

Appalachian States Energy Policy/Program Trends¹⁹

I. Supply Side

As was stated above, supply-side policies are designed to increase availability and diversity of fuel sources, advance technologies that use fuels more efficiently, and address fuel constraints through development of alternative energy sources.

A. Coal

1. Production Tax Incentives

Production tax incentives for coal provide project owners with tax incentives (generally in the form of tax credits) for producing coal. Although coal is a major Appalachian resource, only Alabama and Virginia have production incentives for coal.

2. Indigenous Coal Use Incentives

Indigenous coal use (or employment) incentives provide tax incentives (usually tax credits) for use of coal produced in a given state in energy generation or manufacturing. Kentucky, Maryland, and Virginia have these incentives. Only Virginia has both production incentives and use incentives.

3. Clean Coal Incentives

Clean coal incentives offer tax credits or other benefits for construction of new facilities based on clean coal technologies. Kentucky, New York, Ohio, and Pennsylvania currently have such incentives in place.

4. Environmental Policies

Environmental policies that impact coal development can take a variety of forms. In accordance with the federal Clean Air and Clean Water Acts, all Appalachian states have standards regarding emissions to air and water. Of note among these policies are stricter regulations for mercury emissions that are being considered in North Carolina²⁰, New York²¹, and Pennsylvania²². These regulations, if implemented, would certainly affect coal facilities in these states. Maryland recently passed its “4 Pollutants” initiative, which increases restrictions on emissions of sulfur dioxide, nitrogen oxide, particulate matter, and carbon dioxide.²³ This regulation will affect coal facilities in Maryland. Several Appalachian states offer tax incentives for the purchase of pollution control technologies.

¹⁹ References and resources on state policy resources are in Appendix A.

²⁰ North Carolina Mercury Rule. <http://daq.state.nc.us/rules/rules/D537-541.pdf>

²¹ “Governor Announces Major Initiative to Reduce Mercury Emissions.” May 25, 2006.

<http://www.ny.gov/governor/press/06/0525063.html>

²² Pennsylvania’s Proposed Mercury Reduction Rule.

http://www.dep.state.pa.us/dep/deputate/airwaste/aq/regs/Mercury_Rule.htm

²³ “Maryland to Join Eastern States in Regulating Carbon Dioxide.” April 4, 2006.

<http://www.ens-newswire.com/ens/apr2006/2006-04-04-09.asp>

5. Production Taxes

Management of federal production royalties and state severance taxes offer another opportunity for states to affect production and use of coal in Appalachia. When the United States government leases public lands for mineral production, it pays part of the income to the state where the leased land is located. Federal law requires that a portion of the royalty funds be given back to the local governments where the mineral extraction occurred. Likewise, several states in Appalachia require severance taxes on all coal production within the state, usually based on a per-ton rate or a percentage of the revenue. Alabama, Ohio, Tennessee, Kentucky, Virginia, and West Virginia all have state severance taxes at varying levels. The level, distribution, and use of these funds can be designed to incentivize production, address environmental remediation, or encourage certain production methods and technologies.

West Virginia is one of several states that also imposes an export tax on coal. In the case *U.S. Steel Mining Co. et al. v. Helton*, the coal companies are arguing that West Virginia's tax on exported coal is illegal because the Constitution's "Import-Export" clause prohibits state governments from imposing any "imposts or duties on imports or exports." On appeal to the Supreme Court is a May 2004 ruling by Kanawha Circuit Court that upheld the West Virginia severance tax imposed on all coal mined in the state. The court found that the tax does "not infringe upon the federal government's ability to speak with one voice when regulating foreign commerce." The state Supreme Court upheld the lower court's decision in December 2005.²⁴

6. Other Leading State Policies

California and Wyoming have entered into a Memorandum of Understanding (MOU) to create a joint IGCC task force to take advantage of federal funding opportunities to help develop a commercial-scale integrated gasification combined cycle coal project with carbon sequestration in Wyoming.²⁵ The California Energy Commission, the Public Utilities Commission, and the Governor's Climate Action Team have all recommended that any long-term investments in new power generation for California have a greenhouse gas emission characteristic that is equal to or better than a state-of-the-art IGCC plant.

<u>Coal Barriers/Challenges</u>	<u>Possible ARC Opportunities</u>
Clean coal technologies hold promise for increasing use of Appalachian coal for energy production. However, there is concern about the difficulty of permitting clean coal facilities, such as those using integrated gas combined cycle (IGCC) and carbon capture and sequestration (CCS) technologies.	In order to facilitate future permitting of IGCC and CCS plants, states need more information about these technologies. ARC could invite state regulators to participate in a roundtable discussion of how to streamline the permitting process for IGCC and CCS facilities.

²⁴ Greenwire, May 5, 2006 & Sept. 21, 2005

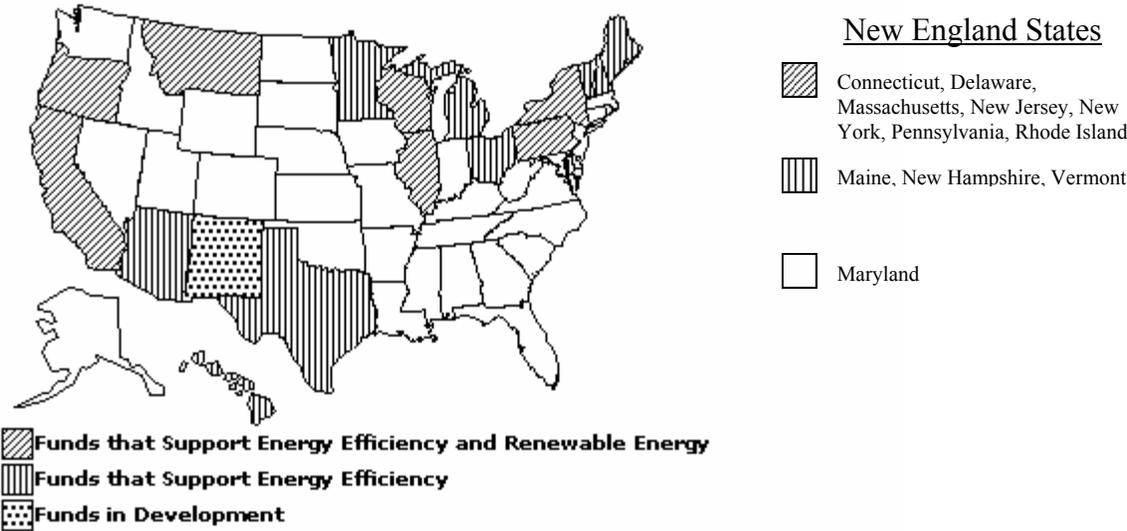
²⁵ "California and Wyoming Sign Agreement on Development of Clean Coal Technology." April 19, 2006. <http://www.schwarzenegger.com/news.asp?id=2153>

