

# EERE FY 2015 Budget Request

U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy



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Efficiency and Renewable Energy

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# Major Administration Energy Goals

- **Reduce GHG emissions** in the range of 17% by 2020\*
- **80% electricity from diverse clean energy** by 2035
- **Reduce net oil imports by 50%** by 2020
- **Double energy productivity** by 2030\*

\*Climate Action Plan Goal

## **EERE Vision**

A strong and prosperous America powered by clean, affordable, and secure energy

## **EERE Mission**

To create and sustain American leadership in the transition to a global clean energy economy

# EERE's Guiding Principles

## The 5 EERE Core Questions

1. **IMPACT:** Is this a high impact problem?
2. **ADDITIONALITY:** Will the EERE funding make a large difference relative to existing funding from other sources, including the private sector?
3. **OPENNESS:** Are we focusing on the broad problem we are trying to solve and open to new ideas, approaches, and performers?
4. **ENDURING ECONOMIC IMPACT:** How will EERE funding result in enduring economic impact for the United States?
5. **PROPER ROLE OF GOVERNMENT:** Why is this investment a necessary, proper, and unique role of government rather than something best left to the private sector to address?

## Applying Impact Assessments to All of Our Activities

# Select Recent EERE Accomplishments

## Sustainable TRANSPORTATION

- First commercial cellulosic ethanol plant in U.S.
- SuperTruck – exceeded goal to develop and demonstrate Class 8 trucks that have a 50% improvement in freight efficiency compared to current models
- Battery cost reduction: \$325/kWh, based on useable energy, complete packaged battery, and high volume production

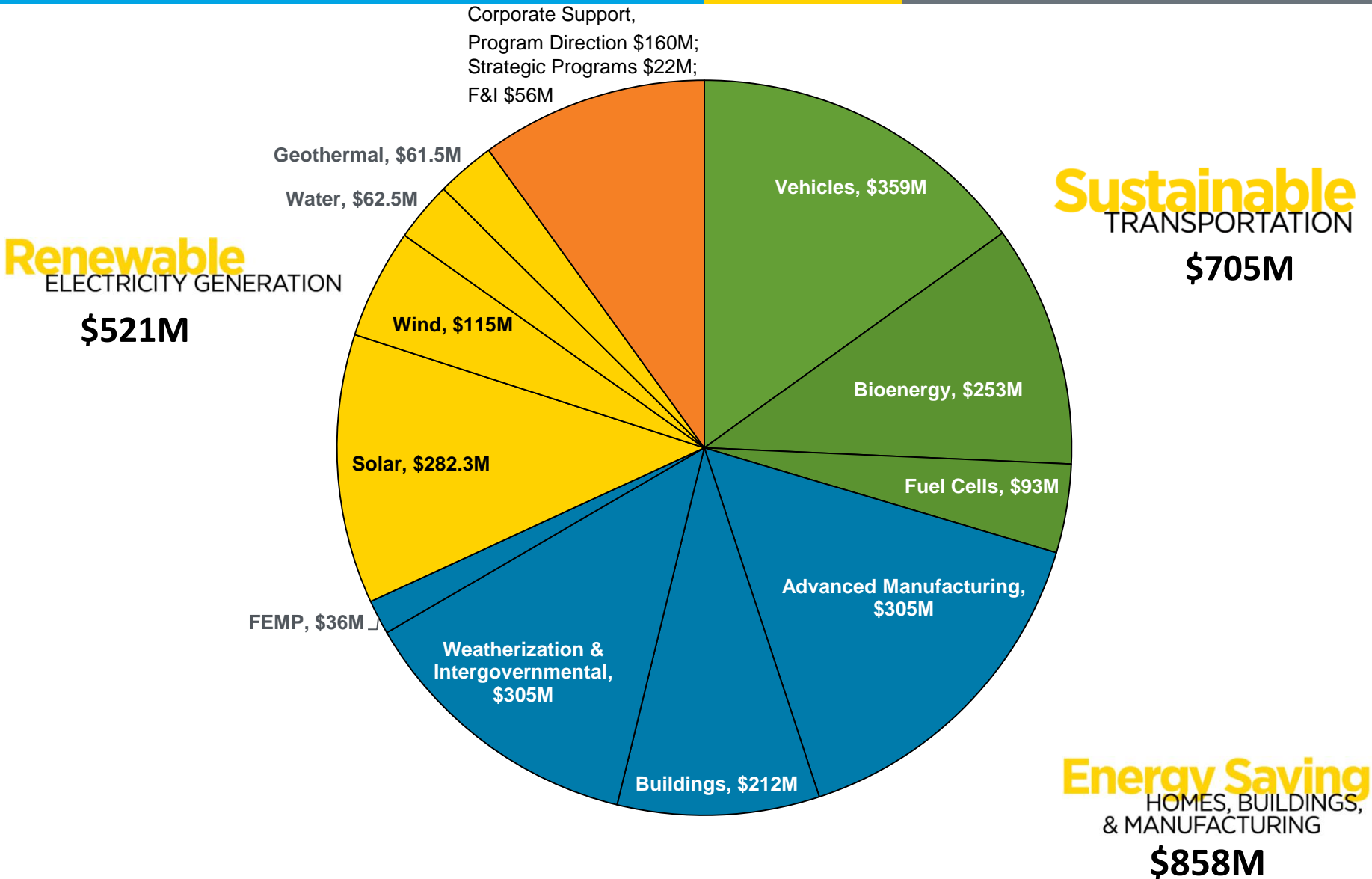
## Renewable ELECTRICITY GENERATION

- First grid connected near-field EGS plant increased power output of nearby operating geothermal field by nearly 38%
- Two of the world's largest state-of-the-art wind turbine drivetrain testing facilities open for business

