United States House of Representatives
Before the Select Committee on Energy independence and Global Warming

Prepared Statement of James J. Hoecker

Counsel to WIRES (Working group on Investment in Reliable and Economic electric Systems)

Hearing on "Get Smart on the Smart Grid: How Technology Can Revolutionize Efficiency and Renewable Solutions"

February 25, 2009

"We will build the roads and bridges, the electric grids and digital lines that feed our commerce and bind us together."

President Barack Obama
January 20, 2009

Chairman Markey, Ranking Member Sensenbrenner, and Honorable Members of the Committee, my name is James J. "Jim" Hoecker. Thank you for the opportunity to testify this morning on the future of smart grid technology deployment within the electric transmission system, and the grid's contribution to our dynamic clean energy future. I am especially honored to have the opportunity to appear before this Committee.

I. Introduction

Today I appear before you as Counsel to WIRES, the **W**orking group on **I**nvestment in **R**eliable and **E**conomic electric **S**ystems. WIRES is a new national coalition of both publicly-owned, investor-owned, and cooperatively-owned transmission providers, customers, and services companies. To my knowledge, WIRES is the only private sector group exclusively dedicated to promoting investment in the electric transmission system and educating policymakers and the public on the benefits derived from an upgraded and strengthened grid. WIRES' most recent work on transmission, including studies on cost allocation and integrating "location-constrained" resources like wind and solar power into the grid, can be found on it website (www.wiresgroup.com).

WIRES was formed to highlight the need for electric transmission investment and to explore ways to facilitate it. I am pleased to say that a range of business and special interests are taking a fresh look at the grid. Policy makers are coming to recognize that, properly planned, sited, and animated by digital technologies, transmission is a network industry with diverse benefits

and beneficiaries and not simply an adjunct to other utility functions. During the time that I was Chairman of the Federal Energy Regulatory Commission, the focus of regulators was largely on enabling a competitive electric generation market. Those wholesale power markets will grow and endure and deliver benefits to consumers, but they are complex and comprised of thousands of transactions. Federal policymakers and the industry are now rediscovering electric transmission infrastructure in light of the need to utilize those markets to deliver reliable, low carbon energy from entirely new resources to load-serving entities.

The need for a more integrated and extensive transmission network is real. When the individual utility transmission systems were achieving a higher degree of integration a half century ago, we had no plasma TV's or energy-hungry computers; no one seriously conceived of the possibility that automobiles would be plugged into the electric system; large-scale regional bulk power markets were only a blip on the horizon; few people were concerned about the consequences of greenhouse gases in the atmosphere; and extensive deployment of "location-constrained" wind, solar, biomass, or geothermal technologies for electric generation – not to mention low-carbon forms of coal generation – was a fantasy. Today an American consumer uses 13 times the electricity he or she did a half century ago and there are twice as many of us. In most instances, we are asking the transmission system, and indeed the electricity system generally, to perform tasks for which it was not designed. The imperative we face is therefore to both upgrade and expand the system and to make it more interactive and "smarter" – *i.e., more digital and less electro-mechanical.*

My testimony today seeks to connect these objectives. As a representative of WIRES, I will focus principally on the challenges facing transmission providers and customers that seek to enlarge the capabilities of the transmission system as a network of wires and the related technologies and equipment that animate it. These challenges must be addressed if the U.S. is to have a chance at changing the energy economy and scaling back its emissions of deleterious greenhouse gases. Climate change is a global problem which demands a range of solutions, among which energy efficiency and demand response are among the most important in our estimation. However, because low-carbon alternative energy resources that utilize some of the most innovative technologies developed in the past quarter century are far from major load centers, transmission is an indispensible enabler of many of the new technological applications now being touted as the engines of energy independence and reduced emissions. In other words, Mr. Chairman, when we speak of the "smart grid," let's not overlook the "grid" itself.[1] The need to invest in smart grid technologies and to strengthen the grid generally are intertwined objectives. WIRES looks forward to working with you, the Committee, and technology companies to create a modern 21st Century electric system. I have attached to this testimony an outline of a legislative proposal that addresses the planning, siting, and cost allocation and recovery issues I discuss below. WIRES is engaged with many groups in an effort to find the best approach to solve the challenges facing the grid.

