



2014-2015 WRP Energy Committee Webinar Series

With Key Entities to Highlight Their
Efforts and Identify Opportunities
for Multi-Agency Coordination



Western Regional Partnership (WRP)

The mission of the WRP is to provide *a proactive and collaborative framework for senior-policy level Federal, State and Tribal leadership to identify common goals and emerging issues in the states of Arizona, California, Nevada, New Mexico and Utah and to develop solutions that support WRP Partners and protect natural resources, while promoting sustainability, homeland security and military readiness.*

The Value of WRP

WRP develops solutions that support Partners and protect natural resources, while promoting sustainability, homeland security and military readiness. In the West, there are significant military assets, infrastructure systems such as energy, transportation and wildlife ecosystems. Leveraging of resources and linking of efforts help to avoid duplication of efforts and encourages sharing of best practices. WRP Partners benefit from interagency and cross-state collaboration and use of WRP tools such as the Web Mapping Application.

The Purpose of this Document

The purpose of this document is to provide a quick overview of the resources and information shared by key entities during the 2014-2015 WRP Energy Committee monthly webinar series. This information should assist WRP Partners in their efforts to better understand current energy planning efforts and opportunities for better engagement and coordination. WRP seeks to encourage better information sharing to foster awareness of the interdependencies between Partners and provide for a more symbiotic relationship.

For More Information

For more information on WRP please see www.wrpinfo.org. To participate in a WRP Committee or to receive updates, please complete the information under "mailing list" on the website.

2014-2015 WRP Energy Committee Webinar Series

With Key Entities to Highlight Their Efforts and Identify Opportunities for Multi-Agency Coordination

During 2014-2015 the WRP Energy Committee in 2014/2015 held a series of monthly webinars with key entities to highlight their efforts and identifying opportunities for multi-agency cooperation. The webinars were well attended with generally 80 to 100 participants. This information should assist WRP Partners in their efforts to better understand current energy planning efforts and opportunities for better engagement and coordination.

Contents

Western Regional Partnership (WRP)	1
U.S. Energy Information Administration (EIA)	3
Western Electricity Coordinating Council (WECC).....	4
Western Governors’ Association (WGA) Regulatory and Permitting Information Desktop (RAPID) Toolkit	5
Desert Renewable Energy Conservation Plan (DRECP).....	5
West-wide Wind Mapping Project (WWMP)	6
Southwest Area Transmission (SWAT) Subregional Planning Group	6
California Independent System Operator (ISO).....	7
WestConnect.....	7
DOE Office of Indian Energy Policy and Programs	8
Summary of State Presentations	9
California.....	9
New Mexico.....	10
Nevada.....	11
Utah.....	12

U.S. Energy Information Administration (EIA)

In October, Steven Azzara, who was under contract as Director of State and Intergovernmental Outreach, and John Krohn, Communications Manager, U.S. Energy Information Administration (EIA), presented "An Introduction to EIA."

EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. By law, data, analyses, and forecasts provided by EIA are policy neutral and independent of approval by any other officer or employee of the U.S. government. An example of how such data has been used is a DOE graphic of wind farms developed in the nation since 1975 (<http://www.energy.gov/maps/wind-farms-through-years#buttn>) and how much energy is used per person (<http://www.energy.gov/maps/how-much-do-you-spend-energy>).

The presentation included:

- The EIA's mission-independent, policy neutral statistics and analysis on energy.
- An overview of stakeholders who utilize EIA information (e.g. government; energy producers and consumers; trade associations and commodity analysts; media; educators and researchers; and private citizens).
- EIA publications, such as: its long term (www.eia.gov/steo) and short term energy outlook (www.eia.gov/aeo), monthly energy data (www.eia.gov/mer), weekly petroleum analysis and drilling data
- Information on fossil fuels from Federal and Tribal lands (www.eia.gov/analysis/requests/federallands/)
- The State Energy Portal (www.EIA.gov/state) which provides access to detailed data on energy consumption, supplies, and prices. There are customized graphs, charts, and maps as well as related articles on energy issues affecting each state. There are useful tools for exploring and understanding the data such as: state rankings and side-by-side data comparisons
- An overview of the features of the EIA's website and the many resources available such as:
 - EIA's Flickr page: <https://www.flickr.com/photos/eiagov/>
 - EIA quarterly coal report: www.eia.gov/coal/production/quarterly/
 - U.S. Energy Mapping System: <http://www.eia.gov/state/maps.cfm>
 - State energy data collected in a user-friendly fashion: <https://www.flickr.com/photos/eiagov/>
 - Drilling Productivity Report: www.eia.gov/petroleum/drilling/
 - Today in Energy: <http://www.eia.gov/todayinenergy/> - Short, timely articles with graphics on energy, facts, issues, and trends
 - "What's New" at EIA: www.eia.gov/about/new/
 - Upcoming data releases: www.eia.gov/reports/upcoming.cfm
 - Energy Explained: www.eia.gov/energyexplained/

