EXECUTIVE SUMMARY

ES.1 WHY ARE FEDERAL AGENCIES PROPOSING TO DESIGNATE ENERGYCORRIDORS IN THE WEST?

On August 8, 2005, the President signed into law the Energy Policy Act of 2005 (EPAct). In Subtitle F of EPAct, Congress set forth various provisions that would change the way certain federal agencies¹ (Agencies) coordinated to authorize the use of land for a variety of energyrelated purposes. Section 368 of EPAct requires, among other things, the designation of energy corridors on federal lands in 11 western states² and the establishment of procedures to ensure that additional corridors are identified and designated as necessary and to expedite applications to construct or modify oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities. The Department of Energy (DOE) and Department of the Interior (DOI), Bureau of Land Management (BLM), are the lead agencies in preparation of this Programmatic Environmental Impact Statement (PEIS), and the Department of Agriculture (USDA), Forest Service (FS); Department of Defense (DOD); and DOI, Fish and Wildlife Service (USFWS), are among the cooperating agencies in preparation of the EIS.

Corridor designation and associated plan amendments are based on the following direction provided in Section 368:

"... The Secretary of Agriculture, the Secretary of Commerce, the Secretary of Defense, the Secretary of Energy, and the Secretary of the Interior (in this section referred to collectively as "the Secretaries"), in consultation with the Federal Energy Regulatory Commission, states, Tribal or local units of governments, as appropriate, affected utility industries, and other interested persons, shall consult with each other and shall—

- 1. designate, under their respective authorities, corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land in the eleven contiguous Western States (as defined in Section 103(o) of the Federal Land Policy and Management Act of 1976 (43 USC 1702(o));
- 2. perform any environmental reviews that may be required to complete the designation of such corridors; and
- 3. incorporate the designated corridors into the relevant agency land use and resource management plans or equivalent plans."

Congress also addressed the need for the Agencies to establish procedures that could potentially increase the efficiency of using designated corridors for energy transport projects. Because of the critical importance of improving the western electrical transmission grid, Congress specifically directed the Agencies in Section 368 to consider the need for upgraded and new facilities to deliver electricity throughout the western states. Finally, Congress directed the Agencies to make the designated energy corridors useful to potential applicants by stating that designated corridors "at a minimum specify the centerline, width, and compatible uses of the corridor."

Section 368 *does not* require that the Agencies consider or approve specific projects, applications for rights-of-way (ROWs), or other permits within designated energy corridors.

¹ Department of Agriculture, Department of the Interior, Department of Defense, Department of Energy, and Department of Commerce.

² The western states are Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

Importantly, Section 368 does not direct, license. or otherwise permit any on-the-ground activity of any sort. If an applicant is interested in obtaining an authorization to site a project within any corridor designated under Section 368, the applicant would have to apply for a ROW authorization, and the Agencies would consider each application by applying appropriate project-specific reviews under requirements of laws and related regulations including, but not limited to, the National Environmental Policy Act (NEPA), the Clean

Water Act, the Clean Air Act, Section 7 of the

Endangered Species Act (ESA), and Section 106

ES.2 WHAT IS THE PURPOSE AND NEED FOR DESIGNATING WEST-WIDE ENERGY CORRIDORS?

of the National Historic Preservation Act.

The purpose and need for Agency action is to implement Section 368 by designating corridors for the preferred location of future oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities and to incorporate the designated corridors into the relevant Agency land use and resource management plans.

Section 368 directs the Agencies to take into account the need for upgraded and new infrastructure and to take actions to improve reliability, relieve congestion, and enhance the capability of the national grid to deliver energy. This action only pertains to the designation of corridors for potential facilities on federal lands located within the 11 western states. In addition, this action is intended to improve coordination among the Agencies to increase the efficiency of using designated corridors.

Electricity consumers in the West rely on an integrated network of more than 49,430 miles of transmission lines to move electricity from generation sources like coal-fired power plants, hydropower facilities, or wind farms to demand centers, and thus provide a reliable supply of

power to homes and businesses. Due in part to the West's unique geography and population distribution, where fuel sources and energy generation facilities are often remotely located and large population centers are spread far apart, the electricity transmission grid in the West is typified by high-voltage transmission lines spanning very long distances. The need for additional electric infrastructure in the West is influenced by several factors, including (1) market restructuring, (2) new energy policies seeking renewable resources, (3) population growth, (4) underinvestment in new lines and technology by the utility sector, and (5) system reliability concerns. An indication of the inadequacies in the electricity transmission system is a phenomenon known as "congestion." Congestion is a condition of the electricity transmission system resulting from overuse of certain electricity transmission pathways in the system. As a result of congestion, electric system operators can be forced to use generation resources at certain times that may not be as economically or environmentally desirable to deliver the requisite electric power to consumers and to maintain reliable operation of the grid and thus delivery of electricity.

Currently, natural gas provides 23% of the total energy consumed each year by the United States, second only to petroleum. There are currently more than 27,000 miles of major natural gas pipelines (>16-inch diameter) in the 11 western states. In the last 20 years, due in large part to market changes and environmental considerations, natural gas has played an increasingly important role as an energy source for the generation of electric power. The need for new natural gas infrastructure arises in the West for three principal reasons. First, demand for natural gas is expected to rise considerably in the short term. In the Pacific region, the Energy Information Agency (EIA) forecasts there will be a need for a 45% increase in pipeline capacity in the next 10 to 15 years. As a result of tight pipeline capacity for the export of natural gas from western Wyoming, five times during the fall of 2006 relatively minor changes in pipeline infrastructure led to significant price changes.

Second, safety considerations related to the age of pipelines in many areas across the United States are also adding to the demand for new pipeline infrastructure. Lastly, market developments will influence the location of and need for new pipelines. One such example is the development of new resources in the Mountain West area, where additional pipeline capacity will be needed to transport new supplies to demand centers.

The United States relies on 2 million miles of oil pipelines as the principal means of delivering supplies of oil and refined petroleum products like gasoline to market. These pipelines are essential to maintain secure daily delivery of the more than 20 million barrels of oil and 17 million barrels of refining capacity necessary to fuel upwards of 220 million cars and trucks on United States roadways. Two principal factors indicate that the oil pipeline delivery system needs improvement. First, demand for petroleum products in the transportation sector is expected to continue to grow at a rapid pace. Additionally, other market factors such as increased petroleum imports due to reduced refinery capacity and expected growth in the production of synthetic liquid fuels like "coal-toliquid" are expected to affect the need for siting new and upgraded pipeline infrastructure. Second, many of the existing oil pipelines currently in place are aging, further creating the need for new or improved pipeline capacity.

Although hydrogen fuel technologies may have a significant role as a future energy source, insofar as pipelines are concerned, hydrogen generation and transport technologies are still in developmental stages. Currently, fewer than 50 retail stations provide hydrogen fuel to automotive consumers. Without a clear infrastructure system in place, it is difficult to estimate future demand for hydrogen and what hydrogen infrastructure will be needed. Nevertheless, because of the potential role that hydrogen could play in meeting future needs, the Agencies sought in this action to identify locations where future hydrogen pipelines might be suitably located.

ES.3 WHAT ARE SOME OF THE EXISTING ADMINISTRATIVE CHALLENGES TO FEDERAL ROW AUTHORIZATION?

Siting large, long-distance energy transport infrastructure is a complicated task for an applicant and for the Agencies involved in the application process. In addition to addressing the heterogeneous mix of private, state, and Tribal land ownership in the West, energy transport projects must confront a complex pattern of federally controlled lands that are administered by different land management agencies, each with its own set of rules and procedures for granting ROWs for land uses. As a result, energy transport project applicants must satisfy the often disparate requirements of multiple agencies for the same project.

Currently, the Agencies producing this Programmatic Environmental Impact Statement (PEIS) have procedures to authorize ROWs on the lands that they administer. In some locations in the West, the Agencies may work cooperatively to address an application. However, these cooperative arrangements are generally limited in nature and apply to special resource management issues that require joint land management decisions. Generally, the local administrative offices address energy transport within the boundaries of their administrative areas.

At present, some of the barriers to infrastructure development in the western states include inconsistent agency procedures for granting ROWs; inconsistent agency views on whether proposed energy infrastructure projects would address near- or long-term energy needs; a lack of coordination among agencies that administer contiguous tracts of land when responding to applications for a ROW across their respective jurisdictions; and the lack of coordination within agency offices regarding the appropriate geographic locations of corridors or ROWs. In certain instances, the applicant may face delays because an agency may need to amend its land use or resource management plan to include a corridor for the proposed ROW. These delays may be caused by administrative hurdles and internal analyses, reviews, and approvals required by the local office. The absence of coordinated ROW application procedures and adequate coordination between and within agencies has frustrated efforts to develop the energy infrastructure needed in the West.