[1] Of course, the distinction is difficult to draw because the terms "grid" and "smart grid" are so often used interchangeably. There is no standard definition of smart grid. I believe it entails two-way communications technologies that provide customers with real-time information and tools that allow them to be responsive to system conditions, help ensure efficient use of the electric grid, and enhance system reliability. The wires network – both transmission and distribution -- is the platform upon which digital technologies will operate to empower customers to manage their carbon footprints and utilize system assets more efficiently.

II. The Benefits of Transmission

Electric transmission has several important benefits. The grid's benefits and the benefits of energy efficiency and distributed generation are not mutually exclusive. At one level, high voltage transmission provides network reliability benefits, including coordinating the operation of power production facilities to permit them to reinforce one another, providing a high degree of flexibility to accommodate changing conditions as they occur, and the sharing of generation reserves among interconnected systems across whole regions.

In addition, transmission systems allow electricity to be transported in large quantities from one production area to another. Power can be delivered to industrial, commercial, and residential customers from generators located at a great distance from those loads. This magnifies consumer access to less expensive, more diverse, or environmentally more benign resources. Transmission, assisted by modern communications technologies, enable buyers and sellers of power to engage in trading of electricity, providing opportunities to reduce the cost of power overall. The electric transmission system provides the greatest hedge against extreme conditions and events that could result in large economic dislocations and threats to the public health. Power from readily available resources can be transmitted to the broadest regional markets to maximize the economic and environmental benefits of those resources.

The benefits derived from the grid may be in direct proportion to the technological advances that will accompany its expansion. Investment in technologies that enhance system reliability, reduce line loss, increase transfer capability may be made without expanding the grid's footprint. Techniques that permit the aggregation of variable resources and transmission of remote renewable resources over greater distances are on the horizon. Control technologies that

enable the grid to be "self-healing" by detecting frequency fluctuations and re-routing power to avoid interruption will produce a high-quality electrical economy. Those technologies can also increase the efficiency and transfer capability of existing transmission assets, thereby avoiding the need to develop new corridors for transmission facilities in many cases.

Educated estimates of the size of the investment that must be made to ensure that these benefits continue to flow in the face of the demands to be placed on the grid between now and 2030 range in the neighborhood of $300 billion. After a period of declining investment, U.S. companies will have spent about $30 billion on transmission in the period 2006-2009, at a rate roughly double the annual expenditures at the beginning of the century. However, as of mid-2008, only 668 miles of high voltage transmission has been built across state lines since 2000. Remarkably, the staggering expenditure on transmission will remain the smallest component of the investment we must make in the electricity system.

The most important potential benefit of transmission along these lines comes from the historic task undertaken by this Committee as part of a shift in public policy – its potential contribution to addressing climate change. The quest to curb greenhouse gas emissions will not -- indeed cannot -- succeed without squarely coming to terms with the need for greater transmission investment. The reasons for this are clear:

- Transmission is the principal means by which electricity from new clean energy resources such as wind, solar, geothermal, and biomass can be made available to the majority of American consumers. This is equally true for other low-carbon resources such as nuclear power and potential low-carbon coal generation. All of these resources

are "location constrained" by their very nature and existing transmission infrastructure is inadequate to serve both the growth in traditional demand and development of these new generation resources.

- By both expanding the high voltage "backbone" network and ensuring that it becomes a "smart grid", we can empower consumers to control their own carbon footprint, enable companies to make optimal use of existing assets, and turn the grid into a driver of energy efficiency and demand response.

