

Group Comments
on the
Draft Programmatic Environmental Impact Statement
for the Designation of
West-Wide Energy Corridors

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I. Introduction and Background

Please accept the following comments of the Alliance for Historic Wyoming, Californians for Western Wilderness, Center for Native Ecosystems, Environmental Defense, Grand Canyon Trust, National Wildlife Federation, Natural Resources Defense Council, New Mexico Wilderness Alliance, Oregon Natural Desert Association, San Juan Citizens Alliance, Sierra Club, The Wilderness Society, Western Organization of Resource Councils, Western Resource Advocates and the Wyoming Outdoor Council on the draft programmatic environmental impact statement (DPEIS) for the designation of west-wide energy transmission corridors.

A. Organizational Information

Alliance for Historic Wyoming

The Alliance for Historic Wyoming is a nonprofit organization dedicated to providing a statewide voice for historic preservation in Wyoming. We work to assist citizens concerned about the preservation, protection, and enhancement of Wyoming's irreplaceable historic and cultural resources by becoming more involved with the public processes affecting these resources.

Californians for Western Wilderness

Californians for Western Wilderness (CalUWild) is an unincorporated citizens organization with 750 members, dedicated to encouraging and facilitating citizen participation in legislative and administrative actions affecting wilderness and other public lands in the West. Our members recreate (quietly) on the public lands of the West, enjoying their scenic beauty, archaeology, wildlife, and other values.

Center for Native Ecosystems

CNE is dedicated to conserving and recovering the native species and ecosystems of our region. We value the clean water, fresh air, healthy communities, sources of food and medicine, and recreational opportunities provided by native biological diversity. We also passionately believe that all species and their natural communities have the right to exist and thrive. We use the best available science to forward our mission through participation in policy, public outreach and organizing, administrative processes, legal action, and education.

Environmental Defense

For a quarter century, the Rocky Mountain Office of Environmental Defense has been dedicated to addressing air quality, public lands, and wildlife across the intermountain West. Encouraging and facilitating the transition to a clean energy economy and protecting the environment of the West plays a central role in those efforts. Protecting public health and the environment from global warming pollution and finding solutions to the global warming crisis is a core organizational mission.

Grand Canyon Trust

For more than two decades, the Grand Canyon Trust has advocated the conservation of natural and cultural resources on the Colorado Plateau. The Trust is committed to reducing greenhouse gas emissions and is actively promoting efficiency and renewable energy options for rapidly transitioning to a cleaner energy future in Utah, Arizona, Nevada, Colorado, and New Mexico.

National Wildlife Federation

NWF's mission is to inspire Americans to protect wildlife for our children's future. As an organization, NWF represents the power and commitment of four million members and supporters joined by affiliated wildlife organizations in 47 states and territories. Both NWF and its affiliates have a long history of working to conserve the wildlife and wild places on federal public lands in the West. Many members of NWF and its affiliates use the lands and resources that will be impacted by the energy corridors discussed in this PEIS.

Natural Resources Defense Council

The Natural Resources Defense Council – NRDC – is a national environmental advocacy organization with approximately 1.2 million members and supporters nationwide and offices in New York City, Chicago, San Francisco, Los Angeles, Washington DC, and Beijing, China. NRDC's mission is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends. For more than three decades, the organization has worked to protect and conserve the nation's federal public lands and their resources from harmful activities, including irresponsible energy development. NRDC also has a long history of advocacy promoting the increased use of energy efficiency and renewable energy sources, and for years has been engaged in major efforts to develop real solutions to the problem of global warming.

New Mexico Wilderness Alliance

The New Mexico Wilderness Alliance is a 6,000 member non-profit 501 C3 grassroots environmental organization dedicated to the protection, restoration, and continued enjoyment of New Mexico's wildlands and Wilderness areas. The primary goal of the New Mexico Wilderness Alliance is to ensure the protection and restoration of all remaining wild lands in New Mexico through administrative designations, federal Wilderness designation, and on-going advocacy.

Oregon Natural Desert Association

ONDA is a non-profit public interest organization dedicated to preserving and protecting the public lands of eastern Oregon. ONDA has a long history of interest and involvement in eastern Oregon's public land management. ONDA's mission is to protect, defend, and restore forever the health of Oregon's native deserts. The members and staff of ONDA use and enjoy the public lands, waters, and natural resources within the proposed corridor pathway for recreational, scientific, spiritual, educational, aesthetic, and other purposes. ONDA and its members also participate in information gathering and dissemination, education and public outreach, commenting upon proposed agency actions, and other activities relating to the federal government's management and administration of the public lands of eastern Oregon.

San Juan Citizens Alliance

San Juan Citizens Alliance is a grass roots organization dedicated to social, economic and environmental justice in the San Juan Basin. We organize San Juan Basin residents to protect our water and air, our public lands, our rural character, and our unique quality of life while embracing the diversity of our region's people, economy and ecology. San Juan Citizens Alliance has offices in Durango and Cortez, Colorado, and in Farmington, New Mexico.

Sierra Club

Named "the most influential environmental organization" by an Aspen Institute poll, the Sierra Club gives the public the information and the means to make their voices heard. As the world's oldest and largest grassroots environmental organization, the Club's 1.3 million members and supporters in 65 chapters and

over 400 local groups nationwide possess the unique ability to empower people and influence public policy through community activism, public education, lobbying, and litigation.

The Wilderness Society

The Wilderness Society (TWS) has been involved in land management since 1935. With over 300,000 members and supporters nation-wide, TWS represents a diverse range of citizens. Our goal at TWS is to protect public lands as wilderness and to ensure that land management practices are sustainable and based on sound science to ensure that the ecological integrity of the land is maintained.

Western Organization of Resource Councils

WORC is a regional network of seven grassroots community organizations that include 9,500 members and 45 local chapters: Dakota Rural Action (South Dakota), the Dakota Resource Council (North Dakota), the Northern Plains Resource Council (Montana), the Powder River Basin Resource Council (Wyoming), the Idaho Rural Council, Oregon Rural Action, and the Western Colorado Congress. WORC helps its member groups succeed by providing training and coordinating issue work. WORC is committed to building sustainable environmental and economic communities that balance economic growth with the health of people and stewardship of their land, water, and air resources.

Western Resource Advocates

Founded in 1989, Western Resources Advocates (WRA) is a non-profit environmental law and policy organization dedicated to restoring and protecting the land, air, water and wildlife resources within the interior Western United States. Specifically, our team of lawyers, scientists and economists works to: 1) promote a clean energy future for the Interior West that reduces pollution and the threat of global warming; 2) restore degraded river systems and to encourage urban water providers to use existing water supplies more efficiently; 3) protect public lands and wildlife throughout the region. WRA is actively engaged in promoting sound electric transmission and energy corridor policies in the western United States to ensure that: (1) power lines and associated rights-of-way/corridors are sited and constructed properly to ensure protection for sensitive land, water and wildlife resources; and (2) new transmission lines are focused on bringing renewable energy sources like wind, solar and geothermal on line so that we may achieve a balanced and sustained energy policy in the region. The designation of energy corridors as proposed in the DPEIS directly and negatively impacts WRA's transmission planning goals and efforts as detailed below.

Wyoming Outdoor Council

The Wyoming Outdoor Council has promoted clean energy solutions in the State of Wyoming for the last forty years. It is involved in all facets of energy development on our public lands. It advocates for the use of clean, renewable forms of energy and increased energy use efficiency, and seeks to minimize the use of coal to meet our electricity needs due to the numerous and severe environmental impacts created by the use of coal for electricity generation. The Wyoming Outdoor Council is a recognized leader in the State of Wyoming in all issues related to energy development, production, transmission, and use.

B. Comprehensive Regional Transmission and Energy Corridor Planning

Planning for energy transmission corridors in the 11 western United States must be done with a regional perspective and comprehensively given that power lines and the corridors in which they are located wrap together the key components of an energy policy. Power lines primarily transport electricity from generation sources to "load" areas or population centers. At these population centers, the emerging energy economy in the West is focused on reducing the need for new bulk power generation by

aggressively applying principles of efficiency, distributed generation and smart grid technologies. At the other end of the power line is a connecting generation source, and this designation process offers an opportunity to have corridors on federal public lands focus on tying in clean and renewable energy sources to combat air pollution and climate change. Finally, designated corridors containing power lines are “in between” the generation source and population centers, which are often great distances apart. It is essential, therefore, that the corridors are located and developed in a manner that preserves the region’s outstanding lands and wildlife resources. The combination of these elements is the big picture that the current study misses by focusing solely on the corridor locations and virtually nothing else.

C. Energy Corridors and the New Energy Economy

The West is headed in a new direction to an exciting and prosperous new energy economy. Many of our groups are working with renewable energy and efficiency advocates, industry and electric utility leaders, lands and wildlife groups and state and federal agencies to achieve this new energy economy, which is centered on a sustainable and balanced energy policy for the western United States. Our comments seek to engage the lead agencies of the federal government to work together on these goals, particularly as the current corridor process provides an opportunity for this type of collaborative, complementary effort.

