WESTERN REGIONAL PARTNERSHIP

WRP Energy Guide

Information on State and Federal Energy-Related Activities in the WRP Region

2014

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 and 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

This document highlights State and Federal agency energy-related efforts within the WRP region. This document serves as a tool for to assist policy makers and planners working together in a proactive and collaborative fashion. 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.

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State Energy Related Information

Significance of State Energy Efforts in the WRP Region

The WRP States (Arizona, California, Nevada, New Mexico and Utah) are all quite large in area, ranging from the third largest state (CA) to the thirteenth (Utah). In total land mass, the States comprise nearly 600,000 square miles, about a fifth of the area of the 48 contiguous States.

The States are also somewhat similar in that each:

- Contain a great deal of Federal land, ranging from 34.1% in New Mexico to 85% in Nevada
- Have considerable State and Tribal lands,
- With the exception to some degree of California, have concentrations of population surrounded by vast rural, nearly uninhabited spaces.

These characteristics impact infrastructure of all types, and energy is no exception. With respect to energy, the five States share a couple other characteristics: they have climates that are conducive to alternative forms of energy, including wind, solar and geothermal, and they have significant hydroelectric resources, e.g., Hoover Dam.

Decisions about where and what types of power will be generated, and how that power will be transmitted from the generation source to the load, are greatly impacted by decisions made in the States. Each of the States has its own regulatory framework for the siting of electric power facilities and goals for alternative power generation and transmission.

The purpose of this Guide is to give WRP members a reference tool providing an overview of the energy related issues at the State level. As these matters are in a constant state of change, this should not be considered a definitive or comprehensive outline, and may become outdated rapidly. Any suggestions as to improvements, corrections or updates are always welcome.

ARIZONA

Arizona is aggressively pursuing additional energy development. Arizona's State Renewable Energy Portfolio Standard is 15% by 2025. The state has abundant sunshine and according to the 2013 U.S. Solar Market Insight Report from the Solar Energy Industries Association (SEIA), Arizona added 421 MWs of photovoltaic energy production in 2013 alone, down from over 700 MWs the previous year, but remains second only to California both in its 2013 additional capacity and in its cumulative installed capacity.

In January 2010 the state began offering the Arizona Renewable Energy Tax Incentive Program, which is designed to stimulate new investments in manufacturing and headquarter

operations of renewable energy companies including solar, wind, geothermal and other renewable technologies.

Energy proponents are encouraged to contact the Governor's Office of Energy Policy (http://www.azenergy.gov/).

Arizona Land Ownership

The state of Arizona comprises 114,000 square miles, making it the 6th largest state in area. Land in Arizona consists of 42.1% Federal land, 27.6% Indian Trust Land, 17.5% private land and 12.7% state trust land.

Arizona State Land Department (ASLD)

ASLD manages 9.3 million acres of Trust Land. ASLD works with renewable energy developers to identify potential sites for utility-scale power generation on State Trust Lands. During its review of solar lease and wind right-of-way applications for renewable energy development ASLD considers:

- The viability and income potential of the proposed use;
- Archaeology;
- Hydrology;
- Geology;
- Topography;
- Drainage;
- Impacts to adjacent State Trust Lands;
- Availability of utilities/infrastructure;
- Proximity to existing and proposed transmission lines and substations;
- Proximity to existing development;
- Access;
- Parcel size; and
- Conformity with local jurisdiction regulations.

During the application process, ASLD solicits comments from entities that may be impacted by the potential use. ASLD requires its applicants perform extensive due diligence on the proposed site. ASLD and its applicant negotiate the terms of a commercial lease for solar or right-of-way for wind development which will be presented to the Board of Appeals for consideration and approval. Once approved, a solar lease will be offered to the highest bidder at public auction. Wind rights-of-way for terms less than 50 years do not go to auction. ASLD will support its lessee/grantee in securing entitlements and permitting for the proposed development. For more information please see http://www.land.state.az.us/.

Private Lands make up 12.8 million acres of land in Arizona. On private lands, typically the city, county or town has planning jurisdiction.

Arizona Governor's Office of Energy Policy

On May 17, 2011 Governor Jan Brewer issued Executive Order 2011-02 (http://www.azenergy.gov/doclib/Gov_OEP_Exec_Order.pdf) which established the Governor's Office of Energy Policy (OEP). The stated mission of this office is *"To be the national leader in renewable energy development, while buoying traditional energy sources with new clean technologies and increased efficiency to benefit all Arizonans."* For more information on the office or the efforts below please see: http://www.azenergy.gov/ or https://www.facebook.com/azenergy:

- Renewable Energy (including resources and Arizona Incentive programs)
- Policy (including Governor's Solar Energy Task Force and Arizona-Mexico Commission Energy Committee)
- Residential
- Weatherization Program
- Gas Prices
- Business (information on utilities in Arizona, incentives and Energy Star resources)
- Government (information on the State Energy Program, Energy Efficiency and Conservation Block Grant Program, Community Energy Planning Program, State Energy Codes, Energy Savings Performance Contracting, and the Tribal Energy Program)
- Contractors and Vendors
- Other Resources

The Office staffs the Governor's Solar Energy Task Force which was created in March 2011 by Governor Brewer's Executive Order. The Task Force issued their first report in December 2011 to "address permit reform for the vast majority of residential solar installations in the State of Arizona." Forthcoming reports will address additional recommendations by December 31, 2012 and a final report by December 2013. For more information please see: http://www.azenergy.gov/doclib/2011%20GSETF%20Recommendations.pdf

In addition, on January 15, 2013, Governor Brewer by executive order established Arizona's Master Energy Plan Task Force to draft a master energy plan for Arizona, the first such plan in 23 years. The Task Force worked through four groups, on the following topics: Transportation, Fuels and Infrastructure Planning; Business, Regulation and Workforce; Environment, Natural Resources and Land Use; and Technology Development.
In January 2014, the Governor approved the Task Force's Master Energy Plan, "emPOWER Arizona" (which may be found here: bit.ly/1fwyAGF) with the following goals:

- "identifying best practices to increase solar energy development;
- "educating our next generation of energy professionals;
- "positioning Arizona as a global leader in energy-sector workforce development;
- "fostering statewide coordination to reduce energy consumption;
- "establishing an Energy Advisory Board to oversee, review and update the plan."

For more information, see http://www.azenergy.gov/Policy/MEP.aspx

The Arizona Renewable Energy Mapping Project

"The Arizona Renewable Energy Mapping Project is a collaborative project to create a renewable energy mapping system to help facilitate the development of Arizona's Renewable Energy resources in a coordinated manner. The system provides information to the public, the renewable energy industry and public agencies on lands in Arizona which help users evaluate lands for their general potential for development as renewable energy generation sites. The system also provides information regarding specific areas which are currently under consideration for development. The project is currently focused on lands for use in industrial scale solar energy generation. Additional data will be added to the system over time."
For more information please see: https://renewablemap.az.gov/portal/

Arizona Department of Environmental Quality (ADEQ)

ADEQ "issues approvals, certifications and general and individual permits, through its Air Quality, Waste Programs and Water Quality divisions, for a number of activities that may occur at renewable energy development projects." For more information please see: http://www.azdeq.gov/function/permits/renew.html

The Arizona Oil & Gas Conservation Commission (AZOGCC)

"The AZOGCC has statutory responsibility to regulate the drilling for and production of oil, gas, helium, carbon dioxide, and geothermal resources. The AZOGCC consists of five members appointed by the Governor and one ex-officio member, the State Land Commissioner. The Arizona Geological Survey (AZGS) provides administrative and staff support." For more information please see: http://www.azogcc.az.gov/

Arizona Regulating Agencies

Arizona has two main energy regulatory agencies including the Arizona Corporation Commission (ACC) and the Arizona Power Plant and Transmission Line Siting Committee.

