



Remarks to Connectivity Week

Aneesh Chopra

U.S. Chief Technology Officer & Associate Director for Technology
White House Office of Science & Technology Policy

2011 State of the Union

“We need to out-innovate, out-educate, and out-build the rest of the world”



“So tonight, I challenge you to join me in setting a new goal: by 2035, 80% of America's electricity will come from clean energy sources.”

—President Barack Obama, 01/25/11



President's Strategy for American Innovation

Tech Role in Securing Our Economic Growth and Prosperity

Startup America; patent reform; online privacy

Catalyze Breakthroughs for National Priorities

- Unleash a clean energy revolution
- Accelerate biotechnology, nanotechnology, and advanced manufacturing
- Develop breakthroughs in space applications
- Drive breakthroughs in health care technology
- Create a quantum leap in educational technologies

Health IT innovation; smart grid technologies

Promote Market-Based Innovation

- Accelerate business innovation with the R&E tax credit
- Promote investments in ingenuity through effective intellectual property policy
- Encourage high-growth and innovation-based entrepreneurship
- Promote innovative, open, and competitive markets

Wireless Innovation & Infrastructure Initiative; learning tech

Invest in the Building Blocks of American Innovation

- Educate Americans with 21st century skills and create a world-class workforce
- Strengthen and broaden American leadership in fundamental research
- Build a leading physical infrastructure
- Develop an advanced information technology ecosystem



Startup America: Entrepreneurs are Welcome

“DC2VC” Emphasizes how to Unleash New Market Opportunities

Startup America Partnership



Example: Blackstone Entrepreneurs Network launched in RTP with \$3.6m to hire “master entrepreneurs” to serve as mentors to 30 entrepreneurs a year (for 5 years), leverage universities, with a goal to deliver 17,000+ jobs

Unleash Market Opportunities



“DC2VC” Summits - Administration commitment to “unleash market opportunities” by framing current or proposed policies to inspire entrepreneurs, and gain valuable policy feedback for iteration – emphasis on healthcare, education, energy

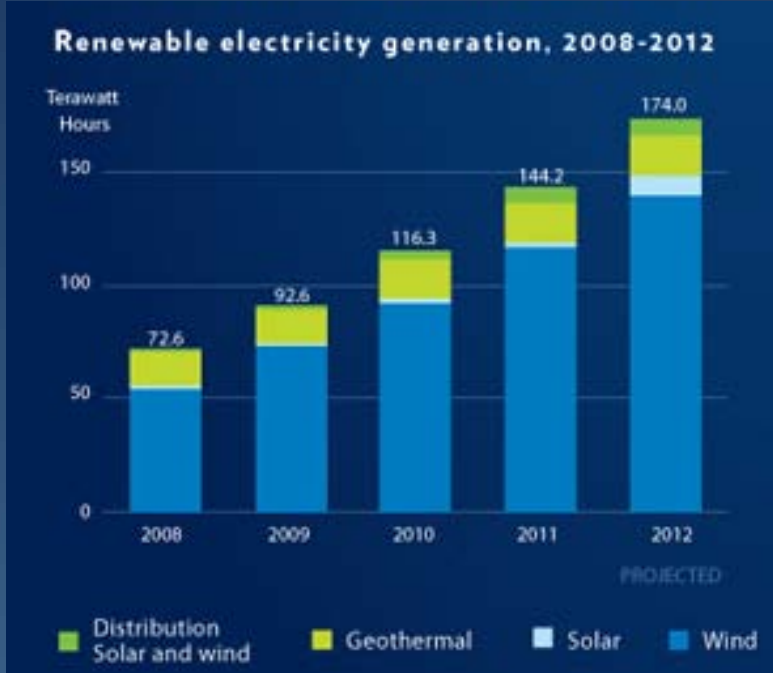


Blueprint for a Secure Energy Future

A 21st Century Grid Enables a Market for New Technologies

Growing Renewable Energy

Smart Grid Policy Committee



Recovery Act \$4.5bn investment spurs 140 projects; White House-led policy process initiated July, 2010 with 100+ stakeholder meetings; Summit planned June 2011

“Creating a market for new technologies will be central to charting a path to a clean energy future...For that reason, the Administration is also advancing policies that will help to modernize the electric power grid...” –President Barack Obama, 03/30/11



Enable Cost-Effective Investments

Early Insights from ARRA to Help Scale What Works

The image shows a screenshot of the SMARTGRID.GOV website. At the top, there are navigation tabs: "What is the Smart Grid?", "Recovery Act Smart Grid Programs", "Federal Smart Grid Initiatives", and "Smart Grid Information Clearinghouse". Below these is the SMARTGRID.GOV logo and a search bar. A red callout box on the left contains a collage of smart grid related images and text: "Example: NETL Wind Integration tests three 'apps' – data portal to match generation to load; synchrophasors for reliability; TX community 'test bed'". A green callout box on the right contains the text: "Importance of inventorying 'active ingredients' of success". The website content below the navigation includes sections for "What is the Smart Grid?", "Recovery Act Smart Grid Programs", "Federal Smart Grid Initiatives", and "Smart Grid Information Clearinghouse".

What is the Smart Grid? | Recovery Act Smart Grid Programs | Federal Smart Grid Initiatives | Smart Grid Information Clearinghouse

SMARTGRID.GOV

Home | About | Glossary | News | Contact

SmartGrid.gov is the gateway to information on federal initiatives that support the development of technologies, policies and projects transforming the electric power industry.