Concerns about climate change, air pollution, public health, energy independence, national security and low-cost energy resources are the primary drivers of the new energy economy – and the region is responding. Presently, 8 of the 11 western states studied in the current analysis have renewable portfolio standards that require 15 to 20 to 25% of future energy supplies to come from clean, renewable sources of energy. In 2005, only 1% of the electric power in the Rocky Mountain and southwest states came from these renewable energy sources, while coal and gas supplied 85%. *See Interior West Power Generation by Fuel Choice* (2005), compiled from Energy Information Administration data, attached as Exhibit 1. In addition, many population centers facing high growth rates are starting more and more to look at efficiency and related measures to partially satisfy future energy demands. The best way for the agencies involved in this process to gain widespread public support from diverse stakeholders is to have the energy transmission corridors consider energy efficiency principles, focus on renewable energy resources and protect sensitive public lands and wildlife. Those are the elements of a comprehensive and forward-thinking vision for the West in which energy corridors can play a major role, as well as nicely complementing the growing momentum in the western states that are rapidly progressing to a new and exciting energy economy.

We understand and appreciate that the lead agencies are designating the west-wide corridors as required by section 368 of the 2005 Energy Policy Act. Our overarching view of this process and the DPEIS is that the lead agencies are missing out on a historic opportunity. When you consider that the key cabinet level secretaries of Energy, Interior, Agriculture (USFS) and Defense are programmatically looking at the 11 western states in a comprehensive fashion – combined with the fact that the predominant use of the corridors will be for new power lines in the West – this offers a unique and possibly one-time opportunity to utilize this process to move the region towards a forward-thinking energy policy for the 21st century.

II. **Designating Smart Corridors and Comprehensive Regional Transmission Planning**

Extending over **6,000 miles in length** and encompassing **3 million acres of public lands**, these corridors will have significant lands and wildlife impacts in the region. Protecting these resources is a key focus for our organizations. In addition to protecting these resources, we ask that the agencies take the opportunity in this one, programmatic look at the region to develop alternatives consider the big picture: what would corridors look like in a scenario that assumes high levels of efficiency, distributed power generation like rooftop solar, smart grid technologies and conservation are achieved in the major

population centers in the West that are driving the need for more generation and thus more power lines? Indeed, the resulting alternative employing this type of analysis might have less overall miles and/or width of designated corridors. Equally important is what would an alternative look like that focused the location of corridors such that they best served, or at least equally served, clean and renewable energy sources? Finally, all of these alternatives must still consider the lands and wildlife impacts associated with the corridors, regardless of the primary focus of connecting generation sources.

In short, the above steps are necessary to ensure that the agencies designate corridors that are smart. A corridor is “smart” when it: (a) addresses corridor need by looking at demand-reducing principles such as efficiency, distributed generation, smart grid technologies, conservation and similar measures; (b) focuses on facilitating the development of clean, renewable energy resources; and (c) ensures long-lasting protection for sensitive public lands and wildlife habitat through avoidance and the adoption of Best Management Practices in locations where corridors will be located. See sections III, IV and V below for additional information on these comprehensive planning steps.

These smart corridor principles are embodied within a platform developed by Western Resource Advocates for comprehensive regional transmission planning. WRA’s position paper on this topic is attached as Exhibit 2 and we ask that the agencies employ this methodology and sequential planning steps in order to designate corridors in a comprehensive and sustainable fashion. In addition, Western Resource Advocates has contracted with the engineering firm Utility Systems Efficiencies, Inc., (USE) to examine the methodologies employed in the current PEIS for the corridor designation process.¹ The expert opinion of Ty Larson, the Senior Power Systems Engineer at USE, is attached as Exhibit 3. While Mr. Larson’s expert statement focuses a great deal on one of these planning steps – maximizing the transfer capacity of current grid assets before turning to new power lines and/or new corridors in which to house them – he has importantly provided expert testimony regarding the many benefits of planning regionally and comprehensively for new transmission and energy additions to the western power grid.

Regarding the benefits of comprehensive regional planning, Mr. Larson states:

THE ROLE OF ENGINEERING SOLUTIONS IN COMPREHENSIVE REGIONAL TRANSMISSION PLANNING TO ASSIST IN ASSESSING ENERGY CORRIDOR NEEDS AND POTENTIAL OPTIMAL PLACEMENT

In the context of regional planning for the optimum location for energy corridors for the future location of thousands of linear miles of power lines in the Western United States, the following paper outlines a methodology that focuses on: (1) maximizing the use of the existing transmission infrastructure and utilizing the existing transmission/transportation rights-of-way; and (2) determining suitable locations for the construction of new transmission corridors for use in future transmission planning. While employing this methodology is one of several potential approaches to developing solutions for energy needs, the methodology discussed herein contains important steps in comprehensive regional transmission planning that may better inform both the need for and location of

¹ Since 1992 Utility System Efficiencies, Inc. (USE) has been serving a variety of power industry clients and enhancing their internal transmission and system analytical capabilities. USE has worked for all sectors of the electric power industry and has a thorough understanding of the transmission issues and concerns of regulators, independent power producers, investor-owned utilities and publicly owned utilities. USE staff consists exclusively of electrical engineers and utility professionals with extensive experience in power systems analysis and related power industry issues. For more information, see <http://www.useconsulting.com/>.

energy corridors for the future location of new or upgraded power lines. This expert opinion focuses on both the need for proposed energy corridors that may contain power lines in the future, as well as the review of a proposed solution. It is not the authors intent to infer that this proposed methodology is the only process or strategy to aid in this type of review, but rather to impart simply a method that could be used to help aid any existing process that may be currently engaged in finding a solution via regional transmission planning and the need for and location of energy transmission corridors.

Exhibit 3 at 1. Applying this methodology to the current process, Mr. Larson states:

The current west-wide corridor effort seeks to designate energy transmission corridors in 11 western states, including Arizona and New Mexico. My professional opinion is that employing the above analyses including a rigorous examination of system needs and potential engineering solutions would have been helpful in determining the optimum number, potential width and location of transmission corridors for the future location of power lines. In addition to the current status of electrical system components, comprehensive planning for new power line corridors could also incorporate available lands and wildlife constraints and proposals for new generation sources seeking grid interconnection. Indeed, this type of grid interconnection “queue” information that is readily available in the public domain can also shed light if one has a particular focus on adding generation sources of a particular type. This type of planning can be useful into addressing multiple concerns in a comprehensive fashion by incorporating information about generation type (e.g., renewable sources), corridor needs and locations and lands and wildlife concerns.

Exhibit 3 at 7.

USE also developed detailed maps for Arizona and New Mexico, including a map of a specific area where energy additions are proposed for grid interconnection. These maps incorporate information concerning land use, wilderness and wilderness study areas, citizen-proposed areas for protection, areas of high biological diversity, existing power lines, substations, generation interconnection or “queue” requests and several proposed section 368 corridors. Importantly, Mr. Larson opines that looking at all of this information at once is critical to thorough and comprehensive regional transmission planning. Exhibit 3 at 1, 7-8.

Indeed, the expert opinion from USE is telling in how this type of approach to transmission planning can: (a) offer opportunities to focus corridors on generation types (e.g., renewable sources) (Exhibit 3 at 7); (b) possibly reduce the overall need for new or upgraded transmission by first addressing how future load calculations have accounted for demand reductions through efficiency and the use of distributed sources of power generation (Exhibit 3 at 3); (c) minimize new impacts to the environment through opportunities to upgrade current grid assets to carry more power in already-impacted areas (Exhibit 3 at 3, 6); and (d) in some instances, possibly avoid the need for a corridor altogether and protect sensitive public lands by looking at the full suite of engineering solutions to address need (Exhibit 3 at 8). It is apparent from the DPEIS that the agencies have not employed this comprehensive regional approach to corridor planning. This is a glaring weakness in the designation process, and we respectfully ask that the agencies employ these methodologies, which are well recognized within the regional transmission planning and engineering community, in order to properly address and account for multiple factors that must be considered in order to arrive at the optimum number, overall length and width, and placement of energy transmission corridors.

III. Analyzing the Need for Corridors

The smartest power line is the one we do not need to build. This is the first principle of smart and comprehensive corridor planning. The agencies admit that the average width of the corridors could end up with multiple projects that will have significant cumulative impacts:

A corridor width of 3,500 feet was selected by the Agencies for the Section 368 energy corridors. . . . 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-footwide corridor. Alternately, as many as 35 liquid petroleum pipelines (each consisting of a 32-inch-diameter pipe and a 100-foot construction ROW) or 29 natural gas pipelines (42-inch-diameter pipe and 120-foot construction ROW) could be supported within a 3,500-foot-wide corridor.

DPEIS at 2-3 – 2-5.

The corridor analysis could be strongly benefited by a need analysis. Indeed, as we will explain, rigorously examining need may result in fewer overall miles of corridors, less overall width, different preferred locations and potentially the elimination of some proposed corridors.

