Survey of Inclusion Workforce Landscape: Appendices

June 29, 2016

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Energy Specialist/ Program Representative/ Residential Outreach Specialist

O*NET OnLine

Summary Report for:
13-1199.01 - Energy Auditors

Updated 2016

Bright Outlook

green

Conduct energy audits of buildings, building systems, or process systems. May also conduct investment grade audits of buildings or systems.

Sample of reported job titles: Building Performance Consultant, Energy Auditor, Energy Consultant, Energy Rater, Home Energy Rater, Home Performance Consultant

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Related Occupations | Wages & Employment | Job Openings

Tasks

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- Identify and prioritize energy saving measures.
- Prepare audit reports containing energy analysis results or recommendations for energy cost savings.
- Collect and analyze field data related to energy usage.
- Inspect or evaluate building envelopes, mechanical systems, electrical systems, or process systems to determine the energy consumption of each system.
- Perform tests such as blower-door tests to locate air leaks.

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Tools & Technology

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Tools used in this occupation:

- Air velocity and temperature monitors — Air current testers; Draft gauges; Duct probe velometers
- Carbon monoxide analyzer — Carbon monoxide detectors
- Infrared imagers — Infrared cameras
- Leak testing equipment — Blower doors; Smoke generators; Smoke pens
- Multimeters — Digital multimeters

Technology used in this occupation:

- Analytical or scientific software — Psychrometric chart software; SAS software; The MathWorks MATLAB; Trane TRACE
- Data base user interface and query software — Abraxas Energy Consulting Metrix; dBASE; Microsoft Access; Structured query language SQL
- Development environment software — Microsoft .NET Framework; Microsoft Visual Basic
- Object or component oriented development software — C++; Python; R
- Operating system software — Linux; UNIX

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Knowledge

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- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

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Skills

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- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Speaking — Talking to others to convey information effectively.

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Abilities

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- Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Written Comprehension — The ability to read and understand information and ideas presented in writing.
- Written Expression — The ability to communicate information and ideas in writing so others will understand.
- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.

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Work Activities

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- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Processing Information — Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
- Interacting With Computers — Using computers and computer systems (including hardware and software)

to program, write software, set up functions, enter data, or process information.

- Documenting/Recording Information — Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

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Detailed Work Activities

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- Oversee business processes.
- Calculate data to inform organizational operations.
- Identify opportunities to improve operational efficiency.
- Prepare financial documents, reports, or budgets.
- Analyze energy usage data.

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Work Context

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- Telephone — 88% responded “Every day.”
- Electronic Mail — 88% responded “Every day.”
- Face-to-Face Discussions — 64% responded “Every day.”
- Freedom to Make Decisions — 54% responded “Some freedom.”
- Letters and Memos — 40% responded “Every day.”

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Job Zone

Title	Job Zone Three: Medium Preparation Needed
Education	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.
Related Experience	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Job Training	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include food service managers, electricians, agricultural technicians, legal secretaries, occupational therapy assistants, and medical assistants.
SVP Range	(6.0 to < 7.0)

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Education

Percentage of Respondents	Education Level Required

33 High school diploma or equivalent

33 Post-secondary certificate

25 Associate's degree

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Credentials

Find Certifications Find Apprenticeships

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Interests

All 2 displayed

Interest code: CE

- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
- Enterprising — Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

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Work Styles

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- Integrity — Job requires being honest and ethical.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Initiative — Job requires a willingness to take on responsibilities and challenges.
- Analytical Thinking — Job requires analyzing information and using logic to address work-related issues and problems.

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Work Values

All 3 displayed

- Independence — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Achievement — Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

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Related Occupations

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17-3025.00	Environmental Engineering Technicians
17-3031.01	Surveying Technicians
19-1031.01	Soil and Water Conservationists
29-9012.00	Occupational Health and Safety Technicians
47-4011.00	Construction and Building Inspectors Green

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Wages & Employment Trends

Median wages data collected from Business Operations Specialists, All Other.
Employment data collected from Business Operations Specialists, All Other.
Industry data collected from Business Operations Specialists, All Other.

Median wages (2014)	$32.35 hourly, $67,280 annual
State wages	Local Salary Info
Employment (2014)	998,000 employees
Projected growth (2014-2024)	Average (5% to 8%)
Projected job openings (2014-2024)	166,900
State trends	Employment Trends
Top industries (2014)	Government Professional, Scientific, and Technical Services

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

Find Jobs Job Banks

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CALHR
CALIFORNIA DEPARTMENT OF HUMAN RESOURCES

Energy Analyst

California State Personnel Board Specification

- **Schematic Code:** BJ95
- **Class Code:** 5837
- **Established:** 09/07/1977
- **Revised:** 03/19/1981
- **Title Changed:** --

Definition

Under supervision, to perform work of average difficulty in a wide variety of consultative and analytical energy assignments such as program evaluation and planning; systems development; site planning; research; conservation; economic assessment; environmental analysis; emergency planning; and to do other related work.

Job Characteristics

The class of Energy Analyst is a recruiting and development class for persons qualified to perform analytical work on one or more aspects in a broad range of energy areas as a background for advancement in the field of energy. Incumbents are assigned duties and responsibilities commensurate with their background and training.

Positions are permanently allocated to this class when the major portion of the functions inherent in the position does not include the more responsible, varied and difficult assignments found at the full journeyperson level.

Typical Tasks

Studies the principles and techniques of the area of work to which assigned and, under supervision, applies them; participates in analytical studies of energy conservation, forecasting, research, siting, planning, or assessment; gathers, tabulates and analyzes data; interviews and consults with

management, employees and others to give and secure necessary information; prepares reports and makes recommendations on procedures, policies and program alternatives; reviews and analyzes proposed legislation and advises management on the impact or potential impact; prepares correspondence.

Minimum Qualifications

EITHER I

Education: Equivalent to graduation from college with a major in ecology, energy, environment, energy economics, statistics, operations research, planning, land use, engineering, geology, physical or biological science, or a closely related energy field. (Registration as a senior in a recognized institution will admit applicants to the examination, but they must produce evidence of graduation or its equivalent before they can be considered eligible for appointment.) (Work experience performing technical energy related duties may be substituted for the required education with one year of experience being equal to one year of education.)

OR II

Experience: Six months of experience in the California State Energy Commission or other State energy programs performing the duties in a class comparable to Management Services Technician, Range B. and

Education: 18 units of college work.

Knowledge and Abilities

Knowledge of: Principles, practices, trends, and terminology of energy programs; governmental functions and organizations.

Ability to: Reason logically and creatively and utilize a variety of analytical techniques to resolve energy problems; develop and evaluate alternatives; analyze data and present ideas and information effectively both orally and in writing, consult with and advise administrators or other interested parties on a wide variety of subject matter areas; gain and maintain the confidence and cooperation of those contacted during the course of work.

Special Personal Characteristics

Willingness as a learner to do routine or detailed work in order to learn the practical application of energy principles, demonstrated capacity for development as evidenced by work history, academic attainment, participation in school or other activities, or by well- defined occupational or vocational interests;

CALIFORNIA DEPARTMENT OF HUMAN RESOURCES

Energy Commission Specialist/Supervisor (Technology Evaluation & Development) Series

California State Personnel Board Specification

Series established December 20, 1988

Scope

This series describes six specialty classes used in the Energy Resources Conservation and Development Commission to perform or supervise technical, professional work in energy technology evaluation and development.

Energy Commission Specialist/Supervisor (Technology Evaluation & Development) Series Specification - Class Titles and Codes

Schem Code	Class Code
+ BJ82	4056
+ BJ54	4184
+ BJ24	4152
+ BJ44	4185
+ BJ05	4058
+ BJ34	4186

Definition of Series

The work performed by nonsupervisory classes ranges from the full journey level to the highest level of technical advisor to the Commission on program and policy issues. Supervisory classes consists of two levels which provide first and second levels of staff supervision. Incumbents conduct, monitor or supervise various technical, regulatory and/or scientific projects, studies and programs undertaken by the Commission. Work is technical in nature and involves analytical, consultative and advisory services to evaluate and regulate the various programs and policies that are developed and administered by the Commission.

Incumbents either perform of supervise the work to plan, organize, and conduct complex studies and programs of various energy technologies and their potential impacts on California's existing energy systems; provide expert consultative services on the scope and direction of analyses and evaluations necessary to address issues regarding energy technologies and their deployment in California; and advise Commissioners, management, staff legislative bodies both State and Federal, governmental entities including other Commissions and regulatory bodies, on the findings and implications of comparative analysis done under their direction; develop information and analysis necessary for making informed choices between the balance of competing energy supply and efficiency improving technologies.

Incumbents either perform or supervise work to analyze issues associated with energy technology development and use and to manage a variety of energy research development and demonstration projects. Incumbents develop the information necessary to perform comparative evaluation of energy supply and efficiency improving technologies and alternative fuels; analyze issues associated with energy technology development and use; and manage a variety of energy research development and demonstration projects.

Positions in these classes determine the characteristics of both existing and developing energy supply, conservation, resources, technologies, and systems as they might be deployed in California or elsewhere; evaluate, compare, and contrast the roles that various technologies might play in meeting California's future energy needs; manage various technology development projects, and prepare recommendations for Commission considerations.

Incumbents are involved with issues dealing with a wide range of energy technologies and associated issues; technology issues, energy supply and demand, energy policy questions, and project management. Energy technologies and alternative fuels addressed include solar, thermal, electric and photovoltaics, geothermal energy resources and technology applications, wind energy technologies, advanced energy efficiency technologies, advanced combustion technologies, waste-to-energy and advances biomass conversion technologies, and advanced transportation energy technologies and related alternative fuels technologies (including methanol, ethanol, compressed natural gas, liquified petroleum gas, electric vehicles, and hydrogen).

Incumbents evaluate promising energy technologies and their potential economic (including export potential), environmental, and public health impact on California's economy and environment; prepare written evaluations and recommendations; manage alternative fuel and energy-related technology development projects; and disseminate findings as testimony before public agencies and as presentations before other interested public and private groups.

Entry Level

Entry into this series is typically from the Energy Analyst classification.

Definition of Levels*

Associate Energy Specialist (Technology Evaluation and Development)

This is the full journeyperson level in the class series. Incumbents independently perform responsible, varied and complex technical and analytical work.

Positions at this level are nonsupervisory but may serve as lead over lower-level technical and analytical staff.

Energy Commission Specialist I (Technology Evaluation and Development)

Specialist I positions are characterized by incumbents independently performing more complex, sensitive and responsible energy-related work which requires, on a regular basis, a high level of knowledge, skill

and ability which is demonstrably above the journey level.

Incumbents in this class will usually possess technical expertise in one or more energy-related fields. Incumbents perform a broad range of duties within the program specialty. Incumbents may exercise some lead responsibility as Project Managers. Incumbents may be responsible for minor Commission reports and may lead other Energy Commission Specialists I in carrying out project responsibility.

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* Additional information regarding functions performed, complexity factors, and scope of responsibility, is contained in a separate document titled "Allocation Guidelines for the Energy Commission Specialist Series"

Energy Commission Supervisor I (Technology Evaluation and Development)

This is the first supervisory level of the series. Incumbents are working supervisors responsible for planning, supervising and directing a small staff of scientific/technical positions. Incumbents typically exercise the full range of supervisory responsibility over 3-5 technical/professional staff at the Energy Analyst and Associate Energy Specialist level.

Energy Commission Specialist II (Technology Evaluation and Development)

Specialist II positions are identified by top Commission management as requiring the service of the most highly skilled practitioners who serve as prime resources and innovators in energy-related subjects which are the most sensitive and complex due to the rapid development in the subject area, extremely high legislative and media attention and multi-state impact. Incumbents provide expert guidance on highly complex and technical problems; and provide expert consultation services within their area of expertise.

Incumbents may also serve as project leaders to address broad national issues such as global warming. Such major projects are characterized by their multidisciplinary scope and interstate impact.

Energy Commission Supervisor II (Technology Evaluation and Development)

This is the second supervisory level of the series, typically responsible for two or more small units, with a total minimum of six professional staff. Typically, the staff will be at the Energy Analyst through Energy Commission Specialist I level and include direct supervision of Energy Commission Supervisor I positions. In the more complex and technical functional areas, staff at the Associate Energy Specialist level and

above may report directly to the Energy Commission Supervisor II, provided that the minimum staff size requirement is met.

Incumbents supervise and direct technical employees and have major program responsibilities in the more complex and technical functional areas of an office either directly or through Energy Commission Supervisors I.

Energy Commission Specialist III (Technology Evaluation and Development)

This is the highest level of specialist assignment in the series intended to accommodate the broadest and most advanced levels of expertise required and to act as a technical advisor to the Commission on program and policy issues.

Incumbents provide expert consultation in a broad range of technical and functional areas of policy development to top administration; make policy recommendations affecting program direction; and provide testimony to legislative bodies, outside agencies and Commission committees.

Minimum Qualifications

All Levels:

The following education is required when non-California state service experience is used to qualify at any level.

Equivalent to graduation from college. Additional experience may be substituted for the required education on a year-for-year basis.

Associate Energy Specialist (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Energy

Analyst, Range C. (Applicants who have completed six months of service performing the duties as specified above will be admitted to the examination but they must satisfactorily complete one year of this experience before they can be eligible for appointment.)

OR II

Three years of responsible technical experience in one or more of the areas described in Pattern I above, including two years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

Energy Commission Specialist I (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Supervisor I (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Specialist II (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above, including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Supervisor II (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above, including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Specialist III (Technology Evaluation and Development)

EITHER I

One year of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of economic, environmental and public health impacts in California at a level of responsibility equivalent to Energy Commission Specialist II.

OR II

Two years of experience in the California state service performing technology evaluation and development duties in areas related to energy technologies, energy research, development and demonstration projects; advanced combustion technologies; transportation energy technologies and alternative fuels; efficiency improving energy technology and fuels; including duties such as analysis of

economic, environmental and public health impacts in California at a level of responsibility equivalent to Energy Commission Specialist I.

OR III

Six years of responsible technical experience in one or more of the areas described in Pattern I above, including five years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist II.)

Knowledge and Abilities

All Levels:

Knowledge of: A wide range of energy technologies and associated deployment and use issues; energy supply and demand forecasts and analytic methodologies, energy policy issues affecting or resulting from energy technology development, and energy project management techniques; California Public Resource Code pertaining to energy resources conservation and development; principles of physical sciences and engineering involved in energy resource development, conversion, distribution, and conservation; principles of econometric and end-use energy demand forecasting; energy sources and use within the California economy; principles of engineering economics, financial analysis, and economic theory as it pertains to energy supply and demand; energy technology costs and cost-accounting methods; recent research and development projects related to the use of petroleum, natural gas, biomass and other synthetic fuels; energy technology environmental impacts, including emissions, waste streams, volumes and characteristics; energy technology public health impacts, air quality impacts and risk analysis; general provisions of social and economic implications of geothermal, solar, wind and other renewable energy development, technology and fuel demonstrations, resource planning and facility construction; recent research and development projects in electrical, nuclear, geothermal, and other energy sources and their related fuels and technologies; Federal and State energy policy; and decision theory, probabilistic risk assessment, and techniques of comparative evaluation, and Federal, State and local government, utilities and private agencies in energy research and regulation.

Ability to: Reason logically and creatively, evaluate and apply a variety of analytical and research methods for the purpose of systematic, critical, and thorough analysis of energy problems or prospective issues leading to formulation, testing, or revision of State and/or Federal energy policies; utilize available computer systems for data base and/or computational applications; manage contracts; analyze energy data and present ideas and information effectively both orally and in writing; communicate in both written and oral formats; prepare and give testimony in planning and regulatory proceedings; develop

and use complex computer programs and analytic models; develop and evaluate fuel alternatives; gain and maintain the confidence and cooperation of those contacted during the course of work; evaluate and quantify the effect of research, development and demonstration programs on energy systems; analyze situations accurately and take effective actions, and act independently within the guidelines set forth by the Commission; present ideas and analysis cogently and effectively; and consult with and advise other staff management, Commissioners, or others on the relative merits of specific energy technologies and the impact of various energy policies.

Energy Commission Specialist II and III (Technology Evaluation and Development)

Knowledge of: A variety of analytical and research techniques to resolve complex and policy sensitive issues and technical problems; significant trends and issues reported in the energy literature; theory and practice of utility planning and regulation, in general, and as implemented in California; energy efficiency, conservation, planning, forecasting and research methods including problem definition, data acquisition, and analytical techniques; and other Federal, State and local energy related environmental goals, policies and organizations.

Ability to: Coordinate the complex technical work of others, act as a team or conference leader to analyze the more technical and complex situations accurately and take effective action; establish and maintain project priorities; testify as subject matter expert (geothermal solar, wind and other renewable energy development, technology and fuel demonstrations, recent research and development projects in electrical, nuclear, geothermal, and other energy sources and their related fuels and technologies) before the Commission and other groups; and serve as the Commission's top adviser in such areas; effectively employ computer techniques for problems solving; and consult with and advise Office Managers, Division Administrators, Commissioners and other interested members of State energy community on a wide variety of energy forecasting, modeling and fuel-related issues and topics.

Energy Commission Supervisor I and II (Technology Evaluation and Development)

Knowledge of: Principles and practices of employee supervision, development and training, program management, formal and informal aspects of Legislative process; principle practices and trends of management and administration such as budget, personnel, planning, program evaluation and related areas; and Federal, State and local environmental goals, policies and organizations; the Commission's Affirmative Action Program objectives; a supervisor's role in the Affirmative Action Program and the processes available to meet affirmative action objectives.

Ability to: Review and constructively critique the work of others; coordinate the work of others; supervise a team of interdisciplinary specialists; analyze situations accurately and take effective action; review and edit complex technical and other written reports; effectively utilize interdisciplinary teams in the conduct of studies; prepare or direct the preparation of complex reports; manage a complex energy project; establish and maintain project priorities, and develop and effectively use all available resources; effectively contribute to the Commission's affirmative action objectives.

Class History

Energy Commission Specialist/Supervisor (Technology Evaluation & Development) Series
History - Dates Established, Revised, and Title Changed

Class	Date Established
+ Associate Energy Specialist (Technology Evaluation and Development)	12/20/1988
+ Energy Commission Specialist I (Technology Evaluation and Development)	03/19/1985
+ Energy Commission Supervisor I (Technology Evaluation and Development)	09/12/1990
+ Energy Commission Specialist II (Technology Evaluation and Development)	03/19/1985
+ Energy Commission Supervisor II (Technology Evaluation and Development)	12/20/1988
+ Energy Commission Specialist III (Technology Evaluation and Development)	03/19/1985

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CALIFORNIA DEPARTMENT OF HUMAN RESOURCES

Energy Commission Specialist/Supervisor (Forecasting) Series

California State Personnel Board Specification

Series established December 16, 1976

Scope

This series describes six specialty classes used in the Energy Resources Conservation and Development Commission to perform or supervise technical, professional work in energy forecasting.

Energy Commission Specialist/Supervisor (Forecasting) Series Specification - Class Titles and Codes

Schem Code	Class Code
+ BJ84	4598
+ BJ52	4947
+ BJ22	4928
+ BJ42	4948
+ BJ07	4599
+ BJ32	4949

Definition of Series

The work performed by nonsupervisory classes ranges from the full journey level to the highest level of technical advisor to the Commission on program and policy issues. Supervisory classes consists of two levels which provide first and second levels of staff supervision. Incumbents conduct, monitor or supervise various technical, regulatory and/or scientific projects, studies and programs undertaken by the Commission. Work is technical in nature and involves analytical, consultative and advisory services to evaluate and regulate the various programs and policies that are developed and administered by the Commission.

Incumbents either perform or supervise work to ascertain future energy problems and uncertainties affecting electricity and fuels, and develop actions to ensure the availability of sufficient, secure and affordable electric energy and fuels supplies for California; prepare or revise long-range supply, demand and price forecasts for electricity, petroleum, petroleum products, natural gas, coal and alternative fuels; perform complex, technical and analytical work in the field of forecasting and analysis; provide technical analysis to the Commission, the electric and gas utilities and other interested parties; analyze the consequences of these forecasts for transportation, residential, industrial, utility, and other end-use sectors; develop, maintain and enhance electricity and fuels forecasting models; and review and critique the electricity and fuels forecasts of others.

Incumbents in either supervisory or nonsupervisory positions develop State energy policies for the Biennial Report, Fuels Report and Shortage Contingency Plan; evaluate the consequences to California of emerging electricity and fuels use availability and cost trends in transportation, residential, industrial, utility and other end-use sectors; develop policy approaches for critical electricity and fuel-use issues, such as transportation, energy security and deregulation; assess the value to California of existing and proposed fuels regulations and policies; identify administrative and legislative actions to ensure sufficient, secure and affordable electrical energy and fuel supplies to California; represent and communicate Commission positions on fuels issues before other State and Federal agencies; develop and maintain an information and knowledge base on current electricity and fuels supply, demand and price for use in policy development and forecasting and for public dissemination; collect and verify fuels and energy data in accordance with relevant statutes; prepare and publish derivative statistics; develop and maintain an integrated picture of California's electricity and fuels and energy economy from resource extraction through consumption; and prepare written and oral reports on forecasting topics.

Incumbents develop policies and programs to implement or update the California Energy Shortage Contingency Plan; help ensure operational readiness of California's Energy Emergency Response Program; and participate in State, regional and local energy emergency coordination bodies.

Incumbents perform thermodynamic calculations and other calculations that utilize pert, linear programming, and cost/benefit analysis. Incumbents use various statistical techniques, including ordinary and two-stage least squares regression, auto-correlation, significant tests, correlation and analysis of residuals; write and analyze computer programs and models, utilizing econometrics; and use micro-and macro-economic theory; preparing written and oral reports on forecasting topics; and creatively improving existing forecast methods and data.

Other duties may include recommending changes in supervising and performing code changes and related forecasting activities; choosing electricity, fuels and other related energy forecasting models; writing forecasting reports; testifying in Commission hearings; improving the energy forecasting state of the art; and innovative use of forecasting methodologies in new applications.

Entry Level

Entry into this series is typically from the Energy Analyst classification.

Definition of Levels*

Associate Energy Specialist (Forecasting)

This is the full journeyperson level in the class series. Incumbents independently perform responsible, varied and complex technical and analytical work.

Positions at this level are nonsupervisory but may serve as lead over lower-level technical and analytical staff.

Energy Commission Specialist I (Forecasting)

Specialist I positions are characterized by incumbents independently performing more complex, sensitive and responsible energy-related work which requires, on a regular basis, a high level of knowledge, skill and ability which is demonstrably above the journey level.

Incumbents in this class will usually possess technical expertise in one or more energy-related fields. Incumbents perform a broad range of duties within the program specialty. Incumbents may exercise some lead responsibility as Project Managers. Incumbents may be responsible for minor Commission reports and may lead other Energy Commission Specialists I in carrying out project responsibility.

Energy Commission Supervisor I (Forecasting)

This is the first supervisory level of the series. Incumbents are working supervisors responsible for planning, supervising and directing a small staff of scientific/technical positions. Incumbents typically exercise the full range of supervisory responsibility over 3-5 technical/professional staff at the Energy Analyst and Associate Energy Specialist level.

Energy Commission Specialist II (Forecasting)

Specialist II positions are identified by top Commission management as requiring the service of the most highly skilled practitioners who serve as prime resources and innovators in energy-related subjects which are the most sensitive and complex due to the rapid development in the subject area, extremely high legislative and media attention and multistate impact.

Incumbents provide expert guidance on highly complex and technical problems; and provide expert consultation services within the area of expertise.

Incumbents may also serve as project leaders to address broad national issues such as global warming. Such major projects are characterized by their multidisciplinary scope and/or interstate impact.

One incumbent may also serve as the CEC's Assistant Demand Forecaster.

Energy Commission Supervisor II (Forecasting)

This is the second supervisory level of the series, typically responsible for two or more small units, with a total minimum of six professional staff. Typically, the staff will be at the Energy Analyst through Energy Commission Specialist I level and include direct supervision of Energy Commission Supervisor I positions. In the more complex and technical functional areas, staff at the Associate Energy Specialist level and above may report directly to the Energy Commission Supervisor II, provided that the minimum staff size requirement is met.

Incumbents supervise and direct technical employees and have major program responsibilities in the more complex and technical functional areas of an office either directly or through Energy Commission Supervisors I.

Energy Commission Specialist III (Forecasting)

This is the highest level of specialist assignment in the series intended to accommodate the broadest and most advanced levels of expertise required and to act as a technical advisor to the Commission on program and policy issues.

Incumbents provide expert consultation in a broad range of technical and functional areas of policy development to top administration; make policy recommendations affecting program direction; and provide testimony to legislative bodies, outside agencies and Commission committees.

Minimum Qualifications

All Levels:

The following education is required when non-California state service experience is used to qualify at any level.

Equivalent to graduation from college. Additional experience may be substituted for the required education on a year-for-year basis.

Associate Energy Specialist (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Energy Analyst, Range C. (Applicants who have completed six months of service performing the duties as specified above will be admitted to the examination but they must satisfactorily complete one year of this experience before they can be eligible for appointment.)

OR II

Three years of responsible technical experience in one or more of the areas described in Pattern I above, including two years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

Energy Commission Specialist I (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Supervisor I (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Specialist II (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above, including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Supervisor II (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above,

including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Specialist III (Forecasting)

EITHER I

One year of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Energy Commission Specialist II.

OR II

Two years of experience in the California state service performing forecasting duties in areas related to supply and demand of electricity, fuels, transportation and other energy uses; energy pricing; shortage contingency planning; including duties such as econometric modeling, linear programming, and cost benefit analysis at a level of responsibility equivalent to Energy Commission Specialist I.

OR III

Six years of responsible technical experience in one or more of the areas described in Pattern I above, including five years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California state service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist II.)

Knowledge and Abilities

All Levels:

Knowledge of: A wide range of electricity, fuels and energy technologies and associated forecasting methodologies and issues; energy demand forecasts and supply analytic methodologies, energy policy issues affecting or resulting from energy technology development, and energy project management techniques; California Public Resource Code pertaining to energy resources conservation and development; principles of physical sciences and engineering involved in fuels and energy production, transmission, utilization and conservation; principles of econometric, engineering and end-use energy demand forecasting, conservation impacts forecasting, fuel and electricity price forecasting, new demand-reducing technologies growth forecasting, computer modeling, statistical sample design, data collection, data base development and monitoring, utility and other forecasting methods; commercially available energy conservation and alternative energy generation technologies; principles of engineering economics, financial analysis, and economic theory as it pertains to energy supply and demand; energy technology costs and cost-accounting methods; industrial energy conversion technologies, thermodynamic analysis of heat loads in buildings, and direct energy use surveys; general provisions of social and economic implications of fuels and energy demand forecasting, resource planning and facility construction; recent research and development projects related to the use of electricity, petroleum, natural gas, biomass and other synthetic fuels; principles and procedures of environmental impact assessment, energy supply and demand forecasting, safety standards review and assessment, and fuels development and utilization; principles of program evaluation and planning and energy policy analysis and formulation; decision theory, probabilistic risk assessment, and techniques of comparative evaluation; and Federal, State and local governments, utilities and private agencies involved in energy forecasting, research and regulation.

Ability to: Reason logically and creatively and use a variety of analytical and research techniques to resolve complex electric energy and fuels development, energy conservation and development programs; utilize available computer systems for data base and/or computational applications; develop and use complex computer programs and forecasting models; develop and evaluate fuel alternatives; perform policy analysis and formulate policy recommendations; act as team or project leader; manage contracts; analyze energy data and present ideas and information effectively both orally and in writing; gain and maintain the confidence and cooperation of those contacted during the course of work; acquire and prepare energy use and other data relevant to energy demand forecasting and fuel-related issues; critique and diagnose the performance of energy forecasting and resource planning and policy forecasting models; evaluate and quantify the effect of conservation programs on energy demand; present ideas and analysis cogently and effectively; consult with and advise Office Managers, Division Administrators, Commissioners and other interested members of the State energy community on a wide variety of forecasting and fuel-related subject-matter areas; and analyze situations accurately, take effective action and act independently within the guidelines set forth by the Commission.

Energy Commission Specialist II and III (Forecasting)

Knowledge of: A variety of analytical and research techniques to resolve complex and policy sensitive issues and technical problems; significant trends and issues reported in the energy literature; theory and practice of utility planning and regulation, in general, and as implemented in California; energy efficiency, conservation, planning, forecasting and research methods including problem definition, data acquisition, and analytical techniques; and other Federal, State and local energy-related environmental goals, policies and organizations.

Ability to: Coordinate the complex technical work of others, act as a team, project, task or conference leader to analyze the more technical and complex situations accurately and take effective action; establish and maintain project priorities; testify as subject matter expert (forecasting,fuels, energy policies, major Commission policy reports) before the Commission and other groups; serve as the Commission's top adviser in such areas; effectively employ computer techniques for problem solving; and consult with and advise Commission management on a wide variety of energy forecasting, modeling and fuel-related issues and topics.

Energy Commission Supervisor I and II (Forecasting)

Knowledge of: Principles and practices of employee supervision, development and training; program management, formal and informal aspects of Legislative process; the Commission's Affirmative Action Program objectives; a supervisor' role in the Affirmative Action Program and the processes available to meet affirmative action objectives; principle practices and trends of management and administration such as budget, personnel, planning, program evaluation and related areas; and Federal, State and local environmental goals, policies and organizations.

Ability to: Review and constructively critique the work of others; coordinate the work of others, supervise a team of interdisciplinary specialists; effectively utilize interdisciplinary teams in the conduct of studies; review and edit complex technical and other written reports; prepare or direct the preparation of complex reports; manage a complex energy project; establish and maintain project priorities, and develop and effectively use all available resources; and effectively contribute to the Commission's affirmative action objectives.

Class History

Energy Commission Specialist/Supervisor (Forecasting) Series History - Dates Established, Revised, and Title Changed

Class	Date Established
+ Associate Energy Specialist (Forecasting)	12/16/1976
+ Energy Commission Specialist I (Forecasting)	12/16/1976
+ Energy Commission Supervisor I (Forecasting)	09/12/1990
+ Energy Commission Specialist II (Forecasting)	12/16/1976
+ Energy Commission Supervisor II (Forecasting)	12/16/1976
+ Energy Commission Specialist III (Forecasting)	12/16/1976

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* Additional information regarding functions performed, complexity factors, and scope of responsibility, is contained in a separate document titled "Allocation Guidelines for the Energy Commission Specialist Series".

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Energy Commission Specialist/Supervisor (Efficiency) Series

California State Personnel Board Specification

Series established December 16, 1976

Scope

This series describes six specialty classes used in the Energy Resources Conservation and Development Commission to perform or supervise technical, professional work in energy efficiency.

Energy Commission Specialist/Supervisor (Efficiency) Series Specification - Class Titles and Codes

Schem Code	Class Code
+ BJ80	4938
+ BJ50	4935
+ BJ20	4927
+ BJ40	4936
+ BJ03	4940
+ BJ30	4937

Definition of Series

The work performed by nonsupervisory classes ranges from the full journey level to the highest level of technical advisor to the Commission on program and policy issues. Supervisory classes consists of two levels which provide first and second levels of staff supervision. Incumbents conduct, monitor or supervise various technical, regulatory and/or scientific projects, studies and programs undertaken by the Commission. Work is technical in nature and involves analytical, consultative and advisory services to evaluate and regulate the various programs and policies that are developed and administered by the Commission.

Incumbents in this specialty either perform or supervise the work to identify, analyze and develop energy conservation, load management and efficiency measures, activities, regulations and programs; provide technical quality control as part of contract management; and independently plan, organize and conduct complex studies of energy use, efficiency and conservation.

Incumbents identify and implement cost-effective energy options for specific end users by providing technical assistance, grants and loans to fund technical analysis and energy saving projects (including energy resources, conversion and transmission) for local governments, schools, hospitals and the agricultural sector, as well as encourage technology transfer by providing training and information to energy users through publications, workshops, seminars and direct on-site assistance.

Incumbents either perform or supervise the analysis, design, implementation and enforcement of State energy efficiency standards; collect and analyze energy and economic data on new residential and commercial buildings and appliances; work with advisory groups, developing materials and providing training to assist in implementation of the standards; use technical research and computer models to determine the effects of potential conservation measures for incorporation into the standards; provide estimates of the economic and energy savings impacts of all conservation, load management and efficiency programs in the State (including State, utility and third-party programs); create new methods/models where necessary to address new analytical issues; provide original market and customer behavior research; evaluate the costs and benefits of conservation, load management and efficiency measures and programs for utilities and consumers; measure the energy savings that have accrued due to building standards, appliance standards and other conservation programs; determine the proper amount of conservation that is cost effective for new and continuing energy efficiency programs; provide recommendations to utilities and the California Public Utilities Commission through expert witness testimony in general rate cases and other proceedings concerning appropriate utility conservation expenditures and energy savings targets; develop conservation measures to be implemented at the user level; provide impact analyses of various conservation measures; analyze institutional restraints; and develop recommendations for institutional modification to support energy conservation.

Incumbents review, analyze, and assess the efficiency of buildings and appliances; design, develop and recommend construction, maintenance, and operational features in buildings and appliances to maximize energy efficiency; coordinate and communicate with local, State, and Federal agencies and building and appliance industry regarding energy efficiency.

Entry Level

Entry into this series is typically from the Energy Analyst classification.

Definition of Levels*

Associate Energy Specialist (Efficiency)

This is the full journeyperson level in the class series. Incumbents independently perform responsible, varied and complex technical and analytical work.

* Additional information regarding functions performed, complexity factors, and scope of responsibility, is contained in a separate document titled "Allocation Guidelines for the Energy Commission Specialist Series".

Positions at this level are nonsupervisory but may serve as lead over lower-level technical and analytical staff.

Energy Commission Specialist I (Efficiency)

Specialist I positions are characterized by incumbents independently performing more complex, sensitive and responsible energy-related work which requires, on a regular basis, a high level of knowledge, skill and ability which is demonstrably above the journey level.

Incumbents in this class will usually possess technical expertise in one or more energy-related fields. Incumbents perform a broad range of duties within the program specialty. Incumbents may exercise some lead responsibility as Project Managers. Incumbents may be responsible for minor Commission reports and may lead other Energy Commission Specialists I in carrying out project responsibility.

Energy Commission Supervisor I (Efficiency)

This is the first supervisory level of the series. Incumbents are working supervisors responsible for planning, supervising and directing a small staff of scientific/technical positions. Incumbents typically exercise the full range of supervisory responsibility over 3-5 technical/professional staff at the Energy Analyst and Associate Energy Specialist level.

Energy Commission Specialist II (Efficiency)

Specialist II positions are identified by top Commission management as requiring the service of the most highly skilled practitioners who serve as prime resources and innovators in energy-related subjects which are the most sensitive and complex due to the rapid development in the subject area, extremely high legislative and media attention and multi-state impact.

Incumbents provide expert guidance on highly complex and technical problems; and provide expert consultation services within the area of expertise.

Incumbents may also serve as project leaders to address broad national issues such as global warming. Such major projects are characterized by their multidisciplinary scope and/or interstate impact.

Energy Commission Supervisor II (Efficiency)

This is the second supervisory level of the series, typically responsible for two or more small units, with a total minimum of professional six staff. Typically, the staff will be at the Energy Analyst through Energy Commission Specialist I level and include direct supervision of Energy Commission Supervisor I positions. In the more complex and technical functional areas, staff at the Associate Energy Specialist level and above may report directly to the Energy Commission Supervisor II, provided that the minimum staff size requirement is met.

Incumbents supervise and direct technical employees and have major program responsibilities in the more complex and technical functional areas of an office either directly or through Energy Commission Supervisors I.

Energy Commission Specialist III (Efficiency)

This is the highest level of specialist assignment in the series intended to accommodate the broadest and most advanced levels of expertise required and to act as a technical advisor to the Commission on program and policy issues.

Incumbents provide expert consultation in a broad range of technical and functional areas of policy development to top administration; make policy recommendations affecting program direction; and provide testimony to legislative bodies, outside agencies and Commission committees.

Minimum Qualifications

All Levels:

The following education is required when non-California state service experience is used to qualify at any level.

Equivalent to graduation from college. Additional experience may be substituted for the required education on a year-for-year basis.

Associate Energy Specialist (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost

effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Energy Analyst, Range C. (Applicants who have completed six months of service performing the duties as specified above will be admitted to the examination but they must satisfactorily complete one year of this experience before they can be eligible for appointment.)

OR II

Three years of responsible technical experience in one or more of the areas described in Pattern I above, including two years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

Energy Commission Specialist I (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California State service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Supervisor I (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Associate Energy Specialist.

OR II

Four years of responsible technical experience in one or more of the areas described in Pattern I above, including three years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California State service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Associate Energy Specialist.)

Energy Commission Specialist II (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above, including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California State service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Supervisor II (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Energy Commission Specialist I.

OR II

Two years of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Associate Energy Specialist.

OR III

Five years of responsible technical experience in one or more of the areas described in Pattern I above, including four years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California State service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist I.)

Energy Commission Specialist III (Efficiency)

EITHER I

One year of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Energy Commission Specialist II.

OR II

Two years of experience in the California State service performing efficiency duties in areas related to energy conservation, load management and efficiency measures, building and appliance standards and regulations; energy cost effectiveness and savings measures; including duties such as energy cost effectiveness, end use modeling, and estimates of energy and savings impacts at a level of responsibility equivalent to Energy Commission Specialist I.

OR III

Six years of responsible technical experience in one or more of the areas described in Pattern I above, including five years of experience above the trainee level. A master's degree in a field related to one of the specialties may be substituted for one year of the required experience; while a doctoral degree may be

substituted for two years of the required experience. Only one postgraduate degree may be counted towards experience. (Completion of dissertation research for a doctoral degree in a field appropriate to one of the Energy Commission specialties may be substituted for up to one year of the required experience.)

(Experience in the California State service applied toward this pattern must include at least one year performing the duties in a class with a level of responsibility equivalent to Energy Commission Specialist II.)

Knowledge and Abilities

All Levels:

Knowledge of: A wide range of energy technologies and associated conservation programs, efficiency standards, end-use forecasting methodologies and related conservation issues; assessment of energy efficiency of buildings and appliances; energy demand forecasts and supply analyses, energy policy issues affecting or resulting from end-use energy technology development, and end-use energy project management techniques; California Public Resource Code pertaining to energy resources conservation and development; principles of physical sciences and engineering involved in fuels and energy production, transmission, utilization, and conservation; principles of econometric, engineering and end-use energy demand forecasting, conservation impacts forecasting, new demand-reducing technologies growth forecasting, computer modeling, data base development and monitoring, utility and other end-use forecasting methods; commercially available energy conservation and alternative energy generation technologies; principles of engineering economics, financial analysis, and economic theory as it pertains to energy supply and demand; energy technology costs and cost-accounting methods; industrial energy conversion technologies, thermodynamic analysis of heat loads in buildings, and direct energy use surveys; general provisions of social and economic implications of fuels and energy demand forecasting, resources planning and conservation program implementation; recent research and development projects in the fields of electrical and other energy sources, and end-use systems and technologies; principles and procedures of environmental impact assessment, energy supply and demand forecasting, safety standards review and assessment, and energy utilization and conservation program standards design and monitoring; principles of program evaluation and planning, and energy policy analysis and formulation; decision theory, probabilistic risk assessment, and techniques of comparative evaluation; Federal, State and local governments and building and appliance industry involved in energy efficiency, conservation, end-use forecasting, research and regulation.

Ability to: Reason logically and creatively and use a variety of analytical and research techniques to resolve complex fuels development, energy conservation and development problems, develop and use complex computer programs and end-use forecasting models; develop and evaluate alternatives; perform policy analysis and formulate policy recommendations; act as team or project leader; manage contracts; analyze energy data and present ideas and information effectively both orally and in writing; ability to design, develop, and recommend construction, maintenance, and operational features in buildings and appliances to maximize energy efficiency; acquire and prepare energy use and other data relevant to energy demand forecasting and end-use issues; evaluate and quantify the effect of conservation programs on energy demand; present ideas and analysis cogently and effectively, consult with and advise Office Managers, Division Administrators, Commissioners and other interested members of the State energy community on a wide variety of energy efficiency and conservation subject-matter

areas; gain and maintain the confidence and cooperation of those contacted during course of work; analyze situations accurately, take effective actions, and act independently within the guidelines set forth by the Commission.

Energy Commission Specialist II and III (Efficiency)

Knowledge of: A variety of analytical and research techniques to resolve complex and policy sensitive issues and technical problems; significant trends and issues reported in the energy literature; theory and practice of utility planning and regulation, in general, and as implemented in California; energy efficiency, conservation, planning, forecasting and research methods including problem definition, data acquisition, and analytical techniques; and other Federal, State and local energy-related environmental goals, policies and organizations.

Ability to: Coordinate the complex technical work of others, act as a team or conference leader to analyze the more technical and complex situations accurately and take effective action; establish and maintain project priorities; effectively employ computer techniques for problem solving; testify as subject-matter expert (energy efficiency, conservation, appliance standards, building standards, energy policies, major Commission policy reports) before the Commission and other groups; and serve as the Commission's top adviser in such areas.

Energy Commission Supervisor I and II (Efficiency)

Knowledge of: Principles and practices of employee supervision, development and training; program management, formal and informal aspects of legislative process; the Commission's Affirmative Action Program objectives; a supervisor's role in the Affirmative Action Program and the processes available to meet affirmative action objectives; principle practices and trends of management and administration such as budget, personnel, planning, program evaluation and related areas; and Federal, State and local environmental goals, policies and organizations.

Ability to: Review and constructively critique the work of others; coordinate the work of others; supervise a team of interdisciplinary specialists; review and edit complex technical and other written reports; effectively utilize interdisciplinary teams in the conduct of studies; prepare and direct the preparation of complex reports; manage a complex energy project; establish and maintain project priorities; develop and effectively use all available resources; and effectively contribute to the Commission's affirmative action objectives.

Class History

Energy Commission Specialist/Supervisor (Efficiency) Series History - Dates Established, Revised, and Title Changed

Class	Date Established
+ Associate Energy Specialist (Efficiency)	12/16/1976
+ Energy Commission Specialist I (Efficiency)	12/16/1976
+ Energy Commission Supervisor I (Efficiency)	09/12/1990
+ Energy Commission Specialist II (Efficiency)	12/16/1976
+ Energy Commission Supervisor II (Efficiency)	12/16/1976
+ Energy Commission Specialist III (Efficiency)	12/16/1976

Updated 6/3/2012

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STATE OF OREGON
POSITION DESCRIPTION

Position Revised Date:
02/03/16

This position is:
☒ Classified
☐ Unclassified
☐ Executive Service
☐ Mgmt Svc – Supervisory
☐ Mgmt Svc – Managerial
☐ Mgmt Svc - Confidential

Agency: Oregon Housing and Community Services

Division: Housing Stabilization

☐ New ☒ Revised

SECTION 1. POSITION INFORMATION

a. Classification Title:	Program Analyst 3	**b.** Classification No:	C0862
c. Effective Date:	07/01/01	**d.** Position No:	0001035
e. Working Title:	Wx Program Coordinator	**f.** Agency No:	91400
g. Section Title:	Energy Services Section	**h.** Budget Auth No:	000828660
i. Employee Name:	VACANT	**j.** Repr. Code:	OA

k. Work Location (City – County): Salem

l. Supervisor Name (Optional): Tim Zimmer

m. Position: ☒ Permanent ☐ Seasonal ☐ Limited Duration ☐ Academic Year
☒ Full-Time ☐ Part-Time ☐ Intermittent ☐ Job Share

n. FLSA: ☐ Exempt ☒ Non-Exempt
If Exempt: ☐ Executive ☐ Professional ☐ Administrative

o. Eligible for Overtime: ☒ Yes ☐ No

SECTION 2. PROGRAM AND POSITION INFORMATION

a. Describe the program in which this position exists. Include program purpose, who's affected, size, and scope. Include relationship to agency mission.

Oregon Housing and Community Services (OHCS) provides stable and affordable housing, and engages leaders to develop integrated statewide policy that addresses poverty and provides opportunity for Oregonians. OHCS's vision for the state is that all Oregonians have the opportunity to pursue prosperity and live free from poverty.

OHCS's Housing Stabilization Division provides critical services to the lowest income Oregonians by addressing housing stabilization and helping more Oregonians access safe, stable, and affordable housing options. Housing stabilization addresses the many aspects of the needs that low income Oregonians face – affordable housing, access to energy assistance, and connections to other services such as health care, education, and nutritious food. The Housing Stabilization Division works closely with Community Action Agency partners and other partners across Oregon to meet basic needs. The Housing Stabilization Division passes through federal and state resources to local partners to enable local communities to provide a wide range of services and assistance in order to increase housing stability and access to opportunity. The Division also manages federal housing resources through the HUD Contract Administration section.

Housing Stabilization Division: Energy Services
The Energy Services Section of the Housing Stabilization Division addresses basic needs to help Oregonians access housing stability. The section manages state and federal resources to mitigate high energy costs, address health and safety risks, and improve energy efficiency in the homes of low income Oregonians. Through a network of community action agencies and utility companies, services include utility bill payment assistance, health and safety improvements, heating system repair and replacement, energy conservation services, and energy conservation education. These critical services encourage improved health and safety and improved housing stabilization.

This position is in the Energy Services Section.

b. Describe the primary purpose of this position, and how it functions within this program. Complete this statement. The primary purpose of this position is to:

Plan, coordinate and implement Oregon's Low Income Weatherization (Wx) Program on a statewide basis. This is accomplished by assuring that the complex and varied State and Federal procedures and regulations are followed by the State and 18 community based organizations that deliver weatherization program services and by providing policy leadership and program direction in a highly complex environment of energy stakeholders who have diverse and sometimes conflicting objectives.

SECTION 3. DESCRIPTION OF DUTIES

List the major duties of the position. State the percentage of time for each duty. Mark "N" for new duties, "R" for revised duties or "NC" for no change in duties. Indicate whether the duty is an "Essential" (E) or "Non-Essential" (NE) function.

