

Instructions: **Please make comments specific, reference pages where appropriate, and be focused on Business Plan level strategies.**

Commenter: Please Fill In This Part Of The Form

Comment #	PA(s)	Sector	Page #	Comment
Workforce Incubator-1	PG&E	Workforce Education & Training	Page 15, Table 5	<p>Observations</p> <p>Barrier 1 – Schools Lack Resources to Prioritize Energy Efficiency <i>In the opinion of the commenter, the main barrier isn't that schools lack resources, it's that school curriculum is not aligned with Energy Efficiency. Schools are receiving funds through initiative-funded grants like Prop 39 for energy efficiency facilities upgrades that provide opportunities for such alignment. 128 career academies in 74 school districts promote career opportunities in Energy & Utilities, Building & Construction Trades, and Engineering & Design. More needs to be done around educating students about Energy Efficiency activities happening on their campuses.</i></p> <p>Recommended Action <i>IOUs should partner with local education authorities, particularly with these related career partnership academies, to use these projects as "Learning Labs" to educate students on the energy efficiency aspects of projects. These can be used to address the following:</i></p> <ul style="list-style-type: none"> • <i>What will this capital improvement accomplish in terms of carbon reduction, energy savings, and financial benefits? The focus should not be limited to the sciences, but broadly address economics (financial costs of carbon effects on global climate change) and social sciences (societal effects of global climate change).</i> • <i>What is the technology of the project designed to do and how does it work? How can this support education in math, physics, and career technical education programs?</i> • <i>What jobs do the workers carry out for this project – describing the full spectrum of occupations from marketing and sales to finance, engineering, design, installation, operations, maintenance, and accounting?</i> • <i>What education and training do the workers need, and what are typical incomes for the various occupations?</i> • <i>Why would students want to pursue a career in energy efficiency?</i>

<p>Workforce Incubator-2</p>	<p>PG&E</p>	<p>Workforce Education & Training</p>	<p>Page 15, Table 5</p>	<p>Observations</p> <p>Barrier 2 – Energy Efficiency Education is not Mandated by California schools</p> <p><i>This observation is fair - Energy Efficiency is not part of Common Core - but that certainly doesn't limit the number of opportunities for including energy efficiency principles, benefits, and career opportunities in curriculum and programs. 128 Career Academies in 74 school districts offer curriculum and programs focused on Energy & Utilities, Building & Construction Trades, and Engineering & Design. The lack of a mandate does not limit the opportunities for influencing and building relationships at the K-12 level at these energy-focused academies.</i></p> <p>Recommended Action</p> <p><i>The IOUs recently commissioned a study on the Inclusion Energy Workforce Landscape that included recommended energy efficiency career pathways that would translate well to a K-12 educational initiative. The study mapped out areas of relative disadvantage throughout the state. Forming partnerships with the Career Academies in these areas would introduce students before they enter a challenging workforce to energy careers that the data show are strong in demand and income outlook. This approach will be a better building ground for Connections than just curriculum development.</i></p>
<p>Workforce Incubator-3</p>	<p>PG&E</p>	<p>Workforce Education & Training</p>	<p>Page 15, Table 5</p>	<p>Observations</p> <p>Barrier 3 – Limited Career Awareness Focused on Energy Efficiency and Green Careers</p> <p><i>County educational officials shouldn't be expected to know the intricacies of energy efficiency and careers that arise from it, currently outpacing general job growth in California by six times [Advanced Energy Economy Institute]. There are plenty of reasons for educators to promote green careers, but this will happen only with funding and focus by industry partners like the IOUs.</i></p> <ul style="list-style-type: none"> • <i>IOUs, at the pinnacle of the industry mandated to reduce greenhouse gases and lead workforce education & training efforts in occupations that impact carbon reduction and global climate change, should be more proactive in engaging K-12 educators in promoting careers in energy efficiency and the technology/applications in this sector.</i> • <i>California already has established Partnership Academies and Link Learning Academies with energy, construction and utility focus – these are obvious targets.</i> • <i>Some relationships exist, but the IOUs often engage in discrete projects with limited time horizons – educating and engaging K-12 students in career training is a decades-long proposition.</i> <p>Recommended Action</p> <p><i>In the next 3 years, K-12 Systems throughout California will be receiving \$600 million in funding for Continuing Technical Education.</i></p> <ul style="list-style-type: none"> • <i>In the opinion of the commenter, that funding represents a critical mass to go beyond “setting up an academy here and there” and to establish and fund a long range plan</i>

				<p><i>with a minimum horizon of 10 years.</i></p> <ul style="list-style-type: none"> • <i>One focus of that plan would be investing in train-the-trainer efforts at the K-12 level as the IOUs have done at the Community College level.</i> • <i>IOUs should build the plan around career academies focused on Energy & Utilities, Building & Construction Trades, and Engineering & Design.</i>
<p><i>Workforce Incubator-4</i></p>	<p><i>PG&E</i></p>	<p><i>Prop 39 creates opportunities for “teachable moments” in a broad range of disciplines for which the IOUs should make available subject matter experts and training materials for use in the classroom to impart new knowledge to students, addressing the questions in comment Workforce Incubator-1.</i></p> <p><i>IOUs have the opportunity to upgrade K-12 faculty knowledge and skills through these projects:</i></p> <ul style="list-style-type: none"> • <i>Convening professional development sessions for faculty.</i> • <i>Assisting with integration of subject matter into mainstream coursework.</i> • <i>Offering BOC certification courses to district facilities operations and maintenance personnel.</i> <p><i>IOUs can build general student body awareness of the importance and relevance of these projects by holding assemblies and distributing awareness material. Educators can inspire students to choose carbon reduction/energy efficiency as a preferred lifestyle and to motivate others via community action. In so doing, students may elect to pursue careers in carbon reduction/energy efficiency.</i></p> <ul style="list-style-type: none"> • <i>An individual school or Local Education Authority (LEA) can develop a community action program that engages students as ambassadors.</i> • <i>Energy and environment career partnership academies can be the nucleus for a school or LEA program.</i> • <i>Regional programs could be organized by a community college and surrounding school districts.</i> • <i>Events, contests, and community campaigns can be developed to add excitement to the LEA’s Climate Action Plan and potentially to the municipality’s plan.</i> 		

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