Arizona Corporation Commission (ACC)

The ACC was established through Article 15 of the Arizona Constitution. The ACC conducts public utilities regulation, and other duties such as facilitating the incorporation of businesses and organizations, securities regulation and railroad/pipeline safety (http://www.azcc.gov/). The ACC has a significant role in regulating energy industry (but does not have oversight over wind and photovoltaic projects and thermal projects under 100 MW) including:

ACC Notification/Coordination Opportunities:

- *Review BTA*
- *As power plant cases move through the process, hundreds of pages of documents, testimony and technical data are filed in the Docket Control Centers at the Arizona Corporation Commission's Phoenix and Tucson offices. The Phoenix Docket Control Center is located at 1200 West Washington and the Tucson office is at 400 West Congress Street.*

- Responsible for confirming, denying or modifying the Certificates of Environmental Compatibility issued by the Arizona Power Plant and Transmission Line Siting Committee for proposed Extra High Voltage power lines (115 kv and above) and for thermal power plants generating 100 MW or more; and proposed aboveground transmission lines designed for 115 kv or higher
    - Every entity considering construction of a new power plant of 100 Megawatts of greater within Arizona is required to file a plan with the commission at least 90 days before filing an application for a Certificate of Environmental Compatibility (CEC)
    - See Power Plant and Transmission Line Siting Committee process below
- Conducts Biennial Transmission Assessment (BTA) which requires utilities to file a ten year plan identifying planned and necessary transmission projects.
    - AZ statutes require every entity considering construction of any transmission line equal to or greater than 115kV within Arizona during the next ten year period to file a ten year plan with the ACC on or before January 31 of each year (ARS 40-360.02A).

Arizona Power Plant and Transmission Line Siting Committee

Arizona Power Plant and Transmission Line Siting Committee was established by the Arizona State Legislature to "provide a single forum for the expeditious resolution of all matters concerning the location of electric generating plants and transmission lines in a single proceeding to which access will be open to interested and affected individuals, groups, county and municipal governments and other public bodies to participate in these decisions." (Laws 1971, Ch. 67, § 1) Local jurisdictions are therefore deprived of the ability to approve or disapprove transmission projects. In general, the Committee has jurisdiction on:

- Proposed plants generating 100 megawatts or more; and
- Proposed above-ground transmission lines designed for 115kv or higher.

Before any "utility" may build a "thermal" power plant in the state of Arizona that generates 100 megawatts (A.R.S. §40-

Three methods exist for public participation in line siting hearings:

- *A.R.S. § 40-360.05(A)(4) authorizes the Committee to grant intervention as a party "at any time." R14-3-204A requires a person to make a request to appear as a party at least ten days before the hearing is scheduled. Hearings must begin not less than thirty nor more than sixty days after the application is filed. A.R.S. § 40-360.04(A). If a party intervenes at the last moment it creates the potential for delay while witnesses and exhibits are disclosed to the other parties.*
- *A.R.S. § 40-360.05(B) authorizes a limited appearance which amounts to a sort of public statement.*
- *A.R.S. § 38-431.01(H) allows but does not require public comment. However, as the ACC ultimately grants the CEC, and the ACC typically provides an opportunity for public comment at its hearings, the possibility of comment at the ACC hearing exists.*

The Arizona Corporation Commission's website (www.azcc.gov) includes a link for information about Arizona Power Plant and Line Siting Committee meetings
ACC Power Plant and Line Siting Committee

360(9)) or more electricity, or build a transmission line that carries nominal voltages of 115 kilovolts or more of electricity (A.R.S. § 40-360(10)), the "utility" must apply for and obtain a CEC from the Committee

- A decision on a CEC application must be made within 180 days of filing unless the applicant agrees to extend the time. Failure by the Committee to act within the time specified effectively approves the application. The average time from the date the application is filed until the Committee's decision on the CEC in all cases filed since July 1, 2008 was less than 80 days.

The Committee's decision on the CEC is forwarded to the ACC for final action.

CALIFORNIA

California, with its abundant natural resources, has a long history of support for renewable energy. California ranks first in the nation in terms of solar installation, according to the 2011 U.S. Solar Market Insight Report.

California's Renewable Portfolio Standard (RPS) is the most ambitious in the country. It requires utilities to meet 33 percent of their energy supplies from eligible renewable energy resources by 2020. Additionally, Governor Brown's Clean Energy Jobs Plan highlights the need to streamline transmission and generation permitting in California, and calls for an additional 20,000 MW of new renewable capacity by 2020, including 8,000 MW of large-scale wind, solar, and geothermal resources, and 12,000 MW of distributed generation. The plan also calls for 6,500 MW of combined heart and power by 2030 and increasing the state's use of renewable and alternative fuels.

California Land Ownership

The state of California comprises 160,000 square miles, making it the third largest state in area. Land in California consists of 50.3% private land, 44.2% Federal land, 2.5% state land, 2.5% local land and 0.5% Indian Trust Land.

MOU with U.S. Department of Interior (DOI)

In January 2012, DOI Secretary Salazar and Governor Brown signed an MOU to expand a state and federal partnership that over the last two years assisted with renewable energy projects in California. The MOU calls for many specific objectives, including maintaining the Renewable Energy Policy Group (REPG), which includes senior policy representatives from DOI, the Governor's Office, the Natural Resources Agency, and other participating State departments. The REPG will oversee implementation of the MOU and monitor its progress. For more information please see: http://www.doi.gov/news/pressreleases/Secretary-Salazar-Governor-Brown-Expand-Partnership-to-Expedite-Renewable-Energy-Projects-in-California.cfm

California Energy Commission (CEC)

According to its website, "The California Energy Commission is the state's primary energy policy and planning agency. Created by the Legislature in 1974 and located in Sacramento, six basic responsibilities guide the Energy Commission as it sets state energy policy:

- Forecasting future energy needs;
- Promoting energy efficiency and conservation by setting the state's appliance and building efficiency standards;

CEC Power Plant Siting Process

Members of the public are encouraged to be involved in siting activities. Presentations can be made and become "comments" in the administrative and/or the hearing record.

For more information please see: http://www.energy.ca.gov/sitingcases/index.html

- Supporting public interest energy research that advances energy science and technology through research, development and demonstration programs;
- Developing renewable energy resources and alternative renewable energy technologies for buildings, industry and transportation;
- Licensing thermal power plants 50 megawatts or larger;
- Planning for and directing state response to energy emergencies."