A. NEPA Purpose and Need Requirements

The National Environmental Policy Act (NEPA) requires that the agencies “briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives.” 40 C.F.R. § 1502.13. The agencies in the current document unduly limit the analysis of purpose and need to the requirement within the Energy Policy Act of 2005 (“2005 EPAct”) that the agencies designate corridors. The agencies frame the purpose and need as an “all or nothing” proposition: if a possible alternative approach like efficiency cannot by itself *fully* address the system congestion and transfer capacity requirements that Congress directed to be addressed, then the agencies need not (or could not) consider these types of alternative approaches. This point is highlighted at pages 2-37 and 2-38 of the DPEIS where the agencies reject *any* analysis of reducing energy demand through energy efficiency and conservation and how that might affect corridor designations because the agencies concluded that this would result in an alternative that did not designate *any* corridors.

In this regard, carefully examining the need for the proposed action would not result in the wholesale rejection of all corridor designations as the agencies improperly suggest, but rather, will just affect these designations in two key areas: overall linear miles and average width. The agencies miss the key distinction that the requirements of the 2005 EPAct (address congestion and improve power transfer capacity) can still be met by looking at demand-reducing scenarios – with the likely result that corridors would be affected in their *degree*, but certainly not eliminated in their *entirety*. This “all or nothing” purpose and need approach misses out on a key opportunity to combine both compliance with the 2005 EPAct mandate (i.e., designating corridors) with an important first-order analysis of whether some of the proposed corridors are actually needed. It is also a violation of NEPA. See e.g., Friends of the Southeast’s Future v. Morrison, 153 F.3d 1059, 1066 (9th Cir. 1998) (“An agency cannot define a project’s purpose so narrowly that it precludes consideration of alternatives and can be accomplished only by the preferred alternative.”); Colorado Environmental Coalition v. Dombeck, 185 F.3d 1162, 1174 (10th Cir. 1999); Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 666 (7th Cir. 1997) (“One obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence).”).

B. Analyzing Energy Efficiency, Distributed Generation, Demand-Side Management, Smart Grid Technologies and other Energy Demand-Reducing Efforts

When planning for energy transmission corridors that are predominantly intended for new power lines, (DPEIS as ES-2; 1-3 through 1-7), it is important that the agencies understand the well-recognized principle that reducing future energy demands in major population centers can dramatically lessen the overall need (both miles and width) of power line rights-of-way to be eventually housed within designated corridors. In 2006, the Western Governors' Association completed its Clean and Diversified Energy Initiative that included a task force report focused on transmission issues. See www.westgov.org/wga/initiatives/cdeac/TransmissionReport-final.pdf (excerpts attached as Exhibit 4). The report contains the astounding finding at page 9: if high, but achievable, levels of efficiency are reached in the region, this could result in eliminating 1,150 miles of a projected need for 4,000 miles – approximately **30%** – of new power lines. Clearly, therefore, the corridor designations can be greatly informed by first addressing demand-reducing principles including efficiency, distributed sources like rooftop solar and other similar energy-saving measures.

In addition, the Southwest Energy Efficiency Project (SWEEP) has prepared a report entitled “The New Mother Lode” (see www.swenergy.org/nml/New_Mother_Lode-Highlights.pdf), which concludes that the following savings can be realized in 2020 by implementing a high efficiency program in the Southwest:

- 99,039 GW-hrs of energy can be saved,
- Construction of thirty-four 500 MW coal plants can be avoided,
- Households and businesses can save \$28 billion in energy expenses, and
- Greenhouse gas and conventional pollutant emissions can be cut.

Quite obviously, examining the energy demand reductions to be gained from energy efficiency has immediate implications for the current designation process: if efficiency can wipe out the need for dozens of coal plants, it is not difficult to imagine the resulting decreased need for new power lines and corridors for future rights-of-way.²

While efficiency is garnering a lot of the focus in the energy sector, the Western Governors' Association recognizes that demand-side management (DSM) and distributed generation efforts may achieve the same type of result, noting a Department of Energy report with a target of having distributed generation sources like rooftop solar move up to a 20% share of new electrical capacity by 2010.³ Smart grid technologies such as demand response and advance metering, have been proven effective in reducing energy demand by 4 to 6%, with a direct correlation to fewer power plants needed.⁴ Indeed, the Federal Energy Regulatory Commission has concluded that, “As a substitute for transmission and distribution infrastructure, demand response *can reduce the need for new transmission* or distribution expansion to bring generation to a local area.” See FERC, *Assessment of Demand Response and Advanced Metering Staff Report* (Aug. 2006) at x, attached as Exhibit 4.3 (emphasis added). In combination, therefore, efficiency, distributed generation, smart grid technologies such as demand response and other demand-

² In his expert opinion, Mr. Larson with U.S.E., Inc. states that, “Reducing load through efficiency gains, as well as the application of distributed power sources, can result in reductions in the amount of generation needed to meet future load growth, which may in turn affect and possibly lessen overall transmission and corridor needs.” Exhibit 3 at 3.

³ WGA Transmission Task Force Report, Exhibit 4 at pp. 10-11.

⁴ See Demand Response and Advanced Metering Coalition, *Fact Sheet* (2002), attached as Exhibit 4.1; Federal Energy Regulatory Commission, *Demand Response and Advanced Metering Staff Report* (Sept. 2007), attached at Exhibit 4.2.

reducing efforts may result in a significant decrease in generation sources that need transmission, thereby possibly reducing the need for many of the proposed corridors in the DPEIS.

C. Maximize the Existing Grid First

The expert opinion from USE Consulting, Inc., attached as Exhibit 3, focuses on engineering solutions as part of comprehensive regional transmission planning. In simple terms, the more that the existing grid infrastructure can be upgraded, improved upon or otherwise transformed to have more power transfer capacity, this can translate into less of a need for power lines and – importantly for the designation process – corridors and rights-of-way in which to house them. USE’s Ty Larson, with 15 years of transmission planning and engineering experience, explains the relationship as follows: “There is a direct correlation between project need – i.e., the need for an upgrade or addition to the electric power infrastructure – and rights-of-way and corridors in which to ‘house’ a potential project. By first taking a hard look at whether a potential or specific project is needed, this may in turn answer a related question of whether the related ROW/corridor is also needed.” Exhibit 3 at 2.

Mr. Larson further explains the possible benefits associated with a rigorous look at project need:

From an engineering perspective, this paper focuses on opportunities to reduce the overall need for new power lines and thereby corridors and rights-of-way in which to locate them, namely by identifying potential engineering solutions and methodologies to follow in order to optimize components of the existing western power grid and enhance the current electric system’s overall power carrying capacity to meet future power transfer needs. Employing these methodologies and applying technological engineering solutions in this fashion is a widely recognized industry practice as one component of transmission planning that in some instances may reduce or eliminate the need for new power lines and the impacts associated with associated rights-of-way and/or corridors.

Mr. Larson has provided a methodology to follow and a suite of technological solutions to maximize current grid assets before turning to building more power lines and rights-of-way. Mr. Larson restates his overall professional opinion that looking at these engineering solutions “may result in reducing or eliminating the need for new transmission ROW/corridors and their attendant impacts on the natural environment.” Exhibit 3 at 3; see also “Experience has shown that typically solution projects are more cost effective and less environmentally invasive on many levels if the project solution employs leveraging or upgrading an existing grid asset.” Exhibit 3 at 3. Key technological solutions that are recommended for consideration in addressing need by maximizing current grid assets include: (1) re-rating current grid equipment; (2) re-conductoring an existing circuit with a higher capacity conductor; (3) adding an addition circuit to existing towers; (4) upgrading the voltage of an existing transmission line; and (5) employing new technologies such as high capacity conductors, reactors/capacitors and phase shifters to increase power transfer capacity. Exhibit 3 at 4-7.⁵ Importantly, all of these solutions would utilize current infrastructure and existing rights-of-way and this would be “more environmentally friendly than embarking on the construction of a new line.” Exhibit 3 at 6.

Finally, Mr. Larson’s expert statement demonstrates how employing this methodology and the use of these engineering solutions might provide real, on-the-ground environmental benefits:

⁵ The WGA 2006 Transmission Task Force Report also recognized these and other technologies that can “increase the transfer capability of existing lines, enable more power to be delivered in existing rights-of-way, provide greater flexibility to site lines underground and in water, and improve overall power system utilization.” See WGA Transmission Task Force Report, Exhibit 4 at 11-14.

The current corridor designation process could be improved upon by addressing these issues in a comprehensive fashion and employing these engineering-solution methodologies. In the current example, while, proposed corridor 81-213 does coincide with the existing 345 kV for approximately 30 miles west of the Luna substation, about 10 miles east of the Hidalgo substation, however, the power line departs the proposed corridor. From this point on all the way to the Tucson area, proposed corridor 82-213 appears to not follow areas containing existing power line and ROW infrastructure. From the point of departure with the existing 345 kV line, proposed corridor 81-213 appears to also bisect citizen proposed wilderness areas as well as high priority conservation areas identified by The Nature Conservancy. Accordingly, comprehensive transmission planning that combines geographic features with engineering analyses and solutions, may in this one example suggest other alternatives to transfer proposed power additions to the grid system other than any use of a new power line through proposed corridor 81-213. While this analysis is mostly qualitative, the purpose in this instance is not to provide a definitive engineering solution, but rather, to suggest in this example that *employing these comprehensive transmission planning principles might obviate the need for this proposed corridor altogether and keep future impacts in already-impacted areas and outside of potential environmental constraints.*

Exhibit 3 at 8 (emphasis added).

