The National Clean Energy Smart Grid:
An Economic, Environmental, and National Security Imperative

Expanding and upgrading our electric power transmission and distribution system are vital to renewing America's economic growth, strengthening national security, and addressing the threat of global climate change. Two critical investments are needed: (1) Efficient, secure and reliable interstate transmission networks – incorporating renewable collection lines and extra-high voltage (EHV) backbone facilities – which will enable massive domestic renewable energy resources currently stranded in our country's remote areas to be developed and delivered to population centers; and (2) "Smart Grid" technologies to make the transmission and distribution grid more reliable, resilient, and secure, and to accommodate renewable power and enable more energy efficiency by consumers and businesses.

At a time of serious economic distress and mounting pressure to address the widespread environmental, economic, and geopolitical consequences of our excessive reliance on fossil fuels, the case for a National Clean Energy Smart Grid has never been stronger. We recommend that Congress and the President move rapidly to adopt the following policies:

- Interconnection-wide planning for transmission networks to move renewable power from remote areas to population centers while ensuring the efficiency and reliability of the transmission grid, using a participatory and analytically robust process designed to engage all interested parties early and avoid later conflicts, minimize environmental impacts, and overcome the geographic and procedural limitations of current planning approaches.
- A simple mechanism to pay for transmission investments and smart grid transmission upgrades identified in the interconnection-wide plans, which would minimize individual economic impacts by allocating costs broadly among ratepayers.
- Consolidated certification and siting authority to expedite transmission projects identified in the interconnection-wide plans to serve urgently-needed renewable energy resources while ensuring the efficiency and reliability of the transmission grid.
- New policies to make electric grid security a priority, and to coordinate and pay for investments that will rapidly reduce the grid's vulnerability to cyber and physical attacks and natural disasters.
- Provide strong financial incentives for rapid deployment of smart grid distribution and metering technologies.
- Invest in education and training to create the workforce we will need to build, manage and maintain the National Clean Energy Smart Grid.

Recognizing the complex nature of the electric grid, its importance to the future of our economy, and its impact on our environment, these new policies and authorities should be developed and implemented in accordance with several key principles:

- Interconnection-wide grid planning should not duplicate or supplant already ongoing planning efforts at the utility and regional level, but rather should build on them.
- The interconnection-wide planning process should take into account: opportunities for improved end-use energy efficiency, customer demand response, clean distributed generation, and energy storage; opportunities to improve the efficiency of the grid; and opportunities to diversify and transform the Nation's power supply resources.
- New transmission plans should dramatically enhance our capacity to meet steep greenhouse gas emission reduction goals by targeting new clean renewable energy resources and limiting interconnection for new high-emitting generation (while still ensuring reliability).
- Use of federal project certification and siting procedures to expedite construction of new grid facilities identified in interconnection-wide transmission plans is critical to reliable and efficient delivery of remote renewable energy to load centers, with a special role for state and local agencies on siting considerations to minimize adverse impacts.