## Energy Saving HOMES, BUILDINGS, & MANUFACTURING

- **Since 2009, finalized new efficiency standards for more than 30 household and commercial products, which are estimated to save consumers hundreds of billions of dollars through 2030 and cut greenhouse gas emissions.**

# FY 2015 EERE Budget Request - \$2.317B



# FY 2015 Budget Summary Table

| Dollars in Thousands                                    | FY 2013<br>Current | FY 2014<br>Enacted | FY 2015<br>Request | FY 2015 vs<br>FY 2014 |
|---|--------------------|--------------------|--------------------|-----------------------|
| <b>Transportation</b>                                   | <b>584,199</b>     | <b>614,955</b>     | <b>705,183</b>     | <b>+90,228</b>        |
| - Vehicle Technologies                                  | 303,165            | 289,737            | 359,000            | +69,263               |
| - Bioenergy Technologies                                | 185,190            | 232,290            | 253,200            | +20,910               |
| - Hydrogen and Fuel Cell Technologies                   | 95,844             | 92,928             | 92,983             | +55                   |
| <b>Renewable Electricity</b>                            | <b>444,891</b>     | <b>449,524</b>     | <b>521,300</b>     | <b>+71,776</b>        |
| - Solar Energy Technologies                             | 269,050            | 257,058            | 282,300            | +25,242               |
| - Wind Energy Technologies                              | 86,129             | 88,126             | 115,000            | +26,874               |
| - Water Power Technologies                              | 54,687             | 58,565             | 62,500             | +3,935                |
| - Geothermal Technologies                               | 35,025             | 45,775             | 61,500             | +15,725               |
| <b>End-Use Efficiency</b>                               | <b>535,354</b>     | <b>617,449</b>     | <b>857,700</b>     | <b>+240,251</b>       |
| - Advanced Manufacturing                                | 114,254            | 180,471            | 305,100            | +124,629              |
| - Federal Energy Management Program                     | 28,265             | 28,248             | 36,200             | +7,952                |
| - Building Technologies                                 | 204,601            | 177,868            | 211,700            | +33,832               |
| - Weatherization and Intergovernmental Programs         | 188,234            | 230,862            | 304,700            | +73,838               |
| <b>Corporate Support Programs</b>                       | <b>208,889</b>     | <b>231,513</b>     | <b>237,779</b>     | <b>+6,266</b>         |
| <b>Subtotal, Energy Efficiency and Renewable Energy</b> | <b>1,773,333</b>   | <b>1,913,441</b>   | <b>2,321,962</b>   | <b>+408,521</b>       |
| - Use of Prior Year Balances                            | -81,576            | -2,382             | -5,213             | N/A                   |
| - Rescission of Prior Year Balances                     | 0                  | -10,418            | 0                  | N/A                   |
| <b>Total, Energy Efficiency and Renewable Energy</b>    | <b>1,691,757</b>   | <b>1,900,641</b>   | <b>2,316,749</b>   | <b>+416,108</b>       |

# Overview of Strategies – Homes, Buildings, and Manufacturing

## Drive Innovation (Reduce Technology Risk)

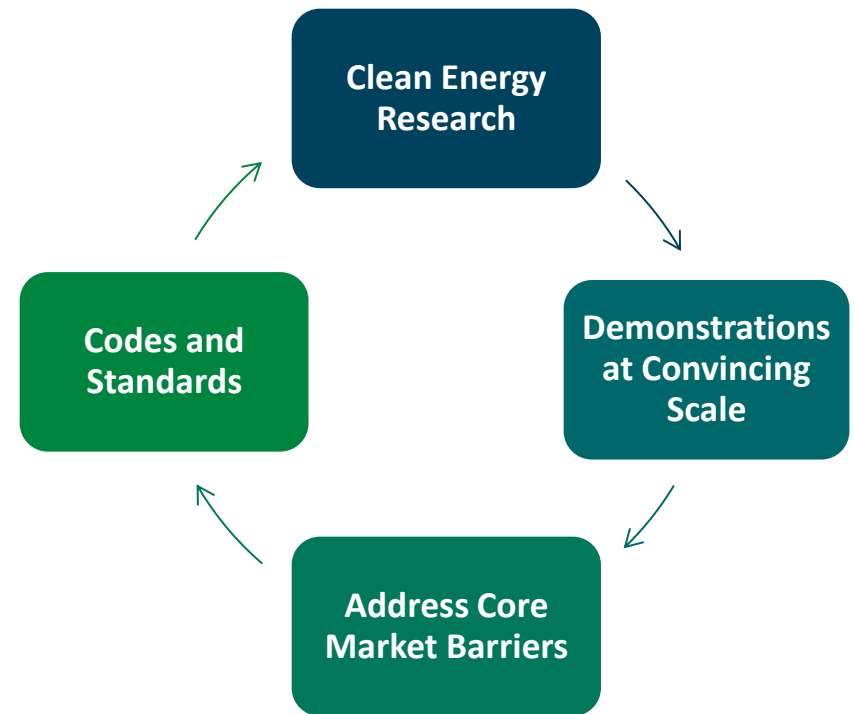
- High impact targets of opportunity
- Pursue market-relevant cost & performance targets
- Pursue demos at convincing scale

