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What Do You Know About Renewable Energy in Kansas?

Take the following energy quiz and see!

State, national and global attention is currently focused on energy: its' costs, its' benefits, and the long-term effects of one choice over another. One area of particular interest is Kansas' abundant **wind energy resource** and its possible contribution as not only a clean source of electrical energy but its value to our rural communities and state economy. The Kansas Rural Center (KRC) developed the following energy quiz to offer citizens and candidates for public office some basic information on wind energy, how other states are developing it and benefit, and what kinds of policies we need in Kansas. In addition to the short version offered here, KRC offers a longer version on its website (www.kansasruralcenter.org) with references and links to other resources. Please use the following information to guide you as you ask questions about the state's renewable energy future!

Q.1. Do you have an understanding of Renewable Energy resources in Kansas?

A. Renewable Energy is defined as energy captured from sources that are virtually inexhaustible because the earth, through natural processes, replaces it at a rate that is equal to or faster than it is consumed. For electrical power generation, Kansas' wind energy is our most abundant resource.

Q. 2. Would Wind be a good energy resource for Kansas to utilize?

A. Kansas has a total wind energy potential of 121,900 MW (megawatts). This ranks third of all states in the U.S. At present, Kansas has 364 MW of wind energy installed. A typical

Kansas coal burning plant might generate 600 MW of energy.

Q. 3. Do you understand why states with less wind, have more wind development helping their rural communities than Kansas?

A. Minnesota and Iowa both have wind resources of lesser quality than Kansas, yet they both far exceed Kansas in wind turbine installation. This is because of public policies such as Renewable Portfolio Standards (RPS) that encourage the development of wind energy, especially community owned wind projects.

Q. 4. Can wind energy production be taxed to pay for local needs like schools, roads and EMT's, and still be highly profitable to investors?

A. Yes. Minnesota levies a Production Tax on energy produced, which is all returned locally for use by counties, townships, municipalities and school districts. In Pipestone County, Minnesota, for example, one hundred percent of the Production Tax revenues go to local government - Cities, counties, townships and school districts. County government there receives 20% of its revenue from local wind production.

Q. 5. Do you believe Kansas should have a Renewable Portfolio Standard? Why or why not?

A. Renewable Portfolio Standards (RPS) are also called Renewable Electricity Standards (RES). An RPS requires electric utilities to gradually increase the amount of renewable energy resources - such as wind, solar and bioenergy in their electricity supplies.

An RPS is a public policy tool that would make utilities take into account the long term effects of their decisions on the environment, human health and local economies. It requires them to decrease their dependence on fossil fuels by increasing their reliance on renewables. An RPS indicates that legislators have found good public policy may require consideration of issues other than the short-term profitability of utilities. A well-planned RPS should not hamper production and delivery of consistent, high quality electrical energy.

Q. 6. Can the ownership of wind turbines (local owners vs outside investors) make any difference to the local economy?

A. Studies have consistently shown that while merely leasing the land under a turbine can provide the landowner lease payments of between \$2,000 and \$5,000 (with Kansas at the extreme

low end even, of that scale), this pales in comparison to that which a farmer might earn if he or she owned the turbine itself. According to the General Accounting Office (GAO), ownership can double or even triple the landowner's income, plus they will purchase services locally, and spend the income locally. Other studies have shown that locally owned wind generation creates about 10 times more economic activity in the local community and state.

Q. 7. Do you know whether Kansas is actively pursuing renewable sources of electrical energy or more coal generated energy? Do you agree with the path we are taking?

A. There is little renewable electrical energy generation in Kansas. Kansas utilities are most interested in vastly increasing energy production based on imported coal. Sunflower is proposing two 600 MW plants in Holcomb, with the energy being sold into Colorado. Westar is proposing one 600 MW plant somewhere in East Central Kansas, plus 2 natural gas burning units of 150-200 MW. KCPL is proposing a 900 MW plant on the Missouri river plus 100 MW of wind. And the Kansas City Kansas Board of Public Utilities is proposing another coal fired plant. In addition, the Goodland Energy Center is proposing a combined ethanol, biodiesel and 25 MW coal plant.

Nationwide, the U.S. Department of Energy (DOE) has announced that 153 new coal-fired plants, and 93 gigawatts of capacity are expected to be built by 2025.

Q. 8. Are you aware of how wind energy compares with traditional forms of energy in terms of consumption of resources?

A. Once installed wind turbines use only the resources necessary for their maintenance. The "fuel" is the free wind, an abundant natural resource in Kansas.

- The planned Sunflower plants in Holcomb will use about 8 billion gallons of water a year.

Wind turbines do not use water.

• To generate the same amount of electricity as today's U.S. wind turbine fleet (6,740 MW) would require burning 9 million tons of coal (a line of 10-ton trucks 3,437 miles long, from Seattle to Miami) or 28 million barrels of oil each year. Wind turbines do not burn coal or oil.

Q. 9. Do you understand the differing health impacts from wind generated energy vs. coal?

A. Wind energy does not pollute. Coal fired energy has serious pollution issues with human health consequences which are not assessed against the cost of production. The 440 coal fired plants in the U.S. produce about 48 tons of mercury per year. The planned Sunflower coal fired plants in southwest Ks. will boost toxic mercury production by 60% over present levels.

In addition, traditional coal-fired plants are major producer of smog producing nitrogen oxide (NOx), Sulphur dioxide (SO2) which pro-

duces acid rain, and millions of tons of Carbon Dioxide (CO2) which is a major contributor to global warming.

Q. 10. What is the least expensive option Kansans could take to greatly decrease our reliance on imported fossil fuels?

A. The Natural Resources Defense Council says: "The fastest, cleanest, and cheapest way for America to address its growing energy demand is through energy efficiency -- getting more productivity using less energy. Thanks to readily available technology for improving heating and cooling systems in buildings and increasing the efficiency of everyday appliances, America can make dramatic cuts in energy use without sacrificing comfort or profitability. Indeed, the economic benefits of investing in efficiency measures typically outweigh costs by a ratio of 2 to 1. And the good news is that we can reap these benefits faster than by building new power plants.

If you want to view a longer version of the above Questions and Answers, with references to resources and background information, please go to our website at **www.kansasruralcenter.org**.

If you want to contribute to KRC's Renewable Energy Project, you may do so on-line at our website, or by sending your contribution to:
Kansas Rural Center, Energy Project, Box 133, Whiting, Ks. 66552.

The Kansas Rural Center is a non-profit research, education and advocacy organization promoting a sustainable agriculture based on renewable resources, and working for healthy communities. and a safe secure food system for urban and rural citizens alike.