- Energy in brief: www.eia.gov/energy_in_brief/

For more information please see: the U.S. Energy Information Administration home page at www.eia.gov or contact John Krohn, Communications Manager, EIA at John.Krohn@eia.gov or 202-586-7246.

Western Electricity Coordinating Council (WECC)

In November 2014, Byron Woertz, Senior Project Manager, Western Electricity Coordinating Council (WECC), presented on Transmission Expansion Planning. WECC leads transmission expansion planning for the Western Interconnection and conducts studies, technical analysis, modeling and scenario development. WECC's service territory extends from Canada to Mexico. It includes the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and all or portions of the 14 Western states between. WECC is one of four interconnection regions in the US and Canada. WECC has both non-planning functions (compliance monitoring/enforcement; standards development; market-operations interface; operator training; WREGIS) and planning functions (loads/resource assessments; reliability studies; transmission expansion planning)

His presentation included:

- Transmission Expansion Planning Policy Committee (TEPPC) Study Program, which includes over 50 studies on subjects such as Coal plant retirements, high distributed generation, transmission expansion and high renewable development. The TEPPC provides annual studies and congestions studies. Its stakeholders include: transmission stakeholders, States/provinces, environmental groups, Tribes and Members.
- Scenario Planning Steering Group Planning Process, which was demonstrated through an example of its 2013 study, which indicated that resource additions are principally driven by natural gas prices, generation costs and prices or penalties of carbon or other greenhouse gases.
- A 20 year planning process showed that renewable resources were selected on both economic grounds and to support Renewable Portfolio Standards; costs for new gas and wind resources were very similar; additional transmission resulted from the need to deliver low-cost renewable resources to load centers; solar penetration appears to be trending higher; and new coal generation is not economic if the carbon price is around \$37/ton.
- An Environmental Data Task Force Efforts (EDTF) was formed in June 2010 to provide input on planning transmission expansion. The EDTF has a broad range of stakeholders, among them DoD and Tribes, which provides early environmental/cultural resource input and thereby decreases conflict and cost; high quality data; and, as the tools are publically available, they may be used by state, regional and federal planners.

For more information please see [WECC Home Page](#) or Byron B. Woertz, Jr., PMP, Senior Project Manager, WECC, by phone: (801) 883-6841 or by email: bwoertz@wecc.biz

Western Governors' Association (WGA) Regulatory and Permitting Information Desktop (RAPID) Toolkit

On December 2014, Chris Scolari, Policy Advisor, Western Governors' Association (WGA), presented on State Government Engagement with the Regulatory and Permitting Information Desktop (RAPID) Toolkit, an online tool to assist with transmission siting and permitting processes. WGA represents the Governors of 19 Western states and 3 U.S.-flag islands. The association is an instrument of the Governors for bipartisan policy development, information exchange and collective action on issues of critical importance to the Western United States. The goal of this effort is to streamline the regulatory processes and reduce the time needed for permitting new projects.

The presentation described the RAPID's development. In 2011, WGA created a Transmission Siting Task Force to encourage collaboration and cooperation among all levels of government, including working with federal land agencies to develop and institutional best practices for transmission siting. RAPID developed from the tools and best practices discovered through the Task Force process. It provides publically available data about bulk transmission, geothermal and solar projects and state and federal permit and regulation information. As it uses a Wiki platform, users may view, edit, add and download the data. Sample scenarios were demonstrated, such as an inquiry of how state permitting works in a given state, or how permitting process vary among states.

