

**Application Narrative**

**Impact significance:** Reducing regional haze is a significant challenge in the 12-state WRAP region<sup>1</sup>. While certain air pollution problems can be readily attributed to a specific source (e.g., power plants, forest fires), regional haze involves many diverse emission sources over broad multi-state areas. The regional nature of the haze problem provides an opportunity to promote the use of renewables and energy efficiency in the SIPs of 12 states. Regional haze SIPs also provide new opportunities to promote efficiency and renewables through mechanisms such as regional emissions cap and trade programs. Finally, regional haze offers an opportunity to promote multi-state actions, such as transmission reform, which are necessary to exploit renewable resources in one state where the market may be in another state.

The opportunities to effectively utilize regional haze SIPs to promote renewables and efficiency are particularly great in the West because of (1) the long history of collaboration among interest groups and among states in evaluating regional haze and developing plans to address regional haze and (2) the high quality of the renewable resource base in the region.

Beginning with the 1990 Clean Air Act Amendments, which established the Grand Canyon Visibility Transport Commission (GCVTC), there has been an on-going collaborative effort among diverse interest groups and the states covered by this project to evaluate regional haze and develop plans to reduce it. This collaborative effort led to the establishment of the Western Regional Air Partnership (WRAP), a key purpose of which is to implement the recommendations of the GCVTC, and has extended through the development of the regional haze rule which was issued by EPA in 1999. The WRAP has established a committee, the Air Pollution Prevention Forum, to develop strategies to implement the renewables and energy efficiency goals of the GCVTC. This long history of collaboration among interest groups and among states provides a solid foundation for using regional haze SIPs to promote renewables and energy efficiency.

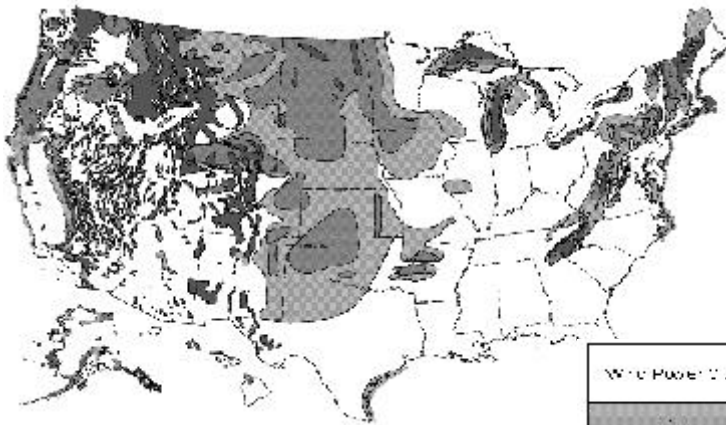
This project may be particularly instrumental in promoting the production of renewable energy because the region covered by the project contains much of the high quality wind, solar and geothermal resources in the nation. The following renewables resource maps are from “Renewable Energy Technology Characterizations, Topical Report,” December 1997, DOE and EPRI.

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<sup>1</sup> The following states are eligible or are participating in the WRAP: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming

