Congressional Research Service

MEMORANDUM March 9, 2009

To: Senate Energy & Natural Resources Committee
Attention: Kellie Donnelly

From: Stan Kaplan, Specialist in Energy & Environmental Policy, x7-9529

Subject: **Updated Comparison of Transmission Plans**

At your request, this memorandum updates my March 3, 2009, memo to you comparing current proposals for enhancing the national transmission system. Changes from the prior memorandum include the following:

- The comparison table (**Table 1**) includes the terms of Senator Reid's transmission bill (S. 539); the March 9, 2009, version of Senator Bingaman's proposal that you supplied; and I have replaced the discussion of the AEP transmission "vision" with the specific terms of the joint AEP/Mesa Power legislative proposal.
- I have added to the comparison table a line for "Scope of FERC Cost Allocation Authority." The information in this line makes it clear that the cost allocation methods in these plans would include all ratepayers in the relevant region, not just the traditionally FERC-jurisdictional utilities (essentially the investor owned utilities). The rate plans would therefore include the public power and rural cooperative utilities that in the past have not been subject to FERC transmission rate-setting authority.
- I have added to the brief discussion of less detailed plans the proposal published by the Manhattan Institute.

As you requested, I have also added a new **Table 2** which is subset of Table 1 that includes only the following proposals: Reid, Bingaman, AEP/Mesa, and Energy Future Coalition.

If you have questions or need more information, please let me know at skaplan@crs.loc.gov or 7-9529.

Summary of Less Detailed Transmission Plans

In addition to the relatively detailed proposals included in the Table 1 comparison, some other recent plans or statements touch on transmission development. These less detailed proposals are summarized briefly below:

- The Pickens plan, which calls in part for massive wind development and vehicle electrification, generally refers to the importance of developing a modern backbone

transmission system comparable to the development of the interstate highway system.[1] Mesa Power, which is a wind energy development company controlled by Pickens, has also made a detailed proposal in combination with American Electric Power (see Table 1).

- The Institute for 21st Century Energy of the U.S. Chamber of Commerce has proposed a comprehensive *Blueprint for Securing America's Energy Future*.[2] The infrastructure part of the proposal suggests giving the Federal Energy Regulatory Commission (FERC) full permitting authority over transmission lines operating in interstate commerce; recommends a joint Department of Energy (DOE) and Department of Transportation study of energy infrastructure requirements through 2030; and suggests new legal authority that would allow DOE to expedite federal environmental permits for new transmission lines.
- ITC Holdings, a developer and operator of transmission systems, has a proposed a transmission infrastructure vision that includes creation of a transmission planning authority, with mandatory utility participation, that would report to FERC; regional cost allocation for new transmission lines; and enhanced (though unspecified) FERC siting authority.[3]
- IEEE-USA has issued energy policy recommendations, which calls for unspecified transmission construction incentives, unspecified reforms to the permitting process, research into large scale electricity storage, full funding of already authorized federal smart grid programs, and resolution of smart grid standards issues.[4]
- The Manhattan Institute has published a transmission proposal, *The Million-Volt Answer to Oil*.[5] This proposal discusses in general terms how a new, nation-wide, ultra-high voltage transmission grid could be used to facilitate the electrification of the transportation system.

[1] The plan can be downloaded from [http://media.pickensplan.com/pdf/pickensplan.pdf]. A CRS Congressional Distribution memorandum on the Pickens Plan is available on request.

[2] For further information see the Institute website at [http://energyxxi.org/pages/reports.aspx].

[3] For further information see the ITC website at [http://www.modernizethegrid.com/].

[4] For additional information see the IEEE-USA energy policy statement at [http://www.ieeeusa.org/policy/positions/energypolicy.pdf]. IEEE was originally an acronym that stood for the Institute of Electrical and Electronics Engineers, but IEEE is now the name of the organization.

[5] For further information see the Manhattan Institute website at [http://www.manhattan-institute.org/html/cepe_10-14-08.htm].