Interested persons can access RAPID by setting up an account at <http://en.openei.org/> and accessing the RAPID toolkit homepage: <http://en.openei.org/wiki/RAPID>

For more information, please see the RAPID website: <http://en.openei.org/wiki/RAPID> or contact Chris Scolari, Policy Advisor, Western Governors' Association, by phone: (720) 897-4541 or by email: csolari@westgov.org.

Desert Renewable Energy Conservation Plan (DRECP)

In January 2015, California Energy Commissioner Karen Douglas and BLM California Director Jim Kenna presented on the Desert Renewable Energy Conservation Plan (DRECP). The DRECP is a renewable energy and conservation plan covering more than 22 million acres in Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino and San Diego counties. The DRECP is the result of collaboration among the Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), California Energy Commission (CEC), California Department of Fish and Wildlife (CDFW) and other stakeholders.

The draft plan resulted from a process begun in 2008; a Public Draft was released in September 2014 by the California Energy Commission and Department of Fish and Wildlife and the U.S. Bureau of Land Management and Fish and Wildlife Service. The draft plan proposes to protect areas in the California desert that are important for wildlife, recreation, cultural and other uses while also facilitating the timely permitting of solar, wind and geothermal energy projects and associated transmission in appropriate areas. The draft plan presents six alternative approaches for meeting renewable energy and conservation goals through 2040. Each alternative proposes a different conservation design and configuration of lands available for more efficient and predictable renewable energy project review. The draft plan also includes an analysis of the potential environmental impacts of these alternatives. For more information please see <http://www.drecp.org/>

West-wide Wind Mapping Project (WWMP)

In February 2015, Ray Brady, Bureau of Land Management, and Karen P. Smith, Argonne National Laboratory, presented an overview of the West-Wide Wind Mapping Project (WWMP.) BLM is in the process of evaluating wind energy development potential and resource conflicts for development on public lands across 11 western states: Arizona, California, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington and Wyoming. The WWMP is a collaborative effort between the BLM and Argonne National Laboratory to generate maps and geospatial data reflecting wind energy resources (defined as wind speeds at 80 meter of at least 5 meters per second) on public lands and identify existing land use exclusions and other potentially sensitive resources that may affect wind energy development opportunities. The WWMP is intended to provide updated and enhanced information to the 2005 Wind Energy PEIS.

A stakeholder outreach meeting was held in Denver, Colorado on September 16, 2014 to obtain input on this effort. Geospatial data are being gathered regarding sensitive resources; these data will be used to develop an online interactive mapping tool.

Several states have made follow-on efforts, among them California's Desert Renewable Energy Conservation Plan. For more information, please see: http://www.blm.gov/wo/st/en/prog/energy/wind_energy/west-wide_wind_mapping.html

Southwest Area Transmission (SWAT) Subregional Planning Group

In March 2015, Mr. Patrick Harwood, Western Area Power Administration presented an overview of the Southwest Area Transmission (SWAT) Subregional Planning Group. SWAT promotes collaborative regional transmission planning in the Desert Southwest (focused primarily in Arizona and New Mexico). SWAT is a voluntary, open study group of regulators, government entities, transmission users, owners and operators, environmental entities and other interested parties who wish to promote collaborative regional planning in the Desert Southwest.

- Maps of Existing and Future Transmission Projects

- Arizona Utility Ten Year Plans and Biennial Transmission Assessment filings
 - <http://edocket.azcc.gov/Docket/DocketDetailSearch?docketId=18827>
- TEPPC
 - <https://www.wecc.biz/TransmissionExpansionPlanning/Pages/Project-Information-Portal2.aspx>
- WestConnect Ten Year Plan
 - http://www.westconnect.com/final_reports_2015.php
- SWAT Planning Map
 - http://www.westconnect.com/documents_results.php?categoryid=83
- Land Resource Maps
 - US Bureau of Land Management, Arizona Office
http://www.blm.gov/az/st/en/prog/energy/arra_solar.html
 - Open Energy Information
<http://en.openei.org/wiki/Gateway:Transmission>
 - TEPPC Environmental Data Viewer
<https://www.wecc.biz/TransmissionExpansionPlanning/Pages/Environmental-and-Cultural-Considerations.aspx>

For more information please see: http://www.westconnect.com/planning_swat.php and Patrick Harwood, Western Area Power Administration, harwood@wapa.gov, 602-605-2883.

