



Facility type	Naval Base
Project cost	\$105 million
Cost savings	\$358 million (total)
Contract term	20 years
Contract type	Federal ESPC

COMMANDER FLEET ACTIVITIES YOKOSUKA

Yokosuka, Japan

Largest overseas U.S. Naval installation needed increased energy efficiency and additional power generation capacity to meet increasing mission requirements.

The existing steam plants at Commander Fleet Activities Yokosuka, Japan (CFAY) were inefficient, consuming more than 8 million gallons of liquid fossil fuel each year and the base required additional 60 Hz power generation capacity to meet increasing mission requirements.

In 2008, NORESKO completed installation of a 39.5 megawatt cogeneration plant at CFAY that is guaranteed to save the U.S. Navy \$358 million over the next 20 years. The \$105 million price for the project was funded through the Energy Savings Performance Contract program managed by the Naval Facilities Engineering Command, in partnership with NORESKO.

The project features a new 4-story building to house the plant, 3 gas turbine generators with heat recovery steam generators, 3 reciprocating engine generators with heat recovery steam generators, major upgrades to steam generation & distribution system and installation of a new gas line to the base. The plant is designed to deliver clean, efficient and reliable electric power to meet all capacity needs, even in the event of a single turbine failure or shut down. It also allows for expansion to meet future loads and mission requirements. NORESKO provides ongoing operational support and maintenance and repair for the plant for the 20-year term of the contract to ensure the plant is functioning at optimal efficiency, capacity and maximum availability.

Technical Highlights

- ▶ New 4-story power plant building
- ▶ 3 gas turbine generators (60 Hz)
- ▶ 3 reciprocating turbine generators (2x 50 Hz and 1x 60 Hz)
- ▶ Major upgrades to steam generation & distribution system
- ▶ New gas line to the base

Environmental Impact

- ▶ Conserves 582 billion British thermal units of energy per year
- ▶ Saves 8 million+ gallons of liquid fuel annually
- ▶ 22% reduction in CO₂
80% reduction in SO_x
47% reduction in NO_x

“The new cogen plant solves a number of the Navy’s vital energy needs. First, it provides significant cost savings and energy to the fleet. Second, it will save millions for taxpayers, while providing huge reductions in greenhouse gases and other potentially harmful emissions damaging to our environment”.

Captain Gregory Zielinski
NAVFAC ESC Commanding Officer