The Energy Commission also administers the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP), which annually invests $100 million to promote development and deployment of advanced vehicles, vehicle technologies, alternative low carbon fuels, and associated fueling infrastructure to help the state achieve its greenhouse gas, air quality, and public health goals.

Every two years the Energy Commission prepares an *Integrated Energy Policy Report (IEPR)*, which serves as the state's main energy planning document by providing the Governor, Legislature, and the public with information and analysis about the state's energy supply, demand, distribution, and price. Additional information regarding the IEPR process is available at: http://www.energy.ca.gov/

Since 2002, the Energy Commission has determined the eligibility of renewable resources and verified renewable procurement for the state's Investor-Owned Utilities. Under Senate Bill X1-2 (Simitian, 2011) the Energy Commission's expanded to include determination of eligible renewable resources, monitoring RPS compliance, and adopting regulations specifying procedures for the enforcement of RPS procurement requirements for Publically Owned Utilities.

The Energy Commission has exclusive licensing authority for thermal power plants 50 megawatts and larger, including jurisdiction over related ancillary facilities – the Commission's one-stop permitting process and permit is in lieu of all other local, state and federal permits to the extent allowed by federal law. Since 1996, the Energy Commission has licensed more than 16,000 MW of generation that is currently operating; in 2010, over 4,000 MW of solar thermal projects and 3,000 MW of natural gas projects were licensed. Information regarding the Energy Commission's siting, transmission, and environmental protection division is available at: http://www.energy.ca.gov/siting/
Information on large solar energy projects can be assessable through this link: http://www.energy.ca.gov/siting/solar/

In September 2011, the Energy Commission developed the Energy Aware Facility Siting and Permitting Guide, which discusses the increasing role of local governments in energy planning and permitting. The guide is intended as a tool to assist local governments in developing general plan energy and transmission elements by providing guidance on utility-scale electricity generation and transmission planning and permitting and describing

the environmental impacts associated with such projects. The Guide also includes four tables helpful to understanding permitting jurisdiction in California:

- Table 4.1 – Agencies (including Federal and California) with permit, leasing, or review requirements
- Table 4.2 – Permitting Matrix: Projects < 50 MW on Private Lands
- Table 4.3 – Permitting Matrix: Projects > 50 MW on Private Lands
- Table 4.4 – Permitting Matrix: Projects < 50 MW on Public Lands
- Table 4.4 – Permitting Matrix: Projects > 50 MW on Public Lands

For more information please see: http://www.energy.ca.gov/energy_aware_guide/siting.html

California Public Utilities Commission (CPUC)

The CPUC has authority over the operations of the California's investor-owned electric utilities (IOUs), including design of retail rates and allocating costs among utility customers. In addition, it is responsible for ensuring that IOUs meet the state's Renewables Portfolio Standard. The CPUC also regulates electric safety and the state's electric distribution safety standards through its General Orders. The CPUC also administers the state's Public Purpose Programs for electricity such as utility sponsored energy efficiency efforts and renewable energy programs. The CPUC also coordinates its regulatory activities with those of the California Energy Commission and the California Independent System Operator. At the federal level, the CPUC represents California and its ratepayers in proceedings before the Federal Energy Regulatory Commission (FERC).

According to the June 2012 CPUC Report titled, "California Solar Initiative Annual Program Assessment" in 2011 California "reached a major milestone by becoming the first state in the nation to install more than 1 gigawatt (1,000 megawatts) of customer-generated solar energy; a record 311 megawatts (MW) were installed in the investor-owned utility territories in 2011 alone."

CPUC holds public hearings and seeks comments on project's Draft Environmental Impact Report (EIR). Information on projects can be found through this link: http://www.cpuc.ca.gov/PUC/energy/Environment/Current+Projects/

The CPUC permits transmission facilities that are greater than 50 KV (with certain exemptions). "Investor-owned utilities are required to obtain a permit from the CPUC for construction of certain specified infrastructure listed under Public Utilities Code sections 1001. The CPUC reviews permit applications under two concurrent processes: (1) an environmental review pursuant to the California Environmental Quality Act (CEQA), and (2) the review of project need and costs pursuant to Public Utilities Code (PU Code) sections 1001 et seq. and General Order (G.O.) 131-D (Certification of Public Necessity and Convenience (CPCN) or Permit to Construct (PTC))." Through this link are "resources for permit applicants and public parties interest in participating in CPUC's environmental review and/or the CPUC's economic and need assessment for a particular project" as well as

information on current and pending transmission projects:
http://www.cpuc.ca.gov/puc/energy/environment/

Information on the process by which electric transmission siting occurs at the CPUC is available through this link: http://www.cpuc.ca.gov/NR/rdonlyres/2CC81265-6521-43B0-A510-36B5A42E4BB4/0/Transmission_siting_flow_chart.pdf

Information from CPUC regarding Federal, State, and Local Permitting Processes likely to be required for electric transmission projects is available through this link: http://www.cpuc.ca.gov/NR/rdonlyres/D896C1EA-BD35-4BC8-83C8-D332BAE959BF/0/GenericTransmissionLinePermit.pdf

California Independent System Operator (CAISO)

CAISO is a non-profit public benefit corporation charged with operating the majority of California's high-voltage wholesale power grid. Balancing the demand for electricity with an equal supply of megawatts, the ISO is the impartial link between power plants and the utilities that serve more than 30 million consumers. The ISO provides equal access to the grid for all qualified users and strategically plans for the transmission needs of this vital infrastructure. For more information please see: http://www.caiso.com/

California Department of Fish and Game (DFG)

California DFG's Renewable Energy Program is "responsible for coordinating and performing a variety of tasks related to environmental review of proposed renewable energy projects. These tasks include reviewing environmental project documents prepared pursuant to the California Environmental Quality Act (CEQA), and providing comments and recommendations to fulfill DFG's trustee and responsible agency obligations under CEQA. The Renewable Energy Program also ensures compliance with and issues permits under the California Endangered Species Act (CESA), issues lake or streambed alteration agreements pursuant to Fish and Game Code sections 1600-1616, and meets the requirements of the Natural Community Conservation Planning Act, Fish and Game Code section 2800, et seq." For more information please see:
http://www.dfg.ca.gov/Climate_and_Energy/Renewable_Energy/

California State Lands Commission

In 2008, the State Lands Commission adopted a resolution "Supporting the Environmentally Responsible Development of School Lands Under the Commission's Jurisdiction for Renewable Energy Related Projects." The resolution notes that the Commission "manages on behalf of the State hundreds of thousands of acres of "school lands," a great deal of which has serious potential for siting renewable energy projects. The resolution is available through this link: http://www.slc.ca.gov/Renewable_Energy/Documents/Resolution.pdf and information regarding leasing Commission land for renewable energy development can be reached through this link: http://www.slc.ca.gov/Renewable_Energy/Renewable_Home.html

Desert Renewable Energy Conservation Plan (DRECP)

According to the DRECP website, "California Executive Order S-14-08 requires the development of the Desert Renewable Energy Conservation Plan (DRECP) for the Mojave and Colorado deserts in order to provide binding, long-term endangered species permit assurances and to facilitate the review and approval of compatible renewable energy projects. The DRECP is a major component of California's renewable energy planning efforts. It is intended to provide effective protection and conservation for desert ecosystems and to allow for the development of compatible renewable energy projects. The Renewable Energy Action Team (REAT) is a collaboration of state and federal agencies (CEC, California Department of Fish and Game, Bureau of Land Management and U.S. Fish and Wildlife Service) and oversees development of the DRECP. The REAT was formed to "streamline environmental review and permitting for compatible renewable energy projects and to recommend environmental avoidance, minimization and mitigation measures, or project alternatives, where appropriate." For more information please see: *http://www.drecp.org/*

DRECP Stakeholder Participation

Stakeholders are encouraged to participate in person or by Webex in the monthly public DRECP Stakeholder Committee meetings as well as reviewing and commenting on documents. For more information and to sign up for the listserve to receive notices of DRECP meetings and publications, please visit www.drecp.org.

