

Southern Idaho's Next Big Thing – Green Energy

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Green energy development isn't just a fad anymore. And, it's not just for anti-establishment folks left over from the 60's that want to live "naturally." It's an aggressive, long-term, cost-generating industry sector on a path toward rapid growth. Communities that - years ago- didn't see green energy development as the next big thing may have already been passed over as sites for green energy projects. And, it will be tough for them to catch the green wave that's already moving across the country.

The five primary sustainable energy sectors - hydro, wind, geothermal, biomass and solar - each utilize a different form of natural resources. A community's geographic location, geographic elements and weather patterns largely dictates which green energy sector can be developed there.

It's rare that any region can boast the ability to produce commercial energy in all of these categories. But, southern Idaho is one of those unique areas currently producing power in four of the five categories. And this nine-county region recently announced that a major solar farm is planned for this area so southern Idaho will soon produce green energy in all five sectors.

Ideal Geography

Southern Idaho is ideally located in an area of the United States where all five renewable energy elements can be tapped and utilized for energy production.

Water: Thanks to the massive presence of the mighty Snake River, hydroelectric power abounds in the area. Idaho Power owns numerous hydro projects including larger, run-of-river projects that involve dams on the Snake River. It also receives power from approximately 50 smaller co-generation plants using streams, canals and irrigation water. Because of the large amount of electricity produced by hydro power, Idaho has some of the lowest utility rates in the west.

Wind: Atop the Snake River lies the Snake River plain that produces average wind speeds of 13 mph, making this area the states windiest and an ideal spot for wind farms. The area's natural wind flow, consistent wind patterns and open areas has attracted the attention of numerous developers.

One of these projects is The China Mountain Project, being developed in southern Idaho by a subsidiary of RES Americas. China Mountain will harness some of the best, strongest winds in Idaho and Nevada with 200 wind turbines that can produce up to 400 MW of power and generate enough renewable energy to power more than 100,000 homes. Over the 30-year projected project life, nearby Twin Falls County is expected to receive \$33.4 million in tax revenue and create almost 400 - 750 full and part-time jobs.

"We've had an explosion of wind power in this area over the past few years," said Dan Olmstead with Idaho Power. "Southern Idaho is particularly good for wind producers so we're working with them to tap into some of this energy for our customers. By 2012, we expect to receive almost 18 percent of our power from wind, among the highest in the country," he said.

Underground Hotspots: Geothermal hotspots are plentiful in this region, less than 100 miles from Yellowstone National Park. U.S. Geothermal runs the utility-scale Raft River Geothermal power plant in Southern Idaho at the site of a former U.S. Department of Energy geothermal installation.

Geothermal is an attractive form of renewable energy since it's always available and not subject to energy fluctuation. Currently producing 10MW of power, Raft River will produce an additional 40MW, potentially producing up to 100MW.

Animal Mass: Over 525,000 dairy and feedlot cattle in the area equates to ample biomass generating material. Dairies and local businesses are working together to

develop and purchase methane digesters that take the manure and convert it into methane gas. The gas is used to heat dairies and as a potentially supplemental energy source to the state's gas provider, Intermountain Gas. While the digesters play a vital role in waste management, they're also kept busy with an unending supply of "material."

Sunshine: Solar energy production will soon be the last alternative sector to be available in southern Idaho. This region receives enough sunshine to be in the company of Arizona and New Mexico and peaks in the summer. Mid Point Energy plans to capture the sun's light via a soon-to-be-built solar farm in the nearby community of Jerome, utilizing 157,000 photovoltaic panels that will produce 65-75 MW. Slated for operation by 2013, the solar farm site is ideal as it's located near an Idaho Power substation.

"Not only will this solar farm be a major boost to this region's renewable energy production, it will be one of the largest solar farms in the country," said Jan Rogers, executive director of Southern Idaho Economic Development Organization.

Identifying the Next Big Thing

Thanks to the foresight almost a decade ago of economic development, education and business leaders in southern Idaho, green energy was considered as possibly the next big thing. The area was already in the early stages of tapping into several of the renewable categories before the green energy industry was nationally popular. Regional leaders determined that by working together, these resources could be developed to not only generate energy, but economic growth and jobs.

Local College of Southern Idaho (CSI) has fueled the way to put southern Idaho on the map for all areas of alternative energy development. In fact, CSI's origins of renewable energy training and environmental consciousness have been around since 1981. Decades

ago, environmental science was part of CSI's general education core lead by their Biology Department. Even their Agriculture Department had been integrating renewable energy into their courses for several years.

When national articles began appearing in 2008 regarding a shortage of trained wind turbine technicians, CSI looked more seriously at the sustainable energy industry and determined that this may be the next big thing.

"It became apparent that there was an emerging market in wind energy, particularly in Southern Idaho," said Todd Schwarz, instructional dean at the college. "We took it upon ourselves to address the maintenance and operations needs of the industry. Our wind tech programs are fairly broad in scope but focused enough that students get very direct, occupational hands-on training."

As the college developed the wind energy curriculum, it found that only 20 percent of their program was specific to one renewable category, such as wind. So, it broadened the scope to enable students to be trained in various sectors with the ability to work anywhere.



"All five renewable sectors are here in Idaho and they're all areas our graduates could move into," added Schwarz. "The College of Southern Idaho Renewable Energy Training Center now provides a comprehensive curriculum designed to give students the skill sets necessary to work in any of the renewable energy areas," he said. "Students are clamoring to get in."

Adding It All Up

Southern Idaho enjoys an abundance of five natural resources. Renewable energy resource development is fully supported at the local and state level. And the College of Southern Idaho provides the state's best renewable energy training and education in the state. Add it all up, and you have a unique region in the country

that developers are finding to be the ideal location for their next project.

"Renewables are receiving national attention as well as local, state and federal support," said Schwarz. "Plus, the sector is growing because some feel like it's their patriotic duty to reduce dependency on foreign oil and improve national security. The key element is opportunity. We have an entrepreneurial spirit in Idaho and people are optimistic this will be the next big thing." 🏠



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