

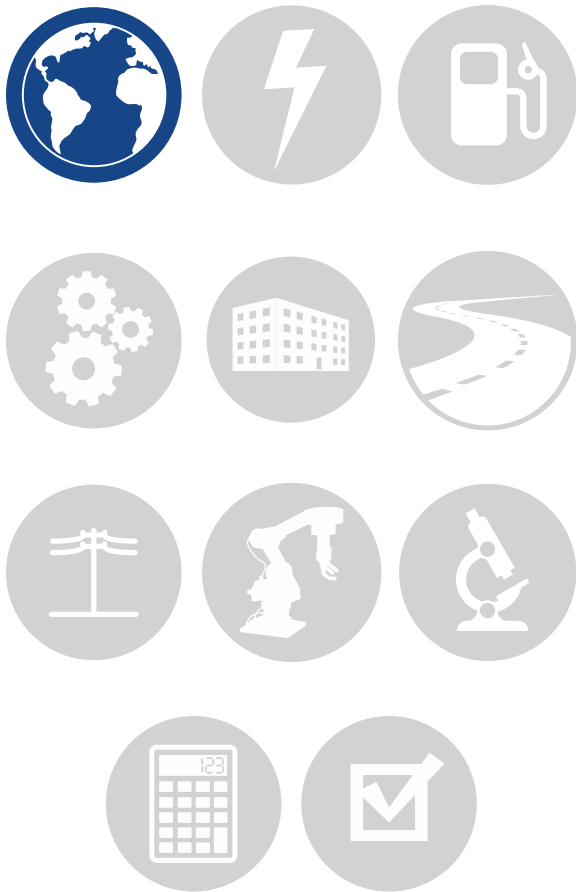


Quadrennial Technology Review 2015

**Chapter 1:** Energy Challenges

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# Supplemental Information



*Additional Information on Energy Challenges*

***Agency Information***

*Representative DOE Science and Energy  
Program Workshops*



Quadrennial Technology Review 2015

# Agency Information

## Chapter 1: Supplemental Information

### Agency Information

Many Federal Departments and Agencies conduct research, development, demonstration, and deployment (RDD&D) activities, policy and regulatory activities, and other actions related to clean energy technologies, as do many State Agencies. The following websites provide a starting point for examining some of the excellent work done by these Federal Agencies—with a primary focus on RDD&D activities, as well as those providing data and information helpful for informing those activities. State and local activities are not covered here. This is not a complete list across agencies or within agencies, only a starting point. For all of these agencies, searching their websites for the energy-related topics of interest is the best way to get up-to-date information. For regulatory and policy issues, the work done by the Quadrennial Energy Review provides a useful overview and framework.<sup>1</sup>

### AGENCY/DIVISION and URL:

#### Executive Office of the President (EOP)

<https://www.whitehouse.gov/administration/eop>

#### Council on Environmental Quality (CEQ)

<https://www.whitehouse.gov/administration/eop/ceq>

#### National Security Council (NSC)

<https://www.whitehouse.gov/administration/eop/nsc>

#### Office of Management and Budget (OMB)

<https://www.whitehouse.gov/omb>

#### Office of Science and Technology Policy (OSTP)

<https://www.whitehouse.gov/administration/eop/ostp>

#### U.S. Department of Agriculture (USDA)

<http://www.usda.gov/wps/portal/usda/usdahome>

<http://www.usda.gov/wps/portal/usda/usdahome?navid=ENERGY>

<http://www.usda.gov/oce/energy/>

[http://www.ars.usda.gov/research/programs/programs.htm?NP\\_CODE=307](http://www.ars.usda.gov/research/programs/programs.htm?NP_CODE=307)

