



# CLIENT MEMORANDUM

## American Recovery and Reinvestment Act of 2009: Investment in Energy and Infrastructure

*February 16, 2009*

### **INTRODUCTION**

On February 13, 2009, Congress approved and sent to President Obama for his signature the American Recovery and Reinvestment Act of 2009 (“ARRA” or “the Act”), a \$787 billion stimulus package composed of approximately \$506 billion in spending and \$281 billion in tax cuts and tax credits designed to create jobs and jumpstart the economy. Several of ARRA’s major funding provisions focus on investment in clean, efficient energy and infrastructure. The Act provides for billions of dollars of direct spending on energy and infrastructure projects, and tax incentives for investments in clean energy projects. The funds are meant to stimulate the economy and provide jobs through investment in both long- and short-term improvements and programs.

ARRA’s spending provisions are founded on a preference for quick-start activities, directing the President and the agencies to “commenc[e] expenditures and activities as quickly as possible consistent with prudent management.” The Act also seeks to provide transparency, oversight, and accountability over the use of funds.

Funds are provided directly to federal, state, and local agencies and governments to be used at their own discretion, rather than through earmarks for pre-identified projects. In addition, many appropriations provisions also include additional funding for Inspectors General of various agencies for oversight and audit functions.

### **FUNDING FOR DEPARTMENT OF ENERGY PROGRAMS**

The Act appropriates funds for several existing or authorized programs administered by the Department of Energy (“DOE”) to invest in the nation’s energy transmission, distribution, and production systems, focusing on an improved electric grid and renewable energy. Some noteworthy programs include:

- *Electricity delivery and energy reliability* – The Act provides \$4.5 billion to modernize the electric grid, include demand-responsive equipment, enhance security and reliability of energy infrastructure, conduct energy storage research, development, demonstration and

deployment, facilitate recovery from disruptions to energy supply, and fund smart grid programs under Title 13 of the Energy Independence and Security Act of 2007 ("EISA"). One hundred million dollars of these funds are to be used for worker training. The smart grid is characterized loosely as including, among other features, increased use of digital information and controls technology, dynamic optimization, integration of distributed resources, incorporation of demand response, demand-side, and energy-efficiency resources, deployment of smart technologies and smart appliances, and deployment of advanced electricity storage. Smart grid programs include funding of up to 50% of the cost of demonstration projects and the Smart Grid Investment Matching Grant Program, which reimburses 20% of the cost of qualifying smart grid investments. The programs are administered by the DOE's Office of Electricity Delivery and Energy Reliability. The Office will also, in coordination with the Federal Energy Regulatory Commission, provide technical assistance to the national and regional electric reliability entities, states, and transmission owners and operators for the formation of interconnection-based transmission plans.

- *Fossil Energy Research and Development* – The Act provides \$3.4 billion for fossil energy research and development in an open-ended grant. The DOE may use these funds for several existing or authorized programs including competitively awarded grants pursuant to section 703 of EISA for projects that demonstrate carbon capture from industrial sources (the DOE, however, has not yet established this program), or for future selections under the DOE's Clean Coal Power Initiative program. In the past, the DOE has invited

applications for funding of up to 50% of advanced coal-based projects that will integrate with the large-scale geologic carbon sequestration field tests already under development by the DOE and its partners.<sup>1</sup>

- *Innovative energy technology loan guarantees* – The Act provides \$6 billion for loan guarantees (expected to support more than \$60 billion in loans, according to the Joint Explanatory Statement of the Committee of Conference) for construction of renewable energy systems (including generation and facilities that manufacture related components), electric power transmission systems, and biofuel projects, for projects that commence construction no later than September 30, 2011. The DOE periodically publishes requests for applications for loan guarantees, which can target specific technologies or be general.<sup>2</sup>
- *Advanced battery loans and grants* – The Act provides \$2 billion of facility funding grants to U.S. manufacturers of advanced vehicle batteries and battery systems, including advanced lithium ion batteries, and hybrid electrical systems, component manufacturers, and software designers.
- *Energy efficiency and renewable energy research and development*<sup>3</sup> – The Act provides \$2.5 billion to the DOE for energy efficiency and renewable energy research and development, with not less than \$800 million for biomass and \$400 million for geothermal technologies. Because the Act provides a broad,

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<sup>1</sup> U.S. DOE, National Energy Technology Laboratory, Clean Coal Power Initiative – Round 3 (Aug. 11, 2008).