NEVADA

Nevada's State Renewable Portfolio Standard is 25% by 2025. For more information please see: http://puc.nv.gov/Renewable_Energy/Portfolio_Standard/

Nevada was 12th in the country in installation of photovoltaic production in 2013, slipping from 4th place to 5th (falling behind North Carolina) in total installed capacity. http://www.seia.org/research-resources/solar-market-insight-report-2013-year-review

Nevada Land Ownership

The state of Nevada comprises 110,561 square miles, making it the 7th largest state in area. Land in Nevada consists of 84.9% Federal land, 1.42% Indian Trust Land, 13.03% private land and .15% state trust land.

Energy Development in Nevada

This information was very kindly provided by the Nevada Public Utilities Commission:

Energy Development is a two-step process in Nevada, and if the development is on public lands, then the two steps must be done simultaneously.

Step 1: Contact the Nevada BLM Renewable Energy Coordination office, and begin the NEPA process (develop an EA or an EIS) – Form 299 "right of way". For more information see: http://www.blm.gov/nv/st/en.html

Step 2: File a Utility Environmental Protection Act (UEPA) application with the Nevada Public Utilities Commission (~150 day process). File with the Nevada State Clearinghouse where the application is made available to all NV state agencies for comment, for a period of 30 days. For more information please see: http://puc.nv.gov, and http://clearinghouse.nv.gov/

When the final EA/EIS is complete, and you are provided a "Decision Record" or "Record of Decision" by BLM, within 30 days you are required to file an "amended application" with the PUCN with the record of decision and any recommended changes. The PUCN processes the application, and then the developer is given the UEPA "Permit To Construct" or a "Compliance Order" dependent on if other permits are still pending which is the final document you need to begin building for any renewable "utility facility", with gross nameplate generating capacity of 70 megawatts or more or any electric transmission line 200KV or higher.

If building on private land, the steps are the same with the exception that 1 and 2 do not have to be concurrent.

Nevada Governor's Office of Energy (GOE)

The mission of GOE is to "ensure the wise development of Nevada's energy resources in harmony with local economic needs and to position Nevada to lead the nation in renewable energy production, energy efficiency, conservation, and the exportation of energy. GOE

implements the laws of the State as defined in Nevada Revised Statutes 701 and 701A; manages energy-related programs; facilitates cooperation between key stakeholders; advises the Governor on energy policy; and collaborates with our local, regional, and federal partners to ensure a reliable and sustainable energy system." For more information on the office or the efforts below, please see: http://energy.nv.gov/

- Building Energy Codes – GOE recently completed the rulemaking process to adopt the 2012 International Energy Conservation Code (IECC).
- Commercial Retrofit Grant – GOE analyzes and enacts methods to improve Nevada's regulatory and policy environment for implementing energy efficiency projects in existing commercial buildings.
- Public Facilities Retrofit Grant – GOE accelerates the use of performance contracting to achieve comprehensive retrofits in government facilities through a Performance Contracting Audit Assistance Program, which allows eligible government entities to request funds for a financial-grade operational audit.
- Green Building Tax Abatements – GOE instituted the program in 2007 as an incentive for business owners to improve the energy efficiency of new and existing buildings. Since 2007, 39 Leadership in Energy and Environmental Design (LEED) buildings in Nevada, ranging in type from new construction to renovation of existing buildings, have become U.S. Green Building Council certified.
- Renewable Energy Tax Abatements – GOE launched the program in 2010 as an incentive to encourage developers to build renewable energy projects in Nevada. Since 2010, 18 projects have been built that created $5.3 Billion in benefits to Nevada, helping the State place Top 5 in installed geothermal and solar in the U.S.
- Revolving Loans – GOE provides short-term, low-cost loans to developers of renewable energy projects, renewable component manufacturers, energy efficiency, and energy conservation projects. These loans serve as a bridge financing option to provide funding for various startup costs associated with a project.
- State Energy Program Formula Grant – GOE focuses on energy efficiency and renewable energy in the State, and provides funding for preparation of the State Energy Plan and annual Status of Energy Report.

Nevada Public Utilities Commission (PUCN)

The mission of PUCN is to, "Supervise and regulate the operation and maintenance of utility services in Nevada." The PUCN:

- Regulates Nevada's investor-owned utilities including their compliance with the Renewable Portfolio Standard (RPS).
- Ensures reliable utility service at just and reasonable rates.
- Reviews and approves all Power Purchase Agreements (PPAs) through the Integrated Resource Planning (IRP) process.
- Regulatory authority for permitting/siting of certain energy projects.
- Conducts investigations and rulemakings regarding policy matters.
- Participates with NSOE in regional activities on energy policy.

The Utility Environmental Protection Act (UEPA) (1971) addresses environmental issues related to the construction of utility generating facilities and of transmission over 200kV; however, renewable energy facilities under 70 MWs are exempt. UEPA has a two-step process for projects requiring federal environmental analysis.

NSOE and PUCN work together on many efforts including:

- Working with other states through regional organizations on WECC 10 and 20 year transmission planning, FERC Order 1000 and interregional planning, among others which is important to understand the landscape as FERC must look at a region.
- MOU with BLM on the coordination on Renewable Energy and Transmission projects throughout Nevada (Solar PEIS, Project Coordination and Sage Grouse and wildlife habitat issues) and they meet every 4-6 weeks to go over any pending projects.
- Energy efficiency in buildings, Distributed Generation, EPA regulations & plant retirement and Smart Grid potential.

PUCN Stakeholder Participation Opportunities:

To subscribe to receive PUCN information regarding meetings, dockets and/or all orders please complete, sign and return a service list request form to either the PUCN's Carson City or Las Vegas office. Interested persons subscribe to any or all of the following:

1. *Public Meeting Notices*
2. *All PUCN Notices*
3. *Docket Specific Notices*

To learn more about service lists or obtain service list request forms, visit http://puc.nv.gov/ServiceList3.aspx.

