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**The Implications of the Regional  
Haze Rule on Renewable and Wind  
Energy Development on Native  
American Lands in the West**

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# The Implications of the Regional Haze Rule on Renewable and Wind Energy Development on Native American Lands in the West

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## INTRODUCTION

The Clean Air Act, as augmented by the 1990 amendments, established a national goal for improving visibility in national parks and wilderness areas. The Act authorized the creation of a commission, the Grand Canyon Visibility Transport Commission (GCVTC), to examine the problem of visibility in the Grand Canyon (later expanded to include assessments of 15 additional national parks and wilderness areas in the West) and to recommend actions to protect and improve visibility in those areas. The Commission completed its work in 1996 with the publication of a report entitled: “Recommendations for Improving Western Vistas, 1996.” (1)

### The WRAP

The Western Regional Air Partnership (WRAP) was created as a successor organization to the GCVTC, and was charged with implementing the recommendations of the GCVTC. The membership of the WRAP consists of representatives of 13 Western states, a corresponding number of tribal government representatives from throughout the West, the U.S. Departments of Agriculture and the Interior, and ex officio participation by the U.S. Environmental Protection Agency. The WRAP has created numerous stakeholder-based committees and forums to carry out its responsibilities. One such forum is the Air Pollution Prevention Forum, created by the WRAP “to examine barriers to use of renewable energy and energy efficient technologies, identify actions to overcome such barriers, and recommend potential renewable energy and energy efficiency programs and policies that could result in a reduction of air emissions from energy production and energy end-use sectors in the Grand Canyon Visibility Transport Region.” See Figure 1 for a map depicting the Grand Canyon Visibility Transport Region.

### The Regional Haze Rule

In 1999, EPA issued the national regional haze rule (RHR). (64 Fed.Reg. 35714-35774, codified at 40 CFR 51.300-309). Although the RHR has provisions that apply to all states and tribes in the United States, one provision of the RHR embraces the recommendations of the GCVTC and offers states in that region the option of complying with the RHR requirements by developing implementation plans to achieve the goals set forth by the GCVTC and later by the EPA. Section 309 of the RHR presents a method of reducing haze that focuses on the implementation of renewable energy and energy efficiency.

