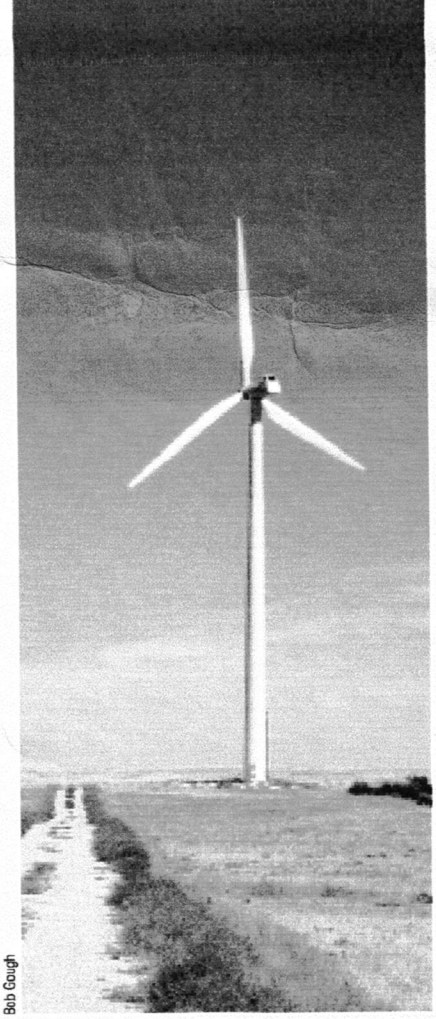
Falling Water, Rising Wind

Seeking answers to problems of drought and economic stagnation, Indian tribes in the American West are listening to the wind.

by Bob Gough



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This 750kW wind turbine on the Rosebud Sioux Reservation, completed in April 2003, is the first phase of a planned 10MW wind farm.

Water has always been the lifeblood of the arid American West, and electricity—the primary byproduct of U.S. federal government water management in the area—is the current that powers urban and rural life after a century of settlement. But the West is now suffering its sixth year of drought, the longest and harshest in recorded history. Electricity trickles from the six big hydropower dams on the Missouri River at a rate less than two-thirds of the 10 billion kilowatthours produced in a "normal" year. The Western Area Power Administration (WAPA) supplements its hydro shortfalls with coal-fired power using lignite, which is not only the dirtiest form of coal but has increased fivefold in cost since the drought began.

There is, however, a domestically secure, carbon-free resource that will conserve water, enhance regional air quality, and broaden reservation economies beyond the opportunities offered by casinos and smokeshops.

For the past decade, several Missouri-basin tribes—the Lakota, Nakota, and Dakota, the Mandan, Hidatsa, and Arikara, and the Omaha—have gathered as the Intertribal Council On Utility Policy (Intertribal COUP) to formulate energy and utility policy recommendations, beginning with how best to utilize the hard-won 20-year contract for a WAPA allocation of about 4 percent (65 megawatts) of the river's hydropower capacity. (WAPA manages over 17,000 miles of the high-voltage transmission system stretched across 15 western states. If you live on an Indian reservation, you are 10 times less likely to have electricity than anywhere else in the country, but are far more likely to have a federal transmission line towering overhead.) Federal power began flowing directly to reservation customers in 2001, after 15 years of unprecedented tribal cooperation to secure this modest benefit from the dams that flooded tribal lands 50 years ago.

One condition of the allocation, however, was for tribes to develop integrated resource plans for reservation energy resources. The resulting assessments showed that, along with remarkable solar, geo-thermal, and biomass resources, the COUP tribes have thousands of megawatts of power potential in the wind that blows across their reservations every day—one of the richest wind regimes in the world. Moreover, the transmission grid, designed to distribute hydropower from the dams, can just as easily collect and transmit native wind power beyond the region. The Intertribal COUP tribes are collaborating in a plan providing for tribal control and ownership of reservation NativeWind™ projects that could install up to 3,000 megawatts of capacity on two dozen reservations within a decade, to meet tribal needs and produce power for sale into the regional grid. That grid once carried 100-percent renewable hydropower, but as demand growth has outpaced hydroelectric capacity and drought has reduced water levels, hydropower is now less than 20 percent of the mix. The balance comes from coal-fired plants, but the COUP plan could recharge the system with clean, renewable, and water-saving power.

The current drought may be a result of climate change, or part of a natural transition from the historical long-term wet cycle to a dry phase. In either case, the West's electrical system relies heavily on water that is in short supply and may remain so. Wind needs no water to generate electricity, and unlike coal produces no CO_2 emissions. Rural tribal economies building upon our domestic wind resources offer both Indian Country and our nation a no-regrets option for energy security and a step toward national energy independence.

Bob Gough *is Secretary of the Intertribal Council On Utility Policy. For more information on the work of Intertribal COUP and its partner organizations, go to www.energyindependenceday.org.*