For more information please see: http://pucweb1.state.nv.us/pucn/PUCHome.aspx

Nevada Division of Minerals

The mission of the Division of Minerals is to "be responsible for administering programs and activities to promote, advance, and protect mining and the development and production of petroleum and geothermal resources in Nevada." The Division of Minerals authorizes permits for geothermal wells drilled in the state. In 2013, twenty-two geothermal generating plants produced over 2.5 million net megawatt hours of electrical power, about double what was produced in 2008.
For more information please see: http://minerals.state.nv.us/

Nevada Bureau of Mines and Geology (NBMG)

NBMG is a research and public service unit of the University of Nevada and is the state geological survey. NBMG mission is to conduct "research and publish reports on mineral resources, engineering geology, environmental geology, hydrogeology, and geologic mapping." NBMG catalogs geologic hazards, maps the locations of active faults and monitors the geodetic strain throughout the state of Nevada. For more information please see: http://www.nbmg.unr.edu/index.html

Nevada State Wind Working Group

A Nevada Wind Working Group was formed under Wind Powering America to "identify specific state concerns, barriers, and obstacles to wind development in Nevada. The working group is a collaboration of government agencies, nonprofit organizations, businesses, and industries interested in wind development." For more information please see: http://www.windpoweringamerica.gov/filter_detail.asp?itemid=468

NEW MEXICO

New Mexico's State Renewable Portfolio Standard for Investor Owned Utilities is 15% by 2015 and 20% by 2020. In 2012, installed 24 megawatts of solar electric capacity, and now ranks 13th in installed capacity with over 170 MWs. It also has nearly 700 MWs of wind power projects.

New Mexico Land Ownership

The state of New Mexico comprises 121,593 square miles, making it the fifth largest state in area. Land in New Mexico consists of 43.9% private land 34.1% Federal land, 11.6% state trust land and 10.2% Indian Trust Land.

New Mexico Public Regulation Commission (PRC)

PRC regulates the "utilities, telecommunications, motor carriers and insurance industries to ensure fair and reasonable rates, and to assure reasonable and adequate services to the public as provided by law." PRC controls all aspects of siting transmission lines. For more information please see: http://www.nmprc.state.nm.us/

New Mexico State Land Office

The State Land Office is "responsible for administering 9 million acres of surface and 13 million acres of subsurface estate for the beneficiaries of the state land trust, which includes schools, universities, hospitals and other important public institutions. "

Wind Energy

Existing wind projects located on State Trust Land include: Florida Power & Light (16 MW), Caprock Wind (4 MW), San Juan Mesa Wind Project, LLC (46 MW) and Iberdrola Renewables (200 MW). In what would be the largest wind project in New Mexico, Iberdrola has broken ground on the 1,000 MW "El Cabo" project in Torrance County. The project stretches across 80,000 acres, including 39,600 acres of State Trust Land. The project ultimately could generate 1,000 megawatts of electricity -- enough electricity to supply up to 400,000 homes. The development would reduce CO2 emissions by 2.6 million tons and save over 1.1 billion gallons of water annually compared to coal driven electricity. The project would be built in several phases over the next 10 years and create hundreds of jobs.

The State Land Office also recently signed a lease with Triangle Gallegos, LP, a wind energy company based in Hereford, Texas, for a wind farm project to be located on about 19,000 acres of State Trust Land and 31,000 acres of private land 35 miles west of Clayton in Union County. Triangle Gallegos, LP, a joint venture between Triangle Cattle Co., Ltd. and Gallegos Wind Farm, LLC, won the right to develop the project through a public auction held in April. The overall proposed project ultimately could generate about 500 megawatts of electricity via 285 wind turbines -- enough electricity to supply up to 200,000 homes. The development would reduce CO2 emissions by 1.3 million tons and save over 550 million gallons of water annually compared to coal driven electricity. The project would be built in

two phases starting in 2015, creating 400 total construction jobs and about 20 new, well-paying permanent jobs.

Solar Energy
Existing solar energy arrays located on State Trust Lands include: Sun Edison (two projects totaling 20 MW), EMCORE (2 MW landfill solar), and First Solar (50 MW).
The largest solar array in New Mexico (50 MW), which will expand the state's solar capacity by over 20 percent, will begin operating on about 600 acres of State Trust Land in Luna County. This project created 300 jobs during the construction phase and will provide clean, efficient solar power for use by New Mexicans. First Solar manufactures its own solar panels, which use the most current technology to provide the same amount of electricity with half the size of regular solar panels, reducing the impact on the surrounding natural world.
The state's largest distributive solar array is also located on State Trust Lands at the Sandia and Science Tech Park, which transformed a former landfill into a clean energy producing site that will power 20 percent of the energy needs for the EMCORE facility
For more information please see: http://www.nmstatelands.org/default.aspx and http://www.nmstatelands.org/Renewable_Energy_Overview.aspx. Please click here for a map of Land Office renewable energy projects.

New Mexico Energy, Minerals and Natural Resources Department (EMNRD)

The New Mexico Energy, Minerals and Natural Resources Department was created in 1987 and its mission is to develop and implement "effective clean energy programs – renewable energy, energy efficiency and conservation, alternative fuels, and safe transportation of radioactive waste – to promote and administer policies for environmental and economic sustainability and to protect public health and safety for New Mexico and its citizens. The Program's goals of reduced energy consumption and expenditures and effective administration of federally funded programs lead to many achievements for the state, including generation of new jobs and revenues, environmental protection and improvement, enhancement of public health, decreased consumptive water use for power generation, lessened dependence on foreign oil, and greater energy security.." EMNRD certifies utility-scale renewable energy power plants for the state's Renewable Energy Production Tax Credit (PTC). For more information please see: http://www.emnrd.state.nm.us/ECMD/index.htm

New Mexico Renewable Energy Transmission Authority (RETA)

New Mexico RETA "is a quasi-state authority that focuses on developing new transmission and energy storage projects to promote development of renewable energy resources in New Mexico. RETA is one of eight state authorities that concentrates on these issues, but is the first whose primary focus is on developing and financing renewable energy related projects. By statute, 30% of the energy transmitted by any project supported by RETA must come from renewable sources." Efforts include:

- In 2010, RETA commissioned Los Alamos National Laboratory to analyze potential upgrades for the New Mexico grid system. The report, titled "New Mexico Renewable Development Feasibility Study," completed on October 6, 2010, looked at the economic benefit of a collector system for New Mexico, which would enable about 5,200 MW of renewable energy projects to be developed.
- In April 2011, RETA provided a Letter of Support to the Wheatland Wind Energy Farm Project. The project comprises a plan for approximately 150 MW of wind generators with more than 40,000 acres under option. There is a prospective transmission intertie located within the optioned boundaries.
- In October of 2010, RETA entered into a Memorandum of Understanding (MOU) with Centennial West. This project is a planned transmission line to deliver 3,500 megawatts of renewable energy from New Mexico to Arizona, Nevada, and Southern California via an approximately 900-mile overhead, high-voltage direct current transmission (HVDC) line. In November of 2010, RETA entered into a MOU with Lucky Corridor which is a planned double circuit 230 kV AC line from Gladstone, New Mexico to Taos, New Mexico. In 2010, RETA issued $50 million in revenue bonds to help fund the transmission portion of the High Lonesome Mesa Wind Farm in Torrance County, New Mexico. This was the first time publicly issued debt had been used to finance a project involving Clipper Wind Turbines, and marked the first time RETA issued bonds to contribute to the financing of a project. New Mexico and Wyoming Transmission Authorities are the only two that have issued debt to date.
- In March 2011, the Board entered into a MOU with Goldman Sachs Global Infrastructure Partners II, L.P. to jointly develop a collector system in Central New Mexico. This project is approximately 200 miles long through four New Mexico counties and will enable 1,500 MW capacity. In 2013, Goldman Sachs Global Infrastructure Partners II, L.P. sold their interest in this project to Clean Line Energy Partners. They are working to have this project in service by 2018. This project is projected to be a significant impact