% of Time	N/R/ NC	E/ NE	DUTIES
Note: *If additional rows of the below table are needed, place curser at end of a row (outside table) and hit "Enter".*			

30%	**R**	**E**	**Program Coordination**
			• Approve subgrantee work plans, budgets, and evaluate program effectiveness and compliance with all governing laws, regulations, policies and procedures.
			• Evaluate quarterly reporting function to collect production and service data for federal grant reports and for analysis.
			  ○ Analyze sub-grantee production and expenditure reports for compliance with state/federal regulations.
			• Develop program best practices, priorities, and strategies including program modifications, administrative controls, changes in organizational structure, and program standards.
			• Assist sub-grantees by setting standards for the development of budgets and business plans that reflect best practices of weatherization.
			  ○ Guide sub-grantees in the use and complex mix of each of the four funding sources for weatherization projects to ensure maximum leveraging of funding consistent with the varied and specific purposes of each of the four funding sources.
			• Develop best practices and consistency on the general operation and administration of the weatherization program by conducting on-site sub-grantee visits and initiating corrective action as necessary. On-site visits include but are not limited to: assistance in financial record keeping, program tracking, project management, and program compliance.
			• Develop a detailed program budget for all weatherization funding sources including line items for: administration; program; training and technical assistance; evaluation; and sub-grantee administration.
			• Develop and maintain statewide funding formulas for each grant based on program parameters and requirements.

			○ Develop and award sub-grantee funding allocations based on formulas. • Monitor federal US Department of Energy (DOE) grant application and budget process and program changes to ensure compliance.
30%	**R**	**E**	**Program Development** • Develop and submit the annual grant application for the US Department of Energy Weatherization Assistance Program: ○ Create a detailed master file describing type of work to be completed. ○ Create a detailed annual file detailing sub-grantee budgets and production schedules. ○ Create a comprehensive health and safety plan. ○ Modify the annual state plan and guidance documents. • Develop and implement the program's systems and processes for improving program efficiency and effectiveness in areas such as program delivery, budget management, data reporting, and monitoring. • Make initial and ongoing business process assessments and decisions related to the objectives of the program, section, and department. • Ensure inclusion of techniques in energy conservation, installation measures, materials, and health and safety protocol in the weatherization programs. • Plan and coordinate the implementation of four complex and diverse federal and state grant programs including: ○ US Department of Energy Weatherization Assistance Program (DOE) ○ Energy Conservation Helping Oregonians (ECHO) ○ Low-Income Home Energy Assistance Weatherization Program (LIHEAP WX) ○ Bonneville Power Administration (BPA) • Identify and integrate sources of leverage funds through new or existing internal and external partnerships by: ○ Working with the Housing Finance Division and Single Family Home programs to better align the weatherization and Housing programs. ○ Working with utilities in the development of new initiatives such as appliance replacement programs. ○ Research, assess and identify federal grant opportunities that both the Department and sub-grantees can leverage with existing or new programs. • Develop and implement the following program components to provide direction and regulation to sub-grantees, to reflect changes in state and federal program regulations, and to meet divergent needs of key stakeholders: ○ Program guidelines, policy, standards and specifications ○ The annual US Department Of Energy (DOE) State Plan, Energy Conservation Helping Oregonians (ECHO) guidelines and Oregon Administrative Rule amendments ○ Guidelines for the allocation and controversial redistribution of weatherization funding in collaboration with local partners, state agencies, interest groups, utilities, and key stakeholders. • Provide leadership and support by convening partners to assist in the development of Department policies and administrative rules on a variety of weatherization issues, such as eligible expenditures, grant quarterly reporting requirements, hazards (including lead, mold and mildew), lead safe work practices, energy conservation measures, and program outcome evaluations. • Communicate guidelines by developing and messaging official weatherization program guidance memos to all affected partners. • Participate on regional, state and local committees regarding the development of new program policies/procedures, funding requirements and, fiscal monitoring and controls.
20%	**R**	**E**	**Technical Assistance** • Provide authoritative and strategic direction, as the weatherization program subject matter expert, to partners and state and sub-grantee staff. ○ Interpret program rules and regulations and provide clear direction to Department and sub-grantee staff. ○ Establish program standards and guidelines for local partners by writing formal MEMO directives, administrative rules and other instructive guidance to

			implement federal, state and Department guidelines. o Identify weatherization program management needs. o Establish best practices and standards for grant fund management, reporting, monitoring, and program evaluation. o Establish program content and procedures for service delivery of each of the four different grant programs. o Develop and implement new programs and program guidelines. o Establish guidelines for weatherization measures to be installed in dwelling. • Maintain a high degree of proactive awareness concerning utility rebates, client energy and self-sufficiency education, program coordination, and current legislative issues so that the Department and partners can take advantage of all resources and information available.
15%	**R**	**N/E**	**Outreach** • Promote and establish strong partnerships by initiating cooperation and joint planning with federal funders, state agencies, local jurisdictions, utilities, and community organizations. o Daily communication with Department staff, managers, state and federal agency staff, sub-grantee partners, and the public. o Frequently provide partners with weatherization information to ascertain linkages for coordinated project efforts. o Schedule, convene and act as Hearing Officer at public hearings related to weatherization program design to receive public input and improve program effectiveness. o Respond orally and in writing to weatherization program inquiries from the public, sub-grantees and grantors, from the media, policy makers, clients, utilities and federal and state officials. o As applicable to the position, participate in local, regional and national advisory meetings, conferences, forums, and committees, including U.S. Department of Energy (DOE), Bonneville Power Administration Regional Technical Forum, DOE Region 10 Peer Exchange T&TA Committee, Community Action Partnership Association, Oregon Energy Coordinators Association, and the National Association for State Community Services Programs to keep up to date with information necessary to manage the weatherization program. o Represent the state and Department with utilities and fuel providers, state and federal agencies, and local partners to ensure consistent, effective coordination of weatherization resources and direction.
5% **100%**	**R**	**N/E**	**Other Duties** • Participate in unit, section meetings and Department committees. Complete and track a variety of special projects as assigned by section management. • Work to continuously improve performance by attending classes, training and seminars related to key responsibilities and/or employee development plan. • Perform any other duties as directed by supervisor.

SECTION 4. WORKING CONDITIONS

Describe any on-going working conditions. Include any physical, sensory, and environmental demands. State the frequency of exposure to these conditions.

The person in this position will work both in and out of the office. Work in the office is performed in a typical office environment. Requires occasional lifting and exertion for short periods of time and sitting for extended lengths of time. Work outside of the office will vary considerably. Many of these geographic work areas are in remote locations in Oregon. At times the work requires irregular work hours including nights, evenings and weekends. This position requires frequent travel on official State business. Should you choose to drive a motor vehicle you must have a valid driver license and an acceptable driving record. If not, you must have

an alternate method of transportation. Compliance with ORS 807.020 (1) is required. It is required that drivers of state-owned vehicles complete a defensive driving safety class every two years.
Requires occasional out-of-state travel for conferences, training, and meetings.

SECTION 5. GUIDELINES

a. List any established guidelines used in this position, such as state or federal laws or regulations, policies, manuals, or desk procedures.

Oregon Revised Statutes related to OHCS
OHCS Administrative Rules
HSD Grant Work Plans for Weatherization
LIHEAP Program Manuals
OAR 813-205 Weatherization Program Administrative rules
Oregon Weatherization Program Specifications and Requirements
US Department of Energy 10 CRF Part 440 Weatherization Assistance Program
Oregon DOE State Plan/Weatherization Assistance Program
US Health and Human Services Low Income Home Energy Assistance Program (LIHEAP) State Plan
Bonneville Power Administration Weatherization Rules and Regulations
Oregon Weatherization Assistance Program Site Built and Manufactured Home Field Guide
Energy Conservation Helping Oregonians (WX) Guidelines
Oregon Energy Assistance Program Manual
ORS 757 Low-income weatherization and bill payment assistance
US Department of Housing and Urban Development (HUD) 24 CRF 950
US Environmental Protection Agency (EPA) CRF Title 40

a. How are these guidelines used?

These guidelines are used for routine reference to accomplish the various responsibilities of this position and to establish program guidelines and procedures. The guidelines are reviewed and/or researched as necessary to ensure compliance and consistency with pertinent standards, regulations, policies, agreements, and laws.

SECTION 6. WORK CONTACTS

With whom, outside of co-workers in this work unit, must the employee in this position regularly come in contact?

Who Contacted	How	Purpose	How Often?
Note: *If additional rows of the below table are needed, place curser at end of a row (outside table) and hit "Enter".*			
Federal Agencies	Phone/Email	Consultative advice, program specifications, build collaboration	Weekly
Sub-grantees	Phone/Email/In person	Program administration, service delivery guidance, program development, technical assistance, performance monitoring	Daily
US Department of Energy	Phone/Email	Consultative advice, program specifications, collaboration	Daily/Weekly
Bonneville Power Administration	Phone/Email	Consultative advice, program specifications, collaboration	Weekly
Oregon Dept. of Energy	In person/ Phone/Email	Coordination, program specifications, consultative	Monthly
Private and Public Utilities	Phone/Email/In person	Program Development/Coordination	Weekly
Other State Agencies	Phone/Email/In person	Coordination, networking, program development	Weekly

General Public	Phone/Email	Program Eligibility/Conflict Resolution	Weekly

SECTION 7. POSITION RELATED DECISION MAKING

Describe the typical decisions of this position. Explain the direct effect of these decisions.

The individual in this position must operate on his/her own initiative to research and evaluate complex information in a very timely manner to execute this program successfully. This position makes operational decisions within the broad scope of the Department's mission and values. The position ensures the Department and Sub-grantees meet all federal and state program rules, defines and recommends policy, and determines adequate resources for the weatherization programs.

Because of the complex nature of the program's implementation, these decisions are often made based on professional judgment and without clear-cut guidelines or policies. Decisions are often made independently, in collaboration with other Department staff, and sometimes made in consultation with stakeholders. Errors in judgment would have a substantial negative impact on overall state program operation and agency effectiveness of implementing low-income weatherization. Decisions made by this position affect local weatherization partners' ability to successfully implement its strategic goals and deliverables. Failure to achieve strategic goals could result in future federal funding decline. Decisions will also impact other state agencies and private housing developers concerning energy conservation related applications, technology and renewable energy sources.

SECTION 8. REVIEW OF WORK

Who reviews the work of the position?

Classification Title	Position Number	How	How Often	Purpose of Review
PEM E	0000864	In person/phone/email	Ongoing, weekly, annually	Work is reviewed on an ongoing basis to maintain communication and information sharing of program progress/issues; weekly meetings and annual performance review.

Note: *If additional rows of the below table are needed, place curser at end of a row (outside table) and hit "Enter".*

SECTION 9. OVERSIGHT FUNCTIONS

THIS SECTION IS FOR SUPERVISORY POSITIONS ONLY

a. How many employees are directly supervised by this position? 0

How many employees are supervised through a subordinate supervisor? 0

b. Which of the following activities does this position do?

- ☐ Plan work
- ☐ Assigns work
- ☐ Approves work
- ☐ Responds to grievances
- ☐ Disciplines and rewards
- ☐ Coordinates schedules
- ☐ Hires and discharges
- ☐ Recommends hiring
- ☐ Gives input for performance evaluations
- ☐ Prepares & signs performance evaluations

SECTION 10. ADDITIONAL POSITION-RELATED INFORMATION

At Oregon Housing and Community Services:

- Our **Vision** is that all Oregonians have the opportunity to pursue prosperity and live free from poverty.
- Our **Mission** is to provide stable and affordable housing and engage leaders to develop integrated statewide policy that addresses poverty and provides opportunity for Oregonians.
- Our **Core Values**: Collaboration – Compassion – Equity – Integrity – Leadership – Transparency.

ADDITIONAL REQUIREMENTS: List any knowledge, skills, certificates and licenses needed at time of hire that are not already required in the classification specification:

The individual in this position is expected to create a professional work environment focused on high productivity, model sound work habits through personal example and leadership, maintain accurate and current office records, and actively participate, contribute and engage in department meetings.

The incumbent is expected to perform position duties in a manner which promotes customer service and collaborative and harmonious working relationships, including: courteous and respectful treatment of all persons; engage in effective team participation through willingness to assist and support co-workers, supervisors, and other work-related associates; develop good working relationships with division and agency staff and supervisors through active participation in cross-divisional group projects; identify and resolve problems in a constructive, collaborative manner; demonstrate openness to constructive feedback and suggestions in an effort to strengthen work performance; and contribute to a positive, respectful and productive work atmosphere.

- Must have working experience related to managing residential energy conservation programs or experience managing multifamily residential weatherization projects.
- The individual must be capable of facilitating stakeholder discussions related to federal grants and the weatherization program and policies to meet diverse and sometimes conflicting needs.
- Must have certification in or have a working knowledge of the Residential Energy Analyst Training Program or equivalent weatherization training program.
- The person in this position must have knowledge of state and national issues that affect the weatherization program direction/operation, good communication skills (both written and verbal), knowledge of basic accounting, proficiency with computers, excellent decision making ability, and the ability to prioritize a demanding workload.

BUDGET AUTHORITY: If this position has authority to commit agency operating money, indicate the following:

Operating Area	Biennial Amount ($00000.00)	Fund Type

Note: *If additional rows of the below table are needed, place curser at end of a row (outside table) and hit "Enter".*

Determines funding allocations and has primary responsibility for budget oversight and performance monitoring for the following funding streams (estimated amounts):

Energy Conservation Helping Oregonians (ECHO)	$14.6 million per biennium
US Department of Energy (DOE)	$ 5.4 million per biennium
Bonneville Power Administration (BPA)	$ 3.0 million per biennium
LIHEAP Weatherization (US Health & Human Services' Low Income Energy Assistance Program)	$ 9.6 million per biennium

SECTION 11. ORGANIZATIONAL CHART

Attach a current organizational chart. Be sure the following information is shown on the chart for each position: classification title, classification number, salary range, employee name and position number.

SECTION 12. SIGNATURES

Employee Signature	Date	Supervisor Signature	Date

Appointing Authority Signature	Date

DIRECT INSTALLATION TECHNICIAN

Job Description

Job Title: Direct Installation Technician

Essential Duties and Responsibilities:

1. Contacts potential customers by phone to discuss benefits of using energy efficient apparatus such as light bulbs, shower heads, aerators, etc.
2. Schedules meetings for further discussions and/or for energy assessment
3. Schedules appointments for technicians to do direct installations for custom
4. Ensures appropriate inventory of supplies is on hand.
5. Installs energy efficient apparatus in multifamily unit
6. Performs administrative functions of the office such as answering phones and responding to inquires or redirecting call to supervisor
7. Maintains positive working relationships with others, both internally and externally.
8. Serves as liaison between client companies and Thorpe Energy Company.
9. Performs other related duties and responsibilities as assigned.

Job Relationships:

Reports to: Program Coordinator

Interrelationships: Frequent internal and external

Education/Experience Qualifications:

1. Related field experience
2. Valid driver's license
3. Customer service experience
4. Excellent verbal communication skills
5. Knowledge of energy sustainability programs desired
6. Ability to work in a fast-paced work environment
7. Experienced in use of Microsoft Office products

Other Qualifications:

1. Must have a reliable vehicle (up to 60% travel)
2. Ability to operate and manipulate standard office equipment
3. Ability to sit for extended time periods and make or receive telephone calls
4. Must be able to occasionally lift and/or move 10 pounds and lift and/or move up to 40 pounds on rare occasions

Energy Advisor I

Posted on March 3, 2016

POST A FREE JOB OPENING (//ACEEE.ORG/NODE/ADD/JOB)

Confidential

Closing Date:
Thu, 06/02/2016

We provide our utility clients with a wide range of energy-saving and renewable energy solutions. From individual utility customers and construction contractors, to utilities, municipalities, and government bodies, our clients have come to depend on our customized energy efficiency programs to help them to meet their energy saving goals.

This position is responsible for providing our services directly to homeowners, landlords, building owners and other utility customers. You will provide expert advice and coordination for our programs while recommending specific modifications to electric and/or gas systems; you will also convince prospective clients of the improved efficiency that our services will bring. This role combines field work with office time (typically 3 field days to 2 office days per week). You will also be working with others who are passionate about energy efficiency and making a positive impact on the industry.

img.img { width: opx !important;}

Promote the energy efficiency program to customers and trade allies within your assigned territory

Understand and implement the Franklin Energy Sales Process, including but not limited to: making outbound calls to new and existing customers to meet assigned energy saving targets, developing and facilitating program presentations to spur project activity and managing customer inquiries and concerns by phone, electronically or in person to move projects toward completion

Identify and provide documentation of on-site opportunities for energy efficiency and provide follow-up to customers as required; Generate summary reports to customers and Program Managers as needed

Discuss technical elements of energy consuming equipment—i.e., lighting, HVAC, hot water systems, building and pipe insulation, and air sealing

Enter data into spreadsheets and databases to determine energy savings and to manage current projects which may also include collaborating with Energy Engineers

Collaborate with home performance contractors and consultants to provide residential energy audit programs to utility customers

Coordinate, schedule and manage implementation contractors performing HVAC, air sealing and building shell improvements for each project

Perform post audit diagnostics, measurement and verification

Specific Qualification for the role include:

Bachelor's degree or equivalent experience required. Technical school degree combined with demonstrated experience in the electric/gas utility field will be considered. Equivalent work experience may be considered.

1-2 years of experience in the electric or natural gas utility industry, facilities management, HVAC design or sales, commercial and industrial lighting, or conservation and energy management

Previous energy efficiency and/or energy modeling experience - Preferred

Previous customer service, sales, or marketing experience

Must be self-motivated, flexible, organized and have an ability to prioritize workload in a fast-paced environment

Proficient in Microsoft Office, specifically Word, Excel and Outlook and comfortable entering and tracking information in databases

Ability to communicate effectively, both verbally and in writing with customers, clients and employees

Ability to analyze and interpret complex and/or quantitative data and solve practical problems

Valid driver's license and reliable transportation

Willingness to travel 50% or more of the time, occasional overnight

Apply Here (http://www.Click2Apply.net/n37k7c43xk)

MOBILE SITE

Home

Job Number:	625334
Job Category:	Energy / Power / Nuclear
Location:	SYRACUSE, NY US
Schedule:	Full-time
Travel:	None
Shift:	Day Job
Potential for Teleworking:	No
Clearance Level Must Currently Possess:	None
Clearance Level Must Be Able to Obtain:	None

Description:
Leidos Engineering, LLC is seeking a highly motivated Energy Efficiency Program Analyst for our office in Syrac

This position is full time. The individual will work as part of an energy efficiency program processing team to perf professionally answer and respond to incoming calls, review and prepare energy efficiency rebate applications, report on program activities, and manage incoming work flow, contribute to program reporting requests, and resp other program stakeholders regarding individual applications. Individual must be flexible team player with the ab team members in the delivery of multiple energy efficiency programs. Must be able to work well in a team setting must be flexible with schedule and be prepared to work overtime with little or no advance notice. Works on assig ability to recognize deviation from accepted practice is required.

TA_3

Qualifications:
Education: Associates Degree required, Bachelors Degree preferred.

Required Skills: Experience using MS Windows, Outlook, and Excel. Must be willing to learn technical data, be a quantities, operate and work in a data entry and processing environments, possess excellent written and verbal strong attention to detail.

The successful candidate must be a U.S. citizen.

Desired: Previous experience working directly with clients and account executives, Basic knowledge of Commer

Leidos Overview:
Leidos is an applied solutions company focused on markets that are seeing converging business and technolog human needs: defense and national security, health and life sciences, and energy, engineering and infrastructur employees serve customers in the U.S. Department of Defense, the intelligence community, the U.S. Departmer Government civil agencies and commercial health and engineering markets. Qualified women, minorities, indivic veterans are encouraged to apply. Leidos is an Equal Opportunity Employer.

Other Locations:

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Putting our energy into saving yours. ®

ENERGY AUDITS **HOME PERFORMANCE** **HEATING & COOLING** **SOLAR**

Home Energy Technician

Powersmith Home Energy Solutions, Copiague, NY

Location:

Would you like to put your customer service and technical/administrative skills to use in a new industry with an unprecedented market opportunity?

Are you interested in making a difference for people and the planet on a daily basis?

Are you interested in energy efficiency?

If so, join the next energy revolution. Powersmith Home Energy Solutions is dedicated to making every home a more comfortable, energy efficient, and healthy environment. We focus on the home as a system and provide customized improvements that raise homes' energy performance level to today's standards. Using building science technology, Powersmith Home Energy Solutions' specially trained and certified technicians perform a thorough home performance audit, analyze the resulting data, and then we implement the residential construction solutions that meet our clients' needs.

We are looking for hard-working and honest people interested in making a positive impact on people's lives and the environment. Candidates must possess an entrepreneurial spirit that thrives in a fast-paced,

demanding work setting and be willing to dedicate him/herself to the Powersmith company culture.

Position Overview

This is a full-time position. The successful candi **Appendix 1 - Page 59** ated experience in the energy efficiency

This is a full time position. The successful candidate will gain real-world experience in the energy efficiency field, along with an understanding of building science principles and the positive impact energy efficiency installation measures have on our residential structures. This is an administrative and field technician position in which you will be included in team meetings and work with Executive level Sales and Construction staff; specifically the heads of our Customer Acquisition, Sales, and Construction departments. Daily hours for this position may vary, but are predominantly 8am-6pm, Monday through Friday. Applicants must be available to work an adjusted schedule of Monday and Wednesday through Saturday, when needed.

We are looking for our next Home Energy Technician (HET). HETs act as a support system to our professional Home Energy Specialist (Sales) staff by creating energy efficient residential building models that are delivered to New York State residents in need of utility cost control and improved comfort in their homes.

Job Requirements

- **Building Performance Institute (BPI) certifications in Building Analyst and Envelope Professional, is a MUST**
- **1 year experience working as a Home Energy Technician**
- Maintain established standards of quality and accuracy
- Possess determination and self-discipline
- Possess strong communication and organizational skills
- Handle multiple simultaneous tasks/projects
- Perform roughly 7 home energy audits (assessments) per week
- Gather all relevant data during each audit and develop a whole home energy efficiency solution
- Generate approved scopes of work that guarantee energy efficiency improvements to residential building structures
- Communicate with Sales and Construction management on a daily basis to guarantee that top quality product/solution is offered to clients
- Must have a valis and CLEAN New York State Driver's License in order to drive a company vehicle
- Able to pass a criminal background check and provide work references

Preferred, but not required

Experience in sales, service, and/or distribution of mechanical systems equipment, to include: boilers, central air conditioning (HVAC), furnaces, and hot water heaters.

We are looking for a hard worker who believes in our mission, sees the opportunity in residential energy efficiency, and will ultimately be a strong addition to our team and company culture.

Reporting Relationship

Home Energy Technicians will report to the Vice President of Production, Auditing Foreman, and Lead Home Energy Technician.

You Must Have

1. Strong ambition for building a premium service for homeowners
2. Internally motivated to do first-class quality and professional work
3. Comfortable putting team goals ahead of individual goals
4. Comfortable communicating effectively with a team to create a better work experience
5. Must be coachable

Compensation

Annual compensation expectation: $40,000 to $65,000 plus the opportunity for vacation and medical benefits packages. This is a salary position, with pay determined by tiered scale that is measured on your ability to apply training we provide in your daily duties. Benefits include health care and dental as well as 10 days paid vacation, 3 paid sick days, and 6 holidays; all granted upon successful completion of an entry level probation period that is monitored by Exexcutive and Senior Sales and Production staff.

How to Apply:

Please write a cover letter answering the three questions below. Send it along with a copy of your resume to jobs@thepowersmith.com. In the subject line of the e-mail please enter "Powersmith Home Energy Technician."

1. Why do you want to join Powersmith
2. Why do you think you are the best person for this job?
3. What interests you about making homes energy efficient?

RESUMES WITHOUT COVER LETTERS ANSWERING THE QUESTIONS ABOVE WILL NOT BE CONSIDERED OR RESPONDED TO.

Best of luck,

The Recruiting Crew at Powersmith

About Us

Certifications
Awards & Recognition
In The Press
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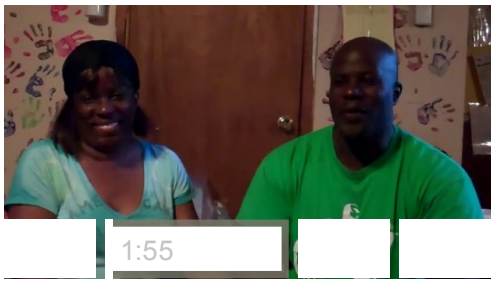
Customer Service Representative
HVAC/Service Junior Mechanic
Home Energy Technician
Permitting Coordinator
Plumbing Junior Mechanic
Production Assistant
Solar Sales Manager

What our customers are saying



The house is much warmer than it was... We haven't needed to put the heat on yet!

Valerie & Eddie St Bernard, Deer Park, NY

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Energy Coordinator

Worcester Community Action Council 6 reviews - Worcester, MA

This job posting is no longer available on Indeed.

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Worcester Community Action Council (WCAC) is the federally-designated anti-poverty agency for Worcester and serves 44 surrounding communities. Our commitment to low-income individuals and families has been a core strength and major component of our success for 50 years.

We are seeking a self-directed leader for this exempt position to assume the day-to-day operation of the Energy Conservation Programs including federally-funded DOEWAP and HEARTWAP as well as Utility-funded Weatherization, Heating System Replacement, AMP and Multi-Family programs serving Central and Southern Worcester County.

The successful candidate will have experience managing Federal Grants and Human Services Programs, as well as experience managing a large staff with multi-faceted responsibilities. They will lead by example, providing excellent customer service to the low and moderate income clients who are eligible for the energy efficiency programs.

Excellent critical thinking, analytical and organizational skills and high attention to detail in addition to strong written and verbal communication skills are required. Massachusetts Construction Supervisor License and Building Performance Institute Building Analyst and/or Quality Control Inspector Certifications preferred.

Duties and responsibilities:

- Oversee all aspects of the DOEWAP and HEARTWAP and Utility-Funded programs, including conducting community outreach, setting and achieving production goals, managing the associated budgets, developing detailed and accurate work orders and approving all reporting.
- Maintain current records of project start dates, ensure that all jobs are properly permitted and all files are complete with necessary approvals from clients, landlords and any other pertinent parties.
- Ensure all customer appointments are met and appropriate measures are reported back to customers in a timely manner. Mediate all contractor or client disputes to a successful resolution, involving the Director of Energy Resources when necessary.
- Maintain full knowledge of all technical manuals and guidelines as outlined by the DHCD Office of Energy Conservation and utility funders.
- Maintain complete and up-to date contractor files, participate in procurement of new vendors and pricing according to the programs. Ensure that all staff and contractors have and maintain at least minimum certifications for the programs in which they work.
- Review staff production weekly, including approving time, mileage reimbursement and other supervisory tasks.
- Assist the Senior Management team with office space planning, moves and new set ups.

Other duties and responsibilities may be assigned as necessary.

WCAC offers competitive salaries and an excellent benefits package to include Blue Cross Health and Dental, Agency paid Life Insurance, 403(b), paid time off and much more.

Send resume with cover letter specifying position to: Human Resource Director, Worcester Community Action Council, Inc., 484 Main St., 2nd Fl., Worcester, MA 01608. AA/EOE. Resumes must be received by March 25, 2016.

Job Type: Full-time

Local candidates only:

- Worcester, MA

Required experience:

Follow Get job updates from Worcester Community Action Council

About this company

Worcester Community Action Council

6 reviews

The Worcester Community Action Council, Inc. was started in 1965 as the locally designated “community action” agency for the...

- Energy Conservation; Managerial: 3 years

Required license or certification:

- MA Construction Supervisor License, Building Performance Analyst, or Quality Control Inspector

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Program Coordinator

Green Charge Networks - San Francisco Bay Area, CA

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COMPANY

Green Charge specializes in intelligent energy storage specifically on demand charges – an issue that affects (nearly) every business owner. Energy efficiency is a decades-old initiative and the next wave of innovation will come from energy efficiency solutions, with energy storage as the nucleus. Green Charge empowers businesses to better control their energy use and reduce their monthly electric costs.

Green Charge was founded in 2009 and installed its first intelligent energy storage system in 2011. 7-Eleven purchased the initial project and has since brought on Green Charge's storage solutions at stores in California and New York. In 2013, Green Charge introduced the Power Efficiency Agreement, the industry's first no-cost, shared savings financing model.

Green Charge is privately funded. In July 2014, Green Charge secured $56 million from K Road DG and Intel Capital founder George Coelho. Portfolio customers include Walgreens, Kohls, Safeway, UPS, Mountain View- Los Altos Unified School District, and industrial facilities across five utilities around the country (SDG&E, SCE, PG&E, Con Edison, and Silicon Valley Power).
In 2015, Green Charge announced industry first partnerships including: Nissan to deploy second-life lithium-ion vehicle batteries for stationary commercial energy storage in the U.S. and international markets. Sun Edison to combine solar and energy storage throughout California. ChargePoint to combine EV charging with energy storage to offset spikes in energy use caused by fast DC charging.

Green Charge delivers industry leading savings, up to 20 percent, of monthly energy bills and provides no cost financed energy storage and software that time-shifts power use and optimizes electric vehicles charging, solar and energy efficiency measures.

JOB DESCRIPTION

Green Charge is growing and we're looking for an entry level Program Coordinator to take ownership of our SGIP Application Process. The Self-Generation Incentive Program (SGIP) provides financial incentives for the installation of clean and efficient distributed generation technologies. SGIP plays a critical role in the deployment of distributed generation projects and the reduction of onsite electric demand and greenhouse gas emissions.This position requires the ability to work with minimal direction, the capacity to move quickly and be flexible while delivering high-quality results. The work environment is supportive and fast-paced. The ideal candidate will have high attention to detail, ability to meet deadlines under pressure, flexibility, and excellent communication.This is a full-time position located in Santa Clara, CA.

RESPONSIBILITIES

- Serve as liaison between Sales, SGIP representatives and current/future clients.
- Ability to meet and respect deadlines
- Take ownership of SGIP application process from beginning to end
- Process and keep track of all clients' applications
- Schedule and arrange SGIP inspector appointments with clients
- Work closely with sales and analyst teams
- Ensure each application is entered correctly

QUALIFICATIONS

- Bachelor's degree
- Proactive and thrive in fast-paced environment that is deadline driven
- 1+ year(s) in administrative, data entry, or related role
- Take strong initiative to gather necessary information from stakeholders
- Ability to prioritize, coordinate tasks and well-organized
- Keen attention to detail, focused
- MS Office Suite
- Excellent written and verbal communication skills

Green Charge Networks is an equal opportunity employer. We recruit and hire qualified candidates without regard to race, religion, color, sex, sexual orientation, age, national origin, ancestry, citizenship, and veteran or disability status.

Job Type: Full-time

Local candidates only:

- San Francisco Bay Area, CA

Required experience:

- Administrative, Data Entry, or Related Role: 1 year

Required education:

- Bachelor's

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JOB DESCRIPTION

JOB TITLE: Energy Assistance Clerk

Job Summary: The Energy Assistance Clerk will be responsible for receiving and processing all energy assistance and ECIP applications under the LIHEAP (Low Income Home Energy Assistance Program).

Work Station: Assigned County Office

Supervised By: Designated Energy Assistance Coordinator or Community Service Supervisor

Supervisor To: None

Essential Duties: The requirements below are representative of the duties, knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Major Duties and Responsibilities:

1. Mail out designated applications.
2. Receive and process applications as determined by Federal, State and local regulations/policies.
3. Communicate with vendors and county staff regarding energy assistance and crisis program applications.
4. Enter data into the program data system.
5. Ensure accurate and timely data entry.
6. Ensure electronic files are accurately stored.
7. Know and comply with CMCA policies and procedures.
8. Perform other duties as required.

Knowledge, Skills and Abilities:

1. Ability to maintain the confidentiality of information on each client.
2. Skilled in use of computer applications such as word processing, custom database, and web-based applications/processes.
3. Ability to communicate effectively with and relate positively to clients, agency staff, utility company representatives and other social service agencies.
4. Ability to be a self-starter and to work in a fast paced environment.

5. Ability to deal effectively with diverse groups.

6. Ability to work as a team member.

7. Ability to deal with confrontation in a constructive manner.

8. Ability to implement concepts learned from training.

9. Ability to attend work site regularly to perform job duties and responsibilities.

10. Ability to flex schedule to meet demands at different times of season.

Qualifications Required:

1. High school diploma or GED.

2. Working knowledge of Windows 2000, Microsoft Word, and Internet.

3. Demonstrated ability to be a self-starter and work independently of direct supervision.

4. Residence within designated service area preferred.

5. Possession of a valid, current Missouri driver's license and daily access to an automobile.

Salary Range: III Non-Exempt

EQUAL OPPORTUNITY EMPLOYER

Approval	Initials	Date
Exec. Director		

_____ _____

Employee Signature Date

SouthEastern Idaho Community Action Agency
Helping People. Changing Lives.

JOB TITLE: LIHEAP Intake Specialist
CLASSIFICATION: Full-Time, Temporary Pay Grade – A
LOCATION: SEICAA's service area (7 S.E. Idaho Counties)
BENEFITS: N/A

SUMMARY OF WORK: Assist in serving low-income participants in the Low-Income Home Energy Assistance Program (LIHEAP) and creation and maintenance of related data entry, documents and files. Focus on participants' immediate needs with consideration of the Agency's mission of developing long term independence of individuals.

JOB CHARACTERISTICS: Working closely with the Lead Program Specialist, this position is focused on providing services to participants seeking Low-Income Home Energy Assistance Program (LIHEAP). This position will be focused on answering phones and collecting participant information required to complete the LIHEAP applications. Duties include professionally and efficiently managing in-person and telephone contacts and relationships with project staff, other in-house staff, participants, and partners (public and private). Position requires ability to effectively communicate orally, excel in written communications, understand and implement regulations, and maintain records. Performs programmatic and administrative duties requiring attention to detail, accuracy, and timeliness individually and as part of a team. Clerk must possess strong organizational skills and be able to prioritize work and meet deadlines while maintaining confidentiality of sensitive information.

TEAM CONTACT: Lead Program Specialist

JOB DETAILS:
Knowledge: This position requires the ability to develop knowledge of all Agency programs for referral of participants. Knowledge of records management, broad computer software applications, multi-line phone systems, administrative/clerical and office procedures is a must.
Abilities: This position requires demonstrated customer service skills the ability to hear spoken words clearly, pay attention to detail, accuracy, and timeliness. Must be able to prioritize work and manage multiple projects, maintain confidentiality, follow verbal and written instructions, establish effective working relationships with fellow employees, supervisors, the public and maintain rapport with partners and participants. Individual must be able to perform essential job functions with or without reasonable accommodation while not endangering self or others and other duties as assigned.
Hours: Hours determined by funding availability.

EDUCATION, EXPERIENCE and CONDITIONS FOR EMPLOYMENT: The above knowledge, skills, and abilities are typically acquired through a combination of education and experience equivalent to:
- High School Diploma or equivalent; bilingual preferred but not required
- Demonstrated customer service skills.
- One to two years experience working with computer spreadsheets and performing data entry
- Experience and ability working with low-income populations

Conditions: The following abilities are mandatory for fulfillment of the job requirements:
- Bondable, insurable under SEICAA's insurance policy, and maintain a valid Idaho driver's license
- Able to work flexible hours as needed to accommodate program needs including nights and weekends
- Attends meetings, trainings, and conferences to enhance expertise and performance as scheduled by the County Coordinator including requirements of outside funding sources or agencies
- Willing to travel on Agency business at Agency reimbursement rates
- Ability to lift 50 pounds as needed
- Must successfully pass a pre-employment drug and background screening

_____ _____
Signature of employee to indicate understanding & acceptance of job description **Date**

GATEWAY COMMUNITY ACTION
JOB DESCRIPTION

Job Title: LIHEAP Intake Worker
Classification: Nonexempt
Reports to: LIHEAP Director
Date: July 2015

Summary/Objective
The LIHEAP Intake Worker will process LIHEAP applications during LIHEAP season.

Essential Functions
Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Intake information on clients relevant to the application process and statistical data for the Low Income Home Energy Assistance Program (LIHEAP).
- Advocate on behalf of clients who lack essential education and communication skills, and the ability to provide basic needs for themselves and/or families.
- Gather all required documentation required by CAK and Cabinet for Health and Family Services (CHFS) that proves that the client's household qualifies for approval for LIHEAP.
- Print, Copy, and Fax LIHEAP transmittals on a daily basis.
- Provide accurate paperwork to be submitted to the Finance Department on a daily basis.
- Create and maintain system of record keeping and maintain organized filing system of client case files and other necessary documentation that must be legible, chronological and stored in a secured location to ensure client confidentiality.
- Generate and prepare reports that are legible, accurate, and submitted on time according to the requirements set forth by GCSO, Cabinet for Health and Family Services (CHFS), CAK, etc.
- Track all services provided to clients and generate and maintain detailed records of said services.
- Observes GCSO's confidentiality policy regarding participants, records, technology, reports and staff.

Competencies

1. Attention to Detail
2. Collaboration
3. Communication
4. Customer/Clients Focus
5. Ethics and Integrity
6. Organizational Understanding
7. Professionalism
8. Reliability

Supervisory Responsibility
This position has no supervisory responsibilities.

Work Environment
This position operates in a professional office environment. This role routinely uses standard office equipment such as computers, phones, photocopiers, filing cabinets, and fax machines.

Physical Demands
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job.

While performing the duties of this job, the employee is occasionally required to stand; walk; sit; use hands to finger, handle, or feel objects, tools or controls; reach with hands and arms; climb stairs; balance; stoop, kneel, crouch or crawl; talk or hear; and taste or smell. The employee must occasionally lift or move up to 25 pounds. Specific vision abilities required by the job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

Position Type/Expected Hours of Work
This is a full-time temporary position. Days and hours of work are Monday through Friday, 8:00 a.m. to 4:30 p.m., unless otherwise noted.

Travel
Travel is primarily local during the business day, although some out-of-area may be expected.

Required Education and Experience
Minimum qualifying education is a high school diploma or GED.

Preferred Education and Experience
A bachelor's degree from an accredited university or college with a major in a human service field or related study.

Additional Eligibility Qualifications
None

Additional Requirements
Valid Kentucky driver's license, reliable transportation, and satisfactory background checks. Pass a pre-employment drug test and random drug testing as required. State required minimum vehicle liability insurance and uninsured motorist insurance. Any/all other testing or applicable checks required by local, state, or federal law.

AAP/EEO Statement
Gateway Community Action provides equal employment opportunity to all individuals regardless of their race, color, creed, religion, gender, age, sexual orientation, national origin, disability, veteran status, or any other characteristic protected by state, federal, or local law.

Other Duties
Please note this job description is not designed to cover or contain a comprehensive listing of activities, duties or responsibilities that are required of the employee for this job. Duties, responsibilities and activities may change at any time with or without notice.

Signatures
This job description has been approved by all levels of management:

Executive Director: _____ Date: _____

HR/EEO Director: _____ Date: _____

Employee signature below constitutes employee's understanding of the requirements, essential functions and duties of the position.

Employee: _____ Date: _____

Approved by Board of Directors on: _____

NORTHERN KENTUCKY COMMUNITY ACTION

FSLA Classification: non-exempt

GENERAL RESPONSIBILITY: Provides winter energy assistance eligibility determination and services to low-income clients and support to the County Neighborhood Center.

SPECIFIC RESPONSIBILITIES:

1. Assist low-income clients access temporary financial assistance for their household's winter heating costs.
2. Make appropriate referrals for other community programs, as available.
3. Assist the CountySupervisor with record maintenance including CASTiNET; the client needs assessment, NeighborhoodCenter maintenance and other duties, as assigned.

QUALIFICATIONS:

Job Information

- High school diploma or GED
- Experience in social work/human services or customer service preferred
- Organizational skills
- Computer experience, including Microsoft Office and internet research, and ability to learn specialized computer databases, as needed.
- Knowledge of county, community, agencies and resources preferred
- Good communication skills.
- Ability to work with people of diverse and varying socio-economic backgrounds.
- Ability to sit at, read, and enter data on computer for prolonged periods of time up to 75% of the time
- Ability to lift and/or carry up to 10 lbs up to 10% of the time

Send resume and letter of application to:

Human Resources Northern Kentucky Community Action Commission

717 Madison Avenue Covington, KY 41011

e-mail: humanresources@nkcac.org (mailto:humanresources@nkcac.org) Fax: 859-655-2949

No phone calls please.

- Get Into the Act (http://www.nkcac.org/get-into-the-act/)
- Rekindle Class in Pendleton County, May 16 (http://www.nkcac.org/rekindle-class-in-pendleton-county-may-16/)
- Rekindle Class on Business Development and Social Media (http://www.nkcac.org/rekindle-class-on-business-development-and-social-media/)
- Program Spotlight: MoneyCorps (http://www.nkcac.org/program-spotlight-moneycorps/)
- Celebrate Service During Kentucky Volunteer Week (http://www.nkcac.org/celebrate-service-during-kentucky-volunteer-week/)
- Rekindle Classes for Grant County (http://www.nkcac.org/rekindle-classes-for-grant-county/)
- Program Spotlight: Community Collaboration for Children (http://www.nkcac.org/program-spotlight-community-collaboration-for-children/)
- Six-Week Rekindle Course Location Change (http://www.nkcac.org/six-week-rekindle-course-location-change/)
- Rekindle Workshops Cancelled 2/17-2/18 (http://www.nkcac.org/rekindle-workshops-cancelled-217-218/)
- Free Tax Preparation Assistance (http://www.nkcac.org/free-tax-preparation-assistance/)

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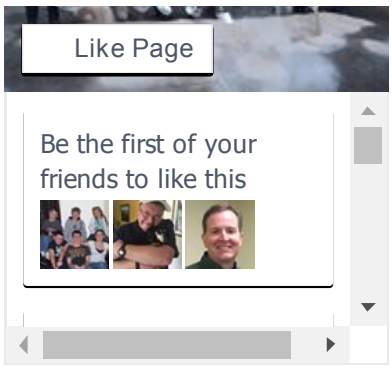

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Northern Kentucky Community Action Commission
717 Madison Ave
Covington, KY 41011
859 581 6607
800 783 6607
859 655 2949 (fax)
www.nkcac.org

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Summary Report for:
47-4099.03 - Weatherization Installers and Technicians

Updated 2016

Bright Outlook

green

Perform a variety of activities to weatherize homes and make them more energy efficient. Duties include repairing windows, insulating ducts, and performing heating, ventilating, and air-conditioning (HVAC) work. May perform energy audits and advise clients on energy conservation measures.

Sample of reported job titles: Building Analyst/Supervisor, Director of Housing and Energy Services, Energy Administrator, Energy Assistant, Energy Auditor, Energy Conservation Director, Housing Director, Lead Weatherization Installer-Technician, Weatherization Director, Weatherization Installer

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Wages & Employment | Job Openings

Tasks

5 of 17 displayed

- Test and diagnose air flow systems, using furnace efficiency analysis equipment.
- Inspect buildings to identify required weatherization measures, including repair work, modification, or replacement.
- Maintain activity logs, financial transaction logs, or other records of weatherization work performed.
- Apply insulation materials such as loose, blanket, board, and foam insulation to attics, crawl spaces, basements, or walls.
- Prepare or assist in the preparation of bids, contracts, or written reports related to weatherization work.

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Tools & Technology

10 of 70 displayed

Tools used in this occupation:

- Leak testing equipment — Blower doors; Smoke generators
- Power saws — Circular saws; Reciprocating saws
- Screwdrivers — Phillips head screwdrivers; Straight screwdrivers
- Squares — Combination squares; Framing squares
- Voltage or current meters — Digital voltmeters DVM; Non-contact voltage detectors

Technology used in this occupation:

- Customer relationship management CRM software — Salesforce.com Salesforce CRM
- Data base user interface and query software — Energy use ratings databases; Microsoft Access
- Office suite software — Microsoft Office software
- Operating system software — Microsoft Windows
- Word processing software — Microsoft Word

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Knowledge

5 of 6 displayed

- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

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Skills

5 of 9 displayed

- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Monitoring — Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.
- Speaking — Talking to others to convey information effectively.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

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Abilities

5 of 19 displayed

- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Manual Dexterity — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- Near Vision — The ability to see details at close range (within a few feet of the observer).
- Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Oral Expression — The ability to communicate information and ideas in speaking so others will understand.

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Work Activities

5 of 30 displayed

- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Making Decisions and Solving Problems — Analyzing information and evaluating results to choose the best solution and solve problems.
- Performing for or Working Directly with the Public — Performing for people or dealing directly with the

public. This includes serving customers in restaurants and stores, and receiving clients or guests.

- Performing General Physical Activities — Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.

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Detailed Work Activities

5 of 14 displayed

- Prepare operational reports.
- Inspect work sites to determine condition or necessary repairs.
- Inspect completed work to ensure proper installation.
- Clean equipment or facilities.
- Record operational or environmental data.

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Work Context

5 of 36 displayed

- Face-to-Face Discussions — 86% responded “Every day.”
- Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets — 67% responded “Every day.”
- Work With Work Group or Team — 66% responded “Extremely important.”
- Outdoors, Exposed to Weather — 73% responded “Every day.”
- Telephone — 69% responded “Every day.”

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Job Zone

Title	Job Zone Two: Some Preparation Needed
Education	These occupations usually require a high school diploma.
Related Experience	Some previous work-related skill, knowledge, or experience is usually needed. For example, a teller would benefit from experience working directly with the public.
Job Training	Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations often involve using your knowledge and skills to help others. Examples include sheet metal workers, forest fire fighters, customer service representatives, physical therapist aides, salespersons (retail), and tellers.
SVP Range	(4.0 to < 6.0)

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Education

Percentage of Respondents	Education Level Required

55 High school diploma or equivalent ?

28 Post-secondary certificate ?

7 Less than high school diploma

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Credentials

Find Apprenticeships

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Interests

All 2 displayed

Interest code: RC

- Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

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Work Styles

5 of 16 displayed

- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Integrity — Job requires being honest and ethical.
- Self Control — Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.
- Concern for Others — Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.

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Work Values

All 3 displayed

- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Relationships — Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
- Working Conditions — Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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Wages & Employment Trends

Median wages data collected from Construction and Related Workers, All Other.
Employment data collected from Construction and Related Workers, All Other.
Industry data collected from Construction and Related Workers, All Other.

