



**POWERED BY ENERGY EFFICIENCY—
FUELED BY ENERGY CONSERVATION**

COG 2006 Energy Strategic Plan
[Executive Summary]



**Metropolitan Washington
Council of Governments**

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THE NEW ENERGY ERA

We live in a New Energy Era of rising global demand, tight global energy supplies, and high global energy prices. At the international level, the United States must now compete with up-and-coming economies such as China and India for a limited supply of energy. Global demand for energy is growing at a rate of 2 percent a year and experts are debating whether the world will soon reach its peak oil capacity.

While many experts are now coming to consensus that global petroleum peak is near, the natural gas peak is following close behind. In fact, the U.S. peak in conventional natural gas production may have passed.¹

At a more local level, metropolitan Washington, like other regions throughout the country, is moving from an era of regulated and relatively inexpensive energy, to an era in which energy is deregulated and relatively expensive.

Planners and policymakers now must grapple with the effects of these changes on the budgets of households, businesses and governments. They must also focus on reducing energy dependence as the region continues to grow at an astounding rate. Since 2000, the area's economy has led the nation in job growth, and according to COG forecasts, the region will add 1.6 million new residents and 1.2 million new jobs over the next 25 years.

Recent energy disruptions have also reminded us of the urgent need for updated regional plans and policies. Hurricane Isabel caused electricity outages, Hurricanes Katrina and Rita interrupted the flow of fuels to the region, and the Northeast Blackout of 2003 darkened the area. As demonstrated in the Heat Wave of 2006, the GOG region is fortunate to have substantial reserve capacity, unlike other regions of the country. However as a region, policymakers must stay vigilant to insure the presence of sufficient generation transmission and distribution resources to prevent Black Outs or Brown Outs.

Planners and policymakers have a great deal to accomplish given these economic, natural, and technological forces. They will have to focus on:

- Keeping dollars from flowing out of the regional economy due to rapidly rising energy prices,
- Reducing potential economic shocks due to interruptions in energy supply, enhancing homeland security,

¹ While new sources of natural gas are exploited, these sources are far from the shores of the United States and will require a massive transportation infrastructure to bring stranded energy assets to global economic centers like the Washington DC Area.

- Assisting low and moderate-income households,
- Maintaining public service deliveries as public sector energy expenditures rise,
- Improving the natural environment, air and water quality,
- Managing the transition to a deregulated energy environment that introduces new types of economic and technological volatility for energy consumers,
- Reducing contributions to climate change, and
- Promoting energy efficient homes and workplaces.



To succeed in this New Energy Era, the metropolitan Washington region must be powered by energy efficiency and fueled by energy conservation.

COG ENERGY VISION

The COG Region will be a recognized leader in energy efficiency, energy conservation, and energy renewables policies, planning and programs.



COG ENERGY MISSION

The COG Region will adopt and implement energy polices: (1) that expand its variety of energy sources, (2) that manage energy demand ensuring continued overall economic growth but lessening the effects of energy disruptions, and (3) that enhance environmental quality.

In 2001, Hydro Electric Power, Wind and Waste and other renewables accounted for about 3.14% of the energy fuels in the Tri-State area². While economic activity for the Tri-State area increased about 6% a year between the years 1997-2001, total energy consumption grew at a rate of less than one percent per

² Due to the way data is reported, the region is referred to in several ways. *Tri-State Area* means that the data was available only at the state level and the states include, the District of Columbia, Maryland and Virginia. *COG Region* means the area that comprises the 21 jurisdictions that are members of the organization. *Metropolitan Area* includes areas counties outside the COG region for example those jurisdictions, like Calvert County, included in air quality studies.

year. However, energy prices increased at a rate of 5% annually and are expected to rise at a faster rate in the coming years. In order to mitigate the effects of rising energy prices, new efforts to reduce the rate of growth of energy consumption will be needed.

Growth in the COG Region's renewable energy portfolio will be important to reducing the growth in the consumption of fossil fuels. This growth in renewables can take place through the expansion of production of renewables by utility companies (e.g., wind farms) and the expansion of locally sited energy generation (e.g., photovoltaic solar arrays).

