



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

federal energy management program

U.S. Department of the Interior Overview

Federal Utility Partnership Working Group

Mary Heying

Department of the Interior

Office of Acquisition and Property Management

April 2008



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

DOI Mission

DOI's mission is to:

Protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.





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

DOI Bureaus



Bureau of Indian Affairs



National Park Service



Bureau of Land Management



Office of Surface Mining



Bureau of Reclamation



U.S. Fish & Wildlife Service



Minerals Management Service

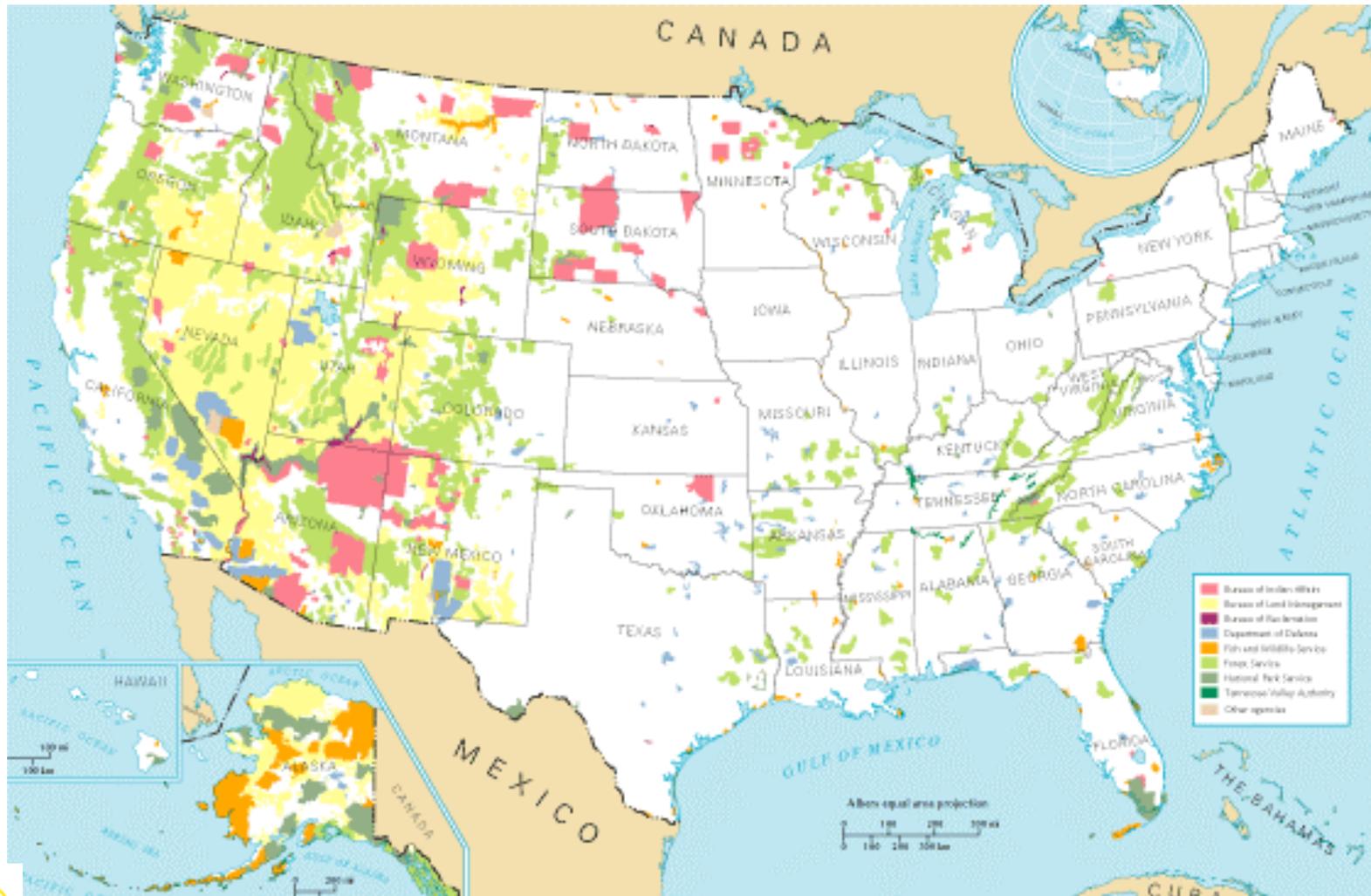


U.S. Geological Survey





DOI Bureaus





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

DOI Owned Assets

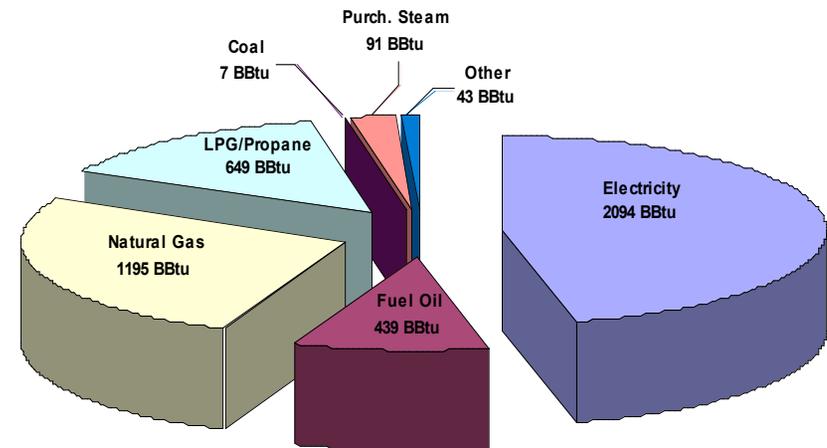
- **Interior's Owned Assets**
 - **48,000 Buildings**
 - Office Buildings
 - Visitor Centers
 - Schools
 - Dormitories
 - Laboratories
 - Detention Centers
 - Historical Buildings & National Monuments
 - Housing
 - Warehouses





- **Facility Energy Data (FY2007)**

- Energy Sq Ft - 61,725,000
- Energy Consumption - 4,515 BBtu
- Energy Intensity – 73,180 Btu/sq. ft
- Energy Cost - \$95M





Challenges

- Majority of buildings are less than 10,000 square feet
- Geographically Dispersed
- Decentralized
- Resources
- Rising Utility Costs
- Increased Federal Requirements





- Improve building energy efficiency and meet the out-year goals with reduced funding.
- As building systems age and the cost of energy continues to increase, we need to find alternative financing methods to keep pace.





Bureau of Land Management – Multi-Phased, Regional ESPC

- Phase 1 – National Interagency Fire Center & Boise District
 - ECM – Boilers, Lighting, Control System, Occupancy Sensors, Meters
 - Contract - \$1.5M, 23 Year Finance Term
 - Savings - \$117,000 annually, 26% Reduction in Energy Consumption
- Phase 2 - Facilities in CO, ID, MT, NV, OR, and WY (104 sites)
 - ECM – *Prescribed Sites*: Lighting, Occupancy Sensor, Thermostats; *Engineered Sites*: HVAC, Lighting, Controls, Occupancy Sensors, Meters, Commissioning
 - Contract – \$3.6M, 20 Year Finance Term
 - Savings - \$266,000 annually