Median wages (2014)	$17.02 hourly, $35,400 annual
State wages	Local Salary Info
Employment (2014)	35,000 employees
Projected growth (2014-2024)	Average (5% to 8%)
Projected job openings (2014-2024)	7,800
State trends	Employment Trends
Top industries (2014)	Construction Government

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

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O*NET OnLine

Summary Report for:
49-9021.01 - Heating and Air Conditioning Mechanics and Installers

Updated 2016

Bright Outlook

green

Install, service, or repair heating and air conditioning systems in residences or commercial establishments.

Sample of reported job titles: A/C Tech (Air Conditioning Technician); HVAC Installer (Heating, Ventilation, Air Conditioning Installer); HVAC Mechanic (Heating, Ventilation, Air Conditioning Mechanic); HVAC Service Tech (Heating, Ventilation, Air Conditioning Service Technician); HVAC Service Technician (Heating, Ventilation, Air Conditioning Service Technician); HVAC Specialist (Heating, Ventilation, and Air Conditioning Specialist); HVAC Technician (Heating, Ventilation, Air Conditioning Technician); HVAC Technician (Heating, Ventilation, and Air Conditioning Technician); Service Technician; Systems Mechanic

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Related Occupations | Wages & Employment | Job Openings | Additional Information

Tasks

5 of 26 displayed

- Test pipe or tubing joints or connections for leaks, using pressure gauge or soap-and-water solution.
- Test electrical circuits or components for continuity, using electrical test equipment.
- Repair or replace defective equipment, components, or wiring.
- Discuss heating or cooling system malfunctions with users to isolate problems or to verify that repairs corrected malfunctions.
- Repair or service heating, ventilating, and air conditioning (HVAC) systems to improve efficiency, such as by changing filters, cleaning ducts, or refilling non-toxic refrigerants.

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Tools & Technology

10 of 112 displayed

Tools used in this occupation:

- Multimeters — Autoranging meters; Clamp-on multimeters
- Power saws — Circular saws; Jig saws; Reciprocating saws
- Pressure indicators — Differential pressure detectors; Pneumatic air gauges; Refrigerant pressure meters; Water pressure gauges
- Screwdrivers — Flared tip screwdrivers; Phillips head screwdrivers; Slotted screwdrivers
- Voltage or current meters — Alternating current AC line splitters; Electrical current meters; Heating ventilation and air-conditioning/refrigeration HVAC/R clamp meters; Voltmeters

Technology used in this occupation:

- Customer relationship management CRM software — Contact management systems
- Data base user interface and query software — Data logging software; Database software

- Graphics or photo imaging software — Graphics software
- Spreadsheet software — Microsoft Excel
- Word processing software — Atlas Construction Business Forms; Microsoft Word

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Knowledge

5 of 9 displayed

- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Design — Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- Physics — Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.

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Skills

5 of 19 displayed

- Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Installation — Installing equipment, machines, wiring, or programs to meet specifications.
- Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Troubleshooting — Determining causes of operating errors and deciding what to do about it.
- Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.

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Abilities

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- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Finger Dexterity — The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.
- Near Vision — The ability to see details at close range (within a few feet of the observer).
- Visualization — The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Manual Dexterity — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.

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Work Activities

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- Repairing and Maintaining Mechanical Equipment — Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.
- Updating and Using Relevant Knowledge — Keeping up-to-date technically and applying new knowledge to your job.
- Making Decisions and Solving Problems — Analyzing information and evaluating results to choose the best solution and solve problems.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects — Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.

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Detailed Work Activities

5 of 21 displayed

- Cut materials according to specifications or needs.
- Repair worn, damaged, or defective mechanical parts.
- Replace worn, damaged, or defective mechanical parts.
- Fabricate parts or components.
- Position equipment using hand tools, power tools, or heavy equipment.

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Work Context

5 of 38 displayed

- Face-to-Face Discussions — 74% responded “Every day.”
- Outdoors, Exposed to Weather — 69% responded “Every day.”
- Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls — 58% responded “Continually or almost continually.”
- Telephone — 72% responded “Every day.”
- In an Enclosed Vehicle or Equipment — 79% responded “Every day.”

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Job Zone

Title	Job Zone Three: Medium Preparation Needed
Education	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.
Related Experience	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Job Training	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include food

service managers, electricians, agricultural technicians, legal secretaries, occupational therapy assistants, and medical assistants.

SVP Range (6.0 to < 7.0)

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Education

Percentage of Respondents	Education Level Required
55	Post-secondary certificate
16	Associate's degree
13	High school diploma or equivalent

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Credentials

Find Training | Find Certifications | Find Licenses | Find Apprenticeships

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Interests

All 3 displayed

Interest code: RCI

- Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
- Investigative — Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

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Work Styles

5 of 16 displayed

- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Independence — Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
- Analytical Thinking — Job requires analyzing information and using logic to address work-related issues and problems.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Initiative — Job requires a willingness to take on responsibilities and challenges.

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Work Values

All 3 displayed

- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Independence — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
- Working Conditions — Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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Related Occupations

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47-2111.00	Electricians
47-4021.00	Elevator Installers and Repairers
49-3051.00	Motorboat Mechanics and Service Technicians
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door
49-9021.02	Refrigeration Mechanics and Installers Bright Outlook Green

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Wages & Employment Trends

Median wages data collected from Heating, Air Conditioning, and Refrigeration Mechanics and Installers.
Employment data collected from Heating, Air Conditioning, and Refrigeration Mechanics and Installers.
Industry data collected from Heating, Air Conditioning, and Refrigeration Mechanics and Installers.

Median wages (2014)	$21.46 hourly, $44,630 annual
State wages	Local Salary Info
Employment (2014)	292,000 employees
Projected growth (2014-2024)	Much faster than average (14% or higher)
Projected job openings (2014-2024)	84,200
State trends	Employment Trends
Top industries (2014)	Construction

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

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Sources of Additional Information

All 1 displayed

Disclaimer: Sources are listed to provide additional information on related jobs, specialties, and/or industries. Links to non-DOL Internet sites are provided for your convenience and do not constitute an endorsement.

- Heating, air conditioning, and refrigeration mechanics and installers. Bureau of Labor Statistics, U.S. Department of Labor. Occupational Outlook Handbook, 2016-17 Edition.

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O*NET OnLine

Summary Report for:

49-9098.00 - Helpers--Installation, Maintenance, and Repair Workers

Updated 2015

green

Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.

Sample of reported job titles: Building Equipment Operator (BEO), Facilities Maintenance Technician, General Maintenance Mechanic, Helper, Maintenance Helper, Maintenance Mechanic, Maintenance Technician, Mechanic Helper, Trades Helper, Well Tender

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Related Occupations | Wages & Employment | Job Openings

Tasks

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- Transfer tools, parts, equipment, and supplies to and from work stations and other areas.
- Disassemble broken or defective equipment to facilitate repair and reassemble equipment when repairs are complete.
- Install or replace machinery, equipment, and new or replacement parts and instruments, using hand or power tools.
- Examine and test machinery, equipment, components, and parts for defects to ensure proper functioning.
- Hold or supply tools, parts, equipment, and supplies for other workers.

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Tools & Technology

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Tools used in this occupation:

- Hoists — Chain hoists; Hi-los; Power hoists
- Levels — Automatic levels; Carpenters' levels; Torpedo levels
- Pneumatic hammer — Air chisels; Jackhammers; Pneumatic hammers
- Power saws — Circular saws; Reciprocating saws; Saber saws
- Screwdrivers — Phillips head screwdrivers; Straight screwdrivers

Technology used in this occupation:

- Facilities management software — Facility energy management software
- Office suite software — Microsoft Office software
- Operating system software — Microsoft Windows
- Spreadsheet software — Microsoft Excel
- Word processing software — Atlas Construction Business Forms; Microsoft Word

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Knowledge

All 2 displayed

- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

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Skills

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- Operation Monitoring — Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Equipment Maintenance — Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Repairing — Repairing machines or systems using the needed tools.

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Abilities

5 of 26 displayed

- Control Precision — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- Manual Dexterity — The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- Arm-Hand Steadiness — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- Multilimb Coordination — The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.
- Near Vision — The ability to see details at close range (within a few feet of the observer).

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Work Activities

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- Operating Vehicles, Mechanized Devices, or Equipment — Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.
- Communicating with Supervisors, Peers, or Subordinates — Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities — Performing physical activities that require considerable use of

your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

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Detailed Work Activities

5 of 22 displayed

- Order materials, supplies, or equipment.
- Test mechanical equipment to ensure proper functioning.
- Clean equipment, parts, or tools to repair or maintain them in good working order.
- Maintain work equipment or machinery.
- Move materials, equipment, or supplies.

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Work Context

5 of 24 displayed

- Face-to-Face Discussions — 90% responded “Every day.”
- Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls — 68% responded “Continually or almost continually.”
- Telephone — 72% responded “Every day.”
- Contact With Others
- Spend Time Standing

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Job Zone

Title	Job Zone Two: Some Preparation Needed
Education	These occupations usually require a high school diploma.
Related Experience	Some previous work-related skill, knowledge, or experience is usually needed. For example, a teller would benefit from experience working directly with the public.
Job Training	Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations often involve using your knowledge and skills to help others. Examples include sheet metal workers, forest fire fighters, customer service representatives, physical therapist aides, salespersons (retail), and tellers.
SVP Range	(4.0 to < 6.0)

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Education

Percentage of Respondents	Education Level Required
51	High school diploma or equivalent
28	Less than high school diploma
19	Post-secondary certificate

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Credentials

Find Certifications Find Apprenticeships

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Interests

All 3 displayed

Interest code: RCI

- Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
- Investigative — Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

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Work Styles

5 of 13 displayed

- Cooperation — Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Integrity — Job requires being honest and ethical.
- Self Control — Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.

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Work Values

All 3 displayed

- Relationships — Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.
- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Independence — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

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Related Occupations

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47-2151.00	Pipelayers
47-3013.00	Helpers--Electricians Bright Outlook
47-4061.00	Rail-Track Laying and Maintenance Equipment Operators
49-3021.00	Automotive Body and Related Repairers
51-2031.00	Engine and Other Machine Assemblers Green

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Wages & Employment Trends

Median wages (2014)	$12.21 hourly, $25,390 annual
State wages	Local Salary Info
Employment (2014)	129,000 employees
Projected growth (2014-2024)	Faster than average (9% to 13%)
Projected job openings (2014-2024)	53,800
State trends	Employment Trends
Top industries (2014)	Other Services (Except Public Administration) Construction

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

Find Jobs Job Banks

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O*NET OnLine

Summary Report for:
47-4099.02 - Solar Thermal Installers and Technicians

Updated 2016

Bright Outlook

green

Install or repair solar energy systems designed to collect, store, and circulate solar-heated water for residential, commercial or industrial use.

Sample of reported job titles: Installer, Maintenance Technician, Service Technician, Solar Energy Technician, Solar Hot Water Installer (SHW Installer), Solar Installer, Solar Maintenance Technician, Solar System Installer, Solar Technician, Solar Thermal Installer

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Wages & Employment | Job Openings

Tasks

5 of 21 displayed

- Test operation or functionality of mechanical, plumbing, electrical, and control systems.
- Apply weather seal, such as pipe flashings and sealants, to roof penetrations and structural devices.
- Install solar collector mounting devices on tile, asphalt, shingle, or built-up gravel roofs, using appropriate materials and penetration methods.
- Install copper or plastic plumbing using pipes, fittings, pipe cutters, acetylene torches, solder, wire brushes, sand cloths, flux, plastic pipe cleaners, or plastic glue.
- Identify plumbing, electrical, environmental, or safety hazards associated with solar thermal installations.

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Tools & Technology

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Tools used in this occupation:

- Ladders — Extension ladders; Fiberglass extension ladders
- Locking pliers — Channel lock pliers; Vise grip pliers
- Pipe wrenches — Large pipe wrenches; Medium pipe wrenches
- Power drills — Cordless drills; Impact drills; Right-angle drills
- Power saws — Jig saws; Reciprocating saws

Technology used in this occupation:

- Electronic mail software — Microsoft Outlook
- Office suite software — Microsoft Office software
- Project management software — Cost estimating software
- Spreadsheet software — Microsoft Excel
- Word processing software — Microsoft Word

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Knowledge

5 of 12 displayed

- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

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Skills

5 of 16 displayed

- Installation — Installing equipment, machines, wiring, or programs to meet specifications.
- Quality Control Analysis — Conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

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Abilities

5 of 22 displayed

- Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Near Vision — The ability to see details at close range (within a few feet of the observer).
- Speech Recognition — The ability to identify and understand the speech of another person.
- Extent Flexibility — The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.
- Oral Expression — The ability to communicate information and ideas in speaking so others will understand.

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Work Activities

5 of 26 displayed

- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Communicating with Supervisors, Peers, or Subordinates — Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Thinking Creatively — Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.
- Performing General Physical Activities — Performing physical activities that require considerable use of

your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

- Interpreting the Meaning of Information for Others — Translating or explaining what information means and how it can be used.

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Detailed Work Activities

5 of 16 displayed

- Maintain mechanical equipment.
- Pour materials into or on designated areas.
- Cut carpet, vinyl or other flexible materials.
- Determine appropriate locations for operations or installations.
- Test electrical equipment or systems to ensure proper functioning.

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Work Context

5 of 37 displayed

- Freedom to Make Decisions — 77% responded “A lot of freedom.”
- Time Pressure — 55% responded “Every day.”
- Frequency of Decision Making — 60% responded “Every day.”
- Structured versus Unstructured Work — 46% responded “A lot of freedom.”
- Deal With External Customers — 51% responded “Extremely important.”

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Job Zone

Title	Job Zone Three: Medium Preparation Needed
Education	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.
Related Experience	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Job Training	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include food service managers, electricians, agricultural technicians, legal secretaries, occupational therapy assistants, and medical assistants.
SVP Range	(6.0 to < 7.0)

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Education

Percentage of

Respondents	Education Level Required
43	High school diploma or equivalent
25	Some college, no degree
11	Bachelor's degree

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Credentials

Find Certifications

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Interests

All 2 displayed

Interest code: RC

- Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

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Work Styles

5 of 16 displayed

- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Integrity — Job requires being honest and ethical.
- Cooperation — Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.
- Adaptability/Flexibility — Job requires being open to change (positive or negative) and to considerable variety in the workplace.

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Work Values

All 3 displayed

- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Achievement — Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.
- Working Conditions — Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working

Conditions.

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Wages & Employment Trends

Median wages data collected from Construction and Related Workers, All Other.
Employment data collected from Construction and Related Workers, All Other.
Industry data collected from Construction and Related Workers, All Other.

Median wages (2014)	$17.02 hourly, $35,400 annual
State wages	Local Salary Info
Employment (2014)	35,000 employees
Projected growth (2014-2024)	Average (5% to 8%)
Projected job openings (2014-2024)	7,800
State trends	Employment Trends
Top industries (2014)	Construction Government

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

Find Jobs Job Banks

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Energy Efficiency Installation Technician (Elysian Energy in Silver Spring, MD)

Elysian Energy is the area's leading provider of residential energy efficiency services. Our motto, "Lower Bills ~ Lower Impact ~ Higher Value"© speaks directly to our mission of reducing consumption and environmental impact while enhancing both comfort and value in the home. www.elysianenergy.com

Energy Efficiency Installation Technician

Now accepting applications for energy efficiency installation technicians to staff BGE and PEPCO's Quick Home Energy Check-up program. This is a temporary, full-time position with competitive hourly compensation and health benefits. Service areas may include some or all of the following areas: Montgomery, Prince George's, Howard, Carroll, and Baltimore Counties as well as Baltimore City.

A 'boots on the ground' position offers the opportunity to install energy- and water-saving measures into thousands of homes. Every visit you make is an opportunity to create a measurable difference in a homeowner's bills and their carbon footprint.

Responsibilities

- Install and answer questions pertaining to various energy saving products such as CFLs, aerators, showerheads, pipe wrap, etc.
- Communicate installation statistics to auditors and administrative staff

Qualifications

We will train all motivated candidates with preference given to those with the following:

- A recognized green building or retrofit certification
- Strong verbal communication skills
- Familiarity with residential construction and/or building science
- Ability to absorb, process, utilize and communicate technical concepts

Requirements

- Must have valid driver's license with clean driving record and reliable access to an insured vehicle
- Must be able to pass background and reference checks, as well as drug testing
- Must be able to lift 20 pounds and maintain a fast work pace over an extended period of time
- Must be able to thrive in a team environment

The ideal candidate is energetic, personable and self-motivated with a demonstrated passion for contributing to the sustainability movement.

Energy efficiency technician

Advanced Energy Efficiency and Environmental Quality (AE3Q) is dedicated to helping homeowners and small business owners make the places they live and work healthy, comfortable and energy efficient.

AE3Q is currently accepting applications for energy efficiency technicians, who perform the improvements and repairs recommended by energy auditors, to join our team.

Salary Range: $8 to $12 per hour, depending on skills and experience
Position is a 1099 contractor or part time employee: No benefits at this time

PREFERRED QUALIFICATIONS:

- BPI Building Analyst certification
- Knowledge of building construction
- Experience or training in construction trades, such as HVAC, electrical, insulation or carpentry
- Experience operating test equipment including blower doors, thermal imaging cameras, CO meters, duct blasters, etc.

REQUIRED QUALIFICATIONS:

- High School Diploma/GED (or actively pursuing a GED)
- Strong interest to learn and implement energy efficiency and environmental quality measures in homes/businesses.
- Good communication skills
- Must possess valid driver's license, good driving record and provide proof of current automobile insurance

KNOWLEDGE, SKILLS, ABILITIES:

- Must have the ability to work well with limited supervision
- Basic math skills, including geometry
- Knowledge of HVAC systems and any appliances very helpful
- Knowledge of framing, insulation installation very helpful
- Must have good analytical and problem solving abilities
- Ability to lift in excess of 75 lbs
- Ability to work in small spaces (i.e. attics, crawl spaces)

DUTIES:

- Assist energy auditors in performing diagnostic testing of homes and small businesses
- Perform duct sealing and envelope sealing in attics and crawl spaces
- Install insulation in attics and crawl spaces
- Maintain compliance
- Attend weekly training meetings at AE3Q office
- Ensure sufficient and appropriate materials and equipment are brought to job site
- Take refresher courses as needed for continued competency and to maintain certifications, if any
- Maintain a professional atmosphere, making sure client confidentiality is maintained
- Clean and maintain company-issued equipment daily
- Account for material and time used on each job, and completes paperwork daily
- Abide by all safety rules set forth by company and governmental regulatory agencies and ensures that hazardous conditions are reported and corrected
- Other duties as assigned

AE3Q will provide testing equipment and laptop computer. Applicant must provide own transportation to job sites throughout Phoenix Metropolitan area.

Interested applicants can apply by responding to this posting via email with a complete resume and professional references.

For more information about Advanced Energy Efficiency & Environmental Quality, go to our website at: ae3q.com

We are committed to promoting diversity and welcome applications from all qualified individuals.

AE3Q is a drug free workplace.

Home Energy Technician

Location:
Powersmith Home Energy Solutions, Copiague, NY

Would you like to put your customer service and technical/administrative skills to use in a new industry with an unprecedented market opportunity?

Are you interested in making a difference for people and the planet on a daily basis?

Are you interested in energy efficiency?

If so, join the next energy revolution. Powersmith Home Energy Solutions is dedicated to making every home a more comfortable, energy efficient, and healthy environment. We focus on the home as a system and provide customized improvements that raise homes' energy performance level to today's standards. Using building science technology, Powersmith Home Energy Solutions' specially trained and certified technicians perform a thorough home performance audit, analyze the resulting data, and then we implement the residential construction solutions that meet our clients' needs.

We are looking for hard-working and honest people interested in making a positive impact on people's lives and the environment. Candidates must possess an entrepreneurial spirit that thrives in a fast-paced, demanding work setting and be willing to dedicate him/herself to the Powersmith company culture.

Position Overview

This is a full time position. The successful candidate will gain real-workd experience in the energy efficiency field, along with an understanding of building science principles and the positive impact energy efficiency installation measures have on our residential structures. This is an administrative and field technician position in which you will be included in team meetings and work with Executive level Sales and Construction staff; specifically the heads of our Customer Acquisition, Sales, and Construction departments. Daily hours for this position may vary, but are predominantly 8am-6pm, Monday through Friday. Applicants must be available to work an adjusted schedule of Monday and Wednesday through Saturday, when needed.

We are looking for our next Home Energy Technician (HET). HETs act as a support system to our professional Home Energy Specialist (Sales) staff by creating energy efficient residential building models that are delivered to New York State residents in need of utility cost control and improved comfort in their homes.

Job Requirements

- **Building Performance Institute (BPI) certifications in Building Analyst and Envelope Professional, is a MUST**
- **1 year experience working as a Home Energy Technician**
- Maintain established standards of quality and accuracy
- Possess determination and self-discipline
- Possess strong communication and organizational skills
- Handle multiple simultaneous tasks/projects
- Perform roughly 7 home energy audits (assessments) per week
- Gather all relevant data during each audit and develop a whole home energy efficiency solution
- Generate approved scopes of work that guarantee energy efficiency improvements to residential building structures
- Communicate with Sales and Construction management on a daily basis to guarantee that top quality product/solution is offered to clients
- Must have a valis and CLEAN New York State Driver's License in order to drive a company vehicle
- Able to pass a criminal background check and provide work references

Preferred, but not required

Experience in sales, service, and/or distribution of mechanical systems equipment, to include: boilers, central air conditioning (HVAC), furnaces, and hot water heaters.

We are looking for a hard worker who believes in our mission, sees the opportunity in residential energy efficiency, and will ultimately be a strong addition to our team and company culture.

Reporting Relationship

Home Energy Technicians will report to the Vice President of Production, Auditing Foreman, and Lead Home Energy Technician.

You Must Have

1. Strong ambition for building a premium service for homeowners
2. Internally motivated to do first-class quality and professional work
3. Comfortable putting team goals ahead of individual goals
4. Comfortable communicating effectively with a team to create a better work experience
5. Must be coachable

Compensation

Annual compensation expectation: $40,000 to $65,000 plus the opportunity for vacation and medical benefits packages. This is a salary position, with pay determined by tiered scale that is measured on your ability to apply training we provide in your daily duties. Benefits include health care and dental as well as 10 days paid vacation, 3 paid sick days, and 6 holidays; all granted upon successful completion of an entry level probation period that is monitored by Exexcutive and Senior Sales and Production staff.

Energy Efficiency & Insulation Installers (Installation Technician / Team Leader)

Job Title: Installation Technician / Team Leader
Reporting to: Installation Manager
Term: Permanent, Full Time
Deadline: ASAP
Package: Salary + Performance Related Pay
Location: SW London (Earlsfield)

The role:

Q-Bot is currently looking to hire Energy Efficiency Installers (Installation Technicians and Team Leaders) to assist the delivery of the current installations and help the business to scale. Experience within the construction industry is necessary and experience as a Carpenter or Builder highly desirable.

The successful candidate must be willing to get their hands dirty, take a lead on site and make things happen as well as working in the office to feedback to the team and prepare reports. The role will be hands on and involve both on-site and off-site training with a view of gaining growing independence and increasing management responsibilities in line with the delivery of larger programs of work and a growing team. The successful candidate will also engage with the R&D team feeding back from site problems and improvements, testing new solutions and helping to run experiments both in the field and the lab.

This is an excellent opportunity to get involved with a high tech, high growth company and work within a creative and dynamic team. To make the most of this exciting opportunity Q-Bot is looking for someone who is ambitious, driven and who will be motivated by seeing their efforts have a real and lasting impact. The successful candidate will be rewarded with an exciting, diverse and demanding role which has many opportunities for career progression.

Due to the nature of the start-up environment this is a multi-disciplinary and varied role which involves challenges across a diverse range of areas. Therefore it is expected that the successful candidate may not have direct experience of all the functional areas, but must be willing to learn new skills and training will be provided where relevant. Salary will depend on experience and the successful candidate will also be invited to take part in the Employee Share Option Plan (ESOP) and / or performance related pay.

Description:

Q-Bot is at the forefront of robotics, sustainability and the built environment and counts Camden Council, Cardiff Council, CityWest Homes and Peabody among its first customers. The company has been identified as one of the seven innovation wonders of the construction world (please see http://q-bot.co/news.php for our current news coverage) and has been highlighted as 'one to watch' by the UK Government, Guardian and the Financial Times. The intelligent tools developed by Q-Bot have a number of benefits:

- They empower operators, making them more efficient and productive.
- They allow easier, cheaper, safer and more effective execution of tasks than traditionally possible.
- They create buildings that are energy efficient, cheaper to run and much more comfortable.

The company has a highly innovative technology platform with many exciting applications, a creative approach to s tackling climate change, combined with a strong social agenda, helping people in fuel poverty and working with our customers to ensure a positive impact within the local community that we serve. The company's offices are based in Earlsfield (South West London), and include a lab and workshop with state of the art facilities.

Main duties and responsibilities

Site activities relating to insulating of existing homes with robots including surveying, preparation, applying spray foam insulation (predominantly by remotely controlled devices under the floor), making good and maintenance of hardware.

- Executing tasks on site including carpentry and general building work.
- Retrofit of insulation including the application of PU spray foam or blown wool products.
- Surveying sites and supporting sales activities.
- Assisting with installations, including liaising with the management, customers and contractors.
- Implementation of site health and safety, risk assessments and method statements.
- Ensuring quality control and customer satisfaction.
- Keeping accurate records, developing systems where necessary to ensure appropriate records
- Supporting tests and demonstrations to meet accreditation requirements.
- Undertaking any other tasks/duties as may be reasonably required.

Essential requirements:

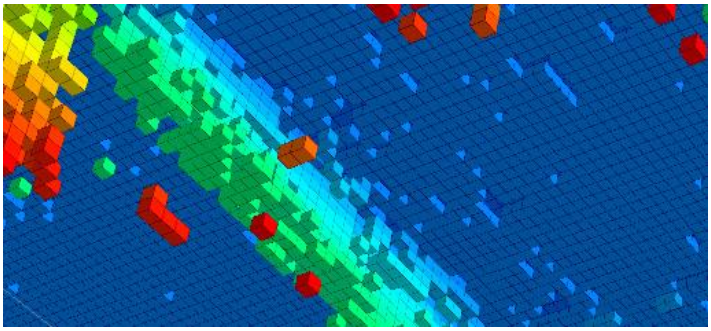
- Full UK Driver's License with residency in the UK for a minimum of 3 years.
- Knowledge and practical experience working in the built environment and construction industry.
- Able to plan projects, mange time, resources, and work to deadlines.
- Drive and determination to get the job done.
- Showing initiative and diligent in their approach.
- Able to work effectively both as part of a team and individually.
- Capable of dealing with uncertainty.
- Willingness to embrace and thrive in the creative, driven and often challenging start-up environment.
- Excellent written and verbal communication skills (English).
- Must be eligible to work in the UK without restriction.

Desirable:

- Experience of spray foam insulation and its application.
- Construction and carpentry qualifications.
- Experience of quality control or health and safety requirements.

We are an equal opportunities employer and welcome applications from all suitably qualified persons regardless of their race, sex, disability, religion, belief, sexual orientation or age. **Please apply to: future@q-bot.co**

No recruitment agents thank you.



HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION TECHNICIAN

Classification: OS

Function of Job:

Under general supervision of designated supervisor, perform all duties related to the installation, service, repair, maintenance and operation of heating, ventilation, air conditioning, air compressors, and refrigeration equipment and related electronic, electric and pneumatic control systems.

Characteristic Duties and Responsibilities:

1. Install, service, repair, maintain, operate and adjust electronic, electric and/or pneumatic control systems for heating, ventilation, air conditioning, humidification, air pressure, dehumidification and laboratory equipment including calibration of related instruments, gauges and controls.
2. Install, service, repair, maintain, operate and adjust all types of industrial, commercial and residential mechanical refrigeration, compressor, and air conditioning systems, including heat pumps, ventilation, and ventilating equipment, for all laboratory equipment, food service equipment and air dryers.
3. Install, service, repair, maintain, operate and adjust all oil and gas fired appliances as well as auxiliary heating specialties other than high pressure equipment.
4. Service, repair, maintain and operate mechanical cooling towers and associated chemical feed/monitor systems.
5. Conduct necessary tests, including standard industry approved trouble shooting methods to determine malfunctions and/or causes of breakdowns of all assigned equipment; remove, repair or replace faulty parts, subassemblies and major components; retest equipment with repaired or replaced components and make required adjustments and/or corrections to restore complete/proper operation.
6. Recommend and/or order necessary parts and supplies for installation, service, repair and maintenance of all assigned equipment.
7. Service, repair, maintain and operate air compressors/air stations for building pneumatic controls and sprinkler systems.
8. Instruct and advise users and/or owners of proper operation and maintenance of equipment.
9. Carry call-back pager on a rotational basis with other technicians to respond to emergency situations on a twenty-four hour, seven day, basis.
10. Direct other mechanics/trades persons in all aspects of heating, ventilation, air conditioning, refrigeration, and air compressors, and related duties.
11. Service, repair, maintain, adjust and calibrate gas and electric ovens and grills.
12. Install additional electronic, electrical, plumbing and/or pneumatic components to improve or enhance performance, or to adapt to existing systems.
13. Review work with State Inspectors, as required, to ensure compliance with State regulations.
14. Report, organize and maintain all necessary records of materials purchased/work performed to service, repair, maintain and operate all equipment, including applicable records/paperwork associated with EPA mandates and refrigerant transition/recovery.
15. Perform other related duties, as assigned.

Minimum Acceptable Qualifications:

1. Technical school graduation or equivalent apprenticeship in heating, ventilation, air conditioning, refrigeration, and air compressors, and three years experience at the journey level.
2. Ability to read, comprehend and follow heating, ventilation, air conditioning, refrigeration, and air compressors, and electrical blueprints and schematics.
3. Thorough knowledge of heating, ventilation, air conditioning, air pressure, and refrigeration equipment and electronic, electric and pneumatic control systems, as applicable to trade specialty.
4. Thorough knowledge of materials, methods and hazards of the heating, ventilation, air conditioning, refrigeration, and air compressors, trade with proficiency in the use of related tools.
5. Ability to climb ladders and work in high places and confined spaces.
6. Ability to perform delicate and intricate repairs.
7. Knowledge of local and national Fire Underwriters Code and ASHREA Standards for the heating, ventilation, air conditioning, refrigeration, and air compressors, industry.
8. Must have certificate of completion for refrigerant transition/recovery and be certified as universal.
9. Sufficient strength and physical dexterity to perform the duties and responsibilities of this job including heavy lifting.
10. Ability to wear and use personal protective equipment, as needed (including respirator, subject to pulmonary test.)
11. Valid motor vehicle operators license, if required.

Additional Desirable Qualifications:

1. Basic computer skills.
2. Knowledge of, and experience in, indoor air quality (IAQ) investigation and problem solving.
3. Additional experience beyond minimum required.

System Approval: 5/3/2006

Effective Date: 5/3/2006

This document is a generic classification specification of the University System of New Hampshire. Its purpose is to describe the representative responsibilities and general level of complexity, and it is not a substitute for the specific job description of the individual position.

*** NOTE: Revised – original approved 5/19/95 ***

Energy Conservation Technician II Job Description

Company Location Code:

FLSA Status (Exempt/Non-Exempt): Non-Exempt

Classification: Hourly

Reports to: Energy Conservation Crew Lead

Job Grade: II

Approval Date: 3/1/2010

Last Revised Date:

Purpose of the Job:

The Energy Conservation Technician II will be working under a Crew Lead to weatherize homes for utility programs and weatherization agencies to reduce consumer energy bills.

Essential Primary Functions:

1. Serves as a representative of EIC, Inc. ComfortHome Partners displaying courtesy, tact, consideration, and discretion in all interactions with clients and with the public.
2. Ability to drive from customer site to customer site with a valid driver's license.
3. Installation of energy savings measures including lighting, thermostats, and CO detectors.
4. Installation of energy savings measures including attic insulation (batts and blown), caulking, sealing, and weather stripping.
5. Ability to run and work with blower doors
6. Perform minor and incidental structural repairs to include windows, and doors
7. Install solar film.
8. Install HVAC FA dampers, chimney flash, and fan replacements
9. Proficient with window and door installation and replacements
10. Proficient with access cut outs including roof penetrations.
11. Proficient with dense pack floors.
12. Proficient with all aspects of side wall installation to include; prep, removal, and drilling.
13. Calculate materials needed for job scope.

Other Functions:

1. Assist with loading and unloading work trucks
2. Assist with keeping the job site tidy, organized and safe
3. Assist with customer site job set up and tear down
4. Assist with restocking inventory in work trucks
5. Ability read job scope and identify additional work opportunities

Supervisory Responsibilities:

1. This position does not have any supervisory responsibilities

Core Competencies:

1. **Interpersonal**: The individual focuses on solving conflict, not blaming; listens to others without interrupting; keeps emotions under control.
2. **Teamwork**: The individual balances team and individual responsibilities, exhibits objectivity and openness to others' views, contributes to building a positive team spirit and is able to build morale and group commitments to goals and objectives.
3. **Planning/Organizing**: The individual prioritizes and plans work activities and uses time efficiently.
4. **Quality**: The individual demonstrates accuracy and thoroughness, looks for ways to improve and promote quality, applies feedback to improve performance, and monitors own work to ensure quality.
5. **Quantity**: The individual meet productivity standards and completes work in a timely manner.
6. **Safety and Security**: The individual observes safety and security procedures and uses equipment and materials properly
7. **Dependability**: The individual is consistently at work and on time, follows instructions, responds to management direction, commits to long hours of work when necessary to reach goals and completes tasks on time or proposes an alternate plane to the appropriate team member.

Skills and Equipment Knowledge Requirements:

1. Ability to read and comprehend basic instructions
2. Ability to utilize common hand tools
3. Ability to measure, cut, and prepare for energy savings installation

Education and/or Experience:

1. High School Diploma or equivalent
2. Preferred 2 years of relevant construction experience.

Certifications and/or Licenses:

1. Valid Driver's License with clean safety driving record
2. Clean Criminal history
3. OSHA certification
4. Weatherization Installation Certification

Physical Demands:

He physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of the job.

1. Have full range of mobility in upper and lower body.
2. Be able to reach overhead
3. Be able to work in various positions, including but not limited to: stooping, standing, bending over, sitting, kneeling, and squatting for extended periods of time.
4. Be able to lift, pull and push materials and equipment to complete assigned tasks.
5. Be able to lift 50 pounds of weight frequently throughout the assigned workday.

Work Environment:

1. Frequent and regular exposure to outdoor weather temperatures and conditions.
2. Frequent and regular exposure to elements such as odor, noise, dust, heat, cold and fiberglass.

The above statements are intended to describe the general nature and level of the work being performed by people assigned to this work. This is not an exhaustive list of all duties and responsibilities associated with it. EIC, Inc. management reserves the right to amend and change responsibilities to meet business and organizational needs.

Acknowledgement

I have reviewed and understand the above job description and believe it to be accurate and complete, and I can successfully fulfill each duty and task. I also agree management retains the right to change this job description at any time.

_____ _____

Employee PRINT Name Date

_____ _____

Supervisor PRINT Name Date

ENERGY UTILITIES TECHNICIAN

DESCRIPTION OF WORK: Positions in this banded class perform semi-skilled and skilled utilities maintenance and repair work on energy utility systems. Positions perform a wide range of progressively responsible tasks involving the service, inspection, troubleshoot, repair, rebuild and diagnosis of a diverse number of mechanical, electrical and I&C systems for cogeneration (boilers, turbines, coal handling), chilled water and electric distribution systems and equipment. Work ranges from inspection, service, repair and troubleshooting to analyzing highly complex control, electrical and mechanical systems and equipment using advanced diagnostic instruments and software; conducting parts/systems failure analysis; to include calibrating, tuning, and operating said system and equipment. Standard operational guidelines, system safety procedures, vendor manuals and manufacturer publications and bulletins are normally established and employees apply technical knowledge and skills, occasionally modifying standard practice and procedures due to unusual situations. Positions must routinely determine materials, techniques and tools to accomplish work assignments. Work assignments vary in complexity depending on the type of control, electrical and mechanical systems components and equipment. Assignments are normally received in the form of written or verbal work orders, which usually indicate the general nature of the task or describe the nature of the problem. New or unusual assignments may be accompanied by more detailed instructions. Work is performed under general supervision and may be reviewed and inspected in progress or upon completion.

EXAMPLES OF COMPETENCIES:
CONTRIBUTING

Knowledge – Technical: Ability to perform a variety of recurring and related tasks using steps and processes that are readily understood and are associated with less complex components, equipment and systems. Examples: Inspect equipment for lubrication, cooling water, vibration, noise, overheating and overall operational status of boilers, chillers and high voltage equipment for electric distribution, cogeneration and chilled water systems.
Safety and Health Compliance: Ability to perform tasks safely to avoid danger to self or co-workers; ability to identify and inform supervisor of potential system safety problems; ability to use appropriate protective equipment in a safe manner.
Problem Solving: Ability to follow instructions or standard operating procedures for assigned tasks; ability to ask for clarification of instructions as needed; ability to perform routine or repetitious tasks completely and accurately; ability to check work for mistakes prior to review; ability to compare finished work to what is expected. Ability to provide field operational solutions.
Customer Service: Ability to respond to customer needs within established parameters; ability to provide prompt, attentive service; ability to listen carefully and check for understanding of customer needs; ability to demonstrate courteous actions and follow the organization's established protocol for customer service.

JOURNEY

Knowledge – Technical: Ability to understand both standard and non-standard work processes. Ability to perform a variety of recurring and non-recurring work that involves related or varying processes and that are associated with moderately complex components, equipment and systems. Ability to troubleshoot, analyze and determine various courses of action for moderately complex components, equipment and systems. Examples: Installation and maintenance of high/low voltage electric distribution systems or high energy pumps and motors.
Safety and Health Compliance: Ability to identify and resolve potential system safety problems and unsafe work practices; ability to show co-workers safe ways to perform job tasks or use equipment; ability to incorporate accident prevention and corrective measures in all activities; ability to regularly assess shop safety conditions.
Problem Solving: Ability to ensure non-routine, non-repetitious work meets industry service standards according to service manuals; ability to check and rechecks work prior to and after completion; ability to seek approval of supervisor or higher-level technician upon completion of assignment; ability to use appropriate record-keeping methods. Ability to operate and identify operation issues of moderately complex equipment and systems.
Customer Service: Ability to anticipate, identify and understand customer's service needs; ability to effectively balance multiple priorities; ability to check with customers to ensure repair or solution meets needs; ability to develop positive relationships with internal/external customers (i.e. vendors, distributors, other technicians).

ADVANCED

Knowledge – Technical: Ability to perform a number of widely varying and diverse assignments that require in-depth analysis and diagnostic work. Ability to serve as a "technical expert" within the work unit and guides and coaches others. Ability to demonstrate a thorough and extensive understanding of complex equipment and systems. Examples: Plan and implement modifications to piping for steam, chilled water and high voltage wiring installation for cogeneration, chilled water and electric distribution systems. Ability to make operational decisions and provide direction in the operations of complex equipment and boiler systems.
Safety and Health Compliance: Ability to demonstrate commitment to provide safe working environment by leading by example; ability to follow appropriate post-emergency procedures. Ability to lead facility safety efforts and regularly communicate safety-related operational items.

Problem Solving: Ability to independently take necessary actions to ensure that industry service standards and procedures are followed when handling multiple, complex assignments. Ability to read and interpret Original Equipment Manufacturer (OEM) manuals and uses diagnostic tools. Ability to lead and resolve operations issues associates with complex equipment and systems.
Customer Service: Ability to identify trends that impact service delivery to groups or individual customers; ability to make recommendations to improve service delivery based on customer feedback; ability to look for ways to remove barriers to optimize service delivery.

MINIMUM TRAINING AND EXPERIENCE: High school diploma or equivalency and one year of related experience; or equivalent combination of training and experience.
Requires certification(s).

Special Note: This is a generalized representation of positions in this class and is not intended to reflect essential functions per ADA. Examples of competencies are typical of the majority of positions, but may not be applicable to all positions.

Inspector

O*NET OnLine

Summary Report for:
47-4011.00 - Construction and Building Inspectors

Updated 2016
green

Inspect structures using engineering skills to determine structural soundness and compliance with specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or plumbing.

Sample of reported job titles: Building Code Administrator, Building Inspection Engineer, Building Inspector, Building Official, Combination Building Inspector, Construction Inspector, Construction Materials Testing Technician, Elevator Inspector, Inspector, Plumbing Inspector

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Related Occupations | Wages & Employment | Job Openings | Additional Information

Tasks

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- Inspect bridges, dams, highways, buildings, wiring, plumbing, electrical circuits, sewers, heating systems, or foundations during and after construction for structural quality, general safety, or conformance to specifications and codes.
- Inspect facilities or installations to determine their environmental impact.
- Monitor installation of plumbing, wiring, equipment, or appliances to ensure that installation is performed properly and is in compliance with applicable regulations.
- Measure dimensions and verify level, alignment, or elevation of structures or fixtures to ensure compliance to building plans and codes.
- Maintain daily logs and supplement inspection records with photographs.

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Tools & Technology

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Tools used in this occupation:

- Circuit tester — Circuit analyzers; Continuity testers; Electrical circuit testers
- GFI circuit testers — Arc receptacle testers; Ground fault circuit interrupter GFCI testers
- Levels — Automatic levels; Electronic levels; Lock levels; Optical levels
- Liquid leak detectors — Refrigerant leak detectors; Ultrasonic leak detectors
- Multimeters — Clamp-on multimeters; Digital multimeters

Technology used in this occupation:

- Accounting software — Intuit QuickBooks software; Intuit Quicken software
- Compliance software — Automated permit system software; NorthWest Builders Network Plan Analyst; OptaSoft Commercial Building Inspector

- Electronic mail software — Email software; Microsoft Outlook
- Enterprise resource planning ERP software — Municipal geographic management software; SAP software
- Word processing software — Inspection Depot Home Guide System; Microsoft Word; New construction inspection form software; Residential home inspection form software

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Knowledge

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- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Law and Government — Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.

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Skills

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- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Speaking — Talking to others to convey information effectively.
- Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

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Abilities

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- Inductive Reasoning — The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.
- Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Oral Expression — The ability to communicate information and ideas in speaking so others will understand.

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Work Activities

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- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Evaluating Information to Determine Compliance with Standards — Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.
- Documenting/Recording Information — Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
- Updating and Using Relevant Knowledge — Keeping up-to-date technically and applying new knowledge to your job.

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Detailed Work Activities

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- Direct construction or extraction personnel.
- Inspect completed work to ensure proper installation.
- Review blueprints or specifications to determine work requirements.
- Test electrical equipment or systems to ensure proper functioning.
- Record operational or environmental data.

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Work Context

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- Telephone — 92% responded “Every day.”
- Face-to-Face Discussions — 88% responded “Every day.”
- Outdoors, Exposed to Weather — 79% responded “Every day.”
- Freedom to Make Decisions — 75% responded “A lot of freedom.”
- Electronic Mail — 63% responded “Every day.”

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Job Zone

Title	Job Zone Three: Medium Preparation Needed
Education	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.
Related Experience	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Job Training	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include food

service managers, electricians, agricultural technicians, legal secretaries, occupational therapy assistants, and medical assistants.

SVP Range (6.0 to < 7.0)

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Education

Percentage of Respondents	Education Level Required
25	Post-secondary certificate
25	Bachelor's degree
17	Some college, no degree

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Credentials

Find Training | Find Certifications | Find Licenses | Find Apprenticeships

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Interests

All 3 displayed

Interest code: RCI

- Realistic — Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
- Investigative — Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

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Work Styles

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- Integrity — Job requires being honest and ethical.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Independence — Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.
- Analytical Thinking — Job requires analyzing information and using logic to address work-related issues and problems.

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Work Values

All 3 displayed

- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Independence — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
- Working Conditions — Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

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Related Occupations

5 of 10 displayed

13-1199.01	Energy Auditors	Bright Outlook, Green
17-3025.00	Environmental Engineering Technicians	Green
29-9012.00	Occupational Health and Safety Technicians	Green
33-2021.01	Fire Inspectors	
45-2011.00	Agricultural Inspectors	Green

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Wages & Employment Trends

Median wages (2014)	$26.94 hourly, $56,040 annual
State wages	Local Salary Info
Employment (2014)	101,000 employees
Projected growth (2014-2024)	Average (5% to 8%)
Projected job openings (2014-2024)	36,300
State trends	Employment Trends
Top industries (2014)	Government Professional, Scientific, and Technical Services

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

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Sources of Additional Information

All 9 displayed

Disclaimer: Sources are listed to provide additional information on related jobs, specialties, and/or industries. Links to non-DOL Internet sites are provided for your convenience and do not constitute an endorsement.

- Construction and building inspectors. Bureau of Labor Statistics, U.S. Department of Labor. Occupational Outlook Handbook, 2016-17 Edition.
- American Society of Home Inspectors (ASHI), 932 Lee St., Suite 101, Des Plaines, IL 60016. Phone: (800) 743-2744. Fax: (847) 759-1620.
- Association of Construction Inspectors (ACI), 21640 N 19th Ave., Suite C-2, Phoenix, AZ 85027. Phone: (623) 580-4646. Fax: (623) 580-9656.
- Housing Inspection Foundation, 21640 N 19th Ave., Suite C-2, Phoenix, AZ 85027. Phone: (623) 580-4646. Fax: (623) 580-9656.
- International Association of Electrical Inspectors (IAEI), 901 Waterfall Way, Suite 602, Richardson, TX 75080-7702. Phone: (972) 235-1455.
- International Code Council (ICC), 500 New Jersey Ave. NW, 6th Floor, Washington, DC 20001. Phone: (888) 422-7233. Fax: (202) 783-2348.
- National Academy of Building Inspection Engineers (NABIE), P.O. Box 522158, Salt Lake City, UT 84152. Phone: (800) 294-7729. Fax: (801) 583-1531.
- National Association of Certified Home Inspectors (NACHI), 1750 30th St., Boulder, CO 80301. Phone: (303) 502-6214. Fax: (650) 429-2057.
- National Association of Home Inspectors (NAHI), 4248 Park Glen Rd., Minneapolis, MN 55416. Phone: (800) 448-3942. Fax: (952) 929-1318.

