

ANWR, Windmills, Global Warming and Going Nuclear: A Washington Reporter's Energy Notebook

Jeff Young

Living on Earth, National Public Radio

Jeff will provide an overview of how recent debate and decisions in Washington might affect energy policy and practice in our country. Energy issues have dominated NPR's *Living on Earth* Washington coverage lately. Congress debated an energy bill and voted to drill the Arctic refuge; attitudes changed on climate change and renewable energy got some wind in its sails; the president pushed nuclear power and even some environmentalists gave fission a fresh look. Not all the information a reporter gathers makes it on the air. Hear more from LOE Washington correspondent Jeff Young's interviews and observations on the major trends in energy policy.

Jeff Young is Washington Correspondent for the NPR program *Living on Earth*. He covers environmental issues before Congress, decisions by the courts, and action by the administration and regulatory agencies like the EPA and Interior Department. It's a busy beat, with developments in energy, endangered species and climate change set against the backdrop of a fierce debate about the Bush administration's changes to environmental law. And within the environmental movement itself there is news as leaders wrestle with what direction to take. Before starting work with LOE, Jeff reported on coal, timber and chemical companies for public broadcasting in his native West Virginia. He studied journalism, political science and biology in college and got his journalism degree from Marshall University in Huntington, WV.

Sustainability of Photovoltaics: Stabilizing CO2 Emissions

Andrea Feltrin

Photovoltaics and Nanostructures Group, CAM, University of Houston
Based on recent forecasts of the carbon dioxide increase in the 21st century and of the needed clean energy to stabilize it at a sustainable level, this presentation analyzes the potential contributions and basic limitations of different clean and renewable energy sources. We concentrated in particular on the photovoltaic case and analyzed the material needs of different technologies, going from crystalline silicon through thin film technologies to highly efficient multijunction solar cells, including sun concentrators. The findings show that not all technologies can provide a substantial contribution due to insufficient global material reserves and that a timely shift to clean energy sources has to be done in order to prevent an uncontrolled rise of carbon dioxide in the atmosphere. Andrea received his PhD in physics at the Swiss Federal Institute of Technology in 2004. Since February 2005 he is working on highly efficient nanostructured photovoltaic structures at the University of Houston under the direction of Prof. Alex Freundlich.

Why Go Sustainable? Can You Say "Peak Oil?"

Cal Perrine

San Antonio Oil Awareness Group;Retired, US Dept of Transportation;

This talk will provide an introduction to the imminent worldwide oil production peak. Why does oil production peak, and how is the timing of the peak estimated? What are the consequences of an oil peak? What do the "doubters" say and why are they wrong? What about oil substitutes? How should you respond?

Power Scorecard Helps Consumers Choose Clean Power

Carol Biedrzycki and Sam Swanson

Texas Ratepayers Organization to Save Energy and Power Scorecard Project Director at the Pace Law Sc

The training explains: (1) the problem: pollution from power plants, (2) the consequences of pollution to health and the environment, (3) the opportunity for change by buying clean power, and (4) how to use the Power Scorecard to shop for clean power sources.

Carol is Executive Director of Texas Ratepayers' Organization to Save Energy (Texas ROSE), the only statewide organization dedicated to affordable electricity and a healthy environment. Texas ROSE is a sponsor of the Power Scorecard – an easy to understand rating of the environmental impacts of power production. Sam is the Power Scorecard Project Director at the Pace Law School Energy Project. The Pace Energy Project is one of the handful of environmental organizations throughout the United States that specializes in addressing the connection between environmental issues and energy. The Energy Project developed and administers the Power Scorecard for the national and Texas sponsors.

Introduction to Solar Energy

Charles Farmer

Radian Energy Systems

An introduction to photovoltaic solar energy systems for the novice. This presentation includes an overview of what photovoltaic systems are, how they work, how they differ

from other forms of renewable energy systems, and what their benefits are.

Charles is President and founder of Radian Energy Systems, which provides design, installation, and servicing of solar and wind energy systems and solar water pumping systems.

An Introduction to Biodiesel

Jeff Plowman

Austin Biofuels, LLC

This presentation will discuss the current state of biodiesel in Texas, as well as the future of biodiesel as a renewable energy source. Attendees should also be prepared to discuss the myths and fallacies associated with this exciting new fuel.