We highlight that this analysis is for one small portion of the 11-state focus area that is currently being studied. It is important to stress, however, that there is existing data out there from the utilities (queue information, power flow studies of existing grid assets), the Western Electricity Coordinating Council, the Western Governors' Association energy arm (the Western Interstate Electricity Board), renewable energy and efficiency advocacy groups and industries, and lands and wildlife groups from which to gather all this information and place it on a map for comprehensive transmission planning.⁶ In this one example, the corridor in the focus area may be rendered unnecessary by analyzing and adopting state-of-the-art engineering solutions. In performing this type of analysis in a supplemental EIS, the agencies might need only designate a fraction of the proposed 6,000 miles of corridors and might also focus their location in different areas based on lands/wildlife data and information about renewable energy locations. In very simple terms, we are asking the lead agencies to conduct analyses similar to the WGA effort in planning for energy transmission corridors across the region – particularly as transmission ties together the fundamental principles of a comprehensive energy policy.

IV. Corridors and Climate Change: Part of the Solution or Part of the Problem?

The second principle behind smart corridors is the extent to which they move the region forward to an energy economy fitting for the 21st century, or whether they continue the same carbon-heavy energy policy of yesterday. As will be discussed, Western Resource Advocates performed an independent

⁶ Mr. Larson states that the information required to perform these analysis is readily available to the public and the agencies. See Exhibit 3 at 2 (this type of information is “readily available in transmission planning circles”). To illustrate this point, the WGA Transmission Task Force discussed above performed detailed analyses in 2006 for transmission needs through 2015 utilizing this type of information from different public sources available in transmission planning circles within the Western Interconnection. Important here relating to the agencies ability and effort in obtaining this public information is that DOE is involved in or keeps track of these planning processes. See *WGA Clean and Diversified Energy Initiative, Report of the Transmission Task Force* (May 2006) at Appendix A (pp. 53-66), excerpts attached as Exhibit 4.

analysis of how the DPEIS corridors line up against existing and proposed coal plants in the region.⁷ The result was revealing (see Group Exhibit 5) – every single proposed coal plant in the western United States directly lines up with the proposed corridors and/or their likely continuation onto non-federal lands. The coal plants that are intended by western utilities to hook up to new or upgraded power lines within these corridors will have demonstrable and negative impacts to air quality (ozone, nitrous oxides, sulfur oxides, mercury, particulate matter and other emissions) as well as to climate change and global warming (CO₂ emissions).

A. Climate Change and Global Warming Overview

Perhaps the single largest oversight within the DPEIS is its failure to consider the role that corridors may have in contributing to global warming by linking up proposed coal plants in the region. Global climate change might result in rising sea levels, effects on wildlife (corals, polar bears), glacier reduction, less snow, more rain and earlier snowmelt runoff. While there is continued debate about the extent and varying causes of climate change, there is overwhelming consensus in the scientific community that: (a) the earth's climate is changing as a result of human activities; (b) CO₂ is the main greenhouse gas (GHG) linked to climate change; and (c) coal combustion in power plants is a major contributing source of CO₂ emissions. See Western Resource Advocates, *A Balanced Energy Plan for the Interior West* (2004) at pp. 3-4, available at www.westernresourceadvocates.org/energy/bep.php.

The Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization and the United Nations Environment Programme in 1988. The IPCC's mission is to comprehensively and objectively assess the scientific, technical and socio-economic information relevant to human-induced climate change, its potential impacts, and options for adaptation and mitigation. See <http://www.ipcc.ch/about/about.htm>. The IPCC completed its First Assessment Report in 1990, its Second Assessment Report in 1995, and its Third Assessment Report in 2001. Id.

In 2007, the IPCC released summaries from three main working groups that contributed its Fourth Assessment Report. See <http://www.ipcc.ch/about/about.htm>. The working group summaries include the following conclusions:

- The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005.
- The atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years.
- The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use.
- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%).
- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades.
- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.

⁷ All the maps referenced herein, including underlying GIS data, are contained on a CD that is included with these comments in order for the agencies to have full access to this information.

- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20th century are due to the observed increases in anthropogenic greenhouse gas emissions.
- In the course of the century, water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by meltwater from major mountain ranges, where more than one-sixth of the world population currently lives.
- Warming in the mountains of western North America is projected to cause decreased snowpack, more winter flooding, and reduced summer flows, thereby exacerbating competition for over-allocated water resources.
- Drought-affected areas will likely increase in extent. Heavy precipitation events, which are very likely to increase in frequency, will augment flood risk.
- Disturbances from pests, disease and fire are projected to have increasing impacts on North American forests, with an extended period of high fire risk and large increases in area burned.
- Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperatures exceed 1.5-2.5 degrees Celsius.
- For increases in global average temperature exceeding 1.5-2.5 degrees Celsius and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographic ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and service, e.g., water and food supply.
- Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which makes adaptation essential, particularly in addressing near-term impacts. Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.
- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades, that could offset the projected growth of global emissions or reduce emissions below current levels.
- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g., storage of removed carbon dioxide from natural gas) are key mitigation technologies and practices currently commercially available.
- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs.
- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment.
- Renewable energy generally has a positive effect on energy security, employment and on air quality.

Finally, the Department of Interior, a lead agency herein, acknowledges that "[t]here is a consensus in the international community that global climate change is occurring and that it should be addressed in government decisionmaking . . . [thereby requiring the agency to] consider and analyze potential climate change impacts . . . when making major decisions regarding the potential utilization of resources under

the Department's purview."⁸ This important topic and the role corridors may play in helping address or worsen climate change needs to be addressed prior to the finalization of the designation process.

B. The Proposed Corridors Primarily Benefit New Coal Plants

The coal maps attached as Group Exhibit 5 make it clear that the current suite of corridors proposed for the western United States may greatly serve the interests of the coal industry and utilities seeking this power source to supply customers. Given the above concerns about air quality and climate change, the corridors need to be reexamined for their potential to facilitate cleaner, renewable sources of energy.

A recent report from Western Resource Advocates and Environmental Defense is illuminating about the amount of air pollution and greenhouse gases that are attributable to existing coal-fired power plants in the southwestern region, as well as how new proposals for coal-fired plants will contribute to air pollution and climate change:

In Arizona, Colorado, New Mexico, Nevada and Utah, existing coal-fired power plants produced 60 million megawatt hours (MWh) of electricity in 2004, and 176 million tons of carbon dioxide. The scenic, historic and culturally rich Four Corners area already hosts some of the largest power plants in the West, and is the proposed site of yet more massive coal-fired plants proposed for construction over the coming years. . . . [A]t least 14 new coal-fired power plants, totaling more than 9,000 megawatts (MW) of new capacity, are now in various stages of planning, permitting or construction in the five-state southwestern region. These proposed power plants would collectively emit nearly 70 million tons per year of global warming pollution, more than a 40% increase over the region's current burden from the same sector.

Western Resource Advocates and Environmental Defense, *Climate Alert: Cleaner Energy for the Southwest* (2007) at v, vi, available at www.westernresourceadvocates.org/media/pdf/ClimateAlertReport.pdf

C. Focusing Corridors on Delivering Clean, Renewable Sources of Energy

Attached as Exhibits 6 through 9 are maps that highlight the relationship of the corridors to the best locations for geothermal, wind and solar (concentrating and photovoltaic) resources. Smart lines must connect to and facilitate the development of these resources and move the region to a balanced energy policy and away from carbon-heavy resources. While many of the corridors match up with industry transmission projects that span numerous states and cover thousands of miles, it is also important to consider developing renewable energy sources that are close to load/population centers. See also Exhibit 2 at step 4. Shorter transmission projects may bring renewable sources onto the grid more quickly than large-scale projects, as well as having less environmental impacts including less habitat fragmentation.