Reducing the rate of growth of energy consumption will require a combination of increasing energy efficiency options (appliances, transportation and buildings) and creating incentives to subsidize those choices when necessary with both tax and consumer initiatives and higher prices to discourage demand. Planners and policymakers must balance fiscal and policy tools, market-based strategies, and intensive public education campaigns to achieve the desired reduction in energy consumption. Improving energy efficiency and promoting conservation will facilitate the adjustment process to this New Energy Era.

While the Tri-State area has been able to maintain low rates of growth of energy consumption, the COG region will have to find ways to reduce the consumption of fossil fuels, particularly petroleum, in order to meet federal air quality guidelines. Since over 50 percent of the petroleum used in the Tri-State region is for motor fuels, local demand and worldwide supply help shape the range of planning and policy options for the region.

Policy options to reduce gasoline consumption include:

- Increasing the vehicle efficiency of vehicles on the region's roads,
- Increasing initial sales taxes on inefficient vehicles,
- Shifting existing fuel tax revenues to provide incentives for consumers to buy more energy-efficient vehicles (including hybrids),
- Using alternative fuels,
- Using public transportation, and
- Managing short-term supply disruptions

Given that any policy change affects income groups differently, care must be taken to weigh the policy options' effects on low and moderate-income groups.

ENERGY GOALS

COG's energy mission is related to two existing COG goals:

1. **Energy Goal:** COG promotes and supports implementation of technologies that foster a diverse supply of reliable, affordable, and economically sound energy resources for the National Capital Region
2. **Environmental Goal:** COG promotes sound management and stewardship of all the environmental resources (air, water and land) of the National Capital Region, through analysis, monitoring, policy development, planning, advocacy, support for regional agreements, promotion of best practices, and public education and awareness

Based on the research and analysis conducted for the COG's regional energy plan, there are four sub-goals that expand COG's focus on reducing energy dependence:

1. COG promotes collecting data that will allow policymakers to monitor the Region's energy price, consumption, and expenditure data for energy planning.
2. COG promotes diversifying the Region's energy sources to include an increased use of "green energy" and renewables.
3. COG promotes raising awareness of energy users so they make wise energy choices by creating a "culture of conservation."
4. COG promotes developing policies and adopting practices that significantly increase the energy efficiency of vehicles, appliances and buildings.

Achieving these goals will allow the COG Region to improve its environmental quality, to manage the effects of rising energy expenditures on households, businesses and governments, to strengthen the regional economy, to manage temporary supply shortages, to expand the use of advanced vehicle technology, and to promote energy efficiency and conservation.

GATHERING & USING ENERGY DATA

As the COG Region moves into the New Energy Era, planners and policymakers must be able to assess the effects that changes in energy prices have on the budgets of households, businesses, and governments. Key to the assessment process is sound historical, current, complete and reliable data.

The U.S. Energy Information Agency (EIA) data is the only energy consumption and expenditure data that is produced annually. (The most recent data is 4 to 5 years old.) The data is only provided at the federal and the state level, with the District of Columbia being a state for the purposes of data collection, reporting and analysis. However, no sound methodology exists for reporting data at the sub-state level, like the COG Region.

State trends can be compared, but sub-state cannot be analyzed using the EIA data, leaving a policymaking void. However, a COG Energy Intelligence System (EIS) would overcome this jurisdictional and regional information void, removing this energy planning and monitoring deficiency.

One particularly important area where data collection will be important is the effect of higher energy prices on tax revenues. As energy prices rise and energy consumptions falls, collection of taxes on energy sales may drop as well. Consequently, jurisdictions could find themselves facing fiscal challenges from two forces – rising public sector energy expenditures and declining tax revenues. In addition, rising energy prices may put pressure on local governments to expand energy assistance for low-income households, leading to an increase in public sector spending, while increasing numbers of dollars are flowing out of the local economy due to higher energy expenditures. Yet, higher energy prices are important market forces to foster conservation, speed up the development of new technologies, and expand the supply of alternative fuels.

DEVELOPING & EXPANDING AN ENERGY POLICY FRAMEWORK

While COG has not had a comprehensive energy consumption and expenditure assessment completed since 1982 and that report was based on 1980 data, COG has used a number of policy and planning documents, such as the *Washington Metropolitan Area Tri-State Energy Emergency Coordination Agreement*, the *Metropolitan Washington, Energy Conservation and Management Plan*, and the *Strategic Energy Assessment; Metropolitan Washington Council of Governments* to guide its energy plans and policies.

