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Arkansas' Energy Choice:

New study finds benefits from energy efficiency and renewable power greater than coal

A new report by the independent consulting firm ECONorthwest reveals that investing in energy-efficiency and renewable resources would cost Arkansas residents and ratepayers less than building the recently proposed 600 megawatt coal-fired power plant in Hempstead, Arkansas. The report, which was commissioned by the Sierra Club, also found that in addition to posing fewer economic risks, investments in efficiency and renewable energy would likely create more jobs and have fewer adverse environmental consequences than investment in new coal. Key findings of the report are below. For the complete study, visit www.sierraclub.org/environmentallaw.

Investing in clean, renewable energy and energy efficiency will create more jobs and economic benefits in the long run than investing in the Hempstead Plant

Average Annual Employment over Life of a 526MW Power Facility

	Construction, Manufacturing, Installation Jobs	Operation, Maintenance, Fuel Processing Jobs	Total Jobs
Solar (photovoltaic)	3,030 - 3,266	631 - 2,525	3,898 - 5,555
Wind	226 - 1,320	142	373 - 1,468
Biomass	210	200 - 1,283	410 - 1,494
Coal	142	389	531

Source: ECONorthwest

- A similarly sized wind or solar energy facility to the proposed coal plant would not only create a higher number of total jobs, but would create more long-term local jobs. This is because most if not all of the long-term operation and maintenance jobs associated with wind or solar facilities would be in-state, while many jobs created by coal power are in the coal mining and transportation sectors that take place outside of Arkansas.
- Renewable energy projects that use solar, wind, and biomass technologies generate approximately 2 to 10 times more jobs per megawatt of installed power capacity than do coal-fired power plants (University of California, Berkeley, Renewable and Appropriate Energy Laboratory).
- Increased investment in renewable energies would further boost the fast-growing clean energy sector of the economy which is already benefiting Arkansas. For example, DMI Industries recently announced plans to build a wind-turbine blade facility in Little Rock that will create more than 1,000 new jobs within five years – over 9 times the number of long-term jobs expected from the Hempstead plant.
- Wind farms can raise tax revenue and provide lease payments for rural residents. A typical 100 MW wind farm in the U.S. boosts property tax revenues by \$500,000 to \$1 million per year, and landowners receive lease payments of \$2,500 to \$3,000 per MW.

“This report . . . demonstrates that the energy-efficiency/renewable-resources alternative is the better choice, for it would have fewer adverse environmental consequences, create more jobs, impose smaller costs on Arkansans, and be accompanied by lower economic risk [than building a new coal-fired power plant.]”

Electricity-Generating Alternatives in Arkansas: An Economic Analysis. October, 2007

Energy efficiency and renewables are less expensive and less risky than coal-fired power

- Saving energy through efficiency measures costs half as much as creating new power with a coal-fired power plant.
- Arkansas is currently ranked 45th among the states in terms of the efficiency with which it uses its electricity; the state could realize

Potential Direct Costs, by Alternative (cents per kilowatt-hour)

Hemstead Plant (Coal)	Energy Efficiency	Wind	Biomass	Solar
5 – 6	2 – 3	5 – 6	6	12 – 16

Source: ECONorthwest

- substantial economic benefits by implementing efficiency measures. For instance, a U.S. Department of Energy study found that an aluminum mill in Arkansas could spend \$271,200 to implement energy efficiency measures that would save it \$925,000 a year in energy and operation costs.
- Arkansas has the potential to reap more than 2400 megawatts of power from wind – more than four times the power of the proposed Hempstead plant – yet currently has less than 1 megawatt of installed commercial capacity.
- Creating power through wind can produce electricity for approximately the same price as coal power but with far fewer spillover costs associated with pollution, global warming and resource degradation.
- Burning waste wood, agricultural residue and other biomass could produce more than enough power to satisfy all residential needs in Arkansas and would also have fewer spillover costs than coal.

When financial and environmental risks inherent in coal power are factored in, coal power is not the cheapest option.

- Construction costs for coal power plants are rising at up to 40% per year; thus, SWEP Co's current construction cost estimate of \$1.34 billion may be short by hundreds of millions of dollars because costs may well continue to rise before the plant could get built.
- Costs of coal are projected to rise by between 6 and 49 %, on top of inflation, by 2030, whereas prices of natural gas are projected to be lower in 2030 than they are now. Despite industry claims, coal power does come with significant risks of price increases.
- Future regulation or taxation of carbon dioxide could raise operating costs of the Hempstead plant by approximately \$50 - \$370 million per year.
- If the utility successfully passes these carbon costs on to consumers, as it states it intends to do, it could raise customer's utility bills by at least 15 percent and possibly by 100 percent or more.

Human health costs

- Pollution from coal-fired power plants causes many health problems that present real costs to families and Arkansas's economy.
- Arkansas residents can expect to pay approximately \$15.4 million per year in out of pocket expenses for health care costs related to this plant's pollution.
- Researchers currently estimate that coal-fired power plants in Arkansas shorten the lives of 395 Arkansans per year, cause 8,327 asthma attacks and lead to 46,407 missed days of work; the operation of the Hempstead plant would only increase these numbers.

Water costs

- The proposed Hempstead plant would use 3.15 billion gallons of water every year, 90% of which is expected to evaporate and thus not be available for other uses.
- The plant's water use will constrain water supplies as the population grows and Arkansas' rainfall decreases due to global warming; it could also drive up the cost of acquiring water for other industrial, municipal or agricultural users.