

Preferred Resources Pilot



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Providing Reliable Power from Clean Resources

Southern California Edison has begun a regional pilot to measure the impact on the grid of preferred resources – alternatives to building new gas-fired power plants. From this study, SCE hopes to develop an approach that will demonstrate that preferred resources can help meet reliability needs across SCE's service territory.

This multi-year pilot, to be conducted in a part of Orange County, will study the reliability of distributed generation (such as solar generation), energy conservation programs and energy storage. Specifically, it will address the long-term needs of the community with San Onofre Nuclear Generating Station's retirement and the pending closure of other ocean-cooled power plants. SCE is working on the pilot with business and residential customers, the California Public Utilities Commission, the California Independent System Operator, nongovernmental agencies and vendors.

The pilot will help determine the correct mix and proper timing for adding preferred resources to meet local customer demand. SCE has taken bids for preferred resources and will select those that will be added to the electrical system by late summer 2014. SCE also plans to roll out a grid-level measurement system to analyze the contribution of preferred resources.

There are several issues affecting the production of electricity in Southern California. The first is the lack of traditional power sources due to the closure of the San Onofre Nuclear Generating Station and the expected reduction in the number of large power plants operating after 2020 due to government regulations. The second is the desire of policymakers to place a priority on clean sources of energy rather than building more gas-fired generation plants.

Clean energy can come from several sources—in terms of generation (clean distributed generation), conservation (energy efficiency and demand response), and energy storage. These sources are collectively called preferred resources, and may be a suitable option to meet local electrical demands. However, the use of these sources of power also means that the electricity grid must be upgraded to transport more intermittent electric power sources than ever before.



Get Involved

Throughout the pilot region in southern Orange County, SCE business and residential customers are encouraged to sign up for programs and services that use preferred resources, especially programs** such as:

- **Automated Demand Response** — business customers may earn up to \$300 per kW of pre-calculated demand response load reduction for installing technology that automatically reduces load during energy events.
- **Summer Discount Plan** — customers are rewarded for allowing their A/C to be remotely shut off during select energy events that affect their area.
- **Save Power Day** — customers can earn up to \$100 annually in bill credits for reducing usage during peak periods on designated days.
- **Energy Efficiency Rebates** — installing energy efficient equipment in your home or business.

For more information on what you can do, visit:

Residential customers:

<https://www.sce.com/residential/>

Business customers:

<https://www.sce.com/business/>

More information about the Preferred Resources Pilot is available at:

<http://on.sce.com/preferredresources>

** Terms and conditions apply

Preferred Resources Pilot

Frequently Asked Questions



What are preferred resources?

Preferred resources include clean energy options to produce electricity – such as solar, wind, and energy storage — and managing energy use to reduce consumption of electricity.

Why is a pilot needed and how long will it last?

Demand side management (energy efficiency and demand response) and clean energy options have been used to meet customers' electricity needs, but we didn't depend on these resources to ensure reliable service. That's because we had sufficient generation and grid resources and did not need to depend on smaller, customer-owned generation. Also, it is sometimes difficult to determine whether a decrease in electricity demand is the result of a successful energy management program or other factors. New monitoring and measuring technologies deployed as part of a smart grid could make timely performance information available for the first time.

We seek to increase overall use of preferred resources in the pilot area and collect data to determine the impacts of demand side management and clean energy options on the local grid. The pilot also will help determine whether the right mix of preferred resources can provide the same level of reliability as traditional, gas-fired power plants, and at what cost and operational effect on the grid.

With the data learned from the nine-year pilot, SCE hopes to develop an approach that may be applied to meet electricity reliability needs far into the future across its service territory.

The first major milestone will occur at the end of 2017 when SCE will use the results of the 2014 pilot to decide whether new gas-fired power plants are needed to maintain reliable service in the pilot area.

How will customers benefit?

If the pilot is successful, it can help ensure reliable electric service and help prevent outages if there is an electrical disturbance in the area. Use of an effective preferred resources portfolio may also reduce or eliminate the need for new gas-fired power plants in the pilot area, avoiding greenhouse gas and other emissions. Customers who choose to participate will also have tools to better manage their energy use and energy costs.

Is SCE doing this alone?

No. SCE is working with the California Public Utilities Commission, the California Independent System Operator, local government, non-governmental organizations, vendors and customers to increase the use and improve measurement of demand side management and clean energy in the southern portion of SCE's service territory.

Preferred Resources Pilot

Frequently Asked Questions



Where will the pilot take place, and how was the location selected?

The pilot region is located in central Orange County, near the San Onofre Nuclear Generating Station. Now that the nuclear plant is no longer producing electricity, and other power plants that use ocean water for cooling are scheduled to close in 2020, SCE needs to ensure it continues to safely provide reliable power in that area.

- Because fewer power plants are expected to be in service after 2020, an electrical disturbance could lead to outages if sufficient amounts of electricity are not produced within the region.
- Preferred resources could fill or lessen electric power needs, reducing or eliminating the need for new gas-fired power plants in the area.

