DOE/Western Joint Outreach Team:

Defining the Future Workshop

Pre-Read Materials

10 July 2012

Introduction

The Department of Energy's (DOE) Power Marketing Administrations (PMAs) play a vital role in providing an electricity system that bolsters our Nation's economic competitiveness, security and prosperity. Western Area Power Administration's (Western) historic mission is to market and deliver reliable, renewable, cost-based hydroelectric power and related services to its customers. Western's investments and the efforts of previous generations have served customers well. While Western maintains its historic mission, Congress has given Western additional obligations over the years in response to changing technologies and societal needs. For instance, Congress created additional obligations and requirements for open access transmission service, reliable operations, and transmission development for renewable energy delivery. Indeed, as our Nation's electricity system evolves, new opportunities have arisen for Western to play a constructive role.

In addition to Congress, other policy makers have established laws or goals that reflect the changing world around us and that directly or indirectly impact Western. These include renewable portfolio standards, energy efficiency targets, grid modernization objectives and grid operation and coordination improvements that increase efficiency, bolster reliability and increase system flexibility. While the stated laws and goals vary, there is a common element that policy makers seek: a healthy, secure, competitive and prosperous future for our Nation.

DOE Secretary Chu's March 16 Memorandum tasked PMAs with the responsibility of facilitating the transition to a more resilient and flexible grid while reducing costs to consumers. Embracing this charge, staff from Western and DOE are working together to use Western's existing authorities in helping to build an electric system that will serve citizens for decades to come. Western and DOE want to make the grid more resilient and efficient while reducing costs to consumers.

Building an electric system that takes advantage of proven and emerging technologies and practices, responds to the changing electric sector, and anticipates the needs of coming generations will be difficult; but DOE, Western and Western's public and private stakeholders can work together and succeed. As part of both Western's ongoing efforts and the Secretary's memo, DOE and Western will evaluate potential improvements in a number of areas including, but not limited to:

- Transitioning to a Resilient, Flexible and Efficient 21st Century Grid
- Complying with NERC Reliability Standards
- Enhancing Services and Rate Structures
- Integrating Variable Resources
- Scheduling on an Intra-Hour Basis
- Centralizing Dispatch
- Responding to Solar Flares

- Minimizing Cyber-Security Vulnerabilities
- Responding to the Recommendations in the Federal Energy Regulatory Commission (FERC) and North American Electric Reliability Corporation (NERC) Report entitled: Arizona- Southern California Outages on September 8, 2011 (Blackout Report)

DOE and Western understand that electricity systems are inherently interconnected and interdependent. As a result, actions taken by Western have implications for its customers as well as for a broad range of Tribes and stakeholders including:

- Tribes
- Western's preference power customers
- Western's transmission customers
- Generators
- Transmission providers
- Load serving entities
- States (including Governor's Offices, Regulatory Commissioners/Staff, etc.)
- Ratepayers and consumer advocates
- Members of Congress
- Other interested parties (e.g. environmental organizations, new technology providers and developers)

Tribes and stakeholders recognize the central role of the electricity system in the future of the country and many have expressed their own vision of what they want the electric system to look like in the future. While goals and objectives may vary in the same way that policy maker views vary, Tribes and stakeholders want Western to contribute to a healthy, secure, competitive and prosperous future.

The purpose of the workshops and listening sessions is to provide all Tribes and stakeholders with an opportunity to share diverse input with DOE and Western as we work together to improve the electricity system for coming generations. DOE and Western understand that these are not easy conversations as many people have different and potentially conflicting objectives, but we also believe that diverse viewpoints often lead to innovative solutions.

DOE and Western are committed to taking advantage of proven and emerging technologies and practices to provide future generations with the best possible electric system. DOE and Western are further committed to exploring how Western can cooperate and collaborate with stakeholders to meet our common objective of setting the stage for a healthy, secure, competitive and prosperous future for coming generations.

Workshop Working Group Sessions

Given the wide range of issues covered in Secretary Chu's memorandum and listed above, DOE and Western have decided to break the topics for discussion into three categories and to task working groups with taking a deeper look into their respective topics. The working groups are: Transmission Planning and Operations, Design of Transmission Services, and Transmission Authorities. The workshop will include plenary sessions at the beginning of the day and the end of the day where all individuals will gather together, and working group breakout sessions from mid-morning to mid-afternoon where individuals will congregate by working group.