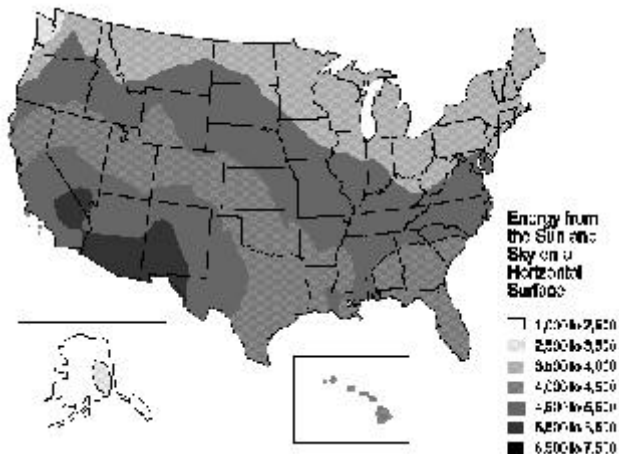
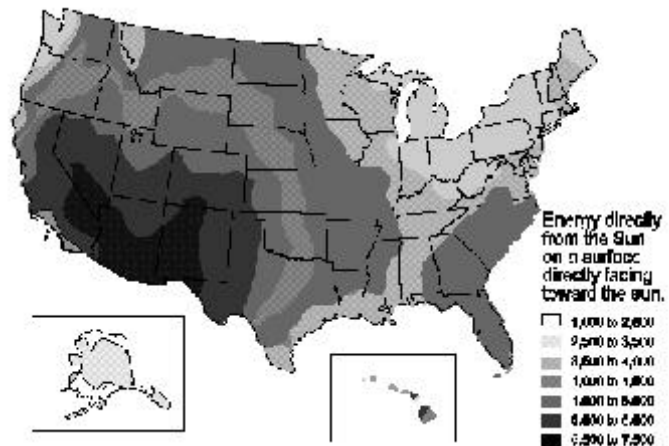
# Attachment A Scope of Work

## Wind Resources



Wind Power Class	Wind Energy Potential	2010 Power Capacity of 87 m (Wind)
3	Very Poor	240-320
4	Poor	320-400
5+	Excellent	4+

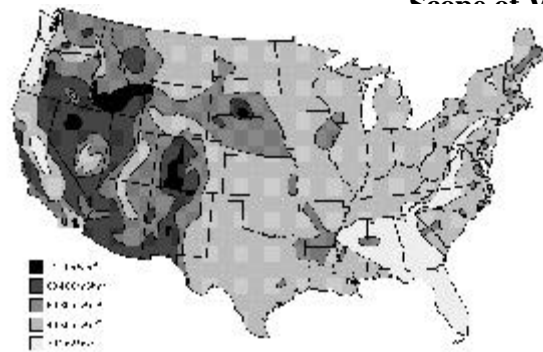
## Global Insolation Resource for Crystalline-Silicon and Thin Film PV Systems



## Direct Normal Insolation Resource for Concentrator PV Technology

**Attachment A**  
**Scope of Work**

## Geothermal Resource Quality in the U.S.



The potential market for renewables and energy efficiency in the area covered by the regional haze SIPs under this project is huge. The maximum potential market for renewable generation is defined by the electrically-separated interconnections. The Western Interconnection is a huge market that covers approximately 1.8 million square miles containing over 65 million people and serving a 1998 load of 742,892 gigawatt hours. In 1997, the total renewable energy generation, including hydro, in the U.S. portion of the region was nearly 264,287 gigawatt hours. As of January 1, 1999, the market had a total generating capacity of 158,500 megawatts.<sup>2</sup>

The impact of this project will extend beyond the use of regional haze SIPs to promote renewables and energy efficiency. This project will provide the states in the WRAP region, which is the fastest growing region in the country, with experience with the use of renewables and energy efficiency as air pollution control measures. This experience can be incorporated into non-attainment SIPs for pollutants such as ozone, carbon monoxide, sulfur dioxide, nitrogen oxides, volatile organic compounds, etc. The lessons learned from this project may also provide valuable experience that can be used in states outside the WRAP region.

**Project Feasibility:** There is a high likelihood that the objectives of this project will be successfully met because:

- This project builds on a long history of collaboration on regional haze among the diverse interests and among the states in the WRAP region.
- Regional haze issues have been a high priority of the political leadership in the states covered by this project.

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<sup>2</sup>Data are from the Western Systems Coordinating Council, the North American Electric Reliability Council and the Energy Information Administration.