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O*NET OnLine

Summary Report for:
13-1199.01 - Energy Auditors

Updated 2016

Bright Outlook

green

Conduct energy audits of buildings, building systems, or process systems. May also conduct investment grade audits of buildings or systems.

Sample of reported job titles: Building Performance Consultant, Energy Auditor, Energy Consultant, Energy Rater, Home Energy Rater, Home Performance Consultant

View report: Summary | Details | Custom

Tasks | Tools & Technology | Knowledge | Skills | Abilities | Work Activities | Detailed Work Activities | Work Context | Job Zone | Education | Credentials | Interests | Work Styles | Work Values | Related Occupations | Wages & Employment | Job Openings

Tasks

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- Identify and prioritize energy saving measures.
- Prepare audit reports containing energy analysis results or recommendations for energy cost savings.
- Collect and analyze field data related to energy usage.
- Inspect or evaluate building envelopes, mechanical systems, electrical systems, or process systems to determine the energy consumption of each system.
- Perform tests such as blower-door tests to locate air leaks.

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Tools & Technology

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Tools used in this occupation:

- Air velocity and temperature monitors — Air current testers; Draft gauges; Duct probe velometers
- Carbon monoxide analyzer — Carbon monoxide detectors
- Infrared imagers — Infrared cameras
- Leak testing equipment — Blower doors; Smoke generators; Smoke pens
- Multimeters — Digital multimeters

Technology used in this occupation:

- Analytical or scientific software — Psychrometric chart software; SAS software; The MathWorks MATLAB; Trane TRACE
- Data base user interface and query software — Abraxas Energy Consulting Metrix; dBASE; Microsoft Access; Structured query language SQL
- Development environment software — Microsoft .NET Framework; Microsoft Visual Basic
- Object or component oriented development software — C++; Python; R
- Operating system software — Linux; UNIX

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Knowledge

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- Building and Construction — Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.
- Customer and Personal Service — Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.
- Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.
- Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.

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Skills

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- Reading Comprehension — Understanding written sentences and paragraphs in work related documents.
- Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Speaking — Talking to others to convey information effectively.

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Abilities

5 of 20 displayed

- Oral Comprehension — The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Written Comprehension — The ability to read and understand information and ideas presented in writing.
- Written Expression — The ability to communicate information and ideas in writing so others will understand.
- Problem Sensitivity — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning — The ability to apply general rules to specific problems to produce answers that make sense.

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Work Activities

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- Inspecting Equipment, Structures, or Material — Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Getting Information — Observing, receiving, and otherwise obtaining information from all relevant sources.
- Processing Information — Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.
- Interacting With Computers — Using computers and computer systems (including hardware and software)

to program, write software, set up functions, enter data, or process information.

- Documenting/Recording Information — Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.

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Detailed Work Activities

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- Oversee business processes.
- Calculate data to inform organizational operations.
- Identify opportunities to improve operational efficiency.
- Prepare financial documents, reports, or budgets.
- Analyze energy usage data.

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Work Context

5 of 27 displayed

- Telephone — 88% responded “Every day.”
- Electronic Mail — 88% responded “Every day.”
- Face-to-Face Discussions — 64% responded “Every day.”
- Freedom to Make Decisions — 54% responded “Some freedom.”
- Letters and Memos — 40% responded “Every day.”

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Job Zone

Title	Job Zone Three: Medium Preparation Needed
Education	Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.
Related Experience	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.
Job Training	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.
Job Zone Examples	These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include food service managers, electricians, agricultural technicians, legal secretaries, occupational therapy assistants, and medical assistants.
SVP Range	(6.0 to < 7.0)

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Education

Percentage of Respondents	Education Level Required

33 High school diploma or equivalent

33 Post-secondary certificate

25 Associate's degree

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Credentials

Find Certifications Find Apprenticeships

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Interests

All 2 displayed

Interest code: CE

- Conventional — Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.
- Enterprising — Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

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Work Styles

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- Integrity — Job requires being honest and ethical.
- Attention to Detail — Job requires being careful about detail and thorough in completing work tasks.
- Dependability — Job requires being reliable, responsible, and dependable, and fulfilling obligations.
- Initiative — Job requires a willingness to take on responsibilities and challenges.
- Analytical Thinking — Job requires analyzing information and using logic to address work-related issues and problems.

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Work Values

All 3 displayed

- Independence — Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.
- Support — Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.
- Achievement — Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

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Related Occupations

5 of 10 displayed

17-3025.00	Environmental Engineering Technicians
17-3031.01	Surveying Technicians
19-1031.01	Soil and Water Conservationists
29-9012.00	Occupational Health and Safety Technicians
47-4011.00	Construction and Building Inspectors Green

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Wages & Employment Trends

Median wages data collected from Business Operations Specialists, All Other.
Employment data collected from Business Operations Specialists, All Other.
Industry data collected from Business Operations Specialists, All Other.

Median wages (2014)	$32.35 hourly, $67,280 annual
State wages	Local Salary Info
Employment (2014)	998,000 employees
Projected growth (2014-2024)	Average (5% to 8%)
Projected job openings (2014-2024)	166,900
State trends	Employment Trends
Top industries (2014)	Government Professional, Scientific, and Technical Services

Source: Bureau of Labor Statistics 2014 wage data and 2014-2024 employment projections. "Projected growth" represents the estimated change in total employment over the projections period (2014-2024). "Projected job openings" represent openings due to growth and replacement.

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Job Openings on the Web

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CALHR
CALIFORNIA DEPARTMENT OF HUMAN RESOURCES

Construction Inspector I

California State Personnel Board Specification

- **Schematic Code:** IS80
- **Class Code:** 4033
- **Established:** 1931
- **Revised:** 04/08/1997
- **Title Changed:** 04/08/1997

Definition

Under close supervision, to perform simple technical inspections of buildings and facilities under construction or alteration; and to do other related work.

Typical Tasks

Performs detailed inspection of buildings and facilities under construction or alteration; checks and keeps records of time and materials received and used in construction; assists in field tests of concrete, mortar, and soils; assists in making and checking measurements, levels, lines, and layouts; checks proportions of batches of various materials; maintains diary and other reports as required; assists in collecting and formulating data required for monthly payment estimates and progress reports; checks the number of various craftspersons at work on a building project; and must drive from one site to another site, and on large sites, drive from one area to another area within the site.

Minimum Qualifications

Possession of a valid driver license of the appropriate class issued by the Department of Motor Vehicles.

(Applicants who do not possess the required license may be admitted to the examination, but must obtain the license before they will be considered eligible for appointment.) and Either I Education: Equivalent to graduation from college with major work in engineering or architecture. (Registration as a senior in a recognized college engineering or architecture curriculum will admit applicants to the examination, but they must produce evidence of graduation or its equivalent before they can be considered eligible for appointment.)

OR II

Experience: Experience in technical inspection or supervision on commercial, industrial, institutional, or other major building construction may be substituted for the required education on the basis of two years of qualifying experience equaling one academic year of education.

Knowledge and Abilities

Knowledge of: Methods of mixing, placing, and curing plain and reinforced concrete; materials, methods, and processes used in the construction of wood, steel frame, masonry, and concrete buildings; the work of various building trades; various codes and safety orders applicable to building construction; mortar and grout mixes; forms and shoring; methods of steel frame erection and reinforced concrete construction; nature of soils and soil compaction techniques; plumbing, heating, ventilating, air conditioning, and electrical work.

Ability to: Detect poor quality building materials and workmanship utilizing visual inspection with knowledge of industry standards, code requirements, and test results; read, understand, and detect deviations from plans and specifications by inspection; perform and interpret results from field tests; calculate material quantities; analyze situations accurately and take effective action; keep records of time and materials; prepare correspondence and write clear and comprehensive reports.

Special Personal Characteristics

Engineering aptitude; keenness of observation and tact; physical stamina.

Updated 6/3/2012

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STATE CLASSIFICATION JOB DESCRIPTION

Salary Group B10 Class No. 1320

INSPECTOR I

GENERAL DESCRIPTION

Performs entry-level inspection work. Work involves conducting inspections and quality assurance reviews to ensure compliance with laws, regulations, and agency policies. Works under close supervision, with minimal latitude for the use of initiative and independent judgment.

EXAMPLES OF WORK PERFORMED

Conducts inspections for compliance with Texas codes, standards, and laws and for proper display of current licenses.

Examines permits, licenses, applications, and records to ensure compliance with licensing requirements.

Makes recommendations on violations and conducts follow-up inspections.

Prepares, organizes, and maintains inspection records and reports.

Gathers and analyzes data.

Assists in reviewing compliance monitoring reports and may monitor follow-up actions in cases in which violations were found.

May collect inspection fees.

May assist in identifying the cause of violations.

May assist in the administration of state licensing examinations.

Performs related work as assigned.

GENERAL QUALIFICATION GUIDELINES

Experience and Education

Experience in inspection work. Graduation from a standard senior high school or equivalent is generally preferred. Experience and education may be substituted for one another.

Knowledge, Skills, and Abilities

Knowledge of Texas laws, codes, and standards related to the area of responsibility; of the principles and methods of field inspection and quality control; and of business practices in regulated occupations and industries.

Skill in conducting inspections, in determining proper courses of action, in using instruments or tools necessary to conduct inspections, in using computer programs and databases, and in maintaining records and written reports.

Ability to prepare reports, to interpret laws and regulations, to gather and analyze data, and to communicate effectively.

Registration, Certification, or Licensure

May require certification in a specialty area.

State Auditor's Office ***Revised 9-1-15***

JOB DESCRIPTION

JOB TITLE: Weatherization Auditor

SUPERVISION RECEIVED: Reports to and works under the general supervision of the Weatherization Program Manager.

SUPERVISION EXERCISED: This is a non-supervisory position. This position educates crews on compliance of local, state, and federal regulations relating to weatherization and construction.

POSITION SUMMARY: Serves as inspector for the construction activities involved in the weatherization programs. Surveys and inspects homes to be weatherized or repaired. Inspects completed work for compliance with specifications.

ESSENTIAL FUNCTIONS/ DUTIES & RESPONSIBILITIES

The duties listed are intended only as Illustrative examples of the various types of work that may be performed by individuals in this classification. Any of the following duties may be performed. These examples are not necessarily performed by all incumbents and do not include all specific essential functions and responsibilities the incumbent may be expected to perform.

1. Read, right and comprehend a work order for the specific job that is to be weatherized.
2. Contact the client and verify the scope of work and schedule the work to be completed using software and other tools for assessment. Create reports based on assessment.
3. Perform house diagnostic testing, such as but not limited to, blower door, duct blaster, room balancing, worst case combustion testing. Combustion appliance testing and other indoor air quality testing to assure home is safe for occupancy.
4. Conducts energy audits and identifies quantity and type of weatherization measures to be taken.
5. Contact client to go over weatherization measures to be performed. Ensure client understands scope of work.
6. Follow agency safety procedures for operating fleet vehicles to drive to job sights up to 80 miles from shop.
7. Perform in-progress and final inspections on all work for compliance with the construction contract, performance standards and regulators. Educate crew members and contractors on compliance issues. Resolve change orders as needed.
8. Re-inspect completed job to ensure proper installation and compliance with procedures.
9. Unload tools and materials as needed.
10. Follow agency safety procedures for operating, inspecting and maintaining fleet vehicles.
11. Consistently maintains a professional and courteous manner and an ability to work effectively and harmoniously with other employees and the general public.
12. Maintains regular job attendance and adherence to working hours.

13. Accepts and performs other work as assigned.

QUALIFICATIONS & REQUIREMENTS

EDUCATION AND EXPERIENCE: High School diploma or equivalent plus two years college or Associate of Arts degree. 10 hours OSHA Safety Training. Two years experience in all phases of residential construction/remodeling with a minimum of one year in the weatherization field. Must have one year experience in a lead position. Must hold or be able to obtain Department of Energy approved certifications or any equivalent combination of experience and training which provides the required knowledge, skills and abilities.

KNOWLEDGE, SKILLS AND ABILITIES: Thorough knowledge of practices, techniques, materials and tools utilized in the building trade; knowledge of OSHA requirements and building codes. Must have ability to assess substandard conditions in buildings and provide accurate reports of inspections. Ability to communicate effectively, both orally and in writing. Must possess a valid Oregon Drivers License with an insurable driving record to operate an agency vehicle.

SPECIAL REQUIREMENTS:
Must pass a criminal history background investigation; however a conviction of a crime may not necessarily disqualify an individual from this classification. Obtain and maintain applicable certification(s) as required.

WORK ENVIRONMENT/ WORKING CONDITIONS/ PHYSICAL DEMANDS

The work environment and working conditions described here are representative of those that are typical of the job and must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The homes are in disrepair and may contain lead paint and asbestos. We often work in tight spaces like attics and under floors. They are very dusty, dirty, moldy and muddy. There are spiders, snakes, rodents and other animals in areas we work in. We use power tools that are loud and cause flying debris. We work outside in all types of weather conditions. Many of our clients have special needs that require you to adapt your communication style to their needs.

In the performance of the job duties, the employee will predominantly work on construction sites that are outdoors with adverse weather conditions including but not limited to high and low temperatures, wet and/or humid conditions, high elevation locations, precarious places and exposed to wet fumes or airborne particles, and vibration. The noise level in the construction environment is quiet to loud.

While performing the duties of this job, the employee is required to stand; walk; use hands to handle, feel, or operate objects, tools, or controls; reach with hands and arms; sit; climb or balance; stoop, kneel, crouch, or crawl; talk or hear; and smell.

There is continuous mental/visual demand for constant alertness or activity that requires hand/eye coordination.

The employee must occasionally lift and/or move up to 50 pounds.

You must wear proper personal protective equipment as required.

I certify that I have read and understand the responsibilities assigned to this position.

Employee
Signature:_____

Printed
Name:_____Date:_____

Energy Conservation Diagnostic Auditor Job Description

Company Location Code:

FLSA Status (Exempt/Non-Exempt): Non-Exempt

Classification: Hourly

Reports to: Regional Manager

Approval Date:

Last Revised Date:

Purpose of the Job:

The Energy Conservation Auditor II will be working under the Regional Manager. Conducts home energy audits and educates consumers on energy conservation and usage.

Essential Primary Functions:

1. Serves as a representative of EIC, Inc. ComfortHome Partners displaying courtesy, tact, consideration, and discretion in all interactions with clients and with the public.
2. Fully understands all program requirements and standards.
3. Completes Diagnostic Energy audits to program standards in a timely and efficient manner
4. Complete formal write up of home energy audit findings.
5. Develop detailed work scopes, pricing, measures and quantities to be completed by EIC production staff.
6. Proficient using performance and analytical tools
7. Proficient operating Blower Door and Duct Blaster
8. Proficient in Combustion Safety, and Zonals
9. Fully understands forced air distribution, heating/cooling, energy modeling, multi-family units, Mold mitigation code inspection, and distribution design.
10. Confirm all scheduled appointments within 24 hours of scheduled appointments
11. Educate consumers and clients regarding energy conservation measures.

Other Functions:

1. QA/QC each weatherization job after work in complete when required
2. Ability to identify additional work opportunities
3. Perform weatherization improvements as needed.

Supervisory Responsibilities:

1. This position does not have any supervisory responsibilities.

Core Competencies:

1. **Interpersonal**: The individual focuses on solving conflict, not blaming; listens to others without interrupting; keeps emotions under control.
2. **Teamwork**: The individual balances team and individual responsibilities, exhibits objectivity and openness to others' views, contributes to building a positive team spirit and is able to build morale and group commitments to goals and objectives.
3. **Planning/Organizing**: The individual prioritizes and plans work activities and uses time efficiently.
4. **Quality**: The individual demonstrates accuracy and thoroughness, looks for ways to improve and promote quality, applies feedback to improve performance, and monitors own work to ensure quality.
5. **Quantity**: The individual meet productivity standards and completes work in a timely manner.
6. **Safety and Security**: The individual observes safety and security procedures and uses equipment and materials properly
7. **Dependability**: The individual is consistently at work and on time, follows instructions, responds to management direction, commits to long hours of work when necessary to reach goals and completes tasks on time or proposes an alternate plane to the appropriate team member.

Skills and Equipment Knowledge Requirements:

1. Ability to read and comprehend basic instructions
2. Ability to utilize common hand tools
3. Detail oriented with the ability to multi task
4. Quality minded
5. Excellent verbal and written communication skills
6. High level of communication and client relationship
7. Has full knowledge of program requirements and standards
8. Has full knowledge of residential energy use.

Education and/or Experience:

1. Preferred Associates Degree or experience equivalent.
2. High School Diploma or equivalent
3. Preferred 5 years of relevant construction experience.
4. Preferred 3 years of relevant residential energy usage and/or utility programs.

5. Experience with job scope pricing

Certifications and/or Licenses:

1. Valid Driver's License with clean safety driving record
2. Clean Criminal history
3. OSHA certification
4. BPI Analyst Certification required
5. Preferred RATER Certification

Physical Demands:

He physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of the job.

1. Have full range of mobility in upper and lower body.
2. Be able to reach overhead
3. Be able to work in various positions, including but not limited to: stooping, standing, bending over, sitting, kneeling, and squatting for extended periods of time.
4. Be able to lift, pull and push materials and equipment to complete assigned tasks.
5. Be able to lift 50 pounds of weight frequently throughout the assigned workday.

Work Environment:

1. Frequent and regular exposure to outdoor weather temperatures and conditions.
2. Frequent and regular exposure to elements such as odor, noise, dust, heat, cold and fiberglass.

The above statements are intended to describe the general nature and level of the work being performed by people assigned to this work. This is not an exhaustive list of all duties and responsibilities associated with it. EIC, Inc. management reserves the right to amend and change responsibilities to meet business and organizational needs.

Acknowledgement

I have reviewed and understand the above job description and believe it to be accurate and complete, and I can successfully fulfill each duty and task. I also agree management retains the right to change this job description at any time.

_____ _____

Employee PRINT Name Date

_____ _____

Supervisor PRINT Name Date

South Central Community Action Program, Inc.
Position Description

Position Title: Weatherization Auditor

Department: Housing **Pay Grade: 11**

Reports To: Weatherization Program Manager **Position Status:** Regular/Full-time

Purpose of Position

Under supervision of the Weatherization Program Manager, the Weatherization Auditor is responsible for supervising the rehabilitation and weatherization of homes in low-income housing and weatherization programs. Ensures all clients and the work performed are in compliance with all Federal, State and Agency regulations and guidelines pertaining to weatherization program. The Weatherization Auditor will treat all individuals with dignity and respect, make necessary referrals for clients, and exemplify the South Central Community Action Program, Inc. commitment to helping people.

Essential Duties and Responsibilities

The following duties are normal for this position. These are not to be construed as exclusive or all-inclusive. Other duties may be required and assigned.

- Conducts home audits and final inspections of all work performed on homes under the Weatherization program.
- Identifies, plans, and estimates cost of fieldwork in ways which will efficiently address building deficiencies and achieve maximum energy savings according to State guidelines.
- Performs high quality lead-based paint inspections and prepares associated reports which are clear, thorough, and accurate.
- Supervises and instructs technicians and independent contractors effectively. Inspects contractors' work to ensure that all work performed is of high quality, completed according to the work order, and done at a reasonable cost.
- Interacts and works with clients in a professional manner, assesses client needs, makes appropriate referrals, and exemplifies agency commitment to helping disadvantaged people.
- Responsible for general effectiveness, efficiency, and achievement of production goals by careful planning and coordinating of field work to achieve the general monthly and annual program goals and adherence to agency goals and policies.
- Responsible for security and maintenance of equipment used in the Weatherization department.
- Uses Agency vehicles for work purposes only. Keeps Agency vehicles clean and organized. Maintains daily mileage logs for the vehicle being driven.
- Responsible for instructing clients and office personnel in energy conservation and residential heating health and safety issues.

Minimum Training and Experience Required to Perform Essential Duties and Responsibilities

- High school diploma or GED; supplemented by three to five years previous experience in carpentry, construction, contracting, home rehabilitation, or related field; or any equivalent combination of education, training, and experience which provides the requisite knowledge, skills, and abilities for this job.

- Working knowledge of natural gas, LP gas, fuel oil, and electric heating systems and of all codes applicable to HVAC system and installations.

- Skilled in the use of computers for email, creation, and manipulation of Windows, Databases, and Microsoft Office.

Special Requirements

- A valid driver's license is required.

- Must be able to within one year of hire date, must be licensed in the State of Indiana as a Lead Based Paint Risk Assessor.

- Must be able to within one year of hire date, must have successfully obtained Building Analyst Certification and Heating Technician Certification through the Building Performance Institute.

- Must be able to obtain CPR and First Aid Certification with in 60 days of hiring. (The Company will provide the training).

- Ability to travel locally, regionally, and nationally to attend meetings, workshops, and conferences.

Minimum Physical and Mental Abilities required to Perform Essential Job Functions

Physical Requirements

- Ability to use departmental equipment, tools, and materials.

- Ability to exert physical effort in light to moderate work involving lifting, carrying, pushing, and pulling; ability to stoop, kneel, crouch, and crawl; ability to climb and balance; tasks require visual perception and discrimination.

Mathematical Ability

- Requires the ability to perform addition, subtraction, multiplication and division; ability to calculate decimals and percentages; ability to perform mathematical operations with fractions; ability to compute discount, interest, profit and loss, ratio and proportion; ability to perform operations incorporating geometric principles.

Language Ability and Interpersonal Communication

- Ability to comprehend, prepare, and correctly use a variety of informational documents including billing statements, bids, specifications, time logs, purchase orders, memorandum, correspondence, real estate flyers, health/safety forms, vehicle mileage forms, and other reports and records using the prescribed formats.

- Ability to comprehend a variety of reference books and manuals including building codes, computer handbooks, topographical maps, building manuals, program manuals, estimating manuals, architectural drawings, etc.

- Ability to maintain the integrity of confidential employment, client, and business information.

- Ability to accurately record and deliver information, meet deadlines, and maintain confidentiality of restricted information.
- Ability to respond competently and positively to the culture, traditions, lifestyles, language, and values of each individual, family, and community.
- Ability to use independent judgment and principles of rational systems in the performance of tasks.
- Ability to use and interpret engineering, mechanical, and electrical terminology and language.
- Ability to work under moderately stressful conditions, to respond immediately to crisis situations, and to balance priorities within and between offices/departments.
- Ability to maintain complete, organized, and accurate files for all assigned tasks and program areas, ensuring that the files are in compliance with all Federal, State, and Agency guidelines and requirements.
- Ability to maintain personal composure, tactfully handle difficult situations, and interpret questions correctly; ability to behave in a friendly, understanding, helpful, and professional manner with clients and program staff.
- Ability to counsel, supervise, and mediate and to persuade, convince, and influence others.
- Ability to advise and interpret on the application of policies, procedures and standards to specific situations. The ability to explain, demonstrate and clarify to others, the understanding of the well-established policies, procedures and standards.
- Ability to communicate effectively with clients, contractors, real estate personnel, suppliers, state/local government officials, and the general public verbally and in writing; while conforming to all rules of punctuation, grammar, diction and style.

Environmental Adaptability

- Ability to work effectively in an office environment and at on-site locations in varying weather conditions; ability to protect self and others when working with and around construction sites, machinery, toxic chemicals/agents, loud noises, electrical current, etc.

This job description describes the general nature and level of work performed by employees assigned to this position. It does not state or imply that these are the only duties and responsibilities assigned to the job. The employee may be required to perform other job-related duties as requested by the Executive Director, their Department Head, and/or their immediate Supervisor. All requirements are subject to change over time and to possible modifications in order to reasonably accommodate individuals with a disability.

The employee has read the above job description and understands the duties and requirements expected of them. The employee will ask for clarification of those areas that they did not clearly understand. The employee also understands that if he/she continues to have questions or new questions arise, they are immediately to discuss these questions with their immediate supervisor.

Employee's Name:_____

_____ _____
Employee's Signature Date

_____ _____
Human Resources Manager's Signature Date

Appendix 2 – Taxonomy

NAICS Code	Description	Used NAICS for Changes
236210	Industrial Building Construction	236200
236220	Commercial and Institutional Building Construction	236200
238212	Nonresidential electrical contractors	238210
238222	Nonresidential plumbing and HVAC contractors	238220
333411	Air Purification Equipment Manufacturing	333400
333412	Industrial and Commercial Fan and Blower Manufacturing	333400
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	333400
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	333400
335314	Relay and Industrial Control Manufacturing	335300
541310	Architectural Services	541300
541330	Engineering Services	541300
541340	Drafting Services	541300
541350	Building Inspection Services	541300

SOC Code*	Description	TOP Code(s) (Reference Only)
11-1021	General and operations managers	0501,0505,0506,0508,2102
11-2011	Advertising and promotions managers	0509,0606
11-2021	Marketing managers	1303
11-2022	Sales managers	0501,0505,0506
11-3011	Administrative services managers	0501,0505,0506,0509,2102
11-3131	**Training and development managers**	
11-3042	Training and development managers	
11-3061	Purchasing managers	0509
11-9021	Construction managers	0501,0505,0506
11-9041	Engineering managers	0201,0901
11-9199	Managers, all other	0501,0505,0506,0599,2102,2104,2199
13-1023	Purchasing agents, except wholesale, retail, and farm products	0509
13-1051	Cost estimators	0501,0505,0506
13-1073	Training and development specialists	
13-1111	Management analysts	0501,0505,0506
13-1151	**Training and development specialists**	
13-1199	Business operation specialists, all other	0599
13-2011	Accountants and auditors	0502
13-2051	Financial analysts	
15-1041	Computer support specialists	
15-1071	Network and computer systems administrators	0701,0707,0708,0799
15-1081	Network systems and data communications analysts	0701,0702,0707,0708
15-1142	**Network and computer systems administrators**	
15-1151	**Computer support specialists**	
15-2031	Operations research analysts	
17-1011	Architects, except landscape and naval	0299
17-2051	Civil engineers	
17-2071	Electrical engineers	
17-2072	Electronics engineers, except computer	
17-2081	Environmental engineers	
17-2112	Industrial engineers	
17-2141	Mechanical engineers	
17-2199	Engineers, all other	0901
17-3021	Aerospace engineering and operations technicians	
17-3023	Electrical and electronic engineering technicians	
17-3025	**Environmental engineering technicians**	
17-3029	Engineering technicians, except drafters, all other	0934,0943,0946,0954,0961,0999
19-3051	Urban and regional planners	
27-1021	Commercial and industrial designers	1009,1013
27-1025	Interior designers	1302
41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	0509,0599
41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	0509,0599
41-9031	Sales engineers	0509
43-4051	Customer service representatives	0518
43-4151	Order clerks	
43-5061	Production, planning, and expediting clerks	
47-1011	First-line supervisors/managers of construction trades and extraction workers	0934,0952,0957,2102
47-2031	Carpenters	0952
47-2061	**Construction laborers**	**2102**
47-2111	Electricians	0952
47-2131	Insulation workers, floor, ceiling, and wall	2102
47-2132	Insulation workers, mechanical	2102
47-2152	Plumbers, pipefitters, and steamfitters	0952
47-2211	Sheet metal workers	0956
47-3012	**Helpers--carpenters**	**0952**
48-3013	**Helpers--electricians**	**0952**
49-3015	**Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters**	**0952**

47-4011	Construction and building inspectors	0957
49-1011	First-line supervisors/managers of mechanics, installers, and repairers	
49-2011	Computer, automated teller, and office machine repairers	0934
49-2022	Telecommunications equipment installers and repairers, except line installers	0934
49-2094	Electrical and electronics repairers, commercial and industrial equipment	0934
49-9012	Control and valve installers and repairers, except mechanical door	
49-9021	Heating, air conditioning, and refrigeration mechanics and installers	0946
49-9041	Industrial machinery mechanics	
49-9042	Maintenance and repair workers, general	0957
49-9043	Maintenance workers, machinery	
49-9071	**Maintenance and repair workers, general**	
49-9098	**Helpers--installation, maintenance, and repair workers**	
51-2022	Electrical and electronic equipment assemblers	0934
51-2023	Electromechanical equipment assemblers	0935
51-2091	Fiberglass laminators and fabricators	
51-2092	Team assemblers	
51-2093	Timing device assemblers, adjusters, and calibrators	
51-2099	Assemblers and fabricators, all other	
51-4041	Machinists	0956
51-8021	Stationary engineers and boiler operators	
51-9061	Inspectors, testers, sorters, samplers, and weighers	0956

*** Codes added or updated in taxonomy**

Appendix 3: LMI Data Summary

Additional data is available in the excel spreadsheet, but appendix 3 covers LMI data from REMI for all of California and for each of the 6 Metropolitan Service Areas.

There are 5 tabs in the worksheet:

Tab 1 – Summarizes the labor market posting for the entire state of California.

Tab 2 – Summarizes the labor market posting for the Los Angeles Metropolitan Service Area.

Tab 3 – Summarizes for labor market posting for the San Diego Metropolitan Service Area.

Tab 4 – Summarizes the labor market posting for the San Diego Metropolitan Service Area.

Tab 5 – Summarizes the labor market posting for the Northern Californian Metropolitan Service Area.

Tab 6 – Summarizes the labor market posting for the Southern Californian Metropolitan Service Area.

Appendix 4 – Regional Economic Modeling, Inc. (REMI) Model [1]

The REMI model incorporates aspects of four major modeling approaches: Input-Output, General Equilibrium, Econometric, and Economic Geography. Each of these methodologies has distinct advantages as well as limitations when used alone. The REMI integrated modeling approach builds on the strengths of each of these approaches.

The REMI model at its core, has the inter-industry relationships found in Input-Output models. As a result, the industry structure of a particular region is captured within the model, as well as transactions between industries. Changes that affect industry sectors that are highly interconnected to the rest of the economy will often have a greater economic impact than those for industries that are not closely linked to the regional economy.

General Equilibrium is reached when supply and demand are balanced. This tends to occur in the long run, as prices, production, consumption, imports, exports, and other changes occur to stabilize the economic system. For example, if real wages in a region rise relative to the U.S., this will tend to attract economic migrants to the region until relative real wage rates equalize. The general equilibrium properties are necessary to evaluate changes such as tax policies that may have an effect on regional prices and competitiveness.

REMI is sometimes called an "Econometric model," as the underlying equations and responses are estimated using advanced statistical techniques. The estimates are used to quantify the structural relationships in the model. The speed of economic responses is also estimated, since different adjustment periods will result in different policy recommendations and even different economic outcomes.

The New Economic Geography features represent the spatial dimension of the economy. Transportation costs and accessibility are important economic determinants of interregional trade and the productivity benefits that occur due to industry clustering and labor market access. Firms benefit having access to a large, specialized labor pool and from having access to specialized intermediate inputs from supplying firms. The productivity and competitiveness benefits of labor and industry concentrations are called agglomeration economies, and are modeled in the economic geography equations.

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Appendix 5: Burning Glass Data Summary

Additional data is available in the excel spreadsheet, but appendix 5 cover the data over a 6-year period from Burning Glass Data.

There are 5 tabs in the worksheet:

Tab 1 – Summarizes the data highlighting the four career occupations.

Tab 2 – Summarizes the data for the four career pathways over the last 6 years.

Tab 3 – Summarizes for the top 10 occupations the number of job openings.

Tab 4 – Summarizes the number of job postings for each of the 5 Metropolitan Service Areas surveyed

Tab 5 – Summarizes the number of job postings requiring certificates.

Appendix 6 – California Community College Inventory

California Community Colleges Inventory Summary By Region

Region	Electrical Colleges Offering	Electrical Total Sections Count	Electrical Apprenticeship Only	Carpentry Colleges Offering	Carpentry Total Sections Count	Carpentry Apprenticeship Only
Los Angeles MSA	9	215	69	8	328	288
Rest of Northern California	8	46	23	6	66	52
San Diego MSA	3	189	162	3	122	120
San Francisco MSA	6	102	92	6	49	5
Rest of Southern California	3	21	4	1	2	0

Region	Plumbing Colleges Offering	Plumbing Total Sections Count	Plumbing Apprenticeship Only	HVAC Colleges Offering	HVAC Total Sections Count	HVAC Apprenticeship Only
Los Angeles MSA	6	49	23	13	282	2
Rest of Northern California	3	28	27	5	73	0
San Diego MSA	2	34	17	3	54	0
San Francisco MSA	5	105	101	6	161	37
Rest of Southern California	1	4	4	3	22	0

Region	Electrical College	Carpentry College
Los Angeles MSA	Cerritos College	El Camino College
	Orange Coast College	Bakersfield College
	Bakersfield College	Long Beach City College
	Los Angeles Trade Technical College	Los Angeles Trade Technical College
	North Orange School of Continuing Education	Palo Verde College
	Palo Verde College	Santiago Canyon College
	Santiago Canyon College	Rio Hondo College
	Irvine Valley College	Victor Valley College
	Victor Valley College	
Rest of Northern California	American River College	American River College
	Merced College	Merced College
	College of the Redwoods	College of the Redwoods
	San Joaquin Delta College	College of the Sequoias
	College of the Sequoias	Shasta College
	Sierra College	
	Santa Rosa junior College	
	Modesto Junior College	
San Diego MSA	Imperial Valley College	Imperial Valley College
	Palomar College	Palomar College
	San Diego City College	San Diego Adult
San Francisco MSA	Chabot College	Gavilan College
	Foothill College	Hartnell College
	Hartnell College	Laney College
	City College of San Francisco	City College of San Francisco
	San Francisco Ctrs	San Francisco Ctrs
	San Jose City College	San Jose City College
Rest of Southern California	Allan Hancock College	Fresno City College
	Antelope Valley College	
	Fresno City College	

Region	Plumbing College	HVAC College
Los Angeles MSA	Orange Coast College	Citrus College
	Bakersfield College	Orange Coast College
	Los Angeles Trade Technical College	El Camino College – Compton
	Palo Verde College	El Camino College
	College of the Canyons	Glendale College
	Victor Valley College	Long Beach City College
		Los Angeles Trade Technical College
		Mount San Antonio College
		Cypress College
		Riverside City College
		San Bernardino Valley College
		Oxnard College
		Victor Valley College
Rest of Northern California	San Joaquin Delta College	Sacramento City College
	Sierra College	Mendocino College
	Santa Rosa junior College	Merced College
		San Joaquin Delta College
		College of the Sequoias
San Diego MSA	San Diego Adult	Imperial Valley College
	San Diego City College	San Diego City College
		San Diego Adult
San Francisco MSA	Diablo Valley College	Los Medanos College
	Foothill College	Diablo Valley College
	City College of San Francisco	Foothill College
	San Francisco Ctrs	Laney College
	San Jose City College	City College of San Francisco
		San Jose City College
Rest of Southern California	Allan Hancock College	Antelope Valley College
		College of the Desert
		Fresno City College

Appendix 7: Selection of Relevant California License Requirements for Selected Occupations[1]

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
Electrician: Electrical Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Electrical Contractor, Class Code C-10. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

1 Source: O*NET Online (www.onetonline.org) and www.myskillsmyfuture.org

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
Electrician: Low Voltage Systems Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Low Voltage Systems Contractor, Class Code C-7. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.
Carpenter: Elevated Floors Limited Specialty Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Elevated Floors Limited Specialty Contractor, Class Code C-61/D-10. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam. (No trade exam.) Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
Carpenter: Framing and Rough Carpentry Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Framing and Rough Carpentry Contractor, Class Code C- 5. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.
Carpenter: Siding and Decking Limited Specialty Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Siding and Decking Limited Specialty Contractor, Class Code C-61/D-41. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam. (No trade exam.) Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
Plumber: Air and Water Balancing Limited Specialty Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Air and Water Balancing Limited Specialty Contractor, Class Code C-61/D-62. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam (no trade exam). Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.
Plumber: Boiler, Hot Water Heating and Steam Fitting Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Boiler, Hot Water Heating and Steam Fitting Contractor, Class Code C-4. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
Plumber:	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Plumbing Contractor, Class Code C-36. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.
HVACR Mechanic and Installer: Refrigeration Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Refrigeration Contractor, Class Code C-38. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

OCCUPATION: LICENSE	LICENSING AGENCY	DESCRIPTION
HVAC Mechanic and Installer: Warm-Air Heating, Ventilating and Air-Conditioning Contractor	Department of Consumer Affairs Contractors State License BoardLicense Information Center 9821 Business Park Drive Sacramento, CA 95827 (800) 321-2752 http://www.cslb.ca.gov	All contractors/builders must be licensed by the Contractors State License Board in order to perform work in California. The list of classifications and scope of work for each is available on the Board's website at www.cslb.ca.gov. Warm-Air Heating, Ventilating and Air-Conditioning Contractor, Class Code C-20. License Application Fee: $300. Initial License Fee: $180 for 2 years. Experience Requirement: At least 4 years journey level experience; must be at least 18 years of age. Exam Requirement: Business/law exam and trade exam. Exam Frequency: Computerized exams given daily at 8 sites throughout the state. Re-exam Fee: $60 Additional License Requirements: Fingerprinting, license bond(s), proof of workers' compensation coverage or exemption therefrom. Renewal Period: Active: $360 for 2 years; Inactive: $180 for 4 years. Comments: The Board's publication "Blueprint for Becoming a California Licensed Contractor", study guides and license applications can be found on the Contractors State License Board's Web site at www.cslb.ca.gov. Authority: Business and Professions Code, Section 7000 et seq. California Code of Regulations, Title 16, Section 810 et seq.

Appendix 8: Selection of Relevant Certifications for Selected Occupations[1]

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: Lighting Associate	American Lighting Association PO Box 420288, Dallas TX 75342-0288	The Lighting Associate Program of courses covers the basics of lighting and lighting design. http://www.americanlightingassoc.com	Work Experience Required? No Either training or work experience required, but not both? No Oral or Written Exam Required? Yes Renewal Required? Every 2 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? No Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No
Electrician: Assistant Technician Level II	Electrical Testing Technician Certification Institute 6483 Clovermeadows Ave Scotts Scotts MI 49088	An ETTCI Technician performs tests and inspections and evaluates the suitability of electrical power equipment and systems for the intended use. http://www.ettci.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes
Electrician: Certified Electrical Inspector - Residential	International Association of Electrical Inspectors 901 Waterfall Way, Suite 602, Richardson TX 75080-7702	See http://www.iaei.org/web/Online/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? No Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No Military Occupation. This certification is related to military occupational specialties.

1 Source: O*NET Online (www.onetonline.org) and www.myskillsmyfuture.org

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: Certified Apprentice Lighting Technician	International Association of Lighting Management Companies 431 E. Locust, Suite 300, Des Moines IA 50309	NALMCO offers a home study certification program, the Certified Apprentice Lighting Technician (CALT), which is indispensable for both entry-level and midlevel lighting management personnel. http://www.nalmco.org/	Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes
Electrician: Electrical Plans Examiner	International Code Council 5203 Leesburg Pike, Suite 600, Falls Church VA 22041	See http://www.iccsafe.org	Either training or work experience required, but not both? Yes Oral or Written Exam Required? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters. Read more about career clusters.
Electrician: Residential Electrical Inspector	International Code Council 5203 Leesburg Pike, Suite 600, Falls Church VA 22041	See http://www.iccsafe.org	Either training or work experience required, but not both? Yes Oral or Written Exam Required? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: ETT Assistant Level II	InterNational Electrical Testing Association 106 Stone Street, PO Box 687, Morrison CO 80465	The ETT Assistant Level II performs limited testing and service work while generally requiring direct supervision. The individual has sufficient knowledge and experience to be qualified for assuring the safety of him/herself. Safety knowledge includes an understanding of lockout/tagout procedures and requirements, arc-flash and shock hazard analyses, and other facets of hazardous electrical energy control procedures. The ETT Assistant Level II generally requires direct supervision of a Level III ETT Certified Technician or Level IV Senior Certified Technician. http://www.netaworld.org/	Work Experience Required? No Oral or Written Exam Required? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
Electrician: ALA Certified Lighting Consultant	American Lighting Association PO Box 420288, Dallas TX 75342-0288	See http://www.americanlightingassoc.com	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 2 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? No Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No
Electrician: Certified Senior Technician Level IV	Electrical Testing Technician Certification Institute 6483 Clovermeadows Ave Scotts Scotts MI 49088	DESCRIPTION An ETTCI Technician performs tests and inspections and evaluates the suitability of electrical power equipment and systems for the intended use. http://www.ettci.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: Certified Technician Level III	Electrical Testing Technician Certification Institute 6483 Clovermeadows Ave Scotts Scotts MI 49088	An ETTCI Technician performs tests and inspections and evaluates the suitability of electrical power equipment and systems for the intended use. http://www.ettci.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes
Electrician: Certified Electrical Inspector - Master	International Association of Electrical Inspectors 901 Waterfall Way, Suite 602, Richardson TX 75080-7702	See http://www.iaei.org/web/Online/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? No Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No Military Occupation. This certification is related to military occupational specialties.
Electrician: National Certification Program Construction Code Inspector	International Association of Electrical Inspectors 901 Waterfall Way, Suite 602, Richardson TX 75080-7702	Knowledge of the Code is one of the most powerful aspects and strengths anyone involved in the electrical trade can possess. The purpose of these examinations is to provide a basis for assessing competency in technical code knowledge of a Construction Code Inspector or Plan Reviewer. http://www.iaei.org/web/Online/	Oral or Written Exam Required? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: Certified Lighting Management Consultant	International Association of Lighting Management Companies 431 E. Locust, Suite 300, Des Moines IA 50309	See http://www.nalmco.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties.
Electrician: Certified Senior Lighting Technician	International Association of Lighting Management Companies 431 E. Locust, Suite 300, Des Moines IA 50309	NALMCO offers a home study certification program, the Certified Senior Lighting Technician (CSLT) which is indispensable for both entry-level and midlevel lighting management personnel. http://www.nalmco.org/	Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes
Electrician: Commercial Electrical Inspector	International Association of Plumbing and Mechanical Officials 4755 E Philadelphia St. Ontario CA 91761	See http://www.iapmo.org/Pages/IAPMOgroup.aspx	Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Electrician: Residential Electrical Inspector	International Association of Plumbing and Mechanical Officials 4755 E Philadelphia St. Ontario CA 91761	See http://www.iapmo.org/Pages/IAPMOgroup.aspx	Work Experience Required? No Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes
Electrician: ETT Senior Certified Level IV	InterNational Electrical Testing Association 106 Stone Street, PO Box 687, Morrison CO 80465	The ETT Senior Certified Level IV supervises large projects and multiple crews and can work independently. Individual performs complex investigations, tests, and evaluations, and prepares written reports as needed. http://www.netaworld.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
Electrician: ALA Lighting Specialist	American Lighting Association PO Box 420288, Dallas TX 75342-0288	See http://www.americanlightingassoc.com	Oral or Written Exam Required? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No Military Occupation. This certification is related to military occupational specialties.
Carpenter: Certified Aging-In-Place Specialist	National Association of Home Builders 1201 15th Street, NW, Washington DC 20005	Get the technical, business management and customer service skills essential to competing in the fastest-growing segment of the residential remodeling industry: home modifications for the aging-in-place market. Earn NAHB's Certified Aging-in-Place Specialist (CAPS) designation and become the expert in your market. http://www.nahb.org	Oral or Written Exam Required? Yes Renewal Required? Every 1 Year(s)

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Carpenter: Certified Lead Carpenter	National Association of the Remodeling Industry 780 Lee Street, Suite 200 Des Plaines IL 60016	A consumer considering a major home improvement needs to know that the remodeling contractor he or she chooses is a full-time, dedicated remodeling professional. NARI's certification program offers this assurance through its extensive screening and testing process. Only full-time, professional remodeling contractors are eligible for NARI certification. http://www.nari.org/	Work Experience Required? No Oral or Written Exam Required? Yes Renewal Required? Every 1 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? No
Carpenter: Certified Installer	Vinyl Siding Institute	For skilled siding installers, becoming a VSI Certified Installer is easy - just take a course taught by a Certified Trainer and pass an exam that tests your knowledge about vinyl siding installation. https://www.vinylsiding.org/	Work Experience Required? No Oral or Written Exam Required? Yes Renewal Required? Every 3 Year(s) Renew through Continuing Educational Units(CEU)? No Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No Related to Job Corps training programs. This certification is related to Job Corps training programs.
Carpenter: Graduate Master Builder	National Association of Home Builders 1201 15th Street, NW, Washington DC 20005	The Graduate Master Builder (GMB) designation is for experienced veterans only. Before beginning the GMB designation process, you must have the CGB designation or the CGR designation with five years of building experience, or 10 years of building experience and successful completion of three CGB/CGR courses. http://www.nahb.org	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 1 Year(s) Renew through Continuing Educational Units(CEU)? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Plumber: Commercial Plumbing Inspector	International Code Council 5203 Leesburg Pike, Suite 600, Falls Church VA 22041	See http://www.iccsafe.org	Either training or work experience required, but not both? Yes Oral or Written Exam Required? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
Plumber: IAPMO Plumbing Inspector	National Inspection, Testing and Certification Corporation 501 Shatto Place, Suite 201 Los Angeles CA 90020-1713	IAPMO's National Personnel Certification Program for Inspectors, Plans Examiners and Code Administrators is a nationally recognized, comprehensive testing and certification program that assesses the knowledge of construction codes as an indicator of competence and professionalism. It provides a valid and reliable professional program of testing that represents all the occupations and technical disciplines in the code administration profession. The program sets the minimum level of required knowledge for individuals working in the profession and commits them to continuous self development through its certification renewal program. http://nationalitc.com/	Work Experience Required? No Oral or Written Exam Required? Yes Renew through Continuing Educational Units(CEU)? No Renew through Re-Examination? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Plumber: IAPMO Plumbing Plans Examiner	National Inspection, Testing and Certification Corporation 501 Shatto Place, Suite 201 Los Angeles CA 90020-1713	IAPMO's National Personnel Certification Program for Inspectors, Plans Examiners and Code Administrators is a nationally recognized, comprehensive testing and certification program that assesses the knowledge of construction codes as an indicator of competence and professionalism. It provides a valid and reliable professional program of testing that represents all the occupations and technical disciplines in the code administration profession. The program sets the minimum level of required knowledge for individuals working in the profession and commits them to continuous self development through its certification renewal program. http://nationalitc.com/	Work Experience Required? No Oral or Written Exam Required? Yes Renew through Re-Examination? Yes
Plumber: Journey Level Pipefitter-Steamfitter	National Inspection, Testing and Certification Corporation 501 Shatto Place, Suite 201 Los Angeles CA 90020-1713	The NITC journey level pipefitting/steamfitting certification is based on a written examination that consists of 100 multiple choice questions. The examination is designed to test the journey level pipefitter/steamfitter(s) general knowledge, piping mathematics knowledge, welding, rigging, hydronics, and some A/C refrigeration. http://nationalitc.com/	Work Experience Required? Yes Either training or work experience required, but not both? No Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? No Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
Plumber: UPC Journeyman Plumber	National Inspection, Testing and Certification Corporation 501 Shatto Place, Suite 201 Los Angeles CA 90020-1713	This certification is designed to test the knowledge that a journey level plumber has of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials (IAPMO). The NITC journey level plumber certification is covered under the scope of NITC's ANSI accredidation. The NITC journey level plumber certification is based on a 100 question written examination consisting of questions on general knowledge of plumbing, drainage, waste and vent, water distribution and fuel gas piping from the 2006 edition of the Uniform Plumbing Code. http://nationalitc.com/	Work Experience Required? Yes Either training or work experience required, but not both? No Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? No Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No
HVACR Mechanic & Installer: Combustion Analysis Certification	HVAC Excellence 1350 W Northwest Hwy Mount Prospect IL 60056	This certification is designed to ensure that technicians possess the knowledge necessary to guarantee maximum fuel efficiency, safety, reduction in warranty claims, and extended appliance life. http://www.hvacexcellence.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Certified Graduate Technician	Professional Service Association	Rating is designed for graduates of vocational schools who have completed their training. This serves as proof that the graduate has attained the knowledge necessary to perform in accordance to national skill standards. This certification is good for a period of two years. After successfully completing two years of employment as a appliance service technician, the graduate can request an up grade to Master Technician with the approval of his employer. http://www.psaworld.com/main.html	Work Experience Required? No Oral or Written Exam Required? Yes Renewal Required? Every 2 Year(s) Related to Job Corps training programs. This certification is related to Job Corps training programs.
HVACR Mechanic & Installer: Certified Service Manager	Professional Service Association	See http://www.psaworld.com/main.html	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 4 Year(s)

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: HVAC Master Specialist	HVAC Excellence 1350 W Northwest Hwy Mount Prospect IL 60056	A written exam indicates whether a technician has retained the knowledge to be competent, but not whether they are competent. Just as new drivers take a written exam and a road test to demonstrate their knowledge and skill, Master Specialists are required to go beyond a written test and demonstrate their skill and workmanship. The analogy would be knowing which solder to use and then demonstrating that you can solder tubing that is structurally sound and leak free. The Master Specialist program requires a technician to demonstrate retained knowledge and prove that they can apply that knowledge through skill verification. http://www.hvacexcellence.org/	Work Experience Required? Yes Either training or work experience required, but not both? No Oral or Written Exam Required? Yes
HVACR Mechanic & Installer: STAR Residential-Light Commercial HVACR Mastery	National Inspection, Testing and Certification Corporation 501 Shatto Place, Suite 201 Los Angeles CA 90020-1713	See http://nationalitc.com/	Work Experience Required? Yes Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? No Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? No

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Light Commercial Air Conditioning Certification	HVAC Excellence 1350 W Northwest Hwy Mount Prospect IL 60056	Commercial buildings may experience high occupancy leading to indoor air quality (IAQ) concerns, and contain a variety of equipment and controls unique to commercial applications. This certification addresses the unique issues involved in the service and maintenance of light commercial air conditioning systems up to 25 tons. http://www.hvacexcellence.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Light Commercial Refrigeration Certification	HVAC Excellence 1350 W Northwest Hwy Mount Prospect IL 60056	The commercial refrigeration technician must act quickly and accurately in troubleshooting and service situations. Competency is essential when perishables are at risk. http://www.hvacexcellence.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Residential Air Conditioning Certification	HVAC Excellence 1350 W Northwest Hwy Mount Prospect IL 60056	Air Conditioning Certification establishes a basis for all other residential certifications involving the vapor compression refrigeration system. A properly maintained system by a qualified technician should deliver years of trouble free operation. http://www.hvacexcellence.org/	Work Experience Required? Yes Oral or Written Exam Required? Yes Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Air Conditioning Installation Technician	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 30 tons or less cooling capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Air Conditioning Service Certification	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 30 tons or less cooling capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Air Distribution Installation Certification	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 12,000 CFM or less airflow. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Air Distribution Service Technician	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 12,000 CFM or less airflow. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Air to Air Heat Pump Installation	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 30 tons or less cooling capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Commercial Refrigeration Service	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	See http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Gas Heating (Air) Installation	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: HVAC Efficiency Analyst Senior	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC system operations to maintain high levels of energy efficiency. System sizes are limited to 10 tons or less of Air Conditioning and 325,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Hydronics Gas Installation	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of hot water heating systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Hydronics Gas Service	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of hot water heating systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Hydronics Oil Installation Certification	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of hot water heating systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Hydronics Oil Service	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of hot water heating systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Light Commercial Refrigeration Service	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	The test is designed for the top level service technician. This test for certification is not intended for the Refrigeration system designer, sales force, or the engineering community. To become NATE-certified, you must pass this specialty and a CORE SERVICE exam. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.
HVACR Mechanic & Installer: Oil Heating (Air) Installation Certification	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

OCCUPATION: CERTIFICATION	CERTIFYING ORGANIZATION	DESCRIPTION	DETAILS
HVACR Mechanic & Installer: Oil Heating (Air) Service	North American Technician Excellence, Inc. 4100 North Fairfax Drive, 210, Arlington VA 22203	Tests a candidate's knowledge of the installation, service, maintenance, and repair of HVAC systems. System sizes are limited to 400,000 BTU or less heating capacity. http://www.natex.org/site/1/Home	Oral or Written Exam Required? Yes Renewal Required? Every 5 Year(s) Renew through Continuing Educational Units(CEU)? Yes Renew through Re-Examination? Yes Renew through Continuing Professional Development(CPD)? No Does applicant have choice of at least two options from above for renewal (CEU, CPD, or exam)? Yes Military Occupation. This certification is related to military occupational specialties. Career and Technical Education Career Clusters. This certification is related to Career and Technical Education Career Clusters.