Table 1. Summary and Comparison of Transmission Plans

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	WIRES Group Proposal	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition	AWEA/SEIA	Center for American Progress
Synopsis	Provides for the construction of green transmission projects included in interconnection-wide plans.	Planning and permitting policies to expedite development of new high voltage transmission and renewable "feeder lines"[f] (High-Priority National Transmission Projects [NHPT projects]) .	Establish a regional transmission planning process, with federal backstop permitting authority for certain proposed projects.	Planning and permitting policies to expedite development of new high voltage transmission (Sustainable Electric Interstate Transmission Grid [SEITG] projects).	Planning and permitting policies to expedite development of new high voltage transmission, primarily to serve clean energy resources, and to implement smart grid technologies.	Planning and permitting policies to expedite development of green electricity transmission "superhighways."	Establish a framework for a national clean energy transmission grid as part of a broader clean energy implementation program.
Planning	Interconnection-wide planning for transmission lines that would access National Renewable Energy Zones (see below), to be coordinated by FERC approved "planning entities" for the Eastern and Western interconnections.[a] FERC must approve plans and has backstop planning authority for states or entities that do not participate or submit unacceptable plans.[b] The plan must consider transmission alternatives, such as demand response and distributed renewable generation.[c] The plan is due within 15 months after enactment. ERCOT is excluded.[d]	Interconnection-wide planning for NHPT projects, to be coordinated by FERC approved "planning entities" for the Eastern and Western interconnections.[a] FERC must approve plans and has backstop planning authority for states or entities that do not participate or submit unacceptable plans.[b] Development and connection of renewable resources is an emphasis but not the primary aim of the planning process; other issues include, for example, system reliability and congestion relief.	The proposal would mandate regional-level planning aimed at resolving transmission reliability, congestion, smart grid implementation, and clean energy access issues. The use of existing regional processes is encouraged, but if necessary FERC can order creation of a regional planning authority. Each region will have one planning authority. Plans are to be filed annually and updated at least triennially. ERCOT is excluded.	FERC is to designate one planning authority apiece for the Eastern and Western Interconnections. The authorities are to develop plans for SEITG lines with the ultimate aim of developing a nationwide extra high voltage transmission grid. Development and connection of renewable resources is an emphasis but not the primary aim of the planning process. The first plan is due to FERC a year after the planning authorities are chosen. Plans are to be updated biennially. FERC has 180 days to accept, reject, or modify a plan after it is submitted. FERC is to establish a funding mechanism for the planning authorities. FERC has backstop planning authority.	Interconnection-level transmission planning under the aegis of FERC, funded by ratepayers. Object is to identify new transmission lines, including extra high voltage backbone lines, needed in particular to serve renewable resources. ERCOT is excluded. No specific planning process is outlined.	Congress would give FERC the authority to establish interconnection-wide planning processes for extra-high voltage transmission lines, primarily to serve renewable resources. In addition to renewable development, the plans should support other objectives, such as system reliability and congestion relief. Plans would be updated annually and must be approved by FERC. The first plans would be due to FERC by 6 months after enactment; FERC then has 12 months to finalize the plans. ERCOT is excluded.	Calls for establishment of new interconnection-wide planning efforts focused on access to renewable resources. The planning processes would also address transmission efficiency and reliability, and take into consideration demand response and distributed generation. These new planning processes would be centered on transmission facilities of national import, and would supplement but not replace current planning efforts.