<sup>2</sup> U.S. DOE, Loan Guarantee Program, <http://www.lgprogram.energy.gov/index.html>.

<sup>3</sup> This provision and the following two provisions were included in the Joint Explanatory Statement of the Committee of Conference but were not in the bill text released by the Committee on February 12, 2009.

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open-ended appropriation, the DOE may use these funds to provide, for example, research grants to private businesses or institutions.<sup>4</sup>

- *Electric vehicle technology grants* – The Act provides \$400 million for a grant program to encourage electric vehicle technologies authorized under section 131 of EISA. The DOE has not yet established the program, but grants will be awarded competitively to public and private entities (including public-private partnerships).
- *Alternative fuel vehicles grants* – The Act provides \$300 million in grants for state and local governments and transit authorities to acquire alternative fueled vehicles.
- *State and local government energy efficiency programs* – The Act provides \$3.2 billion of Energy Efficiency and Conservation Block Grants to state and local governments for energy efficiency and carbon emission reduction programs, with \$2.8 billion to be awarded by the DOE by formula and \$400 million to be awarded on a competitive basis.

## FUNDING FOR OTHER PROGRAMS

Other notable appropriations include:

- *Surface transportation infrastructure* – The Act provides \$27.5 billion to states for restoration, repair, and construction of highways, passenger and freight rail systems, and port infrastructure, available through September 30, 2010. The Act also provides \$1.5 billion for the Department of Transportation to award to state and local governments and transit authorities on a competitive basis for surface transportation projects, \$8 billion for discretionary grants for intercity high speed rail projects, \$1.5 billion for fixed guideway infrastructure, and \$100 million for small shipyards.

Finally, the Act appropriates \$1.3 billion for Amtrak for capital investment.

- *Air transportation infrastructure* – The Act provides \$200 million to the Federal Aviation Administration for air traffic systems and \$1.1 billion to the Department of Transportation for discretionary grants for runway incursion prevention devices.
- *Rural business loan guarantees and grants* – The Act provides \$150 million for guaranteed loans and grants, administered under existing programs by the Department of Agriculture. The loans are to be used for development of rural businesses, including purchases of land, facilities, equipment, supplies, and inventory, and business acquisitions that will expand job opportunities or prevent loss of jobs.<sup>5</sup> The grants will finance and facilitate development of emerging rural businesses and create, expand, or operate rural educational or job training programs.<sup>6</sup>
- *Rural water and waste disposal* – The Act provides \$1.38 billion for direct loans and grants for rural water, waste water, and waste disposal programs administered by the Department of Agriculture, available to public entities and not-for-profit corporations.<sup>7</sup>

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<sup>4</sup> See, e.g., U.S. DOE Energy Efficiency and Renewable Energy, EERE Financial Opportunities, <http://www1.eere.energy.gov/financing/business.html>.

<sup>5</sup> USDA, Business and Industry Guaranteed Loans (B&I), [http://www.rurdev.usda.gov/rbs/busp/b&i\\_gar.htm](http://www.rurdev.usda.gov/rbs/busp/b&i_gar.htm).

<sup>6</sup> USDA, Rural Business Enterprise Grants (RBEG) Program, <http://www.rurdev.usda.gov/rbs/busp/rbeg.htm>.

<sup>7</sup> USDA, RUS, Water and Environmental Programs Missions Page, <http://www.usda.gov/rus/water/programs.htm>.