California Independent System Operator (ISO)

In April 2015, Neil Miller, Executive Director, Infrastructure Development, California ISO, presented on Transmission Planning at the California Independent System Operator (ISO). California ISO manages the flow of electricity across the high-voltage, long-distance power lines that make up 80 percent of California's and a small part of Nevada's power grid. As the only independent grid operator in the western U.S., the ISO grants equal access to 26,000 circuit miles of power lines and reduces barriers to diverse resources competing to bring power to 30 million customers. It also facilitates a competitive wholesale power market designed to diversify resources and lower prices.

It is currently working on its 2015-2016 study plan, information on which may be found at: <http://www.caiso.com/Documents/StakeholderInputfor2015-2016UnifiedPlanningAssumptions.htm>

For more information, please see: <http://www.caiso.com/Pages/default.aspx>

WestConnect

In May 2015, Charlie Reinhold, WestConnect Project Manager, and Keegan Moyer, WestConnect Planning Consultant, provided an update on Regional Planning. WestConnect is composed of electricity utility companies providing transmission services throughout the western United States. Its members work collaboratively to assess stakeholder and market

needs and to develop cost-effective enhancements to the western transmission systems. WestConnect recently completed its Annual Ten-Year Transmission Plan, which provides a comprehensive overview of the large number of planned and conceptual transmission projects proposed within the planning area within 2015-2024. WestConnect is also in the first year of its FERC Order 1000 transmission planning process, and is preparing for its first full biennial planning cycle starting in 2016. Its 2015 study plan may be found here: http://www.westconnect.com/filestorage/wc_2015_regional_study_plan_010615.pdf

For more information <http://www.westconnect.com/> and Charlie Reinhold and Keegan Moyer

DOE Office of Indian Energy Policy and Programs

In June 2015, Christopher C. Deschene, Director, Office of Indian Energy, U.S. Department of Energy, presented on the programs of his office. Placing the office in the global context of an energy sector measured in trillions of dollars, with global competition and concerns about climate change, he noted the current US energy revolution: world-leading oil and gas production; on-shoring related to low natural gas prices; carbon emission targets; integration with Canada and Mexico; and increasing renewable energy deployment. That revolution was contrasted with the challenges of energy security/climate change, resource price volatility and modernized infrastructure.

Mr. Deschene noted that tribal lands constitute about 2% of all US lands outside of Alaska, and about 4% of potential renewable energy. About 55 MW of wind generation has been installed but there is a capacity of over 370,000 MW, generating as much as 32% of current electricity. For solar, tribal lands had installed about 5 MW.

The Office of Indian Energy Policy and Programs promotes tribal energy development, reduces/stabilizes energy costs, enhances tribal energy infrastructure, and brings energy to tribal members. For FY 2015/16, the Office's priorities include meeting the needs and priorities of Indian Country, technical and financial assistance, collaboration with DOE and federal partners, and working with the Indian Country Energy and Infrastructure Working Group (ICEIWG,) which is 11 tribes exchanging information about current state of energy development and practices.

The Office selected 11 clean energy projects with a total estimated cost in excess of \$13 million dollars; 7 of the projects are in WRP states.

For more information, see www.energy.gov/indianenergy or contact Christopher Clark Deschene, Director, Office of Indian Energy Policy & Programs, Department of Energy (202) 586-1272, chris.deschene@hq.doe.gov

Summary of State Presentations

In July 2015, four of the five WRP states provided an overview of their energy-related efforts.