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	WIRES Group Proposal	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition	AWEA/SEIA	Center for American Progress
Cost Allocation & Funding	The regional planning entity is to submit to FERC cost allocation plans for green transmission projects along with the transmission plan (see above). If a cost allocation plan is not submitted or is unacceptable, FERC is to develop a plan with regional or interconnection-wide cost sharing.	The regional planning entity is to submit to FERC cost allocation plans.[g] If a cost allocation plan is not submitted or is unacceptable, FERC is to develop a plan with regional or interconnection-wide cost sharing.	Under the proposal, it would be the "sense of the Congress" that FERC should establish cost allocation principles applicable to all high voltage transmission projects. If established, a federal Clean Energy Bank can be used to help fund public convenience and necessity (PC&N) projects that would assist in the development of "location constrained" clean energy resources.	SEITG project costs will be allocated interconnection-wide by FERC. Other projects that can demonstrate value to the SEITG plan or otherwise will yield interconnection-wide benefits can request the same cost allocation treatment from FERC. Otherwise, FERC will allocate costs on a sub-interconnection basis. FERC can also offer incentive rates to SEITG projects.	Calls for the establishment of simple, interconnection-wide cost allocation procedures.	Calls for the establishment of interconnection-wide cost allocation procedures.	Calls for interconnection-wide cost allocation of national green energy transmission projects, and FERC allocation of long-term transmission rights to green power generators to facilitate transmission project financing. Also suggests additional government support for these projects, including tax incentives (e.g., accelerated depreciation) and in some cases public financing.
Scope of FERC Cost Allocation Authority	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Appears to apply to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	WIRES Group Proposal	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition	AWEA/SEIA	Center for American Progress
Siting Authority	FERC permits green projects that are part of the interconnection-wide plan when the developer "has failed to make reasonable progress in siting the facility based on timelines in the plan." Whether this requires the developer to first seek state approval is unclear. The term "reasonable progress" is undefined.	FERC permits all NHTP projects developed by "public utilities."[h] Other types of entities, such as public power utilities, can opt into the FERC process.[e]	The regional planning entity can request FERC to designate projects of region-wide importance as required by the public convenience and necessity. FERC has backstop siting authority for PC&N projects (states retain initial jurisdiction). The current process for conducting triennial congestion studies and designating congestion corridors is eliminated.	SEITG projects that entered development prior to the point in time one year after enactment and which have applied for state permits can choose to switch to FERC permitting. SEITG projects developed a year or more after enactment are permitted by FERC. Applies to public power entities (including federal power agencies) only at their option. Renewable project feeder lines that are not SEITG projects can choose to use FERC permitting.	Permitting would be the responsibility of FERC. States could propose routing conditions which FERC would accept unless the state conditions conflict with development of a project of national import.	FERC would have sole permitting authority for the extra-high voltage green transmission lines included in the regional plans. (The proposal notes that FERC backstop siting authority might be an acceptable alternative, but the existing process would have to be extensively revised.)	For green transmission projects of national import, permitting would be the responsibility of either a federal regulator (though not necessarily FERC) or an interconnection-wide organization of states.
Designation of Renewable Zones	President is to designate national renewable energy zones, within 90 days of enactment for the Western Interconnection and 270 days for the Eastern Interconnection.[i]	Not part of the proposal.	Not part of the proposal.	Not part of the proposal.	Not part of the proposal.	Not part of the proposal.	Not part of the proposal.
Renewable or Clean Energy Commitment	75% of the new generating capacity connecting to a line must be renewable, except in certain special circumstance (e.g., to maintain system reliability).[j]	Renewable energy is emphasized as a planning goal, but there is no specific renewable requirement.	No specific target or requirement. The proposal includes nuclear and coal with carbon capture as clean energy technologies.	Renewable energy is emphasized as a planning goal, but there is no specific renewable requirement.	New generators connecting to lines developed under this program will have to meet unspecified greenhouse gas emission requirements. It is not clear if this could include nuclear or coal with carbon capture.	The primary purpose of the plan is to connect renewable resources, but there is no specific renewable requirement.	The primary purpose of the plan is to connect renewable resources, but there is no specific renewable requirement.

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	WIRES Group Proposal	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition	AWEA/SEIA	Center for American Progress
Role of Federal Power Entities[k]	Participate in planning process; identify, in the states where they operate, key transmission projects needed to facilitate green power development; fund "essential" parts of a green project if not privately financed and constructed (each entity is given $10 billion in bonding authority to support this work); take various steps to promote renewable generation development.[l]	No specific requirement.	Federal utilities must either participate in the planning process or conform their transmission plans to the regional plans.	No specific requirement.	No specific requirement.	Federal utilities are to develop renewable resources within their service areas, and can serve as backstop transmission line developers if private funding for critical lines does not materialize. Relevant funding and bond authority limitations would be eased.	Federal utilities may play an expanded role in transmission development in circumstances or regions where private investment is inadequate. Options include additional federal construction, federal investment in private projects, and subsidies to private projects aimed at increasing the project's size.
Other Provisions	Provides for interconnection-wide charges to raise $80 million annually for planning, to be distributed to the states and planning entities. Authorizes $500 million in grants to the states and planning entities to support development (but not construction) of green transmission projects that are part of the interconnection plan.	Provides for interconnection-wide charges to raise $80 million annually for planning, to be distributed to the states and planning entities. This proposal would replace the DOE congestion analysis and FERC backstop siting processes created by the Energy Policy Act of 2005.		The FERC backstop siting process created by the Energy Policy Act of 2005 would not apply to SEITG projects.	Program also includes incentives for smart grid development. Hardening of the grid and grid cybersecurity should be national priorities supported by regulations and incentives.		Other issues discussed in the plan include, among others, hardening of the grid against terrorist attacks, renewable portfolio standards, and implementation of smart grid technologies at the distribution level.
Web Reference	http://reid.senate.gov/newsroom/pr_030509_transmissionbill.cfm?renderforprint=1&	Materials supplied by congressional staff.	http://www.wiresgroup.com/	Materials supplied by congressional staff.	http://www.energyfuturecoalition.org/editorsblog/EFC-Announces-Vision-Clean-Energy-Smart-Grid	http://www.awea.org/GreenPowerSuperhighways.pdf	http://www.americanprogress.org/issues/2009/02/wired_for_progress.html

