State Lead By Example Energy Efficiency and Conservation Practices

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Why States are Leading By Example

- **Energy Costs** - State and local governments spend more than $11 billion per year on building energy costs (almost 1/3rd energy goes to waste), more than $2.5 billion on state fleet costs, energy bills can account for 10% of a government operating budget
- **Demonstrating Clean Energy –** State government operations can provide an initial market for emerging clean energy technologies, help reduce costs through large purchase orders, and educate consumers on the benefits of clean energy
- **First Step in Comprehensive Energy Strategy –** States developing a comprehensive energy plan can take immediate and tangible steps through lead by example actions
- **Rising Emissions Associated with Energy Use** – A majority of states have a climate action plan or have set a statewide greenhouse gas emissions reduction target, and several are taking actions within state government to help meet their statewide goals

Energy Efficiency/Conservation Lead By Example (LBE) Topics

- Finance
- Buildings and Public Facilities
- Procurement and Management Policies
- State Fleets

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LBE Finance

- **Challenges and Considerations**
  - Cost premium upfront (payback over several years)
  - Competing state budget priorities
  - Modest state revenue growth
- **State Solutions**
  - Revolving Loan Funds
  - Performance Contracting
  - Bonding to set-up public corporation
  - Pension Funds

LBE Finance State Practices

- **Texas** LoanSTAR revolving loan program, $212 million in energy savings.
- **Kansas** Facility Conservation Improvement Program (FCIP), to-date half of state's 40 million sq. ft. improved saving nearly $8 million per year.
- State of **Iowa** Facilities Improvement Corporation (SIFIC) funds state agency energy efficiency improvements, to date saved $88 million in energy costs.
- **California** *Green Wave* initiative resulted in CalPERS and CalSTRS agreeing to invest $200 million in energy efficiency improvements to reduce energy use in their real estate holdings by 20% over 5 years.

