



The Age of Infrastructure

James J. Hoecker

Forty percent of all energy consumed in the United States is electricity. Our economy arguably depends more heavily on power than on oil. For two reasons, this is a potentially transformative moment in American energy policy—although I confess it is difficult to feel liberated in the midst of an economic meltdown.

Forty percent of all energy consumed in the United States is electricity.

First, our use of, and dependence on, electricity will expand dramatically if plans for conversion of the transportation fleet to electric power, the digitalization of electric delivery systems, and exploitation of renewable resources on a grand scale are achieved in our lifetimes. Moreover, the administration's proposed fiscal year 2010 budget signals a long-term commitment to a low carbon energy economy by aiming for an 83 percent reduction in greenhouse gas emissions (from 2005 levels) by 2080 and relying on the auction of emissions allowances

James J. Hoecker (james.hoecker@huschblackwell.com) is a senior counsel at Husch Blackwell Sanders LLP and principal at Hoecker Energy Law & Policy. He is a former chairman of the Federal Energy Regulatory Commission.

under a “cap-and-trade” system for \$646 billion toward reducing the national debt.

The administration's proposed fiscal year 2010 budget signals a long-term commitment to a low carbon energy economy by aiming for an 83 percent reduction in greenhouse gas emissions (from 2005 levels) by 2080.

Second, this time of crisis has, as I intimated in an earlier article, brought government back to center stage in the U.S. economy. The “bailout” of the nation's largest banks testifies to this fact. However, nothing confirms this development like the stimulus package recently signed into law, and I submit nothing will be as profoundly affected by it as energy.

I submit that nothing will be as profoundly affected by [the stimulus package] as energy.

THE \$90 BILLION SOLUTION

Known as the American Recovery and Reinvestment Act of 2009 (ARRA), the stimulus is a breathtaking attempt to reinvigorate the job-creation capabilities of major sectors of the economy, including the energy industry. But beyond that, the stimulus is much more. It seeks unabashedly to change the course of the energy economy, a role ordinarily reserved for the allocators of pri-

vate capital, except perhaps during the Carter-era response to the Arab Oil embargo. Its objectives are longer term than the word “stimulus” might imply. And it sets policymakers on a course toward another round of national energy legislation, including a national renewable portfolio standard and regulation of the price of carbon emissions.

The stimulus is a breathtaking attempt to reinvigorate the job-creation capabilities of major sectors of the economy, including the energy industry.

Both the basic appeal of the ARRA and its proven capacity to attract critics is its focus on the foundational aspects of what one might call the clean energy economy. Some will call it a grab bag of liberal agendas. One thing is clear—it is not a mere jobs bill. ARRA redesigns our priorities. Over \$90 billion of the nearly \$800 billion total is dedicated to the energy sector. The bill appropriates substantial sums for near-term activities like weatherization of homes and businesses (\$5 billion); state programs that promote conservation and energy efficiency (over \$6 billion); modernization, construction, acquisition, and replacement of electric transmission systems (\$11 billion, of which \$6.5 billion is in new or extended borrowing authority assigned to large government-owned Western utilities); worker training activities (\$100 million); and rapid deployment (by 2011) of renewable energy systems and related manufacturing capacity, related transmission facilities, and “leading-edge” biofuel projects (\$6 billion). These projects appear capable of infusing the stagnant economy with cash and opportunities for employment, provided of course that the Department of Energy and its various state and federal partners in these programs can find ways to expeditiously and fairly distribute the funds.

BETTING ON THE COME

However, the ARRA also supports important work whose immediate job-creating potential is less certain, irrespective of the merits of the programs long-term. In this category, one might include \$2 billion for advanced battery research; \$400 million for research into novel energy tech-

nologies that can reduce oil imports, increase efficiency, and curb greenhouse gas emissions; \$6 billion in related loan guarantees, Smart Grid demonstration projects, fossil energy research and development (including competitive solicitations for industrial carbon capture technology); and government assistance to reliability organizations for modeling, programs, laws, and regulations related to electricity operations.

In sum, the energy provisions in the ARRA reflect the government’s bet on an array of undertakings, the fruit from which will in many cases take considerable time and sums of private capital in order to ripen. Nevertheless, the ARRA is a startling acknowledgment, in a range of economic activities, that we are in danger of becoming uncompetitive and that no player in the economy other than the government has the strategic or financial tools to plan a rescue. The ARRA’s commitment to basic infrastructure is welcome evidence that Washington is serious about turning the page on the current fossil-fuel-based energy economy.

The ARRA’s commitment to basic infrastructure is welcome evidence that Washington is serious about turning the page on the current fossil-fuel-based energy economy.

WHAT WOULD LINCOLN REGULATE?

Meantime, President Obama has become the busiest Chief Executive since FDR’s first 100 days. It is not yet clear what makes the new president tick, but it is clear that he sees himself at a historical inflexion point like the predecessor he seeks to emulate. Obama has found in Abraham Lincoln a kind of presidential archetype. Lincoln’s personal brilliance and dogged leadership in a time of national crisis are definitely worthy of imitation.

However, it should also be noted that the history of Lincoln’s time in office is also noteworthy for the investment made in what became the engines of the nation’s emergence as a major economic power. The Morrill Act produced our modern land grant universities. The Homestead Act reinforced our modern democracy as one of independent property owners. Lincoln

helped create stronger national banks and hence strengthened the finances of the federal government. His administration created our first national transportation and communications infrastructure network—the transcontinental rail system. He fully appreciated that if the Union was to prosper as well as survive, we needed to invest in the foundations of greatness. Commemorating Lincoln's 200th birthday, Obama showed he understood the importance of these measures to Lincoln's significance as a leader.