The purpose of the working group breakout sessions is to foster a discussion among stakeholders and seek their feedback about how Western might exercise its existing authorities to achieve the foundational goals and policy objectives identified within Secretary Chu's March 16th memorandum while maintaining Western's commitment to its historic core mission. The DOE/Western Joint Outreach Team (JOT) will utilize the feedback presented in the breakout sessions when developing the team's draft recommendations on implementing the Secretary's memo at Western. After developing draft recommendations, the JOT will again seek stakeholder input on the draft recommendations before finalizing and submitting its recommendations to Secretary Chu sometime in fall 2012.

The remainder of this document is background reading to help Western stakeholders to effectively prepare and participate in the upcoming Workshops.

Workshop Working Group Materials

Working Group 1: Transmission Planning and Operations

Secretary Chu laid out a number of foundational goals and policy objectives in his March 16, 2012 memorandum to the Department's Power Marketing Administrations (PMAs) to transform the grid into a flexible, resilient 21st century grid. Key areas of the memorandum for transmission planning and operations include: ***Improving PMA Existing Infrastructure***; and, ***Improving Collaboration with Other Owners and Operators of the Grid***. He asked the PMAs to consider improvements in a number of areas, many of which overlap with Western's current initiatives.

Opportunities for improving Western's existing infrastructure include: achieving compliance with NERC reliability standards, integrating variable resources, investigating participation in an Energy Imbalance Market, to enhance the flexibility and resiliency of the grid, scheduling on an intra-hour basis, centralizing dispatch, responding to solar flares, and minimizing cyber security vulnerabilities.

Opportunities for improving Western's collaboration with other owners and operators of the grid include: strengthening relations with other owners and operators, coordinating operations with neighboring Balancing Authorities, increasing cooperation between public and private power, participating more effectively in regional planning, and capturing economies through partnering with others in planning, building and operating the grid.

Improving Western's Existing Infrastructure

Western's 10 Year Transmission/Capital Improvement Plan

Western is a Federal agency under the Department of Energy that markets and transmits wholesale electrical power through an integrated 17,000-plus circuit mile, high-voltage transmission system across a 15-state Marketing Area. Each of Western's Regions engages in an annual 10 Year Transmission Planning process with its customers and stakeholders concurrent with its annual budget cycle. The process yields a 10 Year Transmission/Capital Improvement Plan that identifies new and upgraded transmission infrastructure to meet the current and future needs of its customers while maintaining compliance with the appropriate NERC reliability and critical infrastructure protection standards.

Opportunities for Western to improve existing infrastructure utilizing the 10-year planning process include:

1. Refine Regional 10-Year Transmission/Capital Improvement Plan processes accounting for reliability, commercial and strategic needs;
2. Investigate opportunities for Western to plan beyond the boundaries of individual Regions to account for broader strategic and policy needs; and,
3. Enhance Western's asset management program utilizing a risk-based approach for allocating resources.

Complying with NERC Reliability and Critical Infrastructure Protection Standards

Maintaining and enhancing the reliability of the Bulk Power System is integrated into Western's Strategic Plan, Annual Strategic Targets and corporate culture. Western has multiple registrations with the North American Electric Reliability Corporation (NERC), the Midwest Reliability Organization (MRO) and the Western Electricity Coordinating Council (WECC) as Balancing Authorities, Planning Authorities, Transmission Owners, Transmission Operators, Transmission Planners, Transmission Service Providers and others.

Western is committed to fully complying with all applicable NERC, WECC and MRO reliability and critical infrastructure protection standards and has demonstrated a strong history of compliance. The primary objective of Western's Reliability Standards Compliance Program is to ensure Western's Bulk Power System is operated in a reliable, stable and secure manner, protected from cyber security vulnerabilities and, compliant with NERC, MRO and WECC reliability and critical infrastructure protection standards. Western participates actively within NERC, the MRO and WECC. Western management and staff participate as members of these

organizations, very often taking on leadership roles in the various standing committees and/or subcommittees.

On September 8, 2011 the Western Interconnection sustained a major outage as a result of cascading failures of the transmission system. As a result, nearly 2.7 million customers in Arizona, Southern California, and Baja California, Mexico were left without electric power for up to 12 hours. In their April 2012 Report entitled *Arizona- Southern California Outages on September 8, 2011*, the Federal Energy Regulatory Commission (FERC) and NERC identified key findings, causes and recommendations. Western is participating in efforts with reliability organizations, its neighboring utilities and regional transmission planning and operations forums to respond to these recommendations.