California

Scott Morgan, Deputy Director and State Clearinghouse Director, Governor's Office of Planning and Research, and Jim Bartridge, Senior Transmission Program Specialist, Siting, Transmission, and Environmental Protection Division, California Energy Commission, presented on "California Energy Perspectives" on July 29, 2015. Topics included:

- Key Energy Policies and Goals established by legislative, executive and agency actions:
 - Reducing greenhouse gas (GHG) emissions to 2006 levels by 2020, with a goal of further reducing them to 20% of 2006 levels by 2050
 - Interim GHG reduction to 40% below 1990 levels by 2030
 - Prioritizing investments in renewables and clean fossil fuels
 - Production of 20 GW of new renewables by 2020
 - 3 GW by end of 2016
 - 8 GW large-scale by 2020
 - 12 GW small scale by 2020
 - Renewable portfolio standard of 33% by 2020
 - Zero net energy goals for new homes by 2020, commercial buildings by 2030
 - Efficiency improvements in state buildings
 - Target of 1.5 million zero emission vehicles by 2025 and reduce GHG emissions from transportation sector to 80% of 1990 levels by 2050
- Drought and Energy
 - Reduced snowpack/water supply leads to less hydroelectric generation, particularly for Northern CA
 - New renewable generation, especially solar, contributed enough to make up about 55% of lost hydroelectric
- Water-related Energy Use in CA
 - Non-ag water use-58%
 - Agriculture water use-16%
 - Non-ag water supply and treatment-16%
 - Ag water supply and treatment-5%
 - Wastewater treatment-5%
- Desert Renewable Energy Conservation Plan
 - Identify preferred areas for renewable development
 - Reduce cost/time for permitting renewable generation and transmission in desert
 - 22.5 million acres in DRECP area

- Collaborative effort with federal, state and local governments, environmentalists and other stakeholders
- Phased-in, starting with public lands

New Mexico

Jeremy Lewis, Energy Conservation & Management Division (ECMD), New Mexico Energy, Minerals and Natural Resources Department, provided an update on activities in New Mexico:

- ECMD
 - Legislature created it to serve as the State Energy Office
 - Funded by NM and Federal governments
 - Provides technical assistance to citizens, businesses and government
 - Promote efficiency and renewables
 - Programs
 - Residential Solar
 - Sustainable Building
 - Utility Wind & Solar
 - Geothermal
 - Energy Efficiency Programs
 - Energy Audits
 - Clean Fuels Program
- State Energy Policy & Implementation Plan
 - Creation of State Energy Policy has been in process since 2013 and expected to be released by end of summer 2015
 - Focus on “all of the above” and economic development
 - Market expansion
 - Regulatory clarity
 - Infrastructure
 - Water/energy nexus
 - Workforce training
 - Energy education
 - Public building energy efficiency
 - WISE
 - Goal of 20% savings by 2020 (from 2011 baseline) achieved
 - DOE-funded 2012
 - LEEP
 - Local government program
 - 4 cities and counties
 - DOE-funded 2014

For more information, contact Jeremy Lewis. Jeremy.Lewis@state.nm.us (505) 476-3319

Nevada

Paul A. Thomsen, Director, Governor's Office of Energy (GOE), presented on Nevada Energy Perspectives:

- Governor's Office of Energy
 - Mission
 - Ensure wise development of NV energy resources in harmony with local economic needs
 - Position NV to lead nation in renewable energy production, conservation and exportation of energy
 - Implements State laws
 - Manages energy-related programs
 - Facilitates cooperation among stakeholders
 - Advises Governor
 - Collaborates with local, regional and federal partners to ensure reliable and sustainable energy
- Renewable Energy Tax Abatement Program
 - Awards renewable energy producers with sales, use or property tax reductions
 - Since inception
 - NV invested \$585 million
 - Attracted \$5.7 billion in investment, payroll, taxes
 - Over 3,000 construction jobs
 - 22 renewable power plants operating in NV
- Revolving Loan Program
 - Funded by federal stimulus plan in 2009
 - Provides low-interest rate loans of \$100,000 to \$1 million for up to 15 years for project development
 - More than \$17.4 million loaned to 20 projects
- Performance Contract Audit Assistance Program
 - Funds audit to determine if performance contract is right for a project
 - Way to upgrade facilities without up-front capital costs, paid for through energy savings
 - Over \$300,000 awarded for 2 audits
- International Energy Conservation Code
 - Model for design and construction for energy efficiency
 - NV adopted 2012 IECC in 2014
 - Sponsored training of more than 300 industry consultants and contractors
- Home Energy Retrofit Opportunity for Seniors
 - Funded by GOE
 - Provides up to \$6,000 for seniors at or below 200% of federal poverty guidelines to assess and install weatherization measures
 - 132 homes have been served