Focusing energy transmission corridors on renewable energy sources would be consistent with federal and state policy initiatives. Federal agencies have enacted policies and made commitments to encourage the use of public lands to support development and transmission of renewable energy. See, e.g., "BLM Launches Effort to Facilitate Renewable Energy Development on Public Lands, available at http://www.blm.gov/wo/st/en/info/newsroom/2007/june/NR_0706_1.html ("The Forest Service looks forward to working in concert with BLM on these geothermal projects,' said Forest Service Chief Gail Kimbell. 'Enhancing our nation's energy needs through safe and clean energy is an important focus of

⁸ U.S. Dept. of Interior, Director's Order No. 3226 (Jan. 19, 2001), available at http://elips.doi.gov/app_so/act_getfiles.cfm?order_number=3226

the Department of Agriculture and a proper use of our public lands.’’). In June 2005, BLM completed its programmatic EIS for a Wind Energy Development Program in the western U.S., including public lands within Arizona, Nevada and California. See <http://windeis.anl.gov/>. Indeed, “[i]t is the BLM general policy, consistent with the National Energy Policy of 2001 and the Energy Policy Act of 2005, to encourage development of wind energy in acceptable areas,” Instruction Memorandum No. 2006-216 (<http://www.blm.gov/nhp/efoia/wo/fy06/im2006-216.htm>). Both the BLM geothermal and wind-focused studies built upon a DOI/DOE 2003 study, “Assessing the Potential for Renewable Energy on Public Lands,” that included a key finding that of 20 BLM planning units that had high potential for three or more renewable energy resources, 12 occurred in Arizona, California and Nevada. See http://www.blm.gov/nhp/spotlight/energy_report/press_release.htm.

Furthermore, 8 of 11 western states have enacted renewable portfolio standards that require electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date:

<u>State</u>	<u>Percentage from renewable sources</u>	<u>Date for achieving</u>
Arizona	15%	2025
California	20%	2010
Colorado	20%	2020
Montana	15%	2015
Nevada	20%	2015
New Mexico	20%	2020
Oregon	25%	2025
Washington	15%	2020

See http://www.eere.energy.gov/states/maps/renewable_portfolio_states.cfm and Exhibit 10 (regional map of state RPS requirements).

One estimate within the transmission planning circles of the Western Electricity Coordinating Council is that it may take up to 33,000 additional MW of installed renewable energy capacity by 2017 just to meet bare minimum RPS requirements in the West. Importantly, the designation of transmission corridors can help the states and federal government achieve these important goals, and we ask the agencies to develop an alternative in a supplemental PEIS with corridors that prioritize renewable energy development.

V. Ensuring Long-lasting Protection for Public Lands and Wildlife Resources

This is the third and final principle behind smart corridors. NEPA requires a rigorous analysis of “means to mitigate adverse environmental impacts.” 40 C.F.R. §§ 1502.16(h); 1502.14(f). Mitigation is defined as:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

- (e) Compensating for the impact by replacing or providing substitute resources or environments.

40 C.F.R. §1508.20.

A. Avoidance

While the proposed designations are a vast improvement compared to the draft maps released in 2006, there are still too many important public lands in the region affected by the current proposal. We incorporate the analysis performed by The Wilderness Society as Exhibit 11, which shows the intersections of proposed corridors and important public lands in the region. We also attach, as Group Exhibit 12, The Wilderness Society's maps showing the intersection of proposed corridors and special places in the following Rocky Mountain and Southwest states: Montana, Wyoming, Colorado, New Mexico, Arizona, Utah and Nevada. These maps highlight areas of concern for our organizations, including, but not limited to:

- Roadless areas in Montana
- The Adobe Town Citizen Wilderness Proposal in Wyoming
- Wyoming's Shirley Basin and potential impacts to black-footed ferret reintroduction sites (corridor 78-255)
- Wyoming's treasured Red Desert (corridor 121-221 that appears duplicative of other nearby and more suitable corridors)
- The Curecanti National Recreation Area in Colorado as well as numerous citizen-proposed wilderness areas
- The Sevilleta National Wildlife Refuge in New Mexico, as well as numerous citizen-proposed wilderness areas
- The Lake Mead National Recreation Area and Havasu National Wildlife Refuge in Arizona;
- The Glen Canyon National Recreation Area, Grand Staircase-Escalante National Monument and Arches National Park in Utah
- The Lake Mead National Recreation Area and Desert National Wildlife Refuge in Nevada
- Numerous Wild & Scenic Rivers in these states⁹

In addition, the Colorado Natural Heritage Program (CNHP) identifies Potential Conservation Areas (PCAs), which contain habitat for special status wildlife and sensitive plants. As described by the CNHP (<http://www.cnhp.colostate.edu/gis.html>):

- A PCA represents "CNHP's best estimate of the primary area required to support the long-term survival of targeted species or natural communities."
- PCAs are land units that have been identified as important to the continued existence of ecological processes that support one or a suite of rare or significant features.

⁹ See DPEIS at Appendix M, Tables M-1, M-2 and M-3. We suggest that better analysis, enhanced public involvement and more informed decision-making would be achieved by cross-referencing every major river crossing in Table M-3 with the applicable corridor number and approximate location. This would enable the public, lead agencies and policy makers to quickly zoom into an affected river stretch to better understand and comment on impacts.

- A PCA is identified because of the “ability of a conservation area to maintain healthy, viable targets over the long term (100+ years), including ability to respond to natural or human-caused environmental change.”

PCAs serve an important role in identifying the need for special management of lands in Colorado to maintain biodiversity. Attached as Exhibit 13 is the Center for Native Ecosystems’ analysis of the proximity and intersection of the proposed corridor locations with PCAs, including an overview of the potentially affected areas. The agencies should take this information into account, as well as similar data by The Nature Conservancy and other groups that has led to the identification of high priority conservation and biodiversity areas (see <http://azconservation.org/projects/ecoregions/>), in order to ensure that corridor designation does not cause irreparable harm to these types landscapes.

B. Adopting and Requiring Best Management Practices

1. *Analysis of IOPs and Mitigation Measures in the DPEIS*

While it is critical that the agencies undertake the best effort to have corridors avoid key lands in the West, as well as contouring them in site-specific locations to avoid “clipping” key public lands, the resulting reality is that thousands of miles of corridors will be designated that probably will contain 10,000 or more miles of power lines and pipelines that are in varying degrees of planning at the present moment. Habitat fragmentation of enormous scope and magnitude is unavoidable in such an undertaking. Consequently, studying, adopting and requiring mitigation measures and Best Management Practices will be critical to lessen impacts on vegetation, soils, wetlands, wildlife and other resources. Indeed, the current process will amend 165 land use plans across the region, and the guidance in the present document must be accurate and represent the state-of-the-art mitigation measures recognized by the scientific community to reduce these impacts. It is also important to develop specific mitigation measures and BMPs that are particular to each phase of future ROW project development. At a minimum, these distinct phases include: (a) planning; (b) construction; (c) ongoing operations and maintenance; (d) initial and long-term reclamation/decommissioning; and (e) mandatory protocols for inspection, enforcement, monitoring and adapting project management to on-the-ground monitoring results.

To help improve guidance for Interagency Operating Procedures, mitigation measures and BMPs, Western Resource Advocates enlisted the services of Bio-Logic, Inc. Jim Ferguson, a Senior Biologist at Bio-Logic, was the primary reviewer of these sections of the DPEIS. Mr. Ferguson has a BS degree in wildlife biology and over 31 years’ experience in Utah and western Colorado as a biologist with the U.S. Department of Interior Bureau of Land Management. During his career he has completed numerous Environmental Assessments and Biological Assessments and has worked on the biological resource sections of Environmental Impact Statements. Importantly, his Environmental Assessment and Impact Statement work included biological resource issues associated with power generation facilities, natural gas transmission and distribution lines, and electrical transmission and distribution lines, which gives him a great deal of on-the-ground expertise regarding ROW development and energy transmission corridors.

Bio-Logic’s detailed review of the IOPs and mitigation measures is attached as Exhibit 14. While we ask the agencies for a full assessment of Bio-Logic’s findings and recommendations, our organizations highlight here some of the main findings that need to be addressed by the agencies:

- (1) The IOPs and mitigating measures could ultimately result in a suite of best management practices for energy corridor development projects. In order to insure that project proponents and federal agencies have a solid foundation for planning future projects, many of the proposed IOPs and mitigation measures need edits or modification. A number of additional IOPs or mitigation

measures are needed to fully protect natural resources. Bio-Logic further recommends that IOPs and mitigation lead to the agencies developing best management practices for energy corridor development.