For more information please see www.nmreta.com

New Mexico State Senate Joint Memorial (SJM) 8

In 2011 the New Mexico State Legislature passed SJM 8, which requests the New Mexico Renewable Energy Transmission Authority and the Energy, Minerals and Natural Resources Department collaborate with the White Sands Missile Range and other military installations when developing renewable energy programs and corridors for transmission lines in New Mexico. New Mexico EMNRD collaborated with New Mexico RETA in developing a November 15, 2011 report titled, "*State Government Collaboration with New Mexico Military Installations on Renewable Energy and Transmission Development*." For more information please see: http://www.sos.state.nm.us/uploads/files/Bills2011/Memorials/SJM8.pdf

UTAH

Utah boasts an abundance of diverse natural resources, the development of which has been critical in securing the state's position in the areas of business and career growth. Conservative estimates indicate that about twenty-three thousand Utahns are employed in the energy sector, and the total wages associated with those jobs is over $1.5 billion a year; those working in the energy sector are paid 171% of the state's average. Utah's goal is to have 20 percent of its electrical energy needs met by renewable sources by 2025. Utah is one of four states generating power from geothermal sources. Utah's photovoltaic production has generally been on a distributed basis, but the state anticipates 2014 as the year for construction of its first utility scale projects. Additionally, it has two wind projects, 19 MW in Spanish Fork and 306 MW near Milford. I is ranked 4th in geothermal production with about 70MWs of capacity.

Utah Land Ownership

The state of Utah comprises 84,904 square miles, making it the 13th largest state in area. Land in Utah consists of 67% Federal land, 4.5% Indian Trust Land, 21% private land and 7.5% state trust land.

Utah Office of Energy Development

The Utah State Legislature passed HB 475 in 2011 which created the Office of Energy Development. The mission of the office is to, "*provide leadership in the balanced development of Utah's abundant energy resources through public and private partnerships for economic prosperity, energy independence and a reliable, affordable energy supply.* " The office strives to provide a single point of contact to streamline energy processes with state and federal agencies. Utah's Energy Initiative "encourages adequate, reliable, affordable, sustainable, and clean energy resources, including both nonrenewable and renewable resources, and energy conservation, energy efficiency, and environmental quality." The Utah Renewable Energy Zones (UREZ) includes:

- 9,145MW capacity of wind energy over 1,838 square miles
- 826GW capacity of solar over 6,371 square miles
- 1,330 MW capacity over 5,053 square miles

On June 8, 2010, Governor Herbert launched the formal planning process for the Utah Energy Initiative, including the 10-year strategic energy plan. To review the final report please see: http://www.utah.gov/governor/docs/10year-stragegic-energy.pdf The Governor said:

> "I have assembled an astute and diverse working group to provide oversight and general recommendations, and to facilitate input from all interested parties and stakeholders. In my State of the State address, I announced my intent to create the Utah Energy Initiative—a 10-year strategic energy plan that combines Utah's rich abundance of diverse natural resources with our innovative and entrepreneurial spirit to ensure that Utah is at the forefront of solving the world's energy challenges.

"Initiatives and Objectives

1. Ensure Utah's continued access to our own clean and low-cost energy resources.
2. Develop and deploy new cutting-edge technologies that combine Utah's traditional fuels with future opportunities for renewables.
3. Create new energy-related manufacturing opportunities and jobs in Utah.
4. Address future transmission, generation, and other infrastructure needs, largely through regulatory reform.
5. Promote energy efficiency and conservation.
6. Expand and facilitate responsible development of Utah's energy resources, including traditional fuels, alternative fuels, and renewable fuels.
7. Expand opportunities for Utah to both market and export fuels, electricity and technologies to regional and global markets.
8. Enhance and further integrate partnerships between industry, universities, state government and local communities—especially those in energy-rich rural communities—to address future energy challenges and opportunities.
9. Collaborate with other Western states to present a strong and unified voice to federal regulatory agencies on energy and public land issues"

For more information on Utah's alternative energy, conventional energy, energy efficiency, renewable energy and energy incentives and tax credits please see: http://energy.utah.gov/renewable-energy/

Utah Public Service Commission

The Public Utilities Commission of Utah was created in 1917 by the Utah State Legislature. The primary responsibility of the Commission is to ensure safe, reliable, adequate, and reasonably priced utility service. It conducts hearings and investigations of utility company operations in order to determine just and reasonable rates for service. The Commission strives to protect efficient, reliable, reasonably-priced utility service for customers, and to maintain financially healthy utility companies. The Commission does not regulate municipal utility companies and cable companies. The Office of the Commission consists of a three-member commission, each commissioner appointed by the Governor to a six-year term; an administrative secretary and clerical staff; an executive staff director and technical staff; a legal counsel and paralegal staff; and an administrative law judge. For more information please see: http://www.psc.utah.gov/

Utah Division of Public Utilities

The mission of the Division of Public Utilities is to promote the "*public interest in utility regulation and works to assure that all utility customers have access to safe, reliable service at reasonable prices.*" For more information please see: http://www.publicutilities.utah.gov/index.html

Utah School and Institutional Trust Lands Administration

The Utah School and Institutional Trust Lands Administration (Trust Lands Administration) manages a 3.5 million-acre real estate portfolio for the financial benefit of the 12 beneficiaries. A new source of revenue of state trust lands is alternative energy development. Traditional geothermal energy is limited by the number of places where the resource can produce economically viable energy; new technologies are emerging where previously unusable resources may be tapped. In 2013, the Administration "noted an increased interest in renewable energy development, particularly solar energy, on trust lands this year. The largest and most significant project was a 300-megawatt photovoltaic solar development project on 1,754 acres of trust lands near the Intermountain Power Project plant in Millard County. When complete, it will be one of the largest solar energy projects in the country. This project and two smaller solar leases in Beaver and San Juan counties are expected to bring significant revenue to the Permanent School Fund through lease rental and royalty payments."
For more information please see: http://trustlands.utah.gov/

Utah Geological Survey

The Utah Geological Survey, a division of the Utah Department of Natural Resources, provides timely scientific information about Utah's geologic environment, resources, and hazards. The Division has five programs including:

- Energy & Minerals
  - Identifies, characterizes, and quantifies Utah's energy and mineral resources.
- Geologic Hazards
  - Responds to requests from government agencies for geologic hazards investigations and report reviews and helps protect Utah's public health and safety by investigating and mapping hazards
- Geologic Mapping
  - Maps the geology of the state at 1:100,000 and 1:24,000 scales and produces both print and digital (Geographic Information System) maps
- Geologic Information & Outreach
  - Answers questions and provides information on Utah's geology to the public, educators, industry, and decision makers. Produces non-technical, geologic-overview, and educational publications on a variety of topics
- Ground Water & Paleontology
  - Provides state government and the public with detailed studies on paleontological, and ground-water resources