Opportunities for Western to comply with NERC reliability and critical infrastructure integrating variable energy resources include:

1. Take a leadership role in responding to the recommendations in the FERC and NERC Report;
2. Take a leadership role with reliability organizations to investigate, improve and eliminate gaps in next day, seasonal and near term transmission planning processes;
3. Take a leadership role in efforts to improve transmission system modeling, including dynamic models;
4. Take a leadership role with reliability organizations to investigate efforts to improve post contingency mitigation plans;
5. Take a leadership role with reliability organizations to investigate efforts to improve facility rating methodologies;
6. Take a leadership role in industry efforts to mitigate the impacts of solar flares on the electric power grid; and,
7. Take a leadership role in industry efforts to minimize cyber-security vulnerabilities.

Integrating Variable Resources

With approximately 11,000 megawatts of variable energy resources within its interconnection queues, Western is engaged in a number of activities and initiatives to help facilitate the integration of variable resources and is engaged in collaborative efforts with Regional Reliability Organizations, regulators and others to address the operational needs of variable energy resources. These joint initiatives include: Intra-hour Scheduling, the development and implementation of a Dynamic Scheduling System (DSS), ACE Diversity Interchange (ADI), the development and implementation of an Intra-hour Transaction Accelerator Platform (I-TAP), Balancing Area Reliability Based Controls (RBC) and, the investigation of an Efficient Dispatch Toolkit (EDT).

The EDT effort has lead to significant discussions around the formation of an Energy Imbalance Market (EIM) within the Western Interconnection. Western has been an active participant in both the Western Interconnection's EIM efforts and a similar effort initiated by members of the Northwest Power Pool. The NWPP's Market Assessment and Coordination Committee (MC) is evaluating a set of options ranging from enhanced bilateral sub-hourly markets to a centralized

energy imbalance market with the goal of recommending the most cost-effective strategy to meet the region's operational needs for integrating variable energy resources.

Finally, on June 21, 2012, FERC in RM10-11 ordered that Transmission Providers offer 15 minute scheduling to facilitate renewable integration with data to be provided by generators to improve forecasting.

Opportunities for Western to better integrate variable energy resources include:

1. Work through the joint initiatives to identify, develop and enhance tools to facilitate the integration of variable energy resources;
2. Actively participate in the WECC, PUCeim and Northwest Power Pool efforts to evaluate the development of an Energy Imbalance Market; and
3. Implement FERC's RM10-11 rule on Integrating Variable Energy Resources.

Centralizing Dispatch

Western operates four Balancing Authority Areas, three in the Western Interconnection and one in the Eastern Interconnection. Western also operates a sub Balancing Authority Area or metered subsystem within the California Independent System Operator footprint.

The WAUE and WAUW Balancing Authority Areas are operated out of a single dispatch center within Western's Upper Great Plains Region. The WACM and WALC Balancing Authority Areas are currently operated out of two separate dispatch centers within the Rocky Mountain Region. These two dispatch centers are presently being configured to operate both the WACM and WALC Balancing Authority from either location as part of Western's Operations Consolidation Program to provide backup in the event the one facility is out of service. As part of its current Operations Review effort, Western has retained a consultant to evaluate the potential for further improvements within its operations, transmission services, settlements, and reliability compliance programs.

As mentioned above, Western is also evaluating the potential for participating in an Energy Imbalance Market within the Western Interconnection, which would centralize the dispatch of the generators participating in the market. Western is working with WECC, the Public Utility Commission Energy Imbalance Market (PUCeim), National Renewable Energy Laboratory, other utilities, customers and stakeholders on this proposal.

Opportunities for Western to pursue centralized dispatch include:

1. Complete Western's Operations Consolidation Program efforts to remove duplication, reduce costs, eliminate risks and enhance the effectiveness of our Rocky Mountain Region Operations and Transmission Services organizations. Pursue similar opportunities for standardizing and streamlining system operations and control centers across Western
2. Western is conducting an Operations Review to identify opportunities for further enhancing the effectiveness of Western's Operations, Transmission Services,

Settlements and Reliability Compliance organizations. (Can you suggest any efficiency enhancing opportunities that Western should examine?);

3. Provide leadership and support in the investigation of opportunities for developing Western-wide transmission products and services; common OASIS, and non-pancaked transmission rates. (Can you suggest any opportunities in this area?); and,
4. Provide leadership and support in the WECC, PUCeim and Northwest Power Pool efforts to evaluate the development of Energy Imbalance Markets. (How can Western's active participation in such an EIM provide value to the whole system?)