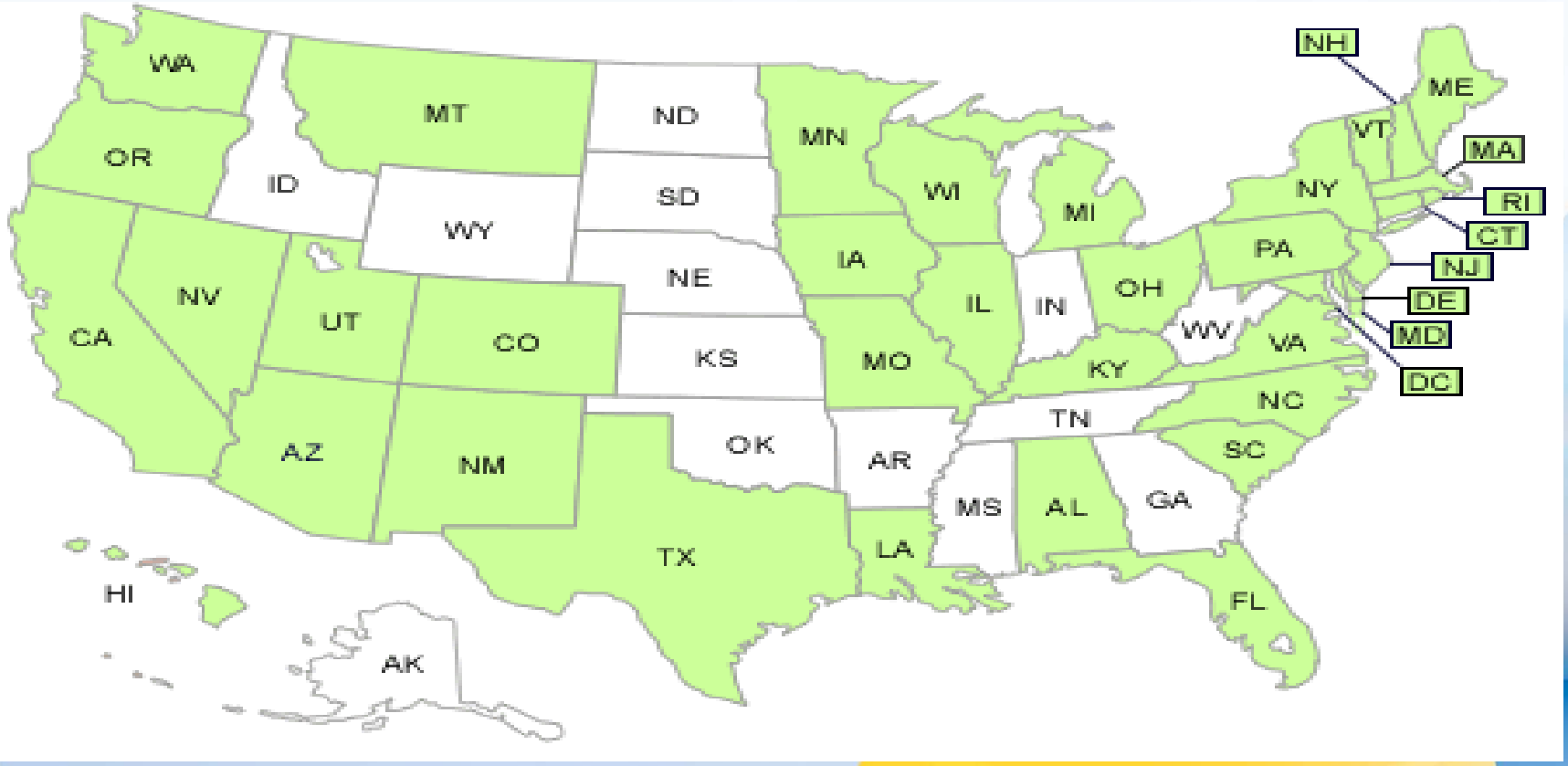
LBE Buildings/Facilities

- **Challenges and Considerations**
  - Deciding which type of "green" building standard to require
  - Need for benchmarking
  - Taking comprehensive approach to achieve maximum benefits
- **State Solutions**
  - Set-Up Energy Audits, Benchmarking
  - Setting Energy Savings Targets
  - Updated Building Energy Codes
  - Beyond Code: "Green" Building Standards

LBE Energy Efficient Buildings/Facilities State Practices

- **Ohio** in 2007 required all state agencies to perform energy audits, reduce consumption 15% within four fiscal years, and use a new benchmarking tool to measure consumption and carbon footprint.
- **New York** all state agencies must reduce energy use 35% from 1990 levels by 2010 in buildings or facilities, all new buildings/substantial renovations 20% more energy savings over state building code.
- **Alabama,** no statewide commercial building code, applies a commercial building energy code for all state buildings. **Louisiana** passed legislation in 2007 updating its residential and commercial energy codes, and **Massachusetts** legislation provides for automatic code updates every 3 years.
- States use LEED, Green Globes, ENERGY STAR, other systems to rate/certify buildings. **Massachusetts** LEED Plus for new construction/renovation exceeding 20,000 sq. ft., LEED plus 20% beyond state energy code, and other measures. **North Carolina** new buildings larger than 20,000 sq. ft. 30% better than code, overall goal of reducing per sq. ft. energy use 30% over FY2003-2004 by 2015.