## Attachment A Scope of Work

- There is an existing regulatory requirement for states to develop regional haze SIPs.
- States in the project region have a unique opportunity under Section 309 of the haze rule to adopt a regional approach which includes specific requirements to address renewables and energy efficiency, as well as to participate in a regional emissions cap and trade program that may offer additional opportunities to earn emissions credits for renewable energy production and the deployment of energy efficiency measures.
- The project team has expertise in both renewables and energy efficiency and development of SIPs. Members of the team have significant experience with the work of the WRAP and its Air Pollution Prevention Forum.
- The Western Governors' Association and the Western Interstate Energy Board have a proven track record of success in building alliances within the western states to resolve western air quality issues, including regional haze.

This project builds on the substantial work of the Grand Canyon Visibility Transportation Commission and institutional infrastructure provided by the Western Regional Air Partnership. Both the GCVTC and WRAP are proven consensus building processes involving diverse interests from throughout the West. This history and institutional structure provides a solid policy basis and significant momentum for actions to expand the deployment of renewable energy and energy efficiency technologies. The leadership and appointments to the WRAP's Pollution Prevention Forum continue the tradition of consensus building among diverse interests.

As evidenced by the adoption of the GCVTC recommendations and the adoption by western governors of WGA Resolution 98-026 *Western State Leadership in Renewable Energy Development*, there is significant political support from governors and tribal leaders for the WRAP and for expanding the use of renewable energy in the region. In adopting the recommendations of the GCVTC, the chief policy makers in the region agreed to set the ambitious goal of producing 10 percent of the region's electricity from renewables by 2005 and 20 percent by 2010. The governors also detailed their interest in energy efficiency and green pricing programs.

The EPA regional haze rule provides a unique opportunity for states in the WRAP region to comply. States may follow the traditional SIP approach (Section 308) or collaborate in a regional approach (Section 309). The box provides an excerpt of the unique renewable and energy efficiency provisions under the Section 309.

***Excerpt of Section 309 of the Regional Haze Rule***

- (8) Pollution Prevention. The plan must provide for:
- (i) An initial summary of all pollution prevention programs currently in place, an inventory of all renewable energy generation capacity and production in use, or planned as of the year 2002 (expressed in megawatts and megawatt-hours), the total energy generation capacity and production for the State, the percent of the total that is renewable energy, and the State's anticipated contribution toward the renewable energy goals for 2005 and 2015, as provided in §51.309(d)(8)(vi).
  - (ii) Programs to provide incentives that reward efforts that go beyond compliance and/or achieve early compliance with air-pollution related requirements.
  - (iii) Programs to preserve and expand energy conservation efforts.
  - (iv) The identification of specific areas where renewable energy has the potential to supply power where it is now lacking and where renewable energy is most cost-effective.
  - (v) Projections of the short- and long-term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with the renewable energy goals, energy efficiency and pollution prevention activities.
  - (vi) A description of the programs relied on to achieve the State's contribution toward the Commission's goal that renewable energy will comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015, and a demonstration of the progress toward achievement of the renewable energy goals in the years 2003, 2008, 2013, and 2018. This description must include documentation of the potential for renewable energy resources, the percentage of renewable energy associated with new power generation projects implemented or planned, and the renewable energy generation capacity and production in use and planned in the State. To the extent that it is not feasible for a State to meet its contribution to the regional renewable energy goals, the State must identify in the progress reports the measures implemented to achieve its contribution and explain why meeting the State's contribution was not feasible.

Finally, the project will utilize the technical support of the Western Interstate Energy Board<sup>3</sup> which has a demonstrated track record of performance. The Western Interstate Energy Board, which is the energy arm of the Western Governors' Association, would be best suited to provide technical assistance to the Forum because of its expertise in western energy issues (particularly its knowledge of the linkage between energy and air quality issues), its

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<sup>3</sup>The Western Interstate Energy Board is an association of western states and western Canadian provinces. The legal basis of the Board is an interstate compact which has been ratified by Congress (PL 91-461). The Board includes a Federal Representative appointed by the President. It also serves as the energy advisory arm of the Western Governors' Association. The Board maintains a staff at its Denver, Colorado, office. Board members are appointed by the governor of each state and are generally the head of the state energy agency. The purposes of the Board are to:

- ▶ Provide a forum for identifying, discussing and resolving regional energy-related issues and problems of interest to its members and provide assistance in policy formulation;
- ▶ Provide multi-state services to member states, including the management and oversight of special projects;
- ▶ Monitor, analyze and report on federal, state and private sector activities affecting western energy interests; and
- ▶ Assist states in coordinating activities with federal agencies.