- Transmission ensures fuel diversity and provides the needed market access for new technologies like carbon capture and sequestration, wind power, and solar generation. Deployment of new transportation technologies like plug-in hybrid vehicles will necessitate a more uniformly strong transmission system to deliver power on demand.

This climate change challenge can be met. It will require leadership from Congress and the States, industry, and regulators. As the National Clean Energy Project Summit here in Washington amply demonstrated this week, transmission expansion is becoming a national priority.

III. Challenges to Transmission Development

The existing electric transmission system today faces well-recognized challenges, however. New competitive bulk power markets test the limits of the grid's capabilities. Transmission is

persistently constrained and congestion costs have risen. As investment in transmission declined for a quarter century, electricity demand grew by 34% between 1992 and 2007. Most importantly, the regulatory path for facilities that could link major renewable and low-carbon resources to consumers many hundreds of miles away is a long and winding road. Barriers to transmission upgrades and expansions often delay or even deter the development of facilities truly needed for a low-carbon energy environment. The National Renewable Energy Laboratory, in a recent report entitled *20% Wind Energy By 2030* (May 2008), has identified some of these barriers:

A. Transmission Planning. Upgrades and expansions of the transmission system serve numerous purposes. They meet the needs of the next increment of generation, sustain the reliability of the electrical system as a whole, and serve an evolving need for a flexible low-carbon energy mix over the long term. Planning these enhancements, and execution of such plans, must be regional and national while accommodating local concerns. It should also anticipate the development of broad areas or "zones" of location-constrained renewable energy resources.

Sound transmission planning (to analyze benefits and costs and the distribution of benefits for the purpose of allocating costs) should incorporate a number of features. Yet, there is no generally accepted planning regime for these interstate facilities. WIRES believes the following:

- Transmission planning and analysis should be done on a regional level – tending toward larger regions as a general rule. While the overall planning

process must encompass a large region, the planning studies cannot lose sight of the impacts on sub-regions.

- Transmission planning and analysis should include all of the demand loads (existing and anticipated) and all of the supply resources (existing and anticipated) located within the geographic region for which planning is taking place.
- Transmission planning should occur in a process that is open, transparent, and inclusive, and conducted by a credible entity without particular attachment to specific interests or market outcomes in the region. In other words, it should be compliant with the planning principles of FERC's Order No. 890.

B. Allocation of Costs. Public policy must provide a clear and consistent guide to who pays for additions to the electron superhighway, *i.e.*, the high voltage grid that has such broad regional benefits. While cost allocation may vary regionally, WIRES, as well as the NREL study, believe it should be founded on fixed, clear, and equitable principles, particularly where multi-state facilities are concerned. No generic principles guide the allocation of costs of transmission, which produces great difficulty when the facilities at issue cross multiple jurisdictions with varying regulatory criteria. Where transmission investment was once only a candidate for system-specific rate base, today such costs can be allocated to users of regionally-interconnected systems. They can be very diverse. In both organized markets (i.e., markets run by regional transmission organizations ("RTOs")) and non-RTO bilateral markets, the disputes over cost allocation and cost recovery, and the procedural delays occasioned by these disputes, can be prolonged and counter-productive.

There are numerous ways to allocate costs. At one end of a spectrum of approaches is so-called participant funding which seeks to allocate costs of a transmission upgrade or expansion to immediate "cost causers" such as interconnecting generators, even if facilities may have regional reliability or economic benefits. At the other end of the spectrum is the "socialization" of costs, meaning a broad allocation of all project costs to the perceived beneficiaries of the project across the market or region served. Different perceptions of the equities and the reliability or economic benefits of a grid expansion have often chilled transmission investment. The debate over cost allocation remains largely unresolved and many of our members identify cost allocation as the greatest deterrent to transmission development.

In 2007, WIRES commissioned an independent study of how best to allocate the costs of transmission. Entitled A National Perspective On Allocating the Costs of New Transmission: Practice and Principles, it is available on the WIRES website. It does not advocate "one size fits all," but instead a principled approach to determining what is the just and reasonable way to assign cost responsibility.