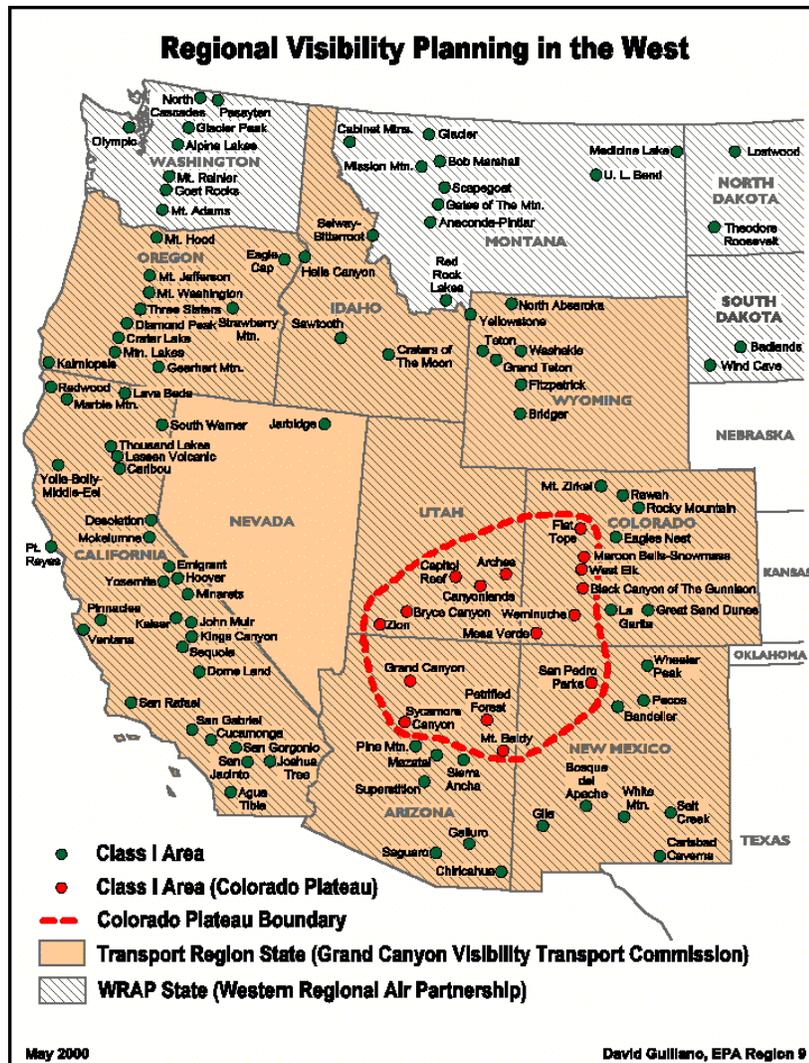


FIGURE 1 – The Grand Canyon Visibility Transport Region (<http://www.wrapair.org/images/wrap2000.gif>).

Tribes within the GCVTC Region may seek approval from the EPA to implement the regional haze program through tribal implementation plans (TIPs) developed under the provisions of the Tribal Authority Rule (TAR). Promulgated in 1998, the TAR recognizes the authority of eligible tribes to regulate all sources of air pollution within the exterior boundaries of the reservation, including those on non-Indian-owned fee land within the reservation. Tribes generally are exempt from statutory deadlines and the sanctions imposed for failure to meet those deadlines, and have a great deal of flexibility in developing their air quality management programs.

### The Tribal Renewables Report

One of the key recommendations of the GCVTC report was to assess the potential impact of increasing the use of renewable energy resources for the generation of electricity as a way to reduce pollution from fossil-fueled power plants in the West, and thereby improve visibility. The WRAP has commissioned studies to assess the potential for the generation of electricity from renewable energy resources. One such study focused on the policy actions that States in the West could take in order to increase the generation of electricity from renewable resources.<sup>(2)</sup> A similar study focused on actions that Native American Tribes could take in order to increase electricity generation from renewable resources. However, the tribal study had an expanded focus that considered not only policy actions, but also the available renewable energy resources in Indian country, energy information required in a TIP, tribal energy perspectives, and an analysis of the barriers and opportunities for tribal energy

development. The resulting report from this study (“the Tribal Renewables Report” (3)) recommends policies and strategies for tribal leaders to consider in order to use renewable energy resources not only to reduce pollution but also as a means to assert tribal sovereignty and autonomy and to spur economic development on tribal lands.

The purpose of this paper is to summarize some of the pertinent findings during this study with a particular emphasis on wind energy development. Tribal energy development and the opportunities for wind energy development will be discussed in the context of the constraints and opportunities facing Native Americans in the West.

### **TRIBAL ENERGY DEVELOPMENT**

In order to understand the barriers and opportunities for renewable energy development in Indian country, information about tribal energy perspectives and their current electricity situation was sought. Data primarily from two sources were consulted (see Reference (4)):

- The first source was an assessment performed in 2001 by the Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University (NAU) of 12 tribes within the WRAP region.
- The second source was a survey conducted in 1996 and 1997 by the Native American Renewable Energy Education Project (NAREEP) of 39 tribes from throughout the United States that were engaged in renewable energy projects.

The tribes contacted in the ITEP assessment were selected to represent a diversity of tribal perspectives, based upon geographic distribution, population, land size, urban versus rural location, experience with renewable energy, and level of existing energy infrastructure. While these data are not definitive and may not be representative of all 237 tribes within the 13-state WRAP region, they do suggest some valuable insights. A few pertinent results from the tribal surveys are listed below:

- For three-quarters of the tribes polled, no central office or agency is in charge of tribal energy issues, such as a utility authority.
- Three-quarters of the tribes are interested in using renewable energy systems, especially if the cost of energy is competitive with current energy supplies.
- Over 80% of the tribes indicated an interest in selling electricity on the deregulated electric market.