ES.4 WHAT IS THE PROPOSED ACTION TO ADDRESS THE PURPOSE AND NEED?

As directed by Congress in Section 368 of EPAct, the participating Agencies have examined the long-term needs of increased energy infrastructure in the West and propose to designate energy corridors on federal land for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities in 11 contiguous western states. In addition, each Agency proposes to amend its respective land use management plans or similar land use plans, as appropriate, to include the designated energy corridors on land it administers.

In considering potential ways to designate the corridors, the Agencies took into account, per Congress' mandate in Section 368, the need for upgraded and new electricity transmission and distribution facilities to improve reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity. The Agencies decided to propose to locate corridors for the West-wide transport and distribution of energy (electricity, oil, natural gas, and hydrogen) between supply and demand areas in the 11 western states while avoiding sensitive resources and land use and regulatory constraints to the fullest extent possible. If applicants develop energy transport projects within the proposed corridors, the resulting infrastructure would aid in alleviating congestion problems associated with electricity transmission in the West.

The proposed corridor designations would not approve any site-specific activities or projects or prejudge the environmental impacts of individual projects. While the type of environmental review to be conducted is not specified in Section 368, the Agencies have decided to prepare this PEIS to conduct an environmental review at the programmatic level, integrate the NEPA process early in the planning process, and address potential conflicts among Agencies. If the Agencies decide at the end of this environmental review, under NEPA, to designate a system of energy corridors, it will be for the purpose of establishing those corridors as preferred locations for energy transport projects. Again, the designation of such a system of corridors would not authorize parties to proceed with any site-specific projects or to carry out any activities in these corridors. Corridor designation would have no direct impacts that may significantly affect the quality of the human environment.

Similarly, if the Agencies decide to amend related land use plans, this also would not any site-specific activities. authorize Bv amending land use plans at the designation stage, the proposed action may accelerate the process of subsequently applying for energy project ROWs. In particular, an applicant could avoid delays associated with seeking a land use plan amendment for a specific project. However, as with the designation of corridors, the amendment of land use plans would not authorize parties to proceed with any sitespecific projects, or to carry out any activities in areas within the corridors, and accordingly will not result in any on-the-ground impacts that may significantly affect the quality of the human environment. If individual projects are sited, as noted above, any applications for such projects would be subject to environmental review under applicable statutes.

The Agencies also note that designating a system of energy corridors would not preclude an applicant from applying for a ROW outside of the designated energy corridors, and the current process to authorize ROWs would apply to the application. However, such an applicant would not benefit from the coordinated interagency application procedures that would be established under Section 368, any land use plans that have already been amended to contain designated Section 368 energy corridors, or environmental analyses already examined in this PEIS.

ES.5 HOW WILL THE AGENCIES EXPEDITE THE APPLICATION PROCESS?

Section 368 directs the Agencies to establish procedures under their respective authorities to expedite the application process for energyrelated projects within Section 368 designated corridors. The Agencies would include uniform interagency operating procedures for reviewing applications for energy ROWs within designated Section 368 energy corridors. Importantly, the Agencies will appoint one federal point-ofcontact (POC) who will represent the Agencies in specified matters pertaining to a ROW application in a designated energy corridor. The POC will be the liaison among the applicant, the Agencies, and any other federal regulatory agency involved in a land use authorization. The Agencies will provide a summary of the duties, responsibilities, and authorities of the POC to the applicant.

The Proposed Action of designating Section 368 corridors does *not*:

- 1. Guarantee that a specific project would be approved in a designated energy corridor. The Agencies must review each project-specific application and conduct an appropriate environmental review for each project;
- Limit an Agency's discretion to deny a ROW or other permit within the designated energy corridor or elsewhere;
- 3. Alter an Agency's internal procedures for review and approval of site-specific

projects as facilitated through an appropriate interagency POC;

- 4. Establish energy corridors on nonfederal lands;
- 5. Preclude any proposal for a project outside of a Section 368 designated corridor.
- 6. Limit proponents to applying for permits solely within designated corridors.

ES.6 WHY IS A "NO EFFECT" DETERMINATION BEING MADE UNDER THE ENDANGERED SPECIES ACT FOR DESIGNATING ENERGY CORRIDORS ON FEDERAL LAND?

ES.6.1 ESA Section 7 Requirements

Section 7 of the Endangered Species Act (ESA) directs each federal agency, in consultation with the Secretary of the Interior and the Secretary of Commerce, as appropriate, to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any listed threatened or endangered. species or result in the destruction or adverse modification of critical habitat.³

Under Section 7 of the ESA, those agencies that authorize, fund, or carry out a federal action are commonly known as "action agencies." If an action agency determines that its federal action "may affect" listed species or critical habitat, it must consult with the USFWS of the DOI or the National Marine Fisheries Service (NMFS) of the Department of Commerce (DOC) (collectively known as the "Services") or both,

³ See ESA § 7; 16 USC 1536. The standard for determining when federal agencies must consult under the ESA is different from the standard for determining when federal agencies must prepare an Environmental Impact Statement under the National Environmental Policy Act.

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If an action agency does not believe that the federal action will have any effect on listed species or critical habitat, the agency will make a "no effect" determination. In that case, the action agency does not initiate consultation with the Services and its obligations under Section 7 are complete.

ES.6.2 Agency Status under ESA Section 7

The DOI, USDA, and DOD have concluded that they are action agencies for ESA purposes because each manages federal land where the proposed energy corridors may be designated under Section 368. Each action agency is tasked with designating energy corridors on federal land and incorporating these corridors into appropriate land use plans by amending them.

The DOE has determined that it is not an action agency because it does not manage any federal lands where the proposed energy corridors would be designated under Section 368. As such, the Proposed Action does not involve any action by this agency to incorporate the proposed corridors into any land use plans that it may have issued.

ES.6.3 Basis for "Effects" Determination under Section 7 of the ESA

In complying with their duties under Section 7 of the ESA, the action agencies have examined the effects of designating federal land under Section 368 and amending land use plans on listed species and critical habitat. As a result of this examination, the action agencies have determined that designating corridors through land use plan amendments would have no effect on a listed species or on critical habitat. This determination is based on the following: First: The Proposed Action, designation of energy corridors and amendment of land use plans, would not have any direct impact on the environment. Designation of an energy corridor is an administrative task that occurs when an action agency amends its land use plans to show an area, identified by centerline, corridor width, and compatible use, to be used for Section 368 purposes. The Proposed Action has no impacts on a listed species or critical habitat.

Second: The Proposed Action does not impact the environment within a designated energy corridor, nor does it establish a precedent or create any legal right that would allow ground-disturbing activities within a designated energy corridor.

Third: An application for a ROW, permit, or other authorization for Section 368 purposes describing land in a designated energy corridor is subject to full policy and legal review at the time it is filed and may be denied by an action agency. Any ground-disturbing activities that may occur in a corridor in the future would be reviewed by an action agency under the ESA and other applicable statutes when individual proposals are submitted. If consistent with law, these future activities may be authorized by the grant of a ROW, permit, or other authorization, but only following site-specific compliance with ESA and other applicable laws.

Fourth: An application for a ROW, permit, or other authorization for Section 368 purposes describing land outside a designated energy corridor is subject to full policy and legal review and may be granted by an action agency.

For the above reasons, the action agencies have determined that designating energy corridors under Section 368 of the Energy Policy Act and incorporating these corridors in land use plans would have no effect on listed threatened or endangered species or critical habitat.

The action agencies reach their "no effect" determination not because listed species and critical habitat are unlikely to be present in the

⁴ See 50 CFR 402.2, 402.13-14.

corridors described in the alternatives. To the contrary, Table 3.8-5 identifies numerous listed species that occur in the 11 western states where energy corridors could be designated. Portions of the corridors would likely include areas occupied by listed species or within critical habitat.