Why not just build gas-fired plants to ensure reliability?

SCE shares policymakers' and customers' interest in preferred resources. In addition, power plant developers interested in building in the area may encounter challenges due to air quality concerns, limited site availability and concerns with greenhouse gas and other emissions.

How will the pilot work?

SCE business and residential customers in the pilot area will be encouraged to participate in programs and services using preferred resources. Customer and utility use of the preferred resources will be carefully measured and analyzed to determine the impact on overall electrical power reserves and the distribution grid. Based on this analysis, a preferred resources portfolio will be created to manage electricity supply and demand, particularly during peak times, and meet reliability requirements in the pilot area.

Why is electricity reliability important?

A reliable electricity supply is essential for the health and safety of our customers, as well as the economic well-being of our communities.

Because large-scale electricity storage is not yet cost-effective (although SCE is working to advance the technology), the amount of electricity produced must perfectly match the amount of electricity required by customers 24-hours a day, seven days a week.

For more information on what you can do, visit:

Residential customers:

<https://www.sce.com/residential/>

Business customers:

<https://www.sce.com/business/>

More information about the Preferred Resources Pilot is available at:

<http://on.sce.com/preferredresources>

Preferred Resources Pilot Process



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Overview

Southern California Edison (SCE) is committed to ensuring safe, reliable and affordable electricity is delivered to our customers. The closure of the San Onofre Nuclear Generating Station results in the loss of 2,200 megawatts of cost-effective clean energy for our customers in central Orange County.

SCE is conducting a multi-year pilot to study the capabilities of clean energy options such as energy efficiency, energy conservation, solar, wind, and energy storage – collectively known as Preferred Resources – to meet the constantly changing demands for electricity in the central Orange County area. The three-phase pilot began in November 2013, and will end in 2022.

The pilot attempts to address the needs of the community without SONGS and the possible closure of ocean-cooled power plants in the area. We are reaching out to our customers and working with the California Public Utilities Commission, the California Independent System Operator, non-governmental agencies and vendors on the pilot.

We believe a successful pilot will help us find a way to reduce or eliminate the need to construct new natural gas plants in the pilot area, and will to help design the clean energy grid of the future.

Our Goals for the Pilot

- Determine if preferred resources can be used to reliably meet customer demand, especially during peak needs.
- Integrate preferred resources in a manner that preserves the reliability and safety of the grid.
- Use results to create a clean energy grid of the future.

Our Strategy

- Develop a system that will measure the local grid impact of preferred resources.
- Design and implement a preferred resources portfolio to address local reliability needs.
- Engage stakeholders by sharing the pilot's progress and lessons learned, and seek input from our stakeholders and customers to gain pilot improvement.

What is Southern California Edison's Plan for the Multi-Year Pilot?

**Phase 1:
Lay the Foundation
November 2013-2014**

**Phase 2:
Demonstration and Proof
2015-2017**

**Phase 3:
Sustainability
2018-2022**

Preferred Resources Pilot Process



Design and Acquisition

To meet the growing electricity demand, at least 250 MW of power will be needed in the pilot area over the next 10 years. To address this need, SCE is designing a portfolio that is able to reliably meet constantly changing customer demand, as well as account for resources like solar, that are not always available. This portfolio will include resources that can reduce electricity demand, store electricity and produce electricity from renewable resources.

Steps are already in progress to acquire preferred resources through SCE's existing procurement and program processes, and program enhancements. Information on these acquisitions will be shared in the early fall 2014. A preferred resources portfolio is in development, and will be used to determine future acquisitions.

Implementation

SCE is seeking to increase the use of preferred resources in the pilot area – a critical element of the project. To do this, we are emphasizing customer education on products and services currently available that will give them greater control of their energy use and costs. Also, we are launching a project focused on helping our commercial customers – our largest contributor to peak demand – manage their energy usage. The lessons learned from these efforts will be shared this fall on our website.

Measurement

Utility systems rely on measurement instruments to provide the information needed to support safe and reliable operation of the grid. Due to their generally smaller size and dispersed locations on the grid, preferred resources require advanced instrumentation to measure grid impacts. Recent technology improvements now allow SCE to collect measurement data at a much more granular level and localized scale than previously feasible. The ability to measure grid-level impacts of preferred resources is critical to determining if SCE can depend on preferred resources to provide for customer needs in a safe and reliable manner. A new measurement process will be established this summer.

Stakeholder Engagement

To ensure a successful pilot, continued input is needed. We will report our progress on pilot activities and lessons learned on our website <http://on.sce.com/preferredresources>.

We encourage you to go to our website and review the reports that will be housed there. We would also like to hear from you. You can email us at preferredresources@sce.com with your comments and questions about the pilot program.

For More Information

Website: <http://on.sce.com/preferredresources>
Email: preferredresources@sce.com

For media only:
Please contact our Media Relations office:
(626) 302-2255