

# Diablo Canyon Power Plant

## Safely storing used nuclear fuel

Like all 104 commercial nuclear reactors in the United States, the electricity produced at Diablo Canyon Power Plant is fueled by half-inch uranium pellets, contained in fuel rods grouped together into fuel assemblies and placed inside the reactor core. Each fuel assembly has a lifetime in the core of about five years, after which time it no longer produces the desired amount of heat energy and must be replaced. At Diablo Canyon, on average, 88 of 193 fuel assemblies are replaced during a refueling outage every 18 to 21 months to maintain electric power operations.

### Storage Pools

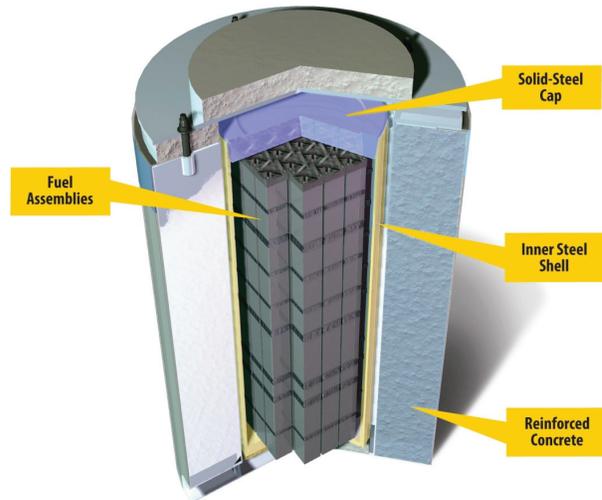
When used fuel is removed, it is safely secured in special racks in stainless steel-lined, concrete-walled pools of borated water; one pool for each reactor. The steel, concrete and water protect the workers and public from the residual radiation. The water is continuously circulated to keep the fuel cool.

Like most other nuclear power plants around the country, Diablo Canyon has limited capacity to store fuel in its pools, and since the federal government has not provided a federal repository as directed by law, an interim used fuel storage facility was built on-site.



### Dry Storage Casks

Once used fuel has cooled substantially in the pools for about five years, it can be placed in a sealed, Helium-filled canister and set inside a 20 foot tall, concrete-filled, steel storage cask where the canister continues to be cooled by natural air convection through



vents in the storage cask. The storage casks are bolted to a seven-and-a-half-foot thick steel-reinforced concrete pad to ensure it is seismically stable. This feature is unique to Diablo Canyon. The storage casks are located in a secure, protected area adjacent to the power plant.

Dry storage is currently used at more than half of the U.S. nuclear plants. The storage systems are approved and licensed by the U.S. Nuclear Regulatory Commission for storage of used fuel beyond the plant's current licensing period, if necessary. Like the reactor containment vessel, the storage systems are robustly designed to withstand numerous physical threats, including severe weather, earthquakes and other potential hazards.

### Minimal Waste

A nuclear power plant produces relatively little non-recyclable waste and is the only large-scale electric power generation system that contains and safely stores 100 percent of its used fuel. In fact, if a family of four received all of its electricity from a nuclear power plant for 20 years, the resulting used fuel would fit in a shoe box.

### About PG&E

Pacific Gas and Electric Company, a subsidiary of PG&E Corporation (NYSE: PCG), is one of the largest combined natural gas and electric utilities in the United States. Based in San Francisco, with 20,000 employees, the company delivers some of the nation's cleanest energy to 15 million people in northern and central California. For more information, visit [www.pge.com/about](http://www.pge.com/about)



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