- (2) The IOPs and mitigation measures are sometimes confusing, not located in the appropriate project phase, or are far too general even for a programmatic analysis. Bio-Logic found considerable duplication between resource sections, and between resource sections and the IOPs. For example, the requirements for seeding, a revegetation plan, minimizing access roads, etc., are repeated in slightly different ways in many sections of the document. The mitigation information should be revised accordingly in order to achieve consistency and to make the information easier for the public to understand and comment on, and for agency personnel to implement.
- (3) The DPEIS can be greatly improved by adopting and using consistent terminology concerning the distinct phases of project development. For example, the PEIS sometimes uses different terms for the same or similar thing. In the wildlife section on page 3-228, the term “preconstruction” is used rather than the term “planning” used elsewhere in the document. In keeping with past practices, the DPEIS places project development into planning, construction, and operation phases. In actuality, projects could be broken down into more phases as suggested by Western Resource Advocates. If the PEIS included additional project development phases, including long-term monitoring/adaptive management, and decommissioning, it would foster improved communication, planning, and understanding between the public, project proponents, and federal agencies.
- (4) The PEIS often confuses mitigation measures between the different phases of project development. For example, there are many instances where IOPs or mitigating measures state that a plan should be developed, resource inventories completed, or something should be designed, yet the PEIS places them under the “construction” or “operation” phases. In nearly every case, activities such as developing plans, designing roads, and completing inventories more properly belong in the “planning” phase, and should occur prior to approval of the project, not during the construction, reclamation or maintenance/monitoring phases of the project. If these items are mentioned in phases other than planning, it should relate to implementation of the appropriate components within the Plan of Development and other plans required for development, mitigation, reclamation, or operation.
- (5) Once a project has been approved, and initially constructed, it is critical to follow through on monitoring and long-term enforcement of required mitigation. In the wealth of on-the-ground experience gained by Bio-Logic staff (which includes decades of work with BLM, a lead agency in the current process), the company biologists have seen wetland mitigation that was not adequately accomplished, vegetation reclamation that was not successfully completed, project-induced erosion problems that have gone untreated, and weed problems that have not been addressed.
- (6) Bio-Logic has found that inadequate project inspection, enforcement, monitoring and proper management adaptation is primarily due to shortages of agency personnel and funding necessary to administer and implement these requirements for rights-of-ways on federal lands. In addition, turnover of personnel in the federal agencies typically results in a loss of institutional knowledge and familiarity with individual projects that affects these important requirements. Bio-Logic suggests that one potential solution is requiring project proponents to hire third-party contractors to complete required monitoring for the agencies. However, unresolved issues would remain

concerning the shortage of agency personnel to supervise the third-party contractors, and to act on all of the findings provided to them.

- (7) Regarding monitoring and mitigation requirements, Bio-Logic finds it especially critical that all project proponents understand agency expectations as early as possible in the application process, which makes the IOPs and mitigation developed in the DPEIS process particularly important to long-term management of energy corridor development projects.

See Exhibit 14 at 5-7.

2. *Special Considerations for the Sage-Grouse*

While our groups have concerns about many species in decline in the West, the sage-grouse is near or at the top of our list. This is particularly true in the instant agency proposal, where thousands of miles of future power lines in corridors will produce enhanced prey opportunities for raptors, as well as the 6,000-plus miles of corridors that will unavoidably disturb and affect wildlife habitat.

The Draft PEIS acknowledges broad concerns with the effects of development on sage-grouse, including energy corridors impacts such as “oil and gas wells and their associated infrastructure” and “pipelines.” DPEIS at 3-202. Further, like the energy corridors, the majority of sage grouse habitat is on lands managed by the BLM. DPEIS at 3-203. Accordingly, construction, operation and maintenance of energy transport facilities within designated energy corridors are likely to result in a range of damaging effects on sage-grouse. DPEIS at 3-202. The DPEIS cites proposed mitigation measures, including the BLM’s National Sage-Grouse Conservation Strategy and documents issued by the Western Association of Fish and Wildlife Agencies in 2004 and 2006. However, the DPEIS does not provide sufficient data on the potential impacts of the proposed energy corridors on sage-grouse. In contrast, The Wilderness Society prepared a sample analysis of the proximity of the energy corridors in Idaho to sage grouse leks/habitat (attached as Exhibit 14.1), which shows the potentially devastating impacts on sage grouse populations.

The DPEIS also fails to include the most recent research on sage-grouse and does not include definitive commitments to mitigate impacts. The findings and recommendations of noted experts, including those of Holloran (2005) regarding the impacts of development activities and those of Braun (2006), have yielded more recent guidelines that the agencies should employ instead of the information currently presented. A multi-state effort to coordinate interpretation of recent science related to sage-grouse and oil and gas development, in which the state wildlife agencies from Colorado, Montana, North Dakota, Utah, and Wyoming participated, led to a summary of current research and findings, set out in a document entitled *Using the Best Available Science to Coordinate Conservation Actions that Benefit Greater Sage-Grouse Across States Affected by Oil and Gas Development in Management Zones I-II (Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming)*.¹⁰ In addition, *A Blueprint for Sage-grouse Conservation and Recovery*¹¹ details the habitat requirements for successful and sustaining sage-grouse populations. This document states that “no surface occupancy should be allowed within 5.5 km of all active sage-grouse leks.” The summary of best available science prepared by the state wildlife agencies and the proposed management for protection of sage-grouse habitat as outlined in the Blueprint should be taken into consideration for location of energy corridors and mandatory guidelines for development of projects within the corridors.

¹⁰ See http://www.voiceforthewild.org/general/pdfs/BestScience_2008_sagegrouse_energy.pdf

¹¹ See http://www.sagebrushsea.org/pdf/Braun_Sage_Grouse_BluePrint.pdf

VI. Using Public Lands for the Public Good: Emissions/Performance-Based Corridors

If our public lands are going to be impacted by energy transmission corridors, they should advance the region towards a forward-thinking energy policy. One method to advance this important public policy goal is to have the designated corridors link up wind, solar and geothermal sources instead of new coal plants. We realize, however, that in some instances, this is easier said than done. A perfect example is any corridor going into southern or central Wyoming: it may facilitate a future wind project or a coal plant, or both.

Our solution for this situation is to have the agencies consider an alternative that places emissions or performance-based standards on all or some of the designated corridors. Agencies have the ability to set reasonable conditions of approval for rights-of-way on public lands. Section 505 of the Federal Land Management Policy Act provides that each right-of-way shall contain:

- (a) terms and conditions which will . . .
 - (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment;
 - (iii) require compliance with *applicable air* and water quality standards established by or pursuant to applicable Federal or State law; and
 - (iv) require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards; and

- (b) such terms and conditions as the Secretary concerned deems necessary to . . .
 - (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way;
 - (iii) protect lives and property;
 - (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes;
 - (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and
 - (vi) otherwise protect the public interest in the lands traversed

43 U.S.C. § 1765 (emphasis added).

While this provision applies to rights-of-way, the current programmatic EIS is the time and place to consider alternatives and develop policy guidelines for how these provisions will be carried out when 165 different field offices in the West face a flood of ROW applications in upcoming years. Importantly, there is precedent in the controlling law (FLPMA) that allows for air quality to be a valid consideration in terms of conditioning a ROW permit to protect the public health, air quality and environmental concerns such as global warming. In a supplemental PEIS, the agencies should consider conditioning future right-of-way approvals within corridors such that each new connecting power source does not exceed the CO₂ and other emissions of a combined-cycle natural gas plant (roughly 1,100 lbs. of CO₂ per megawatt-hour of produced energy).¹²

¹² This standard is derived from the 2007 decision of the California Public Utilities Commission setting a green house gas performance standard for new long-term commitments for base-load energy generation serving California consumers. See “PUC Sets GHG Emissions Performance Standard to Help Mitigate Climate Change” attached as Exhibit 15.

In Border Power Plant v. Dept. of Energy, 260 F.Supp.2d 997 (S.D. Cal. 2003), the projects under immediate consideration for approval were federal rights-of-way to build power lines connecting coal power plants in Mexico with the power grid in Southern California. To help ensure that the connecting power plants would have the least impacts on regional air quality, the plaintiffs in Border Power Plant advanced a novel theory: condition the right-of-way permits “on the commitment of the project proponents to implementation of state-of-the-art emissions control systems, mitigation through offsets in existing sources, and the use of dry cooling or parallel dry-wet cooling.” Border Power Plant, 260 F.Supp.2d at 1029. The defendant permitting agencies argued that such a condition would frustrate the purpose and need of the proposed action, which only dealt with the construction of power lines in a right-of-way and not the operation of the connecting power plants.

The court agreed with the plaintiffs, and its analysis is worth quoting in full:

Here, the scope of the action relates only to the transmission lines, but the nature of the action includes the full scope of the analysis, including the effects of the action. The nature of the action therefore includes the importation of power generation in Mexico. Indeed, to leave out the secondary impacts would be at odds with the purpose of the alternatives analysis, which is to provide a way for an agency to calculate and compare the various predicted effects of alternative courses of action. The analysis would be arbitrary in itself if it did not take into account all effects of a proposed action. Accordingly, defendants’ arguments that they need not consider alternatives related to the [coal power plant] facilities fails.

Given this nature, the agencies were obligated to set forth in the EA ‘the range of alternatives . . . sufficient to permit a reasoned choice.’ Although defendants argue that ‘international sensitivities’ preclude conditioning the permits from being a reasonable and feasible alternative, such a discussion belongs in the EA’s alternative analysis rather than a litigation brief.

Border Power Plant, 260 F.Supp.2d at 1030-31 (citations omitted).

Accordingly, there is judicial precedent for the proposition that NEPA approval processes for corridors or rights-of-way that will house power lines, should consider alternatives that place performance-based conditions on the right to use public lands. We ask the agencies to develop this type of permit condition to guide future ROW approvals across the region. Emissions-based corridors (EBCs) will go a long way towards ensuring that America’s public lands are being used to support a forward-thinking energy policy and are furthering climate change solutions. Fuel-neutral, EBCs are an appropriate condition for the use of the country’s public lands and allow the public assurances that support for a particular corridor will not result in future actions connecting polluting and carbon-heavy power sources to the electric grid.

