

# **2003 Southwest Renewable Energy Conference Program**

**Thursday, August 7**

7:30 a.m. – 8:30 a.m.

## **Registration and Continental Breakfast**

8:30 a.m. – 10:00 a.m.

## **Plenary 1: Renewable Energy Resources in the West and the Unveiling of Arizona's New Wind Map**

10:20 a.m. – 12:00 noon – Concurrent Sessions

### **Panel A: Experiences with Renewable Energy**

Much has been learned from the many renewable energy projects that have come to fruition over the past 20 years. These lessons are valuable for directing future efforts in renewable energy development and optimizing project initiation, implementation, operation, economics and technology development. This session will provide an opportunity to exchange ideas and learn from those who have direct experience with renewable energy projects. Come prepared with questions!

### **Panel 1: Renewable Energy Development on Tribal Lands**

In this session panelists, representing a variety of successful tribal programs and projects, will discuss how they were able to bring renewable energy projects into their communities. Panelists will also address the tribal decision-making process and steps for approval of renewable energy projects.

12:10 p.m. – 1:10 p.m.

### **Luncheon: The Hydrogen Future**

Hydrogen is the most abundant element in the universe and when used as a fuel it is super clean and renewable. Hydrogen can be used in fuel cells or internal combustion engines and for electricity production or powering a car. It is often touted as the panacea for the future. Our luncheon speaker will provide an overview on the development of hydrogen and the critical decisions facing the future use of hydrogen.

1:20 p.m. – 3:00 p.m. – Concurrent Sessions

**Panel B -Transmission Issues with Utility-Scale Wind Power**

With 50% of the grid at the end of its useful life and with no significant new infrastructure development in the last 15 years the Regional Transmission Organizations (RTO's) have characterized the grid as "brittle" and "...on the nose of voltage collapse." Enormous growth in the utility-scale wind power industry has added to the line capacity issue and resulted in a National Wind Coordinating Committee (NWCC) study on the impacts of wind power on the transmission system. The condition of the transmission system is also impacting the rapidly expanding wind industry. This session will summarize the issues and present the findings of the NWCC.

**Panel 2 - Local Efforts Make a Difference**

Supportive policy and financial incentives can spur development of renewable energy but it is often a committed individual or organization who makes the difference. This session will highlight accomplishments spearheaded by local activists and organizations that have made important contributions to the implementation of renewable energy projects.

3:20 p.m. – 5:00 p.m. – Concurrent Sessions

**Panel C - Distributed Generation and Rural Electrification**

Centralized electric power plants are the major source of electric power supply today. However, installations of distributed generation (DG) power sources are growing because they can provide incremental capacity to the utility grid, benefit electric utilities by avoiding or reducing the cost of transmission and distribution system upgrades, and feasibly bring electric power to remote and rural areas. The use of renewable distributed energy generation and "green power" such as wind, photovoltaic, fuel cells and geothermal offer a significant environmental benefit while providing users with efficient, reliable and high quality energy and energy independence. The topic of discussion in this session will be the incorporation of renewable energies to meet DG needs.

**Panel 3 - Initiatives to Develop Renewable Energy – Action Plans from Work Groups and Coalitions**

A vast amount of the work done to promote renewable energy is done by committees and work groups that provide forums to develop and implement action plans. These groups vary in form and mission but all can be effective in promoting specific technologies. Speakers will provide information and insights into groups that are promoting wind, geothermal, solar and energy. Learn about the latest activities to develop renewables, how these groups are having an impact, and how you can become involved.

6:00 p.m. – 7:30 p.m.

### **Conference Reception**

Conference attendees will enjoy food and drink in the cool mountain pines at one of Flagstaff's best restaurants. This is an opportunity to continue the day's discussions or just relax in a comfortable setting.

## **2003 Southwest Renewable Energy Conference Program**

**Friday, August 8**

7:30 a.m. – 8:30 a.m.