Improving Collaboration with other Owners and Operators of the Grid

Strengthening Relations with Other Owners and Operators

Western has a strong history of cooperating and working with other public and private utilities to capture economies through joint projects to develop the transmission system. Western is a member of the Integrated System (IS) along with Basin Electric and Heartland Consumers Power District. The IS is the backbone of the transmission grid in the upper Great Plains region of eastern Montana, North Dakota and South Dakota.

Western is also a joint participant in several projects within the Western Interconnection, including; the Mead Phoenix Project, the Navajo Project, the Mead Adelanto Project and the California-Oregon Transmission Project. These are all transmission projects with diverse ownership comprised of public and private utilities that have cooperated in the planning, design, construction, operation and maintenance of these assets for years. Western participates actively in the Engineering, Operating and Management Committees of these joint projects, continually evaluating opportunities for enhancing the capabilities of these transmission assets to meet the needs of the owners and their respective customers.

Western also participates in a number of forums with other owners and operators working collaboratively to assess stakeholder and market needs and develop cost-effective enhancements to the transmission system and wholesale electricity markets. These include WestConnect within the Western Interconnection and the Mid Continent Area Power Pool within the Eastern Interconnection. At the national level Western participates in the North American Transmission Forum.

Opportunities for Western to strengthen relations with other owners and operators include:

1. Provide leadership and support in industry organizations such as WestConnect to develop transmission products and services like a common OASIS and regional transmission pricing to enhance energy markets;
2. Provide leadership and support in efforts to jointly plan, build and operate the transmission grid. (What can Western do to facilitate longer term (20 year+) planning in the Western and Eastern Interconnections); and,
3. Investigate additional opportunities for integrating the planning and operation of the Federal transmission system with other transmission owners and operators. (What

should Western initiate to enhance effective system operations and planning, e.g., better databases, consistent tools, etc.?)

Coordinating Operations with Neighboring Balancing Authorities

Western coordinates operations with its neighboring Balancing Authorities on a real-time, day ahead, seasonal, annual and long-term basis both directly with adjacent Balancing Authorities and indirectly through its membership in various Regional Reliability Organizations. Western participates in WECC, MISO, and the MRO in a variety of different forums including; the Reliability Centers, the Operating Committees, and their various sub-divisions. Western also coordinates operations with other Balancing Authorities through various reserve sharing groups including; the Rocky Mountain Reserve Sharing Group, the Southwest Reserve Sharing Group, the Northwest Power Pool, and the Southwest Power Pool.

Opportunities for Western to coordinate operations with neighboring Balancing Authorities include:

1. Provide leadership and support in the Interconnection to develop the data exchange and other processes needed to implement the FERC-NERC recommendations in the 2011 Southwest blackout study. (What enhancements are needed to ensure that Western and other utility operators have the situational awareness needed to operate reliably?); and
2. Provide leadership and support in Western and Eastern Interconnection programs to deploy synchrophasors and other reliability tools to help enhance the capabilities and reliability of the interconnected power system. (What should be given priority in terms of future application development to enhance grid operations based on the availability of PMU data?)

Participating More Effectively in Regional Planning

Transmission system expansion is coordinated through local, sub-regional and interconnection-wide planning. Western participates at each of these levels through a variety of open, transparent and inclusive forums including; the Colorado Coordinated Planning Group, the Southwest Area Transmission Planning Group, the Sierra Pacific Planning Group, the California Transmission Planning Group, the WestConnect Planning Management Committee, the Northern Tier Transmission Group, Columbia Grid, the MAPP Regional Planning and Coordination Committee, the WECC Planning Coordination Committee, the Eastern Interconnection Planning Collaborative, and the WECC Regional Transmission Expansion Planning.

Western has a safe harbor Open Access Transmission Tariff and conducts its transmission planning processes in accordance with FERC Order 890 and the Commission's nine planning principles. Western is currently engaged in extensive FERC Order 1000 compliance efforts within its footprint to establish Regional and Inter-Regional transmission planning and cost allocation processes.

