Statewide Energy Efficiency Forum

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SoCalGas
Southern California Gas Company

- Largest natural gas distribution utility in US
- Service territory of 20,000 square miles
- Serving 20.9 million consumers through 5.8 million meters in more than 500 communities
- Workforce of 8,500 employees
Providing Access to Customer Information

Energy Data Request Program

- Publicly available reports posted online on a quarterly basis
- Streamlined data request intake and request tracking process
Why is this change happening?

Decision 14-05-016 May 1, 2014

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission’s own Motion to Actively Guide Policy in California’s Development of a Smart Grid System.

Rulemaking 08-12-009
(Filed December 18, 2008)
Phase III Energy Data Center

DECISION ADOPTING RULES TO PROVIDE ACCESS TO ENERGY USAGE AND USAGE-RELATED DATA WHILE PROTECTING PRIVACY OF PERSONAL DATA

Protect privacy of personal data

Implement formal process for data requests from select third parties
Who is eligible?

State and federal agencies

Local government entities

Academic researchers

Community services & development
https://energydatarequest.socalgas.com/
Successful Go-Live December 1, 2014

Energy Data Request Program

This page contains reports of quarterly gas usage in our service territory by zip code. SoCalGas® can also supply more specific reports to qualifying academic researchers, local government entities or state and federal agencies. Click here for more information.

Quarterly Gas Usage by ZIP Code

Quarterly reports on gas usage by ZIP are available below. Each report includes number of customers, therms billed and average therms per customer by ZIP Code. Click a link below to download the quarterly report.

<table>
<thead>
<tr>
<th>2014</th>
<th>2013</th>
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<tbody>
<tr>
<td>Q1: Jan – Mar 2014</td>
<td>Q1: Jan – Mar 2013</td>
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<tr>
<td>Q3: Jul – Sep 2014</td>
<td>Q3: Jul – Sep 2013</td>
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Submit a Request

Local governments, academic researchers and state and federal agencies may request energy usage data from SoCalGas.

Request a Custom Report »

Data Request Log

See energy data requests submitted to SoCalGas.

View Requests »
New Response Time Boxes

Maximum 7 Business Days

Respond to requestor if the data request is complete.

Maximum 15 Business Days

Respond to requestor if the request can be granted and provide a proposed schedule. Notify the Executive Director of the Commission.

Mandatory 4 Weeks

Data can be released no earlier 4 weeks from the date the Executive Director of the Commission is notified.
Requests Not Supported by EDRP

- Emergency Response
- Under existing partnership or agreement
- Regulatory (Direct from CPUC)
- Subpoenas
- Requests authorized by the customer of record
Value for our Customers

- Readily available reports online
- Streamlined, single point of contact
- New processing time frames
- Consistent data security policies
- California Public Utilities Commission oversight
Technology Strategies Create New Transportation Pathways

- **Natural Gas Transportation Pathway** focuses on natural gas vehicles in heavy duty sectors, which represent the largest share of both ozone/greenhouse gas problem. Technology transferrable to other sectors:

  - Transit/Fleet Vehicles
  - Heavy Duty Trucks Short/Long Haul
  - Cargo Handling Equipment
  - Locomotives Short/Long Haul
  - Marine Vessels
Five Technology Strategies Reduce NGV Trucks NOx and GHG Emissions
Five Technology Strategies Also Address GHG Goals

Efficiency Improvements & Renewables Availability Increase Over Time

- Petroleum Fuels
- Compressed Natural Gas and Liquefied Natural Gas
- Natural Gas Vehicles (NGV)
- NGV Efficiency Improvements – Aerodynamics, Advanced Engines, and Hybridization
- Renewable Natural Gas/Hydrogen Blends

2050 Goal

GHG Emissions (from 1990 levels)
• **Foundational Fuel Strategy** focuses on natural gas vehicles in heavy duty sectors, which represent a large portion of ozone/greenhouse gas problem and help *grow our market*.
Technologies Also Address Greenhouse Gas (GHG) Goals
Efficiency Improvements & Renewables Availability Increase Over Time

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2050 Goal
Natural Gas as a Transportation Fuel

- Vehicles are among the largest sources of both NOx and GHG emissions in California
- LA Metro (By switching to CNG, Metro has reduced cancer-causing particulates from the bus fleet by 98 percent, carbon monoxide by 80 percent and greenhouse gases by about 150 tons per day.)
- Offering Compression Services Tariff to facilitate development of NGV market by proving natural gas at higher pressure to enable fueling
From Organic Waste to Renewable Natural Gas: De-Carbonizing the Pipeline
Biogas

- Renewable Natural Gas/Biogas will help lower the greenhouse gas profile of all natural gas uses
  - Agricultural waste
  - Wastewater treatment facilities
  - Landfills
- Offering Biogas Conditioning Services Tariff to facilitate development of renewable natural gas market by providing a means to clean biogas so it can be injected into our pipelines
From Renewable Power-to-Gas: De-Carbonizing the Pipeline
Hydrogenics Plant (Stuttgart, Germany)  
Power-to-Gas Example

• Nearby renewable energy powers an electrolyzer to produce H$_2$ from water
• Uses CO$_2$ from biogas plant
• Produces methane, which is injected into pipeline
SoCalGas/UC Irvine Project

Purpose:
Develop a deep understanding of the physical, chemical and energy dynamic attributes of H2 blending necessary to achieve commercial P2G deployments for storage and distribution of excess wind and solar energy
• This is logical next step from SoCalGas/NREL that focuses on P2G grid integration

Deliverables:
Design, build, install and test systems for:
• PV and electrolysis integration
• H2 blending and pipeline injection
Determine impacts of H2 injection on natural gas system components
Massive Energy Storage

- Hydrogen energy can successfully store energy
- Where can we store the gas?
  - Why not use the natural gas infrastructure?
- Southern California Gas Company Storage
  - Alison Canyon (2,435,262,000 m³)
  - Honor Rancho (685,271,400 m³)
  - La Goleta (608,815,500 m³)
  - Playa del Rey (67,960,800 m³)
Summary and Conclusions

• Energy transport and storage is increasingly important
• Existing natural gas infrastructure offers a high transport and storage capacity
• Power to hydrogen and injection in the gas grid is attractive, especially if the local power grid capacity is insufficient
• Many types of power generation is already connected to the gas grid (fuel cells, CHP)
• Interaction between gas grids and power grids will increase
• Smart communication and control systems are mandatory to create smart grids