TRADE	APPRENTICESHIP	PROGRAM	2014 COMPLETERS
Carpenter	Carpenter	Associated Builders & Contractor Northern California Chapter Carpentry U.A.C.	11
Carpenter	Carpenter	Carpenters Training Committee For Northern California	155
Carpenter	Carpenter	Innercity Community Unilateral Apprenticeship Committee	1
Carpenter	Carpenter	San Diego Associated General Contractors J.A.C.	16
Carpenter	Carpenter	Southern California Carpenter J.A.T.C.	287
Carpenter	Carpenter	Southern California Carpentry J.A.T.C. (San Diego)	
Carpenter	Insulating Worker	Southern California Insulator & Weatherization Joint Apprenticeship And Training Committee	2
Carpenter	Insulation Installer	Carpenters Training Committee For Northern California	
Carpenter	Weatherization Installer & Technician	Southern California Weatherization Installers & Technicians Ja&Tc	
Electrician	Electrical Inside Wireman	San Francisco J.A.T.C. For The Electrical Industry - Inside Wireman	
Electrician	Electrician	Associated Builders & Contractors Northern California Chapter Electrical U.A.C.	16
Electrician	Electrician	Reno Electricians Jatc For The Electrical Industry	3
Electrician	Electrician	Riverside Area Electrical J. A. C.	20
Electrician	Electrician	Sacramento Area Electrical Apprenticeship	22
Electrician	Electrician	San Bernardino, Mono And Inyo Counties Electrical J. A. C.	12
Electrician	Electrician	San Luis Obispo Electrical Workers J.A.C.	3
Electrician	Electrician	Santa Barbara County Electrical J.A.C.	
Electrician	Electrician	Southern California Chapter Of The Associated Builders And Contractors Inc. Electrical U.A.C.	24
Electrician	Electrician	Tri-County Electrical J.A.T.C.	6
Electrician	Electrician (Inside Wireman)	Orange County Electrical J.A.C.	49
Electrician	Electrician (Inside Wireman)	Alameda County J.A.T.C. For The Electrical Inside Wireman Trade	3
Electrician	Electrician (Inside Wireman)	Associated Builders & Contractors Of San Diego, Inc. Electrical U.A.C.	16
Electrician	Electrician (Inside Wireman)	Contra Costa County Electrical J.A.C.	13
Electrician	Electrician (Inside Wireman)	Kern County Electrical Joint Apprenticeship & Training Committee	10
Electrician	Electrician (Inside Wireman)	Los Angeles Electrical J.A.& E.T.C.	
Electrician	Electrician (Inside Wireman)	Redwood Empire Electrical J.A.T.C.	12
Electrician	Electrician (Inside Wireman)	San Diego Electrical J.A.T.C.	15
Electrician	Electrician (Inside Wireman)	San Joaquin & Calaveras Counties Electrical J.A.T.C.	1
Electrician	Electrician (Inside Wireman)	Ventura County Electrical J.A.T.C.	9
Electrician	Electrician Construction	Western Electrical Contractors Assoc., Inc. (Weca) Apprenticeship And Training Committee	15
Electrician	Electrician Inside Wireman	Los Angeles/Ventura Chapter Of A.B.C. Inc. E.U.A.C.	18
Electrician	Inside Wireman	Central Valley Electrical J.A.T.C.	7
Electrician	Inside Wireman (Electrician)	Crater Lake Electrical J A T C	3
Electrician	Inside Wireman (Electrician)	Fresno, Madera, Kings & Tulare Counties Electrical Industries Jatc	6
Electrician	Inside Wireman (Electrician)	San Mateo County J.A.T.C. For The Electrical Construction Industry	20
Electrician	Inside Wireman (Electrician)	Santa Clara County Electrical Trades J.A.T.C.	9
Electrician	Inside Wireman (Electrician)	Solano & Napa Counties Electricians J.A.T.C.	2
Electrician	Inside Wireman Electrician	I.B.E.W. Local Union No. 40 Los Angeles County Chapter Neca J.A.C.	6
Electrician	Maintenance Electrician	Redwood Empire Electrical J.A.T.C.	
Electrician	Residential Wireman	Los Angeles Electrical J.A.& E.T.C.	91
Electrician	Residential Wireman	Redwood Empire Electrical J.A.T.C.	
Electrician	Residential Wireman	Sacramento Area Electrical Apprenticeship	
Electrician	Residential Wireman	San Diego Electrical J.A.T.C.	
Electrician	Residential Wireman	Santa Clara County Electrical Trades J.A.T.C.	27
Electrician	Residential Wireman	Western Electrical Contractors Assoc., Inc. (Weca) Apprenticeship And Training Committee	45
HVACR Mechanic & Installer	Air Balance Testing Technician	Fresno Sheet Metal Workers J.A.T.C.	

HVACR Mechanic & Installer	Air Conditioning & Refrigeration Mechanic	Stanislaus Area Plumbers, Pipe, & Refrigeration Fitters J.A.T.C.	
HVACR Mechanic & Installer	Air Conditioning And Refrigeration Mechanic	San Diego & Imperial Counties Pipe Trades J.A.C.	
HVACR Mechanic & Installer	Air Conditioning Mechanic	Bay Area Sheet Metal J A C	4
HVACR Mechanic & Installer	Air Conditioning Refrigeration Mechanic	Kern, Inyo & Mono Counties Plumbing, Pipefitter & Refrigeration/Air Conditioning Mechanic J.A.T.C.	
HVACR Mechanic & Installer	Air Conditioning Specialist	Bay Area Sheet Metal J A C	
HVACR Mechanic & Installer	Heating, Ventilation And Air Conditioning Worker	So. Calif. Chapter Of A.B.C., Inc. Heating, Ventilation & Air Cond. U. A. C.	
HVACR Mechanic & Installer	Heating, Ventilation, Air Conditioning Worker	Associated Builders And Contractors Of San Diego, Inc. Heating, Ventilation, Air Conditioning U.A.C.	
HVACR Mechanic & Installer	Hvacr Service Technician	Los Angeles & Orange Counties Air-Conditioning & Refrigeration J.A.T.C.	15
HVACR Mechanic & Installer	Refrigeration & Air Conditioning Fitter	J. A. & T. C. , Plumbing, Pipe Fitting & Refrigeration Industry Of San Mateo	1
HVACR Mechanic & Installer	Refrigeration & Air Conditioning Mechanic	Santa Barbara County Pipe Trades J.A.C.	
HVACR Mechanic & Installer	Refrigeration & Air Conditioning Mechanic	Ventura County Plumbing & Pipefitting J.A.C.	
HVACR Mechanic & Installer	Refrigeration & Air Conditioning Mechanic Equipment Service & Maintenance	Pipe Trades J.A.T.C. Of Santa Clara And San Benito Counties	9
HVACR Mechanic & Installer	Refrigeration And Air Conditioning Mechanic	Central Valley Motherlode Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Traini	
HVACR Mechanic & Installer	Refrigeration And Air Conditioning Mechanic	Fresno Area Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Training Sub-Committee	
HVACR Mechanic & Installer	Refrigeration And Air Conditioning Mechanic	Monterey & Santa Cruz Counties Plumbers, Pipe & Refrigeration Fitters J A& T/ (Sub Comm.)	
HVACR Mechanic & Installer	Refrigeration And Air Conditioning Mechanic	Napa/Solano Counties Plumbers And Steamfitters J.A.T.C.	
HVACR Mechanic & Installer	Refrigeration And Air Conditioning Mechanic	Northern California Area Plumbers, Pipe & Refrigeration Fitters Joint Apprenticeship & Training Subc	
HVACR Mechanic & Installer	Refrigeration Fitter	Plumbing & Pipefitting Industry Of Sacramento & Yolo District J.A.C.	5
HVACR Mechanic & Installer	Refrigeration Fitter	Reno Plumbers & Fitters J.A.T.C.	
HVACR Mechanic & Installer	Refrigeration Fitter / Air Conditioning Mechanic	United Association Local Union 342 J.A.T.C.	7
HVACR Mechanic & Installer	Refrigeration Mechanic	Contra Costa County Plumbing & Pipefitting Industry J A T C	
HVACR Mechanic & Installer	Refrigeration Mechanic	The Joint Apprenticeship And Training Committee Of The Plumbing And Pipefitting Ua Local38	3
HVACR Mechanic & Installer	Residential Sheet Metal/Service Technician	Northern California Valley Sheet Metal Industry Jatc	5
HVACR Mechanic & Installer	Service Technician	Bay Area Sheet Metal J A C	
HVACR Mechanic & Installer	Service Technician	Northern California Valley Sheet Metal Industry Jatc	17
HVACR Mechanic & Installer	Sheet Metal Service Worker	Monterey, Santa Cruz And San Benito Counties Sheet Metal Joint Apprenticeship Committee	
HVACR Mechanic & Installer	Sheet Metal Services Technician	Fresno Sheet Metal Workers J.A.T.C.	
HVACR Mechanic & Installer	Sheet Metal Specialist	Monterey, Santa Cruz And San Benito Counties Sheet Metal Joint Apprenticeship Committee	
HVACR Mechanic & Installer	Sheet Metal Worker Energy Management Technician	Kern & Northern Los Angeles Counties Air Conditioning & Sheet Metal Workers J.A.T.C.	2
HVACR Mechanic & Installer	Test, Adjust & Balancing Technician	Bay Area Sheet Metal J A C	
Plumber	Air Conditioning And Refrigeration Mechanic	San Diego & Imperial Counties Pipe Trades J.A.C.	
Plumber	Air Conditioning Refrigeration Mechanic	Kern, Inyo & Mono Counties Plumbing, Pipefitter & Refrigeration/Air Conditioning Mechanic J.A.T.C.	
Plumber	Hvacr Service Technician	Los Angeles & Orange Counties Air-Conditioning & Refrigeration J.A.T.C.	15
Plumber	Pipe Fitter	Plumbing & Pipefitting Industry Of Sacramento & Yolo District J.A.C.	32
Plumber	Pipefitter	Kern, Inyo & Mono Counties Plumbing, Pipefitter & Refrigeration/Air Conditioning Mechanic J.A.T.C.	6
Plumber	Pipefitter	Napa/Solano Counties Plumbers And Steamfitters J.A.T.C.	
Plumber	Pipefitter	San Luis Obispo County Plumbing J.A.C.	
Plumber	Pipefitter	Stanislaus Area Plumbers, Pipe, & Refrigeration Fitters J.A.T.C.	
Plumber	Pipefitter	United Association Local Union 342 J.A.T.C.	
Plumber	Pipefitter	Ventura County Plumbing & Pipefitting J.A.C.	
Plumber	Pipefitter / Steamfitter	Associated Builders & Contractors Of San Diego, Inc. Plumbing / Pipefitting	
Plumber	Pipefitter/Steamfitter	Pomona And San Gabriel Valleys Plumbers & Steamfitters J.A.C.	
Plumber	Plumber	Associated Builders & Contractors Northern California Chapter Plumbing U.A.C.	2
Plumber	Plumber	Associated Builders & Contractors Of San Diego, Inc. Plumbing / Pipefitting U.A.C.	22
Plumber	Plumber	Central Valley Motherlode Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Traini	
Plumber	Plumber	Contra Costa County Plumbing & Pipefitting Industry J A T C	2
Plumber	Plumber	Fresno Area Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Training Sub-Committee	
Plumber	Plumber	Glendale, Burbank, San Fernando Valley & Antelope Valley Plumbers & Steamfitters J.A.T.C.	

Plumber	Plumber	Kern, Inyo & Mono Counties Plumbing, Pipefitter & Refrigeration/Air Conditioning Mechanic J.A.T.C.	
Plumber	Plumber	Los Angeles Metropolitan Plumbers J.A.T.C.	35
Plumber	Plumber	Monterey & Santa Cruz Counties Plumbers, Pipe & Refrigeration Fitters J A& T/ (Sub Comm.)	
Plumber	Plumber	Napa/Solano Counties Plumbers And Steamfitters J.A.T.C.	4
Plumber	Plumber	Northern California Area Plumbers, Pipe & Refrigeration Fitters Joint Apprenticeship & Training Subc	
Plumber	Plumber	Orange County Plumbers & Steamfitters Joint Apprenticeship & Training Committee	17
Plumber	Plumber	Oregon Sw Washington/Nw California Plumbers J.A.T.C.	
Plumber	Plumber	P.H.C.C. Of The Greater Sacramento Area Plumbers U.A.C.	1
Plumber	Plumber	Pipe Trades J.A.T.C. Of Santa Clara And San Benito Counties	30
Plumber	Plumber	Pomona And San Gabriel Valleys Plumbers & Steamfitters J.A.C.	22
Plumber	Plumber	San Bernardino & Riverside Counties Plumbing & Steamfitter Trade J.A.C.	17
Plumber	Plumber	San Diego & Imperial Counties Pipe Trades J.A.C.	29
Plumber	Plumber	San Luis Obispo County Plumbing J.A.C.	
Plumber	Plumber	Santa Barbara County Pipe Trades J.A.C.	
Plumber	Plumber	Southern California Chapter Of The Associated Builders & Contractors, Inc. Plumbers U.A.C.	10
Plumber	Plumber	Stanislaus Area Plumbers, Pipe, & Refrigeration Fitters J.A.T.C.	
Plumber	Plumber	The Joint Apprenticeship And Training Committee Of The Plumbing & Pipe Fitting Industry Ua Local 38	28
Plumber	Plumber	United Association Local Union 342 J.A.T.C.	31
Plumber	Plumber	Ventura County Plumbing & Pipefitting J.A.C.	
Plumber	Plumber & Pipefitter	J. A. & T. C. , Plumbing, Pipe Fitting & Refrigeration Industry Of San Mateo	17
Plumber	Plumber/Pipefitter	Plumbing & Pipefitting Industry Of Sacramento & Yolo District J.A.C.	
Plumber	Plumber/Pipefitter	Reno Plumbers & Fitters J.A.T.C.	2
Plumber	Refrigeration & Air Conditioning Fitter	J. A. & T. C. , Plumbing, Pipe Fitting & Refrigeration Industry Of San Mateo	
Plumber	Refrigeration & Air Conditioning Mechanic	San Luis Obispo County Plumbing J.A.C.	
Plumber	Refrigeration & Air Conditioning Mechanic	Santa Barbara County Pipe Trades J.A.C.	
Plumber	Refrigeration & Air Conditioning Mechanic	Ventura County Plumbing & Pipefitting J.A.C.	
Plumber	Refrigeration & Air Conditioning Mechanic Equipment Service & Maintenance	Pipe Trades J.A.T.C. Of Santa Clara And San Benito Counties	
Plumber	Refrigeration And Air Conditioning Mechanic	Central Valley Motherlode Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Traini	
Plumber	Refrigeration And Air Conditioning Mechanic	Fresno Area Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Training Sub-Committee	
Plumber	Refrigeration And Air Conditioning Mechanic	Monterey & Santa Cruz Counties Plumbers, Pipe & Refrigeration Fitters J A& T/ (Sub Comm.)	
Plumber	Refrigeration And Air Conditioning Mechanic	Napa/Solano Counties Plumbers And Steamfitters J.A.T.C.	
Plumber	Refrigeration And Air Conditioning Mechanic	Northern California Area Plumbers, Pipe & Refrigeration Fitters Joint Apprenticeship & Training Subc	
Plumber	Refrigeration Fitter	Plumbing & Pipefitting Industry Of Sacramento & Yolo District J.A.C.	
Plumber	Refrigeration Fitter	Reno Plumbers & Fitters J.A.T.C.	
Plumber	Refrigeration Fitter / Air Conditioning Mechanic	United Association Local Union 342 J.A.T.C.	
Plumber	Refrigeration Mechanic	Contra Costa County Plumbing & Pipefitting Industry J A T C	
Plumber	Refrigeration Mechanic	The Joint Apprenticeship And Training Committee Of The Plumbing And Pipefitting Ua Local38	3
Plumber	Residential Plumber	Pipe Trades J.A.T.C. Of Santa Clara And San Benito Counties	
Plumber	Steamfitter	Contra Costa County Plumbing & Pipefitting Industry J A T C	
Plumber	Steamfitter	Orange County Plumbers & Steamfitters Joint Apprenticeship & Training Committee	
Plumber	Steamfitter	San Luis Obispo County Plumbing J.A.C.	
Plumber	Steamfitter	Santa Barbara County Pipe Trades J.A.C.	
Plumber	Steamfitter	The Joint Apprenticeship And Training Committee Of The Plumbing & Pipe Fitting Industry Ua Local 38	
Plumber	Steamfitter	United Association Local Union 342 J.A.T.C.	
Plumber	Steamfitter	Ventura County Plumbing & Pipefitting J.A.C.	
Plumber	Steamfitter - Pipefitter	Pipe Trades J.A.T.C. Of Santa Clara And San Benito Counties	
Plumber	Steamfitter & Industrial Pipefitter	San Bernardino & Riverside Counties Plumbing & Steamfitter Trade J.A.C.	
Plumber	Steamfitter And Industrial Pipefitter	Los Angeles & Vicinity Steamfitters And Industrial Pipefitters J.A.T.C.	20

Plumber	Steamfitter, Industrial Pipefitter, Pipefitter	San Diego & Imperial Counties Pipe Trades J.A.C.
Plumber	Steamfitter/Pipefitter	Central Valley Motherlode Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Traini
Plumber	Steamfitter/Pipefitter	Fresno Area Plumbers, Pipe And Refrigeration Fitters Joint Apprenticeship And Training Sub-Committee
Plumber	Steamfitter/Pipefitter	Glendale, Burbank, San Fernando Valley & Antelope Valley Plumbers & Steamfitters J.A.T.C.
Plumber	Steamfitter/Pipefitter	Monterey & Santa Cruz Counties Plumbers, Pipe & Refrigeration Fitters J A& T/ (Sub Comm.)
Plumber	Steamfitter/Pipefitter	Northern California Area Plumbers, Pipe & Refrigeration Fitters Joint Apprenticeship & Training Subc
Plumber	Steamfitter/Pipefitter	Santa Barbara County Pipe Trades J.A.C.

Note: 75 unique apprenticeship programs offering 149 energy efficiency-related apprenticeships
472 Carpenter Completers, 483 Electricians, 68 HVACR Mechanics, and 345 Plumbers; 1,368 Total Completers