The action agencies considered preparing a biological assessment and initiating consultation with USFWS and NMFS under Section 7(a)(2). After discussing various approaches, the action agencies determined. however. that the administrative action of drawing lines on a map to designate energy corridors would have no effect on listed species or critical habitat. Preparing a biological assessment before a sitespecific project had been proposed to the agencies would be based largely on conjecture and speculation. There would be simply no way to know before such a site-specific proposal is made whether the impacts to be assessed would be those of an overhead electricity transmission line or buried oil or gas pipeline or some combination of uses. Further, without knowing the specifics of when and where a project would occur within a corridor, it would be impossible to know what species, if any, would be affected bv these future projects. The agencies considered whether it made sense to make assumptions for the purposes of a biological assessment, but were left with no credible basis on which to make such assumptions. The agencies determined such assumptions would be speculative and not linked to the federal action of designating energy corridors through land use plan amendments. Any biological assessment would be a speculative assessment of effects from future site-specific projects, not of the Proposed Action.

This is not to say that there would be no Section 7 consultations (including preparation of biological assessments or biological opinions where appropriate) on future actions that may affect listed species or critical habitat, On the contrary, the action agencies fully expect that Section 7 consultations will be appropriate as projects within a corridor are proposed. That is,

if an application for a ROW, permit, or other authorization is received by an action agency for lands within a designated corridor, further compliance with Section 7 of the ESA would be initiated at that time.⁵ This may take the form of preparation of a biological assessment by the action agencies and issuance of a biological opinion by USFWS and/or NMFS; a "may not likely to adversely affect" affect, determination by the action agencies with Service concurrence; or а "no effect" determination by the action agencies. At such time, any biological assessment, biological opinion, concurrence, or "no effect" determination would be based on a detailed ROW application describing the project, site, and method of construction, all features lacking at the present time.

Officials at NMFS do not agree with the action agencies' "no effect" determination. In a written communication received in June 2007, NMFS states that the designation of energy corridors in areas that contain salmonids and their critical habitat "may affect" listed species, thus triggering ESA consultation requirements. NMFS also notes that nothing in this draft PEIS allows it to discount adverse effects. "As a result, DOE should engage in a consultation with NMFS pursuant to the ESA on the proposed designation of energy corridors," NMFS concludes.

Having carefully considered NMFS's position, the action agencies maintain that the Proposed Action would have no effect on a listed species or critical habitat. For the reasons stated above, the action agencies found no causal connection, whether direct or indirect, between the mere designation of energy corridors (by land use plan amendment) and any effect on a listed species or critical habitat. Any

⁵ Further, if a future, site-specific proposal may adversely affect essential fish habitat (EFH), the action agencies would consult with NMFS, as required by the Magnuson Stevens Fishery Conservation and Management Act, 16 USC 1855(b)(2), prior to approval.

effects to a listed species or critical habitat, which are simply unknown at this time, that might occur in a corridor in the future are caused by the grant of a ROW, permit, or other authorization, following full policy and legal review, including any consultation under Section 7 of the ESA. Designation of an energy corridor neither guarantees that a ROW application for lands within a corridor will be granted, nor that an application for lands outside a corridor will be denied. The action agencies further found that NMFS had yet to provide the action agencies with a fully articulated rationale or analysis sufficient to cause the agencies to alter their determination.

The USFWS agrees with the "no effect" determination of the action agencies.

ES.7 WHAT ALTERNATIVES ARE CONSIDERED IN THIS PEIS?

The Agencies have proposed two alternatives:

- 1. *No Action:* No land would be designated as a Section 368 energy corridor.
- Designation 2. Proposed Action: of Section 368 energy corridors and amendment of land use plans on federal land. More than 6,000 miles of Section 368 corridors would be designated within federal lands in the 11 western states as identified by environmental, engineering, and land use screening criteria to reduce potential environmental and land use conflicts.

The PEIS does not consider project-specific activities because the proposed designation does not involve or direct the authorization of any specific projects.

ES.8 WHY CONDUCT AN ENVIRONMENTAL REVIEW UNDER NEPA AND PREPARE A PROGRAMMATIC ANALYSIS?

Section 368 requires the Agencies to conduct any "environmental reviews" necessary to complete the designation of Section 368 energy corridors. The proposed designation of Section 368 energy corridors would not result in any direct impacts on the ground that may significantly affect the quality of the human environment.

Nevertheless, the Agencies have decided to prepare a PEIS to conduct a detailed environmental analysis at the programmatic level and to integrate NEPA at the earliest possible time. The proposed designation of more than 6,000 miles of Section 368 energy corridors among the various Agency land use plans is a forward-looking response, mandated by statute, to address a national concern.

NEPA requires that federal agencies prepare a "detailed statement for major federal actions significantly affecting the quality of the human environment."⁶ Here, the Agencies have concluded that preparing a PEIS at this time to examine region-wide environmental concerns is appropriate, even in the absence of on-theground environmental impacts resulting from the designation. Actual local environmental impacts must inevitably await site-specific proposals and the required site-specific environmental review. A quantifiable and accurate evaluation of impacts at the local scale can be made only in response to an actual proposed energy project, when a proposal for an action with specific environmental consequences exists.

The decision to prepare an EIS for a programmatic action such as that described by Section 368 is supported by Council on

⁶ NEPA § 102(2).

Environmental Quality (CEQ) regulations at Title 40, Part 1502.4(b), of the *Code of Federal Regulations* (40 CFR 1502.4(b)), which state that "Environmental Impact Statements may be prepared and are sometimes required for broad federal actions such as the adoption of new agency programs or regulations (Section 1508.8). Agencies shall prepare statements on broad actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decision making."

A PEIS also allows for early public participation in the Section 368 energy corridor designation process through a mechanism familiar to interested members of the public. The designation of several thousand miles of energy transportation corridors is a large task. The PEIS allows the Agencies to seek public input very early in the process through open comment periods and public forums where concerns regarding Section 368 energy corridors can be raised. The Agencies are seeking public review and comment on this proposal to better inform their decision-making process.

ES.9 WHAT IS THE SCOPE OF THE PEIS?

The scope of the analysis in the PEIS includes an assessment of any positive and negative environmental, social, and economic impacts of the alternatives. The Agencies examined the direct, indirect, and cumulative impacts of corridor designation on the natural environment, social systems, and the economy. The analyses conducted in preparation of the PEIS are based on current, available, and credible scientific and engineering information.

As a programmatic evaluation, this PEIS does not evaluate site-specific issues associated with potential individual energy transport projects. The combined and individual effects of location-specific and project-specific impacts are not foreseeable at the Section 368 energy corridor designation stage. Therefore, the Agencies do not speculate about project- and location-specific impacts in this PEIS. Local and project-specific impacts will be evaluated in the future at the individual-project level, and sitespecific impacts will be addressed during individual project reviews. Individual project analyses, reviews, and approvals and denials may tier off the PEIS, thus using and referencing the information, analyses, and conclusions presented in the PEIS to supplement the projectspecific reviews and analyses. However, individual project-specific decision making will not be supplanted by the PEIS.

ES.10 WHAT ARE THE PLANNING DECISIONS THAT ARE BEING PROPOSED IN THIS PEIS?

Upon signing Records-of-Decision (RODs), the BLM, FS, USFWS, and, if applicable, the DOD would amend their respective affected land use plans to incorporate the corridor designation. Corridor designation on these federal lands would be defined by a centerline and width to accommodate future proposed energy transport projects.

As specified in Section 368, these energy corridors would be designated only on federal lands, not private lands. Applicants would be required to identify preferred project-specific routes across and plan for gaining authorization to cross private lands. Project applicants would secure authorizations across private lands in the same manner that they currently do, independent of the application process for corridors on federal lands.

In addition, designating an energy corridor does not mean that the Agencies are approving specific energy transport projects. Future proposals for specific energy transport projects require project-specific applications at the Agency level, containing site-specific requirements. A ROW would authorize specific project actions and would require a prior projectspecific environmental review subject to NEPA and other laws and regulations, as well as a coordinated engineering review.

ES.11 WHAT KINDS OF OUTREACH ACTIVITIES DID THE PEIS PROJECT UNDERTAKE?

A Notice of Intent (NOI) to prepare the PEIS, amend relevant agency land use plans, and conduct public scoping meetings, as well as a notice of floodplain and wetlands involvement, was published in Volume 70, p. 56647, of the Federal Register (70)FR 56647) on September 28, 2005. The Agencies advertised the opportunity for the public to become involved through a "scoping" process, in which interested parties could comment on the scope and content of the PEIS. The Agencies conducted scoping for the PEIS from September 28 to November 28, 2005.

To encourage public participation, the provided multiple Agencies ways to communicate about issues and submit comments. The NOI identified five methods by which the public could submit comments or suggestions to the Agencies on the preparation of the PEIS:

- Public scoping meetings,
- Traditional mail delivery,
- Facsimile transmission (fax),
- Telephone, and
- Public Web site with automated comment form.