<u>Coal Barriers/Challenges</u>	<u>Possible ARC Opportunities</u>
Capital costs for IGCC facilities are substantial.	ARC could serve as a broker for funding for IGCC facilities in Appalachian states.

B. Electricity

1. Systems Benefit Funds

Systems (or public) benefit funds are programs developed through the electric utility restructuring process as a measure to assure continued support for renewable energy resources, energy efficiency initiatives, and low-income support programs. Such funds are commonly supported through a charge to all customers on electricity consumption, e.g., 0.2 cents per kilowatt hour of energy used. New York, for example, applies some of the proceeds from its systems benefits fund to research innovative energy technologies. Systems benefit funds are generally supported through a charge to all customers on electricity consumption. In addition to New York, only Ohio and Pennsylvania currently have systems benefit funds. However, several other states have expressed an interest in examining the possibility of implementing systems benefits funds in the future.



Source: Pew Center on Global Climate Change

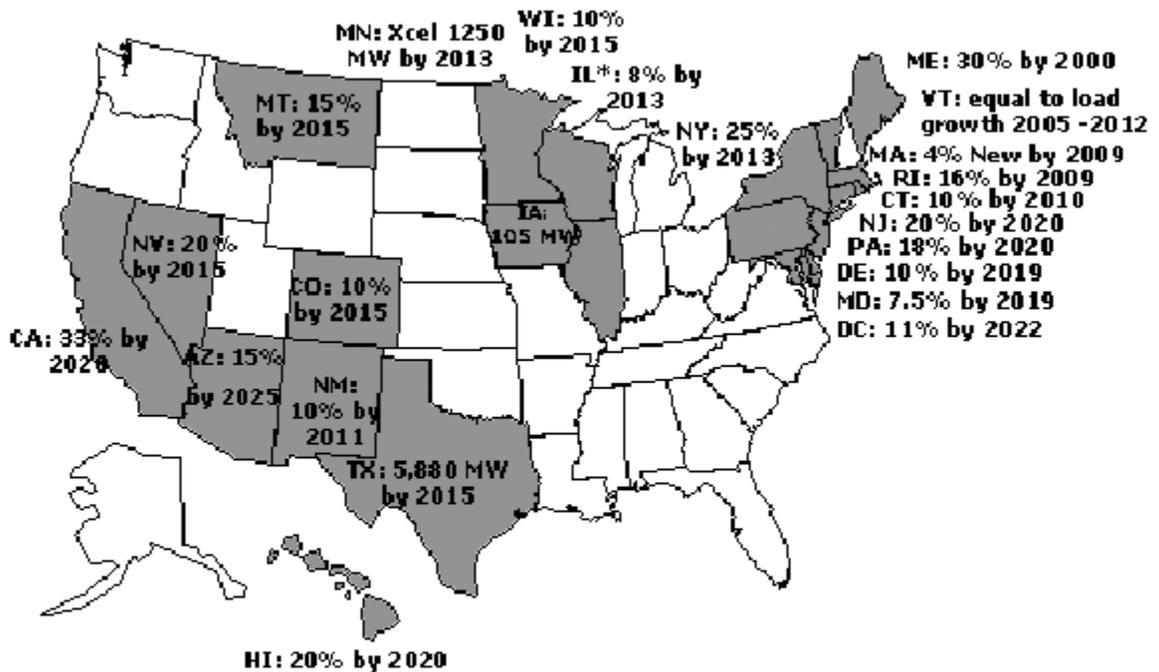
2. Policies for Demand Response

Demand response (or load management) programs allow electricity customers to reduce their energy consumption at critical times or in response to market prices. All Appalachian states except Mississippi and Tennessee have some sort of demand response program.²⁶

²⁶ http://www1.eere.energy.gov/femp/program/utility/utilityman_energymanage.html

3. Resource Portfolio Standards

Resource portfolio standards require that a certain percentage of a utility's overall or new generating capacity or energy sales must be derived from renewable resources, such as requiring that 1% of electric sales be from renewable energy in the year 2010. Portfolio Standards most commonly refer to electric sales measured in megawatt hours (MWh), as opposed to electric capacity measured in megawatts (MW). Currently, only Maryland, New York, and Pennsylvania have renewable portfolio standards. However, several other states have expressed an interest in exploring the possibility of implementing such standards in the future.



* IL implements its RPS through voluntary utility commitments

Adapted from Pew Center on Climate Change

4. Energy Efficiency Resource Standard (EERS)

An EERS requires energy providers to meet quantitative targets for energy savings, typically in the electricity and natural gas sectors. State public utility commissions or other regulatory bodies specify explicit numerical goals that must be met on an annual and cumulative basis. An EERS may specify that implementation will involve coordination with a public benefit fund (PBF)²⁷ and may be linked to a renewable portfolio standard (RPS). In Appalachia, only Pennsylvania has an EERS.

