



**Comments of Google Inc.**  
**Submitted in response to the Notice of Intent to Issue a Funding Opportunity**  
**Announcement for the Smart Grid Investment Grant Program**

May 6, 2009

Google submits these comments in response to the Department of Energy's (DOE) Notice of Intent (NOI) to Issue a Funding Opportunity Announcement for the Smart Grid Investment Program.

Google's mission is to organize the world's information and make it universally accessible and useful. Our philanthropic arm, Google.org, uses information and technology to contribute solutions to major global challenges such as climate change and energy security. We believe that by building a "smarter" electricity grid, the synergies of technology and information can give consumers and businesses better tools to save energy, save money, and reduce their carbon footprint. Google is tackling this challenge on several fronts, including developing energy information software tools, investing in energy technology companies, and advocating for policies that advance a smart grid.

Congress has recognized the importance of building a smarter grid that empowers consumers. Section 1301 of the Energy Independence and Security Act of 2007 (EISA) states that a smart grid should include deployment of smart technologies, integrate 'smart appliances' and consumer devices, and provide consumers with timely information and control options.

The \$4.5 billion in smart grid funding in the American Recovery and Reinvestment Act (ARRA) represents an unprecedented opportunity to accelerate these goals. President Obama called ARRA a "sweeping economic package" that will "transform the way we use energy" and lay the "groundwork for new green energy economies that can create countless well-paying jobs." The Administration has stated that "jump-starting the transformation to a bigger, better, smarter grid" including the installation of "40 million smart meters in American homes" will be a "detailed benchmark" of ARRA. This type of investment, coupled with investment in home energy measurement, control and information technologies, can lay the groundwork for empowering electricity users to take control of their energy use and make better energy choices.

We believe the proposed smart grid solicitations should be modified to support the powerful message sent by the Obama Administration and detailed in ARRA. Proposals should:

1. Focus on engaging and empowering the ultimate end-users of electricity -- consumers
2. Advance the Administration's stated goal of broad smart meter deployment
3. Be eligible for increased grant size that will promote the speed and breadth of deployment
4. Support ARRA goals of openness and interoperability
5. Align with other stimulus funding when possible

Accordingly, Google respectfully submits the following recommendations on how the program may be improved:

## **1. Include direct benefits to electricity consumers as a key criterion of the merit review process**

Empowering electricity consumers with new information, tools and choices to manage energy should be a main driver of the Smart Grid Investment Grants. The NOI merit review criteria do not reflect the important role that consumers in all customer classes will play in building a smarter grid. As DOE reviews submissions, it should ensure that grants fund deployment of technologies that benefit consumers directly and/or encourage consumers to purchase smart grid technology applications themselves. We offer the following recommendations:

- State explicitly that customers are eligible to apply for grants (as stated in Section 1306 of the EISA), and allow projects designed to encourage retail purchases of smart grid technologies by consumers.
- Ask all applicants to supply a customer component that describes the information and/or efficiency opportunities available to electricity consumers and give priority to projects that offer electricity consumers direct benefits.
- Ensure that most, if not all, of the approved proposals contain consumer benefits supported by measured and verifiable reporting.

## **2. Identify the ability of a project to contribute to the Administration's goal of installing 40 million smart meters with ARRA funds as a metric for proposal evaluation**

Immediately following passage of ARRA, the Administration specifically focused on the importance of installing smart meters, highlighting the expectation that stimulus dollars would fund the installation of 40 million smart meters in American homes. DOE's smart grid grant proposals articulate no pathway for attaining the Administration's 40 million smart meter target either as a goal itself or as a part of an integrated approach to commercial development of a smart grid. We recommend the following:

- The final FOA should expressly reference the 40 million meter target, and direct applicants to describe and include their plans for contributing to that goal.
- All smart meters funded with federal stimulus money should be capable of communicating information directly into the home, and all grants for advanced meter deployments should include a plan to provide consumers with direct access to energy usage information.

It is entirely appropriate to emphasize meter installations as part of the stimulus response. Meter installations are major capital investments that have been slowed during the economic crisis. Advanced meters are a fundamental element of a smart grid, being deployed by the millions in places like California, Texas, Georgia, Michigan, and elsewhere. Without the consumer engagement that smart meter installations enable, the complete benefits of the smart grid cannot be achieved. Grants can be used to buy down the cost of meters, accelerate stalled installations already planned, or upgrade meter choices to those with more innovative components.

## **3. Remove perceived limitations on grant size and allow applicants to propose projects that meet desirable criteria and policy objectives**

The NOI discusses estimated award sizes that are unreasonably low given the amount of funding provided by Congress and the mission of catalyzing the commercial build-out of a smart grid. DOE

should eliminate references to grant sizes in the final FOA. Eliminating grant ceilings and focusing instead on the criteria and functionalities desired by the Administration and Congress will allow industry to submit proposals that reflect the maturity of smart grid technologies and encourage large-scale commercialization of smart grid applications. To ensure that smaller, more innovative funding proposals (such as retail applications) are accommodated, DOE should consider creating size categories for grants.

#### **4. Projects should support ARRA goals for open protocols and standards**

The ARRA states that under the Section 1306 matching grants, the Secretary shall “require as a condition of receiving funding under this subsection that demonstration projects utilize open protocols and standards (including Internet-based protocols and standards) if available and appropriate.” Open standards and protocols are essential to fostering competition and innovation, and will help drive new products and services to help consumers save energy and make smarter energy choices. The NOI suggests using a checklist from the Gridwise Alliance to evaluate grant applications. We agree with comments submitted by Gridwise that its checklist is still evolving and that grants should be evaluated according to the goals set forth in the ARRA.

#### **5. Consider projects that align with other stimulus funding available to states and localities, and even to Federal agencies**

There is significant stimulus funding available for a wide range of programs, from renovating Federal buildings to weatherization to projects involving Governors and state energy offices. The final FOA should allow leveraging of other funds for projects that can demonstrate a significant benefit under all the elements they can bring together to create innovation, jobs, energy and greenhouse gas savings. For example, smart grid investment funds could be leveraged with weatherization programs to provide homes with real-time electricity monitoring capability. Doing so will encourage large-scale projects and help accelerate the widespread commercialization of energy-saving technologies.