Source: California Division of Apprenticehip Standards

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US93201	93201	PGE	ZCTA5 93201	93201	1,348	27938	12.8	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	65.2%	95%	0	0	0
8600000US93203	93203	PGE	ZCTA5 93203	93203	20,938	35429	15.4	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	72.9%	117%	0	0	0
8600000US93204	93204	PGE	ZCTA5 93204	93204	15,529	29302	19.7	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	61.9%	139%	0	0	0
8600000US93206	93206	PGE	ZCTA5 93206	93206	2,300	41488	9.4	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	85.4%	71%	0	0	0
8600000US93210	93210	PGE	ZCTA5 93210	93210	19,504	50290	9.8	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	111.3%	69%	0	0	0
8600000US93212	93212	PGE	ZCTA5 93212	93212	26,079	34565	16.2	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	73.0%	114%	0	0	0
8600000US93219	93219	PGE	ZCTA5 93219	93219	10,194	23458	18.8	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	54.7%	139%	0	0	0
8600000US93220	93220	PGE	ZCTA5 93220	93220	211	-	19.8	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	NA	NA	NA	NA	NA
8600000US93224	93224	PGE	ZCTA5 93224	93224	451	42273	14.3	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	87.0%	108%	0	0	0
8600000US93230	93230	PGE	ZCTA5 93230	93230	65,264	53008	12.8	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	112.0%	90%	0	0	0
8600000US93235	93235	PGE	ZCTA5 93235	93235	4,559	32783	20.9	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	76.5%	155%	0	1	1
8600000US93239	93239	PGE	ZCTA5 93239	93239	1,688	61319	12	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	129.5%	85%	0	0	0
8600000US93241	93241	PGE	ZCTA5 93241	93241	17,489	31886	10.8	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	65.6%	82%	0	0	0
8600000US93242	93242	PGE	ZCTA5 93242	93242	3,468	40109	15.3	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	88.7%	107%	0	0	0
8600000US93245	93245	PGE	ZCTA5 93245	93245	37,412	51280	13.4	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	108.3%	94%	0	0	0
8600000US93249	93249	PGE	ZCTA5 93249	93249	2,739	33011	6.4	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	68.0%	48%	0	0	0
8600000US93250	93250	PGE	ZCTA5 93250	93250	13,522	34961	18.6	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	72.0%	141%	0	0	0
8600000US93251	93251	PGE	ZCTA5 93251	93251	270	40179	12.3	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	82.7%	93%	0	0	0
8600000US93252	93252	PGE	ZCTA5 93252	93252	4,176	31771	22	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	65.4%	167%	0	1	1
8600000US93254	93254	PGE	ZCTA5 93254	93254	811	32750	9.8	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	51.6%	110%	0	0	0
8600000US93263	93263	PGE	ZCTA5 93263	93263	19,582	40833	15.5	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	84.1%	117%	0	0	0
8600000US93266	93266	PGE	ZCTA5 93266	93266	1,587	24122	21.1	Hanford-Corcoran, CA	Metropolitan Statistical Area	Kings County	47341	14.2	51.0%	149%	0	0	0
8600000US93268	93268	PGE	ZCTA5 93268	93268	16,897	46615	12.3	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	96.0%	93%	0	0	0
8600000US93274	93274	PGE	ZCTA5 93274	93274	69,721	45591	11.5	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	106.4%	85%	0	0	0
8600000US93276	93276	PGE	ZCTA5 93276	93276	161	45313	20	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	93.3%	152%	0	1	1
8600000US93277	93277	PGE	ZCTA5 93277	93277	50,607	51056	11.5	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	119.1%	85%	0	0	0
8600000US93280	93280	PGE	ZCTA5 93280	93280	27,152	39206	16	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	80.7%	121%	0	0	0
8600000US93286	93286	PGE	ZCTA5 93286	93286	9,548	41579	17.4	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	97.0%	129%	0	0	0
8600000US93291	93291	PGE	ZCTA5 93291	93291	52,849	50833	12.1	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	118.6%	90%	0	0	0
8600000US93292	93292	PGE	ZCTA5 93292	93292	39,032	51341	10.6	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	119.8%	79%	0	0	0
8600000US93301	93301	PGE	ZCTA5 93301	93301	12,248	30963	13.2	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	63.7%	100%	0	0	0
8600000US93307	93307	PGE	ZCTA5 93307	93307	82,658	34358	19.8	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	70.7%	150%	0	1	1
8600000US93308	93308	PGE	ZCTA5 93308	93308	52,447	41737	12.6	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	85.9%	95%	0	0	0
8600000US93309	93309	PGE	ZCTA5 93309	93309	58,409	47369	11.7	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	97.5%	89%	0	0	0
8600000US93311	93311	PGE	ZCTA5 93311	93311	40,829	87720	6.6	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	180.6%	50%	0	0	0
8600000US93312	93312	PGE	ZCTA5 93312	93312	56,741	93588	6.4	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	192.7%	48%	0	0	0
8600000US93313	93313	PGE	ZCTA5 93313	93313	43,553	64803	12.8	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	133.4%	97%	0	0	0
8600000US93314	93314	PGE	ZCTA5 93314	93314	22,393	96446	8.8	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	198.6%	67%	0	0	0
8600000US93401	93401	PGE	ZCTA5 93401	93401	28,033	52906	7.4	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	89.0%	93%	0	0	0
8600000US93402	93402	PGE	ZCTA5 93402	93402	14,318	57241	8.1	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	96.3%	101%	0	0	0
8600000US93405	93405	PGE	ZCTA5 93405	93405	35,440	41488	10.9	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	69.8%	136%	0	0	0
8600000US93420	93420	PGE	ZCTA5 93420	93420	28,413	66506	8.4	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	111.9%	105%	0	0	0
8600000US93422	93422	PGE	ZCTA5 93422	93422	31,375	66014	6.2	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	111.0%	78%	0	0	0
8600000US93424	93424	PGE	ZCTA5 93424	93424	1,261	77679	0	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	130.7%	0%	0	0	0
8600000US93426	93426	PGE	ZCTA5 93426	93426	1,401	57014	13.9	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	97.3%	145%	0	0	0
8600000US93427	93427	PGE	ZCTA5 93427	93427	5,505	62969	7	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	99.3%	79%	0	0	0
8600000US93428	93428	PGE	ZCTA5 93428	93428	6,314	63514	5.9	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	106.8%	74%	0	0	0
8600000US93429	93429	PGE	ZCTA5 93429	93429	154	47031	12.7	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	74.2%	143%	0	0	0
8600000US93430	93430	PGE	ZCTA5 93430	93430	2,972	52329	5.3	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	88.0%	66%	0	0	0
8600000US93432	93432	PGE	ZCTA5 93432	93432	1,384	53571	9.8	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	90.1%	123%	0	0	0
8600000US93433	93433	PGE	ZCTA5 93433	93433	13,162	49418	9.9	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	83.1%	124%	0	0	0
8600000US93434	93434	PGE	ZCTA5 93434	93434	7,110	45191	10.2	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	71.3%	115%	0	0	0
8600000US93436	93436	PGE	ZCTA5 93436	93436	54,017	54980	11.9	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	86.7%	134%	0	0	0
8600000US93437	93437	PGE	ZCTA5 93437	93437	3,338	61308	7.3	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	96.7%	82%	0	0	0
8600000US93440	93440	PGE	ZCTA5 93440	93440	2,058	63112	4.7	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	99.5%	53%	0	0	0
8600000US93441	93441	PGE	ZCTA5 93441	93441	1,530	95625	13.7	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	150.8%	154%	0	1	1
8600000US93442	93442	PGE	ZCTA5 93442	93442	10,789	52579	7.5	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	88.4%	94%	0	0	0
8600000US93444	93444	PGE	ZCTA5 93444	93444	19,244	61379	8.6	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	103.2%	108%	0	0	0
8600000US93445	93445	PGE	ZCTA5 93445	93445	7,173	50000	8.5	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	84.1%	106%	0	0	0
8600000US93446	93446	PGE	ZCTA5 93446	93446	43,714	64974	7.5	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	109.3%	94%	0	0	0
8600000US93449	93449	PGE	ZCTA5 93449	93449	7,657	67500	6.4	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	113.5%	80%	0	0	0
8600000US93450	93450	PGE	ZCTA5 93450	93450	740	42083	20.2	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	71.8%	210%	0	1	1
8600000US93451	93451	PGE	ZCTA5 93451	93451	3,779	54205	12.8	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	91.2%	160%	0	1	1
8600000US93452	93452	PGE	ZCTA5 93452	93452	524	34769	8.4	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	58.5%	105%	0	0	0
8600000US93453	93453	PGE	ZCTA5 93453	93453	2,899	51520	6.2	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	86.7%	78%	0	0	0
8600000US93454	93454	PGE	ZCTA5 93454	93454	36,448	52564	11.1	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	82.9%	125%	0	0	0
8600000US93455	93455	PGE	ZCTA5 93455	93455	41,684	72212	7.4	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	113.9%	83%	0	0	0
8600000US93458	93458	PGE	ZCTA5 93458	93458	55,431	43803	11	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	69.1%	124%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US93460	93460	PGE	ZCTA5 93460	93460	5,255	91737	8.1	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	144.7%	91%	0	0	0
8600000US93461	93461	PGE	ZCTA5 93461	93461	1,623	59738	9.4	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	100.5%	118%	0	0	0
8600000US93463	93463	PGE	ZCTA5 93463	93463	7,646	66771	10.2	Santa Barbara-Santa Maria-Goleta, CA	Metropolitan Statistical Area	Santa Barbara County	63409	8.9	105.3%	115%	0	0	0
8600000US93465	93465	PGE	ZCTA5 93465	93465	9,153	83194	7.6	San Luis Obispo-Paso Robles, CA	Metropolitan Statistical Area	San Luis Obispo County	59454	8.0	139.9%	95%	0	0	0
8600000US93516	93516	PGE	ZCTA5 93516	93516	2,299	30708	26.6	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	63.2%	202%	0	1	1
8600000US93527	93527	PGE	ZCTA5 93527	93527	2,387	52123	2.2	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	107.3%	17%	0	0	0
8600000US93555	93555	PGE	ZCTA5 93555	93555	32,560	62533	10.7	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	128.7%	81%	0	0	0
8600000US93561	93561	PGE	ZCTA5 93561	93561	34,630	60513	8.1	Bakersfield, CA	Metropolitan Statistical Area	Kern County	48574	13.2	124.6%	61%	0	0	0
8600000US93601	93601	PGE	ZCTA5 93601	93601	1,909	61466	10.7	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	135.1%	113%	0	0	0
8600000US93602	93602	PGE	ZCTA5 93602	93602	3,862	59125	9.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	130.8%	66%	0	0	0
8600000US93603	93603	PGE	ZCTA5 93603	93603	222	51250	24.4	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	119.6%	181%	0	1	1
8600000US93604	93604	PGE	ZCTA5 93604	93604	674	50455	28.8	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	110.9%	303%	0	1	1
8600000US93605	93605	PGE	ZCTA5 93605	93605	175	82917	0	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	183.4%	0%	0	0	0
8600000US93606	93606	PGE	ZCTA5 93606	93606	1,217	16154	17.9	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	35.7%	125%	1	0	1
8600000US93608	93608	PGE	ZCTA5 93608	93608	1,114	31111	14	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	68.8%	98%	0	0	0
8600000US93609	93609	PGE	ZCTA5 93609	93609	5,640	43322	11.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	95.8%	80%	0	0	0
8600000US93610	93610	PGE	ZCTA5 93610	93610	23,833	39051	10.7	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	85.8%	113%	0	0	0
8600000US93611	93611	PGE	ZCTA5 93611	93611	45,614	77930	11.2	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	172.4%	78%	0	0	0
8600000US93612	93612	PGE	ZCTA5 93612	93612	35,351	37207	15	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	82.3%	105%	0	0	0
8600000US93614	93614	PGE	ZCTA5 93614	93614	11,661	50858	13.3	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	111.8%	140%	0	0	0
8600000US93615	93615	PGE	ZCTA5 93615	93615	6,042	25327	17.4	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	59.1%	129%	0	0	0
8600000US93616	93616	PGE	ZCTA5 93616	93616	2,627	31250	13.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	69.1%	92%	0	0	0
8600000US93618	93618	PGE	ZCTA5 93618	93618	28,262	38269	15.6	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	89.3%	116%	0	0	0
8600000US93619	93619	PGE	ZCTA5 93619	93619	28,965	104557	6.6	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	231.3%	46%	0	0	0
8600000US93620	93620	PGE	ZCTA5 93620	93620	9,591	34869	18.1	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	81.0%	103%	0	0	0
8600000US93621	93621	PGE	ZCTA5 93621	93621	464	31544	0	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	69.8%	0%	0	0	0
8600000US93622	93622	PGE	ZCTA5 93622	93622	9,581	32125	13.2	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	71.1%	92%	0	0	0
8600000US93623	93623	PGE	ZCTA5 93623	93623	69	24009	48.4	Non-Metro Area, CA		Mariposa County	45961	12.6	52.2%	384%	0	1	1
8600000US93624	93624	PGE	ZCTA5 93624	93624	1,134	33600	11	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	74.3%	77%	0	0	0
8600000US93626	93626	PGE	ZCTA5 93626	93626	1,359	26958	12.8	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	59.6%	90%	0	0	0
8600000US93627	93627	PGE	ZCTA5 93627	93627	123	-	0	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	NA	NA	NA	NA	NA
8600000US93628	93628	PGE	ZCTA5 93628	93628	327	66679	9.3	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	147.5%	65%	0	0	0
8600000US93630	93630	PGE	ZCTA5 93630	93630	19,162	42303	10.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	93.6%	71%	0	0	0
8600000US93631	93631	PGE	ZCTA5 93631	93631	15,941	58381	13	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	129.2%	91%	0	0	0
8600000US93633	93633	PGE	ZCTA5 93633	93633	25	-	-	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	NA	NA	NA	NA	NA
8600000US93634	93634	PGE	ZCTA5 93634	93634	33	-	21.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	NA	NA	NA	NA	NA
8600000US93635	93635	PGE	ZCTA5 93635	93635	38,776	45056	17.5	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	104.6%	100%	0	0	0
8600000US93636	93636	PGE	ZCTA5 93636	93636	11,908	75160	7.2	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	165.2%	76%	0	0	0
8600000US93637	93637	PGE	ZCTA5 93637	93637	37,743	49121	6.6	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	108.0%	69%	0	0	0
8600000US93638	93638	PGE	ZCTA5 93638	93638	49,068	36890	9.8	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	81.1%	103%	0	0	0
8600000US93640	93640	PGE	ZCTA5 93640	93640	11,880	25741	29	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	56.9%	203%	0	1	1
8600000US93641	93641	PGE	ZCTA5 93641	93641	595	42222	0	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	93.4%	0%	0	0	0
8600000US93643	93643	PGE	ZCTA5 93643	93643	3,171	48617	22.3	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	107.6%	156%	0	1	1
8600000US93644	93644	PGE	ZCTA5 93644	93644	8,637	44223	12.7	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	97.2%	134%	0	0	0
8600000US93645	93645	PGE	ZCTA5 93645	93645	318	93529	0	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	205.6%	0%	0	0	0
8600000US93646	93646	PGE	ZCTA5 93646	93646	10,557	27914	20.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	61.8%	141%	0	0	0
8600000US93647	93647	PGE	ZCTA5 93647	93647	11,874	32898	18.1	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	76.8%	134%	0	0	0
8600000US93648	93648	PGE	ZCTA5 93648	93648	15,719	32175	16.2	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	71.2%	113%	0	0	0
8600000US93650	93650	PGE	ZCTA5 93650	93650	4,055	31818	17.7	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	70.4%	124%	0	0	0
8600000US93651	93651	PGE	ZCTA5 93651	93651	1,674	90179	16.2	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	199.5%	113%	0	0	0
8600000US93652	93652	PGE	ZCTA5 93652	93652	415	22917	10.7	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	50.7%	75%	0	0	0
8600000US93653	93653	PGE	ZCTA5 93653	93653	1,229	46121	8.8	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	101.4%	93%	0	0	0
8600000US93654	93654	PGE	ZCTA5 93654	93654	29,776	47882	12.9	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	105.9%	90%	0	0	0
8600000US93656	93656	PGE	ZCTA5 93656	93656	6,313	45485	17.5	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	100.6%	122%	0	0	0
8600000US93657	93657	PGE	ZCTA5 93657	93657	34,999	49785	15.8	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	110.1%	110%	0	0	0
8600000US93660	93660	PGE	ZCTA5 93660	93660	4,675	26223	10.6	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	58.0%	74%	0	0	0
8600000US93662	93662	PGE	ZCTA5 93662	93662	30,237	43442	14.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	96.1%	99%	0	0	0
8600000US93664	93664	PGE	ZCTA5 93664	93664	585	96563	8.6	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	213.6%	60%	0	0	0
8600000US93665	93665	PGE	ZCTA5 93665	93665	472	33813	38.1	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	78.5%	218%	0	1	1
8600000US93666	93666	PGE	ZCTA5 93666	93666	692	24276	5.2	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	56.6%	39%	0	0	0
8600000US93667	93667	PGE	ZCTA5 93667	93667	2,604	53385	13.3	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	118.1%	93%	0	0	0
8600000US93668	93668	PGE	ZCTA5 93668	93668	1,118	38665	2.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	85.5%	17%	0	0	0
8600000US93669	93669	PGE	ZCTA5 93669	93669	295	6827	22.4	Madera, CA	Metropolitan Statistical Area	Madera County	45490	9.5	15.0%	236%	1	1	2
8600000US93673	93673	PGE	ZCTA5 93673	93673	713	38359	18.7	Visalia-Porterville, CA	Metropolitan Statistical Area	Tulare County	42863	13.5	89.5%	139%	0	0	0
8600000US93675	93675	PGE	ZCTA5 93675	93675	3,721	63105	23.2	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	139.6%	162%	0	1	1
8600000US93701	93701	PGE	ZCTA5 93701	93701	12,529	18553	21.6	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	41.0%	151%	1	1	2
8600000US93702	93702	PGE	ZCTA5 93702	93702	48,607	26031	18.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	57.6%	129%	0	0	0
8600000US93703	93703	PGE	ZCTA5 93703	93703	31,868	28406	18.9	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	62.8%	132%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US93704	93704	PGE	ZCTA5 93704	93704	27,156	48461	11.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	107.2%	78%	0	0	0
8600000US93705	93705	PGE	ZCTA5 93705	93705	36,703	32635	17.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	72.2%	120%	0	0	0
8600000US93706	93706	PGE	ZCTA5 93706	93706	41,087	29197	17.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	64.6%	120%	0	0	0
8600000US93710	93710	PGE	ZCTA5 93710	93710	30,202	42844	17	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	94.8%	119%	0	0	0
8600000US93711	93711	PGE	ZCTA5 93711	93711	36,731	63934	9.8	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	141.4%	69%	0	0	0
8600000US93720	93720	PGE	ZCTA5 93720	93720	45,191	77092	9.5	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	170.6%	66%	0	0	0
8600000US93721	93721	PGE	ZCTA5 93721	93721	6,959	11922	19.1	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	26.4%	134%	1	0	1
8600000US93722	93722	PGE	ZCTA5 93722	93722	76,448	54381	13.4	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	120.3%	94%	0	0	0
8600000US93723	93723	PGE	ZCTA5 93723	93723	9,547	69055	10.3	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	152.8%	72%	0	0	0
8600000US93725	93725	PGE	ZCTA5 93725	93725	24,979	35635	17.8	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	78.8%	124%	0	0	0
8600000US93726	93726	PGE	ZCTA5 93726	93726	40,705	32471	19.9	Fresno, CA	Metropolitan Statistical Area	Fresno County	45201	14.3	71.8%	139%	0	0	0
8600000US93906	93906	PGE	ZCTA5 93906	93906	59,461	55082	10.6	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	94.0%	110%	0	0	0
8600000US93907	93907	PGE	ZCTA5 93907	93907	21,726	68078	9	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	116.2%	94%	0	0	0
8600000US93908	93908	PGE	ZCTA5 93908	93908	13,043	113826	4	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	194.3%	42%	0	0	0
8600000US93920	93920	PGE	ZCTA5 93920	93920	1,369	57670	5.1	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	98.4%	53%	0	0	0
8600000US93921	93921	PGE	ZCTA5 93921	93921	3,281	62230	3.9	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	106.2%	41%	0	0	0
8600000US93923	93923	PGE	ZCTA5 93923	93923	12,073	98219	6.7	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	167.7%	70%	0	0	0
8600000US93924	93924	PGE	ZCTA5 93924	93924	6,279	92137	5	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	157.3%	52%	0	0	0
8600000US93925	93925	PGE	ZCTA5 93925	93925	1,671	60000	7	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	102.4%	73%	0	0	0
8600000US93926	93926	PGE	ZCTA5 93926	93926	8,726	51044	5.8	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	87.1%	60%	0	0	0
8600000US93927	93927	PGE	ZCTA5 93927	93927	17,547	52233	13.8	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	89.2%	144%	0	0	0
8600000US93928	93928	PGE	ZCTA5 93928	93928	506	77250	0	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	131.9%	0%	0	0	0
8600000US93930	93930	PGE	ZCTA5 93930	93930	15,866	42454	15.1	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	72.5%	157%	0	1	1
8600000US93932	93932	PGE	ZCTA5 93932	93932	592	94712	7.3	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	161.7%	76%	0	0	0
8600000US93933	93933	PGE	ZCTA5 93933	93933	22,406	53955	8.1	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	92.1%	84%	0	0	0
8600000US93940	93940	PGE	ZCTA5 93940	93940	31,615	67716	6.5	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	115.6%	68%	0	0	0
8600000US93943	93943	PGE	ZCTA5 93943	93943	6	-	-	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	NA	NA	NA	NA	NA
8600000US93950	93950	PGE	ZCTA5 93950	93950	15,046	70230	7.6	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	119.9%	79%	0	0	0
8600000US93953	93953	PGE	ZCTA5 93953	93953	4,509	102396	7.1	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	174.8%	74%	0	0	0
8600000US93954	93954	PGE	ZCTA5 93954	93954	302	43750	30.8	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	74.7%	321%	0	1	1
8600000US93955	93955	PGE	ZCTA5 93955	93955	33,359	52420	10.5	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	89.5%	109%	0	0	0
8600000US93960	93960	PGE	ZCTA5 93960	93960	27,080	47098	11.7	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	80.4%	122%	0	0	0
8600000US93962	93962	PGE	ZCTA5 93962	93962	673	80288	2.4	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	137.1%	25%	0	0	0
8600000US94002	94002	PGE	ZCTA5 94002	94002	25,992	105985	7.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	132.5%	83%	0	0	0
8600000US94005	94005	PGE	ZCTA5 94005	94005	4,282	80233	10	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	100.3%	115%	0	0	0
8600000US94010	94010	PGE	ZCTA5 94010	94010	40,737	118125	5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	147.6%	57%	0	0	0
8600000US94014	94014	PGE	ZCTA5 94014	94014	47,014	71668	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	89.6%	86%	0	0	0
8600000US94015	94015	PGE	ZCTA5 94015	94015	60,927	78564	9.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	98.2%	113%	0	0	0
8600000US94019	94019	PGE	ZCTA5 94019	94019	18,424	103378	7.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	129.2%	90%	0	0	0
8600000US94020	94020	PGE	ZCTA5 94020	94020	1,559	92356	5.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	115.4%	62%	0	0	0
8600000US94021	94021	PGE	ZCTA5 94021	94021	192	93810	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	117.3%	0%	0	0	0
8600000US94022	94022	PGE	ZCTA5 94022	94022	18,500	182750	4.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	196.6%	47%	0	0	0
8600000US94024	94024	PGE	ZCTA5 94024	94024	22,385	167546	5.9	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	180.2%	66%	0	0	0
8600000US94025	94025	PGE	ZCTA5 94025	94025	40,526	119095	6.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	148.9%	77%	0	0	0
8600000US94027	94027	PGE	ZCTA5 94027	94027	7,089	236912	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	296.1%	74%	0	0	0
8600000US94028	94028	PGE	ZCTA5 94028	94028	6,534	180174	4.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	225.2%	53%	0	0	0
8600000US94030	94030	PGE	ZCTA5 94030	94030	21,536	92006	6.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	115.0%	78%	0	0	0
8600000US94037	94037	PGE	ZCTA5 94037	94037	2,913	147568	2.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	184.4%	25%	0	0	0
8600000US94038	94038	PGE	ZCTA5 94038	94038	3,040	81622	2.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	102.0%	28%	0	0	0
8600000US94040	94040	PGE	ZCTA5 94040	94040	32,996	101912	6.4	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	109.6%	71%	0	0	0
8600000US94041	94041	PGE	ZCTA5 94041	94041	13,292	88810	7.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	95.5%	87%	0	0	0
8600000US94043	94043	PGE	ZCTA5 94043	94043	28,358	100844	8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	108.5%	89%	0	0	0
8600000US94044	94044	PGE	ZCTA5 94044	94044	37,296	96719	6.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	120.9%	76%	0	0	0
8600000US94060	94060	PGE	ZCTA5 94060	94060	1,554	60089	9.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	75.1%	114%	0	0	0
8600000US94061	94061	PGE	ZCTA5 94061	94061	36,245	81907	6.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	102.4%	79%	0	0	0
8600000US94062	94062	PGE	ZCTA5 94062	94062	25,876	126557	4.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	158.2%	51%	0	0	0
8600000US94063	94063	PGE	ZCTA5 94063	94063	30,949	54003	7.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	67.5%	90%	0	0	0
8600000US94065	94065	PGE	ZCTA5 94065	94065	11,359	132462	5.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	165.6%	66%	0	0	0
8600000US94066	94066	PGE	ZCTA5 94066	94066	41,130	81369	7.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	101.7%	90%	0	0	0
8600000US94070	94070	PGE	ZCTA5 94070	94070	29,166	125335	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	156.7%	86%	0	0	0
8600000US94074	94074	PGE	ZCTA5 94074	94074	214	153269	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	191.6%	0%	0	0	0
8600000US94080	94080	PGE	ZCTA5 94080	94080	63,975	78378	7.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	98.0%	91%	0	0	0
8600000US94085	94085	PGE	ZCTA5 94085	94085	21,247	92489	9.9	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	99.5%	110%	0	0	0
8600000US94086	94086	PGE	ZCTA5 94086	94086	45,697	100215	8.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	107.8%	90%	0	0	0
8600000US94087	94087	PGE	ZCTA5 94087	94087	54,293	122354	6	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	131.6%	67%	0	0	0
8600000US94089	94089	PGE	ZCTA5 94089	94089	19,245	88797	8.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	95.5%	92%	0	0	0
8600000US94102	94102	PGE	ZCTA5 94102	94102	31,176	24127	7.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	30.2%	85%	1	0	1
8600000US94103	94103	PGE	ZCTA5 94103	94103	27,170	41612	8.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	52.0%	99%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US94104	94104	PGE	ZCTA5 94104	94104	406	80341	12.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	100.4%	148%	0	0	0
8600000US94105	94105	PGE	ZCTA5 94105	94105	5,846	170656	2.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	213.3%	29%	0	0	0
8600000US94107	94107	PGE	ZCTA5 94107	94107	26,599	120610	6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	150.7%	69%	0	0	0
8600000US94108	94108	PGE	ZCTA5 94108	94108	13,768	36875	7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	46.1%	80%	1	0	1
8600000US94109	94109	PGE	ZCTA5 94109	94109	55,984	63173	5.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	79.0%	67%	0	0	0
8600000US94110	94110	PGE	ZCTA5 94110	94110	69,333	84488	8.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	105.6%	97%	0	0	0
8600000US94111	94111	PGE	ZCTA5 94111	94111	3,713	103472	11.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	129.3%	131%	0	0	0
8600000US94112	94112	PGE	ZCTA5 94112	94112	79,407	71505	11	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	89.4%	126%	0	0	0
8600000US94114	94114	PGE	ZCTA5 94114	94114	31,124	122970	5.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	153.7%	63%	0	0	0
8600000US94115	94115	PGE	ZCTA5 94115	94115	33,021	85330	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	106.7%	74%	0	0	0
8600000US94116	94116	PGE	ZCTA5 94116	94116	43,698	84828	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	106.0%	86%	0	0	0
8600000US94117	94117	PGE	ZCTA5 94117	94117	39,169	103333	6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	129.2%	69%	0	0	0
8600000US94118	94118	PGE	ZCTA5 94118	94118	38,319	82993	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	103.7%	74%	0	0	0
8600000US94121	94121	PGE	ZCTA5 94121	94121	41,203	70220	6.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	87.8%	71%	0	0	0
8600000US94122	94122	PGE	ZCTA5 94122	94122	56,023	86070	6.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	107.6%	70%	0	0	0
8600000US94123	94123	PGE	ZCTA5 94123	94123	23,088	121200	5.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	151.5%	66%	0	0	0
8600000US94124	94124	PGE	ZCTA5 94124	94124	33,996	49594	14.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	62.0%	167%	0	1	1
8600000US94127	94127	PGE	ZCTA5 94127	94127	19,289	131108	5.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	163.9%	66%	0	0	0
8600000US94128	94128	PGE	ZCTA5 94128	94128	69	0		San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Mateo County	80008	8.7	NA	NA	NA	NA	NA
8600000US94129	94129	PGE	ZCTA5 94129	94129	3,183	144886	1.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	181.1%	16%	0	0	0
8600000US94130	94130	PGE	ZCTA5 94130	94130	2,880	38077	11.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	47.6%	134%	1	0	1
8600000US94131	94131	PGE	ZCTA5 94131	94131	26,881	100114	5.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	125.1%	67%	0	0	0
8600000US94132	94132	PGE	ZCTA5 94132	94132	28,129	66607	11.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	83.3%	130%	0	0	0
8600000US94133	94133	PGE	ZCTA5 94133	94133	26,237	53150	6.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	66.4%	79%	0	0	0
8600000US94134	94134	PGE	ZCTA5 94134	94134	40,798	60230	11.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	75.3%	128%	0	0	0
8600000US94158	94158	PGE	ZCTA5 94158	94158	4,792	83542	4.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	San Francisco County	80008	8.7	104.4%	51%	0	0	0
8600000US94303	94303	PGE	ZCTA5 94303	94303	45,467	89464	9.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	96.2%	109%	0	0	0
8600000US94304	94304	PGE	ZCTA5 94304	94304	3,627	101932	3.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	109.7%	37%	0	0	0
8600000US94501	94501	PGE	ZCTA5 94501	94501	60,212	70935	9.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	88.7%	107%	0	0	0
8600000US94502	94502	PGE	ZCTA5 94502	94502	13,600	105480	5.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	131.8%	68%	0	0	0
8600000US94503	94503	PGE	ZCTA5 94503	94503	19,681	81918	9.1	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	115.5%	108%	0	0	0
8600000US94505	94505	PGE	ZCTA5 94505	94505	13,403	111833	8.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	139.8%	100%	0	0	0
8600000US94506	94506	PGE	ZCTA5 94506	94506	22,452	176241	4.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	220.3%	51%	0	0	0
8600000US94507	94507	PGE	ZCTA5 94507	94507	14,889	163219	5.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	204.0%	63%	0	0	0
8600000US94508	94508	PGE	ZCTA5 94508	94508	3,661	72411	6.9	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	102.1%	77%	0	0	0
8600000US94509	94509	PGE	ZCTA5 94509	94509	62,439	54372	14.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	68.0%	162%	0	1	1
8600000US94510	94510	PGE	ZCTA5 94510	94510	27,088	89500	8.2	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	132.9%	68%	0	0	0
8600000US94511	94511	PGE	ZCTA5 94511	94511	2,137	36845	12.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	46.1%	140%	1	0	1
8600000US94512	94512	PGE	ZCTA5 94512	94512	108	64583	0	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	95.9%	0%	0	0	0
8600000US94513	94513	PGE	ZCTA5 94513	94513	54,605	89607	9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	112.0%	103%	0	0	0
8600000US94514	94514	PGE	ZCTA5 94514	94514	1,360	51992	8.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	65.0%	100%	0	0	0
8600000US94515	94515	PGE	ZCTA5 94515	94515	7,050	62182	2.2	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	87.7%	26%	0	0	0
8600000US94516	94516	PGE	ZCTA5 94516	94516	211	100750	11	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	125.9%	126%	0	0	0
8600000US94517	94517	PGE	ZCTA5 94517	94517	12,385	121367	9.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	151.7%	106%	0	0	0
8600000US94518	94518	PGE	ZCTA5 94518	94518	26,778	73040	9.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	91.3%	114%	0	0	0
8600000US94519	94519	PGE	ZCTA5 94519	94519	18,453	67607	11.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	84.5%	133%	0	0	0
8600000US94520	94520	PGE	ZCTA5 94520	94520	37,208	47656	11.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	59.6%	128%	0	0	0
8600000US94521	94521	PGE	ZCTA5 94521	94521	41,249	84819	10.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	106.0%	121%	0	0	0
8600000US94523	94523	PGE	ZCTA5 94523	94523	33,569	81685	6.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	102.1%	78%	0	0	0
8600000US94525	94525	PGE	ZCTA5 94525	94525	3,127	81667	7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	102.1%	80%	0	0	0
8600000US94526	94526	PGE	ZCTA5 94526	94526	31,102	128802	6.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	161.0%	78%	0	0	0
8600000US94528	94528	PGE	ZCTA5 94528	94528	964	162328	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	202.9%	0%	0	0	0
8600000US94530	94530	PGE	ZCTA5 94530	94530	23,877	87598	9.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	109.5%	105%	0	0	0
8600000US94531	94531	PGE	ZCTA5 94531	94531	40,290	88693	12.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	110.9%	146%	0	0	0
8600000US94533	94533	PGE	ZCTA5 94533	94533	69,277	56973	13.2	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	84.6%	109%	0	0	0
8600000US94534	94534	PGE	ZCTA5 94534	94534	36,416	91882	7.9	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	136.4%	65%	0	0	0
8600000US94535	94535	PGE	ZCTA5 94535	94535	3,793	53389	9.5	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	79.3%	79%	0	0	0
8600000US94536	94536	PGE	ZCTA5 94536	94536	68,790	92107	8.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	115.1%	97%	0	0	0
8600000US94538	94538	PGE	ZCTA5 94538	94538	61,148	87652	7.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	109.6%	89%	0	0	0
8600000US94539	94539	PGE	ZCTA5 94539	94539	50,031	144152	7.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	180.2%	82%	0	0	0
8600000US94541	94541	PGE	ZCTA5 94541	94541	61,635	57895	14.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	72.4%	163%	0	1	1
8600000US94542	94542	PGE	ZCTA5 94542	94542	12,717	80327	10.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	100.4%	120%	0	0	0
8600000US94544	94544	PGE	ZCTA5 94544	94544	73,026	59699	12.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	74.6%	147%	0	0	0
8600000US94545	94545	PGE	ZCTA5 94545	94545	29,707	71723	12.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	89.6%	144%	0	0	0
8600000US94546	94546	PGE	ZCTA5 94546	94546	42,209	75500	9.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	94.4%	106%	0	0	0
8600000US94547	94547	PGE	ZCTA5 94547	94547	24,092	100204	5.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	125.2%	66%	0	0	0
8600000US94548	94548	PGE	ZCTA5 94548	94548	412	85000	18.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	106.2%	211%	0	1	1
8600000US94549	94549	PGE	ZCTA5 94549	94549	26,864	137344	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	171.7%	74%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US94550	94550	PGE	ZCTA5 94550	94550	46,896	102952	5.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	128.7%	67%	0	0	0
8600000US94551	94551	PGE	ZCTA5 94551	94551	36,867	98321	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	122.9%	86%	0	0	0
8600000US94552	94552	PGE	ZCTA5 94552	94552	14,454	132826	6.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	166.0%	77%	0	0	0
8600000US94553	94553	PGE	ZCTA5 94553	94553	47,065	76669	10.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	95.8%	122%	0	0	0
8600000US94555	94555	PGE	ZCTA5 94555	94555	34,143	114603	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	143.2%	74%	0	0	0
8600000US94556	94556	PGE	ZCTA5 94556	94556	15,229	133088	7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	166.3%	80%	0	0	0
8600000US94558	94558	PGE	ZCTA5 94558	94558	66,830	72720	8.3	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	102.5%	99%	0	0	0
8600000US94559	94559	PGE	ZCTA5 94559	94559	27,184	58363	10.6	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	82.3%	126%	0	0	0
8600000US94560	94560	PGE	ZCTA5 94560	94560	42,573	86521	7.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	108.1%	85%	0	0	0
8600000US94561	94561	PGE	ZCTA5 94561	94561	36,515	77706	10.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	97.1%	123%	0	0	0
8600000US94563	94563	PGE	ZCTA5 94563	94563	17,672	166147	4.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	207.7%	56%	0	0	0
8600000US94564	94564	PGE	ZCTA5 94564	94564	18,287	74283	8.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	92.8%	95%	0	0	0
8600000US94565	94565	PGE	ZCTA5 94565	94565	84,641	55865	14.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	69.8%	164%	0	1	1
8600000US94566	94566	PGE	ZCTA5 94566	94566	40,884	120401	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	150.5%	86%	0	0	0
8600000US94567	94567	PGE	ZCTA5 94567	94567	623	58643	8.1	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	82.7%	96%	0	0	0
8600000US94568	94568	PGE	ZCTA5 94568	94568	46,016	113616	5.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	142.0%	61%	0	0	0
8600000US94569	94569	PGE	ZCTA5 94569	94569	198	94420	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	118.0%	0%	0	0	0
8600000US94571	94571	PGE	ZCTA5 94571	94571	7,911	61563	22.3	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	91.4%	184%	0	1	1
8600000US94572	94572	PGE	ZCTA5 94572	94572	8,684	68701	10.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	85.9%	116%	0	0	0
8600000US94573	94573	PGE	ZCTA5 94573	94573	94	61310	9	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	86.4%	107%	0	0	0
8600000US94574	94574	PGE	ZCTA5 94574	94574	8,742	81788	5.8	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	115.3%	69%	0	0	0
8600000US94575	94575	PGE	ZCTA5 94575	94575	974	-	32.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	NA	NA	NA	NA	NA
8600000US94576	94576	PGE	ZCTA5 94576	94576	164	40341	0	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	56.9%	0%	0	0	0
8600000US94577	94577	PGE	ZCTA5 94577	94577	45,560	64660	9.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	80.8%	114%	0	0	0
8600000US94578	94578	PGE	ZCTA5 94578	94578	38,558	49095	10.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	61.4%	123%	0	0	0
8600000US94579	94579	PGE	ZCTA5 94579	94579	20,571	75481	8.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	94.3%	100%	0	0	0
8600000US94580	94580	PGE	ZCTA5 94580	94580	27,152	71177	12.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	89.0%	144%	0	0	0
8600000US94582	94582	PGE	ZCTA5 94582	94582	38,537	138371	5.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	172.9%	63%	0	0	0
8600000US94583	94583	PGE	ZCTA5 94583	94583	34,859	121948	6.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	152.4%	75%	0	0	0
8600000US94585	94585	PGE	ZCTA5 94585	94585	28,263	70721	10.1	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	105.0%	83%	0	0	0
8600000US94586	94586	PGE	ZCTA5 94586	94586	925	85000	5.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	106.2%	61%	0	0	0
8600000US94587	94587	PGE	ZCTA5 94587	94587	69,516	82564	8.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	103.2%	102%	0	0	0
8600000US94588	94588	PGE	ZCTA5 94588	94588	30,842	127684	6.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	159.6%	72%	0	0	0
8600000US94589	94589	PGE	ZCTA5 94589	94589	29,876	56154	15.2	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	83.4%	126%	0	0	0
8600000US94590	94590	PGE	ZCTA5 94590	94590	35,420	40826	18.3	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	60.6%	151%	0	1	1
8600000US94591	94591	PGE	ZCTA5 94591	94591	53,042	73870	13.9	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	109.7%	115%	0	0	0
8600000US94592	94592	PGE	ZCTA5 94592	94592	742	107660	17.2	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	159.9%	142%	0	0	0
8600000US94595	94595	PGE	ZCTA5 94595	94595	16,425	58659	9.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	73.3%	110%	0	0	0
8600000US94596	94596	PGE	ZCTA5 94596	94596	20,037	78856	6.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	98.6%	77%	0	0	0
8600000US94597	94597	PGE	ZCTA5 94597	94597	20,277	88012	7.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	110.0%	82%	0	0	0
8600000US94598	94598	PGE	ZCTA5 94598	94598	25,818	121337	6.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	151.7%	78%	0	0	0
8600000US94599	94599	PGE	ZCTA5 94599	94599	3,021	66136	8.4	Napa, CA	Metropolitan Statistical Area	Napa County	70925	8.4	93.2%	100%	0	0	0
8600000US94601	94601	PGE	ZCTA5 94601	94601	50,294	39601	14.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	49.5%	169%	1	1	2
8600000US94602	94602	PGE	ZCTA5 94602	94602	28,329	68813	9.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	86.0%	114%	0	0	0
8600000US94603	94603	PGE	ZCTA5 94603	94603	31,403	40962	17.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	51.2%	197%	0	1	1
8600000US94605	94605	PGE	ZCTA5 94605	94605	39,016	57610	15.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	72.0%	174%	0	1	1
8600000US94606	94606	PGE	ZCTA5 94606	94606	36,672	37288	13.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	46.6%	156%	1	1	2
8600000US94607	94607	PGE	ZCTA5 94607	94607	24,978	34192	13.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	42.7%	160%	1	1	2
8600000US94608	94608	PGE	ZCTA5 94608	94608	28,019	55959	10.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	69.9%	116%	0	0	0
8600000US94609	94609	PGE	ZCTA5 94609	94609	20,596	56378	10.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	70.5%	117%	0	0	0
8600000US94610	94610	PGE	ZCTA5 94610	94610	29,287	73850	6.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	92.3%	71%	0	0	0
8600000US94611	94611	PGE	ZCTA5 94611	94611	36,565	107577	5.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	134.5%	60%	0	0	0
8600000US94612	94612	PGE	ZCTA5 94612	94612	14,389	30879	12.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	38.6%	147%	1	0	1
8600000US94613	94613	PGE	ZCTA5 94613	94613	715	-	15.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	NA	NA	NA	NA	NA
8600000US94618	94618	PGE	ZCTA5 94618	94618	16,046	123575	6.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	154.5%	74%	0	0	0
8600000US94619	94619	PGE	ZCTA5 94619	94619	23,299	78676	8.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	98.3%	100%	0	0	0
8600000US94621	94621	PGE	ZCTA5 94621	94621	29,870	30528	16.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	38.2%	193%	1	1	2
8600000US94702	94702	PGE	ZCTA5 94702	94702	15,979	59628	7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	74.5%	80%	0	0	0
8600000US94703	94703	PGE	ZCTA5 94703	94703	19,846	58613	8.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	73.3%	101%	0	0	0
8600000US94704	94704	PGE	ZCTA5 94704	94704	25,592	30997	12.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	38.7%	146%	1	0	1
8600000US94705	94705	PGE	ZCTA5 94705	94705	12,762	96537	6.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	120.7%	76%	0	0	0
8600000US94706	94706	PGE	ZCTA5 94706	94706	19,615	81746	7.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	102.2%	84%	0	0	0
8600000US94707	94707	PGE	ZCTA5 94707	94707	11,710	136331	4.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	170.4%	55%	0	0	0
8600000US94708	94708	PGE	ZCTA5 94708	94708	10,985	145610	5.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	182.0%	59%	0	0	0
8600000US94709	94709	PGE	ZCTA5 94709	94709	11,806	59150	5.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	73.9%	64%	0	0	0
8600000US94710	94710	PGE	ZCTA5 94710	94710	6,948	60952	8.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	76.2%	99%	0	0	0
8600000US94720	94720	PGE	ZCTA5 94720	94720	2,964	-	26.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Alameda County	80008	8.7	NA	NA	NA	NA	NA
8600000US94801	94801	PGE	ZCTA5 94801	94801	29,395	38856	13.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	48.6%	153%	1	1	2