5. Generation Disclosure Requirements

"Disclosure" refers to the requirement that utilities provide their customers with additional information about the energy they are supplying. This information often

²⁷ www.keystone.org/ceetf background document for

includes fuel-mix percentages and emissions statistics. Maryland, New York, Ohio, Pennsylvania, and Virginia have generation disclosure requirements.

6. Other Leading State Policies

Massachusetts regulations include a four-pollutant cap on emissions for six coal power plants.²⁸ In addition to limits on emissions of sulfur dioxide, nitrogen oxide, and mercury, Massachusetts also requires plants to reduce their carbon dioxide emissions. There are no requirements about how reductions must be made, although the state does have a preference for conversion of plants from coal to natural gas. Deadlines for achieving the new standards are delayed for any plant that converts to natural gas.

Statewide Renewable Portfolio Standards have now been adopted by 13 states and efforts are beginning to establish and coordinate these programs regionally.

California, Colorado, Texas, and most of the Northeast states are among the states that have implemented the RPS through a Renewable Energy Credit (REC) Trading System. REC trading among load serving entities is designed to achieve the RPS standard more cost-effectively and allow better tracking of transactions and compliance.²⁹

<u>Electric Power Barriers/Challenges</u>	<u>Possible ARC Opportunities</u>
As is indicated above, several states have expressed an interest in pursuing systems benefit funds and renewable portfolio standards. Documents prepared by these states suggest that state officials want to assess the feasibility of these policies and study their potential impacts to the economy.	<ol style="list-style-type: none"> 1. ARC could provide research or assessment funds to assist in these efforts. 2. ARC could host conference calls or discussion groups in which states who currently have systems benefits funds and/or renewable portfolio standards could share their knowledge and experience with other states.
Some states in Appalachia are experiencing electricity supply problems. Others are concerned about minimizing risk of supply disruptions in the future.	ARC could initiate and/or host a regional energy compact and regional planning for energy supply/infrastructure redundancies.

C. Natural Gas and Oil

1. Production Incentives for Natural Gas and/or Oil

Alabama, New York, Pennsylvania, Virginia, and West Virginia offer production incentives for natural gas. Alabama, Kentucky, New York, and West Virginia offer

²⁸“Greenhouse and Statehouse: The Evolving State Government Role in Climate Change.” Barry G. Rabe, Pew Center on Global Climate Change. November 2002.

http://www.pewclimate.org/global-warming-in-depth/all_reports/greenhouse_and_statehouse_/index.cfm

²⁹ EPA, Clean Energy-Environment Guide to Action for States, Chapter 5.1, 2006.

www.epa.gov/cleanrgy/stateandlocal/guidetoaction.htm

incentives for oil production. These incentives generally take the form of tax credits for produced natural gas or oil. Other incentives include tax exemptions for resource studies and permit exemptions. Alabama offers incentives for offshore deep wells.

2. Enhanced Oil Recovery Incentives

Enhanced recovery techniques allow for extraction of additional reserves of oil and/or prolonged production in more mature wells. By increasing production efficiency, enhanced oil recovery can extend the economic life of older wells that can no longer be tapped by traditional extraction methods. Enhanced recovery techniques include gas re-injection, carbon dioxide flooding, and horizontal drilling. Alabama, Mississippi, and Virginia offer incentives for enhanced oil recovery.

3. Streamlined Permitting and/or Reporting

Streamlined permitting and/or reporting can take a variety of forms. In Appalachian states, these include allowing well completion statements to serve as hazardous chemical inventories and electronic permit applications. Ohio and Pennsylvania have these policies.

4. Other Leading State Policies

California's Liquefied Natural Gas Interagency Permitting Working Group³⁰ works closely with agencies who are involved in the permitting process for any LNG facility in the state. The Working Group also provides guidance to potential LNG developers on how to navigate the state's permitting process.

Kentucky and Wyoming are among several states that have created state energy infrastructure authorities that can finance (through revenue bond) and build new projects not being advanced by the private sector. Kentucky's Oil and Gas Infrastructure Authority is specifically created to support natural gas and coal bed methane storage, gathering, and transportation projects.³¹

Virginia passed legislation to help facilitate oil and gas production from coal bed methane where mineral rights are in dispute. As is often the case when prior coal developers and current oil and gas developers are two different entities, lengthy litigation is often the only avenue for resolving multiple claims. The Virginia law passed in 1990 requires pooling of proceeds from production in an escrow account while the dispute is legally settled.³²

³⁰ http://www.energy.ca.gov/lng/working_group.html

³¹ DOE, Interstate Oil and Gas Compact Commission, *Mature Region, Youthful Potential, Oil and Natural Gas Resources in the Appalachian and Illinois Basins*, Sept. 2005

³² DOE IOGCC

<u>Natural Gas Barriers/Challenges</u>	<u>Possible ARC Opportunity</u>
Several states have expressed interest in expanding natural gas production, storage, and delivery. However, they must first do feasibility and impact assessments.	ARC could provide funds for feasibility and impact assessments.
Some states have identified problems with natural gas distribution. Insufficient pipeline capacity is of particular concern.	ARC could fund a study or convene a discussion group examining natural gas distribution problems and possible solutions.

D. Alternative Fuels

1. Production Incentives for Biofuels

Kentucky, Maryland, Mississippi, South Carolina, and Virginia offer production incentives for biofuels, such as ethanol and biodiesel. These incentives generally take the form of tax credits for produced fuel.

