The U.S. Climate Action Plan & Opportunities for Energy Performance

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Key Points Up Front

• Climate change is real and will have significant impacts
• The emissions that drive the change – and therefore the solutions to the problem – are largely in the energy arena
• The Federal government is the single largest energy consumer – a clear role to lead by example
• Properly designed, our emission reduction strategies can create multiple economic and social benefits – from cleaner air to good jobs to energy security
Climate Trends and Energy Sector Impacts

Climate Trends

- Average temperatures have increased across the U.S. over the past 100 years
- Heat waves have become more frequent and intense
- Hurricanes and tropical storms have become more intense
- Snowpack levels have decreased, resulting in lower summer streamflows

Key Energy Sector Impacts

- Increasing temperatures will likely increase electricity demand
- Increasing intensity of storm events, sea level rise, and storm surge put coastal and offshore facilities at increased risk of damage or disruption
- Increasing intensity of storm events increases risk of damage to electric transmission and distribution lines
- Changes in precipitation/decreasing snowpack could decrease available hydropower generation capacity
U.S. Emissions Targets

- Robust action brings us in range of 26-28% below 2005 levels by 2025
- Doubling of energy productivity by 2030
For the U.S., Climate Change is an Energy and Carbon Problem

U.S. Emissions by Greenhouse Gas and Sector
~85% of emissions tied to energy

Emissions by Gas
- Carbon Dioxide: 82%
- Nitrous Oxide: 6%
- Methane: 9%
- Fluorinated Gases: 3%

Emissions by Sector
- Electricity: 32%
- Industry: 20%
- Transportation: 28%
- Agriculture: 10%
- Commercial & Residential: 10%

The U.S. Climate Action Plan

- Appliance & Equipment standards
- Building codes
- Green Mortgages
- Other measures
- HFCs including SNAP
- Oil & Gas Methane
- Efficiency programs
- Other measures

- Interagency Methane Strategy
- Agricultural policies on N₂O

- Clean Power Plan
- Building codes
- Appliance & equipment standards
- Other measures

- Fuel economy standards
- Biofuels
- Reduced VMT
- Aviation & Shipping
- Other measures

Sector Breakdown of 2012 Emissions (EPA)
Federal Energy Use Trends

Federal government energy consumption by type, 1975-2013 fiscal years

FY 2013 Federal Energy Use by Agency

Source: FEMP, 2014
Major Investments in Clean Energy Research, Development and Demonstration

Through the Recovery Act, the Department of Energy invested more than $80 billion to support a wide range of clean energy projects across the nation.
Advancing Technology

Source: US DOE, 2013 “Revolution Now”
“...[T]he question is not whether we need to act. The overwhelming judgment of science -- of chemistry and physics and millions of measurements -- has put all that to rest.... [T]he question now is whether we will have the courage to act before it’s too late. And how we answer will have a profound impact on the world that we leave behind not just to you, but to your children and to your grandchildren.”

- President Obama, Georgetown University, June 2013