

Ensuring San Onofre Benefits Continue Through Its Current License

To ensure the region's largest, cleanest power source is available to customers through its current license period, 2022, Southern California Edison (SCE) is replacing the four largest components of its San Onofre Nuclear Generating Station.

What is a Steam Generator?

Steam generators turn heat from the plant's reactors into the steam that drives turbines and generators, producing electricity. During 2009 and 2010, these components are being replaced as they near the end of their service. Most U.S. nuclear generating units with a similar design have already replaced their steam generators.

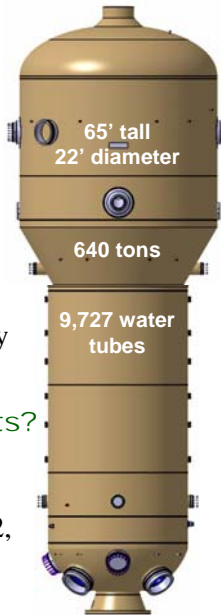
Why Replace These Components?

Replacing the steam generators and continuing San Onofre's operation through its current license period, 2022, will save utility customers as much as \$1 billion during the next two decades compared to the cost of available replacement power. In addition, California will need every viable, clean-power option, including nuclear generation, to meet its ambitious environmental commitments.

Ensuring Public Safety

Eight years of exhaustive planning stand behind this massive construction project. Independent experts are monitoring each aspect of the process. Replacing

San Onofre's steam generators requires creating temporary openings in the plant's containment domes, as has been the case at many U.S. nuclear facilities. Extensive engineering studies and tests have shown this process poses no danger for workers or the public. After the temporary openings are closed, the domes will be as strong, if not stronger than the original structures.



How Do You Replace a Steam Generator?

Step 1 – All nuclear fuel is removed from the reactor and placed in a building designed for safe storage.

Step 2 – A temporary 28'-by-28' opening is created to allow removal of the original steam generators and installation of the new components.

Step 3 – The original steam generators are disconnected from their piping and supports.

Step 4 – A special crane lifts the original steam generators and places them on a rail system running through the opening, sliding them outside the dome where they are lowered to a heavy haul vehicle and transported to a storage area.

Step 5 – The new steam generators are lifted and placed inside the dome using the process described in Step 4 in reverse.

Step 6 – The new generators are connected to their piping and supports; the crane system removed; the opening resealed; and equipment located where the opening was created reinstalled.

Step 7 – Extensive inspections and testing are done to ensure the new components and reactor coolant system are working correctly.

Step 8 – Personnel start up the unit and conduct functional testing. Then power production resumes.