Jeff is a dedicated entrepreneur and has operated a small business for over ten years. As President and co-founder of The Herbal Soapworks, Inc., he was successful in manufacturing and marketing over two tons of private label and specialty soaps annually. In 2001, Jeff founded the Austin Biodiesel Coalition, built a first-generation biodiesel production system and a network of biodiesel enthusiasts. Since that time he has gone on to co-found Austin Biofuels, LLC and is responsible for developing the distribution and marketing model, as well as overseeing day to day operations. He is active in community clean energy efforts and is currently a member of the Austin Clean Energy Development Council. Mr. Plowman holds a Bachelor of Arts in Geography from The University of Texas at Austin

The Role of Wind in the Energy Market

Michael Hansen

Superior Renewable Energy

This talk will provide an overview of wind in the energy market and how it has become a viable renewable energy resource as well as its benefits. Background information on the wind industry, where we are today and where we are headed will be included. Studies have shown that wind energy can supply more than 20% of our energy needs, and this would have a great impact on emission reductions. There exist legislative incentives that promote the growth of wind energy such as the Renewables Portfolio Standard (“RPS”) and the Production Tax Credit. There is also a benefit to the communities where the wind facilities are constructed. The cost of electricity from utility-scale wind systems has dropped by more than 80% over the last 20 years. The wind industry is growing rapidly

and continuing technological developments allow wind energy to be more efficient and more cost effective.

Michael has served as Executive Vice President and General Counsel of SRE since May 2005. Since 1995, Mike participated in or supervised numerous M&A (over \$9 billion in announced transactions) and Corporate Finance (over \$2 billion in funding) transactions encompassing diverse industries for both private and public companies. As both an investment banker and practicing corporate attorney, his sourcing and execution of these deals provide expertise and exposure to energy, financial institutions, capital goods, defense, electric, metals and transportation industries.

Substitute Keynote address on Recent Legislation

Russel Smith

Executive Director, Texas Renewable Energy Industries Association

Solar Water Heating for Home and Business

Thomas Isaac

Techsun Solar Inc.

This talk will provide a detailed discussion of current domestic and commercial designs, installations and financial returns of solar water heaters. Learn the advantages/disadvantages of different system types and investment gains from various applications.

Thomas is the owner of Techsun Solar, a national distributor of solar water heating products. He has over 10 years' experience within the solar water heating field and solar certifications from the Florida Solar Energy Center.

The Sustainable Home: Green, Renewable and Practical

Chip Wolfe, Meridian Energy Systems

Richard Heineken, Tank Town

Jim Sargent, Anderson/Sargent Custom Builder

Substitute panel on PV, rainwater and green building.

Energy 101

Chuck Wright

Wright Consulting

Substitute talk on energy efficiency in the home.

High Performance Basics for New Homes

David Fransik

Sierra Homes

This session will be on the basic areas of building high performance homes. The focus will be on energy efficient, indoor air quality and environmental products, concepts and features to consider when building a new home. This builder's passion for building healthy, comfortable, durable, energy efficient and environmentally responsible homes will be evident.

David is the principle builder for his company, Sierra Homes, based in Fredericksburg. He has been in new home construction for 20 years spending the last 5 pursuing energy efficiency and indoor air quality specialization. He is a National Association of Home Builders Certified Graduate Builder and pursues countless hours of continuing education through the Energy and Environmental Building Association. He has a passion for building healthy, comfortable, durable, energy efficient and environmentally responsible homes.

Rainwater Harvesting Basics

Dick Peterson

Austin Energy Green Building Program

An introduction to rainwater harvesting that illustrates constructing a rainbarrel from a recycled drum, assembling a first flush filter or “poor person's roof washer” from off the shelf components, and a slide program of urban rainwater harvesting systems. Example systems illustrate various materials and construction methods for systems from 55 gallons up to 70,000 gallons.

Dick is an Environmental Program Coordinator, recruiting and developing members of Austin Energy's Green Building Program. His experience includes coordinating the Xeriscape, Rainwater Harvesting and Irrigation Programs for Austin's Water Conservation Program. He is a past president of the local Xeriscape and Men's Garden Clubs and the Water Wise Council of Texas.