THRIVING IN THE NEW ENERGY ERA—KEY RECOMMENDATIONS AND INITIATIVES

Energy use is a fundamental driver of all aspects of our economy, and its use is also the single greatest burdened placed on our environment. Policy and planning efforts could be enhanced by adopting a framework for regional energy data collection and by setting regional targets for the reduction in energy consumption and more variety of energy sources.

1. *Adopting a Regional Energy Information System Focus*

Recommendation 1.1: Develop a “Data and Information Collection and Analysis System” that will provide an understanding of economic and social implications of energy consumption, sources, and supply for the COG Region³

- **Initiative 1:** Create a working group among energy suppliers (electric, gas, petroleum, and alternative fuel experts) to develop at the regional level a system of reporting similar to the system used by the Energy Information Agency to determine the scope and feasibility of system development.⁴
- **Initiative 2:** Develop an executive level scorecard for COG that keeps policy makers apprised at how the Region is managing energy resources in the New Energy Era
- **Initiative 3:** Publish Semi-Annual Report
- **Initiative 4:** Report any alerts and results to EPAC, CAOs and COG Board



2. *Setting Regional Energy Savings Targets*

Recommendation 2.1: Develop targets to reduce the rate of growth in the consumption of non-renewable energy and expand the use of renewable energy

- **Initiative 1:** Adopt a set of goals, objectives, and best practices that will lower the rate of growth of energy consumption in the COG region
- **Initiative 2:** Adopt a regional goal to increase the share of regional energy provided from alternative and renewable resources

³ An account for regional energy consumption may include a baseline against which to benchmark regional performance, energy expenditure data to allow participating municipalities to plan future energy budgets; a regional energy generation profile, including on-site renewable energy assets; and local emergencies.

⁴ Several jurisdictions have systems in place to help identify best practices. A COG-wide system can use these systems as a base to avoid duplication of effort.

- **Initiative 3:** Encourage each member jurisdiction to facilitate the purchase of renewable energy by government buildings and the public, using Montgomery County's Clean Energy Purchases and Clean Energy Rewards as examples.
- **Initiative 4:** Encourage each member jurisdiction to develop energy efficiency, management and conservation benchmarks and set goals for offsetting growth in energy consumption (e.g., a percentage each year).

3. Expanding Education & Outreach

Recommendation 3.1: Coordinate state and local energy education programs to ensure a regional message is developed, as well as the state and local messages

- **Initiative 1:** Develop regional energy message materials
- **Initiative 2:** Convene energy public relations staffs of state and local officials to promote, develop and coordinate messages
- **Initiative 3:** Increase outreach efforts to remind drivers to use and maintain their vehicles so they operate efficiently, to use public transportation, to purchase fuel-efficient vehicles, and to make wise energy choices
- **Initiative 4:** Among the jurisdictions, jointly coordinate energy efficiency and green building initiatives that are useful for the residential sector
- **Initiative 5:** Promote cooperation among state energy offices to develop public awareness synergies from programs that address similar audiences and deliver similar messages

Recommendation 3.2: Advocate existing policies related to the energy efficiency of vehicles, appliances, and buildings that meet or exceed federal standards

- **Initiative 1: Vehicles** -- Join existing federal and local programs underway that advocate energy efficiency standards, e.g., Clean Cities and Plug in Partners
- **Initiative 2: Appliances** -- Join existing federal and local programs underway that advocate energy efficiency standards, e.g., Energy Star

- **Initiative 3: Buildings** – Develop guidelines for existing federal and local programs underway that advocate energy efficiency standards, e.g., One Million Solar Roofs, Energy Smart Schools, LEED or other nationally recognized Green Building Programs and Building Codes

Recommendation 3.3: Advocate existing policies and explore new one to reduce the effect of high prices on low- and moderate-income households