Opportunities for Western to participate more effectively in regional planning include:

1. Provide leadership and support in efforts to comply with FERC Order 1000 for regional and interregional planning and cost allocation. (What capabilities within Western and Eastern Interconnections should Western promote to enhance long term system operations and planning?); and
2. Provide leadership and support in local, sub-regional, regional and interconnection-wide transmission planning efforts. (If consistent datasets and tools are a priority for Western, what are the suggested end states as well as the appropriate steps forward?)

Working Group 2: Design of Transmission Services

Secretary Chu's March 16th memorandum outlined several policy objectives to be considered for improving both the transmission services and transmission rate designs of the PMAs. While Secretary Chu endorses continuing to market and deliver federal hydropower at cost-based rates, the Secretary asks whether rate design can incentivize energy efficiency, demand response, integration of variable resources, and electric vehicle deployment. The Secretary also seeks to minimize rate pancaking within each PMA's service territory.

This section is designed to foster a discussion among stakeholders about how Western might ultimately respond to the Secretary with options that meet the policy objectives and are consistent with Western's statutory powers and responsibilities. The topics listed and the questions posed below are not intended to be all-inclusive of those that may be discussed during the workshops, nor are they intended to limit stakeholder input and feedback.

The goal of the Design of Transmission Services (DOTS) Working Group is to assist workshop participants in the identification of potential opportunities for Western to improve design of transmission services to promote: 1) the integration of variable resources to both achieve DOE policy objectives and to support Western's customer requirements to increase renewable energy use; 2) methods to minimize or eliminate rate pancaking in Western's service territories; 3) the efficient use of Western's resources by providing incentives for efficiency and demand response; and, 4) preparation of the grid for increased use of electric vehicles.

Integration of Variable Energy Resources

Given the current state of technology, firm renewable resources such as biomass and geothermal energy and variable renewable resources such as wind and solar generation are among the preferred choices to meet renewable portfolio standards and state mandated clean energy initiatives. Western currently integrates several thousand megawatts of variable renewable resources across its five regions, with a portion of these resources delivered to Western's customers, and the remainder exported to utilities adjoining Western's system. At the same time, policy makers have established renewable standards that will require far greater quantities of renewable energy on the electric system in the coming decade. Western will need

to consider a range of system improvements to accommodate renewables and Western would like your help in identifying the highest value added opportunities for addressing the challenge.

Western does offer some services to facilitate renewable development. Western currently provides credits for qualifying network and interconnection transmission upgrades in its Large Generator Interconnection Agreements (LGIAs) and Small Generator Interconnection Agreements (SGIAs) with all generation resources including renewable resources. Western provides transmission service to renewable resources under its Open Access Transmission Tariff.

The following are some of the questions that may be discussed during this session:

1. What improvements in operating technology, procedures and practices offer the best value added for Western and its customers in increasing the level of variable energy resources that Western could support without significant cost and operational impacts?

2. What range of services need to be developed to move from current technology, procedures and practices to those providing the best value-added innovations in technology, procedures and practices?

3. How might transmission services be modified to enhance the integration of variable resources?

4. Are the ancillary services currently offered by Western sufficient to cost effectively integrate the quantity of variable energy resources that policy makers seek?

5. What changes in current ancillary services (or what new ancillary services) would allow Western to cost effectively integrate the quantity of variable energy resources that policy makers want?

6. What services offer the best value added opportunity to support the implementation of the capabilities implied by the Energy Imbalance Market (EIM) mechanism?

7. How might Western's ancillary services rates be modified to encourage and support integration of variable generation resources without creating unsustainable cost shifts to other customers?

8. Are there other services that need to be discussed as we consider what it will take to move from current technology, procedures and practices to best value added technology, procedures and practices?

<u>Minimizing Rate Pancaking</u>

The Secretary is seeking ideas to reduce the transmission rate pancakes within Western's system. The rate pancakes on Western's system are an outgrowth of the development of the different federal hydro projects, or groups of related projects, and the associated transmission

necessary to market the power from the projects. Currently, Western does not have a transmission rate that would allow a transmission user access to the breadth of the entire Western system. Generally, rate pancakes are seen as a hindrance to market development and could be a barrier to the integration of variable resources in the most cost-effective locations.