For more information please see: http://geology.utah.gov/

Utah Division of Oil, Gas and Mining

The Division of Oil, Gas and Mining regulates exploration for and development of Utah's oil, gas, coal and other mineral resources. When exploration and developmental activities are completed, the division ensures that oil and gas wells are properly abandoned and mining

sites are satisfactorily reclaimed. For more information please see: http://linux1.ogm.utah.gov/WebStuff/wwwroot/division/tabs.html

Military Installation Energy Coalition (MIEC)

The purpose of MIEC is to facilitate discussion with Utah's military assets regarding energy security issues, advance energy goals and support DoD's energy efficiency and renewable energy goals. The MIEC was started in 2010 to fill a gap in coordination and meets quarterly. MIEC members include: Hill AFB, DPG, Tooele Army Depot, Camp Williams, State of Utah and other stakeholders. Utah's installations' respective concerns/issues include: fuel costs, electricity supply, economic development opportunity, costs. Energy security concerns in Utah include: transmission capacity constraints; loss of transmission redundancy; natural disasters (e.g. wildfire, seismic activity); and other unknown threats. For more information please see: http://energy.utah.gov/initiatives/boards/

Federal Energy Related Information

As noted above, there are considerable Federal lands in the five WRP States. That fact alone impacts land use and infrastructure development, including energy facilities. In addition, the Federal Government, through its many Departments and Agencies, has numerous programs dealing with the production, transmission and use of energy. This Federal section is not intended to be comprehensive. Rather, it provides brief sketches of the kinds of energy programs at the agencies that participate in the Western Regional Partnership, and links so that those interested can access additional information and resources.

US DEPARTMENT OF AGRICULTURE

The U.S. Department of Agriculture (USDA) has a number of programs on energy-related issues, from basic research to technology development. Several USDA agencies are involved in energy, and the Department has developed an Energy Matrix to provide information on its various programs. The Matrix may be found here:
http://www.usda.gov/energy/matrix/Home

Two of the USDA agencies with energy programs are the Forest Service and the Natural Resources Conservation Service.

U.S. Forest Service

The Forest Service has developed a Strategic Energy Framework defining its role in energy.
It recognizes:

- National forests and grasslands can provide clean, renewable energy.
- Public and private forests can be home to
    - energy production from conventional and renewable sources, such as
        - Bioenergy/Biobased Products Research
        - Coal
        - Geothermal
        - Hydro
        - Oil and Gas
        - Solar
        - Wind
        - Woody Biomass
    - provide land for energy transmission

Consequently, the Forest Service has developed a number of energy-related programs. For more information, see: http://www.fs.fed.us/energy/

Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) helps farmers and ranchers conserve natural resources by providing financial and technical resources. NRCS

promotes efficient farming and ranching practices and has developed four energy tools to advise farmers and ranchers on which practices will help conserve energy in their particular operations. The agency also provides information on the development and use of renewable energy, including biodiesel, ethanol, biogas and wind, on farms.

For more information, see:
http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/energy/

U.S. Department of Commerce

The Department of Commerce has a wide range of interests and responsibilities, among them the promotion of technology and environmental stewardship. It does this through twelve agencies, among them are:

National Institute for Standards and Technology (NITS)

NITS develops testing, measurement and reference materials to ensure the quality of energy-related products and services. Its energy use and conservation research includes the Smart Grid, energy efficient lighting, photovoltaic and net-zero-energy and "smart" buildings. NITS has identified six subject areas where it is involved:

- Alternative Energy
- Electric Power Metrology
- Energy Conservation
- Energy Conversion, Storage, and Transport
- Fossil Fuels
- Sustainability

For more information, see: http://www.nist.gov/energy-portal.cfm

National Oceanic and Atmospheric Administration (NOAA)

NOAA provides information and services to support the development and operation of both renewable and conventional energy, ranging from wind and storm forecasts to details on endangered species migrations. NOAA works closely with federal partners and industry. It attempts to strike a proper balance between protecting natural resources and supporting the nation's economic and energy goals.

- NOAA's is involved in several energy sectors:
- Offshore oil and gas
- Onshore and offshore wind
- Biomass and biofuels
- Nuclear energy
- Ocean thermal energy conversion
- Marine hydrokinetic energy
- Solar energy
- Traditional hydropower

For more information, see: http://www.energy.noaa.gov/

The Department of Defense

The DoD's mission, "to provide the military forces needed to deter war and to protect the security of our country" necessitates a substantial energy demand. In 2010, for example, the DoD consumed over 5 billion gallons of fuel in military operations. That year, the Department created the Office of the Assistant Secretary of Defense for Operational Energy Plans and Programs. In 2011, the Department issued its Operational Energy Strategy (available at the following link: http://energy.defense.gov/Portals/25/Documents/Reports/20110614_Operational_Energy_Strategy.pdf) which set a direction for operational energy security for the Office of the Secretary of Defense, Combatant Commands, Defense Agencies, and Military Departments/Services.

On April 16, 2014, the Office issued DoD Directive Number 4180.01, "DoD Energy Policy" which establishes policy and guidance for energy planning, use, and management and energy boards and councils. Specifically, the Directive states that DoD's policy is "to enhance military capability, improve energy security, and mitigate costs in its use and management of energy." To accomplish this DoD will:

- Improve energy performance of
    - weapons systems, platforms, equipment, and products
    - installations and
    - military forces.
- Diversify and expand energy supplies and sources, including renewable energy sources and alternative fuels.
- Included energy analyses in DoD processes.
- Assess and manage energy-related risks to operations, training, and testing.
- Develop and acquire technologies that meet needs and manage risks
- Use resources and expertise of other governmental organizations and the private sector.
- Educate and train personnel to treat energy as an essential resource.

The Directive may be found here:
http://www.dtic.mil/whs/directives/corres/pdf/418001_2014.pdf

For more information about the Office of the Assistant Secretary of Defense for Operational Energy Plans and Programs, see: http://energy.defense.gov/

Each of the Department's military departments are also engaged in energy development projects. Information on these projects may be found at the following links:

- Department of the Air Force: http://www.af.mil/EnergyInitiatives.aspx
- Department of the Army: http://www.army.mil/news/energy/

- Department of the Navy: http://greenfleet.dodlive.mil/energy/
- U.S. Marine Corps: http://www.marines.mil/
- U.S. Army Corps of Engineers: http://www.usace.army.mil/Missions/MilitaryMissions/InstallationSupport.aspx

U.S. Department of Energy

The DOE's mission is "to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions." The Department has identified four main areas to carry out its mission:

- "Energy
    - Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies Science and Innovation
- Science and Innovation
    - Maintain a vibrant U.S. effort in science and engineering as a cornerstone of our economic prosperity with clear leadership in strategic areas.
- Nuclear Safety and Security
    - Enhance nuclear security through defense, nonproliferation, and environmental efforts.
- Management and Operational Excellence
    - Establish an operational and adaptable framework that combines the best wisdom of all Department stakeholders to maximize mission success."