Public scoping meetings were held in each of the 11 potentially affected states. At each meeting location, two meetings were scheduled on the same day: one in the afternoon, and the other in the evening. All comments, regardless of how they were submitted, received equal consideration in the preparation of the PEIS. Comments were received from industry, state and local governments, Tribal Nations, environmental organizations, and unaffiliated individuals.

The Agencies also provided the public with maps of the preliminary corridor routes and alternatives in June 2006. The public was asked to comment on the routes and provide the Agencies with suggestions and recommendations on the preliminary routes. The Agencies used the information provided by the public to assist in developing the Proposed Action presented in the PEIS.

The Agencies conducted a number of meetings after the scoping period with the 11 western governors and/or their appointed staff. The meetings provided the project team with the opportunity to brief the governors and their staff members on the status of the PEIS. Discussion centered on the issues brought up during the public scoping period, data that each state could provide related to corridor location constraints and opportunities, and state-specific items related to energy planning environmental concerns and stakeholder involvement.

Although EPAct Section 368 does not apply to Indian lands, the Agencies undertook an extensive effort to initiate consultation with potentially affected federally recognized Indian Tribes. In general, the Agencies recognized that Section 368's designation of energy corridors on federal lands has implications for Indian Tribes beyond current Indian lands. For example, it is common for federal lands to overlap with or be encompassed by an Indian Tribe's ancestral or ceded lands where Tribes have ongoing interests. In addition, a number of Indian Tribes are developing energy resources and may be interested in connecting their energy transport systems with an energy corridor on federal lands.

The Agencies sought government-togovernment consultation with Indian Tribes as set out in Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), and within policies of the individual Agencies. These ongoing consultations are intended to ensure that the designation of energy corridors considers and accounts for the interests of Indian Tribes throughout the NEPA process. These consultations also will assist the Agencies in compliance with Section 106 of the National Historic Preservation Act (NHPA) during the NEPA process.

During the public scoping period, potentially affected Tribes were contacted by letters sent by either BLM state directors or FS regional foresters. The letters outlined the scoping process and encouraged the Tribes to submit scoping comments at scoping meetings, by mail or electronically through the project Web site.

In April 2006, a letter was sent to Tribes in the 11 western states inviting Tribal representatives to regional information meetings to be held in May throughout the West. Twentynine Tribes sent representatives to these meetings where the project was discussed, Tribal concerns were aired, and Tribes were invited to enter into consultation. The Tribes were also invited to comment on the draft corridor map to be released in June 2006.

Thirty-five Tribal groups have entered into some form of one-on-one dialogue with the Agencies. As early as the scoping process, Tribes began to accept the invitation to enter into government-to-government consultation. It is likely that Native American groups will have additional comments on the PEIS. This PEIS is being made available to all 252 federally recognized Tribes with traditional interests in the 11 western states. The Agencies will remain in communication with them during the PEIS process.

The Agencies were assisted with the preparation of the draft PEIS by two states, three county governments, two conservation districts, and one Tribe, each of which requested cooperating status.⁷ The role of the cooperating agencies was to provide information to the Agencies on environmental, economic, and social issues to be considered during the corridor identification process. The other cooperating agencies also provided information on Tribal, state, or local issues that could assist the Agencies in siting corridors and developing the PEIS.

The Agencies maintain a public Web site and e-mail communication with interested stakeholders at http://corridoreis.anl.gov. The public Web site provides background information, access to all public comments received during public scoping, technical documents, overall project status, preliminary maps of possible corridor locations, and the draft PEIS. Members of the public can request electronic e-mail updates and news, which are then automatically sent to them. As of September 23, 2007, more than 475,000 Web pages were viewed in 95,000 user sessions by Currently, 30.841 visitors. more than 1,426 individuals and/or organizations have requested and received project updates via e-mail. In addition, more than 9,000 individuals and groups have downloaded the preliminary corridor location maps that were released to the public during June 2006.

Upon release of this draft PEIS, the Agencies will hold a 90-day public comment period, during which comments on the draft PEIS will be received by the Agencies. Public meetings will be held throughout the West and Washington, D.C., during the 90-day comment period. Additionally, written, fax, and Web-based comments can be sent to the Agencies during the public comment period. All public comments will be treated equally, no matter how received.

⁷ The cooperating entities were the state of Wyoming; the Coeur d'Alene Tribe; Lincoln, Sweetwater, and Uinta counties, Wyoming; and Sweetwater and Uinta conservation districts, Wyoming.

ES.12 WHAT ARE THE ALTERNATIVES EVALUATED IN THIS PEIS?

Two alternatives are evaluated in detail in the PEIS: (1) *No Action*: no land would be designated as a Section 368 energy corridor, and (2) *Proposed Action*: designation of Section 368 energy corridors and amendment of land use plans on federal land.

ES.12.1 No Action Alternative

Under the No Action Alternative, Section 368 energy corridors would not be designated on federal lands in the West, although the siting and development of energy transport projects would continue. In general, all public lands, unless otherwise designated, segregated, or withdrawn, are available for ROW authorization under the Federal Land Policy and Management Act of 1976 (FLMPA) by the appropriate land management agency. Current federal agency practices for permitting energy transport ROWs and ensuring maximum consistency with existing land use plans would be followed for each proposed ROW. Applicants for ROWs would continue to identify and evaluate ROW alternatives following current federal and state regulations, policies, and permitting processes and requirements. There are currently about 32,000 miles of large oil and gas pipelines and 49,000 miles of large (230 kV and greater) electricity transmission lines on federal and nonfederal lands in the West. There relatively little West-wide would be coordination for siting and permitting energy transport projects on federal lands in order to meet current and future energy needs in the 11 western states.

Under current permitting processes and procedures, applicants identify their preferred project-specific ROWs crossing federal and nonfederal lands. Affected federal land managers evaluate the ROW proposals and work with the applicants to identify an acceptable ROW route across the affected land management unit either based on consistency

with approved land use plans or through a potential plan amendment. In addition, there are numerous energy corridors that have been designated on federal lands by individual BLM field offices and FS national forests that may be used for future energy transport projects. For large projects affecting more than one federal land management agency, a joint permitting approach is often used, with a lead agency identified to be in charge of the NEPA analysis documentation. Individual land and use decisions, necessary plan amendments, and ROW authorizations are then processed by each agency.

Development of future energy transport projects would be required to comply with current agency-specific ROW authorizing and permitting processes and requirements regarding environmental review, construction, operation, and decommissioning. Project siting and design must be consistent with land use plans. Future energy transport projects would continue to be evaluated on an individual, project-by-project basis, and applicants would need to identify and evaluate alternative ROW locations as part of the authorization and permitting processes. Amendment of land use plans to incorporate project-specific ROWs would similarly be conducted on a project-by-project and agencyby-agency basis, and there would be no assurance of consistency in siting and evaluation of proposed energy transport projects crossing federal lands.

ES.12.2 Proposed Action Alternative: Designate Section 368 Energy Corridors and Amend Land Use Plans on Federal Lands

Under the Proposed Action Alternative, there would be approximately 6,055 miles of Section 368 energy corridors designated in the West. These corridors would occur in all 11 western states and would be designated for multimodal energy transport with a width of 3,500 feet, unless specified otherwise because of environmental or management constraints or local designations. Energy corridor widths proposed during scoping ranged from as narrow as 60 feet to more than 5 miles. The smaller suggested widths would be able to support little more than a single energy project, while the larger widths would be difficult to apply throughout the West because of environmental, physical, and/or regulatory constraints.

A corridor width of 3.500 feet was selected by the Agencies for the Section 368 energy corridors because this width would provide sufficient room to support multiple energy transport systems. For example, assuming an operational ROW width of 400 feet, about 9 individual 500-kV transmission lines could be supported within a 3,500-foot-wide corridor. As another example, as many as 35 liquid petroleum pipelines (each consisting of a 32-inch-diameter pipe and а 100-foot construction ROW) or 29 natural gas pipelines (42-inch-diameter and 120-foot pipe construction ROW) could be supported within a 3.500-foot-wide corridor. While such development is unrealistic, these examples illustrate the capacity of a 3,500-foot-wide corridor to support multiple energy transport projects. Even with the topographic, environmental, or regulatory constraints encountered during the corridor siting process, a 3,500-foot width could be placed on most federal lands while avoiding many sensitive resources and areas. A 3,500-foot corridor width would also provide additional project siting flexibility within corridors for technical or engineering reasons or for routing projectspecific ROWs around important resources that may be identified during project-specific analyses within the corridors.

