



701 Pennsylvania Avenue, N.W. ■ Washington, D.C. 20004-2696 ■ 1-202-347-5878

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For Information Contact  
Jim Owen, 202 256 8447

## Efficiency, New Generation Capacity Both Needed To Meet Growing Electricity Demand, Studies Find

**NEW YORK** – Even with very substantial improvements in energy efficiency, U.S. utilities must build at least 150 gigawatts of new generating capacity to meet electricity demand by 2030, at a cost of about \$457 billion, according to preliminary findings of a new study being prepared by the Brattle Group on behalf of the Edison Foundation. An additional \$900 billion will need to be invested by 2030 in transmission and distribution facilities to modernize the nation's power grid, setting the stage for perhaps the largest single electricity infrastructure investment cycle in history.

The report's preliminary findings were unveiled during a two-day conference here titled "Keeping the Lights On: Our National Challenge," sponsored by the Edison Foundation, a nonprofit organization dedicated to bringing the benefits of electricity to families, businesses, and industries worldwide. The Foundation was launched in 2006 in an effort to further Thomas Alva Edison's spirit of invention.

The conference was designed to bring together a broad group of stakeholders—including regulators, utility executives, environmental leaders, consumer advocates, labor leaders, Wall Street and others—to discuss new electric industry infrastructure investment requirements and the extent to which they can be offset by energy efficiency efforts to rein in the ever-growing American appetite for electricity, all against the backdrop of looming carbon constraints.

"The power sector is becoming increasingly energy-efficient, and we're working aggressively to maximize the potential energy savings made possible by new technologies," said Edison Foundation President Tom Kuhn. "This will become ever more crucial as we transition to a carbon-constrained environment. But we also are acutely aware of our industry's unbreakable commitment to ensuring a reliable and affordable electricity supply, which means we clearly will have to continue building substantial new generating capacity for years to come."

The U.S. Energy Information Administration projects that electricity demand will increase 30 percent by 2030 – even with substantial efficiency improvements already underway. While the Brattle Group's preliminary findings suggest that additional efficiency gains could allow utilities to meet this demand by building 150 gigawatts of new capacity, a more realistic projection of efficiency improvements indicates that nearly 190 gigawatts of new capacity will be needed by 2030, Brattle said. (A gigawatt equals 1,000 megawatts of generating capacity, roughly equivalent to a typical baseload power plant).

The Brattle study found that impending carbon constraints will significantly drive up the overall cost of electricity while also altering the mix of new generating capacity, with renewable energy sources growing the most. The cost of connecting those renewable sources, along with so-called "distributed resources," to the grid will comprise part of the huge transmission and local distribution price tag.

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The impact of accelerated efficiency initiatives on future electricity demand also was studied jointly by the Electric Power Research Institute and the Edison Electric Institute, who concluded that stepped-up initiatives could reduce electricity consumption by 7 to 11 percent by 2030—perhaps even more—depending on the extent to which key barriers can be addressed.

In their joint report released here today, the organizations said that deeper gains in electric-sector efficiency can be achieved only if critical steps are taken, including increased customer education; adoption and enforcement of aggressive building codes and appliance standards; creation of utility business models that promote increased efficiency within the power sector; and adoption of electricity pricing policies that more accurately reflect the cost of providing electricity to consumers – and give them the information they need to use it wisely.

“What these studies tell us is that we don’t have the luxury of choosing a single option and that we need to throw everything we have at this challenge,” Kuhn said. “We must make the changes necessary to become more energy-efficient, we will have to modernize the power grid and we also will have to build more power plants.”

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The **Edison Foundation** is a nonprofit organization dedicated to bringing the benefits of electricity to families, businesses, and industries worldwide. Furthering Thomas Alva Edison’s spirit of invention, the Foundation works to encourage a greater understanding of the production, delivery, and use of electric power to foster economic progress; to ensure a safe and clean environment; and to improve the quality of life for all people. The Edison Foundation provides knowledge, insight, and leadership to achieve its goals through research, conferences, grants, and other outreach activities. Visit [www.EdisonFoundation.net](http://www.EdisonFoundation.net)