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US94803	94803	PGE	ZCTA5 94803	94803	24,904	76232	9.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	95.3%	105%	0	0	0
8600000US94804	94804	PGE	ZCTA5 94804	94804	38,559	49541	12	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	61.9%	138%	0	0	0
8600000US94805	94805	PGE	ZCTA5 94805	94805	13,648	66079	9.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	82.6%	114%	0	0	0
8600000US94806	94806	PGE	ZCTA5 94806	94806	59,861	52173	13.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	65.2%	154%	0	1	1
8600000US94850	94850	PGE	ZCTA5 94850	94850	0	-	-	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Contra Costa County	80008	8.7	NA	NA	NA	NA	NA
8600000US94901	94901	PGE	ZCTA5 94901	94901	41,157	76909	8.2	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	96.1%	94%	0	0	0
8600000US94903	94903	PGE	ZCTA5 94903	94903	29,040	86196	5.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	107.7%	63%	0	0	0
8600000US94904	94904	PGE	ZCTA5 94904	94904	11,995	102237	6.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	127.8%	79%	0	0	0
8600000US94920	94920	PGE	ZCTA5 94920	94920	12,474	132486	8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	165.6%	92%	0	0	0
8600000US94922	94922	PGE	ZCTA5 94922	94922	425	28556	6.7	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	44.8%	70%	1	0	1
8600000US94923	94923	PGE	ZCTA5 94923	94923	1,411	77305	1.4	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	121.2%	15%	0	0	0
8600000US94924	94924	PGE	ZCTA5 94924	94924	1,638	73621	9.4	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	92.0%	108%	0	0	0
8600000US94925	94925	PGE	ZCTA5 94925	94925	9,253	113279	4.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	141.6%	52%	0	0	0
8600000US94928	94928	PGE	ZCTA5 94928	94928	43,170	57484	10.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	90.1%	114%	0	0	0
8600000US94929	94929	PGE	ZCTA5 94929	94929	264	44417	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	55.5%	0%	0	0	0
8600000US94930	94930	PGE	ZCTA5 94930	94930	8,500	93049	5.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	116.3%	59%	0	0	0
8600000US94931	94931	PGE	ZCTA5 94931	94931	8,470	64625	12.2	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	101.3%	127%	0	0	0
8600000US94933	94933	PGE	ZCTA5 94933	94933	865	71667	18.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	89.6%	210%	0	1	1
8600000US94937	94937	PGE	ZCTA5 94937	94937	837	51921	2.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	64.9%	31%	0	0	0
8600000US94938	94938	PGE	ZCTA5 94938	94938	812	96281	8.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	120.3%	99%	0	0	0
8600000US94939	94939	PGE	ZCTA5 94939	94939	6,859	93750	9.1	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	117.2%	105%	0	0	0
8600000US94940	94940	PGE	ZCTA5 94940	94940	268	28958	17	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	36.2%	195%	1	1	2
8600000US94941	94941	PGE	ZCTA5 94941	94941	30,496	121209	6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	151.5%	69%	0	0	0
8600000US94945	94945	PGE	ZCTA5 94945	94945	17,167	83638	7.6	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	104.5%	87%	0	0	0
8600000US94946	94946	PGE	ZCTA5 94946	94946	699	113281	3.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	141.6%	43%	0	0	0
8600000US94947	94947	PGE	ZCTA5 94947	94947	24,283	81879	6.7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	102.3%	77%	0	0	0
8600000US94949	94949	PGE	ZCTA5 94949	94949	17,202	74009	8.8	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	92.5%	101%	0	0	0
8600000US94950	94950	PGE	ZCTA5 94950	94950	89	21333	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	26.7%	0%	1	0	1
8600000US94951	94951	PGE	ZCTA5 94951	94951	4,124	93389	4.7	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	146.4%	49%	0	0	0
8600000US94952	94952	PGE	ZCTA5 94952	94952	32,858	75221	8.3	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	117.9%	86%	0	0	0
8600000US94954	94954	PGE	ZCTA5 94954	94954	37,365	81980	8.2	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	128.5%	85%	0	0	0
8600000US94956	94956	PGE	ZCTA5 94956	94956	1,756	38750	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	48.4%	0%	1	0	1
8600000US94957	94957	PGE	ZCTA5 94957	94957	1,332	187857	7	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	234.8%	80%	0	0	0
8600000US94960	94960	PGE	ZCTA5 94960	94960	15,740	108295	7.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	135.4%	86%	0	0	0
8600000US94963	94963	PGE	ZCTA5 94963	94963	569	79485	3.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	99.3%	38%	0	0	0
8600000US94964	94964	PGE	ZCTA5 94964	94964	5,094	106333	3.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	132.9%	40%	0	0	0
8600000US94965	94965	PGE	ZCTA5 94965	94965	10,847	89715	10.5	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	112.1%	121%	0	0	0
8600000US94970	94970	PGE	ZCTA5 94970	94970	683	107768	0	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	134.7%	0%	0	0	0
8600000US94971	94971	PGE	ZCTA5 94971	94971	337	42500	8.3	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	53.1%	95%	0	0	0
8600000US94972	94972	PGE	ZCTA5 94972	94972	52	-	0	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	NA	NA	NA	NA	NA
8600000US94973	94973	PGE	ZCTA5 94973	94973	1,429	88750	5.9	San Francisco-Oakland-Fremont, CA	Metropolitan Statistical Area	Marin County	80008	8.7	110.9%	68%	0	0	0
8600000US95002	95002	PGE	ZCTA5 95002	95002	2,077	73333	11.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	78.9%	124%	0	0	0
8600000US95003	95003	PGE	ZCTA5 95003	95003	23,974	83902	8.2	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	125.4%	94%	0	0	0
8600000US95004	95004	PGE	ZCTA5 95004	95004	3,918	67188	16	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	114.7%	167%	0	1	1
8600000US95005	95005	PGE	ZCTA5 95005	95005	6,311	69872	9.9	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	104.4%	114%	0	0	0
8600000US95006	95006	PGE	ZCTA5 95006	95006	8,979	75510	10	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	112.8%	115%	0	0	0
8600000US95007	95007	PGE	ZCTA5 95007	95007	676	149821	10.5	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	223.9%	121%	0	0	0
8600000US95008	95008	PGE	ZCTA5 95008	95008	45,260	88987	6.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	95.7%	76%	0	0	0
8600000US95010	95010	PGE	ZCTA5 95010	95010	9,137	55833	6.6	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	83.4%	76%	0	0	0
8600000US95012	95012	PGE	ZCTA5 95012	95012	10,320	52015	11.1	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	88.8%	116%	0	0	0
8600000US95013	95013	PGE	ZCTA5 95013	95013	80	-	22.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	NA	NA	NA	NA	NA
8600000US95014	95014	PGE	ZCTA5 95014	95014	60,717	130961	7.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	140.9%	86%	0	0	0
8600000US95017	95017	PGE	ZCTA5 95017	95017	834	67031	4.1	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	100.2%	47%	0	0	0
8600000US95018	95018	PGE	ZCTA5 95018	95018	7,778	72161	7.4	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	107.8%	85%	0	0	0
8600000US95019	95019	PGE	ZCTA5 95019	95019	7,727	38491	13.8	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	57.5%	159%	0	1	1
8600000US95020	95020	PGE	ZCTA5 95020	95020	57,349	82748	10.9	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	89.0%	121%	0	0	0
8600000US95023	95023	PGE	ZCTA5 95023	95023	48,841	69678	13.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	San Benito County	92960	9.0	75.0%	148%	0	0	0
8600000US95030	95030	PGE	ZCTA5 95030	95030	12,791	154107	4.6	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	165.8%	51%	0	0	0
8600000US95032	95032	PGE	ZCTA5 95032	95032	25,089	120893	6.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	130.0%	69%	0	0	0
8600000US95033	95033	PGE	ZCTA5 95033	95033	9,372	126397	7.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	136.0%	87%	0	0	0
8600000US95035	95035	PGE	ZCTA5 95035	95035	66,943	98899	8.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	106.4%	97%	0	0	0
8600000US95037	95037	PGE	ZCTA5 95037	95037	45,579	95435	9.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	102.7%	102%	0	0	0
8600000US95039	95039	PGE	ZCTA5 95039	95039	1,377	42708	15.2	Salinas, CA	Metropolitan Statistical Area	Monterey County	58582	9.6	72.9%	158%	0	1	1
8600000US95041	95041	PGE	ZCTA5 95041	95041	160	120208	10.5	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	179.6%	121%	0	0	0
8600000US95043	95043	PGE	ZCTA5 95043	95043	639	62500	4.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	San Benito County	92960	9.0	67.2%	48%	0	0	0
8600000US95045	95045	PGE	ZCTA5 95045	95045	4,046	55250	23.4	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	San Benito County	92960	9.0	59.4%	260%	0	1	1
8600000US95046	95046	PGE	ZCTA5 95046	95046	6,417	108205	10	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	116.4%	111%	0	0	0
8600000US95050	95050	PGE	ZCTA5 95050	95050	35,923	69341	6.4	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	74.6%	71%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95051	95051	PGE	ZCTA5 95051	95051	54,327	101292	8.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	109.0%	98%	0	0	0
8600000US95053	95053	PGE	ZCTA5 95053	95053	2,206	133333	11.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	143.4%	130%	0	0	0
8600000US95054	95054	PGE	ZCTA5 95054	95054	23,364	116855	6.5	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	125.7%	72%	0	0	0
8600000US95060	95060	PGE	ZCTA5 95060	95060	46,377	62365	8.9	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	93.2%	102%	0	0	0
8600000US95062	95062	PGE	ZCTA5 95062	95062	36,079	62253	8.5	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	93.0%	98%	0	0	0
8600000US95064	95064	PGE	ZCTA5 95064	95064	7,331	60536	4.6	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	90.5%	53%	0	0	0
8600000US95065	95065	PGE	ZCTA5 95065	95065	8,113	86031	6.1	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	128.6%	70%	0	0	0
8600000US95066	95066	PGE	ZCTA5 95066	95066	14,749	108919	7	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	162.8%	80%	0	0	0
8600000US95070	95070	PGE	ZCTA5 95070	95070	30,617	167386	6.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	180.1%	69%	0	0	0
8600000US95073	95073	PGE	ZCTA5 95073	95073	10,154	80133	8.5	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	119.7%	98%	0	0	0
8600000US95075	95075	PGE	ZCTA5 95075	95075	331	60556	6	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	San Benito County	92960	9.0	65.1%	67%	0	0	0
8600000US95076	95076	PGE	ZCTA5 95076	95076	82,474	56671	10.2	Santa Cruz-Watsonville, CA	Metropolitan Statistical Area	Santa Cruz County	66923	8.7	84.7%	117%	0	0	0
8600000US95110	95110	PGE	ZCTA5 95110	95110	18,730	68693	9.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	73.9%	101%	0	0	0
8600000US95111	95111	PGE	ZCTA5 95111	95111	58,466	57047	13.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	61.4%	146%	0	0	0
8600000US95112	95112	PGE	ZCTA5 95112	95112	55,927	49454	12.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	53.2%	142%	0	0	0
8600000US95113	95113	PGE	ZCTA5 95113	95113	893	61500	9.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	66.2%	108%	0	0	0
8600000US95116	95116	PGE	ZCTA5 95116	95116	51,496	47413	12.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	51.0%	137%	0	0	0
8600000US95117	95117	PGE	ZCTA5 95117	95117	30,067	67718	9	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	72.8%	100%	0	0	0
8600000US95118	95118	PGE	ZCTA5 95118	95118	31,932	90984	7.3	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	97.9%	81%	0	0	0
8600000US95119	95119	PGE	ZCTA5 95119	95119	9,970	103319	8.5	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	111.1%	94%	0	0	0
8600000US95120	95120	PGE	ZCTA5 95120	95120	37,457	152721	6.4	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	164.3%	71%	0	0	0
8600000US95121	95121	PGE	ZCTA5 95121	95121	37,469	85514	13.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	92.0%	146%	0	0	0
8600000US95122	95122	PGE	ZCTA5 95122	95122	56,545	57470	12.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	61.8%	134%	0	0	0
8600000US95123	95123	PGE	ZCTA5 95123	95123	62,228	90881	7.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	97.8%	87%	0	0	0
8600000US95124	95124	PGE	ZCTA5 95124	95124	47,082	106660	8.5	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	114.7%	94%	0	0	0
8600000US95125	95125	PGE	ZCTA5 95125	95125	51,939	102479	8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	110.2%	89%	0	0	0
8600000US95126	95126	PGE	ZCTA5 95126	95126	31,049	72877	10.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	78.4%	113%	0	0	0
8600000US95127	95127	PGE	ZCTA5 95127	95127	61,325	70692	12	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	76.0%	133%	0	0	0
8600000US95128	95128	PGE	ZCTA5 95128	95128	34,836	70096	9.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	75.4%	108%	0	0	0
8600000US95129	95129	PGE	ZCTA5 95129	95129	38,720	107493	6.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	115.6%	69%	0	0	0
8600000US95130	95130	PGE	ZCTA5 95130	95130	13,911	98990	6.7	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	106.5%	74%	0	0	0
8600000US95131	95131	PGE	ZCTA5 95131	95131	28,565	108366	9.2	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	116.6%	102%	0	0	0
8600000US95132	95132	PGE	ZCTA5 95132	95132	40,299	98026	9.5	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	105.4%	106%	0	0	0
8600000US95133	95133	PGE	ZCTA5 95133	95133	25,401	72459	12.4	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	77.9%	138%	0	0	0
8600000US95134	95134	PGE	ZCTA5 95134	95134	15,268	114757	6	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	123.4%	67%	0	0	0
8600000US95135	95135	PGE	ZCTA5 95135	95135	20,120	128654	9.1	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	138.4%	101%	0	0	0
8600000US95136	95136	PGE	ZCTA5 95136	95136	42,989	87500	8.9	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	94.1%	99%	0	0	0
8600000US95138	95138	PGE	ZCTA5 95138	95138	18,889	145505	8.6	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	156.5%	96%	0	0	0
8600000US95139	95139	PGE	ZCTA5 95139	95139	6,748	98400	10.8	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	105.9%	120%	0	0	0
8600000US95140	95140	PGE	ZCTA5 95140	95140	191	166750	0	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	179.4%	0%	0	0	0
8600000US95148	95148	PGE	ZCTA5 95148	95148	45,528	107324	9.5	San Jose-Sunnyvale-Santa Clara, CA	Metropolitan Statistical Area	Santa Clara County	92960	9.0	115.5%	106%	0	0	0
8600000US95202	95202	PGE	ZCTA5 95202	95202	6,521	15023	25.8	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	28.2%	172%	1	1	2
8600000US95203	95203	PGE	ZCTA5 95203	95203	15,696	37264	18.3	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	70.0%	122%	0	0	0
8600000US95204	95204	PGE	ZCTA5 95204	95204	27,786	43372	14.8	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	81.4%	99%	0	0	0
8600000US95205	95205	PGE	ZCTA5 95205	95205	38,069	33357	20	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	62.6%	133%	0	0	0
8600000US95206	95206	PGE	ZCTA5 95206	95206	65,004	42404	18.8	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	79.6%	125%	0	0	0
8600000US95207	95207	PGE	ZCTA5 95207	95207	47,965	38563	18.5	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	72.4%	123%	0	0	0
8600000US95209	95209	PGE	ZCTA5 95209	95209	39,488	72218	13.5	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	135.6%	90%	0	0	0
8600000US95210	95210	PGE	ZCTA5 95210	95210	39,009	38510	19.3	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	72.3%	129%	0	0	0
8600000US95211	95211	PGE	ZCTA5 95211	95211	1,545	-	8.9	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	NA	NA	NA	NA	NA
8600000US95212	95212	PGE	ZCTA5 95212	95212	25,239	59965	12.6	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	112.6%	84%	0	0	0
8600000US95215	95215	PGE	ZCTA5 95215	95215	23,224	40753	21.2	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	76.5%	141%	0	0	0
8600000US95219	95219	PGE	ZCTA5 95219	95219	27,884	75309	10	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	141.4%	67%	0	0	0
8600000US95220	95220	PGE	ZCTA5 95220	95220	7,273	60899	10	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	114.4%	67%	0	0	0
8600000US95222	95222	PGE	ZCTA5 95222	95222	5,292	51927	4.7	Non-Metro Area, CA		Calaveras County	45961	12.6	113.0%	37%	0	0	0
8600000US95223	95223	PGE	ZCTA5 95223	95223	4,612	62056	8.1	Non-Metro Area, CA		Calaveras County	45961	12.6	135.0%	64%	0	0	0
8600000US95224	95224	PGE	ZCTA5 95224	95224	429	20179	0	Non-Metro Area, CA		Calaveras County	45961	12.6	43.9%	0%	1	0	1
8600000US95225	95225	PGE	ZCTA5 95225	95225	672	19922	0	Non-Metro Area, CA		Calaveras County	45961	12.6	43.3%	0%	1	0	1
8600000US95226	95226	PGE	ZCTA5 95226	95226	84	-	0	Non-Metro Area, CA		Calaveras County	45961	12.6	NA	NA	NA	NA	NA
8600000US95227	95227	PGE	ZCTA5 95227	95227	941	99167	2.5	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	186.2%	17%	0	0	0
8600000US95228	95228	PGE	ZCTA5 95228	95228	3,976	61250	10.2	Non-Metro Area, CA		Calaveras County	45961	12.6	133.3%	81%	0	0	0
8600000US95230	95230	PGE	ZCTA5 95230	95230	718	46250	0	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	86.8%	0%	0	0	0
8600000US95231	95231	PGE	ZCTA5 95231	95231	4,374	36167	20.2	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	67.9%	135%	0	0	0
8600000US95232	95232	PGE	ZCTA5 95232	95232	304	58500	0	Non-Metro Area, CA		Calaveras County	45961	12.6	127.3%	0%	0	0	0
8600000US95233	95233	PGE	ZCTA5 95233	95233	436	50446	16	Non-Metro Area, CA		Calaveras County	45961	12.6	109.8%	127%	0	0	0
8600000US95234	95234	PGE	ZCTA5 95234	95234	70	-	0	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	NA	NA	NA	NA	NA
8600000US95236	95236	PGE	ZCTA5 95236	95236	4,223	76542	7.4	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	143.7%	49%	0	0	0
8600000US95237	95237	PGE	ZCTA5 95237	95237	3,167	46575	16.2	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	87.5%	108%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95240	95240	PGE	ZCTA5 95240	95240	47,172	40021	15	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	75.2%	100%	0	0	0
8600000US95242	95242	PGE	ZCTA5 95242	95242	25,393	64355	12	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	120.8%	80%	0	0	0
8600000US95245	95245	PGE	ZCTA5 95245	95245	2,277	62424	15.5	Non-Metro Area, CA		Calaveras County	45961	12.6	135.8%	123%	0	0	0
8600000US95246	95246	PGE	ZCTA5 95246	95246	1,615	39110	16.3	Non-Metro Area, CA		Calaveras County	45961	12.6	85.1%	129%	0	0	0
8600000US95247	95247	PGE	ZCTA5 95247	95247	4,368	48287	8.8	Non-Metro Area, CA		Calaveras County	45961	12.6	105.1%	70%	0	0	0
8600000US95248	95248	PGE	ZCTA5 95248	95248	301	21429	50	Non-Metro Area, CA		Calaveras County	45961	12.6	46.6%	397%	1	1	2
8600000US95249	95249	PGE	ZCTA5 95249	95249	4,042	41458	6.9	Non-Metro Area, CA		Calaveras County	45961	12.6	90.2%	55%	0	0	0
8600000US95250	95250	PGE	ZCTA5 95250	95250	78	-	0	Non-Metro Area, CA		Calaveras County	45961	12.6	NA	NA	NA	NA	NA
8600000US95251	95251	PGE	ZCTA5 95251	95251	767	78558	4.8	Non-Metro Area, CA		Calaveras County	45961	12.6	170.9%	38%	0	0	0
8600000US95252	95252	PGE	ZCTA5 95252	95252	13,460	62384	14	Non-Metro Area, CA		Calaveras County	45961	12.6	135.7%	111%	0	0	0
8600000US95254	95254	PGE	ZCTA5 95254	95254	480	72120	20.3	Non-Metro Area, CA		Calaveras County	45961	12.6	156.9%	161%	0	1	1
8600000US95255	95255	PGE	ZCTA5 95255	95255	2,042	36678	17	Non-Metro Area, CA		Calaveras County	45961	12.6	79.8%	135%	0	0	0
8600000US95257	95257	PGE	ZCTA5 95257	95257	413	45509	30.8	Non-Metro Area, CA		Calaveras County	45961	12.6	99.0%	244%	0	1	1
8600000US95258	95258	PGE	ZCTA5 95258	95258	4,018	72452	10.4	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	136.1%	69%	0	0	0
8600000US95301	95301	PGE	ZCTA5 95301	95301	37,073	48488	15.2	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	112.6%	87%	0	0	0
8600000US95303	95303	PGE	ZCTA5 95303	95303	912	44792	12.5	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	104.0%	71%	0	0	0
8600000US95304	95304	PGE	ZCTA5 95304	95304	15,706	78640	11.2	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	147.7%	75%	0	0	0
8600000US95305	95305	PGE	ZCTA5 95305	95305	245	-	100	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	NA	NA	NA	NA	NA
8600000US95306	95306	PGE	ZCTA5 95306	95306	970	39219	7.6	Non-Metro Area, CA		Mariposa County	45961	12.6	85.3%	60%	0	0	0
8600000US95307	95307	PGE	ZCTA5 95307	95307	42,753	45631	18.4	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	92.0%	113%	0	0	0
8600000US95310	95310	PGE	ZCTA5 95310	95310	1,882	37500	27.8	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	81.6%	221%	0	1	1
8600000US95311	95311	PGE	ZCTA5 95311	95311	2,197	42614	17.3	Non-Metro Area, CA		Mariposa County	45961	12.6	92.7%	137%	0	0	0
8600000US95312	95312	PGE	ZCTA5 95312	95312	268	51806	17.2	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	120.3%	98%	0	0	0
8600000US95313	95313	PGE	ZCTA5 95313	95313	1,386	35476	5	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	71.6%	31%	0	0	0
8600000US95314	95314	PGE	ZCTA5 95314	95314	0	-	-	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	NA	NA	NA	NA	NA
8600000US95315	95315	PGE	ZCTA5 95315	95315	13,018	44771	17.1	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	104.0%	98%	0	0	0
8600000US95316	95316	PGE	ZCTA5 95316	95316	6,573	67639	8.3	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	136.4%	51%	0	0	0
8600000US95317	95317	PGE	ZCTA5 95317	95317	817	33036	14.1	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	76.7%	81%	0	0	0
8600000US95318	95318	PGE	ZCTA5 95318	95318	541	102872	0	Non-Metro Area, CA		Mariposa County	45961	12.6	223.8%	0%	0	0	0
8600000US95319	95319	PGE	ZCTA5 95319	95319	1,749	24814	23.8	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	50.1%	146%	0	0	0
8600000US95320	95320	PGE	ZCTA5 95320	95320	12,819	55599	10.2	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	104.4%	68%	0	0	0
8600000US95321	95321	PGE	ZCTA5 95321	95321	3,736	45947	13.7	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	100.0%	109%	0	0	0
8600000US95322	95322	PGE	ZCTA5 95322	95322	8,942	40732	15.5	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	94.6%	89%	0	0	0
8600000US95323	95323	PGE	ZCTA5 95323	95323	1,260	55500	14.1	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	112.0%	87%	0	0	0
8600000US95324	95324	PGE	ZCTA5 95324	95324	7,324	51286	7.3	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	119.1%	42%	0	0	0
8600000US95325	95325	PGE	ZCTA5 95325	95325	81	-	0	Non-Metro Area, CA		Mariposa County	45961	12.6	NA	NA	NA	NA	NA
8600000US95326	95326	PGE	ZCTA5 95326	95326	9,581	54366	19.5	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	109.7%	120%	0	0	0
8600000US95327	95327	PGE	ZCTA5 95327	95327	9,806	44902	22.6	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	97.7%	179%	0	1	1
8600000US95328	95328	PGE	ZCTA5 95328	95328	3,993	41103	29.7	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	82.9%	182%	0	1	1
8600000US95329	95329	PGE	ZCTA5 95329	95329	2,460	58191	13.9	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	117.4%	85%	0	0	0
8600000US95330	95330	PGE	ZCTA5 95330	95330	17,853	63248	12.9	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	118.8%	86%	0	0	0
8600000US95333	95333	PGE	ZCTA5 95333	95333	2,942	42366	24.4	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	98.4%	139%	0	0	0
8600000US95334	95334	PGE	ZCTA5 95334	95334	15,457	50740	21.6	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	117.8%	123%	0	0	0
8600000US95335	95335	PGE	ZCTA5 95335	95335	541	33309	11.4	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	72.5%	90%	0	0	0
8600000US95336	95336	PGE	ZCTA5 95336	95336	42,675	56885	14.7	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	106.8%	98%	0	0	0
8600000US95337	95337	PGE	ZCTA5 95337	95337	31,557	66711	14.5	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	125.3%	97%	0	0	0
8600000US95338	95338	PGE	ZCTA5 95338	95338	11,062	47692	17.2	Non-Metro Area, CA		Mariposa County	45961	12.6	103.8%	137%	0	0	0
8600000US95340	95340	PGE	ZCTA5 95340	95340	33,931	49688	17.8	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	115.4%	102%	0	0	0
8600000US95341	95341	PGE	ZCTA5 95341	95341	32,967	32233	16.7	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	74.8%	95%	0	0	0
8600000US95345	95345	PGE	ZCTA5 95345	95345	708	41042	14.7	Non-Metro Area, CA		Mariposa County	45961	12.6	89.3%	117%	0	0	0
8600000US95346	95346	PGE	ZCTA5 95346	95346	1,272	49708	25.7	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	108.2%	204%	0	1	1
8600000US95348	95348	PGE	ZCTA5 95348	95348	30,805	40903	17.8	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	95.0%	102%	0	0	0
8600000US95350	95350	PGE	ZCTA5 95350	95350	51,046	40461	18.2	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	81.6%	112%	0	0	0
8600000US95351	95351	PGE	ZCTA5 95351	95351	46,458	34732	22.7	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	70.1%	139%	0	0	0
8600000US95354	95354	PGE	ZCTA5 95354	95354	25,394	36254	17.5	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	73.1%	107%	0	0	0
8600000US95355	95355	PGE	ZCTA5 95355	95355	58,311	56646	11.8	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	114.3%	72%	0	0	0
8600000US95356	95356	PGE	ZCTA5 95356	95356	30,918	65208	11.6	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	131.5%	71%	0	0	0
8600000US95357	95357	PGE	ZCTA5 95357	95357	11,559	53235	19	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	107.4%	117%	0	0	0
8600000US95358	95358	PGE	ZCTA5 95358	95358	31,668	49567	21.5	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	100.0%	132%	0	0	0
8600000US95360	95360	PGE	ZCTA5 95360	95360	11,712	42213	19.2	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	85.2%	118%	0	0	0
8600000US95361	95361	PGE	ZCTA5 95361	95361	31,610	57652	13.1	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	116.3%	80%	0	0	0
8600000US95363	95363	PGE	ZCTA5 95363	95363	25,237	53466	15.6	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	107.9%	96%	0	0	0
8600000US95364	95364	PGE	ZCTA5 95364	95364	53	-	-	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	NA	NA	NA	NA	NA
8600000US95365	95365	PGE	ZCTA5 95365	95365	4,985	32319	26.6	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	75.0%	152%	0	1	1
8600000US95366	95366	PGE	ZCTA5 95366	95366	16,575	75300	7.3	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	141.4%	49%	0	0	0
8600000US95367	95367	PGE	ZCTA5 95367	95367	23,173	59056	16.4	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	119.1%	101%	0	0	0
8600000US95368	95368	PGE	ZCTA5 95368	95368	13,614	72939	11	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	147.1%	67%	0	0	0
8600000US95369	95369	PGE	ZCTA5 95369	95369	1,099	48510	12.2	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	112.6%	70%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95370	95370	PGE	ZCTA5 95370	95370	26,803	48912	13.7	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	106.4%	109%	0	0	0
8600000US95372	95372	PGE	ZCTA5 95372	95372	1,963	79457	15.3	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	172.9%	121%	0	0	0
8600000US95374	95374	PGE	ZCTA5 95374	95374	2,030	44000	23	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	102.2%	131%	0	0	0
8600000US95375	95375	PGE	ZCTA5 95375	95375	106	-	0	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	NA	NA	NA	NA	NA
8600000US95376	95376	PGE	ZCTA5 95376	95376	49,859	62262	14.6	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	116.9%	97%	0	0	0
8600000US95377	95377	PGE	ZCTA5 95377	95377	30,902	96860	10.4	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	181.9%	69%	0	0	0
8600000US95379	95379	PGE	ZCTA5 95379	95379	3,898	54792	8.6	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	119.2%	68%	0	0	0
8600000US95380	95380	PGE	ZCTA5 95380	95380	41,201	39743	17.2	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	80.2%	106%	0	0	0
8600000US95382	95382	PGE	ZCTA5 95382	95382	36,176	64874	12.3	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	130.9%	75%	0	0	0
8600000US95383	95383	PGE	ZCTA5 95383	95383	3,937	42299	10.3	Non-Metro Area, CA	Micropolitan Statistical Area	Tuolumne County	45961	12.6	92.0%	82%	0	0	0
8600000US95385	95385	PGE	ZCTA5 95385	95385	429	37631	16.1	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	70.7%	107%	0	0	0
8600000US95386	95386	PGE	ZCTA5 95386	95386	9,877	47868	21.5	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	96.6%	132%	0	0	0
8600000US95387	95387	PGE	ZCTA5 95387	95387	636	28472	29.7	Modesto, CA	Metropolitan Statistical Area	Stanislaus County	49573	16.3	57.4%	182%	0	1	1
8600000US95388	95388	PGE	ZCTA5 95388	95388	13,074	42677	20.1	Merced, CA	Metropolitan Statistical Area	Merced County	43066	17.5	99.1%	115%	0	0	0
8600000US95389	95389	PGE	ZCTA5 95389	95389	1,272	45588	6.8	Non-Metro Area, CA		Mariposa County	45961	12.6	99.2%	54%	0	0	0
8600000US95391	95391	PGE	ZCTA5 95391	95391	9,959	107095	15.8	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	201.1%	105%	0	0	0
8600000US95401	95401	PGE	ZCTA5 95401	95401	36,981	52813	12.2	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	82.8%	127%	0	0	0
8600000US95403	95403	PGE	ZCTA5 95403	95403	45,164	63029	10.1	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	98.8%	105%	0	0	0
8600000US95404	95404	PGE	ZCTA5 95404	95404	39,761	67001	9.4	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	105.0%	98%	0	0	0
8600000US95405	95405	PGE	ZCTA5 95405	95405	21,399	72156	9.4	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	113.1%	98%	0	0	0
8600000US95407	95407	PGE	ZCTA5 95407	95407	39,352	53652	12.1	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	84.1%	126%	0	0	0
8600000US95409	95409	PGE	ZCTA5 95409	95409	27,187	65425	8.4	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	102.5%	88%	0	0	0
8600000US95410	95410	PGE	ZCTA5 95410	95410	950	37703	20.8	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	87.1%	169%	0	1	1
8600000US95412	95412	PGE	ZCTA5 95412	95412	401	51875	0	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	81.3%	0%	0	0	0
8600000US95415	95415	PGE	ZCTA5 95415	95415	1,592	34643	3.9	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	80.0%	32%	0	0	0
8600000US95417	95417	PGE	ZCTA5 95417	95417	297	71301	1	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	164.7%	8%	0	0	0
8600000US95420	95420	PGE	ZCTA5 95420	95420	374	51618	5.5	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	119.2%	45%	0	0	0
8600000US95421	95421	PGE	ZCTA5 95421	95421	1,592	58289	6.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	91.4%	72%	0	0	0
8600000US95422	95422	PGE	ZCTA5 95422	95422	15,585	25934	22.8	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	72.0%	137%	0	0	0
8600000US95423	95423	PGE	ZCTA5 95423	95423	3,747	27379	21.3	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	76.1%	128%	0	0	0
8600000US95425	95425	PGE	ZCTA5 95425	95425	10,841	57400	6.5	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	90.0%	68%	0	0	0
8600000US95426	95426	PGE	ZCTA5 95426	95426	2,147	66750	12.2	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	185.4%	73%	0	0	0
8600000US95427	95427	PGE	ZCTA5 95427	95427	459	21410	11.6	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	49.5%	94%	1	0	1
8600000US95428	95428	PGE	ZCTA5 95428	95428	2,516	32782	22.9	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	75.7%	186%	0	1	1
8600000US95429	95429	PGE	ZCTA5 95429	95429	70	73125	0	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	168.9%	0%	0	0	0
8600000US95430	95430	PGE	ZCTA5 95430	95430	44	-	-	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	NA	NA	NA	NA	NA
8600000US95431	95431	PGE	ZCTA5 95431	95431	631	-	65.7	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	NA	NA	NA	NA	NA
8600000US95432	95432	PGE	ZCTA5 95432	95432	426	32431	16.2	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	74.9%	132%	0	0	0
8600000US95435	95435	PGE	ZCTA5 95435	95435	82	-	0	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	NA	NA	NA	NA	NA
8600000US95436	95436	PGE	ZCTA5 95436	95436	5,418	53368	12.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	83.7%	134%	0	0	0
8600000US95437	95437	PGE	ZCTA5 95437	95437	14,799	38276	8.3	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	88.4%	67%	0	0	0
8600000US95439	95439	PGE	ZCTA5 95439	95439	675	73542	6.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	115.3%	72%	0	0	0
8600000US95441	95441	PGE	ZCTA5 95441	95441	2,014	59545	4.1	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	93.3%	43%	0	0	0
8600000US95442	95442	PGE	ZCTA5 95442	95442	3,178	64712	1.3	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	101.4%	14%	0	0	0
8600000US95443	95443	PGE	ZCTA5 95443	95443	233	15529	0	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	43.1%	0%	1	0	1
8600000US95444	95444	PGE	ZCTA5 95444	95444	748	72607	9.5	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	113.8%	99%	0	0	0
8600000US95445	95445	PGE	ZCTA5 95445	95445	2,093	36201	5.6	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	83.6%	46%	0	0	0
8600000US95446	95446	PGE	ZCTA5 95446	95446	4,750	43564	13.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	68.3%	145%	0	0	0
8600000US95448	95448	PGE	ZCTA5 95448	95448	16,852	62076	9.2	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	97.3%	96%	0	0	0
8600000US95449	95449	PGE	ZCTA5 95449	95449	1,507	37321	25	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	86.2%	203%	0	1	1
8600000US95450	95450	PGE	ZCTA5 95450	95450	387	51389	8	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	80.5%	83%	0	0	0
8600000US95451	95451	PGE	ZCTA5 95451	95451	11,213	45392	15.8	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	126.1%	95%	0	0	0
8600000US95452	95452	PGE	ZCTA5 95452	95452	1,393	78114	14.4	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	122.4%	150%	0	1	1
8600000US95453	95453	PGE	ZCTA5 95453	95453	11,256	45299	11.4	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	125.8%	69%	0	0	0
8600000US95454	95454	PGE	ZCTA5 95454	95454	2,556	36196	20.3	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	83.6%	165%	0	1	1
8600000US95456	95456	PGE	ZCTA5 95456	95456	795	38750	5.9	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	89.5%	48%	0	0	0
8600000US95457	95457	PGE	ZCTA5 95457	95457	2,893	42829	24.6	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	119.0%	148%	0	0	0
8600000US95458	95458	PGE	ZCTA5 95458	95458	3,104	20980	20.6	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	58.3%	124%	0	0	0
8600000US95459	95459	PGE	ZCTA5 95459	95459	504	43594	16.5	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	100.7%	134%	0	0	0
8600000US95460	95460	PGE	ZCTA5 95460	95460	2,285	49470	3.2	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	114.3%	26%	0	0	0
8600000US95461	95461	PGE	ZCTA5 95461	95461	3,413	52143	15	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	144.9%	90%	0	0	0
8600000US95462	95462	PGE	ZCTA5 95462	95462	1,417	37083	16.9	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	58.1%	176%	0	1	1
8600000US95463	95463	PGE	ZCTA5 95463	95463	169	-	-	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	NA	NA	NA	NA	NA
8600000US95464	95464	PGE	ZCTA5 95464	95464	2,673	26667	8.7	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	74.1%	52%	0	0	0
8600000US95465	95465	PGE	ZCTA5 95465	95465	2,083	68636	13.3	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	107.6%	139%	0	0	0
8600000US95466	95466	PGE	ZCTA5 95466	95466	946	50500	7.7	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	116.7%	63%	0	0	0
8600000US95467	95467	PGE	ZCTA5 95467	95467	5,498	65706	11.3	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	182.5%	68%	0	0	0
8600000US95468	95468	PGE	ZCTA5 95468	95468	1,258	44412	6.6	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	102.6%	54%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95469	95469	PGE	ZCTA5 95469	95469	1,767	49545	11.2	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	114.4%	91%	0	0	0
8600000US95470	95470	PGE	ZCTA5 95470	95470	6,032	58810	15.8	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	135.9%	128%	0	0	0
8600000US95471	95471	PGE	ZCTA5 95471	95471	522	43854	23.7	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	68.7%	247%	0	1	1
8600000US95472	95472	PGE	ZCTA5 95472	95472	28,255	68804	8.1	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	107.8%	84%	0	0	0
8600000US95476	95476	PGE	ZCTA5 95476	95476	35,394	60100	8	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	94.2%	83%	0	0	0
8600000US95482	95482	PGE	ZCTA5 95482	95482	31,808	45953	14.7	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	106.2%	120%	0	0	0
8600000US95485	95485	PGE	ZCTA5 95485	95485	2,557	29708	11.7	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	82.5%	70%	0	0	0
8600000US95486	95486	PGE	ZCTA5 95486	95486	62	28897	0	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	45.3%	0%	1	0	1
8600000US95488	95488	PGE	ZCTA5 95488	95488	280	56683	0	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	130.9%	0%	0	0	0
8600000US95490	95490	PGE	ZCTA5 95490	95490	13,264	37692	9.1	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	87.1%	74%	0	0	0
8600000US95492	95492	PGE	ZCTA5 95492	95492	28,532	81093	8.5	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	127.1%	89%	0	0	0
8600000US95493	95493	PGE	ZCTA5 95493	95493	198	88333	46.8	Clearlake, CA	Micropolitan Statistical Area	Lake County	35997	16.6	245.4%	282%	0	1	1
8600000US95494	95494	PGE	ZCTA5 95494	95494	139	46319	12	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	107.0%	98%	0	0	0
8600000US95497	95497	PGE	ZCTA5 95497	95497	1,305	59375	0	Santa Rosa-Petaluma, CA	Metropolitan Statistical Area	Sonoma County	63799	9.6	93.1%	0%	0	0	0
8600000US95501	95501	PGE	ZCTA5 95501	95501	23,976	38175	11.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	90.6%	98%	0	0	0
8600000US95503	95503	PGE	ZCTA5 95503	95503	24,152	48681	11	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	115.5%	97%	0	0	0
8600000US95511	95511	PGE	ZCTA5 95511	95511	360	13750	29.4	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	32.6%	260%	1	1	2
8600000US95514	95514	PGE	ZCTA5 95514	95514	254	22893	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	54.3%	0%	0	0	0
8600000US95519	95519	PGE	ZCTA5 95519	95519	17,432	50051	8.6	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	118.7%	76%	0	0	0
8600000US95521	95521	PGE	ZCTA5 95521	95521	20,199	32711	16.2	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	77.6%	143%	0	0	0
8600000US95524	95524	PGE	ZCTA5 95524	95524	1,787	69760	8	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	165.5%	71%	0	0	0
8600000US95525	95525	PGE	ZCTA5 95525	95525	1,733	48142	9.2	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	114.2%	81%	0	0	0
8600000US95526	95526	PGE	ZCTA5 95526	95526	378	21979	17.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	52.1%	151%	0	1	1
8600000US95527	95527	PGE	ZCTA5 95527	95527	627	34911	18	Non-Metro Area, CA		Trinity County	45961	12.6	76.0%	143%	0	0	0
8600000US95528	95528	PGE	ZCTA5 95528	95528	1,139	44554	4.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	105.7%	36%	0	0	0
8600000US95536	95536	PGE	ZCTA5 95536	95536	2,849	50227	6.9	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	119.2%	61%	0	0	0
8600000US95537	95537	PGE	ZCTA5 95537	95537	276	16537	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	39.2%	0%	1	0	1
8600000US95540	95540	PGE	ZCTA5 95540	95540	13,657	42655	10.2	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	101.2%	90%	0	0	0
8600000US95542	95542	PGE	ZCTA5 95542	95542	2,533	35634	3.9	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	84.5%	35%	0	0	0
8600000US95545	95545	PGE	ZCTA5 95545	95545	153	64375	17.9	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	152.7%	158%	0	1	1
8600000US95546	95546	PGE	ZCTA5 95546	95546	3,494	26281	25.4	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	62.3%	225%	0	1	1
8600000US95547	95547	PGE	ZCTA5 95547	95547	1,222	56081	7.8	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	133.0%	69%	0	0	0
8600000US95549	95549	PGE	ZCTA5 95549	95549	1,373	56607	9.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	134.3%	81%	0	0	0
8600000US95550	95550	PGE	ZCTA5 95550	95550	128	44333	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	105.2%	0%	0	0	0
8600000US95551	95551	PGE	ZCTA5 95551	95551	1,739	45729	12.2	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	108.5%	108%	0	0	0
8600000US95552	95552	PGE	ZCTA5 95552	95552	697	34583	5.8	Non-Metro Area, CA		Trinity County	45961	12.6	75.2%	46%	0	0	0
8600000US95553	95553	PGE	ZCTA5 95553	95553	1,062	41393	6.7	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	98.2%	59%	0	0	0
8600000US95554	95554	PGE	ZCTA5 95554	95554	533	23750	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	56.3%	0%	0	0	0
8600000US95555	95555	PGE	ZCTA5 95555	95555	410	33125	18.5	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	78.6%	164%	0	1	1
8600000US95556	95556	PGE	ZCTA5 95556	95556	605	48839	20.7	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	115.9%	183%	0	1	1
8600000US95558	95558	PGE	ZCTA5 95558	95558	425	36000	1.3	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	85.4%	12%	0	0	0
8600000US95559	95559	PGE	ZCTA5 95559	95559	182	22904	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	54.3%	0%	0	0	0
8600000US95560	95560	PGE	ZCTA5 95560	95560	1,648	29913	6.7	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	71.0%	59%	0	0	0
8600000US95562	95562	PGE	ZCTA5 95562	95562	3,450	40181	10.5	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	95.3%	93%	0	0	0
8600000US95563	95563	PGE	ZCTA5 95563	95563	652	40500	2.5	Non-Metro Area, CA		Trinity County	45961	12.6	88.1%	20%	0	0	0
8600000US95564	95564	PGE	ZCTA5 95564	95564	462	53056	3.5	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	125.9%	31%	0	0	0
8600000US95565	95565	PGE	ZCTA5 95565	95565	1,071	54034	4.4	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	128.2%	39%	0	0	0
8600000US95569	95569	PGE	ZCTA5 95569	95569	361	31932	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	75.8%	0%	0	0	0
8600000US95570	95570	PGE	ZCTA5 95570	95570	2,579	50500	10.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	119.8%	89%	0	0	0
8600000US95571	95571	PGE	ZCTA5 95571	95571	271	93393	0	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	221.6%	0%	0	0	0
8600000US95573	95573	PGE	ZCTA5 95573	95573	1,744	35607	12.1	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	84.5%	107%	0	0	0
8600000US95585	95585	PGE	ZCTA5 95585	95585	508	26518	0	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	61.3%	0%	0	0	0
8600000US95587	95587	PGE	ZCTA5 95587	95587	201	114542	0	Ukiah, CA	Micropolitan Statistical Area	Mendocino County	43290	12.3	264.6%	0%	0	0	0
8600000US95589	95589	PGE	ZCTA5 95589	95589	1,612	43295	13.7	Eureka-Arcata-Fortuna, CA	Micropolitan Statistical Area	Humboldt County	42153	11.3	102.7%	121%	0	0	0
8600000US95595	95595	PGE	ZCTA5 95595	95595	262	35750	4.4	Non-Metro Area, CA		Trinity County	45961	12.6	77.8%	35%	0	0	0
8600000US95601	95601	PGE	ZCTA5 95601	95601	198	43036	33.3	Non-Metro Area, CA		Amador County	45961	12.6	93.6%	264%	0	1	1
8600000US95602	95602	PGE	ZCTA5 95602	95602	17,509	63721	11.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	107.2%	93%	0	0	0
8600000US95603	95603	PGE	ZCTA5 95603	95603	27,844	56049	11.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	94.3%	97%	0	0	0
8600000US95604	95604	PGE	ZCTA5 95604	95604	75	-	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	NA	NA	NA	NA	NA
8600000US95605	95605	PGE	ZCTA5 95605	95605	14,179	38255	14.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	64.4%	122%	0	0	0
8600000US95606	95606	PGE	ZCTA5 95606	95606	196	-	29.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	NA	NA	NA	NA	NA
8600000US95607	95607	PGE	ZCTA5 95607	95607	431	69702	10.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	117.3%	90%	0	0	0
8600000US95608	95608	PGE	ZCTA5 95608	95608	59,418	55256	15.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	93.0%	129%	0	0	0
8600000US95610	95610	PGE	ZCTA5 95610	95610	44,147	50536	14	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	85.0%	117%	0	0	0
8600000US95612	95612	PGE	ZCTA5 95612	95612	1,239	53194	1.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	89.5%	11%	0	0	0
8600000US95614	95614	PGE	ZCTA5 95614	95614	3,833	90903	3.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	152.9%	28%	0	0	0
8600000US95615	95615	PGE	ZCTA5 95615	95615	834	59028	9.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	99.3%	79%	0	0	0
8600000US95616	95616	PGE	ZCTA5 95616	95616	47,032	45332	8.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	76.3%	72%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95618	95618	PGE	ZCTA5 95618	95618	27,281	81471	7.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	137.1%	59%	0	0	0
8600000US95619	95619	PGE	ZCTA5 95619	95619	4,842	60660	13.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	102.1%	113%	0	0	0
8600000US95620	95620	PGE	ZCTA5 95620	95620	20,553	66291	10.6	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	98.4%	88%	0	0	0
8600000US95621	95621	PGE	ZCTA5 95621	95621	39,819	51827	13.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	87.2%	115%	0	0	0
8600000US95623	95623	PGE	ZCTA5 95623	95623	3,806	55878	10.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	94.0%	85%	0	0	0
8600000US95624	95624	PGE	ZCTA5 95624	95624	61,989	80233	11.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	135.0%	93%	0	0	0
8600000US95625	95625	PGE	ZCTA5 95625	95625	155	75163	0	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	111.6%	0%	0	0	0
8600000US95626	95626	PGE	ZCTA5 95626	95626	5,975	60579	11.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	101.9%	97%	0	0	0
8600000US95627	95627	PGE	ZCTA5 95627	95627	3,513	57664	10.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	97.0%	89%	0	0	0
8600000US95628	95628	PGE	ZCTA5 95628	95628	40,196	72739	11.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	122.4%	96%	0	0	0
8600000US95629	95629	PGE	ZCTA5 95629	95629	832	42545	14.7	Non-Metro Area, CA		Amador County	45961	12.6	92.6%	117%	0	0	0
8600000US95630	95630	PGE	ZCTA5 95630	95630	72,180	100308	8.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	168.8%	68%	0	0	0
8600000US95631	95631	PGE	ZCTA5 95631	95631	6,076	63901	12	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	107.5%	100%	0	0	0
8600000US95632	95632	PGE	ZCTA5 95632	95632	29,269	61255	15.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	103.1%	126%	0	0	0
8600000US95633	95633	PGE	ZCTA5 95633	95633	3,349	70938	15.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	119.3%	127%	0	0	0
8600000US95634	95634	PGE	ZCTA5 95634	95634	3,232	59844	15.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	100.7%	128%	0	0	0
8600000US95635	95635	PGE	ZCTA5 95635	95635	1,262	46827	5.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	78.8%	45%	0	0	0
8600000US95636	95636	PGE	ZCTA5 95636	95636	1,101	56250	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	94.6%	0%	0	0	0
8600000US95637	95637	PGE	ZCTA5 95637	95637	370	75750	23.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	127.4%	197%	0	1	1
8600000US95638	95638	PGE	ZCTA5 95638	95638	2,255	91518	4.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	154.0%	40%	0	0	0
8600000US95639	95639	PGE	ZCTA5 95639	95639	283	75556	14.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	127.1%	119%	0	0	0
8600000US95640	95640	PGE	ZCTA5 95640	95640	11,353	56696	16	Non-Metro Area, CA		Amador County	45961	12.6	123.4%	127%	0	0	0
8600000US95641	95641	PGE	ZCTA5 95641	95641	1,986	38750	17	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	65.2%	142%	0	0	0
8600000US95642	95642	PGE	ZCTA5 95642	95642	7,164	43981	20	Non-Metro Area, CA		Amador County	45961	12.6	95.7%	159%	0	1	1
8600000US95645	95645	PGE	ZCTA5 95645	95645	2,037	42576	14.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	71.6%	118%	0	0	0
8600000US95646	95646	PGE	ZCTA5 95646	95646	158	39375	0	Non-Metro Area, CA		Alpine County	45961	12.6	85.7%	0%	0	0	0
8600000US95648	95648	PGE	ZCTA5 95648	95648	47,354	70820	9.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	119.1%	83%	0	0	0
8600000US95650	95650	PGE	ZCTA5 95650	95650	12,447	84133	8.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	141.5%	68%	0	0	0
8600000US95651	95651	PGE	ZCTA5 95651	95651	637	65114	1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	109.5%	8%	0	0	0
8600000US95652	95652	PGE	ZCTA5 95652	95652	739	46667	17.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	78.5%	148%	0	0	0
8600000US95653	95653	PGE	ZCTA5 95653	95653	527	55000	28.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	92.5%	240%	0	1	1
8600000US95655	95655	PGE	ZCTA5 95655	95655	4,314	87738	18.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	147.6%	155%	0	1	1
8600000US95658	95658	PGE	ZCTA5 95658	95658	6,285	63604	11.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	107.0%	95%	0	0	0
8600000US95659	95659	PGE	ZCTA5 95659	95659	702	54444	8.2	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	112.1%	53%	0	0	0
8600000US95660	95660	PGE	ZCTA5 95660	95660	30,714	41615	12.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	70.0%	104%	0	0	0
8600000US95661	95661	PGE	ZCTA5 95661	95661	29,791	72459	7.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	121.9%	65%	0	0	0
8600000US95662	95662	PGE	ZCTA5 95662	95662	31,558	65122	11.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	109.6%	99%	0	0	0
8600000US95663	95663	PGE	ZCTA5 95663	95663	2,377	124375	3.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	209.2%	27%	0	0	0
8600000US95664	95664	PGE	ZCTA5 95664	95664	1,380	79327	13.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	133.5%	109%	0	0	0
8600000US95665	95665	PGE	ZCTA5 95665	95665	4,426	48940	15.4	Non-Metro Area, CA		Amador County	45961	12.6	106.5%	122%	0	0	0
8600000US95666	95666	PGE	ZCTA5 95666	95666	5,336	53281	16.8	Non-Metro Area, CA		Amador County	45961	12.6	115.9%	133%	0	0	0
8600000US95667	95667	PGE	ZCTA5 95667	95667	36,726	55710	14.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	93.7%	124%	0	0	0
8600000US95668	95668	PGE	ZCTA5 95668	95668	815	65938	7.8	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	135.8%	51%	0	0	0
8600000US95669	95669	PGE	ZCTA5 95669	95669	2,443	64479	13	Non-Metro Area, CA		Amador County	45961	12.6	140.3%	103%	0	0	0
8600000US95670	95670	PGE	ZCTA5 95670	95670	52,973	55656	12.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	93.6%	108%	0	0	0
8600000US95672	95672	PGE	ZCTA5 95672	95672	4,773	92464	7.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	155.6%	64%	0	0	0
8600000US95673	95673	PGE	ZCTA5 95673	95673	15,455	50854	12.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	85.6%	106%	0	0	0
8600000US95674	95674	PGE	ZCTA5 95674	95674	935	74583	11.5	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	153.6%	75%	0	0	0
8600000US95675	95675	PGE	ZCTA5 95675	95675	381	48285	53.9	Non-Metro Area, CA		Amador County	45961	12.6	105.1%	428%	0	1	1
8600000US95677	95677	PGE	ZCTA5 95677	95677	23,333	69583	10.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	117.1%	90%	0	0	0
8600000US95678	95678	PGE	ZCTA5 95678	95678	41,192	62969	9.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	105.9%	83%	0	0	0
8600000US95679	95679	PGE	ZCTA5 95679	95679	55	14073	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	23.7%	0%	1	0	1
8600000US95680	95680	PGE	ZCTA5 95680	95680	146	-	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	NA	NA	NA	NA	NA
8600000US95681	95681	PGE	ZCTA5 95681	95681	1,226	44464	14.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	74.8%	122%	0	0	0
8600000US95682	95682	PGE	ZCTA5 95682	95682	29,114	77416	10.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	130.2%	88%	0	0	0
8600000US95683	95683	PGE	ZCTA5 95683	95683	6,180	100139	5.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	168.5%	49%	0	0	0
8600000US95684	95684	PGE	ZCTA5 95684	95684	3,422	52292	20.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	88.0%	173%	0	1	1
8600000US95685	95685	PGE	ZCTA5 95685	95685	4,680	60648	8.6	Non-Metro Area, CA		Amador County	45961	12.6	132.0%	68%	0	0	0
8600000US95686	95686	PGE	ZCTA5 95686	95686	1,405	31438	18.3	Stockton, CA	Metropolitan Statistical Area	San Joaquin County	53253	15.0	59.0%	122%	0	0	0
8600000US95687	95687	PGE	ZCTA5 95687	95687	65,096	73684	10	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	109.4%	83%	0	0	0
8600000US95688	95688	PGE	ZCTA5 95688	95688	34,379	81860	10.6	Vallejo-Fairfield, CA	Metropolitan Statistical Area	Solano County	67341	12.1	121.6%	88%	0	0	0
8600000US95689	95689	PGE	ZCTA5 95689	95689	1,244	56875	16	Non-Metro Area, CA		Amador County	45961	12.6	123.7%	127%	0	0	0
8600000US95690	95690	PGE	ZCTA5 95690	95690	2,533	56101	18.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	94.4%	157%	0	1	1
8600000US95691	95691	PGE	ZCTA5 95691	95691	34,737	65769	9.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	110.6%	83%	0	0	0
8600000US95692	95692	PGE	ZCTA5 95692	95692	4,769	62043	19.9	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	127.8%	129%	0	0	0
8600000US95693	95693	PGE	ZCTA5 95693	95693	6,758	79121	10.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	133.1%	91%	0	0	0
8600000US95694	95694	PGE	ZCTA5 95694	95694	9,156	58517	8.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	98.4%	71%	0	0	0
8600000US95695	95695	PGE	ZCTA5 95695	95695	37,946	52274	10.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	87.9%	87%	0	0	0

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH Income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95697	95697	PGE	ZCTA5 95697	95697	425	75714	13	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	127.4%	108%	0	0	0
8600000US95698	95698	PGE	ZCTA5 95698	95698	236	45769	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	77.0%	0%	0	0	0
8600000US95699	95699	PGE	ZCTA5 95699	95699	154	77188	0	Non-Metro Area, CA		Amador County	45961	12.6	167.9%	0%	0	0	0
8600000US95701	95701	PGE	ZCTA5 95701	95701	983	52841	7.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	88.9%	65%	0	0	0
8600000US95703	95703	PGE	ZCTA5 95703	95703	897	69750	12.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	117.3%	101%	0	0	0
8600000US95709	95709	PGE	ZCTA5 95709	95709	4,772	70417	13.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	118.5%	109%	0	0	0
8600000US95713	95713	PGE	ZCTA5 95713	95713	9,495	60720	11.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	102.2%	97%	0	0	0
8600000US95714	95714	PGE	ZCTA5 95714	95714	382	54327	8.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	91.4%	73%	0	0	0
8600000US95715	95715	PGE	ZCTA5 95715	95715	115	32361	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	54.4%	0%	0	0	0
8600000US95717	95717	PGE	ZCTA5 95717	95717	231	39167	37.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	65.9%	315%	0	1	1
8600000US95720	95720	PGE	ZCTA5 95720	95720	157	56667	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	95.3%	0%	0	0	0
8600000US95721	95721	PGE	ZCTA5 95721	95721	37	-	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	NA	NA	NA	NA	NA
8600000US95722	95722	PGE	ZCTA5 95722	95722	4,585	76389	5.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	128.5%	43%	0	0	0
8600000US95724	95724	PGE	ZCTA5 95724	95724	27	-	-	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	NA	NA	NA	NA	NA
8600000US95726	95726	PGE	ZCTA5 95726	95726	8,842	55996	11.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	94.2%	93%	0	0	0
8600000US95728	95728	PGE	ZCTA5 95728	95728	386	38690	4.5	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	67.9%	42%	0	0	0
8600000US95735	95735	PGE	ZCTA5 95735	95735	68	34063	15.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	57.3%	128%	0	0	0
8600000US95736	95736	PGE	ZCTA5 95736	95736	240	43355	0	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	72.9%	0%	0	0	0
8600000US95742	95742	PGE	ZCTA5 95742	95742	7,749	104167	9.5	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	175.3%	79%	0	0	0
8600000US95746	95746	PGE	ZCTA5 95746	95746	21,460	118919	9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	200.1%	75%	0	0	0
8600000US95747	95747	PGE	ZCTA5 95747	95747	51,870	92678	7.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	155.9%	65%	0	0	0
8600000US95757	95757	PGE	ZCTA5 95757	95757	40,222	87782	9.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	147.7%	80%	0	0	0
8600000US95758	95758	PGE	ZCTA5 95758	95758	60,435	70003	11.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	117.8%	93%	0	0	0
8600000US95762	95762	PGE	ZCTA5 95762	95762	38,797	117700	7.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	El Dorado County	59439	12.0	198.0%	62%	0	0	0
8600000US95765	95765	PGE	ZCTA5 95765	95765	33,974	87100	8.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Placer County	59439	12.0	146.5%	73%	0	0	0
8600000US95776	95776	PGE	ZCTA5 95776	95776	21,902	63750	8.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	107.3%	70%	0	0	0
8600000US95811	95811	PGE	ZCTA5 95811	95811	7,595	37672	13.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	63.4%	112%	0	0	0
8600000US95814	95814	PGE	ZCTA5 95814	95814	9,922	33373	9.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	56.1%	78%	0	0	0
8600000US95815	95815	PGE	ZCTA5 95815	95815	24,680	29721	23.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	50.0%	198%	0	1	1
8600000US95816	95816	PGE	ZCTA5 95816	95816	15,579	53002	7.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	89.2%	66%	0	0	0
8600000US95817	95817	PGE	ZCTA5 95817	95817	13,534	34845	16	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	58.6%	133%	0	0	0
8600000US95818	95818	PGE	ZCTA5 95818	95818	19,811	58272	8.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	98.0%	68%	0	0	0
8600000US95819	95819	PGE	ZCTA5 95819	95819	17,141	87156	9.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	146.6%	83%	0	0	0
8600000US95820	95820	PGE	ZCTA5 95820	95820	34,480	40730	15.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	68.5%	131%	0	0	0
8600000US95821	95821	PGE	ZCTA5 95821	95821	33,550	38777	18.2	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	65.2%	152%	0	1	1
8600000US95822	95822	PGE	ZCTA5 95822	95822	42,347	44392	15.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	74.7%	128%	0	0	0
8600000US95823	95823	PGE	ZCTA5 95823	95823	73,985	36731	17.6	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	61.8%	147%	0	0	0
8600000US95824	95824	PGE	ZCTA5 95824	95824	30,221	28447	19.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	47.9%	165%	1	1	2
8600000US95825	95825	PGE	ZCTA5 95825	95825	31,084	37382	15	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	62.9%	125%	0	0	0
8600000US95826	95826	PGE	ZCTA5 95826	95826	36,628	53648	13	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	90.3%	108%	0	0	0
8600000US95827	95827	PGE	ZCTA5 95827	95827	20,269	50528	14	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	85.0%	117%	0	0	0
8600000US95828	95828	PGE	ZCTA5 95828	95828	57,862	45439	16.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	76.4%	136%	0	0	0
8600000US95829	95829	PGE	ZCTA5 95829	95829	24,755	74530	10.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	125.4%	91%	0	0	0
8600000US95830	95830	PGE	ZCTA5 95830	95830	934	56250	8.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	94.6%	70%	0	0	0
8600000US95831	95831	PGE	ZCTA5 95831	95831	41,321	68679	10.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	115.5%	84%	0	0	0
8600000US95832	95832	PGE	ZCTA5 95832	95832	11,924	42228	18.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	71.0%	153%	0	1	1
8600000US95833	95833	PGE	ZCTA5 95833	95833	37,293	55827	15.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	93.9%	133%	0	0	0
8600000US95834	95834	PGE	ZCTA5 95834	95834	25,899	56651	11.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	95.3%	99%	0	0	0
8600000US95835	95835	PGE	ZCTA5 95835	95835	35,936	80449	9.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	135.3%	82%	0	0	0
8600000US95837	95837	PGE	ZCTA5 95837	95837	315	110236	3.4	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	227.1%	22%	0	0	0
8600000US95838	95838	PGE	ZCTA5 95838	95838	36,764	39481	16.4	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	66.4%	137%	0	0	0
8600000US95841	95841	PGE	ZCTA5 95841	95841	19,448	38464	13.1	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	64.7%	109%	0	0	0
8600000US95842	95842	PGE	ZCTA5 95842	95842	31,806	44542	13.8	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	74.9%	115%	0	0	0
8600000US95843	95843	PGE	ZCTA5 95843	95843	45,048	64773	9.9	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	109.0%	83%	0	0	0
8600000US95864	95864	PGE	ZCTA5 95864	95864	22,447	83467	8.3	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Sacramento County	59439	12.0	140.4%	69%	0	0	0
8600000US95901	95901	PGE	ZCTA5 95901	95901	31,314	42319	17.1	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	87.2%	111%	0	0	0
8600000US95903	95903	PGE	ZCTA5 95903	95903	1,732	33173	16.3	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	68.3%	106%	0	0	0
8600000US95910	95910	PGE	ZCTA5 95910	95910	86	37663	-	Non-Metro Area, CA		Sierra County	45961	12.6	NA	NA	NA	NA	NA
8600000US95912	95912	PGE	ZCTA5 95912	95912	4,685	50764	6.5	Non-Metro Area, CA		Colusa County	45961	12.6	110.5%	52%	0	0	0
8600000US95914	95914	PGE	ZCTA5 95914	95914	578	25200	11.8	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	58.4%	90%	0	0	0
8600000US95915	95915	PGE	ZCTA5 95915	95915	44	10481	-	Non-Metro Area, CA		Plumas County	45961	12.6	NA	NA	NA	NA	NA
8600000US95916	95916	PGE	ZCTA5 95916	95916	1,441	38636	21.1	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	89.5%	161%	0	1	1
8600000US95917	95917	PGE	ZCTA5 95917	95917	3,155	44500	22.3	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	103.1%	170%	0	1	1
8600000US95918	95918	PGE	ZCTA5 95918	95918	2,339	77583	13	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	159.8%	84%	0	0	0
8600000US95919	95919	PGE	ZCTA5 95919	95919	1,378	45871	11.5	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	94.5%	75%	0	0	0
8600000US95920	95920	PGE	ZCTA5 95920	95920	274	71063	0	Non-Metro Area, CA		Glenn County	45961	12.6	154.6%	0%	0	0	0
8600000US95922	95922	PGE	ZCTA5 95922	95922	687	24722	13.4	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	50.9%	87%	0	0	0
8600000US95923	95923	PGE	ZCTA5 95923	95923	58	-	100	Non-Metro Area, CA		Plumas County	45961	12.6	NA	NA	NA	NA	NA

Id	Id2	IOU	Geography	ZIPS	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US95925	95925	PGE	ZCTA5 95925	95925	295	-	-	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	NA	NA	NA	NA	NA
8600000US95926	95926	PGE	ZCTA5 95926	95926	37,725	37296	11.3	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	86.4%	86%	0	0	0
8600000US95928	95928	PGE	ZCTA5 95928	95928	36,511	45906	11.3	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	106.4%	86%	0	0	0
8600000US95930	95930	PGE	ZCTA5 95930	95930	69	-	0	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	NA	NA	NA	NA	NA
8600000US95932	95932	PGE	ZCTA5 95932	95932	7,718	46453	15.9	Non-Metro Area, CA		Colusa County	45961	12.6	101.1%	126%	0	0	0
8600000US95934	95934	PGE	ZCTA5 95934	95934	274	31892	2.9	Non-Metro Area, CA		Plumas County	45961	12.6	69.4%	23%	0	0	0
8600000US95935	95935	PGE	ZCTA5 95935	95935	631	37461	6	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	77.2%	39%	0	0	0
8600000US95936	95936	PGE	ZCTA5 95936	95936	352	53214	0	Non-Metro Area, CA		Sierra County	45961	12.6	115.8%	0%	0	0	0
8600000US95937	95937	PGE	ZCTA5 95937	95937	1,491	56394	19.7	Sacramento--Arden-Arcade--Roseville, CA	Metropolitan Statistical Area	Yolo County	59439	12.0	94.9%	164%	0	1	1
8600000US95938	95938	PGE	ZCTA5 95938	95938	3,787	60750	8.5	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	140.7%	65%	0	0	0
8600000US95939	95939	PGE	ZCTA5 95939	95939	604	29063	28.6	Non-Metro Area, CA		Glenn County	45961	12.6	63.2%	227%	0	1	1
8600000US95941	95941	PGE	ZCTA5 95941	95941	563	63529	6.8	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	147.2%	52%	0	0	0
8600000US95942	95942	PGE	ZCTA5 95942	95942	1,301	41888	19.3	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	97.0%	147%	0	0	0
8600000US95943	95943	PGE	ZCTA5 95943	95943	879	51908	18.2	Non-Metro Area, CA		Glenn County	45961	12.6	112.9%	144%	0	0	0
8600000US95944	95944	PGE	ZCTA5 95944	95944	46	-	0	Non-Metro Area, CA		Sierra County	45961	12.6	NA	NA	NA	NA	NA
8600000US95945	95945	PGE	ZCTA5 95945	95945	25,199	42778	10.6	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	75.1%	99%	0	0	0
8600000US95946	95946	PGE	ZCTA5 95946	95946	9,790	62180	13.3	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	109.2%	124%	0	0	0
8600000US95947	95947	PGE	ZCTA5 95947	95947	1,899	34500	9.1	Non-Metro Area, CA		Plumas County	45961	12.6	75.1%	72%	0	0	0
8600000US95948	95948	PGE	ZCTA5 95948	95948	10,810	44423	21.2	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	102.9%	162%	0	1	1
8600000US95949	95949	PGE	ZCTA5 95949	95949	19,741	60459	10.8	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	106.2%	101%	0	0	0
8600000US95950	95950	PGE	ZCTA5 95950	95950	569	42273	8.7	Non-Metro Area, CA		Colusa County	45961	12.6	92.0%	69%	0	0	0
8600000US95951	95951	PGE	ZCTA5 95951	95951	2,601	37500	11.6	Non-Metro Area, CA		Glenn County	45961	12.6	81.6%	92%	0	0	0
8600000US95953	95953	PGE	ZCTA5 95953	95953	10,718	46392	13.1	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	95.6%	85%	0	0	0
8600000US95954	95954	PGE	ZCTA5 95954	95954	12,251	40545	20.6	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	93.9%	157%	0	1	1
8600000US95955	95955	PGE	ZCTA5 95955	95955	1,517	47031	17.4	Non-Metro Area, CA		Colusa County	45961	12.6	102.3%	138%	0	0	0
8600000US95956	95956	PGE	ZCTA5 95956	95956	401	56923	34.3	Non-Metro Area, CA		Plumas County	45961	12.6	123.9%	272%	0	1	1
8600000US95957	95957	PGE	ZCTA5 95957	95957	761	58438	7.5	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	120.4%	49%	0	0	0
8600000US95959	95959	PGE	ZCTA5 95959	95959	17,838	58913	12.6	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	103.4%	118%	0	0	0
8600000US95960	95960	PGE	ZCTA5 95960	95960	796	29250	10.5	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	51.4%	98%	0	0	0
8600000US95961	95961	PGE	ZCTA5 95961	95961	26,510	46441	18.7	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	95.7%	121%	0	0	0
8600000US95962	95962	PGE	ZCTA5 95962	95962	1,567	59832	1.9	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	123.2%	12%	0	0	0
8600000US95963	95963	PGE	ZCTA5 95963	95963	15,493	39485	13.6	Non-Metro Area, CA		Glenn County	45961	12.6	85.9%	108%	0	0	0
8600000US95965	95965	PGE	ZCTA5 95965	95965	20,384	35220	17.6	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	81.6%	134%	0	0	0
8600000US95966	95966	PGE	ZCTA5 95966	95966	30,643	40775	14.3	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	94.5%	109%	0	0	0
8600000US95968	95968	PGE	ZCTA5 95968	95968	1,412	33100	22.9	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	76.7%	175%	0	1	1
8600000US95969	95969	PGE	ZCTA5 95969	95969	27,549	41982	12.5	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	97.3%	95%	0	0	0
8600000US95970	95970	PGE	ZCTA5 95970	95970	530	57639	12.6	Non-Metro Area, CA		Colusa County	45961	12.6	125.4%	100%	0	0	0
8600000US95971	95971	PGE	ZCTA5 95971	95971	5,970	51869	13.8	Non-Metro Area, CA		Plumas County	45961	12.6	112.9%	110%	0	0	0
8600000US95973	95973	PGE	ZCTA5 95973	95973	31,957	56541	9.5	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	131.0%	73%	0	0	0
8600000US95974	95974	PGE	ZCTA5 95974	95974	8	-	-	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	NA	NA	NA	NA	NA
8600000US95975	95975	PGE	ZCTA5 95975	95975	1,769	57969	3.2	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	101.8%	30%	0	0	0
8600000US95977	95977	PGE	ZCTA5 95977	95977	1,678	48500	1.9	Yuba City, CA	Metropolitan Statistical Area	Yuba County	48546	15.4	99.9%	12%	0	0	0
8600000US95978	95978	PGE	ZCTA5 95978	95978	143	-	-	Chico, CA	Metropolitan Statistical Area	Butte County	43165	13.1	NA	NA	NA	NA	NA
8600000US95979	95979	PGE	ZCTA5 95979	95979	597	47500	5.9	Non-Metro Area, CA		Colusa County	45961	12.6	103.3%	47%	0	0	0
8600000US95981	95981	PGE	ZCTA5 95981	95981	97	-	100	Non-Metro Area, CA		Plumas County	45961	12.6	NA	NA	NA	NA	NA
8600000US95982	95982	PGE	ZCTA5 95982	95982	3,221	63816	10.6	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	131.5%	69%	0	0	0
8600000US95983	95983	PGE	ZCTA5 95983	95983	428	26250	6.5	Non-Metro Area, CA		Plumas County	45961	12.6	57.1%	52%	0	0	0
8600000US95984	95984	PGE	ZCTA5 95984	95984	120	-	-	Non-Metro Area, CA		Plumas County	45961	12.6	NA	NA	NA	NA	NA
8600000US95986	95986	PGE	ZCTA5 95986	95986	162	-	-	Truckee-Grass Valley, CA	Micropolitan Statistical Area	Nevada County	56949	10.7	NA	NA	NA	NA	NA
8600000US95987	95987	PGE	ZCTA5 95987	95987	5,992	55355	12.3	Non-Metro Area, CA		Colusa County	45961	12.6	120.4%	98%	0	0	0
8600000US95988	95988	PGE	ZCTA5 95988	95988	8,857	48443	13.2	Non-Metro Area, CA		Glenn County	45961	12.6	105.4%	105%	0	0	0
8600000US95991	95991	PGE	ZCTA5 95991	95991	40,593	43165	15.6	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	88.9%	101%	0	0	0
8600000US95993	95993	PGE	ZCTA5 95993	95993	36,067	64034	13.3	Yuba City, CA	Metropolitan Statistical Area	Sutter County	48546	15.4	131.9%	86%	0	0	0
8600000US96001	96001	PGE	ZCTA5 96001	96001	33,865	46422	12.1	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	104.2%	99%	0	0	0
8600000US96002	96002	PGE	ZCTA5 96002	96002	33,298	43657	12.4	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	98.0%	102%	0	0	0
8600000US96003	96003	PGE	ZCTA5 96003	96003	44,461	46497	10.5	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	104.4%	86%	0	0	0
8600000US96007	96007	PGE	ZCTA5 96007	96007	22,841	38907	13.2	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	87.3%	108%	0	0	0
8600000US96008	96008	PGE	ZCTA5 96008	96008	1,231	53419	5.4	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	119.9%	44%	0	0	0
8600000US96009	96009	PGE	ZCTA5 96009	96009	569	56563	13.2	Susanville, CA	Micropolitan Statistical Area	Lassen County	53351	13.4	106.0%	99%	0	0	0
8600000US96010	96010	PGE	ZCTA5 96010	96010	239	32500	9.7	Non-Metro Area, CA		Trinity County	45961	12.6	70.7%	77%	0	0	0
8600000US96011	96011	PGE	ZCTA5 96011	96011	218	18750	20.5	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	42.1%	168%	1	1	2
8600000US96013	96013	PGE	ZCTA5 96013	96013	4,212	38089	15.2	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	85.5%	125%	0	0	0
8600000US96016	96016	PGE	ZCTA5 96016	96016	366	49732	5.4	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	111.6%	44%	0	0	0
8600000US96019	96019	PGE	ZCTA5 96019	96019	10,082	40455	12.7	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	90.8%	104%	0	0	0
8600000US96020	96020	PGE	ZCTA5 96020	96020	2,416	42433	9.6	Non-Metro Area, CA		Plumas County	45961	12.6	92.3%	76%	0	0	0
8600000US96021	96021	PGE	ZCTA5 96021	96021	16,097	39756	15.7	Red Bluff, CA	Micropolitan Statistical Area	Tehama County	42369	16.1	93.8%	98%	0	0	0
8600000US96022	96022	PGE	ZCTA5 96022	96022	15,768	52154	15.6	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	117.1%	128%	0	0	0
8600000US96028	96028	PGE	ZCTA5 96028	96028	1,464	40781	7.9	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	91.5%	65%	0	0	0