Table ES-1 presents the total lengths and acreages of the corridors that would be designated under the Proposed Action in each of the 11 western states. Appendix F lists the lengths, widths, and compatible energy transport uses for each corridor segment under the Proposed Action. The vast majority of the proposed corridors in each state fall on lands managed by BLM except in Washington where 53 of the 54 miles of proposed corridors would occur on lands managed by the FS; no proposed corridors would fall on lands managed by the Department of Energy (DOE). The proposed corridors have a total surface area of about 2.9 million acres, and approximately 61% (3,713 miles) of the total miles (6,055 miles) of proposed corridors follow or incorporate existing transportation or utility ROWs.

The Proposed Action incorporates about 2,359 miles of existing, locally designated energy corridors (or portions of these corridors) that are currently identified in federal land use plans. Some BLM field offices and FS national forests currently have "locally designated" energy corridors. These corridors are designated within their respective land management plans for use by energy transport projects proposed for those specific lands, and some of these local corridors currently have one or more energy transport projects and ROWs. While these local energy corridors are designated for use by energy transport projects, in many cases, these corridors were not designated to address the reliability, redundancy, or congestion of the western electricity grid, nor to enhance energy transport across and within the western United States.

Not all of the locally designated corridors used in the Proposed Action Alternative have widths of 3,500 feet or are designated for multimodal use, as some of the locally designated corridors are specified for only one type of energy transport (e.g., pipeline only, electricity transmission only). Some locally designated corridors have specified widths greater than, and others less than, the preferred 3,500-foot width. For locally designated corridors with widths greater than 3,500 feet, the greater width was retained for the Proposed Action. Where possible, the widths of narrow locally designated corridors were expanded to 3,500 feet (as allowable) and given multimodal use.

Designation of the proposed energy corridors would require the amendment of as

TABLE ES-1	Total Linear Miles and Acres of Federal Energy Corridors Designated
under Section	368 as the Proposed Action

State	Miles of Corridors	Corridor Area (acres)	Miles Incorporating Existing Utility ROWs ^a	Miles Incorporating Existing Transportation ROWs ^a	Percentage of Length Incorporating Existing Utility and Transportation ROWs
Arizona	644	360 836	301	59	70
California	814	287.657	357	267	70
Colorado	420	261.839	230	72	72
Idaho	410	161,503	133	66	48
Montana	102	42,047	12	83	94
Nevada	1,630	925,051	349	401	46
New Mexico	314	129,929	185	33	70
Oregon	591	238,200	276	90	62
Utah	640	355,941	215	133	54
Washington	54	6,929	37	13	93
Wyoming	438	185,592	231	80	71
Total	6,055 ^b	2,955,526 ^b	2,416	1,297	61

^a Miles of corridors that would be designated under the Proposed Action that follow or incorporate existing ROWs.

^b Slight difference between indicated total and the sum of the state entries is due to rounding.

many as 165 land management plans for the federal lands where the corridors are located.

ES.12.2.1 How Were the Proposed Section 368 Energy Corridor Locations Sited?

Energy corridors were located to provide for the West-wide transport and distribution of energy (electricity, oil, natural gas, and hydrogen) between supply and demand areas in the 11 western states while avoiding sensitive resources and land use and regulatory constraints to the fullest extent possible. If developed with energy transport projects, the corridors would also aid in alleviating congestion problems associated with electricity transmission in the West. Energy corridor locations were selected using a systematic three-step siting process:

- 1. First, the Agencies developed an "unrestricted" conceptual West-wide network of energy transport paths that addressed the need to connect energy supply areas (regardless of energy type) with demand centers and provide for the long-distance transport of energy, and that also could meet the requirements and objectives of Section 368, regardless of land ownership or environmental or regulatory issues.
- 2. Next, the locations of individual segments of the conceptual network defined in Step 1 were examined and revised to avoid major known environmental, land use, and regulatory constraints (such as topography, wilderness areas, cultural resources, military test and training areas, and Tribal and state natural and cultural

resource areas, etc.). This revision of corridor locations was based on an analysis of geographic information system (GIS)-based data from multiple sources (BLM, FS, USFWS, State Historic Preservation Offices [SHPOs], U.S. Geological Survey [USGS], DOE, and DOD). The revision resulted in a preliminary West-wide energy corridor network that avoided private, state, and Tribal lands, many important known natural and cultural resources, and many areas incompatible with energy transport corridors because of regulatory or land use constraints while meeting the requirements and objectives of Section 368.

3. Lastly, locations the of the Section 368 corridors developed in Step 2 were further adjusted using corridor-specific input from local federal land managers and staff. These managers and staff evaluated the preliminary corridor locations on their respective administrative units and adjusted the corridor locations to further avoid important or sensitive resources and to ensure consistency with resource management objectives described in each unit's land use plans, while meeting the requirements and objectives of Section 368.

While this siting process considered all current and expected forms of energy (e.g., electricity, oil, natural gas, hydrogen), energy generation (e.g., coal-fired power plants, hydropower, solar and wind generation), and energy transport system (e.g., pipelines. electricity transmission lines). additional emphasis was given to electricity transmission because of the interconnected nature of the electricity transmission and congestion issues currently facing the West. Throughout the corridor siting process, comments received from the public on corridor locations were considered with regard to both the need for energy corridors in specific locations and the desire to avoid or minimize impacts to environmental resources.

ES.12.2.1.1 Step 1 – Develop an Unrestricted Conceptual West-wide Energy Transport Network

The first step in identifying potential energy corridors was the development of an "unrestricted" conceptual West-wide energy transport network. This network represents an interconnected set of paths along which energy could theoretically move throughout the western states.

Energy demand areas were considered to be the major metropolitan centers in each of the 11 western states, such as San Diego, Los Angeles, San Francisco, Las Vegas, Phoenix, Albuquerque, Denver, Salt Lake City, Seattle, Portland, Boise, Helena, and Cheyenne.

Energy supply areas were considered to include areas with existing high or growing electricity generating capacity, such as areas with numerous small-capacity or several highcapacity electricity generating units, and current natural gas facilities; areas with potential renewable energy (such as wind, geothermal, and solar energy) development; and areas of known coal, oil, and natural gas reserves or production (including energy resources in oil shale and tar sand deposits) that could be developed in the future.

Section 368 directs the Agencies to take into account the need for upgraded and new electricity transmission and distribution facilities to relieve congestion of the national electricity grid. Congestion of the grid could be relieved, in part, by locating electricity transmission projects in locations that would provide additional paths around or through electricity transmission bottlenecks (i.e., congestion points). Development of the unrestricted conceptual West-wide energy transport network took into account the locations of current and future transmission constraints and identified potential paths where new projects could help facilitate current and future electricity transmission.

During public scoping, approximately 210 individuals and organizations provided comments on the scope of the PEIS. Many comments requested that specific existing or planned energy transport project ROWs be designated as Section 368 energy corridors; these suggested corridors range in length from relatively short corridors of less than 100 miles to ones that are hundreds of miles in length and cross one or more states. The majority of the commentors were concerned with electricity transmission; fewer were concerned with natural gas, oil, or hydrogen transport. Several commentors discussed the need for electricity transmission corridors that would support renewable energy projects. The proposed energy corridors received from the public totaled more than 61,550 miles in length and suggests where energy transport paths may be needed within the 11 western states.

ES.12.2.1.2 Step 2 – Identify the Preliminary Energy Corridors on Federal Lands

The unrestricted conceptual West-wide energy transport network developed in Step 1 does not consider physical, environmental, or regulatory constraints, or land ownership. Because Section 368 specifies the designation of energy transport corridors only on federal land, Step 2 focused on identifying potential corridors that would:

1. Be consistent with the unrestricted conceptual West-wide energy transport network, and thus provide paths for connecting current and future energy supply and demand areas that could, if used by future electricity transmission projects, improve reliability, relieve congestion, and enhance the capability of the national grid to deliver electricity; and

2. Meet the Section 368 requirement of designating corridors only on federal land.

The identification of preliminary energy corridors also took into account several "location" factors that affected where a corridor may or may not be located on federal land. These factors included (1) locations of important natural and cultural resources, (2) locations of military training and testing areas, (3) DOD restricted airspace, (4) regulatory stipulations preventing siting of certain activities or infrastructure on specific lands. and (5) environmental concerns identified during scoping. Corridors were located to avoid these areas, resources, and lands to the maximum extent possible, although not all important or sensitive resources could be avoided.