- **Initiative 1: Energy Assistance Funding** – Explore ways to expand existing energy funds for Low Income Energy Assistance, including packing of existing resources to be more accessible to relevant groups.
- **Initiative 2: Energy Assistance Tax Credits (Costs)** – Explore way to expand tax credits for energy assistance for direct relief of high energy costs.
- **Initiative 3: Energy Assistance Tax Credits (Efficiency)** – Publicize tax credits for building energy improvements and explore expanding those credits when appropriate.
- **Initiative 4: Affordable Housing Construction (Green Buildings)** – Explore expanding best practices like the National Resources Defense Council’s Green Affordable Housing Initiative that offers financing, grants and technical assistance to developers to build affordable housing that promotes health, conserves energy.
- **Initiative 5: Utility Discount Programs** – Explore ways to expand utility discount programs, like the ones operating in the District of Columbia, for low and moderate income residents. This includes cooperation with utilities and others to offer counseling and workshops on how to better manage energy budgets.

4. Monitoring & Updating Energy Policy, Planning & Best Practices⁵

Recommendation 4.1: Review and update the “Metropolitan Washington Gas Supply Emergency Alert Plan” July 1985 (completed January 1988) and the “Metropolitan Washington Power Emergency Alert Plan” July 1985(revised February 1988)

⁵ Although energy efficiency and conservation play key roles in reducing the rate of growth of energy consumption, other important components are supply efforts and improvement of the transmission and distribution infrastructure. Ensuring reliable electric power and an adequate supply and delivery of liquid fuels are crucial no matter the level of energy consumption.

- **Initiative 1:** Implement any suggested changes in the Gas Emergency Alert Plan per Regional Emergency Plan Update, 2005 by September 2007
- **Initiative 2:** Implement any suggested changes in the Power Emergency Alert Plan per Regional Emergency Plan Update, 2005 by September 2007
- **Initiative 3:** Work with area utilities to examine electric transmission and natural gas delivery capacity as it affects the long-term electricity and gas security and prices in the region and include any findings or recommendations in the appropriate emergency plans

Recommendation 4.2: Review and update the “Washington Metropolitan Tri-State Energy Emergency Coordination Agreement” dated March 21, 1979

- **Initiative 1:** Implement any suggested changes and revise Tri-State Emergency Coordination Agreement by June 2007
- **Initiative 2:** Have COG Staff coordinate and facilitate ratification processes at state executive level

Recommendation 4.3: Leverage private sector investment funds to finance public sector energy improvements

- **Initiative 1:** Share best practices and report on the extent to which regional governments are using alternative financing techniques to achieve public sector energy savings
- **Initiative 2:** Work with COG’s Cooperative Purchasing Program to encourage the leveraging of alternative financing for energy improvements and to marshal energy savings.
- **Initiative 3:** Prepare a large-scale demonstration project -- for example, promote the development of an energy efficient and technologically advanced major public school facility -- to illustrate the most recent advancements in ways private sector financing can be leveraged

Recommendation 4.4: Leverage jurisdictional purchasing power to ensure and promote the use of alternative fuels and energy security

- **Initiative 1:** Compile best practices in purchasing and aggregation agreements

Recommendation 4.5: Monitor the regulations of the Energy Policy Act of 2005 to maximize the benefits of the Act to the Region

- **Initiative 1:** Request annual data from states on use of provisions in EPACT 2005, e.g. tax credits on alternative, clean fuel vehicles, on bio-diesel fuels, and on renewable energy
- **Initiative 2:** Prepare a “benefits sheet” that illustrates the additional financial and energy savings and air quality improvements that can be gained by taking full advantage of the provisions in the law

Recommendation 4.6: Develop implementation strategies for practices in energy efficiency and conservation at the regional level

- **Initiative 1:** Create a data base of Best Management Practices (BMP's)
- **Initiative 2:** Develop and conduct an annual energy sector peer-to-peer exchange forum to help enhance the rate at which BMP's are adopted throughout the region

Recommendation 4.7: Explore current motor fuel pricing and taxing policies to assess their effectiveness in promoting energy efficiency and conservation and preserving the economic competitiveness of the Region

- **Initiative 1:** Establish a task force of experts in economics, public budgeting and finance, social welfare policy, and energy policy to evaluate the pricing and regional taxing policies and to make recommendations as they relate to:
 - Reducing the outflow from the region of money spent on energy
 - Increasing funds to finance regional energy improvements
 - Assisting low and moderate income households and small and medium-sized business adjust to the new energy environment