## **Attachment A Scope of Work**

existing network to state energy agencies (e.g., western state PUCs, state energy agencies and facility siting agencies), its knowledge of the views and priorities of western governors, its extensive experience in the analysis of western energy issues and preparation of briefing materials, its proven track record in organizing and executing both small and large meetings of diverse participants on difficult technical and policy issues, and its existing links to the Internet server housing the WRAP's home page.

Technical support will be provided by Douglas Larson, Executive Director of the Western Interstate Energy Board, Richard Halvey, air quality program manager for the Western Governors' Association, Dale DeCesare, policy analyst for the Western Interstate Energy Board, and Alison Wilson, Researcher/Financial Administrator for the Western Interstate Energy Board.

*Statement of Qualifications of Technical Support Staff*

**DOUGLAS C. LARSON:** Executive Director. Larson has been Executive Director of the Board since 1979. Prior to joining the Board, Larson was legislative analyst of the Western Governors' Regional Energy Policy Office, an association of the governors of 10 western states. He also served as a tax and fiscal analyst for the Joint Budget Committee of the California Legislature and worked in the State of Michigan's Office of Economic Expansion. Larson has served as a consultant to the Congressional Office of Technology Assessment, a member of the State and Regional Advisory Panel to the National Research Council's Energy Engineering Board, and on the Council on Environmental Quality's regional review panel for the United States' report to the United Nations Conference on the Environment and Economic Development. Larson received a Master of Public Policy degree from the University of Michigan in 1973 and an undergraduate degree from Oakland University in 1971.

Larson is the project manager for a team that provides staff support to the Air Pollution Prevention Forum of the WRAP. He was a primary author of the Forum's scoping paper on renewable energy measures to meet the 10/20 renewable energy goals of the GCVTC. Larson has also been instrumental in the formation of the Committee on Regional Electric Power Cooperation. The purpose of the Committee is to promote efficient and reliable electricity markets in the Western Interconnection. Committee, which is unique in North America, includes all the state and provincial utility regulatory, facility siting and energy planning agencies within an entire electrical interconnection. He helped guide the Committee's work on key topics including: creation of western regional transmission groups; electric industry restructuring; market power; independent operation of the western transmission system; system reliability; organization of grid management functions; integrated resource planning; financial incentives for encouraging utility investment in demand-side management; consideration of environmental externalities in the resource planning process; and creation of the Western Systems Power Pool.

**RICHARD W. HALVEY:** Program Manager, Air Quality, Western Governors' Association. Halvey has been with the Western Governors' Association since 1996. While at the WGA he has managed the Air Quality Initiative Project, an effort concerned with making the State Implementation Plan process more responsive to states and using market and performance based programs to replace or supplement existing prescriptive controls. He also staffs the Western Regional Air Partnership, a consortium of states, tribes, and federal agencies working toward implementation of the recommendations of the Grand Canyon Visibility Transport Commission and other air quality issues of concern. Prior to joining the Western Governors' Association, Halvey worked for 19 years at the Colorado Air Pollution Control Division as the Planning Program Manager. Among other things, his responsibilities included oversight and management of the preparation and implementation of all State Implementation Plans for the attainment of National Ambient Air Quality Standards. Halvey has undergraduate degrees in Economics and Geography from the University of Buffalo, and a Masters in Geography from the University of Colorado.

**DALE DECESARE:** Policy Analyst, Western Interstate Energy Board. In this capacity, he has tracked legislative and regulatory developments affecting western energy systems; written and edited a weekly newsletter covering western energy developments; and was a co-author of the renewable energy scoping paper, *A Background White Paper, Increasing the Use of Renewable Energy in the WRAP Region*. DeCesare has previously served as a law clerk conducting legal research on a variety of corporate business issues. He has a J.D. from the University of Denver College of Law and a B.A. from Trinity University in San Antonio, Texas.