Id	Id2	IOU	Geography	ZIP5	Zip Population	Median HH income 2014	Unemployment Rate	Metro Area	CBSA LSAD	COUNTY NAME	Metro Area HH Income	Metro Area Unemployment	Percent of Median HH Income	Percent of Unemployment Rate	Inclusion Income Only (50% or less of Metro HH Income)	Inclusion Unemployment Only (150% or more or Metro Unemployment Rate)	Inclusion Both
8600000US96029	96029	PGE	ZCTA5 96029	96029	124	54688	25.8	Red Bluff, CA	Micropolitan Statistical Area	Tehama County	42369	16.1	129.1%	160%	0	1	1
8600000US96033	96033	PGE	ZCTA5 96033	96033	432	29306	15.4	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	65.8%	126%	0	0	0
8600000US96035	96035	PGE	ZCTA5 96035	96035	3,324	44028	18.5	Red Bluff, CA	Micropolitan Statistical Area	Tehama County	42369	16.1	103.9%	115%	0	0	0
8600000US96040	96040	PGE	ZCTA5 96040	96040	341	36429	12.6	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	81.8%	103%	0	0	0
8600000US96047	96047	PGE	ZCTA5 96047	96047	1,004	25662	25.5	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	57.6%	209%	0	1	1
8600000US96080	96080	PGE	ZCTA5 96080	96080	28,764	39288	17	Red Bluff, CA	Micropolitan Statistical Area	Tehama County	42369	16.1	92.7%	106%	0	0	0
8600000US96084	96084	PGE	ZCTA5 96084	96084	625	42619	9	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	95.7%	74%	0	0	0
8600000US96087	96087	PGE	ZCTA5 96087	96087	600	27727	0	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	62.2%	0%	0	0	0
8600000US96088	96088	PGE	ZCTA5 96088	96088	4,506	47440	11.8	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	106.5%	97%	0	0	0
8600000US96091	96091	PGE	ZCTA5 96091	96091	699	31917	17.8	Non-Metro Area, CA		Trinity County	45961	12.6	69.4%	141%	0	0	0
8600000US96092	96092	PGE	ZCTA5 96092	96092	496	39013	0	Red Bluff, CA	Micropolitan Statistical Area	Tehama County	42369	16.1	92.1%	0%	0	0	0
8600000US96096	96096	PGE	ZCTA5 96096	96096	695	58889	16.4	Redding, CA	Metropolitan Statistical Area	Shasta County	44556	12.2	132.2%	134%	0	0	0
8600000US96125	96125	PGE	ZCTA5 96125	96125	258	109545	8.9	Non-Metro Area, CA		Sierra County	45961	12.6	238.3%	71%	0	0	0
8600000US96137	96137	PGE	ZCTA5 96137	96137	3,297	48950	24.6	Susanville, CA	Micropolitan Statistical Area	Lassen County	53351	13.4	91.8%	184%	0	1	1

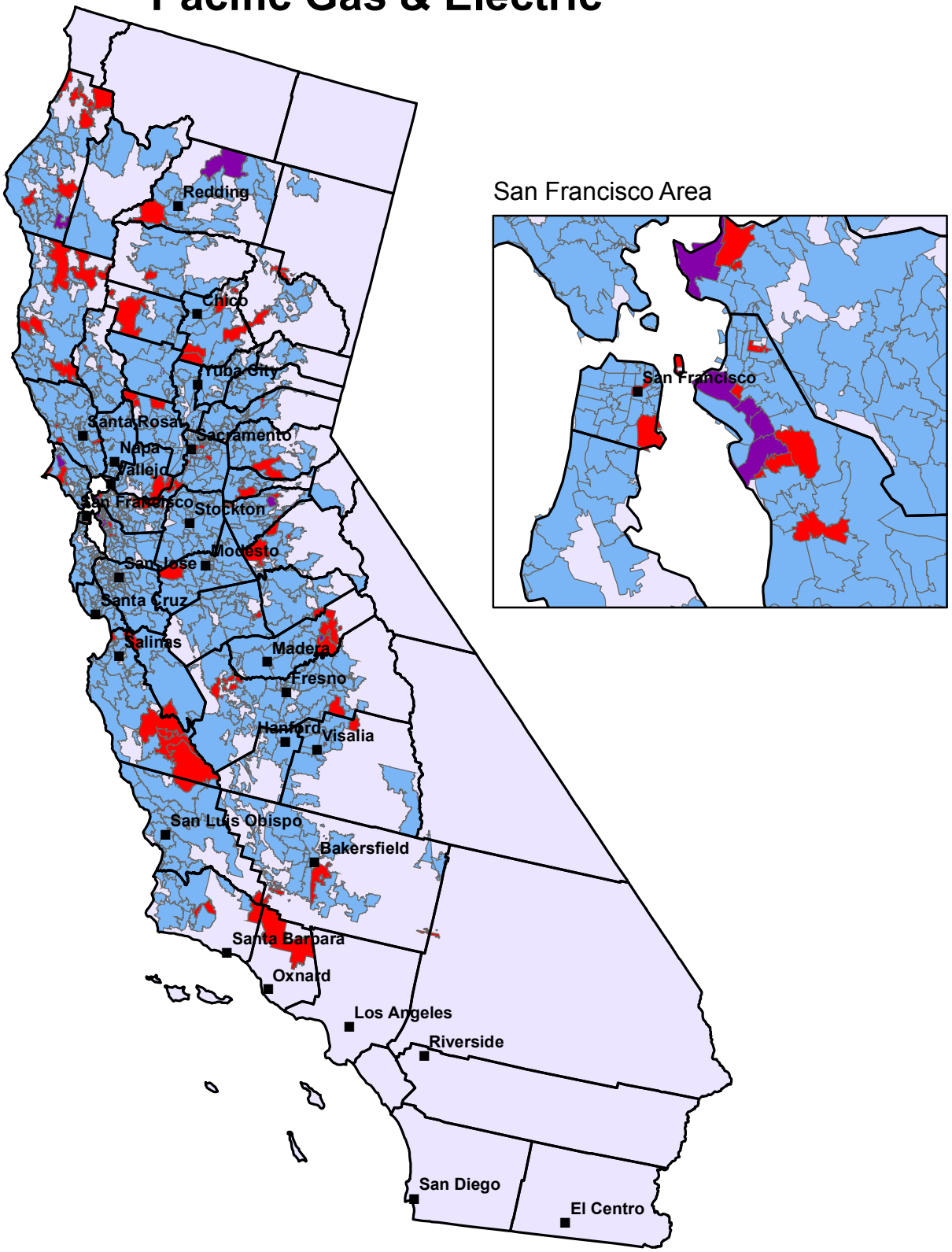
Appendix 10 – American Community Survey (ACS) Data

Metro Area Stats

Non-Metro Unemployment Rate 2014	12.6
Non-Metro HH Income 2014	45961

Id	Id2 Metro	Median HH Income 2014	Unemployment Rate 2014
320M200US0612540	612540 Bakersfield, CA Metro Area; California	48574	13.2%
320M200US0617020	617020 Chico, CA Metro Area; California	43165	13.1%
320M200US0617340	617340 Clearlake, CA Micro Area; California	35997	16.6%
320M200US0618860	618860 Crescent City, CA Micro Area; California	39302	12.6%
320M200US0620940	620940 El Centro, CA Metro Area; California	41772	18.1%
320M200US0621700	621700 Eureka-Arcata-Fortuna, CA Micro Area; California	42153	11.3%
320M200US0623420	623420 Fresno, CA Metro Area; California	45201	14.3%
320M200US0625260	625260 Hanford-Corcoran, CA Metro Area; California	47341	14.2%
320M200US0631080	631080 Los Angeles-Long Beach-Anaheim, CA Metro Area; California	60337	10.5%
320M200US0631460	631460 Madera, CA Metro Area; California	45490	9.5%
320M200US0632900	632900 Merced, CA Metro Area; California	43066	17.5%
320M200US0633700	633700 Modesto, CA Metro Area; California	49573	16.3%
320M200US0634900	634900 Napa, CA Metro Area; California	70925	8.4%
320M200US0637100	637100 Oxnard-Thousand Oaks-Ventura, CA Metro Area; California	77335	9.4%
320M200US0639780	639780 Red Bluff, CA Micro Area; California	42369	16.1%
320M200US0639820	639820 Redding, CA Metro Area; California	44556	12.2%
320M200US0640140	640140 Riverside-San Bernardino-Ontario, CA Metro Area; California	55362	14.1%
320M200US0640900	640900 Sacramento--Roseville--Arden-Arcade, CA Metro Area; California	59439	12.0%
320M200US0641500	641500 Salinas, CA Metro Area; California	58582	9.6%
320M200US0641740	641740 San Diego-Carlsbad, CA Metro Area; California	63996	9.6%
320M200US0641860	641860 San Francisco-Oakland-Hayward, CA Metro Area; California	80008	8.7%
320M200US0641940	641940 San Jose-Sunnyvale-Santa Clara, CA Metro Area; California	92960	9.0%
320M200US0642020	642020 San Luis Obispo-Paso Robles-Arroyo Grande, CA Metro Area; California	59454	8.0%
320M200US0642100	642100 Santa Cruz-Watsonville, CA Metro Area; California	66923	8.7%
320M200US0642200	642200 Santa Maria-Santa Barbara, CA Metro Area; California	63409	8.9%
320M200US0642220	642220 Santa Rosa, CA Metro Area; California	63799	9.6%
320M200US0643760	643760 Sonora, CA Micro Area; California	48493	15.2%
320M200US0644700	644700 Stockton-Lodi, CA Metro Area; California	53253	15.0%
320M200US0645000	645000 Susanville, CA Micro Area; California	53351	13.4%
320M200US0646020	646020 Truckee-Grass Valley, CA Micro Area; California	56949	10.7%
320M200US0646380	646380 Ukiah, CA Micro Area; California	43290	12.3%
320M200US0646700	646700 Vallejo-Fairfield, CA Metro Area; California	67341	12.1%
320M200US0647300	647300 Visalia-Porterville, CA Metro Area; California	42863	13.5%
320M200US0649700	649700 Yuba City, CA Metro Area; California	48546	15.4%

Zip Codes with Both High Unemployment Rate and Low Median Household Income
Pacific Gas & Electric

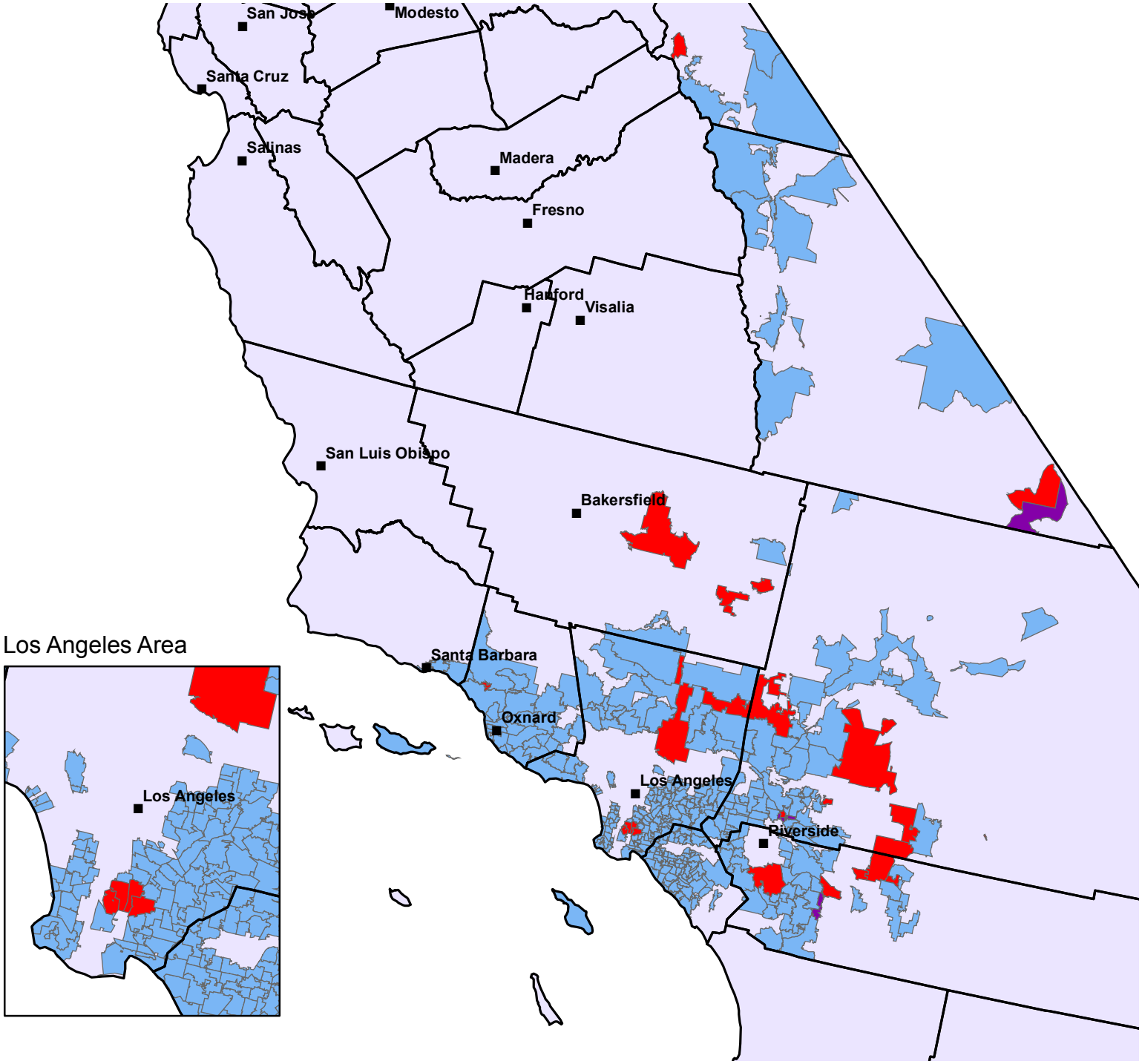


Legend

Zip Code Unemployment Rate and Income as Compared to Metro Area Average

- Neither Higher Unemployment Rate Nor Lower Income
- Higher Unemployment rate or Lower Income
- Higher Unemployment rate and Lower Income
- Data Unavailable

Zip Codes with Both High Unemployment Rate and Low Median Household Income
Southern California Edison

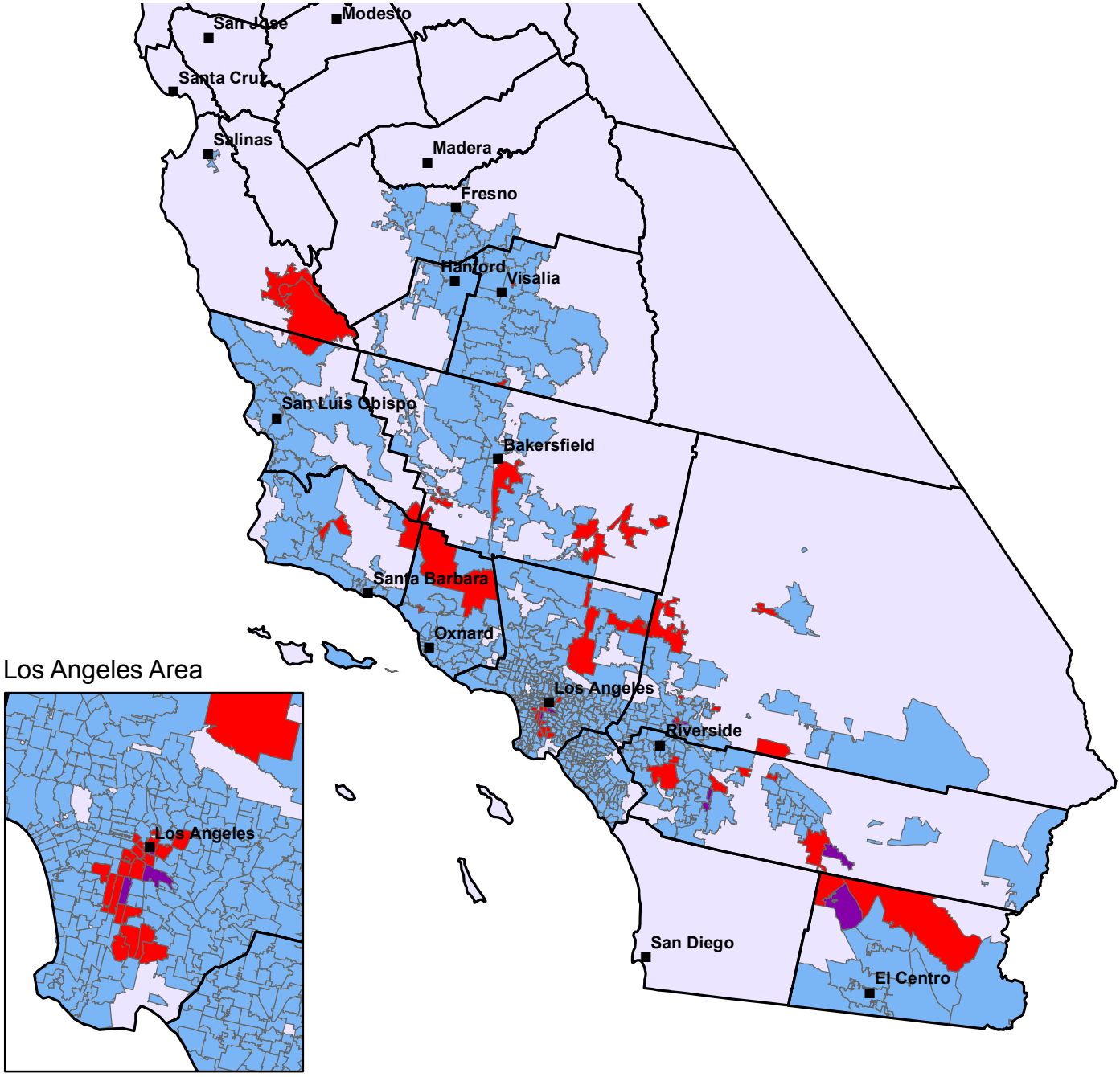


Legend

Zip Code Unemployment Rate and Income as Compared to Metro Area Average

- Neither Higher Unemployment Rate Nor Lower Income
- Higher Unemployment rate or Lower Income
- Higher Unemployment rate and Lower Income
- Data Unavailable

Zip Codes with Both High Unemployment Rate and Low Median Household Income
Southern California Gas Company

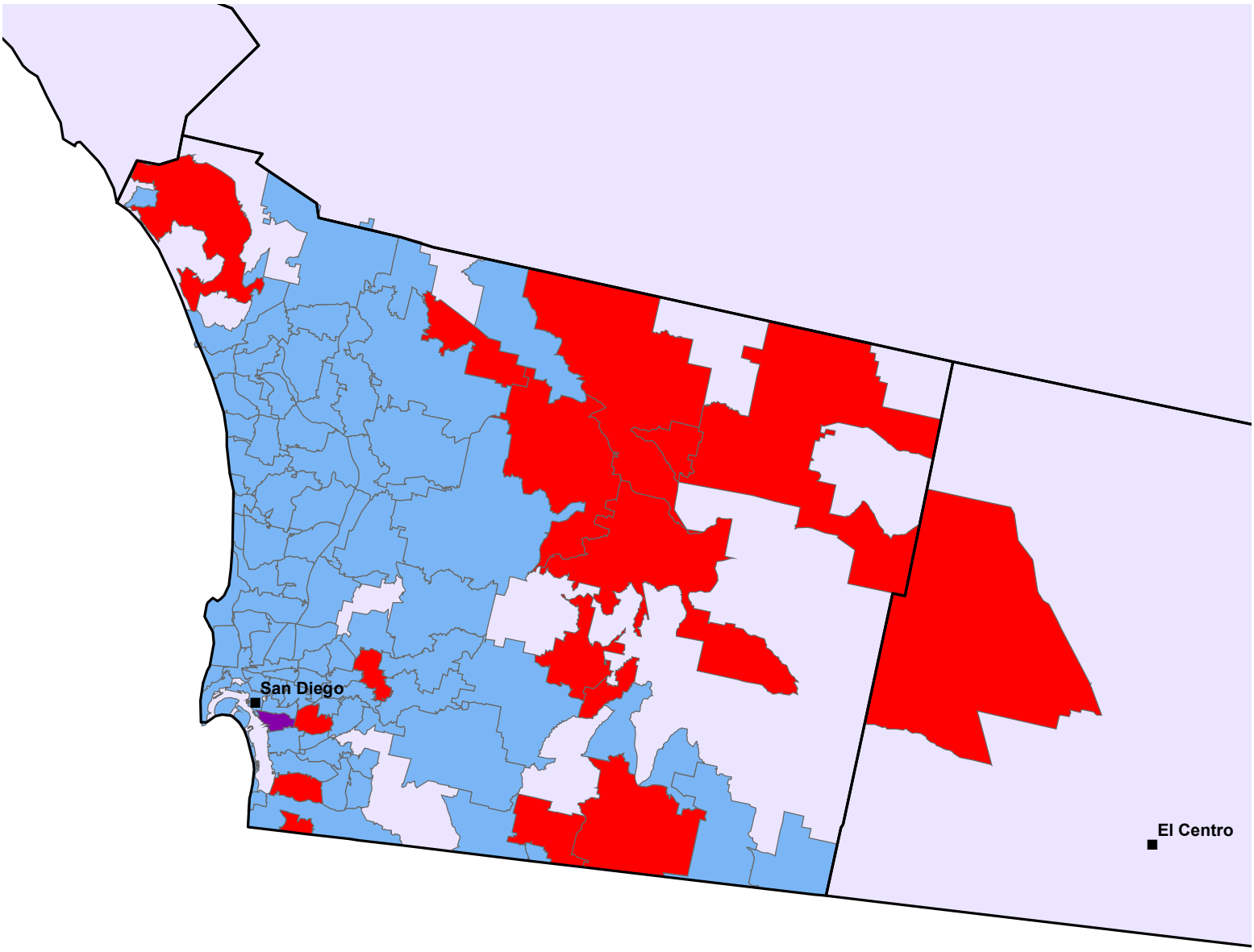


Legend

Zip Code Unemployment Rate and Income as Compared to Metro Area Average

- Neither Higher Unemployment Rate Nor Lower Income
- Higher Unemployment rate or Lower Income
- Higher Unemployment rate and Lower Income
- Data Unavailable

Zip Codes with Both High Unemployment Rate and Low Median Household Income
San Diego Gas & Electric

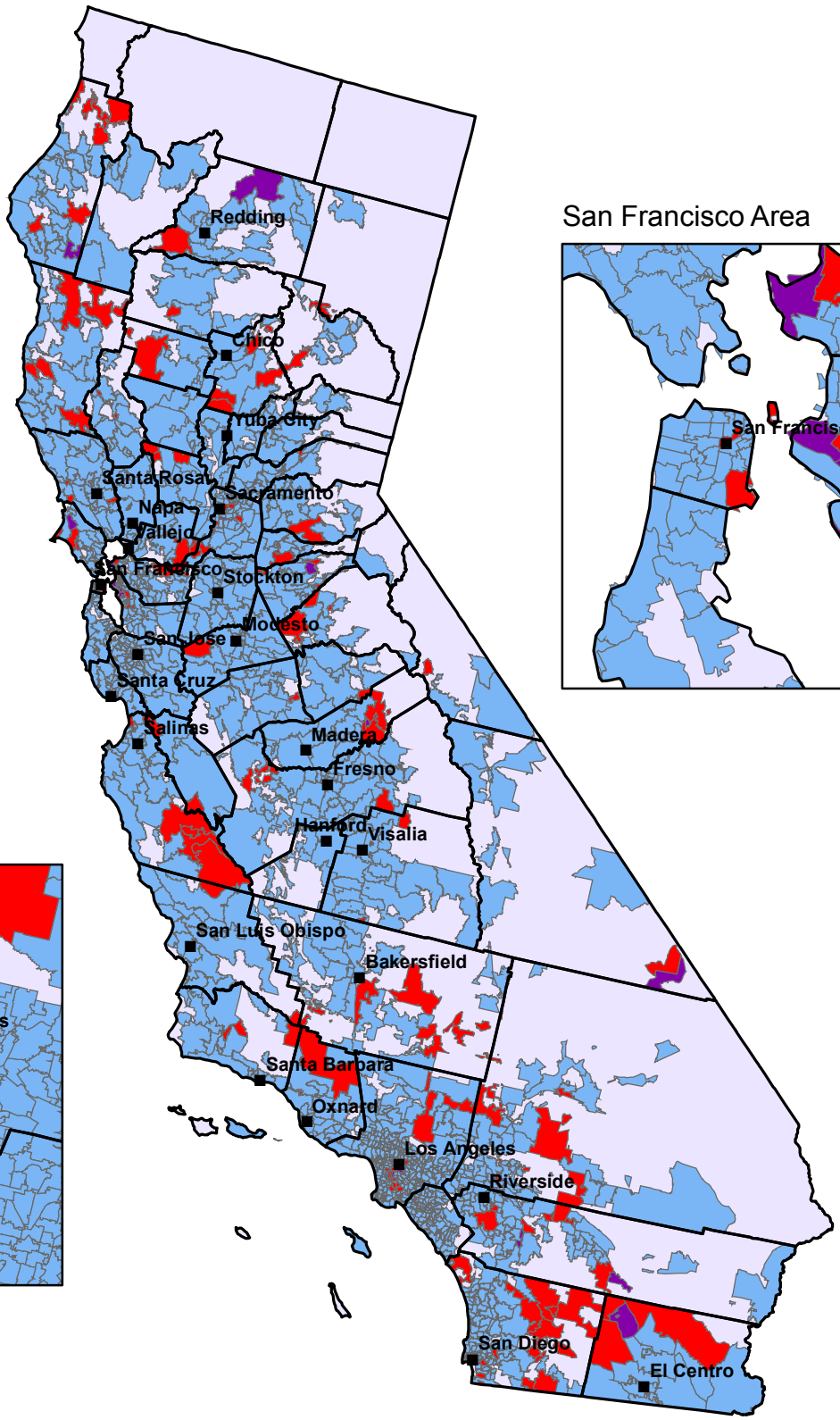


Legend

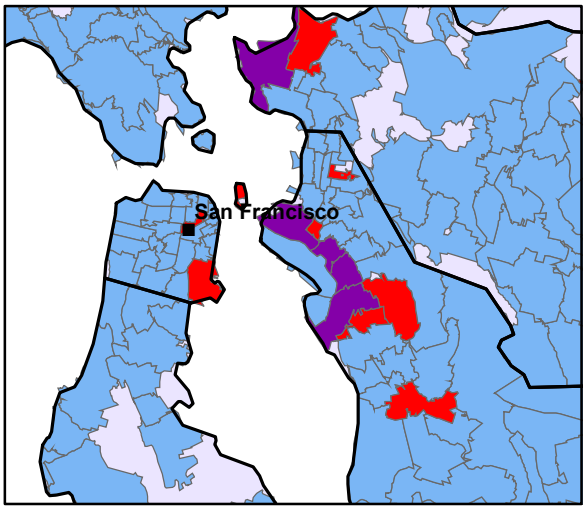
Zip Code Unemployment Rate and Income as Compared to Metro Area Average

- Neither Higher Unemployment Rate Nor Lower Income
- Higher Unemployment rate or Lower Income
- Higher Unemployment rate and Lower Income
- Data Unavailable

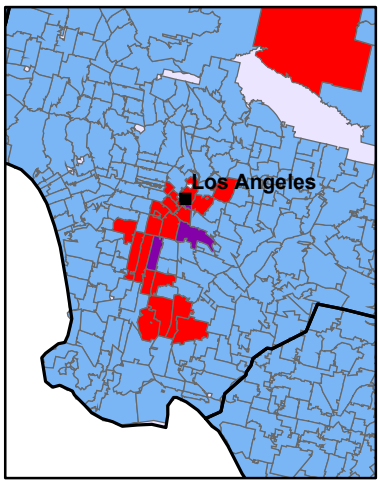
Zip Codes with Both High Unemployment Rate and Low Median Household Income



San Francisco Area



Los Angeles Area



Legend

Zip Code Unemployment Rate and Income as Compared to Metro Area Average

- Neither Higher Unemployment Rate Nor Lower Income
- Higher Unemployment rate or Lower Income
- Higher Unemployment and Lower Income
- Data Unavailable

Appendix 12: Inclusionary Implementers

Appendix 12 provides an overview of the of the inclusionary implementers both those that have been identified by the Workforce Investment Boards, the IOUs, and research which provide energy efficiency training as well as 60 inclusion implementers that do not provide energy efficiency trainings but could be potential partners. A summary of the 6 tabs is located below.

Tab 1 (WIB Survey List) – Outlines the 35 Workforce Investment Boards that were contacted about their Energy Efficiency programs.

Tab 2 (WIB Findings) – Summarizes the findings of the research on the 35 Workforce Investment Boards.

Tab 3 (II Contact Mission) – Provides a summary of 76 organizations that were identified through research including contact information and mission.

Tab 4 (II Quad Results) – Summarizes the results of the 76 organizations including IOU service area, type of trainings offered, and results in the quadrant analysis

Tab 5 (II Yardstick) -- Summarizes the results of the 76 organizations on the yardstick binary analysis on each of the criteria identified.

Tab 6 (Non EE II) – Identified 60 community-based organizations that have received federal grants or large non-profit grants and focused on disadvantaged communities throughout California.

Appendix 13: Questions Asked of Program Implementers

Our scope of work for the IOU Inclusion Study will produce a map outlining **implementers performing inclusion-related work in the IOUs' service territories**. This mapping activity will include the following:

1. Who are the program operators and training providers (organization name)
2. Where they are location (address)
3.. Contact Information (contact name, telephone number, email address)
4. Geographic Area Served
5. Which IOU service territory they are located
6. Organization's Mission/Purpose
7. Specificity in regards to their inclusion work (i.e. which disadvantaged populations they serve and how many workers they train)
8. What kind of training they offer (i.e. occupation, skills, certifications)
9. Job placement rates (if available)
10. How that work aligns to the Guidance Plan recommendations and to what the IOUs can offer

Questions Asked of Each EE Inclusion Training Program To Provide Requested Information

What kind of training do they offer (i.e. occupation, skills, and certificates)?

Do they market/target disadvantaged populations as defined by WE&T?

Do they train disadvantaged populations as defined by WE&T?

How many disadvantaged individuals do they train?

What is their job placement rate?

Do they offer supportive services (job-coaching, guidance)

Do they offer OJT?

Do they conduct a job readiness assessment?

Do they offer barrier removal or referrals to remove barriers to work?

Do they offer job search and short term education for quick employment?

Do they offer post job placement support?

What is the Organizational Type (See Supplemental Sheet)

Role Does Organization Play (Provider or TA Support or Both)

What is the training capacity at one time?

How many are currently enrolled?

What Percent of enrolled participants complete training?

What percentage of graduates is placed in apprenticeship?

What percentage of graduates is placed in EE jobs?

Do you have industry partners?

List Partners

Appendix 14: Energy Efficiency Credentialing Bodies and Common EE Credentials

The **Association of Energy Engineers** (AEE) is a nonprofit professional society offering a variety of certifications to recognize expertise in the areas of energy, power, green facilities, high performance buildings and industry.

American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), accredited by ANSI under ISO/IEC 17024 for the High-Performance Building Design Professional (HBDP) program, has certified more than 2,000 Built Environmental Professionals. ASHRAE also administers Building Energy Assessment Professional Certification (BEAP), Building Energy Modeling Professional Certification (BEMP), Commissioning Process Management Professional Certification (CPMP), and Operations & Performance Management Professional Certification (OPMP).

The **Building Performance Institute**, Inc. (BPI) is a national standards development and credentialing organization for residential energy efficiency retrofit work. BPI offers professional certification examinations on the assessment and upgrade of residential buildings – both single-family and multifamily.

The **Green Building Certification Institute** is a third-party organization that provides independent oversight of professional credentialing and project certification programs related to green building.
International Association Of Certified Home Inspectors (InterNACHI) devoted to maintaining the highest standards of the trade. InterNACHI certification requires that inspectors pass an inspector examination, take a Standards of Practice quiz, and adhere to those standards, complete a Code of Ethics course, and abide by that code, and attend continuing education courses to maintain certification.

International Association of Electrical Inspectors promotes professionalism within the electrical inspector field-of-practice through the Certified Electrical Inspector Certification (CEI) Program.

Interstate Renewable Energy Council (IREC) – IREC evaluates clean energy training providers and instructors against their rigorous industry-developed standards. Only those who demonstrate their commitment to preparing students for real jobs receive the IREC Credential.

North American Board of Certified Energy Practitioners (NABCEP) is a non-profit, voluntary professional credentialing organization that certifies experienced practitioners in the fields of photovoltaics and solar heating. NABCEP's PV Installation Certification is accredited by ANSI to ISO standard 17024.

North American Technician Excellence (NATE) is a non-profit certification program for technicians in the heating, ventilation, air-conditioning, and refrigeration (HVAC/R) industry.

Passive House Academy is accredited by the German Passivhaus Institute as a Passive House Certification body, and provides certification services worldwide. PHA administers Passive House Designer certification, Passive House Tradesperson certification, and Passive House building certification. Passive House US PHIUS provides certification for Passive House Consultants (CPHC), Passive House Builders, PHIUS+Raters, and Passive House buildings.

The **Residential Energy Services Network** (RESNET) is an independent, non-profit organization that administers HERS, a nationally recognized system for inspecting and calculating a home's energy performance, and certifies HERS Raters. RESNET certifies home energy raters that evaluate buildings based on a relative energy use index called the HERS Index.

The **Interstate Renewable Energy Council** (IREC) Credentialing Program for clean energy training providers, master trainers and instructors ensures high-quality training aligned with employer needs. http://www.irecusa.org/workforce-education/credentialing-bodies/

Common EE Credentials[1]:

Building Performance Institute (BPI) certifies weatherization auditors, energy efficiency installation personnel, and other professionals in the residential and multifamily building performance contracting industry.

North American Board of Certified Energy Practitioners (NABCEP) offers national certification programs for solar electric and solar thermal installers.

Residential Energy Services Network (RESNET®) certifies home energy raters that evaluate buildings based on a relative energy use index called the HERS® Index.

HERS and HERS Phase II (Home Energy Rating System)

LIUNA (Laborers' International Union of North America)

NATE (North American Technician Excellence)

LEED Professional, U.S. Green Building Council

Build It Green Certification

General certifications (not specific to green industries) – **OSHA** safety training – **First Aid/CPR**

[1] U.S. Environmental Protection Agency, State and Local Climate and Energy Program, Workforce Development, *"What Certifications are Used?"* found at: http://www3.epa.gov/statelocalclimate/state/topics/workforce.html.

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Aspen Institute, "*Sectoral Strategies for Low Income Workers: Lessons from the Field",* Summer 2007, found at http://www.aspenwsi.org/wordpress/wp-content/uploads/07-0141.pdf

National Fund for Workforce Solutions, "*Characteristics of a High Performing Industry Partnership"*, May 2014, found at http://www.nfwsolutions.org/sites/nfwsolutions.org/files/publications/Characteristics_of_a_High-Performing_Industry_Partnership_NFWS_12.29.14.pdf

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California Public Utilities Commission (CPUC), *"California Energy Efficiency Strategic Plan"*, January 2011 Update

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PolicyLink, "*Strategies for Addressing Equity in Infrastructure and Public Works"*, 2015

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McGraw-Hill Construction, *"Construction Industry Workforce Shortages: Role of Certifications, Training and Green Jobs in Filling the Gaps"*, 2012

Ella Baker Center for Human Rights, *"Making Green Work: Best Practices in Green-Collar Job Training"*,

Environment California Research & Policy Center, *"Building a Clean Energy Workforce: Preparing Californians for New Opportunities in the State's Green Economy"*, Spring 2011

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Brookings, The Hamilton Project, *"Building America's Job Skills with Effective Workforce Programs: A Training Strategy to Raise Wages and Increase Work Opportunities",* November 2011

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Appendix 16: Multi-Craft Core Curriculum (MC3)

In 2007, the Building Trades' national Standing Committee on Apprenticeship and Training created an Apprenticeship Readiness Program (ARP) that would empower participants to make informed decisions about which craft they would pursue. These training programs are sponsored by State and Local Building Trades Councils, Training Coordinators and JATCs in cooperation with local community groups, government agencies and schools.

The goals of the ARPs are to (1) increase the number of candidates for apprenticeship across all crafts, (2) to increase the diversity of apprenticeship candidates by recruiting women, people of color and veterans, and (3) to increase the retention rate among apprentices by providing them with a deeper understanding of both the industry and the role of craft unions in construction.

Building Trades ARPs use the Multi-Craft Core Curriculum (MC3), a comprehensive, 120-hour apprenticeship preparation curriculum. The MC3 provides a gateway for community residents to gain access to Building Trades registered apprenticeships, which are jointly administered by labor and management. In 2012, the US Department of Labor recognized the MC3 with its Registered Apprenticeship Innovator and Trailblazer Award.

The Multi-Craft Core Curriculum (MC3) is offered in cooperation with state and local Building Councils, which are essential participants in any MC3 program; The MC3 is not otherwise available; state or Local Building Trades Councils must participate in any MC3 program.

There are nine sectors or chapters in the MC3. Some sections of the MC3 chapters are required and some are optional as explained in the Table below.

- _Construction Industry Orientation
- _Tools and Materials
- _Construction Health and Safety
- _Blueprint Reading
- _Basic Math for Construction
- _Heritage of the American Worker
- _Diversity in the Construction Industry
- _Green Construction
- _Financial Responsibility

The Multi-Craft Core Curriculum: Required and Elective Sections

Required Sections	Elective Sections - Select to complete the 120 hour requirement
Orientation and Industry Awareness - 8 hours	Construction Health and Safety - 22 hours (CPR and First Aid - 8 hours/Osha-10 - 10 hours/Women's Health and Safety - 4 hours)
Construction Trade Awareness - 8 hours	Blueprint Reading - 24 hours
Tools and Materials Hands on Training - 8 hours	Green Construction - 4-8 hours
Basic Math for Construction - 40 hours	Financial Responsibility - 4-8 hours
Heritage of the American Worker - 8 hours	
Diversity in the Construction Industry - 12 hours (Diversity Awareness - 4 hours/Sexual Harassment - 8 hours	
Total 84 Hours	**Total 54 Hours (Choose 36 out of 54)**

Source: California Workforce Investment Board, Initiatives, Proposition 39 Pre-Apprenticeship Support, Training and Placement Grant 2.0, Build Trades MC3 FAQs, http://cwdb.ca.gov/res/docs/PROP 39/building.trades.mc3.9.1.2015.pdf

Appendix 17: Training and Employment Notice No. 13-12

As identified in Training and Employment Notice No. 13-12 released by the Department of Labor's Employment & Training Administration, A quality pre-apprenticeship program is one that incorporates the following elements:

Approved Training and Curriculum. Training and curriculum based on industry Standards and approved by the documented Registered Apprenticeship partner(s) that will prepare individuals with the skills and competencies needed to enter one or more Registered Apprenticeship program(s);

- **Strategies for Long-Term Success.** Strategies that increase Registered Apprenticeship opportunities for under-represented, disadvantaged or low-skilled individuals, such that, upon completion, they will meet the entry requirements, gain consideration, and are prepared for success in one or more Registered Apprenticeship program(s) including the following:
    - Strong recruitment strategies focused on outreach to populations underrepresented;
    - Educational and pre-vocational services that prepare individuals to meet the entry requisites of one or more Registered Apprenticeship programs (e.g. specific career and industry awareness workshops, job readiness courses, English for speakers of other languages, Adult Basic Education, financial literacy seminars, math tutoring, etc.); and in local, state, and national Registered Apprenticeship programs;
    - Assists in exposing participants to local, state and national Registered Apprenticeship programs and provides direct assistance to participants applying to those programs;
- Access to Appropriate Support Services. Facilitates access to appropriate support services during the pre-apprenticeship program and a significant portion of the Registered Apprenticeship program;
- Promotes Greater Use of Registered Apprenticeship to Increase Future Opportunities. To support the ongoing sustainability of the partnership between pre-apprenticeship providers and Registered Apprenticeship sponsors, these efforts should collaboratively promote the use of Registered Apprenticeship as a preferred means for employers to develop a skilled workforce and to create career opportunities for individuals;
- Meaningful Hands-on Training that does not Displace Paid Employees. Provides hands-on training to individuals in a simulated lab experience or through volunteer opportunities, when possible, neither of which supplants a paid employee but accurately simulates the industry and occupational conditions of the partnering Registered Apprenticeship sponsor(s) while observing proper supervision and safety protocols; and
- Facilitated Entry and/or Articulation. When possible, formalized agreements exist with Registered Apprenticeship sponsors that enable individuals who have successfully completed the pre-apprenticeship program to enter directly into a Registered Apprenticeship program and/or include articulation agreements for earning advanced credit/placement for skills and competencies already acquired.

Source: Training and Employment Notice 13-12, Defining a Quality Pre-Apprenticeship Program and Related Tools and Resources, http://wdr.doleta.gov/directives/attach/TEN/TEN_13-12_Acc.pdf