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- *Construction of research facilities* – The Act provides \$360 million to the National Institute of Standards and Technology for construction of research facilities, including \$180 million for a competitive construction grant program for research science buildings.
- *Federal buildings fund* – The Act provides \$5.55 billion for the General Services Administration (“GSA”) Federal Buildings Fund, including not less than \$4.5 billion to convert GSA facilities into high-performance green buildings.
- *GSA alternative fuel vehicles* – The Act provides \$300 million to replace vehicles owned by the GSA with alternative fuel vehicles.
- *Transit capital assistance grants* – The Act provides \$6.9 billion for public transportation, to be awarded by the Federal Transit Administration to state and local governments and transit authorities by various formulas, including \$100 million for discretionary grants to public transit agencies for capital improvements that will reduce energy consumption or greenhouse gas emissions.
- *Water treatment infrastructure* – The Act provides \$4 billion for the Clean Water State Revolving Funds and \$2 billion for the Drinking Water State Revolving Funds, both administered by the U.S. Environmental Protection Agency (“EPA”). Generally, not less than 20% of each of the Revolving Funds are to be used for projects that address green infrastructure, water and/or energy efficiency, innovative water quality improvements, decentralized wastewater treatment, stormwater runoff mitigation and water conservation. To expedite use of the funds, the bill waives the mandatory 20% State and District of Columbia matching requirements for both Revolving Funds. The Act also specifies that each state must use at least 50% of the funds it receives to subsidize recipients through forgiveness of principal, negative interest loans, grants, or a combination of these.
- *Brownfields projects* – The Act provides \$100 million for Brownfields projects under an existing program administered by the EPA that aims to restore unused or underused contaminated properties to more productive uses. The Act also waives existing cost share requirements under that program.
- *Diesel Emissions Reduction Act (“DERA”) grants* – The Act provides \$300 million for these grants, designed to reduce diesel emissions by, for example, funding the retrofitting of existing, long-lived diesel engines with more recently developed emissions reduction technologies. The Act also waives State Grant and Loan Program matching incentive provisions under the DERA.
- *Contamination cleanup* – The Act includes a number of provisions that provide funding for environmental-related cleanups. These include \$483 million for the DOE’s Non-Defense Environmental Cleanup Program and \$390 million for the Uranium Enrichment Decontamination and Decommissioning Fund; \$5.127 billion for the Department of Defense’s Environmental Cleanup Program; and \$100 million for the Department of Housing and Urban Development to fund competitive grants to local governments and not-for-profit organizations to eliminate lead-based paint hazards in low-income housing. In addition, the Act includes: \$600 million for the EPA’s Superfund Remedial Program under the Hazardous Substance Superfund; and \$200 million for the Leaking Underground Storage Tank Trust Fund, with a waiver of state matching requirements under the Solid Waste Disposal Act.

## TAX INCENTIVES FOR INVESTMENTS IN CLEAN ENERGY AND INFRASTRUCTURE

In addition, ARRA provides approximately \$281 billion in tax cuts for individuals and businesses, as well as modifications to municipal bond taxation and the alternative minimum tax in order to encourage investment in projects sponsored by state and local governments. Several tax provisions are aimed at encouraging investment in renewable energy,<sup>8</sup> including:

- *Extension of the renewable energy production tax credit (assumed cost of \$13.143 billion over ten years<sup>9</sup>)* – An income tax credit is allowed for the production of electricity from qualified energy resources at qualified facilities placed in service by a specified date.<sup>10</sup> The Act extends the placed-in-service date for three years. Accordingly, wind facilities placed in service before January 1, 2013 and biomass, geothermal, small irrigation, hydropower, landfill gas, waste-to-energy, and marine renewable facilities placed in service before January 1, 2014 are eligible for the renewable energy production tax credit.
- *Temporary election to claim the investment tax credit in lieu of the production tax credit (assumed cost of \$285 million over ten years)* – The Act allows a taxpayer to elect to treat “qualified property”<sup>11</sup> that is part of a “qualified investment credit facility” as energy property eligible for a 30% investment tax credit in lieu of the production tax credit. A “qualified investment credit facility” is a wind facility placed in service in 2009, 2010, 2011, or 2012, or other qualified electricity production facility (e.g., biomass, geothermal, small irrigation, hydropower, landfill gas, waste-to-energy, and marine renewable facilities) placed in service in 2009, 2010, 2011, 2012, or 2013.
- *Repeal of certain limitations on the credit for renewable energy property; and repeal of subsidized energy*

