

CLIMATE ISSUES

Energy policy is coming soon: facts to remember

In the coming months, there will be a tremendous amount of discussion about energy policy in the United States. As you read and listen to the news, here are a few terms and facts that will help you identify realistic legislation. The United States needs diversified resources to control the cost of electricity, assure reliability and to protect our country through energy independence.

Fuel Resources Used to Produce Electric Energy

Coal:

Nearly 50 percent of the electricity generated in the United States comes from burning coal. The United States has an enormous coal supply; the Energy Information Administration (EIA) estimates that the U.S. has a 225 year supply of coal. This long-term sup-



ply of coal is crucial to achieving energy independence.

Coal has received bad publicity because of its emission problems. The electric power industry is moving toward cleaner coal technologies and would like to see Congress provide funding for research and development of these technologies.

Quite simply, coal must be part of the future of electric energy in the U.S. Tom Kilgore, CEO of the Tennessee Valley Authority, recently testified to

Congress that it cost \$.04 per kilowatt hour to generate electricity with coal. Hydroelectric power is the only cheaper resource.

Natural Gas:

Natural gas is also used to generate electricity. About 21 percent of the electric energy generated in 2007 came from this source, according to the EIA. Natural gas is traditionally used for peak times, such as early mornings, evenings or during extreme hot or cold weather. Because of the volatility in natural gas pricing, it is not used to meet constant demand for electric energy.

Kilgore testified that it currently costs about \$.08 to generate a kilo-watt hour of electric energy from natural gas for TVA. Natural gas is an available resource in the U.S.; however, additional drilling and exploration is necessary.

Nuclear:

Nuclear energy is a great resource for generating electric energy because it is a low cost resource, dependable and has no emissions. Although the U.S. has not approved the construction of a new plant in nearly 30 years, nuclear energy certainly has a place in the future of electricity production. It is a low cost resource at \$.042 per kilo-watt hour for TVA, according to Kilgore's testimony.

Safety concerns about nuclear plants are much less now since there have been no major incidents in nearly 30 years. Nuclear energy is friendly to the environment because it does not release any

emissions. Approximately 19 percent of the electric energy in the U.S. comes from nuclear power plants.

Hydroelectric:

Hydroelectric energy is a great resource because it is renewable and releases no emissions. Hydroelectric energy is very cheap to produce at less than \$.01 per kilo-watt hour; however, only 6 percent of electric energy in 2007 was generated from hydro, according to EIA.

Hydroelectric energy generation is subject to rainfall and the southeastern U.S. has been hit by a severe drought since 2005, limiting the availability of hydro as an energy resource.



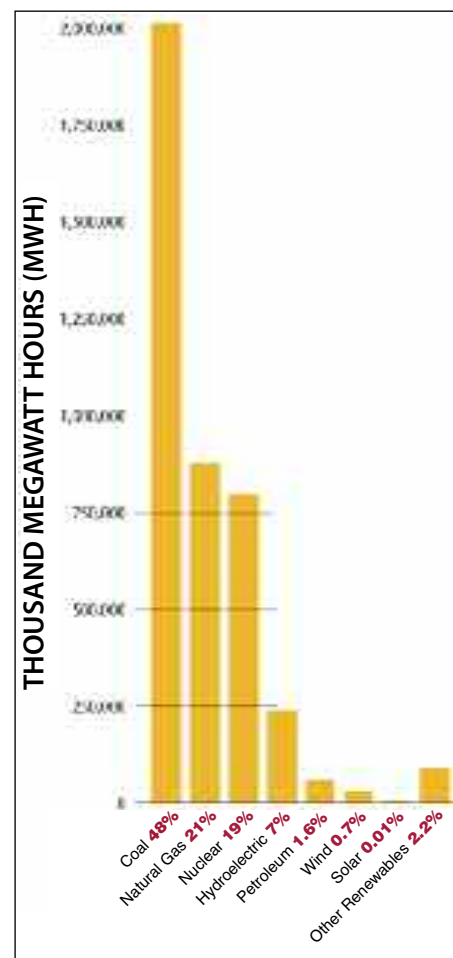
Also, hydroelectric resources are mature, meaning there are not many places left to develop future hydroelectric projects.

Renewables:

Renewable energy resources like wind, biomass, geothermal and solar are emerging technologies that need further study and planning. They contributed a mere 2 percent to the U.S. electric energy generation capacity in 2007, according to EIA.

Renewables like wind, geothermal and solar are beneficial because they do not release emissions; however, they are very expensive when used for electric energy generation. TVA's CEO Kilgore testified that it costs about \$.70 per kilo-watt hour to use wind as a resource. Solar panels are extremely costly when used on a commercial scale. Only a miniscule amount of electric energy is produced from solar panels in the U.S.

The southeastern U.S. is at a significant disadvantage because wind, solar and geothermal resources are not available in this geographic region. Biomass is available in the Southeast, but it is expensive to use and releases emissions.



Percentages of Total Output