- Direct Energy Assistance Loan Program
 - Funded by GOE
 - Interest free loan up to \$6,000 (\$8,000 for veterans) up to a five year term for energy efficiency for state employees' homes
- LEED Tax Abatement Program
 - Property tax incentives for building owners to improve energy efficiency
 - More than 57 million square feet were covered by the program
- Energy Imbalance Market
 - NV Public Utility Commission and FERC approved NV Energy's request to participate in six-state Energy Imbalance Market
 - Analyzes supply and demand every 5 minutes to dispatch lowest cost resources and meet energy needs
 - Saves NV ratepayers \$4 million to \$6.5 million annually
- One Nevada Line
 - 231 mile transmission line completed January 2014
 - First connection between NV northern and southern service areas
 - 500kV, 60-800 MW

For more information, please see www.energy.nv.gov

Utah

Rob Simmons, Energy Policy & Law Manager, Governor's Office of Energy Development, provided State Energy Perspectives for Utah:

- Governor's Office of Energy Development (OED)
 - Serves as primary resource for advancing energy development in state
 - Advances Governor's goals and objectives
 - Engages in energy education and outreach to the public, including workforce development and research
 - Governor's 10-year Strategic Energy Plan
 - Advocate responsible energy resource development
 - Pursue energy technology innovations
 - Recommends addressing access to public lands, leveraging research institutions, tax incentives, expanded resource development, alternative transportation, energy conservation
- State Energy Policy
 - Promotes adequate, reliable, affordable, sustainable and clean energy resources
 - Nonrenewable energy resources
 - Renewable resources
 - Nuclear power
 - Reduce dependence on international energy sources

- Allows for incentives and other methods to ensure optimal development and use of energy in short- and long-term
 - Pursue energy conservation and efficiency and environmental quality
- Renewable Energy in Utah
 - Currently 700 MWs renewable capacity
 - Wind: 327 MWs (2 wind farms)
 - Hydroelectric: 276 MWs (63 power plants)
 - Geothermal: 77 MWs (3 power plants)
 - Solar: 10-20 MWs, distributed
 - Biomass: approx. 15 MWs (landfill/agricultural biogas)
 - Potential
 - Geothermal: 437 MWs
 - Solar: 14,700 MWs
 - Wind: 8,900 MWs
 - 800 MWs currently under development
- Major Trends in Energy Development in UT
 - Oil price reduction resulted in 75% decline in operating rigs in Uinta Basin
 - Coal production reduced 25% from 2004 to 2014
 - Solar development picking up
 - Federal regulatory issues
 - EPA regulations
 - CO2 power plant emissions
 - Ozone standards
 - Mercury & air toxics standards for power plants
 - Regional haze standards
 - EPA/Army Corps of Engineers "Waters of the United States" rule
 - Methane emission regulation of oil and gas operators
 - BLM regulations
 - Hydraulic fracturing rule
 - Sage Grouse land use plan amendments, pending ESA listing
 - Master Leasing Plans
 - Other
 - CEQ guidance for including GHG emission in NEPA reviews
- Prioritizing Infrastructure
 - New infrastructure, including transmission, needed to develop resources, deliver energy to load, and support development of generation, including renewables
 - State and county planning should identify optimal infrastructure corridors and aim to preserve them for that use
- Transmission Projects: Permitting
 - Transwest Express Line (Anschutz project)

- 600 kV proposed to move renewable power from WY to AZ, NV and CA
 - Plan to include terminus in UT but not deliver energy
 - Possible 345 kV line system to deliver energy in UT
 - In process for nearly 8 years; decision expected Fall 2015
- Tools for Better Engagement with Military on Resource Development & Infrastructure Projects
 - Military Installation Energy Coalition (MIEC)
 - Facilitates discussion with UT military assets on energy security, energy goals and support for DoD's energy efficiency and renewable energy goals
 - Started in 2010 to fill coordination gap
 - Meets quarterly
 - Members include
 - Hill AFB
 - Dugway Proving Ground
 - Tooele Army Depot
 - Camp Williams
 - State of Utah
 - Other stakeholders
 - Public Lands Initiative
 - Pursue opportunities to exchange lands with federal government
 - MOU with BLM
 - Signed December 2014
 - Advance responsible energy development in UT
 - Can serve as possible model for agreements with military