- Phase 3 – Facilities in AK, AZ, CA, NM, TX, and UT
 - In planning stages





- Audits
- Lighting Retrofits
- Occupancy Sensors
- Equipment Replacement – Boilers, Air Handlers, HVAC controls
- Water Conservation Technologies
- Advance Metering Systems
- Renewable Energy Systems





Bureau of Indian Affairs – Eastern Region

- Boque Chitto Day School
 - Location: 20 mi east of Philadelphia, MS
 - Facility Size: 60,000 Square feet
 - Electrical Consumption: 1,700 MWH annually
- Conehatta Elementary School
 - Location: 50 mi south of Philadelphia, MS
 - Facility Size: 68,000 Square feet
 - Electrical Consumption: 1,125 MWH annually
- Miccosukee Indian School
 - Location: West of Miami, FL
 - Facility Size: 50,500 Square feet
 - Electrical Consumption: 1,720 MWH annually





Fish and Wildlife Service – Micro-Hydro Power

- Electricity with net metering could be produced at National Fish Hatcheries via a micro-hydro turbine/generator turned by a gravity flow water/effluent system at:
 - Greers Ferry NFH, Arkansas (influent)
 - Jordan River NFH, Michigan (effluent)
- Case Study: Greers Ferry NFH
 - 12,000 gpm gravity-feed water is supplied from a Corps of Engineers dam
 - 300 kW micro-hydro turbine/generator
 - Cogeneration permit would allow sale of “green tag” electricity in accordance with new Arkansas law
 - Potential payback ~ 3 Years
 - Possible Issues – Solicitor’s Opinion, COE, infrastructure upgrades





Closing Thoughts

- 460 million visitors to DOI sites annually
- 46,000 students educated in BIA schools annually
- Opportunity to educate and influence visitors and students on innovative energy conservation and renewable energy technologies





Bureau Points of Contact

- **Bureau of Indian Affairs**
 - John Brown - 505-563-5175
- **Bureau of Land Management**
 - Chuck Svoboda – 303-236-6661
- **Bureau of Reclamation**
 - Carl Leetham - 303-445-2044
- **National Park Service**
 - Terry Brennan - 202-513-7207
- **U.S. Fish & Wildlife Service**
 - David Guthrie - 703-358-2476
- **U.S. Geological Survey**
 - Rob Eng - 703-648-4655





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

Contact Information

Mary Heying
U. S. Department of the Interior
Office of Acquisition and Property Management
202-208-4080
Mary_Heying@ios.doi.gov