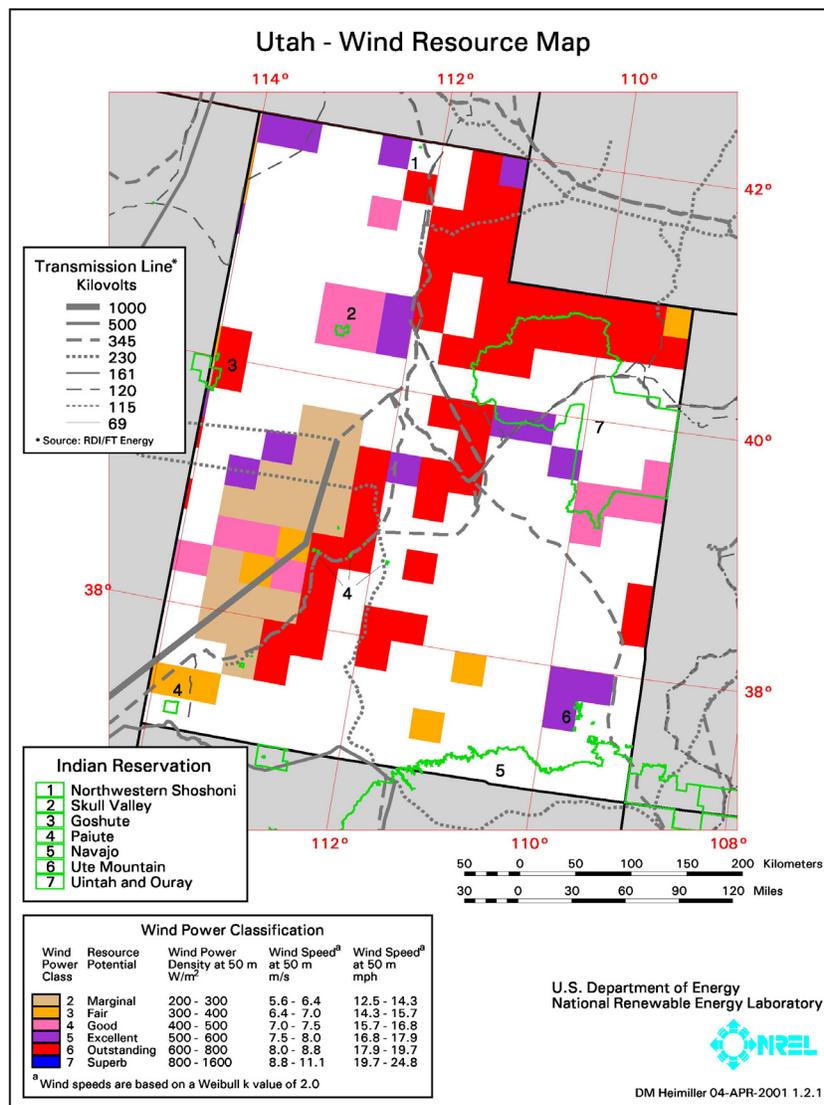
Through comments associated with the assessments, it was apparent that the particular opportunities available and the barriers facing each tribe’s development of renewable energy were as individual and unique as the tribes themselves. Many of the tribes were concerned about cultural issues (such as sacred sites), environmental issues (not damming a river), political issues (intra- and inter-tribal politics and external relations with states), and economics (the cost of energy). In general, tribes were quite interested in the potential opportunities for economic development offered by developing renewable energy resources, as well as the ability to gain energy independence. Furthermore, tribes in rural settings were more interested in developing renewable resources compared to tribes located in urban settings.

When considering energy development, the relative cost of power and marketplace constraints are certainly relevant to tribes, but they may not be the determining or even the most important factors. For most tribes the development of renewable energy is inextricably intertwined with the challenges of economic development. Furthermore, renewable energy may offer many tribes the ability to electrify portions of their reservations that currently have no electrical service, or to increase the reliability of service.

Though many tribes are interested in developing renewable energy resources, there are many external and internal factors that a tribe has to consider when contemplating development. (4) Some of these factors, such as distance to market or access to capital can be significant barriers to development, while others such as the availability of natural resources and tribal sovereignty can be assets. Cultural compatibility of the renewable resource development can also be important. While the relative importance of the various factors depends upon each individual tribe, it is true that many tribes interested in developing renewable energy may welcome partners that can help overcome some of the barriers they face. For example, a company with technical expertise in wind energy development could successfully partner with a tribe if the tribe were to benefit economically, with jobs provided for tribal members and joint ownership of the project by the tribe and the partner company.