<http://www.usda.gov/oce/reports/index.htm#renewable>

<http://www.rd.usda.gov/about-rd/agencies/rural-utilities-service>

#### U.S. Forest Service (USFS)

<http://www.fs.fed.us/>

<http://www.fs.fed.us/research/biomass-bioenergy/>

<http://www.fs.fed.us/science-technology/energy-forest-products>

<http://www.fs.fed.us/science-technology/energy-forest-products/energy>



## **U.S. Department of Commerce (DOC)**

<https://www.commerce.gov/>

<https://www.commerce.gov/tags/energy>

<http://selectusa.commerce.gov/industry-snapshots/energy-industry-united-states>

<http://ita.doc.gov/td/energy/>

<http://export.gov/industry/energy/>

### **International Trade Administration (ITA)**

<https://www.commerce.gov/international-trade-administration>

### **National Institute of Standards and Technology (NIST)**

<http://nist.gov/energy-portal.cfm>

<http://www.nist.gov/energy-portal.cfm>

[http://www.nist.gov/energy\\_i.cfm](http://www.nist.gov/energy_i.cfm)

[http://www.nist.gov/el/building\\_environment/index.cfm](http://www.nist.gov/el/building_environment/index.cfm)

<http://nist.gov/environment-climate-portal.cfm>

<http://nist.gov/itl/>

<http://www.manufacturing.gov/welcome.html>

### **National Oceanic and Atmospheric Administration (NOAA)**

<http://research.noaa.gov/>

<http://www.energy.noaa.gov/>

<https://www.climate.gov>

<http://www.esrl.noaa.gov/gsd/renewable/>

<http://www.energy.noaa.gov/renewable-energy/>

## **U.S. Department of Defense (DOD)**

<http://www.defense.gov/>

### **Office of the Secretary of Defense (OSD)**

<http://www.osd.mil>

Under Secretary of Defense for Acquisition, Technology and Logistics

<http://www.acq.osd.mil/>

Assistant Secretary of Defense for Energy, Installations and Environment

<http://www.acq.osd.mil/>

DOD Environmental Research Programs: SERDP-ESTCP

<https://www.serdp-estcp.org/>

Assistant Secretary of Defense for Research and Engineering

<http://www.acq.osd.mil/chieftechnologist/>

Defense Advanced Research Projects Agency (DARPA)

<http://www.darpa.mil/>

### **Joint Chiefs of Staff (JCS)**

<http://www.jcs.mil/>



### Department of the Army

<http://www.army.mil>

<http://www.army.mil/news/energy/>

[http://www.army.mil/article/103464/Army\\_establishes\\_policy\\_for\\_Operational\\_Energy/](http://www.army.mil/article/103464/Army_establishes_policy_for_Operational_Energy/)

<http://www.asaie.army.mil/Public/ES/index.html>

Assistant Secretary of the Army for Installations, Energy and Environment

<http://www.army.mil/asaie>

Deputy Assistant Secretary of the Army for Energy and Sustainability

<http://www.asaie.army.mil/Public/ES/energy.html>

U.S. Army Corps of Engineers

<http://www.usace.army.mil/Missions/Sustainability.aspx>

U.S. Army Research Laboratory

<http://www.arl.army.mil/www/default.cfm>

### Department of the Navy

<http://www.navy.mil/>

Assistant Secretary of the Navy for Energy, Installations and Environment

<http://www.secnav.navy.mil/eie/Pages/Default.aspx>

Deputy Assistant Secretary of the Navy - Energy

<http://www.secnav.navy.mil/eie/Pages/Energy.aspx>

Office of Naval Research

<http://www.onr.navy.mil>

Naval Research Laboratory

<http://www.nrl.navy.mil>

Marine Corps Energy Office

[http://www.mcicom.marines.mil/Units/GFFacilities/GF1Energy.aspx?pid=corpsHighlights\\_energy](http://www.mcicom.marines.mil/Units/GFFacilities/GF1Energy.aspx?pid=corpsHighlights_energy)

Expeditionary Energy Office

[http://www.mcicom.marines.mil/Units/GFFacilities/GF1Energy/ExpeditionaryEnergyOffice\(E2O\).aspx](http://www.mcicom.marines.mil/Units/GFFacilities/GF1Energy/ExpeditionaryEnergyOffice(E2O).aspx)

