Center for American Progress

Re-energize Regional Economies with New Electric Transmission Lines

New Investments in a 21st Century Power Grid Will Create Jobs and Make Our Economy More Efficient and Competitive

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Introduction

With unemployment at 8.6 percent and our economy still struggling to gain momentum after the Great Recession, it's clear that we need to do everything we can to provide more opportunities for Americans to find work. Immediate job creation is critical, but we also need to focus on creating an environment that's conducive to long-term, sustainable economic growth. Central to this is building the power infrastructure that will enable growth, ultimately making our economy healthier.

A key piece of this economic development infrastructure has to be a robust electricity transmission grid. Unfortunately, many people don't realize the economic benefits of building out a 21st century transmission grid, instead picturing wires and towers that carry electricity from one place to another without much economic activity associated with them. But this view misses why we need a more effective and efficient transmission grid—far from just delivering electricity, a robust transmission grid makes our country's economy stronger.

This issue brief describes four ways that new transmission lines lead to economic growth:

- Delivering new energy sources to our homes and businesses
- Reducing costly power outages
- Lowering power prices
- Putting tens of thousands to work directly, and hundreds of thousands of to work across our economy

Certainly this is not an exhaustive list, but it does demonstrate the job-creation power of investing in new transmissions lines alongside the billions of dollars that consumers and businesses will save as a result. So let's examine in turn each of these ways to build a better and more competitive 21st century economy.

New transmission lines will deliver new energy resources to our homes and businesses

The greatest obstacle to realizing the economic, environmental, and energy security benefits of obtaining at least 20 percent of our electricity from sources of renewable energy is fixing the transmission limitations across the United States. In 2008, the Windpower Conference and Exhibition found that transmission inadequacies are the single largest roadblock preventing the effective delivery of wind energy in the United States. Inadequate transmission lines also prevent solar, geothermal, and hydropower from reaching consumers throughout North America.

More than 13,000 megawatts of solar power plants are waiting to connect to the grid in California alone. Even more disheartening is that 300,000 MW of wind projects, enough to meet 20 percent of all our electricity demands, are waiting to connect to the transmission grid because of transmission inadequacies.

Moving these projects forward would be a tremendous job creator. The Department of Energy found that generating 20 percent of our power with wind would create over 500,000 jobs and $450 billion in economic impact by 2030. But we will not see these benefits without new transmission lines. To cite one example, the Plains and Eastern line being developed now by Clean Line Energy Partners would allow for 7,000 new megawatts of wind energy in Oklahoma, and building the transmission line and those wind farms would immediately create 10,000 jobs.

New transmission lines reduce costly power outages

Each year, power outages cost the U.S. economy at least $79 billion. What's worse, those costs fall almost entirely on businesses that drive local and regional economies. While the cost of a very short power outage for a household is very low (an interruption lasting a few seconds is just a hassle for most families), the impact on a business can be tremendous—especially if they have to interrupt a manufacturing process or restart a whole office of computers. Reducing these outages would be immediately beneficial to businesses.

While not all outages can be fixed with new transmission lines, there's no doubt that a robust transmission grid would be more reliable. The 2003 blackout in the Northeast United States and Canada caused an estimated $7 billion to $10 billion in economic

losses. While the direct causes of the blackout are complicated, the big picture is that inadequate maintenance and a lack of redundancy built into the transmission grid caused local failures to cascade across an entire region of the country.

New transmission lines lower power prices

Indeed, new transmission lines can help reduce the cost of generating power in different parts of the country where costs vary significantly. Power costs are high in the Northeast, but lower in the South and Midwest. New transmission lines can connect customers in high-price areas to power from low-cost areas, which means that customers will pay lower power bills each month.

Lower power bills result in savings over time that can be tremendous. The Brattle Group, an energy consulting firm, found that a transmission line connecting Virginia to New Jersey known as the Atlantic Wind Connection would reduce power prices and save mid-Atlantic customers $1.35 billion over 20 years.

On a more technical note, utilities have to pay "congestion charges" when transmission lines that carry electricity from power plants to customers are overloaded. These costs get passed along to consumers and businesses alike. Building new transmission lines can reduce congestion and ultimately save everyone money. Again, these costs are significant. Utilities in the mid-Atlantic region paid more than $2 billion in congestion costs in just 2008—$2 billion that was mostly passed onto their customers.

New transmission lines can put hundreds of thousands of people to work

If transmission projects begin today in order to reshape our electric transmission grid, we could create new employment opportunities for tens of thousands of workers in the private-sector construction industry. That's why the Obama administration created a program to put some transmission projects on a fast track. Through this effort, seven projects that will employ more than 10,000 people will start construction quickly.

And, an analysis of two projects in Wisconsin and Minnesota shows that, regardless of the scale of the project, construction of power transmission lines yields a return of investment of approximately $1.50 for each dollar spent—clearly both effective investments. Moreover, the smaller project generate 42.5 jobs for every mile and delivered a $6 million-per-mile total economic impact The larger project will generated 11.6 jobs for every mile, and will delivered a $2.1 million-per-mile total economic impact.

Conclusion

In one of our detailed reports on building new transmission lines, "Wired for Progress 2.0: Building a National Clean-Energy Smart Grid," we called for new processes to encourage the timely permitting of transmission lines.

Now, the situation is even more urgent. As we commented a year ago, "Unfortunately, only a handful of high-voltage transmission lines have been built in the last decade. In fact, electricity sales have gone up 20 percent since a landmark Federal Energy Regulatory Commission ruling that restructured electricity markets in 1996, while the total amount of transmission to carry that electricity has gone up by just 8 percent."

Our country is missing a serious opportunity for economic development and job creation. Seizing this opportunity is not easy, though. First, there are people who would rather not see more transmission built. Utilities that profit from forcing their customers to buy high-priced electricity, for example, will oppose action to build more transmission lines that would reduce costs for their consumers. Second, these investments are expensive. The Brattle Group has found that we need to spend at least $298 billion on upgrading the investment grid by 2030.

While these challenges are real, they are not insurmountable. Significantly, the Federal Energy Regulatory Commission has adopted new rules—known as "Order 1000"—for determining who gets to build new lines, how those lines are planned, and which customers ultimately pay for them. With these new rules in place, the United States can start moving forward on these important economic development investments.

It's time to do the right thing for consumers, businesses, and workers. Let's start building more transmission lines.

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