

# Sharing ratepayer funded data and intellectual property

An initial discussion regarding operationalizing the Commission's interest in ratepayer funded programs providing data and intellectual property of value to the overall energy efficiency industry

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## Objective for this meeting: set the stage for future constructive dialogues

- Bring CAEECC membership to same base level of history, terminology, and understanding around sharing data and intellectual property
- Inform membership of what data is already available, and to who, or data anticipated to become available in future per Commission policy
- Start to identify what are the priority use cases to initially solve to meet overall drivers
- List the barriers to solving some of these use cases

# Outline

- 1) Policy from Energy Efficiency Business Plan Application Proceeding (A.17.01.013)
- 2) Policy from Rulemaking to consider Smart Grid Technologies (R.08-12-009)
- 3) Framing
  - Process and Definitions
  - What is a use case?
  - Who's data, and what data are we talking about?
  - Already available data
- 4) Discussion

# Overall Drivers

- Reduce costs of EE programs to ratepayers
  - Avoid paying twice to collect the same data, learn the same lesson, or reinvent the same wheel
- Innovation
  - level the playing field => new implementers can compete  
=> provide new solutions
- Increase EE portfolio cost-effectiveness

# Policy from EE Business Plan Proceeding Standard Terms and Conditions D.18-10-008 Section 4.3.3. Intellectual Property Discussion

“the **Commission has an interest in utilizing intellectual property developed under the agreement** if it can be **useful to unlocking energy savings opportunities more broadly**, even if held by the IOUs on behalf of ratepayers. We recognize that **operationalizing this concept** is a more complex task than can be undertaken in the context of these contract terms. It may be a topic appropriate for **discussion among the CAEECC** members for the future.”

“In the meantime, we encourage the IOUs to consider bid evaluation criteria that could get at the **degree to which the proposed program design develops data and intellectual property of value to the overall energy efficiency industry and would provide that information on an open platform** to be readily utilized.”

# Policy from EE Business Plan Proceeding – Standard Terms and Conditions D.18-10-008

## **Modifiable Contract Terms and Conditions**

### **H. Data Collection and Ownership Requirements**

2. Ownership and Use Rights.
  - b. Program Intellectual Property
  - c. Implementer's Pre-Existing Materials
3. Billing, Energy Use, and Program Tracking Data

“Statutes pertaining to the Smart Grid envision a future in which the increased availability of information concerning energy usage will better enable the Commission and California to promote EE, demand response, greenhouse gas (GHG) reduction and the California economy.

“§ 8360: It is the policy of the state to modernize the state's electrical transmission and distribution system to maintain safe, reliable, efficient, and secure electrical service, with infrastructure that can meet future growth in demand and achieve all of the following, which together characterize a smart grid:

- Increased use of cost-effective digital information and control technology to improve reliability, security, and efficiency of the electric grid.
- Development and incorporation of cost-effective demand response, demand-side resources, and energy-efficient resources.
- Integration of cost-effective smart appliances and consumer devices.
- [list continues]

# Policy from Smart Grid Technologies Rulemaking 08-12- 009

Decision Adopting Rules To Provide Access To Energy Usage And Usage-related Data While Protecting Privacy Of Personal Data (D.14-05-016)

	<b>Customer-Specific Data (information associated with identifying information)</b>	<b>Customer identifying information removed (and cannot be re-identified)</b>
<b>Usage information obtained through Advanced Metering Infrastructure (AMI)</b>	<p>“Covered information” Customer privacy rules apply when data sharing (customer authorization required for non primary uses)</p>	<p>Release to limited entities of such data w/o customer auth. must ensure no individual identifying info (e.g. through specific rules for aggregation or anonymization)</p>
<b>Information obtained beyond AMI data (e.g. unit size, other EE stats collected by program implementers)</b>	<p>As specified in proceeding associated with funding collection of data of interest</p>	<p>As specified in proceeding associated with funding collection of data of interest</p>



# Framing: Process and Definitions

**Process** for determining whether and how data is sharable?

- What is the use case?
- What data is needed to meet the use case?

Usage data vs. program data?

Customer specific vs. aggregated/anonymized?

**Definitions** *D.14-05-16* :

“aggregated data” - A group or set of data points containing a sufficient number of points removed of personally-identifiable information where one cannot reasonably re-identify an individual customer based on, for example, usage, rate class, or location

“anonymized data” - A data set containing individual sets of information where all identifiable characteristics and information, such as, but not limited to, name, address, account number, or social security number, are removed (or scrubbed) so that one cannot reasonably re-identify an individual customer based on, for example, usage, rate class, or location

*“laws do not prohibit utilities from disclosing information that cannot be linked to a particular customer” D.14-05-16*

# Framing: Definitions continued

- “Personal information” means any information that identifies, relates to, describes, or is capable of being associated with, a particular individual, including, but not limited to, his or her name, signature, social security number, physical characteristics or description, address, telephone number, passport number, driver's license or state identification card number, insurance policy number, education, employment, employment history, bank account number, credit card number, debit card number, or any other financial information, medical information, or health insurance information. “Personal information” does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records. D1405016
- PII means data that can be connected to a person, corporation, partnership, limited liability company, firm, or association. D1405016