2. Other Leading State Policies

A new law in **Michigan** creates incentives for the production, distribution, and purchase of ethanol-based alternative fuels.³³ A more expansive law in **Louisiana** provides for a new mandate that ethanol produced from domestic biomass material comprise two percent of all the gasoline sold in the state.³⁴ This mandate would go into affect six months after the state produces 50 million gallons of ethanol or ten million gallons of biodiesel. **Washington** is pursuing legislation to require fuel companies to sell 20 million gallons of biodiesel each year and have biodiesel comprise at least two percent of the state's total diesel sales.³⁵

<u>Biofuels Barriers/Challenges</u>	<u>Possible ARC Opportunity</u>
<p>Several states would like to increase production and on-road delivery of biofuels.</p> <ol style="list-style-type: none"> 1. Coordination of production and delivery across states could minimize harmful duplication or omission of services and service areas. 2. Increased demand for biofuels would make expansion of production and delivery of biofuels more feasible. 	<p>ARC could:</p> <ol style="list-style-type: none"> 1. Help coordinate planning of biofuels production and delivery across Appalachia by hosting a database of planned and implemented projects. 2. Help states coordinate efforts to attract facilities that produce alternative fuel vehicles that run on biodiesel.

³³ “Granholm Says Alternative Energy Development Critical to Diversifying Economy.” April 7, 2006. <http://www.michigan.gov/gov/0,1607,7-168-23442-146879--,00.html>

³⁴ “Governor Blanco signs HB 685.” June 12, 2006. <http://www.gov.state.la.us/index.cfm?md=newsroom&tmp=detail&articleID=1945>

³⁵ “Washington State Adopts Biodiesel Requirement.” March 30, 2006. http://www.biodiesel.org/resources/pressreleases/gen/20060330_wa_b2.pdf

II. Demand-Side Policies/Programs

Demand-side policies and programs are focused on reducing the need for energy and encouraging end-users to produce energy more efficiently and closer to the point of end use.

A. Renewable Energy (RE)

1. Renewable Energy Investment Incentives

Every Appalachian state except Georgia, North Carolina, and Tennessee has some sort of incentive for residential and/or business consumers to invest in renewable energy technologies. These programs include state loans, grants, rebates, and tax incentives for the purchase and installation of renewable technologies for local (residential or business) solar, wind, and geothermal energy production and use.

2. Production Incentives for Renewable Energy

These incentives, which were mentioned above as a type of supply-side policy, also serve as demand-side policies. Production incentives encourage residential and business consumers to invest in renewable technologies for their own use and/or for contribution to the larger local energy supply (see Interconnection and Net-Metering below). This use of renewable energy decreases their demand on other energy sources. In Appalachia, only Alabama, Kentucky, South Carolina, Virginia, and West Virginia do not have production incentives for renewable energy.

3. Interconnection Standards

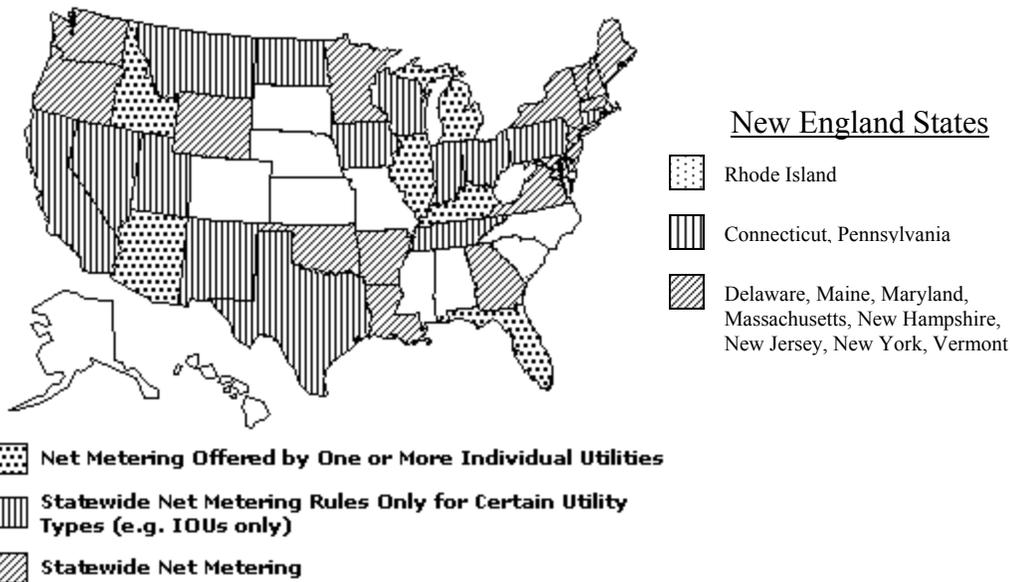
Interconnection standards regulate how distributed sources of energy (like residential and commercial production of renewable energy) can be connected to the larger energy power system. The lack of uniform installation and interconnection requirements can result in technical and economic inefficiencies, interconnection delays, and unnecessary expenses. Many Appalachian states have interconnection standards: Georgia, Maryland, New York, North Carolina, Ohio, Pennsylvania, and Virginia.

4. Green Power Purchasing Requirements

States or other government entities can require that government agencies buy electricity from renewable resources. Green power purchasing can be required for municipal facilities, streetlights, water pumping stations, government buildings, etc. Maryland, New York, Pennsylvania, and South Carolina have green purchasing requirements.

5. Net Metering Rules

For those consumers who have their own electricity-generating units, net metering allows for the flow of electricity both to and from the customer through a single, bi-directional meter. During times when the customer's generation exceeds his or her own use, electricity from the customer to the utility offsets electricity consumed at another time. Most Appalachian states have net metering rules: Georgia, Kentucky, Maryland, New York, North Carolina, Ohio, Pennsylvania, and Virginia.



Adapted from Pew Center on Global Climate Change

6. Alternative Fuel and Alternative Fuel Vehicle Incentives and/or Requirements

States can provide incentives for the consumption of alternative fuels through tax exemptions on fuel, tax rebates or credits for alternative fuel vehicles, and other mechanisms. They can also require that state or other vehicle fleets consist of alternative fuel vehicles. All Appalachian states except Alabama have one or mechanisms for encouraging consumptions of alternative fuels.