## Accelerate to Scale (Address Market Barriers)

- Pursue standardized approaches to address specific market barriers and reduce transaction costs, assist industry (meeting cost & performance targets, as appropriate)
- Pursue demos at convincing scale to show solutions to specific barriers and sound program and business models
- Catalyze Federal leadership
- Catalyze/assist state and local leadership

## Employ Regulatory Authorities

- Appliance and equipment standards
- Lead code development & assist states/locals with adoption, training, and enforcement
- Establish Federal standards

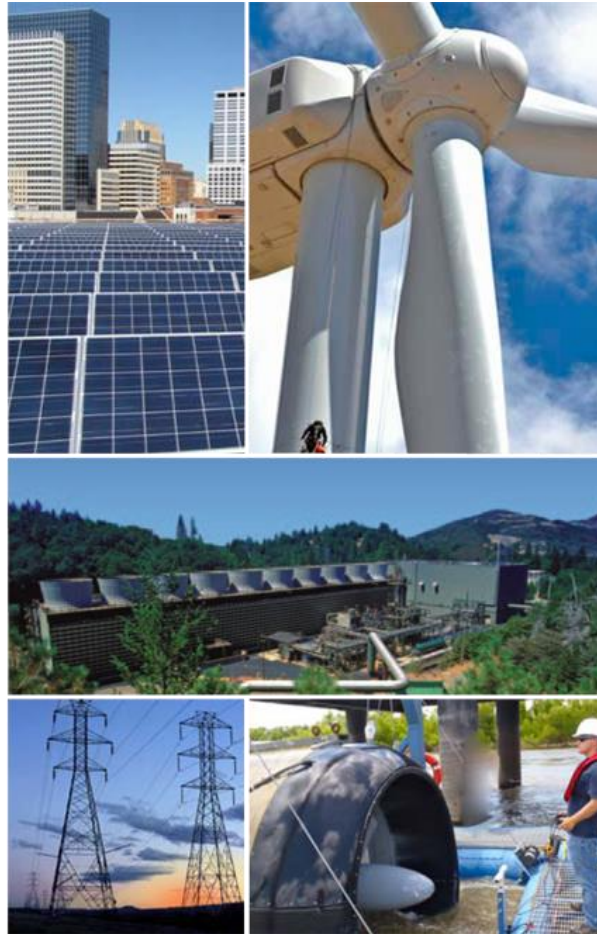




# Sustainable TRANSPORTATION



# Renewable ELECTRICITY GENERATION



# Energy Saving HOMES, BUILDINGS, & MANUFACTURING



# Energy Saving

## HOMES, BUILDINGS, & MANUFACTURING

Office of Energy Efficiency and Renewable Energy  
U.S. Department of Energy



# Building Technologies - Overview

## Motivation/Focus

In the United States, residential homes and commercial buildings consume 40% of the Nation's total energy with an annual energy bill of more than \$400 billion. Buildings use more than 70% of the electrical energy in the United States. These energy bills can be cost-effectively reduced by 20-50% or more through various energy efficiency technologies and techniques. The Building Technologies Program will continue to develop and demonstrate advanced building efficiency technologies and practices to make buildings in the United States more efficient, affordable, and comfortable.

## Achievements

- Completed 13 new Energy Star test procedures proposals or final test procedures and issued final rules for test procedures and standards for 19 products, saving American businesses and consumers billions of dollars in estimated energy costs over the lifetime of associated new products.
- Funded research at ORNL, in conjunction with a private-sector partner, developed a revolutionary ground source integrated heat pump unit that uses variable speed technology. It can save up to 60% of annual energy use and cost for residential heating and cooling over conventional systems, and is up to 30% more efficient than other ground source heat pumps. This product will be manufactured in Oklahoma.
- Funded research at LBNL that led to the development of a Smart Window Coating that saves more than 20% of annual energy use for commercial buildings, as compared to ASHRAE 90.1-2007 windows.
- Increased the square footage of Better Buildings commercial partners who are implementing energy saving technologies and practices to more than 12 billion square feet of office space.
- Launched the Lighting Energy Efficiency in Parking (LEEP) campaign with industry partners, which commits more than 110 million square feet of parking space to be retrofitted using Building Technologies developed lighting and controls specifications.
- Retrofitted over 100,000 homes under the Better Buildings Neighborhood Program demonstrating a range of program models in numerous communities across the country leading to home energy savings of 15-30%.
- Released Building America Solution Center, a dynamic new tool that allows residential building professionals full and simple access to a wealth of building science and energy efficiency information.

## Goal/Metric

Building Technologies will develop and promote the adoption of cost effective technologies and practices, that when fully deployed, would reduce U.S. building-related energy use by 50% from the 2010 [Annual Energy Outlook] baseline. Achieving this goal will decrease annual energy use by approximately 20 quads, which is equivalent to approximately 1 billion metric tons of CO<sub>2</sub>, and will save consumers and businesses roughly \$200 billion in annual energy costs.