LBE Energy Efficient Public Buildings State Practices – EPA Action Map



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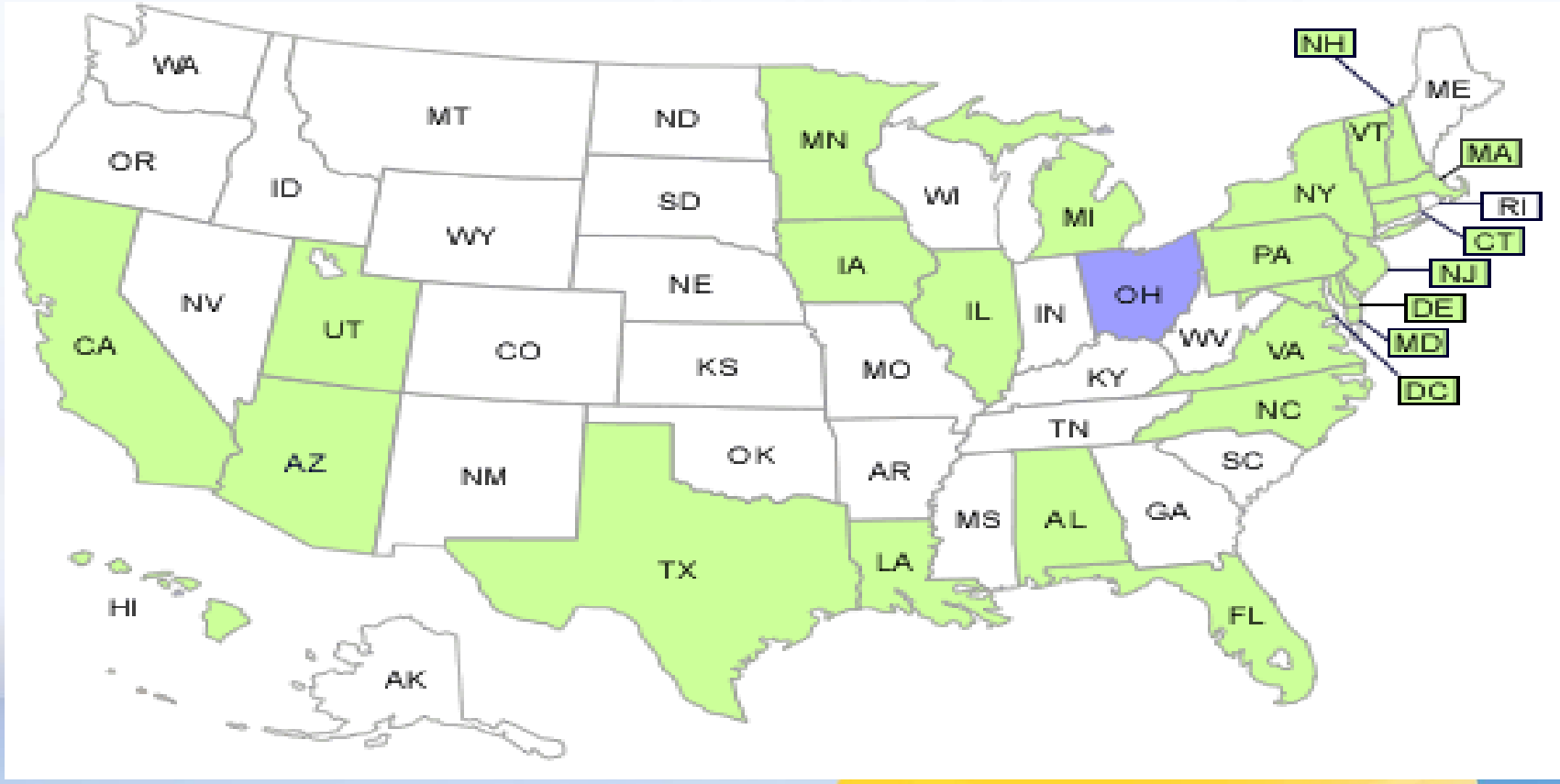
LBE Procurement/Management

- **Challenges and Considerations**
  - Addressing low bid regulations/lifecycle cost analysis
  - Opportunity for aggregated purchasing to save $
  - Need for employees to manage energy use effectively
- **State Solutions**
  - Requiring or Allowing Lifecycle Cost Analysis
  - Leverage state purchase power to lower costs
  - Setting Appliance Purchase Standards
  - Implementing Staff Training

LBE Procurement/Management State Practices

- **Pennsylvania** and **Florida** require lifecycle cost analysis for new buildings, equipment/appliance purchases.
- **Massachusetts** Environmentally Preferable Purchasing Initiative offers energy efficient products on statewide contracts at a lower cost. **Florida** considers GHG emissions, energy consumption in outsourcing projects, meeting venues, and vendor contracts.
- **Virginia** and **Maryland** require the purchase of ENERGY STAR rated appliances and equipment. **Michigan, Minnesota, Kansas, Colorado,** and **Oregon** are part of NGA/Climate Savers Computing Initiative partnership, agree to purchase ENERGY STAR rated computer equipment for state (half typical PC energy use is wasted).
- The Climate Savers states are educating state employees about computer power management functions, and **Kansas** requires computers be turned off when not in use. **Massachusetts** encourages employees to turn off lights, computers, and other equipment when not in use, run dishwashers and laundry only when full, and program thermostats .

