

## UTILITY ALLY IMPLEMENTATION MODEL

### SOUTHERN CALIFORNIA EDISON: ENERGY BENCHMARKING PROGRAM



#### TYPE OF UTILITY AND LOCATION

Investor-owned Utility  
Rosemead, CA

#### OPPORTUNITY (BARRIER OR CHALLENGE)

Energy Benchmarking is a valuable tool to assess building energy performance and reduce energy consumption and carbon footprint. Benchmarking should be the first step to assess a building's energy performance and to measure ongoing progress. Benchmarking enables comparison of a building's energy use with other similar building types, helps determine if a building is using too much energy, and establishes a continuous improvement energy management process for a building. Southern California Edison's (SCE) Automated Benchmarking Service (ABS) allows customers to receive automatic monthly energy information uploads to ENERGY STAR® Portfolio Manager enabling easy monitoring of their energy data.

#### OUTCOME: SHOWCASE PROGRAM

SCE's Automated Benchmarking Service will not only help building owners comply with California Assembly Bill (AB) 1103, but will also empower them to better understand the energy usage of their buildings, and take action where needed to reduce energy use, greenhouse gas emissions, and electricity bills, and increase the overall value of their businesses and buildings.

#### PROGRAM START DATE

SCE's benchmarking program launched in 2010

#### PROGRAM ACHIEVEMENTS

SCE benchmarked 1,093 buildings with over 82 million square feet in the 2010-2012 program cycle.

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## Overview and Background

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Energy Benchmarking is a valuable tool to assess building energy performance and reduce energy consumption, thus minimizing the carbon footprint. It uses “bench marks” to measure performance, much as miles-per-gallon assesses a car’s performance. It provides an “apple to apple” comparison of customers’ building energy performance to other buildings.

### How Businesses Benefit from Energy Benchmarking

- Enables a comparison of a building’s energy use with other similar building types
- Helps determine if a building is using too much energy
- Establishes a continuous improvement energy management process for a building
- Assists customers with energy use planning including goal setting, targets, and timelines
  - Assesses effectiveness of current operations, policies and practices
  - Identifies and prioritizes energy efficiency opportunities
  - Verifies and monitors pre- and post-project energy use through changes in operations and equipment
  - Tracks greenhouse gas (GHG) emissions and energy costs



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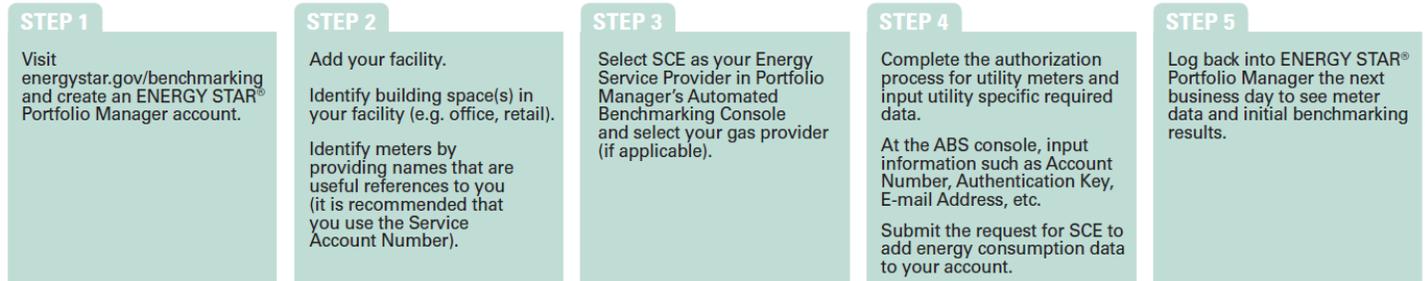
## Energy Benchmarking Project | Program Roadmap

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SCE’s Energy Benchmarking Project follows a five-step process as outlined in the graphic below.

## How to Get Started

### 5-step energy benchmarking process



Two key energy benchmarking tools are integral to the process:

**ENERGY STAR Portfolio Manager** – This free interactive energy management tool helps determine a building’s total energy performance score and allows users to track and assess energy consumption in a secure online environment. Portfolio Manager also helps compare energy use with similar buildings at a national level, as well as set goals, targets and timelines to become more energy efficient.