# Building Technologies – FY 2015 Budget Request

| (Dollars in Thousands)                        | FY 2013 Current | FY 2014 Enacted | FY 2015 Request |
|---|-----------------|-----------------|-----------------|
| Emerging Technologies (ET)                    | 58,599          | 55,862          | 79,000          |
| Commercial Buildings Integration (CBI)        | 33,956          | 30,782          | 28,000          |
| PSU Consortium for Building Energy Innovation | 22,843          | 9,994           | 10,000          |
| Residential Buildings Integration (RBI)       | 27,678          | 24,390          | 23,000          |
| Equipment and Buildings Standards             | 61,525          | 55,840          | 69,000          |
| NREL Site-Wide Facility Support               | 0               | 1,000           | 2,700           |
| <b>Total, Building Technologies</b>           | <b>204,601</b>  | <b>177,868</b>  | <b>211,700</b>  |

# Building Technologies – FY 2015 Budget Highlights

**Emerging Technologies, \$79M:** Increased funding above FY 2014 includes focus on non-vapor compression technologies capable of being used in HVAC applications through Future of Air Conditioning Technologies (FACTs) FOA. Non-vapor compression air conditioning technologies have the potential to provide up to 50% reductions in energy consumption. Building Technologies will also focus additional investments in transactive controls and grid integration to optimize energy performance and comfort as well as support energy-related transaction outside the building envelope.

**Commercial Building Integration, \$28M:** Build the common data structures, tools and processes to support and drive greater investment in energy efficiency across all commercial market sectors, including through decision-grade energy performance data access and design and decision support tools. CBI will support at least 19 city-utility partnerships committed to provide whole building energy data to building owners in their areas . Demonstrate and evaluate the impact of three promising new technologies, broaden the use of the Commercial Energy Asset Score, and assist Better Building industry partner organizations in demonstrating 2% per year portfolio-wide energy savings.

**Penn State Univ. Consortium for Building Energy Innovation, \$10M:** Develop new technologies and solutions not currently available in the market that are needed to reduce energy use in existing small- and medium size commercial buildings, and demonstrate new paths to market for real energy savings.

**Residential Building Integration, \$23M:** Continue to develop new, cost-effective energy efficient technical solutions for existing and new construction, however rather than only focusing on whole house approaches, actionable solutions will be developed around typical systems that are retrofitted individually.

**Equipment and Buildings Standards, \$69M:** Continue to meet all mandated deadlines for covered appliances and equipment, and enforce existing standards. The program will accelerate appliance efficiency standards rulemakings and actively enforce Federal minimum efficiency levels. The new product coverage determinations will be continued further into the rulemaking process. Building Energy Codes efforts will focus on increasing the number of states that have adopted and are complying with updated codes.

# Advanced Manufacturing - Overview

## Motivation/Focus

The Advanced Manufacturing Office (AMO) partners with industry, small business, universities, and other stakeholders to identify and invest in emerging technologies with the potential to create high-quality U.S. manufacturing jobs, enhance global competitiveness, and reduce energy use by encouraging a culture of continuous improvement in corporate energy management.

## Achievements

- **R&D Projects:** Launched **18 Innovative Manufacturing Initiative projects** in partnership with industry, co-investing \$77.5 million in pre-competitive, foundational manufacturing technologies.
- **R&D Facilities**
  - Led DOE contribution to the establishment of the National Network for Manufacturing Innovation (NNMI), including support for the pilot National Additive Manufacturing Innovation Institute (NAMII), known as **AmericaMakes** in Youngstown, OH
  - Launched the **Critical Materials Institute (CMI)** to improve the supply, efficient use and recycling to reduce dependence on foreign supplies such as rare earths for clean energy applications.
- **Technical Assistance**
  - As part of the Better Building, **Better Plants Program**, more than 125 Program Partners, representing close to 1800 plants and over 8% of the total U.S. manufacturing energy footprint, have committed to reduce their energy intensity by 25% over 10 years. As of October 2013, Partners have saved about 190 trillion Btu and \$1 billion.
  - Between FY 2009 and 2013, **centers provided technical support to over 590 CHP projects**. Of those projects, more than 190 are currently under development or online with a combined capacity of 1.54 GW.
  - On average, **Industrial Assessment Center** clients identify about \$140,000 in potential annual energy savings and implement more than one-third of these within the first year of the assessment. Since 2006, Centers have conducted more than 3,300 assessments that have identified nearly \$600 million in savings opportunities and nearly 4.0 million metric tons in CO<sub>2</sub> emissions reductions. Over 1/3 of these identified savings have been implemented to date.

## Goals/Metrics

- Develop industry-specific and cross-cutting foundational manufacturing technologies to assist U.S. industry reduce its energy intensity by 2.5% per year (EPACT 2005).
- Reduce life-cycle energy use by 50% in manufacturing processes and products through technology RD&D.
- Develop, demonstrate, and assist industry with adoption of cost-competitive combined heat and power technologies (supporting EO 13624) towards a national goal of 40 GW of new CHP by 2020.
- Demonstrate technical and economic viability of energy management approaches building off of ISO 50001.