## WIND ENERGY POTENTIAL ON NATIVE AMERICAN LANDS IN THE WEST

It has been established that many tribes in the West are interested in developing their renewable and wind energy resources. The question that naturally arises next concerns the availability of wind resources on Native American lands. Wind energy resource maps from the national wind resource assessment of the United States, created in 1986 for the U.S. Department of Energy by the Pacific Northwest Laboratory, are documented in the *Wind Energy Resource Atlas of the United States*. (5) Wind maps based on this data and overlaid with tribal boundaries and transmission lines were created by the National Renewable Energy Laboratory to assist tribes in evaluating their potential for wind energy development. Wind resource maps similar to the one shown in Figure 2 are presented for each of the 13 states in the WRAP region in Reference (6) (Arizona, California, Colorado, Idaho, Montana, North Dakota, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington and Wyoming), along with resource maps for solar, biomass and geothermal energy. There are 237 tribes in the WRAP region. Based upon NREL wind energy resource maps, there are about 60 reservations in the WRAP region that have a class-5 wind resource (excellent) or better. Many of these reservations with the wind resource have sufficient land to develop the wind resource, and some are in proximity to existing transmission lines.



**Figure 2** – Wind Energy Resource Map for Utah Showing Wind Power Classification, Transmission Lines, and Tribal Land Boundaries (Map provided by the National Renewable Energy Laboratory).

## POTENTIAL ACTIONS BY TRIBES INTERESTED IN DEVELOPING RENEWABLE RESOURCES

Tribal lands in the West have great potential for the development and delivery of electricity generated from wind and other renewable resources. Many tribes are interested in generating, selling, and using such electricity. Substantial barriers exist, however, to the full implementation of tribal opportunities for development of renewable energy resources. Of particular importance to rural residents is the fundamental need for basic or reliable electric service. As tribes seek ways to provide greater electrification, electricity that is generated and distributed from renewable resources could be one of the best alternatives to consider.

The following list is a selection of activities from which tribes in the WRAP region and their collaborators may participate when developing renewable energy resources. They are presented here to inform potential collaborators about some of the activities in which tribes may need to participate if developing renewable resources. For a collaborator working with a tribe, it is important to realize that tribal choices concerning development will likely occur in the context of their overall goal of maintaining and strengthening their cultural, social, economic, and political integrity, not just as a business opportunity. Tribal-state-federal relations must also be considered in their legal, economic, and cultural contexts when exploring the development and delivery of electric energy across political boundaries. Because these relationships are markedly varied, appropriate development strategies will differ from tribe to tribe. The actions listed here demonstrate a wide range of potential activities, of which only some may be appropriate for a given tribe. Prominent amongst the references consulted when developing these recommendations were the reports by Suagee (6) and the Council of Energy Resource Tribes. (7)

- Develop a Tribal Energy Policy

Regardless of a tribe's size, location, or other demographic variables, a formal energy policy statement that incorporates specific provisions for renewable electric energy is an important beginning to a larger set of strategies. A program to stimulate renewable energy generation will be most effective as part of a more comprehensive energy policy developed by and adapted to each tribe. For example, the energy policy can articulate a renewable energy portfolio standard (RPS) to be applied to tribal electric consumers, including the tribal government, as well as federal government entities located on the tribal lands. This could be implemented alone or in collaboration with other tribes or states.

- Create an Economic Development Corporation

Tribes that choose to pursue a renewable energy enterprise may consider setting up a tribal Economic Development Corporation (EDC). Tribes with an EDC or comparable entity already in place may utilize it to advance the opportunities for entrepreneurial energy development. The somewhat autonomous role of an EDC has been shown to be useful when pursuing a long-term economic development initiative such as required for most energy projects. (8)

- Expedite the Permitting Process for Renewable Energy Projects

Tribal governments could streamline the permitting process for renewable energy projects located within their jurisdiction. Such a process will encourage rather than discourage innovative energy supply and distribution enterprises.

- Federal Financing of Authorized Renewable Energy Assistance

Several federal statutes authorize funding for energy conservation and renewable energy incentives on tribal lands. Most notable is the Energy Policy Act of 1992 and its amendments. Tribal leaders and collaborators could formally request adequate appropriations from the U.S. Congress and appropriate agencies to implement the energy conservation and renewable energy development provisions of these laws. This should include funding of training programs for tribal energy professionals related to renewable energy and energy efficiency.