C. Cost Recovery. As a general rule, when state-regulated investor-owned companies invest in transmission assets, that investment typically goes into state-jurisdictional rate base subject to retail regulation. Retail customers are then asked to pay for those facilities in their rates even if the benefits of the facilities are traceable to beneficiaries beyond the utility's service territory. These rates can overlap with federal transmission rates established to recover costs from third parties that utilize the lines in an open access environment. This dual-pricing

system complicates the allocation of costs and makes cost responsibility subject to various interests that have different public policy agendas.

The NREL study argues that this effectively dilutes incentives for development provided by the FERC under the 2005 Energy Policy Act and other laws and creates substantial regulatory uncertainty.

D. Facilities Siting. Laws governing the siting of transmission date from an era when utilities were generally not interconnected and the modern network of interstate lines and multi-state interconnections did not exist. According to NREL, the need to connect location-constrained generation resources to growing load centers over long distances, in part to implement climate change laws and renewable portfolio standards, requires a new regulatory approach.

Facilities siting is an intractable problem that often leaves all parties dissatisfied and the long-term interests of electricity consumers ignored. Congress sought a balanced approach to siting transmission facilities when it adopted Section 216 of the Federal Power Act in 2005. That provision allows FERC to site transmission as a "back-stop" to state procedures, and grant any necessary federal rights of eminent domain, only (1) if the facilities are located within broadly-defined corridors designated by DOE as experiencing significant market inefficiency, high prices, and threats to reliability that should be resolved through enhancement of the transmission system; (2) after states have had the opportunity to consider a project under their traditional authority to site facilities (or lack of such authority) and have failed to act in a

timely manner; and (3) pursuant to its own subsequent review, including environmental analysis under the National Environmental Policy Act and applicable laws, to ascertain what the public interest requires. FERC's effort to expand its ability to utilize the backstop authority in cases where a state provided a reasoned denial of a project application was recently reversed by a Court of Appeals.

The DOE carried out its responsibilities by designating two National Interest Electric Transmission Corridors ("NIETC"). The NIETC process did not site facilities or determine the outcome of transmission siting or a planning processes, or take property or preempt or undermine protection of environmentally or culturally sensitive areas or assets. DOE was hyper-conscientious not to pick winners and losers or specify a required route for any line. Yet, the statutory process resulted in a perfect storm of controversy, delay, and inaction. To this date, FERC has not been formally called upon to exercise its authority under section 216 of the Federal Power Act. The NIETC process was never intended to be a planning device. And it has marginal value as a goad to state action.

While an arguably valid attempt to address the obvious mismatch between the interstate operation of the grid at the high voltages and the exclusive authority of states to determine if such lines are needed and can be constructed, the NIETC process has failed to resolve the delays that inevitably accompany the transmission siting process. Indeed the lead-time for planning and constructing transmission – which is already substantial -- promises to remain so.

The NIETC process may also fail to achieve its goals for two additional but related reasons. First, transmitting large amounts of remotely located renewable generation to load will unquestionably entail entirely new high-voltage network additions that will cross multiple

jurisdictions in many circumstances. The need to take advantage of these domestic, "location-constrained" renewable and clean-coal resources will be central to any climate change and energy independence goals. Development of these generating facilities await some indication that transmission capacity will be available to them. Yet, DOE's focus in implementing corridors focuses on transmission constraints and congestion that already exist. Second, upgrades or expansions to the grid may also be necessary to ensure electric reliability for our digital society, promote energy security, or meet economic development and demographic trends. Section 1221 of EPAct, which adopted section 216 of the FPA, permits DOE to take these forward-looking factors into account when designating corridors but it has largely chosen not to do so. I am unsure whether this reflects a reading of the law or a practical decision about the difficulties of formulating future plans for integrating alternative energy resources.

In the final analysis, delay in selecting and building the right transmission in the right place to serve the right generation resources cannot be good for consumers.