7. Other Leading State Policies

The **Connecticut** Clean Energy Fund (CCFE) is offering \$21 million in financial support to stimulate demand for installations of distributed renewable energy at commercial, industrial, and institutional buildings in Connecticut.³⁶ Support is available for projects that reduce the cost of energy-generating equipment for solar, fuel cells, wind, biomass, landfill gas, and hydropower through the On-Site Renewable Distributed Generation Program.

In **New Jersey**, combined federal and state tax credits have lowered the price of a \$27,000 residential solar electric system to \$10,000. **Oregon** offers a Business Energy Tax Credit designed to stimulate investment in energy conservation, renewable energy, recycling, and renewable fuels. The credit offers 35% of eligible project costs (incremental cost beyond standard practice).³⁷

The **Western Governors' Association** is working with the California Energy Commission to create the Western Renewable Energy Generation Information System, a voluntary system for renewable energy credits that tracks renewable energy credits across the region to facilitate trading to meet renewable energy portfolio standards.³⁸

³⁶ "On-site Renewable DG Program."

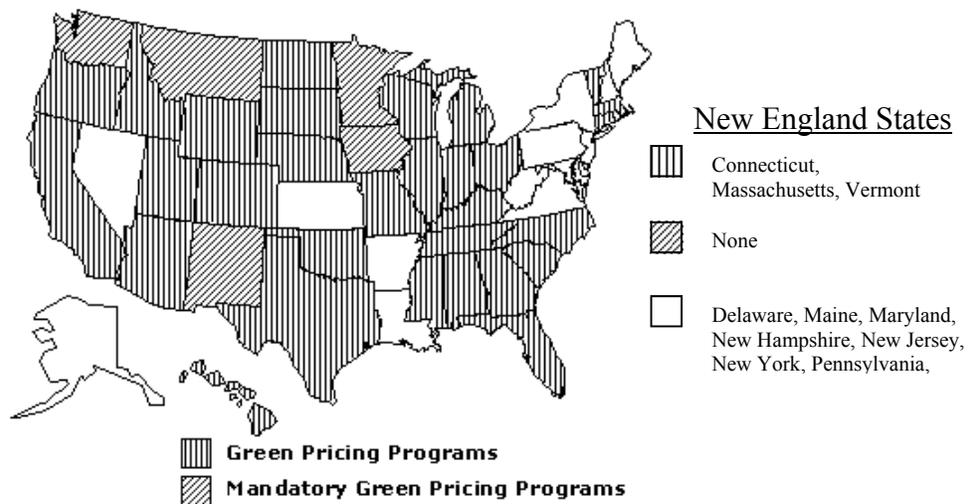
http://www.ctcleanenergy.com/investment/onsite_renewable_dg_program.html

³⁷ ACEEE, Energy Efficiency Tax Incentives, 2006.

³⁸ <http://www.westgov.org/wieb/wregis/>

8. Green Pricing

Utilities can offer customers the option to pay a premium on their electric bills to have some or all of their power provided from renewable sources. While the electricity generated by renewable sources is not delivered directly to the customers who pay for it, the utility certifies that renewable energy has been generated in an amount equal to the customer's purchase. Eight Appalachian states offer green pricing: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Ohio, South Carolina, and Tennessee.



Adapted from Pew Center on Global Climate Change

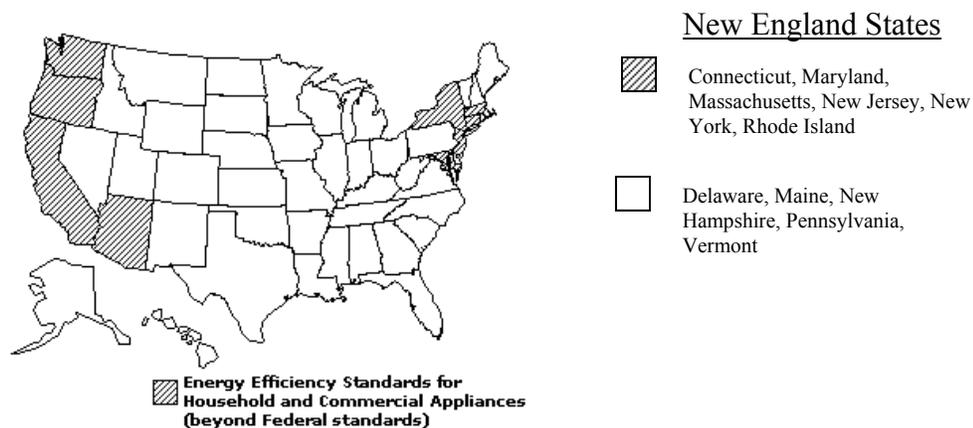
B. Energy Efficiency

1. Investment Incentives for Energy Efficiency Technologies

Many Appalachian states offer investment incentives for energy efficiency technologies: Alabama, Georgia, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and West Virginia. These incentives generally take the form of rebates, grants, loans, or sales tax exemptions. Eligible technologies generally include weatherizing, efficient home appliances (including heating and cooling systems), energy-efficient windows and other building materials, and combined heat and power production.