- Federal Project Grants and Subsidies

One federal mechanism to encourage private sector development and use of renewable energy is tax credits. Because this mechanism does not apply or is of little use to tribes, equivalent financial subsidies for comparable tribal projects should be available. For example, Tribal Energy Block Grants could provide effective incentives to progressive tribal renewable energy initiatives. Tribes could benefit from seeking equitable financial support for projects comparable to those eligible for tax credits.

- Create Special Tribal SO<sub>2</sub> Emissions Credits

The EPA's Regional Haze Rule authorizes and encourages an innovative cap-and-trade program to reduce regional emissions of sulfur dioxide. Tribes may consider seeking allowances under this program to encourage renewable energy generation on tribal lands through both a tribal set-aside allocation and a renewable energy set aside allocation.

- Encourage Creating a Federal Renewable Portfolio Standard

Tribal governments and their collaborators could support a national renewable portfolio standard. Because tribal lands in the West have great potential for development of renewable energy projects, such a national policy can be effective as well as particularly advantageous to tribal energy and economic development.

- Expand Federal Government's Buy Indian Policy

The "Buy Indian" policy is advantageous to suppliers of selected products and services that are purchased by specific federal agencies. This policy could be expanded to include the purchase of electricity generated from renewable sources on tribal lands, and the participating agencies could be expanded to include all relevant federal energy procurement.

- Expand the Federal Government's Program for Procurement of Green Energy

Tribes and their collaborators may consider requesting that the Federal government encourage Power Marketing Agencies to obtain electricity generated from renewable resources on tribal lands, combined with the Federal government programs in Executive Order 13123 for the Federal Government's procurement of green energy. A portion of the electricity generated from these renewable resources could be made available for tribal use, similar to hydropower electricity made available from the Western Area Power Administration.

- Create Partnerships with Independent Power Producers

Innovative and successful renewable energy projects are often developed by independent power producers (IPPs). Tribal governments seeking to develop renewable resources may find it desirable to collaborate with an IPP to expedite resource development and to limit tribal financial exposure.

- Solicit Authorization for Tribal Authority over Non-Indian Lands Within Reservation Boundaries

For many tribes an effective energy policy, including full development of renewable energy resources, will depend on tribal authority over all lands within reservation boundaries, which can include non-Indian lands. Tribes along with federal agencies and states, as appropriate, may enter into agreements that establish such tribal authority for the purpose of development and implementation of renewable energy policies and practices.

- Develop Inter-Tribal Energy Collaborations

Some renewable energy development opportunities require resources beyond those available to small tribal populations and lands. In some instances this limitation of scale and scope can be overcome through multi-tribal collaborations. This is particularly appealing where tribal lands are adjacent or in close proximity. Small tribes may consider expanding existing intertribal relationships and forging new ones where renewable energy development projects exceed the capacity of an individual tribal government.

- Explore State-Tribal Agreements for Renewable Energy Projects on Tribal Lands

Some tribes may want to explore with states the possibility of a state-tribal agreement for renewable energy projects on tribal lands as part of a state's strategy to meet its own goals for renewable energy (especially those goals related to state compliance with the RHR). Such agreements could provide an incentive for locating projects on tribal lands or could remove a disincentive that would arise if location of the project on tribal land meant that the state would not receive credit for the project as part of its progress toward meeting its RHR renewable energy goals.

- Develop a Tribal Implementation Plan

Consider developing a Tribal Implementation Plan under the provisions of the Regional Haze Rule and the Tribal Authority Rule that commits the tribe to expanding its use of renewable energy in the generation and use of electricity.

## **CONCLUSIONS**

Many Native American tribes are interested in developing renewable energy resources. Of the 237 tribes in the WRAP region, about 60 have an excellent wind resource (Class 5 or better). The Regional Haze Rule provides a potential impetus for tribes with air quality programs and visibility concerns to consider renewable energy development. Beyond that, however, tribal development of wind and renewable energy provides a potential for economic development and increased tribal sovereignty. In order to successfully develop their renewable resources, tribes may seek partners to help overcome some of the financial and technical barriers. For potential collaborators it is important to realize that partnering with tribes to develop their resources will likely need to occur in the context of their overall goal of maintaining and strengthening their cultural, social, economic, and political integrity, not just as a business opportunity. Furthermore, it is important to realize that among the tribes in the WRAP region, there is great diversity when considering their differing levels of energy and economic infrastructures, both physical and institutional.

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