### U.S. Department of the Air Force

<http://www.af.mil>

Assistant Secretary of the Air Force for Installations, Environment and Energy

<http://www.safie.hq.af.mil/>

Air Force Energy Office

<http://www.safie.hq.af.mil/energy/index.asp>

Air Force Research Laboratory

<http://www.wpafb.af.mil/AFRL>



## U.S. Department of Energy (DOE)

*(A subset of RDD&D-, policy- and data-related websites)*

<http://www.energy.gov/>

<http://www.energy.gov/offices> (Provides links to all DOE Program Offices)

Advanced Research Projects Agency-Energy (ARPA-E)

<http://arpa-e.energy.gov/>

Office of Energy Policy and Systems Analysis (EPSA)

<http://energy.gov/epsa/office-energy-policy-and-systems-analysis>

U.S. Energy Information Administration (EIA)

<https://www.eia.gov/>

Loan Programs Office (LPO)

<http://www.energy.gov/lpo/loan-programs-office>

Office of the Under Secretary for Management and Performance (S3)

<http://www.energy.gov/office-under-secretary-management-and-performance>

Office of Environmental Management (EM)

<http://www.energy.gov/em/office-environmental-management>

Office of the Under Secretary for Science and Energy (S4)

<http://www.energy.gov/office-under-secretary-science-and-energy>

Office of Electricity Delivery and Energy Reliability (OE)

<http://www.energy.gov/oe/office-electricity-delivery-and-energy-reliability>

Office of Energy Efficiency and Renewable Energy (EERE)

<http://www.energy.gov/eere/office-energy-efficiency-renewable-energy>

Office of Fossil Energy (FE)

<http://www.energy.gov/fe/office-fossil-energy>

Office of Indian Energy Policy and Programs (IE)

<http://www.energy.gov/indianenergy/office-indian-energy-policy-and-programs>

Office of Nuclear Energy (NE)

<http://www.energy.gov/ne/office-nuclear-energy>

Office of Science (SC)

<http://science.energy.gov/>

Office of Technology Transitions

<http://www.energy.gov/technologytransitions/office-technology-transitions>

Crosscut Activities

Advanced Computing Tech Team (ACTT)

<http://www.energy.gov/advanced-computing-tech-team>

Grid Tech Team (GTT)

<http://www.energy.gov/oe/services/doe-grid-tech-team>



Manufacturing Tech Team (Clean Energy Manufacturing Initiative [CEMI])  
<http://www.energy.gov/clean-energy-manufacturing-initiative>

Subsurface Technology and Engineering Research (SubTER)  
<http://energy.gov/subsurface-technology-and-engineering-rdd-crosscut>

Supercritical CO<sub>2</sub> Tech Team (sCO<sub>2</sub>)  
<http://www.energy.gov/supercritical-co2-tech-team>

Water-Energy Tech Team (WETT)  
<http://www.energy.gov/water-energy-tech-team>

Multiagency Collaboration for Unconventional Oil and Gas Research (MAC)  
<http://unconventional.energy.gov/>

National Nuclear Security Administration (NNSA)  
<http://nnsa.energy.gov/>

#### U.S. Department of Energy National Laboratories

Ames Laboratory - <http://www.ameslab.gov/>  
Argonne National Laboratory - <http://www.anl.gov/>  
Brookhaven National Laboratory - <http://www.bnl.gov/>  
Fermi National Accelerator Laboratory - <http://www.fnal.gov/>  
Idaho National Laboratory - <https://www.inl.gov/>  
Lawrence Berkeley National Laboratory - <http://www.lbl.gov/>  
Lawrence Livermore National Laboratory - <https://www.llnl.gov/>  
Los Alamos National Laboratory - <http://www.lanl.gov/>  
National Energy Technology Laboratory - <http://www.netl.doe.gov/>  
National Renewable Energy Laboratory - <http://www.nrel.gov/>  
Oak Ridge National Laboratory - <http://www.ornl.gov/>  
Pacific Northwest National Laboratory - <http://www.pnl.gov/>  
Princeton Plasma Physics Laboratory - <http://www.pppl.gov/>  
Sandia National Laboratories - <http://www.sandia.gov/>  
Savannah River National Laboratory - <http://srnl.doe.gov/>  
SLAC National Accelerator Laboratory - <https://www6.slac.stanford.edu>  
Thomas Jefferson National Accelerator Facility - <https://www.jlab.org>