# Advanced Manufacturing – FY 2015 Budget Request

| (Dollars in Thousands)                      | FY 2013 Current | FY 2014 Enacted | FY 2015 Request |
|---|-----------------|-----------------|-----------------|
| Next Generation Manufacturing R&D Projects  | 41,745          | 76,971          | 86,000          |
| Advanced Manufacturing R&D Facilities       | 55,009          | 81,500          | 190,500         |
| Industrial Technical Assistance             | 17,500          | 22,000          | 28,500          |
| NREL Site-Wide Facility Support             | 0               | 0               | 100             |
| <b>Total, Advanced Manufacturing Office</b> | <b>114,254</b>  | <b>180,471</b>  | <b>305,100</b>  |

# Advanced Manufacturing – FY 2015 Budget Highlights

- **Next Generation Manufacturing R&D Projects (\$86M):** Three or four targeted FOAs will address core technical issues for foundational technologies to enable U.S. manufacturers to realize significant gains in energy productivity, environmental performance, product yield, and economic growth
- **Advanced Manufacturing R&D Facilities (\$190.5M):** Supports the creation of at least one new Clean Energy Manufacturing Innovation Institute and two existing institutes, consistent with the President's vision for a larger, multi-agency National Network of Manufacturing Innovation (NNMI), as well as continuing investment in the Critical Materials Hub and Manufacturing Demonstration Facility.
- **Technical Assistance (\$28.5M):** Continue to support Better Plants and Superior Energy Performance; revitalize and refocus Industrial Assessment Centers around increase productivity as well as energy and water savings for small and medium manufacturers; and expand resources for increased combined heat and power installations.



# Weatherization and Intergovernmental Programs - Overview

## Motivation/Focus

- Partners with state and local organizations to significantly accelerate the deployment of clean energy (e.g., energy efficiency and renewable energy) technologies and practices by a wide range of government, community, and business stakeholders and to improve energy security.

## Achievements

- Improved the energy performance and comfort in the homes of more than 1.4 million American low-income families across the Nation, exceeding the High Priority Performance Goal (HPPG), for a national total estimated energy savings of 41 trillion Btus and \$480 million in first year energy cost savings (Recovery Act).
- Established sustainable lending capacity of \$800 million in 37 States and 100 local jurisdictions to support deployment of energy efficiency improvements and renewable energy systems (Recovery Act).
- Launched partnerships with 71 public sector partners to reduce their energy intensity by 20% or more by 2020.
- Provided funds and technical assistance to states that resulted in the retrofit of 28 million square feet of building space and installation of more than 150 MW in renewable energy generation capacity.
- Created national certifications and work specifications for residential retrofit worker training, energy audits and weatherization methods which are being implemented in FY 2014 and 2015.
- Provided financial and technical resources to tribes that resulted in 64 tribal building retrofits with energy savings of approximately \$90,000 per year.

## Goals/Metrics

- Reduce state government facilities and operations energy use by 2 percent per year by 2020 and accelerate investment in public sector energy use of energy service performance contracting by \$1-2 billion by 2016 through a combination of innovative programs, partnerships and technical assistance.
- Complete more than 33,000 residential energy efficiency retrofits for low income families in FY 2015.

# Weatherization and Intergovernmental – FY 2015 Budget Request

| (Dollars in Thousands)   | FY 2013 Current | FY 2014 Enacted | FY 2015 Request |
|--|-----------------|-----------------|-----------------|
| Weatherization Assistance  | 128,879         | 170,898         | 224,600         |
| Training and Technical Assistance  | 2,826           | 2,998           | 3,000           |
| <b>Total, Weatherization Assistance Program</b>  | <b>131,705</b>  | <b>173,896</b>  | <b>227,600</b>  |
| State Energy Program   | 47,108          | 49,970          | 63,100          |
| Clean Energy and Economic Development Partnerships   | 0               | 0               | 14,000          |
| Tribal Energy Program*   | 9,421           | 6,996           | 0               |
| <b>Total, Weatherization and Intergovernmental</b>   | <b>188,234</b>  | <b>230,862</b>  | <b>304,700</b>  |
| *In FY15 the Tribal Energy Program is being consolidated within DOE's Office of Indian Energy Policy and Programs. |                 |                 |                 |

# Weatherization and Intergovernmental – FY 2015 Budget Highlights

## **Weatherization Assistance Program (\$227.6M):**

- Anticipate completion of 33,100 home energy upgrades nationwide through active management of 59 weatherization formula grantees and competitively select and manage approximately 20 high-impact projects on financing models for the retrofit of low-income multi-family buildings.
- Establish, improve, and implement worker training curriculums, work standards, and audit processes in multi-family housing retrofits.

## **State Energy Program (\$63.1M):**

- Use key engagements through the State Energy Office network and their capacity to use strategic policy levers and innovative programs to bring markets to scale for cost-competitive clean energy technologies by leveraging best practice approaches, up to 20 competitively awarded transformative projects and a nationally diverse set of voluntary commitment-driven partnerships.
- Develop and deploy assessment, planning, and decision-making tools for the adoption of policy infrastructures to facilitate clean energy technology deployment, including self-sustaining financial models.

## **Clean Energy and Economic Development Partnerships (CEED Partnerships) (\$14M):**

- Provide technical assistance to States and local communities to create economic development roadmaps that leverage the current shale gas boom to support sustained economic development and growth, as well as to assist local governments in their efforts to diversify their economies by attracting advanced manufacturing and clean energy industries.