Preliminary energy corridors were identified by examining each of the unrestricted conceptual West-wide energy transport network corridors and adjusting corridor locations to avoid conflicts with applicable location factors to the maximum extent possible. For example, the number of national parks, monuments, and recreation areas crossed by the unrestricted conceptual network decreased from 29 to 15 following Step 2; the number of national wildlife refuges crossed decreased from 15 to 12; and the number of wilderness areas crossed decreased from 58 to 27. In addition, existing ROWs (including those for energy transport and roads and highways) in the vicinity of the conceptual energy transport network were identified and examined for possible use in locating Section 368 energy corridors. Consideration of existing ROWs could expedite the siting and designation of Section 368 energy corridors because for many of these ROWs, projectspecific impact analyses and amendments to land use plans have already been completed. The unrestricted conceptual energy transport network corridors were moved, where possible, to take

advantage of existing ROWs that could be expanded to accommodate federal energy corridors without conflicting with other location factors.

ES.12.2.1.3 Step 3 – Refine the Section 368 Energy Corridor Locations

Following identification of preliminary energy corridors on federal lands, agency personnel involved with the management of federal lands that would be crossed by the preliminary corridors were asked to examine the corridor locations and identify any additional location adjustments that would further avoid important resources or areas, and to confirm that the corridor locations would be consistent with the specific management needs of each land management unit (such as a BLM field office or a FS national forest).

Corridor data in a GIS database was provided to approximately 55 FS national forests, 74 BLM district and field offices, and 17 DOD facilities that could be crossed by the preliminary corridors. In addition, this information was also provided to the national office of the USFWS for its use in examining preliminary corridors that may be crossing national wildlife refuges or other USFWSmanaged areas. The managers and staff of these federal lands were asked to use this information. together with their unique, site-specific knowledge of sensitive resources, management activities, and compatible land uses, to provide (together with detailed supporting rationale) adjustments corridor location to further minimize potential conflicts with management responsibilities, important resources, and other location factors while providing consistency with current land use plans.

In some cases, the corridor adjustments proposed by managers and staff from adjacent federal land management units resulted in discontinuities in corridor alignments between adjacent federal lands (e.g., proposed energy corridors did not line up between adjacent BLM and FS lands). In these circumstances, one or more additional meetings with the land managers and their staffs were conducted to reach siting resolution. The outcome of this refinement was a set of more realistic, potential West-wide energy corridors on federal lands. As a result of these additional corridor location evaluations and adjustments, the number of national parks, monuments, and recreation areas crossed by energy corridors decreased from 15 after Step 2 to 12 after Step 3; national wildlife refuge crossings dropped from 12 to 3; and wilderness area crossings decreased from 27 to 0.

ES.12.2.2 What Land Use Plan Amendments and Interagency Permitting Coordination Would Be Required under the Proposed Action?

Designation of Section 368 energy corridors under the Proposed Action would require the amendment of Agency-specific land use plans to incorporate the designated corridors. Affected plans would be those for federal administrative units crossed by the Section 368 energy corridors. Analyses conducted in this PEIS would support the amendment of approved land use plans for federal lands where Section 368 energy corridors would be designated.

The plan amendments for the Proposed Action would include (1) the identification of specific Section 368 energy corridors by centerline, width, and compatible energy uses and restrictions (such as pipeline only or electricity transmission with a restricted tower height); and (2) the adoption of interagency operating procedures (IOPs) that would be selected on a corridor- and project-specific basis. Only those land use plans where Section 368 energy corridors would be located would be amended. Land use plans that are currently undergoing revision for other reasons (not related to Section 368), but not scheduled for completion until after the ROD is signed, would incorporate the corridor designations into their ongoing plan revisions. Plans that are currently being revised for other reasons and would be completed before the ROD is signed would need to undergo further amendment when the ROD is signed.

ES.13 HOW WOULD THE AGENCIES EVALUATE AND OVERSEE THE USE AND OCCUPANCY OF ENERGY CORRIDORS?

The Agencies would adopt appropriate IOPs when evaluating a ROW application within a Section 368 energy corridor. The IOPs would assist the Agencies, project applicants, and others in evaluating applications for using the Consideration corridors. of information generated by implementation of the IOPs would help ensure that energy transport projects within the Section 368 energy corridors are planned, implemented, operated, and eventually removed in a manner that protects and enhances environmental resources. In addition, the adoption of applicable IOPs during the ROW application and permitting process would promote the multimodal use of each energy corridor and the efficient and effective use of public land. The IOPs would be adopted by the Agencies to provide consistency among the Agencies in considering future land use authorizations and the administration of ROWs within Section 368 energy corridors. Some IOPs, such as compliance with the Endangered Species Act of 1973, are mandatory and would be required for all proposed projects at all corridor locations. Other IOPs, such as those dealing with stream crossings, would only apply for projects in certain locations, as appropriate.

The IOPs would be considered during the application and permitting process as well as during project construction and operation. Where appropriate, specific management controls and performance standards would accompany a ROW authorization. These would be identified on the basis of the project-specific application and supporting site-specific environmental evaluations.

ES.14 WERE OTHER ALTERNATIVES CONSIDERED FOR DETAILED STUDY?

The NOI for this PEIS identified four alternatives: (1) No Action Alternative, (2) Increased Utilization Alternative, (3) New Corridor Alternative, and (4) Optimization Criteria Alternative. Among these, the Increased Utilization and New Corridor Alternatives were eliminated from further study. The Optimization Criteria Alternative is included in the Proposed Action Alternative, designation of EPAct Section 368 energy corridors and amendment of land use plans.

A number of alternatives for energy corridor designation were suggested during scoping. These alternatives are:

- Designating all existing energy corridors and ROWs in the 11 western states as federal energy corridors;
- Upgrading existing energy transport facilities within existing energy corridors and ROWs for greater transport capacity or efficiency, before new federal energy corridors are designated;
- Locating designated energy corridors only in areas adjacent to federal highways and major state and municipal roads;
- Designating energy corridors on national park lands and DOD facilities;
- Designating as energy corridors existing, under way, or planned energy transport project ROWs (as identified by energy providers), including individual

- Environmentally friendly alternatives that called for increasing energy efficiency or conservation by energy users instead of designating corridors; and
- Preliminary corridors identified in the corridor siting process.

These alternatives, which were considered but eliminated from further study, were each examined with regard to how well they would meet the purpose and need of Section 368, how well they would support designation of federal energy corridors, and how they would address the energy transmission issues of the electricity transmission grid in the West.

ES.15 HOW DO THE ALTERNATIVES COMPARE?

The Proposed Action and No Action Alternatives were evaluated in this PEIS for potential environmental impacts associated with the designation of energy corridors on federal lands and the amendment of land use plans to incorporate the corridor designations. In addition, the types of potential impacts that may occur from the development of future energy transport projects were also identified. Because the Proposed Action is the designation of corridors and not the construction and operation of any energy transport projects, only a qualitative evaluation is provided of the types of impacts that could result from development of an energy transport project regardless of project location. More quantitative impact analyses, including the identification of the magnitude and extent of potential impacts to specific social, cultural, economic, and natural resources, can only be conducted at the project level. This would be done in the future if an application to use a designated corridor were received by the Agencies.

No direct environmental impacts are expected to occur as a result of corridor designation and land use plan amendment. Corridor designation could result in effects to land use on nonfederal lands adjacent to or between corridor segments. The type and magnitude of effect would depend on the current and anticipated future land use in these areas. Corridor designation and the amendment of land use plans under the Proposed Action do not authorize the development of projects within the corridors, or require the use of a designated corridor. Project applicants could continue to request project-specific ROWs elsewhere on federal and nonfederal lands to meet their specific energy transport objectives, just as they currently do and would continue to do under the No Action Alternative.

Corridor designation could result in effects to land use on nonfederal lands adjacent to or between corridor segments. The type and magnitude of effect would depend on the current and anticipated future land use in these areas.

ES.15.1 How Do the Physical Characteristics of the Corridors Compare between the Alternatives?

Under the No Action Alternative, there would be no Section 368 federal energy corridors designated on federal lands. Existing locally designated corridors would remain, and new corridors may continue to be locally designated. Under the Proposed Action, approximately 6,055 miles of such corridors would be designated on federal lands. Approximately 61% of the proposed corridors follow or include existing utility and/or transportation ROWs. There are 166 corridor segments that comprise the Proposed Action corridors. These segments have an average length of 37.3 miles.