#### Power Marketing Administration

Bonneville Power Administration - <http://www.bpa.gov/>  
Southeastern Power Administration - <http://www.energy.gov/sepa>  
Southwestern Power Administration - <http://www.swpa.gov/>  
Western Area Power Administration - <http://www.wapa.gov/>

#### U.S. Department of Homeland Security (DHS)

<http://www.dhs.gov/>  
<http://www.dhs.gov/energy-sector>  
<http://www.dhs.gov/nuclear-reactors-materials-and-waste-sector>  
<http://www.dhs.gov/science-and-technology>



### U.S. Coast Guard

<http://www.uscg.mil/>  
<http://www.uscg.mil/hq/cg4/cg46/default.asp>  
<http://www.uscg.mil/hq/cg4/cg46/accomplishments.asp>

### Interagency Coordinating Committee for Oil Pollution Research (ICOPR)

<http://www.uscg.mil/iccopr/>

## U.S. Department of Housing and Urban Development (HUD)

<http://portal.hud.gov/hudportal/HUD>  
[http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/comm\\_planning/library/energy](http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/library/energy)

## U.S. Department of Interior (DOI)

<https://www.doi.gov/>  
<https://www.doi.gov/energy>  
<https://www.doi.gov/greening/energy/>

### Bureau of Land Management (BLM)

<http://www.blm.gov/wo/st/en/prog/energy.html>  
[http://www.blm.gov/wo/st/en/prog/energy/renewable\\_energy.html](http://www.blm.gov/wo/st/en/prog/energy/renewable_energy.html)

### Bureau of Reclamation (BoR)

<http://www.usbr.gov/main/about/>

### Bureau of Offshore Energy Research (BOEM)

<http://www.boem.gov/>

### Bureau of Safety and Environmental Enforcement (BSEE)

<http://www.bsee.gov/>

### U.S. Geological Survey (USGS)

[http://www.usgs.gov/energy\\_minerals/](http://www.usgs.gov/energy_minerals/)  
<http://energy.usgs.gov/>

## U.S. Department of Labor (DOL)

<http://www.dol.gov/>  
<https://www.doleta.gov/BRG/Indprof/Energy.cfm>  
[http://www.bls.gov/green/energy\\_auditors/energy\\_auditors.htm](http://www.bls.gov/green/energy_auditors/energy_auditors.htm)

## U.S. Department of State

<http://www.state.gov/e/>

### Bureau of Economic and Business Affairs

<http://www.state.gov/e/eb/index.htm>

### Bureau of Energy Resources

<http://www.state.gov/e/enr/index.htm>

### Bureau of International Security and Nonproliferation

<http://www.state.gov/t/isn/index.htm>



Bureau of Oceans and International Environmental and Scientific Affairs  
<http://www.state.gov/e/oes/index.htm>

Office of the Chief Economist  
<http://www.state.gov/e/oce/index.htm>

Office of the Science & Technology Adviser  
<http://www.state.gov/e/stas/index.htm>

U.S. Agency for International Development (USAID)  
<https://www.usaid.gov/>  
<https://www.usaid.gov/what-we-do/economic-growth-and-trade/infrastructure/energy>  
<https://www.usaid.gov/GlobalDevLab/about>

### **U.S. Department of Transportation (DOT)**

<https://www.transportation.gov/>  
<https://www.transportation.gov/mission/sustainability/renewable-energy>

Office of the Assistant Secretary for Research and Technology  
<http://www.rita.dot.gov/>

Research, Development and Technology  
<http://ntlsearch.bts.gov/researchhub/index.do>

Volpe, the National Transportation Systems Center  
<http://www.volpe.dot.gov/>

Federal Aviation Administration (FAA)  
[http://www.faa.gov/about/office\\_org/headquarters\\_offices/apl/research/](http://www.faa.gov/about/office_org/headquarters_offices/apl/research/)