Source: For sources see the web reference line in the table.

Notes: AWEA = American Wind Energy Association; ERCOT = Electric Reliability Council of Texas; FERC = Federal Energy Regulatory Commission; SEIA is the Solar Energy Industries Association.

a. It is not clear whether an interconnection can have more than one planning entity. This may relate to the difference between the Western Interconnection, which is covered by a single electric reliability organization (the Western Electric Coordinating Council) and the Eastern Interconnection, which contains multiple reliability organizations and regional transmission organizations. Alaska, Hawaii, and ERCOT, the interconnection covering most of Texas, have the option of participating. For interconnection maps see [http://encarta.msn.com/media_701509077/the_national_power_grid.html].

b. In exercising its backstop planning authority, the proposals list the types of stakeholders FERC is required to consult with (e.g., the electric reliability organization, municipal utilities, and others). However, the lists do not include either transmission owners or investor owned utilities.

c. Demand response refers to arrangements under which electricity consumers reduce demand in real-time in response to high prices and/or short supply, thus obviating the need to construct or operate expensive peaking power plants. Distributed generation refers to generation located close to load and therefore not reliant on the transmission system. The term covers a wide variety of technologies, ranging from residential roof-top solar to large industrial cogeneration systems. This bill refers specifically to renewable distributed generation.

d. ERCOT, the transmission interconnection covering most of Texas, is generally not subject to FERC regulatory authority except in respect to electric power system reliability standards.

e. The proposal is not entirely clear as to whether FERC certification for NHPT projects is optional or mandatory for public utilities. The proposal on the one hand states that any public utility planning a NHPT project *must* receive a certificate of public convenience and necessity from FERC, but on the other hand states that a public utility can *elect* to go to FERC for certification (on page 3 of the draft, compare (b)(1)(A) with (b)(1)(B)(ii)(II)).

f. "Feeder line" refers to a relatively low voltage transmission line that connects one or more generating projects to the extra high voltage grid. In the context of the proposals discussed in this table, the term refers to feeders connecting renewable energy projects.

g. It is not entirely clear whether a cost allocation plan can be proposed for any project in a plan or just for NHPT projects. It also unclear whether the plan is to include anything other than NHPT projects.

h. "Public utility" has a specific meaning under the Federal Power Act. In effect, it refers to utilities subject to FERC ratemaking jurisdiction, and includes investor-owned utilities in the lower 48 states located outside of ERCOT plus a small number of rural electric cooperatives. The term "public utility" should not be confused with "public power"; the latter refers to utilities that are 1) government agencies, including municipal, state, and federal utilities, and 2) most rural electric cooperatives.

i. Less time is allotted for the West based on the assumption that current western region-wide renewable resource planning, such as by the Western Governor's Association (see: http://www.westgov.org/wga/initiatives/wrez/comments.htm), will be used.

j. Seventy-five percent connected renewable capacity does not necessarily equate to 75% of the electricity moving over the line being renewable. This is because solar and wind power typically have low utilization rates.

k. For the purposes of this proposal, the "Federal Transmitting Utilities" are the Tennessee Valley Authority (TVA) and three of the four power marketing administrations: the Bonneville Power Administration (BPA), the Southwestern Power Administration (SWPA), and the Western Area Power Administration (WAPA). The Southeastern Power Administration is not included because it does not own or operate a transmission system. For maps and other information, see CRS Report RS22564, *Power Marketing Administrations: Background and Current Issues*, by Nic Lane.

l. The Reid bill states that the federal transmitting utilities should "identify opportunities to promote the development of facilities generating electricity from renewable energy on Indian land within the service territory of the Federal transmitting utility." In this respect note that while the proposal also designates Alaska Native corporation land conveyed by the Alaska Native Claims Settlement Act as Indian lands, there are no federal utilities in Alaska.