Portfolio Manager generates weather-normalized energy intensity (kBtu/sq. ft.) and GHG emissions metrics for all buildings, as well as a percentile energy performance score (1-100) for many eligible building types.

Based on the building information that is entered into Portfolio Manager, such as its size, location, number of occupants, number of PCs, etc., the ENERGY STAR Energy Performance Scale compares the actual energy data entered to determine where a building ranks compared to similar buildings.

Portfolio Manager can be used to:

- Track energy and water (voluntary) consumption of a building

- Set energy use priorities
- Monitor progress
- Verify energy improvements
- Receive EPA recognition if a building is a top performing building
- Comply with upcoming California regulations such as AB 1103, which requires a building to be energy benchmarked using a tool such as Portfolio Manager when an entire building is sold, leased or refinanced

**Automated Benchmarking Service (ABS)** – This free service from SCE is available on the ENERGY STAR website and allows users to seamlessly upload energy data into their ENERGY STAR Portfolio Manager account. Once customers enter their account data, SCE’s automated benchmarking system will review the request. When approved, SCE will provide the energy usage data necessary for generating an ENERGY STAR score and other building metrics. Customers also receive automatic energy usage updates each month.

SCE also offers free monthly classes on Energy Benchmarking at two locations:

- 1) Energy Education Center - Irwindale
- 2) Energy Education Center - Tulare

“Benchmarking Energy Use in Commercial Buildings” is an introductory-level seminar designed for non-residential building owners/managers and real estate professionals who want to comply with the California State law that requires disclosure of a building’s energy benchmarking score at the time of sale, lease or refinancing. Participants learn how to use the EPA’s ENERGY STAR tracking tool Portfolio Manager to guide investment priorities, identify under-performing buildings, verify energy efficiency improvements, and receive EPA recognition for superior energy performance. A hands-on exercise that prepares participants to benchmark their buildings is included. For more information, visit [www.sce.com/workshops](http://www.sce.com/workshops).

Energy Benchmarking at a Glance:

Program Name	Energy Benchmarking Program
Targeted Customer Segment	Non-residential property owners and managers
Program Start Date	2010
Buildings Benchmarked to-date	<p><u>All buildings benchmarked during the period 2010-2012</u> 1,093 buildings with over 82 million square feet</p> <p><u>Aggregate data from ENERGY STAR Portfolio Manager</u> Gross floor area (square feet): 53,072,079 sq. ft.*</p> <p>Energy consumption: 6,567,698,058 kBtu</p> <p>Normalized energy use intensity: 124 kBtu/sq. ft.</p> <p>Greenhouse gas emissions: 197,018 MtCO<sub>2</sub>e/yr</p> <p>Energy performance rating:</p>

	70.4 (average rating of all buildings in Portfolio Manager)  *Note: The square footage reported above is lower than the total square footage of all buildings benchmarked in Portfolio Manager for the period 2010-2012. There are a number of buildings in Portfolio Manager that received a benchmark during the reporting period, but for any number of reasons do not have current energy use data. In order to calculate and present the most accurate Energy Use Intensity (EUI) [Energy Consumption / Gross Floor Area], buildings with no current energy usage were removed from the above calculations.
Other Measures of Program Results to Date:	51 free benchmarking training workshops conducted 665 customers trained 151 internal SCE employees trained
Budget for most recent year (and next budget cycle if available):	\$325,000 (estimated)
Funding Sources (name and description):	California Public Goods Charges
Website:	<a href="http://www.sce.com/benchmarking">http://www.sce.com/benchmarking</a>
Technical support:	1-855-SCE-INFO (1-855-723-4636) benchmarking@sce.com
Best Person to Contact for Information about the Program:	
Name	Matt Evans, PhD Gary Suzuki
Position	Manager, Energy Codes and Standards Program Manager, Energy Advisor Services
Organization	Southern California Edison
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Email address	matthew.evans@sce.com gary.suzuki@sce.com

■ **Tools:**

- [Program Outreach Material](#)
- [SCE Benchmarking Website](#)