# Federal Energy Management Program - Overview

## Motivation/Focus

- The U.S. Department of Energy (DOE) Federal Energy Management Program (FEMP) works with key individuals to accomplish energy change within their organizations by bringing expertise from all levels of project and policy implementation to enable Federal agencies to meet energy-related goals and provide energy leadership to the country.
- The Sustainability Performance Office (SPO) serves as the lead on all sustainability matters for DOE and implements the DOE Strategic Sustainability Performance Plan (SSPP). SPO provides critical support for DOE for managing, reporting, evaluating and achieving sustainability goals established by Executive Orders, statutes, and internal DOE policies.

## Achievements

### FEMP

- Federal agencies awarded approximately \$1.4 B toward the \$2 B in the first two years of the Presidential Performance Contracting Challenge.
- FEMP assisted other agencies to enable the Federal Government to achieve an overall reduction in scope 1 and 2 (direct) GHG emissions by 15.1% between FY 2008 and FY 2012.
- FEMP provided web-based training on the latest Federal energy requirements, best practices, and technologies to more than 5,500 registrants in FY2013. The International Association for Continuing Education and Training (IACET) awarded the FEMP the prestigious “Authorized Provider” designation for continuing education and training in support of the Federal Buildings Personnel Training Act (FBPTA).
- The Department of Transportation (DOT) and the Department of Energy (DOE) jointly completed energy evaluations at 26 DOT facilities. As result of this work, DOE developed a methodology to assess facility operations for over 600 similar sites using less resource intensive methods such as desk audits. In addition, FEMP also provided a list of low-cost and no-cost energy efficiency measures for implementation at the facilities.

### SPO

- In FY 2012, DOE reduced scope 1 and 2 (direct) GHG emissions by 34% relative to an FY 2008 baseline—placing DOE on track to meet its FY 2020 scope 1 and 2 GHG reduction goals (28% reduction).

## Goals/Metrics

- Reduce energy intensity (Btu/square foot) of facilities by 30% by the end of FY 2015 compared to FY 2003.
- Reduce water consumption intensity (gal/sf) by 16% by the end of FY 2015 relative to 2007 baseline; 26% by FY 2020.
- Use renewable electricity energy equivalent to at least 5% of total electricity use; at least half of which must come from sources developed after January 1, 1999. Must be at least 7.5% in FY 2013 and thereafter.
- Reduce government-wide GHG emissions by 28% for Scope 1&2 emissions and 13% for Scope 3 emissions by 2020 (from 2008 levels).
- Initiate the Better Buildings Data Center Challenge
- Make awards for 2015 Funding Opportunity for implementation of energy conservation and renewable projects at Federal facilities.

# Federal Energy Management Program – FY 2015 Budget Request

| (Dollars in Thousands)                          | FY 2013 Current | FY 2014 Enacted | FY 2015 Request |
|---|-----------------|-----------------|-----------------|
| Project Financing                               | 9,501           | 9,558           | 11,433          |
| Technical Guidance and Assistance               | 9,126           | 6,224           | 12,433          |
| Planning, Reporting and Evaluation              | 4,324           | 5,569           | 4,073           |
| Federal Fleet                                   | 1,540           | 1,388           | 1,634           |
| Federal Energy Efficiency Fund                  | 0               | 3,000           | 3,000           |
| DOE Specific Investments                        | 3,774           | 2,509           | 2,927           |
| NREL Site-Wide Facility Support                 | 0               | 0               | 700             |
| <b>Total, Federal Energy Management Program</b> | <b>28,265</b>   | <b>28,248</b>   | <b>36,200</b>   |

# Federal Energy Management Program – FY 2015 Budget Highlights

## Federal Energy Management Program (FEMP)

- **Project Financing, \$11.4 M:** Provides assistance to agencies to meet the goals set forth in the Presidential Memorandum on Performance Contracting (December 3, 2011) and future goals by utilizing energy savings performance contracts (ESPC), utility energy savings contracts (UESC), and power purchasing agreements (PPA).
- **Technical Guidance and Assistance, \$12.4 M:** Provides support for the establishment of a center of expertise focused on Federal Data Center Energy Efficiency, increases project tracking, supports energy-efficient and sustainable building practices and technology deployment, and provides renewable energy technical assistance.
- **Planning, Reporting and Evaluation, \$4.1 M:** Provides services to agencies that include the collection, tracking, and verification of Federal data; managing recognition awards programs; and training Federal workforce in energy management.
- **Federal Fleet, \$1.6 M:** Provides direct technical assistance and tools for agencies to increase their use of existing alternative fuel infrastructure, and to increase their selection and placement of alternative fuel vehicles.
- **Federal Energy Efficiency Fund, \$3.0 M:** Provides direct funding and leveraged cost-sharing to Federal agencies for capital projects and other initiatives to increase the energy efficiency, water conservation, and renewable energy investments at agency facilities.

**Sustainability Performance Office (SPO), \$2.9 M:** Provides critical support for DOE for managing, reporting, evaluating, and achieving sustainability goals established by Executive Orders, statutes, and internal DOE policies.