High Performance Green Building

Donald Ferrier

Ferrier Custom Homes

This presentation will cover the fundamentals of building high performance, energy-efficient, green homes. The builder's experience with earth-shelter and SIP (Structural Insulated Panel) construction will be included in the discussions. Learn how to build a home that uses 50 percent less energy than a conventionally built home.

Don began Ferrier Builders in 1984 and constructed his first super energy-efficient home, an earth-sheltered home. His background in concrete construction helped him to transition into earth-sheltered homes. Since 1984 Don has built numerous types of high performance homes that use at least 50 percent less energy than conventional construction homes, but his focus has been energy efficient construction, particularly SIP (Structural Insulated Panel) construction. In 2004, Ferrier Builders, Inc. started building custom homes as Ferrier Custom Homes.

Indoor Air Quality: Ventilation for Hot And Humid Climates

Doug Garrett, CEM

Building Performance & Comfort, Inc.

Today all homes are very tightly constructed! Ventilation is essential to keeping your home from becoming polluted with both indoor and outdoor allergens, asthma triggers and the friend of mold, high indoor humidity! Learn how to correctly ventilate a Texas home, to solve these problems safely and efficiently.

Doug is a consultant with a long background in energy efficiency, energy codes, air conditioning, and green building. He has worked for twenty years managing energy efficiency programs, promoting green building, and sound building science for Texans.

Natural Building: Philosophy, Systems & Materials

Gayle Borst and Kindra Welch

Stewardship, Inc., Natural Builder

Natural materials and systems offer many "deeper green" solutions than those possible with most commercial and conventional approaches. This introduction will explain what natural building means and why it is important to the stewardship of our planet. Through visual images and discussion, we will examine many uses and combinations of unmanufactured materials such as clay, sand, straw and local wood. Systems covered will include earthen and straw wall construction, natural paints, plasters and flooring.

In 1992 Gayle founded Stewardship, Inc., an Austin architectural firm specializing in sustainable residential and commercial architecture. Among the firm's special areas of expertise are natural building, site-responsive design and affordable sustainable housing. Gayle has designed and built with many natural systems and materials, including straw bale, cob, and rammed earth walls; rammed earth floors; natural plasters; thatched and vegetative roofs; rainwater harvesting; composting toilets and constructed wetlands wastewater treatment; passive solar design and natural ventilation; and daylighting. She has served as an advisor to the City of Austin's Green Building Program, co-founded the Sustainable Building Coalition and Straw Bale Association of Texas, has participated in and hosted several natural building workshops, and is a LEED® Accredited Professional.

Kindra left Austin in 1995 to receive training as a conventional architect at Rice University. After college, feeling the need to tackle the world's problems, Kindra embarked upon a pathway of grantwriting and affordable housing advocacy on the East Coast. Discouraged by the emphasis on mortgages, lawns, government funding and the toxicity of new construction, she went West and joined the permaculture and natural building movements. After participating in the apprenticeship program with Cob Cottage Company in Oregon, she traveled and worked with many natural builders including Cobworks and HouseAlive!. During the summer of 2005 she is leading family and friends in the construction of a cob-adobe-bale hybrid in the mountains of New Mexico. This winter after a decade of travel and education she will return to her hometown of Austin to fuel Texas' natural building movement as a professional builder and instructor.

Straw Walls Without Beer Bellies

Herb Nordmeyer

Headwaters Construction Materials

Straw bale walls often have bulges. Many homebuyers look at bulges as defects in

construction. This presentation will look at a pioneering technique to build flat straw bale walls that are more resistant to lateral loads than conventional straw bale walls.

Herb is the Project and Technology Manager for Headwaters Construction Materials and active on 5 ASTM committees. He is considered one of the world's leading experts in the use of pozzolans in mortars and stuccos. Hobbies include straw bale construction & energy efficient construction.

