

The Value of Southern California Edison's Nuclear Power Program

Safe, reliable, cost-effective power generation, 24/7, with virtually no emissions



The twin reactor units at Southern California Edison's (SCE) San Onofre Nuclear Generating Station, near San Clemente, Calif., are Southern California's largest and most reliable sources of electricity. Jointly owned by SCE, San Diego Gas & Electric and the city of Riverside, the units can generate 2,200 megawatts of power, enough to meet the needs of 1.4 million average homes at a point in time.

During its history, the San Onofre plant has produced more than 350 billion kilowatt-hours of electricity – exceeding all other individual power sources in the region. Between refueling outages, the plant has been available to help meet our customers' energy needs 97 percent of the time.

The Growing Importance of Clean, "Baseload" Generation

The San Onofre Nuclear Generating Station provides "baseload" generation, meaning its power serves customer needs day and night, regardless of weather variables. And the fact that nuclear energy is virtually emission-free means the plant is increasingly valuable for meeting rising air-quality standards and California's commitment to reducing greenhouse gases. Compared to fossil-fuel generation sources, the plant has helped avoid:

- 100,000 metric tons of smog-producing pollutants.
- 180 million metric tons of carbon emissions.

A Cost-Effective, Secure Fuel Source

The San Onofre plant helps control Southern California power costs and enhances energy security by increasing SCE's generation diversity. The plant saves utility customers some \$250 million per year compared to the average cost of other available power sources. In addition, uranium is an abundant, predictable, secure fuel source that reduces dependence on less stable fuel supplies.

Essential to Grid Reliability

The San Onofre plant provides the region with power as well as essential voltage support. Grid operators like SCE must ensure not only that enough electrons are available to

feed devices in customer homes and businesses, but also that adequate voltage support is available. Much like water pressure in a water system, voltage keeps electrons flowing to their destination.

ENERGY RESOURCES	2010 SCE POWER MIX (Actual)
Eligible Renewable	18%
-- Biomass & waste	2%
-- Geothermal	9%
-- Small hydroelectric	1%
-- Solar	1%
-- Wind	5%
Coal	7%
Large Hydroelectric	6%
Natural Gas	37%
Nuclear	19%
Other	0%
Unspecified sources of power*	13%
TOTAL	100%

A Net Plus for Local Marine Life

One of three cooling systems at the San Onofre facility uses abundant, economical ocean water. Marine protection devices built into the plant's ocean water intake system safeguard 94 percent of local fish. Then, three major marine enhancement projects developed by SCE – a hatchery, giant kelp reef and wetlands project – help mitigate any remaining impacts.



Community Economic Support

The San Onofre plant provides support to neighboring communities in a variety of ways:

- More than \$200 million annually in direct economic benefits through 2,000 high-paying jobs for skilled workers.
- An additional \$300 million in local economic benefits from the current steam generator replacement project.
- About \$20 million annually in property taxes that support local services.
- More than \$300,000 annually in employee and company contributions to local charities, plus thousands of hours of voluntary community service.