VII. Locating Future Projects Within Designated Corridors

After all the effort to find the best locations for energy corridors, it is frustrating that future right-of-way projects will not be required to be within corridor boundaries. To maximize the full benefit of corridor designations, while still allowing appropriate flexibility, future transmission projects should be required to be within designated corridors “to the maximum extent practicable.” Indeed, this is very consistent with Section 503 of the Federal Land Management Policy Act, which provides that: “In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practical. . . . [I]n determining whether to require that

rights-of-way be confined to them, the Secretary concerned shall take into consideration national and state land use policies, environmental quality, economic efficiency, national security, safety, and good engineering and technological practices.” 43 U.S.C. § 1763.

In addition, the failure to have this requirement frustrates one purpose and need of the proposal that seeks to harness multiple ROW proposals into discretely defined corridors in order to minimize impacts. The agencies concede this point when stating that the multiple industry pipeline and power line proposals without any corridors in which to locate them (which is analogous to having purely voluntary corridors), “could be widely distributed across federal and nonfederal lands and thus result in a proliferation of energy transport ROWs” similar to the spaghetti map of industry proposals depicted in Figure 2.1-1 (DPEIS at 2-3).

VIII. Evaluating More than One Action Alternative

Put simply, the one action alternative in the DEIS is inadequate. NEPA requires federal agencies to “rigorously explore” and “evaluate all reasonable alternatives” when considering a proposal. 40 C.F.R. § 1502.14(a). The full range of alternatives for a proposed action is the “heart” of an EIS as it offers an opportunity to provide alternatives in comparative form that “sharply define[s] the issues and provide[s] a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14. The failure to include a full range of alternatives renders an EIS inadequate under NEPA. See Resources Ltd. v. Robertson, 35 F.3d 1300, 1307 (9th Cir. 1993). In evaluating “environmental consequences,” of the different alternatives, an EIS must include discussions of “[e]nergy requirements and conservation potential of various alternatives and mitigation measures.” 40 C.F.R. § 1502.16(e).

In the final or more appropriately a supplement EIS (see Section XII), the agencies need to provide this range of alternatives and clear set of choices for the public and analyzing the following types of alternatives: (a) how reducing demand in population centers by utilizing energy efficiency and the use of local power sources may effect the overall length and width of proposed corridors; (b) focusing corridors that will primarily link clean and renewable sources to the power grid;¹³ (c) maximizing the use of the existing power lines and substations through technology upgrades before designating new corridors; and (d) placing emissions limits for future connecting power sources (i.e., wind farms, solar facilities, gas and coal power plants) for some or all of the designated corridors.

We note that developing these types of alternative would not require a wholesale rejection of the current proposed locations in all instances. For example, Exhibit 6 depicts proposed major geothermal plants in the region, many of them in Nevada. While some of the plants are close to proposed corridors, many of them receive no help (transmission access-wise) from the designations. In some instances, this can be resolved by a small addition to a proposed corridor – either a semicircle or a spur. In Wyoming, for unknown reasons, the main east-west arterial corridor along Interstate 80 has semi-circle additional corridors near Rock Springs, that effectively extend the corridor reach many miles to the north and south. See Exhibit 16 (DPEIS State Map of Wyoming and corridors 121-221/129-218). If the same principle was employed along corridor 17-35 in Nevada, many of the proposed geothermal plants might be picked up by such an addition. This is one example – these types of renewable-focused corridor alterations might go a long way towards facilitating the eventual development of these resources.

¹³ See, e.g., Exhibits 6 through 9, showing the best wind, solar and geothermal sites in the region in relation to the proposed corridors. These maps and the exact locations of industry-backed large-scale renewable energy projects highlight that the PEIS is begging for an alternative that is focused on best facilitating the development and linkage of these important clean and renewable energy sources.

Importantly, the types of alternatives listed above will still satisfy the requirements of the 2005 Energy Policy Act by designating corridors – the alternatives may just yield fewer corridors, less overall linear miles and/or width of corridors and most likely corridors in different locations. In other words, missing in this all-important programmatic document are alternatives that *all still result in designated corridors*, but just look at different ways of getting there. Our groups remain unsatisfied with the agencies' explanation for rejecting an analysis of these types of alternatives. For example, an alternative to maximize existing grid as a means to lessen the number of new corridors was eliminated from further study, despite the acknowledgment that this could be done in discretely defined locations. DPEIS at ES-18; 2-35. Here, the agencies overlook the fact that analyzing and implementing this type of alternative would be consistent with the mandates of Congress, as maximizing current grid assets first would still result in the designation of corridors in other places where this option wasn't practicable to address congestion and increased power transfer needs.

Formulating and analyzing these different alternatives is the best way to satisfy NEPA's requirement that policy makers and the public be presented with clear and contrasting alternatives and their impacts: e.g., corridors that facilitate last century's energy policy in the region that is based on pulverized coal plants versus corridors that better line up with areas or zones rich in clean, renewable energy potential. Indeed, programmatic EISs such as the present one are recognized as the best place to consider differing approaches to addressing a problem that has more than one solution. See Northern Plains Resources Council v. BLM, 2005 U.S. Dist. LEXIS 467 at *28 (D. Mont 2005) (noting that programmatic EISs are "precisely the place" for the development and consideration of alternative solutions that still satisfy a project's underlying purpose and need); Pit River Tribe v. BLM, 306 F.Supp.2d 929, 940 (E.D. Cal. 2004), rev'd on other grounds, 469 F.3d 768 (9th Cir. 2006) (broad-scale alternatives such as the consideration of different power generation sources are "more appropriate" in programmatic EISs compared to site-specific studies); see also 40 C.F.R. § 1508.25(b)(2) (a project's scope should include alternatives that pursue "other reasonable courses of actions").

The Ninth Circuit's opinion in 'Ilio'Ulaokalani Coalition v. Rumsfeld, 464 F.3d 1083 (9th Cir. 2006) discusses the importance of having the full range alternatives present within programmatic EISs that look at broad-level policy decisions. In 'Ilio'Ulaokalani Coalition, the Army prepared a PEIS that looked at programs to modernize and streamline its forces; the PEIS selected Hawaii as one of the sites for this transformation. Subsequently, the Army undertook a SEIS that looked at the site-specific impacts associated with transforming the 2nd Brigade stationed in Oahu. Neither the PEIS nor the SEIS considered any alternatives to transforming the 2nd Brigade – the Army argued the analysis was premature in the PEIS while also contending when it got around to the site-specific SEIS that the decision had already been made in the PEIS, resulting in no analysis of alternative sites.

The court saw through the NEPA shell game: "The Army can't have it both ways. Either it needed to explain in the PEIS its decision to transform the 2nd Brigade in Hawaii and consider reasonable alternatives in the PEIS or it needed to explain that decision in the SEIS, but the Army cannot simultaneously argue that the decision had been made in the PEIS and that it had not." 'Ilio'Ulaokalani Coalition, 464 F.3d at 1097. The court discussed how the scope of reasonable alternatives is shaped by the purpose and need articulated by the agency – which in this case was achieving force readiness in an efficient manner without compromising readiness and responsiveness. The court found that the two alternatives in the PEIS – transforming the 2nd Brigade in Hawaii and No Action – left out consideration of reasonable alternatives that could also accomplish the stated purpose and need. In finding that this was a NEPA violation and that locating the transformation of the 2nd Brigade outside of Hawaii was a reasonable alternative demanding analysis, the court stated, "[w]hen the proposed action . . . is an integral part of a coordinated plan to deal with a broad problem, the range of alternatives that must be evaluated is broadened." 'Ilio'Ulaokalani Coalition, 464 F.3d at 1098 (citations omitted).

The present PEIS process is headed down the same path as the Army followed in 'Ilio'Ulaokalani Coalition. The agencies only offer one action alternative for the corridor designations; at the same time, the agencies admit that no site-specific analysis or wildlife/cultural surveys have been done in the corridors, as that will come later. DPEIS at ES-8; ES-9; 1-11. However, as an incentive to industry for accelerated approval of projects located within corridors, the agencies inform industry that at the time of right-of-way filing and NEPA site-specific review, there will be “no need to identify and evaluate alternative locations for those portions of project ROWs proposed for a designated corridor.” DPEIS at 2-39. With all due respect, this raises the NEPA shell game to an art form: no alternatives at the PEIS stage and no extra-corridor alternatives at the site-specific stage. To make matters worse, if certain basic information was gathered about soils, vegetation, cultural resources and other important attributes in the PEIS, this might better inform the location of corridors; instead, this information will be collected and analyzed at a time and later stage when the agencies are promising industry that other, perhaps better, corridor locations will not be considered.