Example: NETL Wind Integration tests three "apps" – data portal to match generation to load; synchrophasors for reliability; TX community "test bed"

What is the Smart Grid?
Information for Consumers

Recovery Act Smart Grid Programs
Program Progress and Results

Federal Smart Grid Initiatives
Policies and P

Smart Grid Information Clearinghouse

Importance of inventorying "active ingredients" of success



Unlock the Potential of Innovation

ARPA-E Investments, NIST Standards Activities Spur Creativity

Advanced Electronics

Grid Modernization



| | Frequency | Mass | Volume |
|-----------------|---------------|-----------------|--------------------------|
| Today | 60 Hz | 8,160 lb | 4.80m³ |
| Tomorrow | 50 kHz | 100 lb | 0.14m³ |

Early-stage firm, GeneSiC, leads the way in designing a miniaturized grid transformer

NIST Standards Collaboration

Governance: 600+ private sector participants endorse, develop consensus standards; example: PAP10 "Energy Use"



Secure the Grid

Obama Cybersecurity Proposal Emphasizes Critical Infrastructure

The White House Blog

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The Administration Unveils its Cybersecurity Legislative Proposal

Posted by Howard A. Schmidt on May 12, 2011 at 02:00 PM EDT

Today I am happy to announce that the Administration has transmitted its Cybersecurity Legislative Proposal to Capitol Hill in response to Congress' call for assistance on how best to protect our Nation. This is a milestone in our national effort to ensure secure and resilient infrastructure for our businesses, and government; fundamentally, this proposal strikes a balance between ensuring a robust framework to protect our country with the capacity to innovate and grow.

Smart Grid approach emphasizes transparency to help market forces ensure that critical-infrastructure operators are accountable for their cybersecurity

Enables voluntary technical assistance and information sharing with DHS to address threats, with robust privacy oversight

As President Obama said in his Cyberspace Policy Review (pdf) almost two years ago, he declared cyberspace as vital to the United States and its security just as vital. This legislative proposal is the latest step in the progress we are making in securing cyberspace and completes another key recommendation from the Cyberspace Policy Review.

The Administration proposal helps safeguard your personal data and information that has been compromised. In addition to educating you on how to protect your information through the Think. Connect. campaign, we believe organizations should inform you if your information may have been compromised. This notice not only helps you to protect your information but also incentivizes organizations to have better data security in the fragmented patchwork of 47 state notification laws. Our proposal simplifies and streamlines

Additional Note on Privacy: Administration calls for "online privacy bill of rights" emphasizing enforceable codes of conduct



Empower Consumers and Enable Better Decisions

Data.gov Model for “Computer-Friendly” Access, Importance of Privacy

Data.gov

Empowerment Case Studies

The screenshot shows the Data.gov homepage with a navigation bar (HOME, DATA, APPS, COMMUNITY, METRICS, OPEN DATA SITES, GALLERY, WHAT'S NEW). The main content area features a section for 'ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT DATA' with a sub-section for 'Earthquake and Tsunami Datasets and Information'. A search bar is visible at the bottom of the main content area.

“To the extent practicable ...publish information in an open format (machine readable) without restrictions that would impede..re-use...”*

The screenshot shows a 'Report Option' interface for 'Daily Usage (each 15 min intervals)'. It includes a line graph titled 'Use of Electricity Each 15 Minutes' and a table of usage data. A smartphone in the foreground displays a 'Dashboard' with a similar graph and energy pricing information.

| Start Time | End Time | Usage (kWh) |
|------------|----------|-------------|
| 12:00 am | 12:15 am | 88.23KWH |
| 12:15 am | 12:30 am | 20.3KWH |
| 12:30 am | 12:45 am | 77.92KWH |
| 12:45 am | 01:00 am | 43.37KWH |
| 01:00 am | 01:15 am | 97.7KWH |
| 01:15 am | 01:30 am | 42.9KWH |
| 01:30 am | 01:45 am | 16.9KWH |
| 01:45 am | 02:00 am | |
| 02:00 am | 02:15 am | |

ARRA grants to Reliant, CenterPoint, NSTAR, others enhance open access to usage data

A Challenge to Industry: How can we safely and securely provide customers electronic access to their energy information, thereby supporting the continuing development of innovative new products and services in the energy sector?



Source: <http://www.whitehouse.gov/open/documents/open-government-directive>; Tendril: www.smartmetertexas.com

Engaging Students (Families) in a Challenge

One of Three Models to Harness Your Creativity to Solve Big Problems

I

“Triple Bottom Line”

#Unleash Market

Opportunities: Data.gov includes 120+ energy-related data sets with more community features in progress

II

“Cognitive Surplus”*

#Engage Entrepreneurs as

Problem Solvers: Growing array of energy efficiency/grid related challenges posted on challenge.gov

III

“Government Startup”

#Recruit Top Talent: ARPA-e

hiring world-class researchers to launch programs like GENI – designing the energy equivalent of an Internet router

Students to use energy data in a competition to reduce energy use and save their family money

Unleash creativity of 3-8th graders, equip them to make smart energy choices



America's Home Energy Education Challenge

NSTA National Science Teachers Association

U.S. DEPARTMENT OF ENERGY