LBE Procurement/Management State Practices – EPA Action Map



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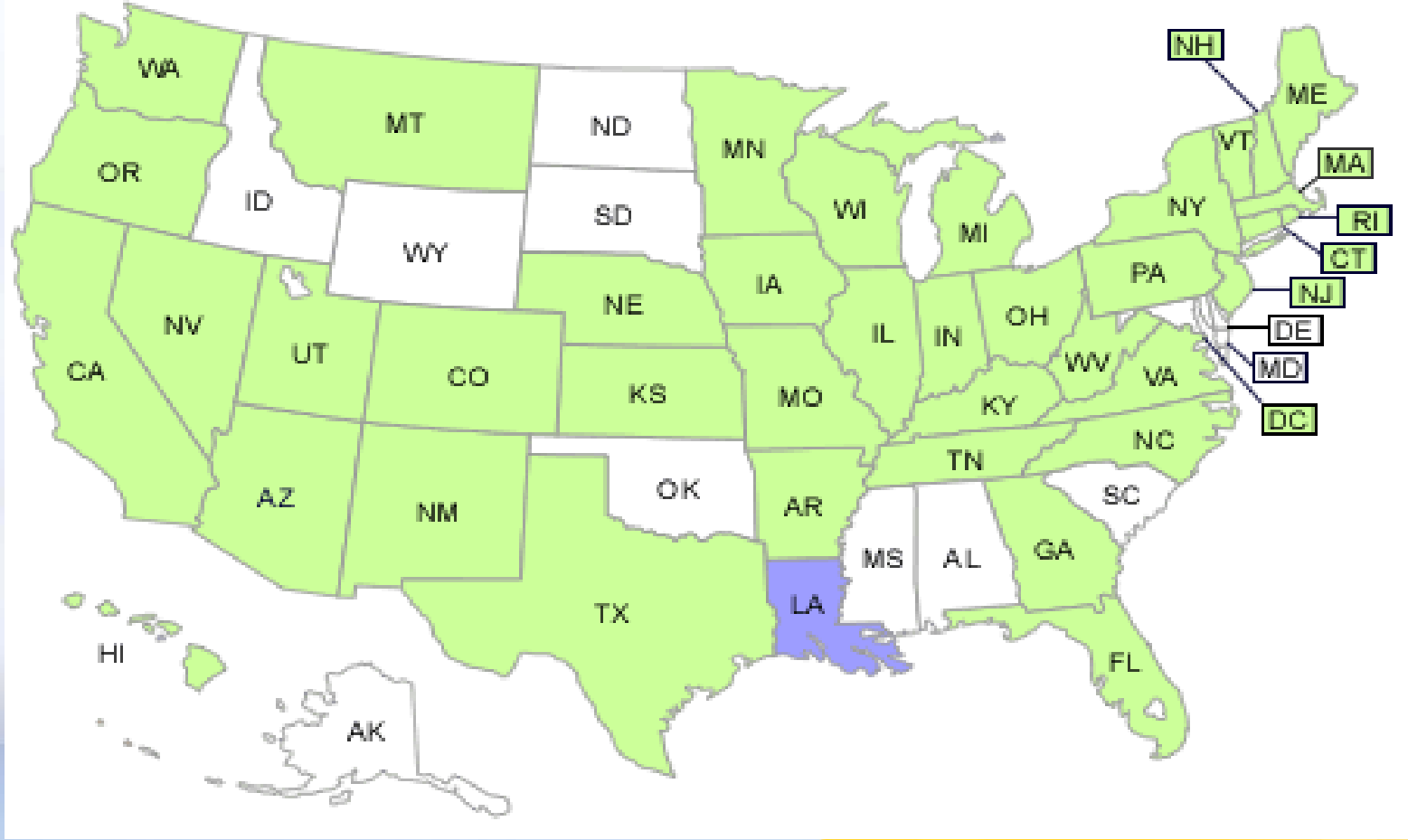
LBE State Fleets

- **Challenges and Considerations**
  - Rising cost of fuel presents an opportunity
  - Fleet turnover takes time, long-term procurement contracts
  - Lack of variety of fuel efficient vehicles from marketplace
  - Opportunity to demonstrate new technology
- **State Solutions**
  - Fleet Performance Standards
  - Demonstration Projects
  - Setting Petroleum Consumption Reduction Targets for State Fleet
  - Contracting for Efficient Rental Vehicles

LBE State Fleets
State Practices

- **Vermont** requires its state fleet to be "right-sized" and requires purchase of the most efficient vehicles in each class, including hybrid-electric vehicles. **Minnesota** requires that at least 75% of all new on-road vehicles achieve 30 MPG city and 35 MPG highway. Both states call for state employees to consider alternative commuting solutions.
- **Minnesota** has indicated it will purchase plug-in hybrid electric vehicles when they are available, and willing to pay a premium of up to 10%.
- **Minnesota** target of reducing gasoline use in state vehicles 50% by 2015 over 2005 levels. **New Hampshire** has instituted an idling-reduction policy for state vehicles.
- **Florida's** 2009 rental car contract criteria will include energy efficiency.

LBE State Fleets
State Practices – EPA Action Map



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Other Ways for State to Lead By Example on Clean Energy

- Set Overall Energy Consumption Reduction Target for State Government (**Montana** 20% by 2010).
- Clean Power Purchase for State Government (**Pennsylvania** exceed requirement by purchasing 28% electricity from wind and hydro).
- Alternative Fuel Use/Flex Fuel Vehicle Requirements (**Arizona** 75% of new vehicles must be AFV's, **Missouri** diesel vehicles B20 requirement when 25 cents or less per gallon premium.)
- Setting GHG Emissions Reductions Target for State Government (**Florida** 40% GHG reduction over 2007 levels by 2025).