IV. Conclusion

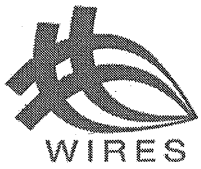
WIRES does not argue that transmission is a singular solution to the challenges facing the electric industry. On the other hand, WIRES is persuaded that the high voltage network provides benefits that are unattainable in other ways. It will, however, require modernization and technical innovation. If we are to fulfill our national ambition of a more secure, environmentally sustainable, and efficient power system, we need a workable regulatory process that ensures that transmission can be built on a timely basis, based on collaboration with stakeholders and a clear regulatory path to completion. That regulatory regime must be regional in nature. Under current circumstances, such a regime will require federal leadership.

WIRES has proposed a pragmatic redesign of federal regulation of the grid to address each of the challenges I outlined above. It is available on www.wiresgroup.com and I have attached it to this testimony.

"Smart grid" technologies may help reduce the difficulties of siting by obviating the development of new rights of way in many instances. Those smart grid investments will nevertheless encounter the same cost allocation and cost recovery problems that transmission already faces. Finally, if the vision of a clean energy economy with substantial contributions from renewable resources and electric vehicles is to be realized, it will be realized in part by a vibrant and liquid interstate bulk power market based on a platform of adequate transmission capacity.

Thank you once again for inviting me to make this presentation. WIRES looks forward to working with you, Mr. Chairman, and the Committee to attract investment to the transmission system. I will be pleased to take your questions.

ATTACHMENT



OUTLINE OF PROPOSED PUBLIC BENEFITS
GRID ENHANCEMENT INITIATIVE

Section 101. Purpose and Objectives

- To ensure electric reliability, fuel diversity, and rate stability across the grid.
- To reinforce, strengthen, and enhance grid infrastructure as an integrated network system.
- To advance the achievement of greenhouse gas reductions.
- To assist in reversing scientifically determined effects of climate change.
- To encourage development of location-constrained clean energy resources.
- To implement renewable portfolio standards and climate change legislation.
- To take maximum advantage of "smart" technologies to promote grid improvements, energy efficiency, and demand response.
- To improve correlation between the regional nature of the interstate high-voltage transmission grid and appropriate planning and siting regulation.

Section 102. Public Benefits Grid Enhancement Plan

A. Planning Requirement.

(1) All regions of the continental United States that are located within the Eastern Interconnection or the Western Interconnection must develop, and establish an entity to administer, a single comprehensive plan for the development of the interstate transmission system. Such regional planning process must be qualified under this section ("qualified planning process"). Each qualified planning process shall result in a regional transmission plan ("regional plan").

(2) A regional plan should (i) maintain and enhance the economic, reliability, and energy security benefits of the regional electric transmission system, including remediation of grid congestion, (ii) anticipate and facilitate development of electric generation from diverse energy resources, including the renewable resources and energy efficiency measures that help reduce greenhouse gases emissions from the production and sale of electric power in North America in all its applications, and (iii) integrate consideration of whether proposals to expand and upgrade high voltage transmission will promote service reliability, minimizing congestion, market integration and efficiency, economic development, deployment of smart grid technologies, and the clean energy goals of renewable portfolio standards and national climate change policy.

B. Regional Planners.

(1) Each region must have an independent regional transmission planning entity ("regional transmission planner") to administer the transmission planning process qualified under this section.

(2) A regional transmission organization ("RTO") or other regionally-based planning structure [*e.g. WestConnect or the Bonneville Power Administration*] with an established regional transmission process may be the regional transmission planner and any existing regional transmission planning processes shall be qualified and approved under this section, provided they meet the requirements of this section.