2. Appliance Efficiency Standards

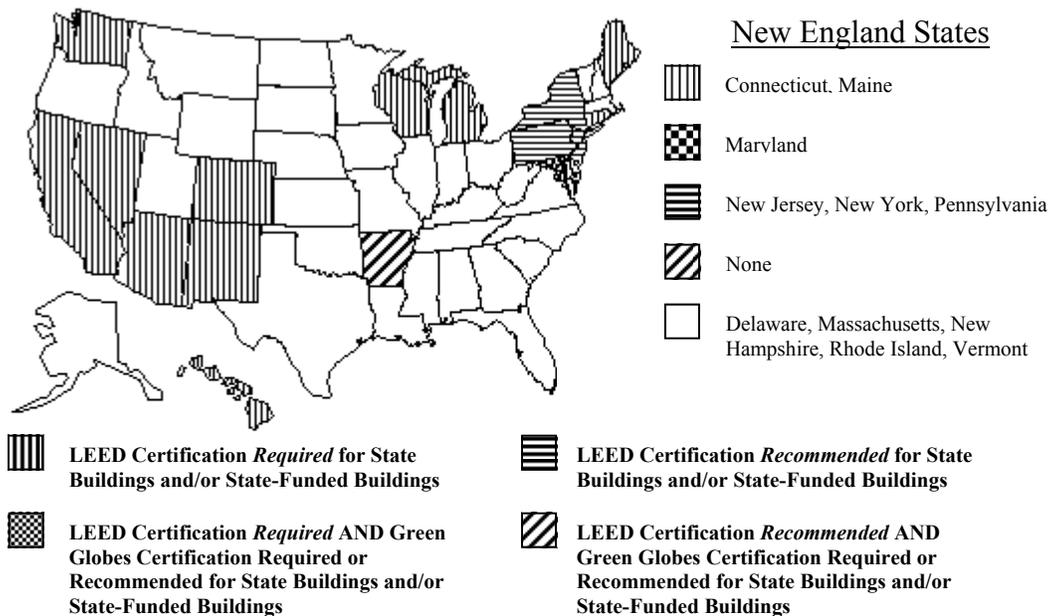
Maryland and New York have set minimum energy efficiency standards for products that are not covered by mandatory federal standards. A waiver from the U.S. Department of Energy is required before states can set standards for products covered by existing federal standards. New York's appliance efficiency standards are very comprehensive and quite ahead of most other states.



Adapted from Pew Center on Global Climate Change

3. Green Building Standards

Green building standards provide a framework for encouraging and assessing energy efficiency in building. Green building standards emphasize state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) standards are the most common building standards. The Green Building Initiative has also created a green-building verification program. Three Appalachian states have green building standards: Maryland, New York, and Pennsylvania.

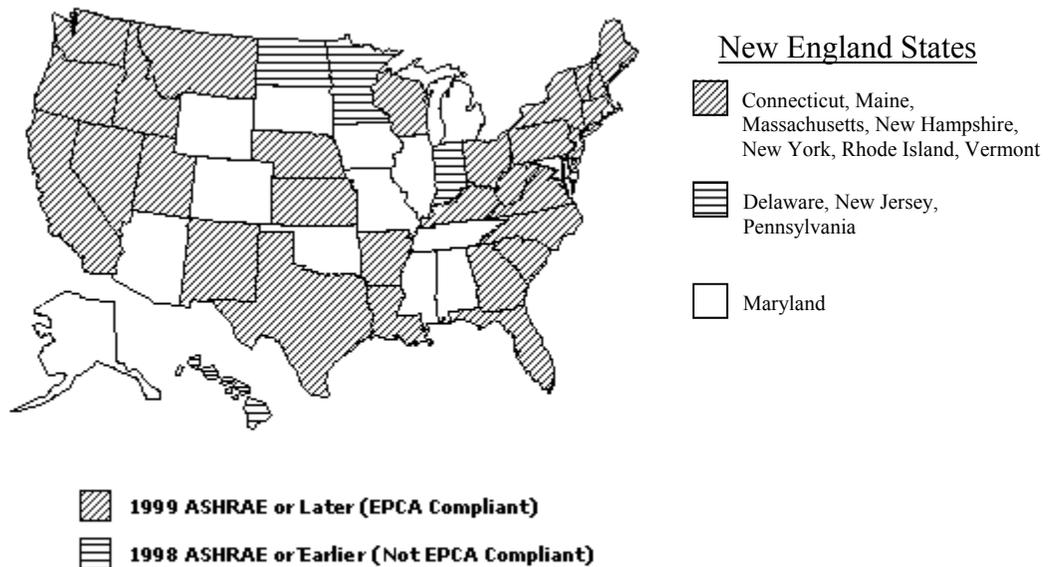


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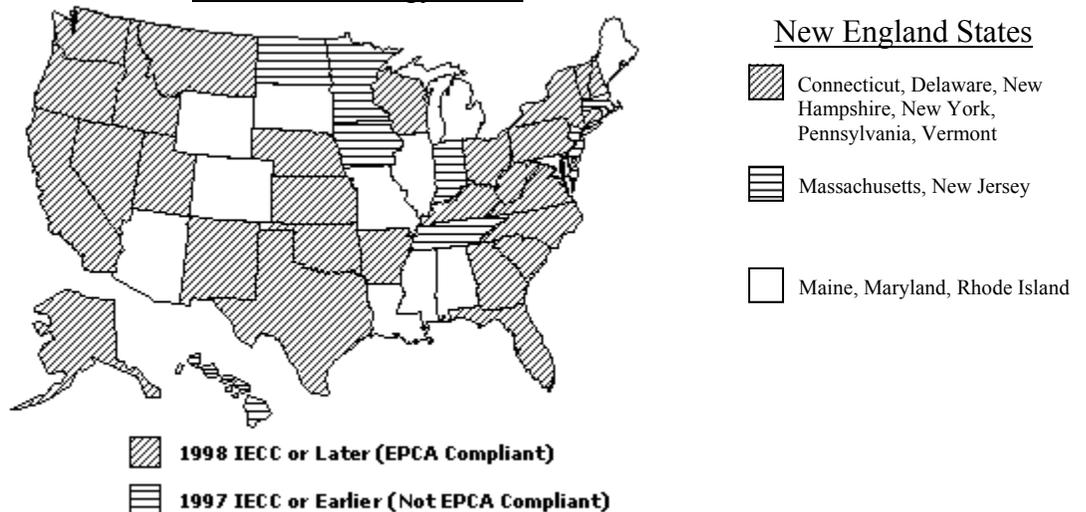
4. Energy Codes (Residential and Business)

Energy codes establish a minimum level of energy efficiency for buildings. Generally, codes specify requirements for "thermal resistance" of the building shell and windows, and minimum heating and cooling equipment efficiencies. Energy codes can target residential and/or commercial buildings. International Energy Conservation Codes (IECC) introduced before 1998 and American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards introduced before 1999 do not meet the requirements of the federal Energy Conservation and Production Act (ECPA). All but three Appalachian states (Alabama, Mississippi, and Maryland) have energy codes for residential buildings. All but Alabama, Mississippi, Maryland, and Tennessee have energy codes for commercial buildings.