## Sustainable TRANSPORTATION



## Renewable ELECTRICITY GENERATION



## Energy Saving HOMES, BUILDINGS, & MANUFACTURING



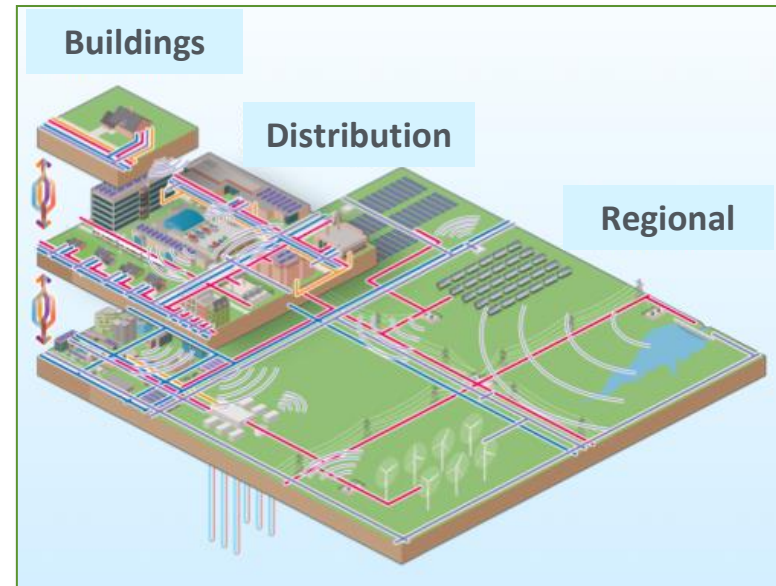
# EERE Crosscutting Initiatives



Within our technology office budgets, EERE organizes and coordinates investments across our technology sectors around common themes to achieve maximum impact for the U.S. taxpayer.

# Grid Integration Initiative (\$126M)

- To support DOE’s cross-cutting grid integration efforts, February 2014 workshop held with industry, universities, utilities, and other stakeholders focused on addressing relevant challenges at the Building, Campus, Distribution, and Regional Scale.
- In FY14, EERE has developed a coordinated effort across the program offices with the Energy Systems Integration Facility (ESIF) which received stakeholder review in February. This will support the joint FY15 activity.
- The FY 2015 request includes a joint (Solar, Buildings ,and Vehicles offices) \$19 million funding opportunity announcement to develop and demonstrate technologies and tools enabling improved integration of electric vehicles, distributed renewable generation, and building equipment – optimizing overall performance and improving interactivity with the utility grid to better meet grid requirements .



## Additional High Priority Activities Focused on Challenges at a Variety of Scales

### Buildings, Campus, and Fleet Scale

- Transactive Controls: Develop technologies and control systems that not only can optimize energy performance and comfort, but also can support energy-related transactions outside the building envelope.

### Distribution Scale

- Distributed energy storage technologies integrated with distributed solar PV for addressing the variability of the resource and increasing the hosting capacity of PV systems on the grid.

### Regional Scale

- Continued development of “concurrent cooling” analyses and methodologies to describe the correlation between wind plant generation and wind cooling of transmission lines

Dollars in Thousands

| EERE Grid Integration Initiative Activities by Program Office | FY 2015 Request |
|---|-----------------|
| Buildings Technologies  | 17,000          |
| Fuel Cell Technologies  | 1,000           |
| Solar Energy Technologies                                     | 56,900          |
| Vehicle Technologies  | 8,500           |
| Water Power Technologies                                      | 4,000           |
| Wind Power Technologies                                       | 8,559           |
| Energy Systems Integration Facility                           | 30,000          |
| <b>Total, EERE Grid Integration Initiative</b>                | <b>125,959</b>  |



# Energy Systems Integration Facility (ESIF) (\$30M)

- ESIF will complete the first full year of RD&D in FY14 supported by \$20M for staffing and operational cost.
- Numerous AOP, WFO, CRADA, and Cost-shared projects will be conducted with a variety of participants including DOE, Federal and State government, academia, not-for-profit enterprises and commercial businesses.
- A major cross-cutting project titled INTEGRATE was begun with EERE support and continues to deliver results.
- In FY 2015, ESIF will continue normal operations and expand investments to function as a DOE User Facility supporting a group of peer reviewed competitively selected projects addressing a scope of work defined by DOE.

| FY15 ESIF Operating Costs | Labor (\$K)   | Non-Labor (\$K) | FY 2015 Request (\$K) |
|---------------------------|---------------|-----------------|-----------------------|
| ESIF Administration       | 750           | 240             | 990                   |
| Scientific Staff          | 9,800         | 0               | 9,800                 |
| Equipment                 | 0             | 4,000           | 4,000                 |
| Operations & Maintenance  | 1,825         | 9,985           | 11,810                |
| Utilities                 | 0             | 3,400           | 3,400                 |
| <b>Total</b>              | <b>12,375</b> | <b>17,625</b>   | <b>30,000</b>         |



Addressing the challenges of integrating clean energy technologies into the energy systems infrastructure at all scales

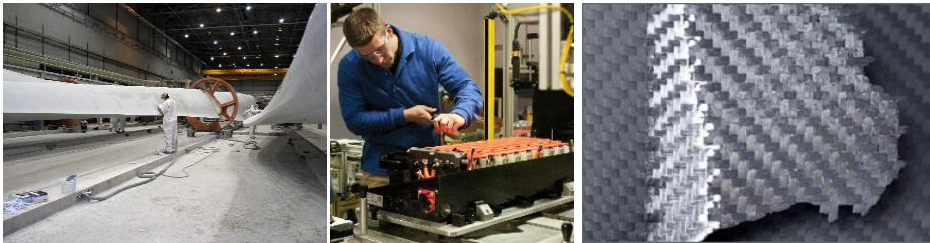
# Clean Energy Manufacturing Initiative (\$554M)