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Next Steps

Comprehensive LBE Program Could Include:

- Setting a long-term energy savings goal for state government operations
- Requiring each agency to benchmark and track its energy use
- A long-term finance mechanism, such as revolving loan or public finance corporation, or expanded performance contracting

Supporting Measures Include:

- Adopt energy savings target or green building standard for new construction/major renovation for public buildings and facilities
- Requiring ENERGY STAR or other standard for appliance procurement, instituting policies to engage state employees in energy savings measures such as computer power management
- Setting increasingly higher performance standards for state fleet efficiency, setting a gasoline or petroleum reduction target, requiring purchase of advanced hybrid or plug-in hybrid vehicles when cost-effective

Resources

- http://www.epa.gov/solar/energy-programs/state-and-local/policy-maps.html (U.S. EPA state LBE maps)
- http://www.eere.energy.gov/states/alternatives/government_buildings.cfm(U.S. DOE lead by example resources)
- http://www.naesco.org/ (National Association Energy Service Companies)
- http://www.energystar.gov/ (ENERGY STAR)
- http://www.energyservicescoalition.org/ (Energy Services Coalition
- http://www.kcc.state.ks.us/energy/fcip/index.htm (Kansas FCIP)
- http://www.seco.cpa.state.tx.us/ls.htm (Texas LoanSTAR program)
- http://www.treasurer.ca.gov/greenwave/update.pdf (California Green Wave initiative)
- http://www.iowadnr.com/energy/ebank/sfp.html (State of Iowa Facilities Improvement Corporation)
- http://www.governorpress.alabama.gov/pr/ex-33-2006-05-10.asp (Alabama lead by example Executive Order)
- http://www.mass.gov/envir/Sustainable/ (Massachusetts Lead by Example Program)
- http://www.mass.gov/envir/Sustainable/pdf/07_eo484.pdf (Massachusetts Lead by Example Executive Order)

Resources

- http://www.mass.gov/envir/Sustainable/initiatives/initiatives_EPP.htm (Massachusetts Environmentally Preferable Purchasing Program)
- http://www.standardsasap.org/documents/leading_2006.htm (Appliance Standards Awareness Project state-by-state savings potential)
- http://www.colorado.gov/governor/press/pdf/executive-orders/2007/ExecutiveOrder-Greening-State-Government-GoalsObjectives.pdf (Colorado LBE Executive Order)
- http://www.climatesaverscomputing.org/ (Climate Savers Computing Initiative)
- http://www.portal.state.pa.us/portal/server.pt?open=512&objID=708&PageID=224602&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/omd/p_and_p/executive_orders/2000_2009/items/2004_12_energy_management_and_conservation_in_commonwealth_facilities.html (Pennsylvania LBE Executive Order)
- http://www.nyserda.org/programs/exorder111orig.asp (New York LBE Executive Order)
- http://governor.vermont.gov/tools/index.php?topic=ExecutiveOrders&id=249&v=Article (Vermont LBE Executive Order)
- http://www.eere.energy.gov/states/state_news_detail.cfm/news_id=10537/state=OH(Ohio LBE Executive Order)
- https://www.energystar.gov/istar/pmpam/ (EPA Portfolio Manager Tool)

Resources

- http://www.energycodes.gov/implement/state_codes/state_status_full.php (U.S. DOE status of state building codes)
- http://www.bc.alabama.gov/buildingcode.htm (Alabama building codes)
- http://gov.louisiana.gov/index.cfm?md=newsroom&tmp=detail&articleID=49 (Louisiana LBE Executive Order)
- http://www.bcap-energy.org/node/158 (Building Codes Assistance Project)
- http://www.bcap-energy.org/files/Level%20I%20MASS%20HB%2003221%20Automatic%20Update.pdf (Massachusetts Building Code Legislation)
- http://www.flgov.com/pdfs/orders/07-126-actions.pdf (Florida LBE Executive Order)
- http://www.governor.virginia.gov/initiatives/ExecutiveOrders/2007/EO_48.cfm (Virginia LBE Executive Order)
- http://www.dot.ca.gov/hq/energy/ExecOrderS-20-04.htm (California LBE Executive Order)
- http://www.eere.energy.gov/afdc/incentives_laws.html (DOE Alt Fuels Database)
- http://governor.mt.gov/20x10/default.asp (Montana 20 by 10 goal)
- www.nga.org/ci (NGA Securing a Clean Energy Future initiative)