To review the numerous programs, research and other information on DOE's website, see: http://energy.gov/

The U.S. Department of Homeland Security

The Department of Homeland Security has as its mission keeping the country safe from the various threats it faces. Energy production and transmission are known to be vulnerable. Consequently, the DHS, along with the Department of Energy and private sector partners has developed the Energy Sector Specific Plan (found here: http://www.dhs.gov/xlibrary/assets/nipp-ssp-energy-2010.pdf to protect and improve resilience in the energy systems. (The Department of Energy is designated as the Sector-Specific Agency for the Energy Sector.) Within DHS, the National Protection and Programs Directorate, Office of Infrastructure Protection takes the lead on critical infrastructure issues, such as energy. Information on the Office can be found here: http://www.dhs.gov/office-infrastructure-protection

Among DHS's many agencies are:

Federal Emergency Management Agency (FEMA)

FEMA supports the public and first responders in preparing for, responding to, and mitigating against hazards, natural and man-made. It has published a Series of

Emergency Support Functions documents; No. 12 in the Series is devoted to FEMA and its agency partners roles in restoring energy services. The document is at: http://www.fema.gov/media-library-data/20130726-1921-25045-2193/final_esf_12_energy_20130501_r1.pdf

U.S. Customs and Border Protection (CBP)

CBP, one of the largest law enforcement agencies in the world, is charged with keeping the border secure while allowing for lawful trade across it. Its primary energy contribution is in the nature of conservation, given the size of its workforce and the areas in which it works. For information about its conservation efforts, including energy conservation, see: http://www.cbp.gov/about/environmental-cultural-stewardship/green-solutions

U.S. Coast Guard

The Coast Guard, one of the five armed forces of the United States, is the only one within the DHS. Its Office of Energy Management Commandant (CG-46) provides for "Resourceful Readiness" which it defines as applying "resources effectively to maximize readiness to execute Coast Guard missions with minimal fiscal, energy, and environmental burden." For more information on the Coast Guard's energy efforts, see http://www.uscg.mil/hq/cg4/cg46/default.asp

The U.S. Department of the Interior

The Department of the Interior (DOI) has a wide-ranging portfolio of interests and agencies. As an overarching theme, the Department has expressed a commitment to the "greening" of the Department itself (see: http://www.doi.gov/greening/index.cfm.) It also provides information on renewable energy and energy efficiency (see: http://www.doi.gov/greening/energy/index.cfm)

Within the Department, several key agencies have energy interests:

Bureau of Indian Affairs

Office of Indian Energy and Economic Development (IEED)
This office works to help Indian communities develop energy and mineral resources, establish business practices, and sponsor training programs.

The office is made up of four Divisions:

- Division of Energy and Mineral Development
- Division of Economic Development
- Division of Capital Investment
- Division of Workforce Development

For more information, see: http://www.bia.gov/WhoWeAre/AS-IA/IEED/

Bureau of Land Management

The BLM manages and conserves more federal lands than any other agency. Because of the large amount of land held by the federal government in the West, BLM has a substantial stake in energy issues in WRP states. Among its interests are:

- Renewable Energy Resources
- Wind Energy
- Solar Energy
- Geothermal
- Biomass
- Electric Transmission Facilities & Energy Corridors
- Oil and Gas
- Coal
- Oil Shale & Tar Sands

For more information on BLM's energy interests, see: http://www.blm.gov/wo/st/en/prog/energy.html

Bureau of Reclamation

The BuRec has developed over 600 dams and reservoirs in the West, and is the largest wholesaler of water and the second largest producer of hydroelectric power. It has developed a Sustainable Energy Strategy (see: http://www.usbr.gov/power/Reclamation%20Sustainable%20Energy%20Strategy%20.pdf

It also provides WaterSMART grants for water and energy efficiency to water districts, States, Tribes and others (see: http://www.usbr.gov/WaterSMART/weeg/index.html) For more on its projects and facilities, see http://www.usbr.gov/projects/index.jsp.

National Park Service

The NPS manages over 400 national parks. Its "Energy and Water Management Program" is designed to reduce energy and water consumption throughout the Service and to increase energy and water efficiency in the parks. The program improved the sustainability of facilities, reports performance data, and promotes renewable energy resources and alternative fuels. For more information see: http://www.nps.gov/sustainability/energy/

U.S. Fish and Wildlife Service

The FWS has placed special emphasis on Wind Energy, including the production of a five-part series of broadcasts to provide training on the voluntary Land-Based Wind Energy Guidelines of the DOI. The Service also set up a Wind Turbine Guidelines Advisory Committee, which advised on the guidelines adopted by DOI. For more

information on the FWS Wind Energy projects, see:
http://www.fws.gov/windenergy/index.html

U.S. Geological Survey

The USGS has developed an Energy Resources Program as part of its Energy and Minerals and Environmental Health Mission Area. It "conducts research and assessments on the location, quantity, and quality of mineral and energy resources, including the economic and environmental effects of resource extraction and use; and conducts research on the environmental impacts of human activities that introduce chemical and pathogenic contaminants into the environment and threaten human, animal (fish and wildlife), and ecological health." For more information, see:
http://energy.usgs.gov/GeneralInfo/AbouttheEnergyProgram.aspx

U.S. Environmental Protection Agency

The Environmental Protection Agency (EPA) addresses the environmental impacts of various activities, including the production of energy. On June 2, 2014, it released its Clean Power Plan, a proposal to reduce the amount of carbon emissions from power plants. Information about the proposal is available here:
http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule

The Agency also had a number of other Clean Energy Programs, including:

- Green Power Partnership
- Combined Heat & Power Partnership
- ENERGY STAR®
- Center for Corporate Climate Leadership

More information on the Clean Energy Programs may be found at:
http://www.epa.gov/cleanenergy/index.html

U.S. Department of Transportation

The Department of Transportation is responsible for ensuring a national transportation system suitable for the national interest and improving the lives of its citizens. Among its many functions, the Department maintains statistics on energy and the environment, which can be found here:
http://www.rita.dot.gov/bts/data_and_statistics/by_subject/energy_and_environment.html

Additionally, among the Department's agencies are:

Federal Highway Administration (FHWA)

The Federal Highway Administration (FHWA) supports State and local governments in the design, construction, and maintenance of the Nation's highway system and various federally and tribal owned lands. Its energy efforts include overseeing

"Renewable Energy in Highway Right-of-Way" projects (including one each in Arizona and New Mexico.) For more information see:
http://www.fhwa.dot.gov/real_estate/practitioners/right-of-way/corridor_management/alternative_uses.cfm
FHWA also has some interest in fuel efficient vehicles. See:
http://www.fhwa.dot.gov/environment/climate_change/energy/

Federal Aviation Administration (FAA)

The FAA's Office of Environment and Energy's Research and Development (R&D) Program provides research and analysis, and the development of new technologies, fuels and operations. Its goals are:

- Reducing community noise and air quality emissions impacts;
- Limiting or reducing the impact of aviation greenhouse gas emissions;
- Improving energy efficiency; and
- Proactively addressing other environmental issues.

More information is available here:
http://www.faa.gov/about/office_org/headquarters_offices/apl/research/