



## California Public Utilities Commission 505 Van Ness Ave., San Francisco

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**PRESS RELEASE**

Docket #: A.11-07-008

### **CPUC APPROVES RESEARCH AND DEVELOPMENT PLAN TO BRING INNOVATION AND SAVINGS TO CALIFORNIA'S CONSUMERS**

SAN FRANCISCO, December 20, 2012 - The California Public Utilities Commission (CPUC) today approved a research and development plan that is expected to result in more than \$552 million in consumer savings by 2020 due to advancements in energy transmission, reliability, and safety.

The CPUC authorized Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) to enter into a five-year research and development agreement, known as 21<sup>st</sup> Century Energy Systems, with Lawrence Livermore National Laboratories (LLNL).

The expected research benefits of this project include more than \$552 million in savings by 2020 from improved resource planning related to the integration of renewables into the grid, potential substantial savings over the next five years from improvements in natural gas operations, improved safety and reliability from enhanced capabilities to model electricity and gas flows, and improvements in cyber security as utilities learn directly from LLNL how to deal with evolving and persistent cyber threats.

In addition, the supercomputing capabilities of LLNL will enable the processing of the three terabytes of data that Smart Meters will produce daily. Supercomputing capabilities, for example, will enable LLNL to model grid operations in a disaggregated and refined way that will allow the companies to see where investments are needed to maintain service and to avoid investments not needed, thereby producing better service and ratepayer savings. The expected economic benefits alone dwarf the \$150 million in project costs over its five-year life (PG&E will pay 55 percent, SCE



35 percent, and SDG&E 10 percent).

“This project will benefit utility customers in many ways,” said CPUC President Michael R. Peevey. “Research findings are likely to improve the safety of gas operations by reducing the amount of pressure needed in transmission pipes in order to maintain distribution flows, and also by improving leak detection and predicting pipe breaks. Further, the project is very likely to provide benefits to ratepayers that exceed costs across both electric and gas operations by avoiding unnecessary purchases of power support services and by identifying with precision places where more grid investment is needed.”

Said Commissioner Timothy Alan Simon, “LLNL supercomputers are capable of modeling grid operations and of processing terabytes of Smart Meter data that electricity grid planners and operators need if we are ever to respond effectively to the serious cyber challenges that threaten the economic and national security of our state and nation.”

Research is restricted to four promising areas: Gas Operations, Electric Operations, Electric Resource Planning, and cyber security. Total yearly expenditures cannot exceed \$30 million and total expenditures cannot exceed \$150 million. All research projects must meet the specific criteria showing ratepayer benefits, and the CPUC will determine funding for projects annually following a public workshop.

Added Commissioner Catherine J.K. Sandoval, “Our decision articulates the state’s policy of promoting joint research by investor-owned electric utilities to protect cyber security, analyze needs for integration of renewable energy, and promote safe operation of the gas transmission and distribution system. The decision adopts a process that provides active state supervision to ensure accountability, public participation, and state oversight of the project proposals. In consultation with Lawrence Livermore Laboratories, the collaborative will propose research projects and methodologies, consider a range of competitive resources to carry out the projects, conduct a public workshop regarding the project proposals before submitting an Advice Letter to the full CPUC, and submit the proposals to the full CPUC for its review and consideration. This process ensures strong ongoing state oversight, provides needed transparency in the public vetting of proposals, and will

yield science-based analysis to support the CPUC's mission to ensure that Californians have safe, reliable utility service at just and reasonable rates.”

The proposal voted on today is available at

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M039/K595/39595225.PDF>.

For more information on the CPUC, please visit [www.cpuc.ca.gov](http://www.cpuc.ca.gov).

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