ES.15.2 Do the Alternatives Meet the Goals and Objectives of Section 368?

Under the No Action Alternative, no Section 368 energy corridors would be designated on federal land; thus the goals and objectives of Section 368 would not be met. In contrast. approximately 6,055 miles of Section 368 energy corridors would be designated on federal lands under the Proposed Action. Thus, the Proposed Action would meet the requirements of Section 368 of designating energy transport corridors on federal lands in the West.

While project applicants would not be locate projects required to within the Section 368 energy corridors, applicants using the corridors could take advantage of an expedited application and permitting process. Under the No Action Alternative, the locations of future energy transport project ROWs would be identified by the project applicants, and the development of transmission projects at these locations may or may not improve reliability, reduce congestion, or enhance the capability of the western portion of national electricity transmission grid to deliver electricity. In contrast, the Section 368 energy corridors that comprise the Proposed Action were sited, in part, considering the need to address reliability and congestion, and to enhance the capability to deliver electricity of the western portion of the grid.

ES.15.3 How Could the Alternatives Affect the Locations of Future Energy Transport Projects in the 11 Western States?

Neither of the alternatives evaluated in this PEIS includes authorization of energy transport projects. The corridors designated under the Proposed Action would be sited on federal land in areas that have been determined to be suitable for supporting future energy transport projects. Under the No Action Alternative, there would be no such Section 368 energy corridors. While the number and types of projects that may be expected to be developed in the foreseeable future are unknown, the corridor suggestions received from the public identify a potential for many energy transport projects to be developed throughout the West.

Assuming these proposed corridors represent possible future energy transport projects, under the No Action Alternative, individual projects could be widely distributed across federal and nonfederal lands and thus result in a proliferation of energy transport ROWs. Under the Proposed Action, however, portions of the ROWs for these same projects could be colocated within the designated corridors, and would not be spread out over the federal landscape.

ES.15.4 What Types of Impacts Might Be Expected with the Development of Energy Transport Projects under the Alternatives?

The construction and operation of energy transport projects under both alternatives would result in environmental impacts on federal and nonfederal lands (see Table ES-2). The types of potential impacts would vary by project phase (i.e., construction, operation). The specific nature, magnitude, and extent of possible project-specific impacts would be determined by the project type (transmission line, pipeline) and its length and location on federal and nonfederal lands. Potential direct impacts typical of project construction and operation include the use of geologic and water resources; soil disturbance and erosion; degradation of water resources; localized generation of fugitive dust and air emissions from construction and operational equipment: noise generation: disturbance or loss of paleontological and cultural resources and traditional cultural properties; degradation or loss of fish and wildlife habitat: disturbance of resident and migratory fish and wildlife species, including protected species; degradation or loss of plant communities; increased opportunity for invasive vegetation establishment; alteration of visual resources; land use changes; accidental release of hazardous substances; and increased human health and safety hazards. Project development under either of the alternatives could also affect populations in the vicinity of the projects on both federal and nonfederal land as well as local and regional economies.

For multiple projects, environmental impacts from project construction and operation

would likely be dispersed over a larger area under No Action than under the Proposed Action. Under No Action, multiple project ROWs could share locally designated corridors but outside of these areas could be more widely dispersed on other federal and nonfederal lands. Under the Proposed Action, these same project ROWs could share about 6,055 miles of designated corridor where project impacts would be localized. TABLE ES-2 Summary of Potential Environmental Impacts of Designating Section 368 Energy Corridors on Federal Lands and Amending Federal Land Use Plans, and Generic Environmental Impacts of Constructing and Operating Energy Transport Projects under the Two Alternatives

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Land use	There would be no direct land use impacts on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to land use on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to land use from the construction and operation of energy transport projects in the absence of designated corridors. Land use could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. ROW clearing would result in permanent loss of timber production within and adjacent to the ROW in areas designated for that use. Recreation, livestock grazing, oil and gas leasing, and wildlife habitat conservation could experience short-term disturbance during construction activities. Project development and operation could limit oil and gas production and mineral extraction directly within the ROW. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts from project construction and operation would be similar to those identified for No Action. Corridor designation could affect land use within and adjacent to the designated corridors, as well as along other federal and nonfederal lands that may be crossed by project ROWs. About 61% of the proposed corridors currently include utility and/or transportation ROWs, and current land uses would continue within and along the designated corridors until development of specific energy transport projects were to occur. For multiple projects, land use could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact land use.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Geologic resources	There would be no direct impacts to geologic resources on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to geologic resources on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to geologic resources from the construction and operation of energy transport projects in the absence of designated corridors. Geologic resources could be affected on federal land wherever energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Construction impacts may include disturbance of surface soils and soil erosion from grading, foundation construction, and trenching activities, and removal of geologic materials (gravel, stone) from borrow areas. Soils could be affected by accidental spills of hazardous materials during project operations. The nature, magnitude, and extent of project- related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of project impacts would be similar to those identified for No Action, but could occur within the Proposed Action corridors and on other federal and nonfederal land that would be crossed by individual projects. About 61% of the designated corridors would occur along existing utility and transportation ROWs where geologic resources have been previously disturbed. For multiple projects, potential impacts would occur at fewer locations and within a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact geologic resources.