**ALISON WILSON:** Financial Administrator and Researcher. Wilson has been with the Board

## Attachment A Scope of Work

**Approach:** To achieve the objectives of this project – (1) inform western state air and energy officials of opportunities to use energy efficiency and renewable energy measures as tools to meet the requirements of the regional haze rule; and (2) to provide resource information sufficient to prepare State Implementation Plans that incorporate energy efficiency and renewable energy measures — six discrete tasks will be undertaken.

Task 1. Organize a project steering committee. The steering committee will be comprised of western state energy and air quality officials and supplemented as needed by energy and air quality experts outside of states. Some members of the steering committee will be drawn from the membership of the Air Pollution Prevention Forum of the Western Regional Air Partnership. However, the Air Pollution Prevention Forum does not have adequate representation of air quality agencies for the purposes of this project.

Task 2. Prepare a draft guidebook that explains the opportunities and procedures for incorporating efficiency and renewable energy measures under Section 308 and Section 309 of the regional haze rule. The draft guidebook will identify the links between recommendations of the Western Regional Air Partnership and state SIP requirements. It is meant to provide state air agencies which are preparing SIPs ready access to specific information on how to incorporate renewables and energy efficiency measures (e.g., system benefit charges, renewable portfolio standards, green power/green marketing, customer information disclosure, government purchases) into regional haze SIPs. The guidebook would cover issues, such as:

- Requirements related to renewables and energy efficiency under the regional haze rule;
- Opportunities to use renewables and energy efficiency under a regional cap and trade program under Section 309, in meeting the specific requirements under Section 309(8), as control measures, and as documented assumptions in emission modeling;
- Precedents for use of renewables and energy efficiency in SIPs (e.g., experience in New York State, EPA guidance)
- Procedures for estimating the energy and air quality impacts of renewables and energy efficiency actions;
- Compliance, verification, and monitoring of renewables and energy efficiency measures;
- Suggestions on the best way to design programs (e.g., who is eligible for emissions credits from renewables and energy efficiency measures, and minimum amounts necessary to award credits.)

The draft guidebook will also make observations about the application of procedures to incorporate renewables and efficiency into non-attainment SIPs. The draft guidebook will be peer reviewed by the steering committee, selected western state air and energy officials, as well as representatives of DOE and EPA.

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Task 3. Publish the handbook on the Internet and brief state air and energy officials on its availability and utility.

Task 4. Hold a workshop of western state energy and air officials on effective means of using energy efficiency and renewable energy measures to meet SIP requirements under the regional haze rule.

Task 5. Follow-up from the workshop (e.g., providing additional information) and preparation of a final report that will include a reviews of lessons learned during the project.

## Attachment B Schedule

Following is the schedule for completion of these tasks. The schedule assumes a project start date of end of September 2000 and a completion date of September 2002. The schedule for this project will provide states with timely information necessary to complete regional haze SIPs by the 2003 regulatory deadline.

Task	Calendar year 2001					Calendar year 2002			
	4 <sup>th</sup> Quarter	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
1	X	X	X	X	X	X	X	X	X
2	X	X	X	X					
3				X					
4					X				
5						X	X	X	X

### The project will produce the following deliverables:

1. March 30, 2001 - A first draft guidebook on incorporating renewables and energy efficiency in western regional haze SIPs;
2. September 30, 2001 - Following peer review, a guidebook.
3. November 30, 2001 - A workshop summary.
4. September 30, 2002 - A final project report, including a review of lessons learned.

In addition, this project supports self-sustaining activities at the end of the project period because the information produced through the project including the guidebook and other workshop briefing materials will help states to fulfill emissions reduction requirements in state implementation plans for the regional haze rule and other state implementation plans under the Clean Air Act in the future.