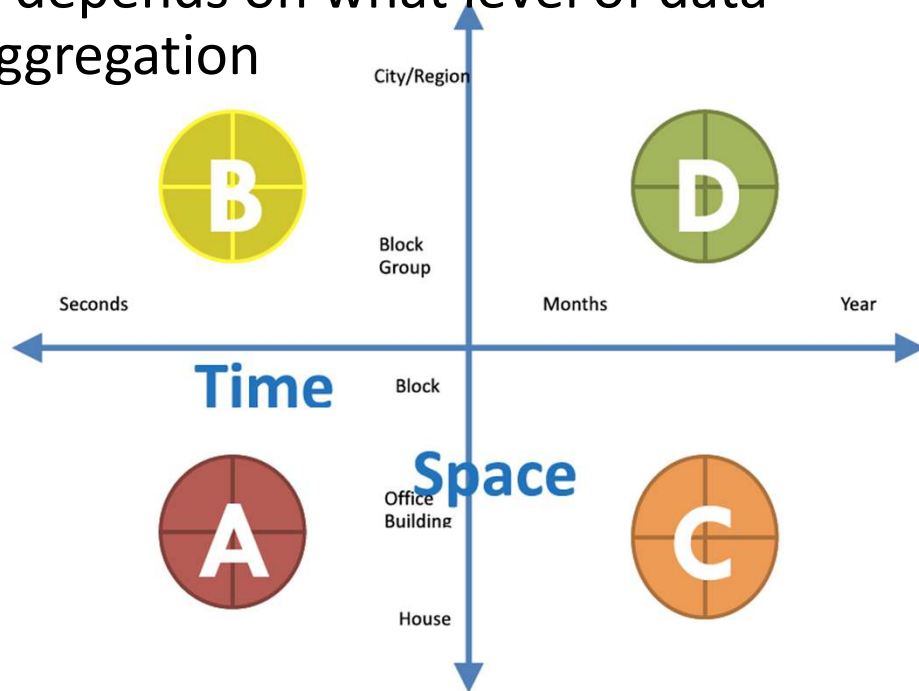
# Framing: What is a “Use Case”

- Use Case 1 as “local governments seeking access to aggregate data for use in creating legislatively required Climate Action Plans and [for] implementation of EE programs.” (D.14-05-016)

**IN WHICH BOX DOES THIS USE CASE RESIDE?**

	Customer-Specific Data (w/ identifying info)	Customer identifying information removed
Usage from AMI data	?	?
Information obtained beyond AMI data		

It depends on what level of data aggregation



Can "parties .. agree on a standardized format that adequately protects the privacy of utility customers"<sup>1</sup>

<sup>1</sup> Working Group Report Pursuant to February 27, 2013 Administrative Law Judge Ruling, filed in R.08-12-009 on July 10, 2013

	Specific location and small time interval	Geographic aggregation and small time interval	Specific location and large time interval	Geographic aggregation and large time interval
Quadrant Label				
Sensitivity	<b>High</b> Clearly personally identifiable, includes details of timing, and specific activities can be exposed.	<b>Moderate</b> Location is not personally identifiable.	<b>Moderate</b> Location is identifiable. Monthly (or annual) data masks timing of specific activities, such as startup or occupancy.	<b>Low</b> Not personally identifiable. Monthly or annual interval masks specific activities.
Public Policy Value	<b>Limited</b> Contains more data than necessary for uses other than academic research or services provided with consent.	<b>Moderate</b> Illuminates load shape, limited use in efficiency program delivery.	<b>High</b> Informs priorities for investment and service delivery.	<b>High</b> Essential for greenhouse gas emissions tracking and city planning.
Useful to Study	<ul style="list-style-type: none"> <li>Limits of demand response</li> <li>Customer to DR program signals</li> <li>Effect of building age &amp; shell on DR</li> <li>Impact of rate design (including Critical Peak Pricing)</li> <li>Plug load management</li> <li>Effect of weather on residential PV output</li> </ul>	<ul style="list-style-type: none"> <li>Effect of geographically targeted measures on load shape. (Example: Intensive appliance installation in a targeted city/zone vs. a "control" area)</li> <li>Demand response program design</li> </ul>	<ul style="list-style-type: none"> <li>Effect of building characteristics on energy consumption (such as building age, shell, most recent permit, etc.)</li> <li>Relate energy use to demographic trends such as occupant age, vulnerable population, linguistic isolation, proximity to cooling shelter for climate adaptation</li> <li>Efficiency program effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Community greenhouse gas program impacts</li> <li>Renewable resource planning</li> <li>Effect of efficiency programs on community/neighborhood energy use.</li> </ul>

# What is already available?

## To public:

- EM&V report data: beyond AMI data, able to separately segment customers that participate in programs, but time lag until data available, and data not collected using same methodology from one report to next
- Sites: CALMAC, CEDARS, EESStats, ETP, and Public Documents Area
- Aggregated usage data from each IOU by ZIP code, month, year, and customer type – res, comm, ag and industrial (per D.14-05-016)

## To third parties:

- e.g. access to aggregated usage data: [https://www.pge.com/en\\_US/residential/save-energy-money/analyze-your-usage/energy-data-hub/energy-data-hub-for-customers-and-third-parties.page](https://www.pge.com/en_US/residential/save-energy-money/analyze-your-usage/energy-data-hub/energy-data-hub-for-customers-and-third-parties.page)
- IOUs maintain data within Home Energy Upgrade pro
- gram per HPXML standard: Open data standard for home energy retrofits.

Discussion:

What are EE community use cases today?

- Imagine you had your ideal dataset:
  - How would you use it?
  - What questions would you seek to answer with it?

Discussion:

## Sharing data and intellectual property to meet use cases

- What program data and/or intellectual property is collected beyond customer usage data that would be valuable in priority use cases?
- What customer usage data is required if any for the priority use cases?
- What degree of aggregation/anonymization may be okay for use cases?

Discussion:

List barriers to solving these use cases