He [Lincoln] fully appreciated that if the Union was to prosper as well as survive, we needed to invest in the foundations of greatness.

IS NEW INFRASTRUCTURE A MATTER OF MONEY OR REFORM?

In Obama's eyes, our sixteenth president therefore speaks to us directly as Congress struggles to invest effectively in infrastructure as a principal way to stimulate the economy. But if Lincoln seems strangely out of place as an icon of U.S. economic development, it is because the modern regulatory state has intervened to change everything since his day. A web of state and federal regulations now constrains the activities of both government and private investors in ways that Lincoln would scarcely recognize. As a former energy regulator, I believe the nation and the environment are infinitely better for it, but a periodic reassessment is critical. How we choose to address energy infrastructure will test our balance and resolve.

If Lincoln seems strangely out of place as an icon of U.S. economic development, it is because the modern regulatory state has intervened to change everything since his day.

For the past three decades, both Congress and the regulators at the Federal Energy Regulatory Commission (FERC) have assiduously tried to free energy markets from unnecessary regulation and to commoditize electricity, natural gas, and

other energy resources. While the new energy markets that resulted have proven durable and productive (although controversial at times), our collective discomfort with dependence on foreign oil and the challenge of climate change loom large over our fossil-fueled energy economy. The question of the hour is whether, driven by the worst financial crisis since the Great Depression and the ineffectiveness of federal oversight of the economy during the past decade, greater federal intrusion into the energy economy is all but inevitable. In fact, advocates from Al Gore to T. Boone Pickens seem to be inviting it.

The question of the hour is whether . . . greater federal intrusion into the energy economy is all but inevitable. In fact, advocates from Al Gore to T. Boone Pickens seem to be inviting it.

The current crisis has given us the opportunity to invest in the technological foundations of restored stability and even greatness. My favorite is the electric grid—often regarded as nothing more than a stolid intrusion of old technology on the landscape, to be opposed at any cost or the least preferred allocation of capital compared to investment in utility assets with creamier returns. Contrary to these unfortunate prejudices, the electric transmission system will be the enabler of the green energy economy.

If expanded and made "smarter," the grid will deliver remotely located clean energy resources to market and increase the efficiency of our electricity-based economy.

If expanded and made "smarter," the grid will deliver remotely located clean energy resources to market and increase the efficiency of our electricity-based economy. An enhanced grid ensures reliable service, promotes economic development, and contributes to our national energy security. Invest in a power plant and you have a power plant; invest in transmission and you have potential access to an infinite variety of power

plants. That being true, why is it so difficult to strengthen this network?

Invest in a power plant and you have a power plant; invest in transmission and you have potential access to an infinite variety of power plants.

The answer is not financial uncertainty but regulatory uncertainty. The interstate high-voltage system is encrusted with the regulatory accretions of the last century. It is not *regulated*, and therefore not planned or operated as the integrated network it has become; it is *beset* by layers of local, state, regional, and national authorities with diverse interests and inconsistent standards and needs. Overlapping and disparate state and regional planning and approval processes typically delay major new facilities for over a decade.

The interstate high-voltage system is encrusted with the regulatory accretions of the last century. It is not *regulated* . . . it is *beset* by layers of local, state, regional, and national authorities with diverse interests and inconsistent standards and needs.

This situation carries within it the possibility of slowing or stopping our green energy revolution, a probable decline in reliability, and, with them, major economic losses.

THE ARRA IS A DROP IN THE BUCKET

Experts predict we must spend \$250–300 billion to upgrade the grid in the next two decades to meet demand and serve changing public policies. This is a financial mountain to climb for which the ARRA has given us a head start and some perspective but not a mission accomplished. Investment in the grid holds some of the greatest hope for economic revival and sustainable job creation. Both private capital investment and public credit support will be important. Nevertheless, modernizing the transmission grid depends on more than financial stimuli. The key ingredient will be more rational regulation of its planning and development.

That is where independent regulatory agencies—those bodies to which past administrations have often been indifferent, if not hostile—come in. The FERC, undersized as it sits at the intersection of energy and the environmental policy, drove the principal electricity and natural gas policy innovations of the past 20 years. Long on vision and short on authority, today it lacks the ability to help strengthen and reinvent the grid for the twenty-first century. The grid remains subject to a hodgepodge of state regulatory requirements and processes that fail to ensure that it is intelligently planned and expanded, with due regard for the environment and the contributions of energy-efficiency and demand-response opportunities. The billions in the stimulus legislation do not alter these troubling obstacles.

The grid remains subject to a hodgepodge of state regulatory requirements and processes that fail to ensure that it is intelligently planned and expanded, with due regard for the environment . . . The billions in the stimulus legislation do not alter these troubling obstacles.

The need for infrastructure investment will survive the fever to spend federal monies quickly to rescue the economy. In fact, a substantial economic rebound will increase that need as electricity demand resurges. The first job of Congress and the Obama administration should therefore be to reassess how electric transmission is regulated, so that regulators and other policymakers can rely on the flexibility of this essential network when pressures on the grid once again escalate. Repositioning federal regulators as the facilitators of the modern interstate energy networks like the high-voltage electricity system—and, by extension, the clean energy economy—is pivotal to that strategy.

THINKING ANEW

President Lincoln would want Americans of our era “to think anew and act anew” in the face of our challenges, as he did in confronting his. For investment in basic infrastructure, the moment to do so is once again at hand. 