Commercial Energy Codes



Residential Energy Codes



5. Output-Based Regulations

Output-based regulations encourage efficient energy generation by establishing emission performance criteria for energy generation (for instance, tons of nitrogen oxides (NOx) per megawatt hour (MWh) generated rather than the more traditional emission limits of tons of NOx per British thermal unit of heat input.) In some cases, states have made provisions that allow energy efficiency and renewable energy to compete equally with other methods of reducing emissions by setting aside a pool of emission allowances for eligible EE/RE projects.³⁹ Maryland, New York, and Ohio have output-based regulations.

6. Other Leading State Policies

A number of states have adopted building efficiency and purchasing requirements for state facilities to both reduce energy costs and lead-by-example. The **Oregon** State Energy Efficiency Design Program requires energy conservation that is 20% beyond code standards for state facility renovation and construction projects.

New Hampshire requires state agencies to reduce energy use by 10%. Equipment purchases must have ENERGY STAR rating. State facility construction and renovations must exceed code by 20%. Clean fleets programs require state vehicles to achieve a minimum of 27.5 mpg (highway).

California has the most extensive and long-standing appliance efficiency standards. The state's standards preceded national standards.

A number of states, including **Pennsylvania**, **California**, and **Connecticut**, have adopted Energy Efficiency Portfolio Standards that are typically an expansion of the renewable energy portfolio requirements. The **Texas** Public Utility Commission adopted energy efficiency goals for utilities as a part of the implementation process for the state's 1999 restructuring law. Electric distribution utilities were required to offset 10% of forecasted load growth through energy efficiency. To achieve this goal, the utilities were required to provide incentives through standard offer programs or targeted market transformation programs. Incentives were to be paid to energy services companies or retail electric providers for the implementation of the energy efficiency programs.⁴⁰

EPA and state environmental agencies offer Supplemental Environmental Projects (SEPs) as an option for partial settlement of violations of environmental regulations. An SEP allows the regulated entity to develop an environmentally-beneficial project in lieu of part of its fine, which often takes the form of energy efficiency projects that benefit the public. For instance, the settlement of an enforcement case in **Texas** funded the purchase of alternative fuel buses and vehicles in Odessa and Houston. A

³⁹ EPA Clean Energy-Environment , Chapter 5.3, 2006 www.epa.gov/cleanrgy/stateandlocal/guidetoaction.htm

⁴⁰ <http://www.keystone.org/html/documents.html#eeportfolio>

South Carolina utility implemented \$1 million worth of energy efficiency measures as the result of an SEP.⁴¹

<u>RE and EE Barrier/Challenge</u>	<u>Possible ARC Opportunity</u>
Regional planning and implementation of renewable energy and energy efficiency policies and programs is disjointed.	ARC could coordinate regional planning of RE and EE policies by hosting a database, meetings, and/or conference calls.
Creating demand for RE and EE technologies is a critical factor in growing this sector.	ARC could host discussions about regional criteria for green building.

C. Statewide Energy Planning⁴²

Eight Appalachian states have comprehensive, statewide energy plans. These plans indicate a likely trajectory for energy policy in the region over the next five to ten years. In addition to addressing many of the issues discussed above, state energy plans tend to include policy plans or recommendations regarding the following issues. *Because most of these issues are in their infancy, any one of them could become an ARC opportunity through research efforts, regional visioning, and/or coordination of planning.*

1. Single-Sector Policies and Programs

- a. Increasing availability of and access to renewable energy and energy efficiency technologies
- b. Conversion of animal waste into energy
- c. Examination of coal bed methane potential
- d. Green building incentives
- e. Energy workforce development

2. Cross-Cutting Policies and Programs

- a. Comprehensive transportation plans and policies, including state fleet requirements
- b. Energy education
- c. Air and water quality improvement plans and policies
- d. Incentives for innovative technology research and development
- e. Climate change policies, including reduction of greenhouse gases and planning for possible carbon emissions regulations and/or possible greenhouse marketplace

⁴¹ Background Document. EPA Clean Energy-Environment Technical Forum, Feb. 28, 2005. www.keystone.org

⁴² Georgia - <http://www.georgiaenergyplan.org/>

Kentucky - <http://www.energy.ky.gov/NR/rdonlyres/8E6F3FFE-5DC6-4FC6-9B5A-EA9D2AC89E7A/0/KentuckyEnergyPlan.pdf>

New York - http://www.nysersda.org/Energy_Information/energy_state_plan.asp

North Carolina - http://www.energync.net/sep/docs/sep_12-04.pdf

Pennsylvania - http://jsg.legis.state.pa.us/ENERGY_2.PDF

Tennessee - http://www.state.tn.us/ece/pdf/energy/energy_policy.pdf

Virginia - <http://www.mme.state.va.us/De/chap2b.html>

West Virginia - <http://www.wvenergyroadmapworkshops.org/reports/WestVirginiaEnergyRoadmap08-20-02.pdf>

2. Climate Change and Agriculture

Nebraska has created and funded the Carbon Sequestration Advisory Committee to address issues of carbon sequestration and agriculture in the state.⁴⁵ The Committee members represent agriculture, energy, and state government, and its work has helped to identify the next steps in implementing a state policy for carbon sequestration. There is evidence that agricultural lands have great potential to store carbon. The **Illinois** Conservation and Climate Initiative is already implementing a voluntary program that offers credits to farmers for their efforts to reduce greenhouse gas emissions.⁴⁶ Such efforts may include conservation tillage, planting grasses and trees, and capturing methane from animal operations. Earned credits will be sold to the Chicago Climate Exchange, which is a market for trading greenhouse gas emission credits.