The German Model - Rainwater Collection

Joe G. Wheeler

Rainfiltrators of Texas, LLC

With over 100,000 installations worldwide, the German model for rainwater collection and water quality is a four step process. This methodology provides high quality, non-potable water that may be used directly in toilets, dishwashers & washing machines. Physics, biological processes and German engineering combine to make this a very low maintenance installation. Giving you high quality water that can be pressure filtered and treated for potability, the German model eliminates brown "tea water," tank cleaning and frequent filter maintenance.

Joe has collected rainwater for all indoor use in his home for the last four years. He initially struggled with low tech, high maintenance system designs. Adoption of the German technology and methods has greatly simplified the maintenance of his system, while increasing the quality of water for potable use.

Build San Antonio Green

L. Michael Lopez

Metropolitan Partnership for Energy

Build Smart. Build Clean. Build Green. This dynamic process assists the public with building choices that are good for your health, pocketbook and the earth. It is about energy and water efficiency and site planning. It also takes advantage of transportation options, and uses materials that have a low impact on the environment. It is the right thing to do.

Michael is the Program Coordinator for San Antonio's Build Green Program that covers 12 counties surrounding Bexar County. He has over 30 years' experience in the construction industry and holds a Class 1 contractors license from the City of San Antonio. He is a native San Antonian and graduated from Texas A&M University

(College Station) with a Bachelor of Science degree in Building Construction, and a minor in Architecture.

Maximizing the Cost Effectiveness of Green Building

Peter Hoffmann

Page Southerland Page Architects

Learn to evaluate and choose sustainable building components and architectural features based on cost effectiveness, and how to determine such cost effectiveness by using tools such as ResCheck and ComCheck. In addition, assign value to benefits that are not readily calculable and see how to integrate them into the overall equation.

Peter is a LEED accredited senior designer with Page Southerland Page Architects in Austin. In addition to working on commercial LEED projects, he also recently completed his own house working with the Green Builder Program. The house was selected for this year's Cool House Tour.

SNAP House: UT Solar Decathlon Entry

Raina Tilden and Robyn Williams Heeks

University of Texas at Austin School of Architecture

This discussion will focus on the SNAP House, the UT-Austin's entry to the Solar Decathlon. An international competition between 18 universities, the Solar Decathlon challenges each team to design and build a completely solar-powered 800 square-foot home. The UT SolarD Team have also focused on using sustainable building materials and constructing with sustainable building practices. The presentation will provide an overview of their design challenges and solutions, focusing on how their decisions were driven by their mission of creating a sustainable and beautiful house.

Both Raina Tilden and Robyn Williams Heeks are graduate architecture students at the University of Texas at Austin. They are both active in the design and construction of the SNAP House, UT's Solar Decathlon entry. While both students are helping with the physical construction of the house, Raina is also responsible for the lighting design and the project's public relations; and Robyn is responsible for fundraising and modeling of the house. Raina's undergraduate degree is from the Georgia Institute of Technology in architecture, and she has worked in several architecture firms in the Atlanta area as an intern designer and project manager. Robyn's degree is from Princeton University in Anthropology and Environmental Studies; before graduate school she served as the Development Director at Dogwood Alliance, a non-profit working to protect Southern

forests from un-sustainable forestry practices.

The Next Generation of Housing

Ralph Smoot

R.C. Smoot Construction

This talk addresses building problems of old with techniques that solve them, covering such concerns as natural resources, water, protection of property and nature, healthier living conditions, safety from natural calamities, affordable housing, and lower living costs.

Ralph is a remodeler and builder of 40 years. His desire is two-fold: first, to show how we can live environmentally without damaging results and conserving nature's resources. Second, to show how everyone can have a home that is affordable, efficient, and health-enhancing, as well as an appreciating asset.

Energy Efficiency in Affordable Housing

Steve C. Brown

Carl Franklin Homes

Energy efficiency is most needed in affordable housing. The implementation of specific green building practices combined with careful materials selection can achieve much lower energy costs even in the smaller, affordable market.

Steve won the Energy Star "2004 Excellence in Energy Performance" Award. He is one of four committee members for the induction of the Green Builder Initiative at the Greater Dallas Home Builders Association. Steve has been featured on the Discovery Channel and HGTV.