(3) In regions where no RTO or other qualified regionally-based transmission planner and no qualified planning process exists as of January 1, 2009, the

Federal Energy Regulatory Commission ("FERC") will direct public utilities and transmitting utilities, as defined under the Federal Power Act, to create an independent regional transmission planner and appropriate planning processes, to be effective not later than 18 months after enactment, to carry out the transmission planning purposes of this section. Federal utilities and power marketing administrations must conform their transmission plans to the regional plans developed by the regional planner and the requirements of this section or otherwise participate in a qualified planning process in accordance with this section.

C. Criteria for Planning Processes

(1) At the time of initial submittal of a regional plan formulated pursuant to this section, FERC shall examine whether the regional planning process developed and administered by the regional transmission planner conforms to the goals and requirements of this section. FERC shall ensure any such process –

(i) is non-discriminatory, independent, and developed in conformance with the planning standards of Order No. 890 and any successor order;

(ii) has actively solicited and considered the views and other direct inputs of local and state policymakers and market participants;

(iii) is sufficiently broad in geographic and market scope to produce economic and operational efficiencies;

(iv) is designed to meet the need for timely high voltage transmission upgrades or expansions; and

(v) has taken into account all applicable laws and regulations governing the procurement of generation, the potential effect on the transmission system or the regional transmission plan of rejection or withdrawal of a transmission project, the development of transmission facilities not originating within the planning process, and the availability of non-transmission resources such as the opportunities for energy efficiency, demand response, enhancements to economic dispatch, distributed generation, and installation of new control, metering, or capacity enhancement technologies.

(2) In considering the appropriate size and scope of a region for purposes of reviewing proposed transmission facilities under a regional transmission plan, FERC shall consider the optimal scope needed to ensure comprehensive planning and operational efficiency, the size and scope of existing RTOs and operating bulk power markets, and the ability of interregional coordination agreements to ensure a sufficiently broad planning process.

(3) FERC shall require that any regional transmission planner coordinate planning and cost allocation across regional boundaries within an interconnection, in order to ensure that the purposes of this section are achieved.

(4) Nothing in this section shall be construed as authorization to create multiple or overlapping planning processes for the same interstate transmission facilities.

D. Formulation and Filing of A Regional Plan; FERC Review of Determinations.

(1) A regional plan should be developed using standardized planning models for at least a 10-year planning horizon. Such plan may assess the potential for future transmission expansion based on a 15-year or longer horizon to facilitate in order to advance the next ten-year planning process. Determinations of the need for expansions and upgrades for the following ten year period shall be made at intervals not longer than every three years.

(2) Each regional planning entity shall file its current qualified transmission plan annually with the FERC. Such filings will be informational in nature, except to the extent that any regional transmission plan makes proposed findings and determinations under subparagraph (3). The FERC shall make all filed plans publicly available.

(3)(i). As part of the qualified transmission plan, the regional transmission planner shall identify and file with FERC under section 205 of the Federal Power Act any proposed regional transmission expansion and upgrade that it determines to be required by, and consistent with, the public convenience and necessity ("PC&N").

(ii) A proposed determination of PC&N by the regional transmission planner shall be based on whether a transmission expansion or upgrade is or will be: (a) necessary to ensure regional compliance with ERO reliability criteria or remedy reliability violations for a period of not less than five years; (b) necessary to provide significant relief from congestion as measured by objective criteria including the total cost of congestion, hours of congestion and the lack of adequate alternatives; (c) important to the diversification of energy supply throughout the region and the achievement of national climate change goals and the goals of state or national renewable portfolio standards; or (d) important to the development of smart grid technology that achieves the purposes of Title 13 of the Energy Independence and Security Act of 2007on a regional basis.

(iii) A FERC decision under the FPA to approve or disapprove any proposed determination of PC&N by a regional transmission planner under this section shall be the exclusive and dispositive determination and finding with respect to the need for any proposed transmission expansion and upgrade. FERC may treat multiple proposed projects in any regional plan as severable for purposes of determining whether a specific proposed transmission expansion or upgrade is in the PC&N.

