

## Nuclear Power Plants Contribute Significantly to State and Local Economies

January 2009

### Key Facts

■ Each year, the average nuclear plant generates approximately \$430 million in sales of goods and services in the local community and nearly \$40 million in total labor income.<sup>1</sup>

■ Operation of a nuclear plant generates 400 to 700 permanent jobs. These jobs pay 36 percent more than average salaries in the local area.

■ The permanent jobs at a nuclear plant create an equivalent number of additional jobs in the local area to provide the goods and services necessary to support the nuclear plant work force (e.g., grocery stores, dry cleaners, car dealers, etc.).

■ Building a new nuclear plant would result in the creation of 1,400 to 1,800 jobs

during construction, with peak employment as high as 2,400 jobs at certain times.

### Nuclear Plant Economic Benefits

Each year, the average nuclear plant generates approximately \$430 million in sales of goods and services (economic output) in the local community and nearly \$40 million in total labor income. These figures include both direct and secondary effects. The direct effects reflect the plant's expenditures for goods, services and labor. The secondary effects include subsequent spending attributable to the presence of the plant and its employees as plant expenditures filter through the local economy (e.g., restaurants and shops buying goods and hiring employees).

Analysis shows that every dollar spent by the average nuclear plant results in the creation of \$1.07 in the local community.

The average nuclear plant generates total state and local tax revenue of almost \$20 million each year. These tax dollars benefit schools, roads, and other state and local infrastructure.

The average nuclear plant generates federal tax payments of approximately \$75 million each year.

### New Nuclear Plant Construction Will Boost Local, State Economies

Nuclear power plants provide substantial economic benefits during their decades of operation. The jobs, taxes, and direct and secondary spending strengthen the economies of communities with nuclear plants and will give a similar boost to any community hosting a new nuclear plant.

A new nuclear plant represents an investment of \$6 billion to \$8 billion (depending on plant size), including interest, during construction.

Construction of a new nuclear power plant will provide a substantial boost to suppliers of commodities like concrete and steel and manufacturers of hundreds of components. For example, a single new nuclear power plant requires approximately:

- 400,000 cubic yards of concrete—as much concrete as was used to build the Pentagon



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<sup>1</sup> The estimates in this fact sheet are based on normalized averages from analyses of the economic and employment impact of 22 U.S. nuclear power plants. The figures are calculated per megawatt of installed capacity and reflect a nominal 1,000-megawatt plant size. The analyses employ the IMPLAN model for estimating direct and indirect economic and employment effects of industrial activity. IMPLAN is widely used by U.S. government agencies.

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- 66,000 tons of steel—the same amount used to build the Empire State Building
- 44 miles of piping
- 300 miles of electric wiring—enough to stretch from Boston to Philadelphia
- 130,000 electrical components.

## Affordable Electricity Production

Nuclear power is the lowest cost producer of baseload electricity. Average nuclear production costs have declined more than 30 percent in the last 10 years, to an average of 1.7 cents per kilowatt-hour. This includes the costs of operating and maintaining the plant, purchasing nuclear fuel, and paying for the management of used fuel.

Compared to coal, natural gas and renewables, electricity generated from nuclear power has tremendous forward price stability because only a small part of production costs are fuel costs. Fuel accounts for 80 percent to 90 percent of the cost of electricity produced by fossil fuel-fired generation, making electricity from fossil plants highly susceptible to fluctuations in coal and gas prices.

The low and stable cost of nuclear power helps reduce the price of electricity paid by consumers.

## Value of Environmental Benefits

The average nuclear plant avoids the emission of approximately 10,000 tons of nitrogen oxides (NO<sub>x</sub>) and 32,000 tons of sulfur dioxide (SO<sub>2</sub>) each year. These gases contribute to acid rain and ground-level ozone. The total value of these avoided emissions based on current emissions allowance prices is approximately \$24.6 million per year.<sup>2</sup>

The average nuclear plant also prevents 7 million metric tons of carbon dioxide (CO<sub>2</sub>) each year. The value of these avoided greenhouse gas emissions, based on the current European Union carbon allowance price, is about \$35 million per year.<sup>3</sup>

As many as 32 new reactors are currently under consideration in the United States. These reactors represent an investment of approximately \$190 billion to \$250 billion to build. New nuclear plant construction will supply as much as 40,000 megawatts of additional clean and affordable electricity to meet the demand of a growing economy.

*This fact sheet also is available at [www.nei.org](http://www.nei.org).*

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<sup>2</sup> NO<sub>x</sub> and SO<sub>2</sub> allowances prices are as of December 2006.

<sup>3</sup> CO<sub>2</sub> prices are as of January 2007.