Resource Paleontologic resources	No Action Alternative: No Action on Federal Lands There would be no direct impacts to paleontologic resources on federal and nonfederal lands from not	Proposed Action Alternative: Designate New Section 368 Corridors There would be no direct impacts to paleontologic resources on federal and nonfederal lands from
	designating Section 368 energy corridors on federal land and amending land use plans.	designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to paleontological resources from the construction and operation of energy transport projects in the absence of designated corridors. Paleontological resources could be affected on federal and nonfederal lands wherever energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Ground-disturbing construction activities may damage fossils and destroy scientific context within project-specific ROWs. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects. Increased accessibility to an area may also expose fossils to vandalism or theft, the magnitude and extent of which would depend on the type, location, and design of the individual projects.	Potential types of project impacts would be similar to those identified for No Action. About 204 geologic units with high fossil yield potential occur within 2,000 feet of the proposed corridor centerlines. Ground-disturbing construction activities could damage fossils and destroy scientific context within the designated corridors as well as on other federal and nonfederal lands. About 61% of the designed corridors include existing utility and transportation ROWs where paleontological resources, if present, may have been previously disturbed. Increased accessibility to an area may also expose fossils to vandalism or theft, the magnitude and extent of which would depend on the type, location, and design of the individual projects. For multiple projects, potential project impacts may occur at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact paleontological resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Water resources	There would be no direct impacts to water resources or 100-year floodplains on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to water resources or 100-year floodplains on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to water resources from the construction and operation of energy transport projects in the absence of designated corridors. Water resources and floodplains could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Groundwater could be impacted if project development affects aquifer recharge or water quality is affected by an accidental release of a hazardous substance. Surface water could be impacted by soil erosion and runoff from construction areas, alteration of stream flow and morphology at ROW crossings, and by an accidental release of hazardous materials. Floodplain capacity could be affected by placement of structures or excavated materials. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of project impacts would be similar to those identified for No Action. Projects developed within designated corridors would cross about 285 named perennial and intermittent streams and man-made channels, 26 lakes and reservoirs, and 4 wild and scenic rivers, totaling 390 linear miles of surface water crossed by the corridors; additional surface waters could be crossed on other federal and nonfederal lands crossed by the projects. Aquifers on federal and nonfederal lands crossed by projects could be affected by project construction and operation. About 33 miles of floodplains could be crossed by projects within designated corridors. Additional floodplain areas could be crossed on other federal and nonfederal lands. About 61% of the designated corridors include existing utility and transportation ROWs where water resources and floodplains may have been previously disturbed. For multiple projects, water resources and floodplains would be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact water resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Air quality	There would be no direct impacts to air quality on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to air resources on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to air quality from the construction and operation of energy transport projects in the absence of designated corridors. Air quality could be affected on federal and nonfederal land where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Air quality impacts would be associated with fugitive dust, construction equipment emissions, and operation of compressor stations. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts to air quality would be similar to those identified for No Action. Energy transport project development and operation could affect air quality along the designated corridors. Similar impacts could also occur along project ROWs on other federal and nonfederal lands that could be crossed by individual projects. About 61% of the designated corridors would occur along existing utility and transportation ROWs where air resources may have been (and may continue to be) affected. For multiple projects, air quality could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact air quality.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Noise	There would be no direct noise impacts on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct noise impacts on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to ambient noise levels from the construction and operation of energy transport projects in the absence of designated corridors. Ambient noise levels could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Noise impacts would be associated with construction equipment, blasting, compressor/pump station operations. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential impacts to ambient noise levels would be similar to those identified for No Action. Project development could affect noise levels along the proposed corridors. Similar impacts could also occur along project ROWs on other federal and nonfederal lands. About 61% of the designated corridors would occur along existing utility and transportation ROWs where ambient noise levels may have been (and may continue to be) affected. For multiple projects, ambient noise levels would be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact noise levels.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Ecological resources	There would be no direct impacts to ecological resources on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to ecological resources on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to ecological resources from the construction and operation of energy transport projects in the absence of designated corridors. Ecological resources could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those currently experienced from energy transport project development and operation on federal and nonfederal lands. Impacts from project development may include habitat fragmentation, wildlife disturbance, habitat loss and modification, exposure to accidental releases of hazardous materials, and the loss or injury of biota within physically disturbed portions of the project ROWs. Construction and operation activities, together with physically disturbed habitats at the ROWs, could lead to the spread or establishment of invasive species. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts to ecological resources would be similar to those identified for No Action. Projects utilizing the designated corridors could cross or intersect about 390 linear miles of surface waters with associated wetlands and aquatic habitats, and additional aquatic habitats could be affected along the project ROWs on other federal and nonfederal lands adjacent to the designated corridor. Projects developed and operated within the corridors could affect wildlife habitat on and adjacent to land present within the corridors, although about 61% of the proposed corridors would occur along existing transportation and utility ROWs where biota and their habitats have been previously disturbed. For multiple projects, ecological resources could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact ecological resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Visual resources	There would be no direct impacts to visual resources on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to visual resources on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to visual resources from the construction and operation of energy transport projects in the absence of designated corridors. Visual resources could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Visual resources could be affected by ROW clearing, project construction, and operation. Potential impacts would be associated with construction equipment and activity, cleared project ROWs, and the type and visibility of individual project structures such as compressor stations and electricity transmission towers. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts to visual resources would be similar to those identified for No Action. Visually sensitive areas crossed by or occurring within 5 miles of the proposed corridor centerlines and that could be affected by project development and operation include 31 national parks, national monuments, and recreation areas; 13 wild and scenic rivers; 33 national scenic or historic trails; 11 national historic landmarks and national natural landmarks; 23 national wildlife refuges; and 25 national scenic highways. Additional visually sensitive resources may be expected to occur on other federal and nonfederal lands that could be crossed by project ROWs. About 61% of the proposed corridors would occur along existing transportation or utility ROWs, and visual resources in these areas may currently be impacted to some extent. For multiple projects, visual resources could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact visual resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Cultural resources	There would be no direct impacts to cultural resources on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts to cultural resources on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to cultural resources from the construction and operation of energy transport projects in the absence of designated corridors. Cultural resources could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Cultural resources could be impacted during project construction, and there could be an increased potential for vandalism or looting due to increased accessibility of sites from project ROWs in previously inaccessible locations. Development of energy transport projects would include consultations with appropriate SHPOs. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts from project construction and operation to cultural resources would be similar to those identified for No Action. Cultural resources may be expected to occur in most project ROWs within the designated corridors, as well as on other federal and nonfederal lands that would be crossed by the project ROWs. About 61% of the proposed corridors would occur along existing transportation or utility ROWs, and the cultural resources near these areas may have previously been disturbed. Development of energy transport projects would include consultations with appropriate SHPOs. For multiple projects, cultural resources could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact cultural resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Resource Tribal traditional cultural resources	No Action on Federal Lands	Designate New Section 368 Corridors There would be no direct impacts to resources on federal and nonfederal lands of particular interest to Tribes from designating Section 368 energy corridors on federal land and amending land use plans. Designations would call attention to the corridors and may draw exploratory teams of energy developers to them, resulting in increased disturbance of Tribal resources, particularly in remote areas. Potential types of impacts from project construction and operation to resources of interest to Tribes would be similar to those identified for No Action. Tribal resources may be expected to occur in most project ROWs within the designated corridors, as well as on other federal and nonfederal lands that would be crossed by the project ROWs. About 61% of the proposed corridors would occur along existing transportation or utility ROWs, and Tribal resources near these areas may have previously been disturbed. Development of energy transport projects would include consultations with the appropriate Tribal Historic Preservation Office. For multiple projects, Tribal resources could be affected at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby
		locations over a period of time could cumulatively impact Tribal resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Socioeconomic resources	There would be no direct social or economic impacts on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct socioeconomic impacts on federal lands from designating Section 368 energy corridors on federal land and amending land use plans. Corridor designation could have effects on property values and future land use on nonfederal lands adjacent to
	The following are the potential impacts to socioeconomic resources from the construction and operation of energy transport projects in the absence of designated corridors. Socioeconomic resources could be affected on federal and	or between the designated corridors on federal lands. The nature of the effects would depend on the current and future land use of the nonfederal lands.
	nonfederal lands where energy transport projects are developed and operated as well as in conjunction with project development and operation. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Development of energy transport projects could result in positive impacts to local and state tax revenues, state employment rates, personal income, and the rental housing market. Land use royalties and property values may be adversely affected within and near project ROWs. Project development could also reduce land prices in areas near the project ROWs. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of project impacts would be similar to those identified for No Action. These impacts could occur not only for areas associated with the designated corridors, but also at other federal and nonfederal lands that the project ROWs might also cross. About 61% of the designated corridors include existing utility and transportation ROWs where socioeconomic resources may have been previously affected. For multiple projects, socioeconomic impacts could occur at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact socioeconomic resources.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Environmental justice There would be no direct impacts, inclu disproportionately high or adverse impa- low-income populations on federal and from not designating Section 368 energ federal land and amending land use plan The following are the potential impacts justice from the construction and operate transport projects in the absence of desi Minority and low-income populations c on federal and nonfederal lands where e projects are developed and operated. Pre- would be similar to those from current e	There would be no direct impacts, including no disproportionately high or adverse impacts, to minority or low-income populations on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct impacts, including no disproportionately high or adverse impacts, to minority or low-income populations on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans. Corridor designation could have effects on property valves and future land use
	The following are the potential impacts to environmental justice from the construction and operation of energy transport projects in the absence of designated corridors. Minority and low-income populations could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Project impacts would be similar to those from current energy transport project development and operation on federal and nonfederal lands. Project development and operation could affect some minority and low-income populations as a result of impacts to visual resources and local economic conditions. The likelihood of disproportionately high impacts can only be evaluated at the project level. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	on nonfederal lands adjacent to or between the designated corridors on federal land, which could affect minority or low-income populations. The nature and magnitude of any effects on minority or low-income populations would depend on the populations that occur in the vicinity of a proposed corridor as well as the current and future land use and property values of the nonfederal lands.
		Potential types of project impacts would be similar to those identified for No Action. These impacts could occur not only for areas associated with the designated corridors, but also at other federal and nonfederal lands that the project ROWs might also cross. About 61% of the proposed corridors would occur along existing utility and transportation ROWs and where minority and low-income populations may have been previously affected. For multiple projects, potential impacts, including disproportionately high impacts, could occur at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact environmental justice.

Resource	No Action Alternative: No Action on Federal Lands	Proposed Action Alternative: Designate New Section 368 Corridors
Health and safety	There would be no direct health and safety impacts on federal and nonfederal lands from not designating Section 368 energy corridors on federal land and amending land use plans.	There would be no direct health and safety impacts on federal and nonfederal lands from designating Section 368 energy corridors on federal land and amending land use plans.
	The following are the potential impacts to health and safety from the construction and operation of energy transport projects in the absence of designated corridors. Health and safety could be affected on federal and nonfederal lands where energy transport projects are developed and operated. Impacts are not expected to differ from those of current energy transport project development and operation on federal and nonfederal lands. Primary concerns are associated with worker safety during project construction and operation, public safety from accidents, and fire incidence. The nature, magnitude, and extent of project-related impacts would depend on the type, location, length, and design of the individual projects.	Potential types of impacts from project construction and operation would be similar to those identified for No Action. About 61% of the designated corridors include existing utility and transportation ROWs where health and safety concerns related to worker safety, public safety, and fire incidence currently may exist. For multiple projects, health and safety concerns, including concerns for increased fire hazard, would occur at fewer locations and over a smaller geographic area than under No Action. However, multiple projects developed at the same or nearby locations over a period of time could cumulatively impact health and safety.