Table 2. Summary and Comparison of Selected Transmission Plans

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition
Synopsis	Provides for the construction of green transmission projects included in interconnection-wide plans.	Planning and permitting policies to expedite development of new high voltage transmission and renewable "feeder lines"[f] (High-Priority National Transmission Projects [NHPT projects]) .	Planning and permitting policies to expedite development of new high voltage transmission (Sustainable Electric Interstate Transmission Grid [SEITG] projects).	Planning and permitting policies to expedite development of new high voltage transmission, primarily to serve clean energy resources, and to implement smart grid technologies.
Planning	Interconnection-wide planning for transmission lines that would access National Renewable Energy Zones (see below), to be coordinated by FERC approved "planning entities" for the Eastern and Western interconnections.[a] FERC must approve plans and has backstop planning authority for states or entities that do not participate or submit unacceptable plans.[b] The plan must consider transmission alternatives, such as demand response and distributed renewable generation.[c] The plan is due within 15 months after enactment. ERCOT is excluded.[d]	Interconnection-wide planning for NHPT projects, to be coordinated by FERC approved "planning entities" for the Eastern and Western interconnections.[a] FERC must approve plans and has backstop planning authority for states or entities that do not participate or submit unacceptable plans.[b] Development and connection of renewable resources is an emphasis but not the primary aim of the planning process; other issues include, for example, system reliability and congestion relief.	FERC is to designate one planning authority apiece for the Eastern and Western Interconnections. The authorities are to develop plans for SEITG lines with the ultimate aim of developing a nationwide extra high voltage transmission grid. Development and connection of renewable resources is an emphasis but not the primary aim of the planning process. The first plan is due to FERC a year after the planning authorities are chosen. Plans are to be updated biennially. FERC has 180 days to accept, reject, or modify a plan after it is submitted. FERC is to establish a funding mechanism for the planning authorities. FERC has backstop planning authority.	Interconnection-level transmission planning under the aegis of FERC, funded by ratepayers. Object is to identify new transmission lines, including extra high voltage backbone lines, needed in particular to serve renewable resources. ERCOT is excluded. No specific planning process is outlined.
Cost Allocation & Funding	The regional planning entity is to submit to FERC cost allocation plans for green transmission projects along with the transmission plan (see above). If a cost allocation plan is not submitted or is unacceptable, FERC is to develop a plan with regional or interconnection-wide cost sharing.	The regional planning entity is to submit to FERC cost allocation plans.[g] If a cost allocation plan is not submitted or is unacceptable, FERC is to develop a plan with regional or interconnection-wide cost sharing.	SEITG project costs will be allocated interconnection-wide by FERC. Other projects that can demonstrate value to the SEITG plan or otherwise will yield interconnection-wide benefits can request the same cost allocation treatment from FERC. Otherwise, FERC will allocate costs on a sub-interconnection basis. FERC can also offer incentive rates to SEITG projects.	Calls for the establishment of simple, interconnection-wide cost allocation procedures.