### **Registration and Continental Breakfast**

8:30 a.m. - 10:00 a.m. – Concurrent Sessions

#### **Panel D - Renewable Energy and Economic Development**

While some technology industries are experiencing little or no growth many renewable energy technologies are growing at double-digit rates. Solar, wind and hydrogen fuel cells offer an array of benefits that include energy security, stabilized energy costs, reduced emissions and the creation of jobs. According to Clean Edge research, the solar photovoltaics industry will grow from a \$3.5 billion industry in 2002 to \$27.5 billion by 2012. Wind power will expand from \$5.5 to \$49 billion in the same period. And fuel cells for mobile, stationary and portable applications will grow from \$500 million to \$12.5 billion in the next decade. This session will discuss the economic opportunities available today in renewable energy and present projects being developed on and off tribal lands in the region.

#### **Panel 4 - Renewable Energy Fact and Fiction**

Ever wonder if there's any truth to the argument that every MW of wind generation must be backed up with a MW of dispatchable generation? This session will focus on the credible and non-credible arguments for and against renewable energy generation. Issues that are typically heard in the press and legislative forums to support or discount renewable energy - such as ancillary costs, backup generation, system integration, customer perception, and capacity value - will be discussed. Unbiased sources of information will be provided. The panel will consist of experts that have both made and responded to these claims.

10:20 a.m. - 12:00 noon – Concurrent Sessions

**Panel E – State-of-the-Art Technologies and Trends in Renewable Energy**

Significant investment in research and development has accompanied the growth in the renewable energy industry during the past ten years. This investment has produced significant advances in the renewable technologies, such as large utility-scale wind turbines up to 1.5 MW in size, with even larger and more efficient machines on the horizon. Dish Stirling solar systems are another example of new, improved technology. Panelists in this session will discuss state-of-the-art technologies and future trends in solar, geothermal, biomass, and wind energy systems.

**Panel 5 - The Washington Report – The Effect of National Policy on States**

The 1970 Clean Air Act and the Energy Policy Act of 1990 have a tremendous impact on the way we live and how our businesses operate. In the past two years Congress created or debated federal policy on air emissions, renewable energy, biofuel development, fuel exploration, Indian energy policy and global warming. Significant changes that have been made or are being considered and how these new policies will impact the Southwest are the topics of this informative session. This is a must for those interested in the big picture.

12:10 p.m.- 1:10 p.m.

**Luncheon – Topic to be announced**

1:20 p.m. - 3:00 p.m.

**Plenary Panel 2 - Renewable Energy Standards – Their Evolution and Success**

Renewable Energy Standards (RES) are recognized as one of the most effective tools to develop renewable energy resources. Over a dozen state and local governments have adopted an RES. Renewable energy advocates and economic development promoters are striving to increase the number of jurisdictions that adopt such standards. This session will review the implementation and evolution of existing standards and new ideas for successfully advocating for new standards. The panel of experts will address the key policy components of some of the adopted standards and well as sponsorship, legislative strategies and coalition building.

3:20 p.m. – 5:00 p.m.

**Plenary Panel 3 - Understanding the Benefits of Renewable Energy Development – A Perspective for Policy Makers**

Development of renewable energy resources can benefit local communities through job creation and capital investments; reduce global warming and air emissions; and create a hedge against fuel price fluctuations. More importantly, developing renewable energy will keep the billions of dollars spent on energy in the state where the energy is produced. This session will focus on the quantifiable benefits of renewable energy development and the policies that policy makers can support.

5:30 p.m. – 7:00 p.m.

**Conference Reception at the Southwest Renewable Energy Fair Product & Technology Expo**

Join your colleagues for this informal reception held at Southwest Renewable Energy Fair Exhibit Hall. This reception offers a preview of the Expo, a showcase of the latest technologies and products for solar, wind, and biomass renewable energy; green building materials and design; and alternative-fuel transportation. This event also provides the opportunity to network with elected officials, industry representatives, renewable energy manufacturers, university faculty and researchers.

7:30 p.m.

**Keynote Address – Energy and the Environment**

This evening program will focus on energy and the environment from federal, state and tribal perspectives.

**David Garman**, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy

**The Honorable John McCain**, Senator, U.S. Senate (Invited)

**The Honorable Jack C. Jackson, Jr.**, Representative, Arizona House of Representatives (Invited)