Pipeline and Hazardous Materials Safety Administration (PHMSA)  
<http://www.phmsa.dot.gov/>

### **U.S. Department of Treasury (Treasury)**

<https://www.treasury.gov/Pages/default.aspx>  
<https://www.treasury.gov/about/organizational-structure/offices/Pages/Environment-and-Energy.aspx>

### **U.S. Environmental Protection Agency (EPA)**

<http://www3.epa.gov/>  
<http://www.epa.gov/energy>  
<http://www3.epa.gov/statelocalclimate/local/index.html>  
<http://www3.epa.gov/epawaste/nonhaz/municipal/wte/index.htm>  
<http://www.epa.gov/water-research/water-and-energy-research>  
<http://www2.epa.gov/research/strategic-research-action-plans>

Office of Air and Radiation  
<http://www.epa.gov/aboutepa/about-office-air-and-radiation-oar>

Office of Atmospheric Programs  
<http://www.epa.gov/aboutepa/about-office-air-and-radiation-oar#oap>





Office of Transportation and Air Quality

<http://www.epa.gov/aboutepa/about-office-air-and-radiation-oar#oap>

National Vehicle and Fuel Emissions Laboratory

<http://www.epa.gov/aboutepa/about-national-vehicle-and-fuel-emissions-laboratory-nvfel>

Energy Star Program

<http://www.energystar.gov/>

Office of Research and Development

<http://www.epa.gov/research>

<http://www2.epa.gov/aboutepa/about-office-research-and-development-ord>

Air, Climate, and Energy Research Program

<http://www.epa.gov/aboutepa/about-air-climate-and-energy-research-program>

<http://www.epa.gov/research/air-climate-and-energy-strategic-research-action-plan-2012-2016>

Safe and Sustainable Water Resources Research Program

<http://www.epa.gov/aboutepa/about-safe-and-sustainable-water-resources-research-program>

### **Federal Aviation Administration (FAA)**

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

### **Federal Communications Commission (FCC)**

<https://www.fcc.gov/>

### **Federal Energy Regulatory Commission (FERC)**

<http://www.ferc.gov/>

<http://www.ferc.gov/about/offices.asp>

### **U.S. General Services Administration (GSA)**

<http://www.gsa.gov/portal/category/100000>

<http://www.gsa.gov/portal/content/104491>

GSA Green Proving Ground

<http://www.gsa.gov/portal/category/102491>

### **National Aeronautics and Space Administration (NASA)**

<https://www.nasa.gov/>

<http://www.nasa.gov/centers/ames/greenspace/clean-energy.html>

[http://climate.nasa.gov/solutions/energy\\_innovations/](http://climate.nasa.gov/solutions/energy_innovations/)

<http://power.larc.nasa.gov/index.php>

### **National Science Foundation (NSF)**

<http://www.nsf.gov/>

Directorate of Biological Sciences

<http://www.nsf.gov/dir/index.jsp?org=BIO>

Directorate of Geosciences

<http://www.nsf.gov/dir/index.jsp?org=GEO>



**Directorate of Engineering**

<http://www.nsf.gov/dir/index.jsp?org=ENG>

**Directorate for Computer and Information Science & Engineering**

<http://www.nsf.gov/dir/index.jsp?org=CISE>

**Directorate for Mathematical and Physical Sciences**

<http://www.nsf.gov/dir/index.jsp?org=MPS>

**Directorate for Social, Behavioral, and Economic Sciences**

<http://www.nsf.gov/dir/index.jsp?org=SBE>

**U.S. Nuclear Regulatory Commission (NRC)**

<http://www.nrc.gov/>

**Endnotes**

<sup>1</sup> Quadrennial Energy Review, “Energy Transmission, Storage, and Distribution Infrastructure”, April 2015, <http://energy.gov/epso/downloads/quadrennial-energy-review-first-installment>

And for ongoing QER work, see: <http://energy.gov/epso/quadrennial-energy-review-qer>