Rate Pancaking questions that may be addressed in this discussion include:

1. Is rate pancaking within Western's system hindering the development of cost effective exchanges among different parts of Western's system?

2. Is rate pancaking on Western's system hindering the development of variable resources or causing less cost effective variable energy resources to be developed over more cost effective variable energy resources?

3. Should Western seek to minimize transmission rate pancaking within its service territory, and if so, what is the service territory/footprint for the pancake rate elimination (system-to-system, region-to-region, Western-wide, or an even broader scope)?

4. How could Western eliminate rate pancaking without creating cost-shifts to existing customers?

5. Does the lack of a Western-owned interconnection between the Sierra Nevada region and the other regions create a different circumstance with regard to rate pancaking?

6. Are there rate structures that eliminate rate pancaking that would be more acceptable than others?

7. What lessons have been learned from WestConnect that should be considered in exploring non-pancaked rate structures?

<u>Energy Efficiency and Demand Response</u>

During this session we wish to engage in discussion with stakeholders regarding opportunities for Western to support state, local and Western consumer initiatives to improve energy efficiency, increase the use of demand response resources and prepare the grid for increased use of electric vehicles, for example;

i. What state, local and Western consumer initiatives exist to increase energy efficiency and promote demand response? What state, local and Western consumer initiatives exist to support the increased use of electric vehicles?

ii. What services and rate structures could Western implement to support these initiatives?

iii. Aside from supporting state, local and Western customer initiatives, what could Western do to support the increased use of energy efficiency and demand response in your region?

While Western customers are responsible for meeting their load growth requirements, Western may be able to affect the economics of energy efficiency and demand response deployment by providing or facilitating infrastructure and rates that support its customers' use of energy efficiency and demand response. The focus of this session is not to tell Western customers how to meet their respective obligations, it is rather to consider how Western infrastructure choices and rate designs might support Western's customers as they seek to meet their load requirements in the most cost effective manner.

The following are some questions that may be raised during this session:

1. Can incentives for energy efficiency and/or demand response be incorporated into Western's rate design? Would such a rate structure be effective in supporting the efficient use of Western's resources?

2. Is there a role for a rate structure similar to BPA's that uses marginal prices to send price signals to customers for energy and demand while lowering sub-marginal rates so that the revenue requirement is not over-collected. Is this possible and if so, could cost shifts among customers be mitigated? Could this be incentivized?

3. Should Western seek to use its resources economically by promoting the conservation of its low cost clean energy or is this premise at odds with Western's organic role of promoting its widespread use? Does conserving energy widen the scope of use?

4. Should Western consider establishing peak/off-peak demand and energy rates for power sales?

    a. What is the benefit to Western's customers? (The revenue requirement wouldn't change because the revenues from the rates are used to establish overall rate levels; the result being that both on-peak and off-peak rates could be higher than the existing rates). Would increasing on-peak rates and lowering off-peak rates create incentives for Western's customers to conserve?

    b. What is the benefit to Western? Is there a potential for increased system flexibility by shifting demand to off-peak hours? Would potential flexibility allow for more/easier integration of renewables?

Increased Electric Vehicle Use

The Secretary cites electric vehicle deployment as one of the policy goals that could be enhanced through rate design and transmission services. Legislation is being considered in Congress that would direct the Secretary to develop a program to provide financial assistance to states, Indian tribes, or local governments (or groups thereof) for the deployment of electric drive vehicles in 10 selected deployment communities. The legislation under consideration would amend PURPA to establish standards for electric utilities regarding electric drive vehicle infrastructure. It would direct non-regulated utilities like Western to, among other things, establish protocols and standards for integrating electric drive vehicles and review determinations on time-based metering and communications.

Questions regarding actions that Western could take to support electric vehicle deployment include:

1. To what extent should Western be proactive and examine electric vehicle incentives, whether or not the legislation passes Congress?

2. Is Western's current wholesale rate structure adequate to provide increased electric vehicle deployment?

3. To what extent should Western explore charging station discounts, or funding for deployment of charging stations?

4. Would incentives for diversity management provide for greater electric vehicle deployment at a lower cost?

5. Could charging stations be integrated into Automated Generation Control systems to provide cost-effective system control?

6. Should Western pursue differential pricing for charging stations that demand fast charging versus those that can defer charging in more optimal time periods?