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## Process

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Assembly Bill 1103 (AB 1103) was signed into law by Governor Arnold Schwarzenegger in 2007. The bill requires utilities to upload energy usage data, upon request, to the EPA's ENERGY STAR Portfolio Manager for nonresidential buildings, beginning January 1, 2009. It also requires nonresidential building owners or operators to disclose ENERGY STAR Portfolio Manager benchmarking data and ratings to a prospective buyer, lessee, or lender beginning January 1, 2010. However, AB 531 was subsequently passed, allowing the California Energy Commission (CEC) to set the implementation date and develop the regulations for AB 1103. In response, the CEC formed the AB 1103 Working Group in March 2009.

Led by the CEC, the AB 1103 Working Group consisted of representatives from utilities, state and government agencies, and building and real estate professionals, including:

- All three California Investor Owned Utilities (Southern California Edison, Pacific Gas & Electric, and Sempra)
- Sacramento Municipal Utility District
- Environmental Protection Agency
- California Association of Realtors
- Building Owners and Managers Association
- Representatives from Senator Saldana's office (the sponsor of AB 1103)
- California Public Utilities Commission

Together, this diverse group addressed key issues surrounding AB 1103, such as how best to preserve the confidentiality of customer energy usage data, the types of buildings to be benchmarked, and how AB 1103 should be implemented, which ultimately included a phased approach. The result of this group's collective effort was a set of regulations that was unanimously approved and adopted by the Commissioners in February 2013, with AB 1103 scheduled to go into effect for nonresidential building owners on July 1, 2013.

In parallel with the efforts of the AB 1103 Working Group, SCE began the development of a fully automated system to allow for the transfer of 12 months' worth of energy usage and cost data to the EPA's Portfolio Manager, upon customer request. This system, referred to as ABS, was launched in February 2011. ABS processes requests once per day, and also provides an automatic monthly upload whenever a new bill is issued for an account. SCE is currently developing its next generation ABS, which will interface to the EPA's newly revised ENERGY STAR Portfolio Manager in the summer of 2013. Utilizing this new system, requests for energy usage data will be processed multiple times per day, thus streamlining the overall process for building owners.

In addition to providing energy usage and cost data upon request, SCE is also able to obtain building-level information and ENERGY STAR scores for those who utilize ABS. In the near future, this will allow SCE to target low-performing buildings for demand-side management program participation, which includes SCE's suite of energy efficiency, demand response, and distributed generation programs. SCE hopes that ABS will not only help building owners comply with AB 1103, but will also empower them to better understand the energy usage of their buildings, and take action where needed to reduce energy usage, greenhouse gas emissions, and electricity bills, and increase the overall value of their businesses and buildings.

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## Program Partners

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EPA provides customers free access to ENERGY STAR Portfolio Manager for building energy benchmarking in addition to providing support for SCE's automated benchmarking service.



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## Impact Summary

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Energy benchmarking is a service provided to SCE customers, as such, the primary metric for measuring program success is the number of buildings benchmarked, as summarized above. Customers who benchmark are under no obligation to participate in other SCE programs; therefore, energy savings metrics aren't easily tracked by, or tied to, energy benchmarking participation.

### **All buildings benchmarked during the period 2010-2012**

- 1,093 buildings with over 82 million square feet



**Aggregate data from ENERGY STAR Portfolio Manager**

- Gross floor area (square feet): 53,072,079 sq. ft.\*
- Energy consumption: 6,567,698,058 kBtu
- Normalized energy use intensity: 124 kBtu/sq. ft.
- Greenhouse gas emissions: 197,018 MtCO<sub>2</sub>e/yr
- Energy performance rating: 70.4 (average rating of all buildings in Portfolio Manager)

\*Note: The square footage reported above is lower than the total square footage of all buildings benchmarked in Portfolio Manager for the period 2010-2012. There are a number of buildings in Portfolio Manager that received a benchmark during the reporting period, but for any number of reasons do not have current energy use data. In order to calculate and present the most accurate Energy Use Intensity (EUI) [Energy Consumption / Gross Floor Area], buildings with no current energy usage were removed from the above calculations.