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NERSC Plans for the Computational Research and Theory Building

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The NERSC facility is transitioning to a new building housed at the LBNL main campus in the 2015 timeframe. This state of the art facility is energy efficient, providing year-round free air and water cooling, is initially provisioned for 12.5 MW power and capable of up to 42 MW power, has two office floors, a 20K square foot HPC floor with seismic isolation and a mechanical floor. Substantial completion was scheduled for May 2015.

As more supercomputing facilities are investigating water cooling as an alternative, the Computational Research and Theory building (CRT) demonstrates the viability of energy efficiency using alternative environmental cooling and leverages the Bay Area's climate to maintain temperature throughout the HPC floor and offices. The seismic isolation floor ensures that the systems are able to withstand earthquakes that are known to occur in this geographic area. The backup power system uses gasoline and can sustain energy to maintain the critical infrastructure of the facility up to 24 hours and can be refilled. Environmental data is collected throughout the facility to monitor not only temperature but also humidity, dust, electrical data from the power distribution units and sub panels.

The move will occur through several months in order to maximize system availability, preserve users' data, minimize the number of outages and minimize move costs.

Length of presentation (max. 20 minutes)

20 min

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