3. Climate Change and Transportation

California has led the way and been joined by nine other states that propose to regulate greenhouse gas emissions from vehicles. Currently under challenge in the courts, the legislation requires the state to develop and adopt regulations that achieve the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks. The California regulations were issued in 2004 and require new vehicles in 2012 to emit 22 percent less carbon dioxide than today's vehicles. Greenhouse gas reductions of up to 30 percent would be required by 2016.

California also recently passed legislation that would set aside 75,000 permits for drivers of hybrids that get at least 45 miles per gallon to drive alone in carpool lanes.

E. Regional Planning Initiatives

1. West Coast Governors' Global Warming Initiative

The three states on the West Coast (California, Oregon, and Washington) are collaborating to reduce greenhouse gas emissions through the West Coast Governors' Global Warming Initiative.⁴⁷

2. Clean and Diversified Energy Initiative

The 18 western states that comprise the Western Governors' Association (WGA) have created a Clean and Diversified Energy Initiative to investigate strategies to increase efficiency and renewable energy sources in western electricity systems. There are 8 technical task forces that have been exploring new strategies for advanced coal, biomass, energy efficiency, geothermal, solar, transmission, and wind.⁴⁸

⁴⁵ "Greenhouse and Statehouse: The Evolving State Government Role in Climate Change." Barry G. Rabe, Pew Center on Global Climate Change. November 2002.

http://www.pewclimate.org/global-warming-in-depth/all_reports/greenhouse_and_statehouse_/index.cfm

⁴⁶ <http://www.iges.or.jp/en/cp/pdf/activity06/23.pdf>

⁴⁷ <http://www.ef.org/westcoastclimate/>

⁴⁸ Western Governors' Association. "Clean Energy, a Strong Economy and a Healthy Environment." Report of the Clean and Diversified Energy Advisory Committee to the Western Governors. June 2006.

<http://www.westgov.org/wga/initiatives/cdeac/CDEAC06.pdf>

3. Powering the Plains

Powering the Plains is a project seeking to craft alternative energy strategies, policies, and demonstration projects for Minnesota, Iowa, Wisconsin, the Dakotas, and Manitoba Province (in Canada). Agricultural practices that minimize climate impacts are also addressed.⁴⁹

4. Southwest Climate Change Initiative

The Southwest Climate Change Initiative is a partnership between the governors of Arizona and New Mexico to work together to reduce greenhouse gas emissions and address other aspects of climate change in the southwest.⁵⁰

5. Regional Greenhouse Gas Initiative (RGGI)

RGGI is an agreement among seven northeastern and mid-Atlantic states. It is a cap-and-trade system that addresses carbon dioxide emissions from regional power plants. RGGI offers flexibility in terms of mechanisms for achieving reductions targets, including credits for emissions reductions achieved outside the electricity sector.⁵¹

6. Eastern Climate Registry

RGGI states have partnered with Pennsylvania, Massachusetts, and Rhode Island to develop a regional greenhouse gas registry.⁵²

7. Northwest Power and Conservation Council (NPCC)

Created by Congress in 1980 because of the Federal Power System in the Northwest, the NPCC includes two representatives from each state. The Council is developing a 20-year electric power plan for reliable energy at the lowest economic and environmental cost. The energy plan gives highest priority to cost-effective conservation, followed by renewable resources, to the extent they are cost-effective. The current plan (5th Plan) includes specific targets and action items for conservation, demand response, and wind resources.⁵³

8. Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP)

Created in 1973, the Conference of New Governors and Eastern Canadian Premiers is an international association of leaders cooperating to advance the interests of participating states and provinces through collaboration with the private sector. The Conference has addressed environmental protection, economic development, tourism, energy, fisheries, trade, and agriculture. The participating U.S. states are Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

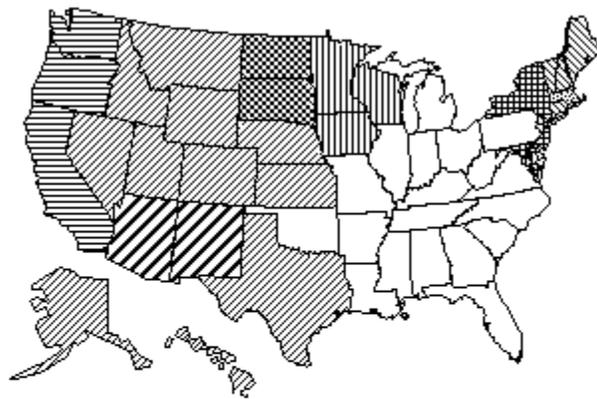
⁴⁹ <http://www.gpisd.net/resource.html?Id=61>

⁵⁰ http://www.governor.state.az.us/press/2006/0602/022806_SouthwestClimateChangeInitiative.pdf

⁵¹ <http://www.rggi.org/about.htm>

⁵² <http://www.easternclimateregistry.org/>

⁵³ EPA, Clean Energy-Environment Guide to Action for States.
www.epa.gov/cleanrgy/stateandlocal/guidetoaction.htm



New England States

-  Delaware, Maryland, New Jersey, New York
-  Connecticut, Maine, New Hampshire, Vermont
-  Massachusetts, Rhode Island
-  Pennsylvania

- | | | |
|--|--|---|
|  West Coast Governors' Initiative
AND
WGA |  Powering the Plains
AND
WGA |  Powering the Plains
 WGA |
|  Southwest Climate Change Initiative
AND
WGA |  NEG_ECP
AND
RGGI |  NEG_ECP
 RGGI |

Adapted from Pew Center on Global Climate Change

Possible Planning Opportunities for ARC

Host meeting or series of calls for Appalachian states to learn from non-Appalachian leaders in energy policy about integrating state actions at the regional level

Initiate regional climate action planning for Appalachia