*financing limitation on the investment tax credit (assumed cost of \$872 million over ten years)* – The Act removes the dollar limitation on tax credits for small wind facilities and eliminates the basis reduction rule for property financed by subsidized energy financing or industrial development bonds.

- *Clean Renewable Energy Bonds (assumed cost of \$578 million over ten years)*. – The Act authorizes an additional \$1.6 billion of new clean renewable energy bonds to finance wind, biomass, geothermal or solar, small irrigation power, hydropower, landfill gas, marine renewable, and trash combustion facilities owned by a public power provider, a governmental body, or a cooperative electric company. The Act provides that the increase will be allocated consistent with current law: 1/3 for qualifying projects of state and local government, 1/3 for qualifying projects of public power providers, and 1/3 for qualifying projects of electric cooperatives.

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<sup>8</sup> In addition to the tax cuts aimed at encouraging investment in renewable energy, there are several general business tax cuts aimed at encouraging business recovery, including changes to the discharge of indebtedness rules and related changes to the rules for original issue discount and high yield debt obligations.

<sup>9</sup> Cost estimates are projections provided by the Senate Finance and House Ways and Means Committees

<sup>10</sup> Qualified energy resources include wind, closed-loop biomass, geothermal energy, solar energy, small irrigation power, municipal solid waste, qualified hydropower production, and marine and hydrokinetic renewable energy, and qualified facilities are generally facilities that generate electricity using such qualified energy resources.

<sup>11</sup> For purposes of this provision, “qualified property” is property (i) which is (1) tangible personal property or (2) other tangible property (not including a building or its structural components), but only if such property is used as an integral part of the qualified investment credit facility and (ii) with respect to which depreciation (or amortization in lieu of depreciation) is allowable.

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- *Tax credits for alternative fuel pumps (assumed cost of \$54 million over ten year)* – For alternative refueling property placed in service in 2009 or 2010, the Act increases the maximum credit available for business property to \$200,000 for qualified hydrogen refueling property and to \$50,000 for other qualified refueling property. In addition, the Act also increases the credit rate from 30% to 50% for such refueling property (except in the case of hydrogen refueling property).
- *Tax credits for the manufacture of advanced energy property (assumed cost of \$1.647 billion over ten years)* – The Act provides for a 30% investment tax credit for facilities engaged in “qualifying advanced energy manufacturing projects”<sup>12</sup> that are certified by the Secretary of Treasury, in consultation with the Secretary of Energy, through a competitive bidding process. The Act provides that the Secretary of Treasury must establish a certification program within 180 days of the date of the Act’s enactment and may allocate up to \$2.3 billion in credits.

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<sup>12</sup> For purposes of this provision, a “qualifying advanced energy project” is a project which re-equips, expands, or establishes a manufacturing facility for the production of various energy property (e.g., (1) property designed to be used to produce energy from the sun, wind, or geothermal deposits, or other renewable resources; (2) fuel cells, microturbines, or an energy storage system for use with electric or hybrid-electric motor vehicles; (3) electric grids to support the transmission of intermittent sources of renewable energy, including storage of such energy; (4) property designed to capture and sequester carbon dioxide; (5) property designed to refine or blend renewable fuels (but not fossil fuels) or to produce energy conservation technologies (including energy-conserving lighting technologies and smart grid technologies); (6) new qualified plug-in electric drive motor vehicle or any component which is designed specifically for use with such vehicles; or (7) other advanced energy property designed to reduce greenhouse gas emissions as may be determined by the Secretary).

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