(4) FERC shall give substantial deference to any proposed determination of the regional transmission planner that is fully supported and based on the criteria set forth in subsection (3) and shall approve any such determination that is based on substantial evidence that the transmission expansion or upgrade meets the public interest in terms of its engineering and economic characteristics and the criteria of subsection (3). Such approval will be subject to judicial review on the limited basis of substantial evidence.

(5) Consideration of a proposed PC&N determination regarding a transmission expansion or upgrade under this section is categorically excluded from review under the National Environmental Policy Act of 1969, provided an environmental assessment or environmental impact statement is required to be prepared under state siting laws. Such exclusion shall not apply to FERC actions taken when

FERC is authorized or required under Section 103 to site a transmission expansion or upgrade. FERC may adopt, wholly or in part, any draft or final Environmental Impact Statement issued by the regional planner. Nothing in this subsection shall be construed as prohibiting preparation of joint environmental review documents by agencies with authority over the siting of a transmission expansion or upgrade.

E. Cost Allocation; Cost Recovery.

It is the sense of Congress that FERC should require all high voltage transmission cost allocation processes and methodologies to adhere to a clear consistent set of regulatory principles, including as appropriate that the costs of any transmission expansion or upgrade shall be allocated consistent with the range and distribution of benefits within the region that are provided by such facilities. FERC may initiate a rulemaking to establish such principles.

F. Definitions.

(1) "Clean energy" and "Clean energy resources" means any low-carbon or alternative energy production facility or geographic "zone" of such potential facilities that contributes to achievement of the climate change goals of this legislation, including renewable energy (wind, solar, biomass, geothermal, landfill gas, marine, hydrokinetic and incremental hydro [see definitions in HR 4059]), nuclear energy, and coal-based generation technologies accompanied by carbon sequestration.

(2) "Beneficiaries" includes customers, market participants, and other entities or persons determined under the regional transmission plan to benefit from a transmission upgrade, enhancement, or expansion. Such benefits may be demonstrable economic benefits, improvements in service reliability, or reductions in greenhouse gases.

Section 103. NIETC Modernization

A. Federal Back-Stop Siting

(1) The entity proposing to construct transmission facilities included under a regional plan must apply for authorization to the siting authorities of the state or states in which the facilities would be located.

(2) Section 216 of the Federal Power Act is revised principally to eliminate the designation of national interest electric transmission corridors and the triennial congestion studies as described in section 216(a), to be replaced under this Act by determinations under regional plans.

(3) Section 216 is also revised to authorize the FERC to issue construction permits for any transmission expansion or upgrade determined as part of a regional plan submitted pursuant to Section 102 and approved by FERC to be required by, and consistent with, the public convenience and necessity, provided the FERC finds that it is authorized to issue such permits under section 216 (b)(1)-(6) of the Federal Power Act.

B. Exclusive State Siting Authority

States shall retain exclusive authority over siting of transmission facilities that are: (1) designed only to replace or update existing facilities; (2) determined by the regional transmission planner not to provide regional economic and reliability benefits; or (3) not within the scope of FERC authority as contemplated under Section 216 of the Federal Power Act, as revised.

Section 104. Clean Energy Bank

A. In the event that a federally-backed Clean Energy Bank [per S. 2730, sponsored by Sen. Domenici or S. 3233, sponsored by Sen. Bingaman, or a melded version of those two bills] is established as an independent funding entity to ensure the development of a domestic clean energy technology industry, such entity is hereby authorized to assist in the financing of transmission projects that (1) are determined to be in the public convenience and necessity under a qualified regional transmission plan, and (2), assist in the development of transmission and location constrained clean energy resources. To the extent possible, the Clean

Energy Bank will seek to ensure the simultaneous funding and development of the supply resource and the transmission resource.

B. The Bank, at its discretion, may use any or all funding mechanisms available to it, including, but not limited to direct loans, credit support such as loan guarantees and letters of credit, or insurance to support the development of projects determined to meet the requirements of Section 104(A).