Item	Reid Transmission Bill (S. 539)	Bingaman Draft of 3/9/09	American Electric Power /Mesa Power Legislation Draft	Energy Future Coalition
Scope of FERC Cost Allocation Authority	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).	Applies to all load serving entities, not just traditional FERC-jurisdictional utilities (which are primarily investor-owned utilities and excludes public power and most cooperatives).
Siting Authority	FERC permits green projects that are part of the interconnection-wide plan when the developer "has failed to make reasonable progress in siting the facility based on timelines in the plan." Whether this requires the developer to first seek state approval is unclear. The term "reasonable progress" is undefined.	FERC permits all NHTP projects developed by "public utilities."[h] Other types of entities, such as public power utilities, can opt into the FERC process.[e]	SEITG projects that entered development prior to the point in time one year after enactment and which have applied for state permits can choose to switch to FERC permitting. SEITG projects developed a year or more after enactment are permitted by FERC. Applies to public power entities (including federal power agencies) only at their option. Renewable project feeder lines that are not SEITG projects can choose to use FERC permitting.	Permitting would be the responsibility of FERC. States could propose routing conditions which FERC would accept unless the state conditions conflict with development of a project of national import.
Designation of Renewable Zones	President is to designate national renewable energy zones, within 90 days of enactment for the Western Interconnection and 270 days for the Eastern Interconnection.[i]	Not part of the proposal.	Not part of the proposal.	Not part of the proposal.
Renewable or Clean Energy Commitment	75% of the new generating capacity connecting to a line must be renewable, except in certain special circumstance (e.g., to maintain system reliability).[j]	Renewable energy is emphasized as a planning goal, but there is no specific renewable requirement.	Renewable energy is emphasized as a planning goal, but there is no specific renewable requirement.	New generators connecting to lines developed under this program will have to meet unspecified greenhouse gas emission requirements. It is not clear if this could include nuclear or coal with carbon capture.
Role of Federal Power Entities[k]	Participate in planning process; identify, in the states where they operate, key transmission projects needed to facilitate green power development; fund "essential" parts of a green project if not privately financed and constructed (each entity is given $10 billion in bonding authority to support this work); take various steps to promote renewable generation development.[l]	No specific requirement.	No specific requirement.	No specific requirement.

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Web Reference	http://reid.senate.gov/newsroom/pr_030509_transmissionbill.cfm?renderforprint=1&	Materials supplied by congressional staff.	Materials supplied by congressional staff.	http://www.energyfuturecoalition.org/editorsblog/EFC-Announces-Vision-Clean-Energy-Smart-Grid

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a. It is not clear whether an interconnection can have more than one planning entity. This may relate to the difference between the Western Interconnection, which is covered by a single electric reliability organization (the Western Electric Coordinating Council) and the Eastern Interconnection, which contains multiple reliability organizations and regional transmission organizations. Alaska, Hawaii, and ERCOT, the interconnection covering most of Texas, have the option of participating. For interconnection maps see [http://encarta.msn.com/media_701509077/the_national_power_grid.html].

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d. ERCOT, the transmission interconnection covering most of Texas, is generally not subject to FERC regulatory authority except in respect to electric power system reliability standards.

e. The proposal is not entirely clear as to whether FERC certification for NHPT projects is optional or mandatory for public utilities. The proposal on the one hand states that any public utility planning a NHPT project *must* receive a certificate of public convenience and necessity from FERC, but on the other hand states that a public utility can *elect* to go to FERC for certification (on page 3 of the draft, compare (b)(1)(A) with (b)(1)(B)(ii)(II)).

f. "Feeder line" refers to a relatively low voltage transmission line that connects one or more generating projects to the extra high voltage grid. In the context of the proposals discussed in this table, the term refers to feeders connecting renewable energy projects.

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h. "Public utility" has a specific meaning under the Federal Power Act. In effect, it refers to utilities subject to FERC ratemaking jurisdiction, and includes investor-owned utilities in the lower 48 states located outside of ERCOT plus a small number of rural electric cooperatives. The term "public utility" should not be confused with "public power"; the latter refers to utilities that are 1) government agencies, including municipal, state, and federal utilities, and 2) most rural electric cooperatives.

i. Less time is allotted for the West based on the assumption that current western region-wide renewable resource planning, such as by the Western Governor's Association (see: http://www.westgov.org/wga/initiatives/wrez/comments.htm), will be used.

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k. For the purposes of this proposal, the "Federal Transmitting Utilities" are the Tennessee Valley Authority (TVA) and three of the four power marketing administrations: the Bonneville Power Administration (BPA), the Southwestern Power Administration (SWPA), and the Western Area Power Administration (WAPA). The Southeastern Power Administration is not included because it does not own or operate a transmission system. For maps and other information, see CRS Report RS22564, *Power Marketing Administrations: Background and Current Issues*, by Nic Lane.

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