7. Are there synergies between electric vehicle deployment and the integration of variable resources? Could ways be developed to store variable energy in charging stations?

8. What other technologies could be developed to aid in electric vehicle deployment? Could battery exchange technology (like 20-gallon residential use propane tanks) become a more effective means of battery charging?

Working Group 3: Transmission Authorities

Section 1222 Authority Background Summary

Section 1222 of the Energy Policy Act of 2005[1] creates a process that allows a PMA to accept third party funding so that transmission infrastructure can be built at no cost to PMA ratepayers or to federal taxpayers. Under this authority, Western and Southwestern may accept private funding from third parties to upgrade existing or develop new transmission facilities, but financial risk for developing the transmission projects rests on the shoulders of third parties.[2]

Section 1222 (§ 1222) gives the Secretary of Energy the authority, acting through the Administrator of Western or Southwestern, to design, develop, construct, operate, own, or participate with other entities in designing, developing, constructing, operating, maintaining, or owning electric power transmission projects to upgrade existing transmission facilities owned by Western or Southwestern, or new electric power transmission facilities, located within any state in which Western or Southwestern operates. In carrying out either type of project, the Secretary may accept and use funds contributed by another entity for the purpose of executing the project.

In June of 2010, DOE issued a Federal Register Notice, stipulating statutory requirements, additional evaluation criteria, and requesting proposals for transmission line projects. Now that the program has been in place for several years, DOE and Western are assessing the § 1222 program, including the application process and evaluation requirements. Though this authority was created in 2005, Western has not utilized it. In April, for the first time, DOE determined a § 1222 application worthy of further evaluation under the program.

§ 1222 authority can enable Western and Southwestern to accommodate increasing demand for electric transmission capacity by improving existing transmission infrastructure, supporting transmission development and addressing sources of transmission system congestion.

Breakout Session Purpose and Goals

To better utilize this authority, DOE and Western will be joining in an effort to develop an improved process to evaluate § 1222 applications. Stakeholder feedback is an integral part of this effort. This breakout session is designed to inform stakeholders about § 1222 authority, to provide insight on the application and evaluation process, and seek input on changes. This session is not meant to develop a group consensus, but rather to solicit input and feedback on the § 1222 program. We invite your input.

Conversation in the breakout session will focus on:

- Summary of § 1222 functions and requirements

[1] 42 U.S.C. § 16421.

[2] Western's existing preference and transmission customers may also participate in funding development of new or upgraded transmission facilities, in which case the means of payment may be passed through to the users of the line.

- Application process
- Evaluation criteria
- Program consistency and interaction with Western's Transmission Infrastructure Program (TIP)
- Transparency / communications with applicants

This section is intended to act as an overview document for § 1222 authority, and will explain the current application process and evaluation criteria. As you participate in this workshop session, some questions to consider are:

- How can DOE, Western and Southwestern improve program transparency?
- How can decision points in the application process be designed to provide appropriate feedback?
- What factors should DOE, Western and Southwestern consider in evaluating an application?
- Are there transmission needs in your region that may be served by a § 1222 project?

Current Process

The June 2010 Federal Register Notice set forth the application requirements and an evaluation process. This process currently has four steps: Eligibility, Evaluation, Negotiations and Analysis, and Agreement Execution.

Project sponsors were encouraged to submit program applications, to include a project description (to establish that the project met five statutory criteria) and a financing statement (detailing the amount of funds the applicant would contribute to DOE to carry out the project).

Once a project proposal is submitted, it is reviewed by DOE, Western and/or Southwestern to determine whether the project could ultimately meet the eligibility requirements.

If a proposed project could ultimately meet the eligibility requirements, DOE and Western may then conduct an initial evaluation of the eligible project proposal, considering the evaluation criteria discussed below in the evaluation criteria section.

If DOE, in consultation with Western and/or Southwestern, decides to proceed with a more in-depth evaluation of the project, any number of steps can be taken, including beginning the NEPA analysis process.

Because all costs of analysis and related activities must be paid for by the applicant, an Advanced Funding Agreement is signed as soon as DOE determines that the proposed project is worthy of more in-depth evaluation.

Ultimately, the Deputy Secretary (acting on authority delegated from the Secretary), in consultation with the Administrator of the PMA, makes the final decision on whether to accept the project under the § 1222 program. DOE, Western and/or Southwestern have no obligation

to continue their participation in a project until the Secretary, or his/her delegate makes a written determination that the project fully satisfies the requirements of § 1222 and the affected parties have executed an agreement with the project developer to establish the project.