Offices across EERE  
are collaborating in the

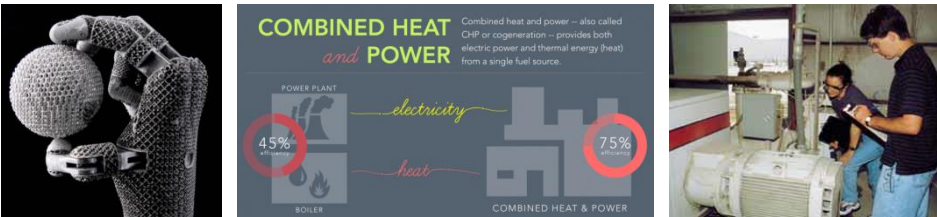
**Clean Energy Manufacturing Initiative**  
*to increase U.S. manufacturing competitiveness*

## Objectives

1. Increase U.S. competitiveness in the production of clean energy products



2. Increase U.S. manufacturing competitiveness across the board by increasing energy productivity



Dollars in Thousands

| Clean Energy Manufacturing Initiative<br>Activities by Program Office | FY 2015<br>Request |
|---|--------------------|
| Vehicles Technologies   | 35,000             |
| Bioenergy Technologies  | 124,500            |
| Hydrogen and Fuel Cell Technologies                                   | 4,000              |
| Solar Energy Technologies   | 67,700             |
| Wind Power Technologies   | 3,500              |
| Water Power Technologies  | 4,000              |
| Advanced Manufacturing  | 305,000            |
| Building Technologies   | 10,000             |
| <b>Total, CEMI</b>  | <b>553,700</b>     |

## Approach:

### 1. R&D

- For developing processes to produce clean energy technologies
- For developing cross-cutting manufacturing technologies

### 2. NNMI Institutes & Other Facilities

- Institutes in the National Network for Manufacturing Innovation

### 3. Technical Assistance

- For implementing Energy Efficiency in manufacturing

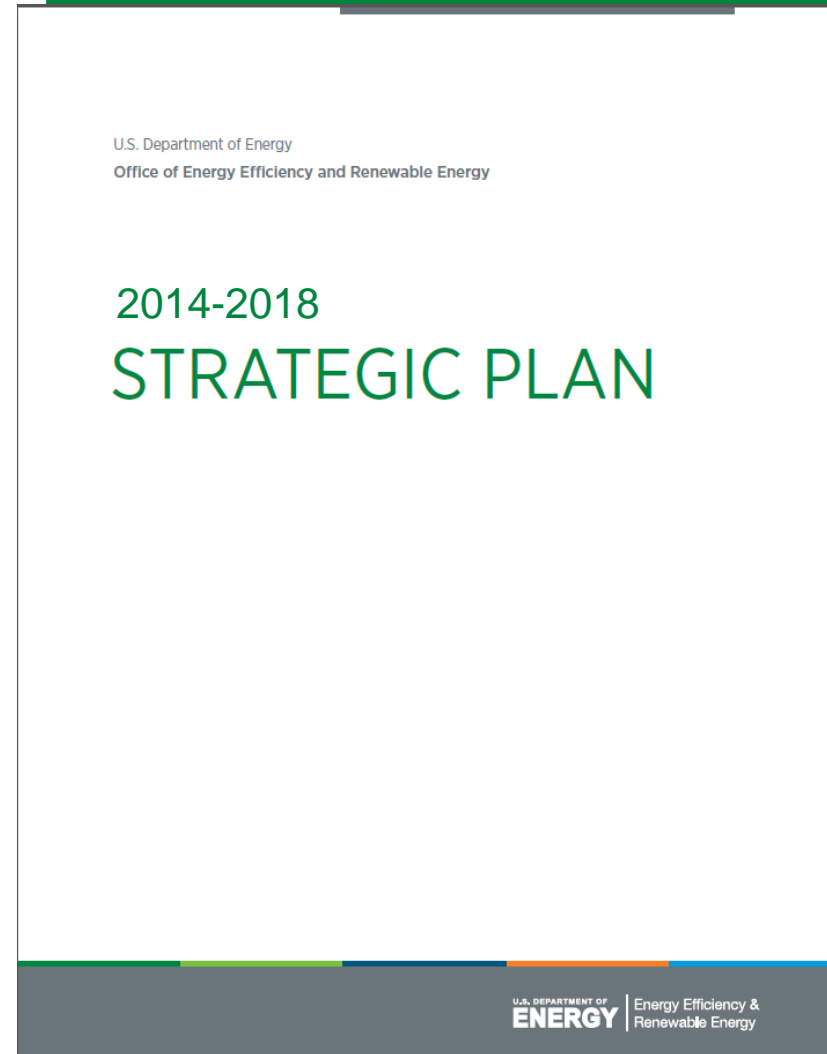
### 4. Competitiveness Analysis

### 5. Partnerships and Engagement

# EERE Strategic Plan

## Purposes of the Strategic Plan

- (Re)Define EERE
- Demonstrate the logical basis for our vision and goals
- Connect to our stakeholders



**QUESTIONS?**

EERE Budget documents can be found at:  
<http://energy.gov/eere/budget/eeres-2015-budget>

Contact EERE Stakeholder Engagement at:  
[SE@ee.doe.gov](mailto:SE@ee.doe.gov)