Local Organic Agriculture Leads to National Security

Andy Erwin

Boggy Creek Farm

A simple solution to national security is to grow your own food, take oil off the roads, reduce our foreign oil dependence, and gain more independence from the whims of the powers that be. This talk will explore the benefits of growing food locally and how that

makes us healthier, less dependent on foreign oil, and how we can all do it. Many of the tremendous resources at our fingertips to help us on our path to freedom will be explored.

Andy is currently using his extensive organic farming experience at the urban Boggy Creek Farm in Austin. He has worked farms from MA to North Carolina to Austin, TX. Andy worked with Carolina Organic Growers and organic growers cooperative with 33 member farms. One of Andy's specialties is in super intensive small scale growing techniques.

Herbs and Organics: The Perfect Match

Bird Mangels

Time On Our Hands

This presentation will teach you how to be successful growing herbs and edible flowers in containers as well as in your garden. It will cover soil preparation, insect control, beneficials, companion planting, harvesting and usage of herbs and edible flowers.

Bird is the Manager of Time On Our Hands, a Fredericksburg plant nursery as well as vintage furniture and antique store. She provides monthly programs on herbs and has taught continuing education at UTEP on herbs. Bird hosted a weekly gardening segment in Beaumont. She is a lifetime member of Thyme for Herbs Society and a member Herb Society of America. Bird became a Master Gardener in 1995.

EarthKind Rose Program

Neil Cochran

Texas Master Gardener

The EarthKind Rose program is an ongoing project of the Texas Cooperative Extension. Many antique roses have passed this demanding trial. The results are roses that thrive from neglect. Never sprayed for disease, insect or fertilized beyond compost, these roses thrive on rainfall only, after the third year. The history and the future of this trial and methods for incorporating these plants into your landscape will be explained.

Neil is currently the President of the Bell County Master Gardener Association. He became a Master Gardener in 2003 and since that time has spoken to over 50 groups on subjects ranging from rainwater collection to propagation. He is an oak wilt and propagation specialist.

Landscaping with Native Plants

Paul Dowlearn

Wichita Valley Nursery

Aesthetically pleasing landscapes that promote water conservation, soil conservation and regional identity can be accomplished by utilizing native plants. Come learn how.

Paul is actively involved in landscape design/build, running a retail nursery, and being a speaker, writer, radio & TV talk show host.

Zero-Emission Transportation with Electric Vehicles

Andrew W. Donoho

City of Austin, Resource Management Commission

The worst emissions your car makes are during the first five minutes after you turn it on. What if you could make a quick trip to the store in your car without turning on the gas motor at all? With a simple addition to a Toyota Prius (2004-05 models), you can turn on a feature, EV mode, that is in every Prius but not enabled in the US model. This talk will discuss enabling EV mode and our recent "Energize-a-thon" to enable Austin Priuses to use EV mode. Other case studies of electric car conversions will also be presented.

Andrew has been a member of the Resource Management Commission for 18 months. During that time, he has worked to launch Austin's Solar PV Rebate program and has started to work on water conservation issues. He is a member of the Board of Directors for SolarAustin. He also hangs out with the Austin Electric Auto Association folks (AustinEV.org) and used his new Prius, with his wife's enthusiastic support, for an EV conversion. He also built a lovely passive solar home in central Austin. In his day job, he is a software strategist for a Fortune 50 company.

Plug-In Hybrids

Mark Kapner

Austin Energy

Plug-in hybrid vehicles are like regular hybrids with much larger batteries designed to be recharged using the electric grid. They are the best near-term option for helping to shift the transportation sector away from its near-total dependence on oil to electricity, which is generated from a variety of domestic energy resources (increasingly renewable). This talk will describe Austin's plan to aggregate a large enough market for plug-in hybrids to persuade major auto manufacturers to begin producing such vehicles. The emphasis will

be on both local action, such as purchasing plug-ins for the City of Austin's vehicle fleet, and a nationwide campaign to encourage similar actions in the 50 largest cities in the US.

Mark is the senior strategy planner at Austin Energy. He was responsible for developing and launching Austin's GreenChoice renewable energy program and helped to organize Austin Energy's solar electric program. Prior to joining Austin Energy, he was research and development energy at the New York Power Authority where he ran innovative demand side management, energy efficiency, and solar photovoltaic projects.