

Every year, Americans spend about \$1900 per person on energy purchases, which is about 8% of the average person's total expenditures on goods and services in a given year. Of this amount, approximately 40% goes to pay for electricity. Energy purchases represent a significant cost to society — nationally and locally — and it is important to spend energy dollars in a way that strengthens the economy rather than depleting it.

In many cases, energy dollars leave the community, going to regional utilities or suppliers of oil or natural gas. Once those dollars have been spent on importing energy into the community or state, they are not available to foster additional economic activity. Because every dollar spent on imports is a dollar lost from the local economy, these energy imports represent a substantial loss to local companies in terms of income and jobs. The challenge is to meet our insatiable appetite for energy while supporting local economic development.

A growing number of state and local governments are investigating ways to keep their energy dollars at home — for many, the answer lies in renewable energy investments.

How Renewable Energy Investments Help the Economy

There are two main reasons why renewable energy technologies offer an economic advantage: (1) they are labor-intensive, so they generally create more jobs per dollar invested than conventional electricity generation technologies, and (2) they use primarily indigenous resources, so most of the energy dollars can be kept at home.

According to the Wisconsin Energy Bureau, "Investment in locally available renewable energy generates more jobs, greater earnings, and higher output ... than a continued reliance on imported fossil fuels. Economic impacts are maximized when an indigenous resource or technology can replace an imported fuel at a reasonable price and when a large percentage of inputs can be purchased in the state." The Bureau estimates that, overall, renewables create three times as many jobs as the same level of spending on fossil fuels.

For states and municipalities with insufficient conventional energy reserves, there is a simple trade-off: import fossil fuels from out-of-area suppliers, which means exporting energy dollars ... or develop indigenous renewable resources, which creates jobs for local workers in the construction, operation, and maintenance of nonfossil power plants and associated industries.

The advantages of renewable energy investments are becoming increasingly clear, even in areas that have traditionally favored fossil fuels. "Texas is now a net energy importer," said Texas Land Commissioner Garry Mauro, speaking at the dedication of the state's first commercial wind-power project in November 1995. "We can accept our status as a net energy importer ... or we can face the challenge head on and serve as a model to others by embracing new ideas such as wind power and solar energy — ideas that will make Texas the leader in renewable energy development, energy-efficient building techniques, job creation, and environmental health."

The renewable energy industry provides a wide range of employment opportunities, from high-tech manufacturing of photovoltaic components to maintenance jobs at wind power

The Multiplier Effect: A Little Goes a Long Way

The multiplier effect is sometimes called the ripple effect, because a single expenditure in an economy can have repercussions throughout the entire economy, much like ripples spreading across a pond. The multiplier is a measure of how much additional economic activity is generated from an initial expenditure.

In the town of Osage, Iowa, for example, \$1.00 spent on consumer goods in a local store generates \$1.90 of economic activity in the local economy. This occurs as the dollar is respent; the store pays its employees, who purchase more goods, all with the same original dollar.

The multiplier effect causes different types of economic benefits as a result of investments in renewable energy technologies:

Direct effects — These are on-site jobs and income created as the result of the initial investment; the people who assemble wind turbines at a manufacturing plant, for example.

Indirect effects — These are additional jobs and economic activity involved in supplying goods and services related to the primary activity; people such as the banker who provides loans to the plant's owners, and the workers who supply parts and materials to the turbine assemblers.

Induced effects — This is employment and other economic activity generated by the respending of wages earned by those directly and indirectly employed in the industry; jobs created by the manufacturing plant workers spending their wages at the local grocery store, for example.