Potential Changes to the Process

While the current process establishes four steps, experience has led DOE, Western and Southwestern to question whether this four-step process works as intended and whether new decision points should be established. Please be prepared to define possible decision points for DOE/Western/Southwestern that could provide applicants with the feedback they need. Each decision point should provide increasing clarity regarding the status of the project: either further evidence that the DOE and PMA are growing increasingly more comfortable with authorizing the project under § 1222, or evidence that the proposed project is off track and likely to be rejected.

Current Requirements and Criteria

Currently, there are five statutory eligibility requirements that must be met before the Secretary or his/her delegate can make a written determination that a project satisfies the requirements of § 1222. An applicant must also submit a project proposal that includes a general description, and a financing statement detailing the amount of funds the submitting entity would contribute to DOE for purposes of carrying out the project.

Statutory *eligibility* requirements:

1. The Project is either located in a National Interest Electric Transmission Corridor or is necessary to accommodate an actual or projected increase in demand for electric transmission capacity;
2. The Project is consistent with: (a) the transmission needs identified in a transmission expansion plan(s) of affected Transmission Organizations or any approved reliability organization, and (b) the efficient and reliable operation of the transmission grid;
3. The Project will be operated in conformance with prudent utility practice;
4. The Project will be operated by or in conformance with the rules of an appropriate Transmission Organization or any approved reliability organization; and
5. The Project will not duplicate the functions of existing transmission facilities or proposed facilities which are the subject of ongoing or approved siting proceedings.

In relationship to other laws, nothing in § 1222 affects any requirement of:

1. Any Federal environmental law, including NEPA
2. Any Federal or State law relating to siting of energy facilities; or
3. Any existing authorizing statutes.

In addition to the statutory *eligibility* requirements, there are currently five additional *evaluation* criteria which were established in the 2010 FRN. After the statutorily-specified

eligibility requirements had been met, the FRN stated that in evaluating proposals DOE would consider additional criteria including, but not limited to, the following:

1. Whether the Project is in the public interest;
2. Whether the Project will facilitate the reliable delivery of power generated by renewable resources;
3. The benefits and impacts of the Project in each state it traverses, including economic and environmental factors;
4. The technical viability of the Project, considering engineering, electrical, and geographic factors; and
5. The financial viability of the Project.

Potential Changes to the Standards Used in Evaluating whether to Authorize a Project under § 1222

DOE, Western and Southwestern must apply the five statutory eligibility requirements. Because the decision to proceed with a § 1222 project is entirely discretionary, DOE and the PMAs may apply other factors in its consideration of whether to authorize a project under § 1222.

To that end, please be prepared to discuss whether the five evaluation criteria that were described in the June 2010 FRN are appropriate criteria or if there are additional criteria that DOE and the PMAs should consider when evaluating a § 1222 application.

Transmission Infrastructure Program Interaction

In the last year, there has also been an extensive stakeholder outreach effort and progress made on refining Western's Transmission Infrastructure Program and making it more user-friendly. In seeking to develop the § 1222 process, DOE and Western are also building on work already done in revising the Transmission Infrastructure Program, including development of clear application criteria, decision points, and communication protocols.

There are significant differences between Western's TIP program and its § 1222 authority. Western's TIP program is a financing and development program, whereas § 1222 authority is solely for project development, with all risk and cost borne by the applicant. However, both programs are intended to assist in transmission development, and applicants could apply for both programs in parallel. An applicant could also apply to one program and, at a later date, decide to apply to the other program. As such, it is important to establish consistency between the two programs where possible and to develop a process by which an applicant can easily transfer from one program to the other if they choose to do so. This will allow DOE and Western to best serve applicants who may have varying needs depending on the status of their project.

Unlike Western, Southwestern does not have borrowing authority and its infrastructure planning process related to the transmission grid are coordinated with and led by the Southwest Power Pool Regional Transmission Organization.

Moving Forward

The § 1222 program will assist applicants in the development of transmission infrastructure with no exposure to taxpayers or PMA customers. Defining clear decision points and evaluation criteria for applicants are important for the success of this program. We welcome your input on § 1222 and look forward to hearing your feedback.