Maximizing the current grid first and factoring in user-end efficiency are two key alternatives missing in the PEIS. Importantly, these alternatives would still designate corridors to ensure reliability, relieve congestion and deliver power – they might just designate fewer of them, or perhaps place them in better-informed locations. And as the 'Ilio'Ulaokalani Coalition and other decisions above highlight, the programmatic level is the best place for these broad types of policy decisions – particularly when no site-specific impact analyses are done in the current document. We caution the agencies here not to fall into the same trap as the Army in 'Ilio'Ulaokalani Coalition – instead, the agencies should analyze these types of alternative but consistent approaches now instead of deciding at the project-level of analysis that these types of options are off the table. This type of shell game will only send the process back for a new and time-consuming EIS. Lastly, an alternative that looked at resulting corridors after aggressively factoring in energy demand lessening actions of efficiency, distributed energy sources and smart grid technologies, *directly* relates to NEPA’s requirement that the corridor EIS must analyze energy requirements and “conservation potential” of various alternatives.

IX. A Better Assessment is Needed of Environmental Impacts

NEPA requires agencies to take a pre-decisional “hard look” at the risk, uncertainty, and potential environmental consequences of proposed federal actions. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 333 (1989). The overarching theme within the DPEIS is that because the designation of corridors is itself an action that does not create impacts, this justifies any real quantitative assessment of impacts until future projects are constructed. For example, the agencies state that 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.” DPEIS at 1-2, 1-11. The agencies further state: “as with the designation of corridors, the amendment of land use plans would not authorize parties to proceed with any site-specific projects, or to carry out any activities in the areas with corridors, and accordingly will not result in any on-the-ground impacts that may significantly affect the quality of the human environment.” DPEIS at ES-4.¹⁴

¹⁴ The agencies further state that: “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.” (DPEIS at ES-8); “The combined and individual effects of location-specific and project-specific impacts are *not foreseeable* at the Section 368 energy corridor designation stage” to justify no quantitative effort at impact assessment (ES -9).

We acknowledge the agencies' claim that the corridor designation itself does not create impact – i.e., that it is merely a line on a map. But it is an important line, as the agencies repeatedly recognize in the DPEIS. Meaning that there are a host of incentives for the energy industry to locate future projects within corridors and that they represent “a potential for many energy transport projects.” DPEIS at ES-20. For example, agencies admit that future applicants could take use of 368 corridors and their “expedited application and permitting process.” DPEIS at 2-39. Indeed, the fact that section 368 of the 2005 EPA Act *requires* that projects located within designated corridors receive expedited processing and approval, itself suggests more than reasonable likelihood that these corridors will receive a lot of attention . . . and therefore impacts.

Highlighting this point is that the agencies list the following seven benefits of the expedited permitting process that will increase the probability of industry utilizing the corridor for future projects: (1) IOPs to assist in ROW preparation and evaluation; (2) a single point-of-contact for each individual ROW application; (3) tiering NEPA and other analyses to the current PEIS; (4) no need to formulate extra-corridor project alternatives for a project proposed within a corridor; (5) the ability to focus project-specific data collection on project-specific issues; (6) the ability to focus project-specific engineering on corridor-specific issues; (7) early knowledge of IOPs that would be required to allow for better compliance. DPEIS at 2-39. The current process will also amend 165 land use plans in the region and the agencies admit that, “amending land use plans at the designation stage, . . . may accelerate the process of subsequently applying for energy project ROWs.” DPEIS at ES-4.

In addition, the likelihood of projects within these corridors is almost a known certainty given current on-the-ground information that is readily available to the lead agencies in this case. BLM itself, for example, is working on numerous proposals from industry in the region for right-of-way permits for major power lines, and many of these line up with proposed corridor designations. See “Proposed Electric Transmission Lines on Public Lands,” (Oct. 12, 2007). This document, prepared by BLM, is attached as Exhibit 17. Some of the projects include the Navajo Transmission Project, Ely Energy Center (a.k.a. Southwest Intertie Project), Gateway West, Gateway South, Northern Lights Inland Express (MT and WY projects), Mountain States Intertie, TransWest Express, Frontier and High Plains Express. Attached as Group Exhibit 18 are maps that show how almost all of these projects **that are all in some phase of current utility planning** line up directly with proposed corridors. This reality and the many incentives provided to industry to locate within a designated corridor create an opportunity to assess and minimize impacts to wildlife, water, and cultural, scenic and historic values in the present study to better inform the final location of these corridors. Clearly, therefore, the lead agencies should be studying more than just qualitative impacts when proposed projects are already in play in or near corridor locations.

Finally, the DPEIS needs to more fully disclose and analyze the impacts associated with the significant expansion of and build-out in areas that already have existing rights-of-way or corridors. In effort to “play down” the significance of this action and the magnitude of potential impacts, the agencies repeatedly cited the statistic found at ES-13 that approximately 61% of the 6,055 linear miles of corridors “follow or incorporate existing transportation of utility ROW.” This statistic is a bit misleading. Attached as Group Exhibit 19 are three “photos” taken from the Google Earth software data set provided on the DPEIS website. The first two photos are of corridor 51-204 within a national forest in Montana. The third photo is of 66-212 that clips a portion of Arches National Park in Utah. The pictures tell the real story here. In the case of 51-204, the “existing” ROW is approximately 140 feet wide. When you compare that visually on the second photo with the newly proposed corridor, the latter dwarfs any impacts that exist or could potentially exist within the 140 foot corridor. This is also obvious when comparing a 3,500-foot-wide corridor – that the DPEIS admits at the same page could contain nine 400-foot-wide ROW for transmission lines or 29 pipelines each with a ROW of 120 feet – to a 140-foot ROW. In other words, it is misleading to play down the potential impacts of the newly proposed corridors when they are

25 times the width of existing rights-of-way that they overlap. In the same vein, the third photograph in Group Exhibit 19 shows the 3,500-foot-wide proposed corridor (66-212) that is significantly larger than any of the “existing” transportation ROW depicted in the area.

In the final or supplemental EIS, this information has to be more fairly presented to the public. In the case when extremely wide corridors are proposed within or adjacent to places like Arches National Park and other important public lands in the West, a more complete analysis is deserved on purpose and need and the ability in these instances to move, eliminate or dramatically decrease the width of these corridors to match up more closely with the “on-the-ground” conditions.

X. Fully Assessing Cumulative Impacts, Connected Actions and Indirect Effects

The DEIS can be improved by properly analyzing cumulative impacts and connected actions. These corridors are being driven by the electric utility industry and will obviously connect to power plants and other generation sources. NEPA requires the agencies to assess and analyze these types of connected actions – we ask the agencies to study the impacts to air quality and climate change if the corridors are targeted for more coal plants in the region. In addition, the impacts to private, state and tribal lands need to be studied under cumulative impacts. The agencies cannot pretend that a corridor “ending” on a public land boundary and arriving at the doorstep of the Navajo reservation, as one example, will not have a reasonable likelihood of continuation, thereby setting the stage for similar impacts to the contiguous lands and natural resources.

A. Cumulative Impacts

A cumulative impact is the effect of an action on the environment “which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. In addition to all of the power line projects mentioned below in Section X.B., we ask the agencies to consider the following projects/activities and their combined impact on the lands, air, wildlife, soils, vegetation and other resources that will be affected by power line and pipeline construction within these corridors:

- (a) Pipeline projects in the region. These include but are not limited to the Rockies Express and Bronco Pipeline projects. Summary materials are attached as Exhibits 20 and 21.
- (b) The 2005 programmatic study for wind development on public lands in the region. Impacts from both generation and transmission needs will cumulatively affect natural resources.
- (c) the current geothermal programmatic EIS that underwent scoping in August 2007. Impacts from both generation and transmission needs will cumulatively affect natural resources.
- (d) BLM is embarking on a programmatic EIS for industrial-scale solar facilities. The same issues exist as in examples (b) and (c).
- (e) In 2007 BLM released the oil shale programmatic EIS. A map of the best potential oil shale resources is attached as Exhibit 22. The cumulative impacts from this type of development are potentially staggering. First, the oil shale projects would need to connect to major power lines and many sources are assumed to be 150 miles from the nearest grid interconnection. Each interconnection and attendant ROW might disturb 2,700 acres. Oil Shale DPEIS at 4-12. Second, processing required to upgrade oil shale to a marketable product would require an average 55-

mile-long by 50-foot-wide ROW (670 acres of disturbance). Oil Shale DPEIS at 4-12. Third, energy demands for full-scale development will require 1,200 MW of power for each 100,000 bbl of oil shale produced. The DPEIS mentions that oil shale might be a 1,000,000 bb/day industry, requiring 12,000 MW of additional power. That would mean five new 2,400 MW conventional-fired coal plants, with major land use (20,000 acres), water (65,000 acre-feet/year) and air quality impacts. The water needs would be in addition to 100,000 acre-feet per year of water use for commercial development of 1,000,00 bbs/day of oil shale. Oil Shale DPEIS at 4-11 – 4-15. All of these cumulative impacts need to be analyzed in the current corridor study.

- (f) The corridor EIS needs to analyze the cumulative land, wildlife and air quality impacts associated with full-field development in New Mexico, Colorado, Wyoming, Montana and Utah.
- (g) The proposed National Interest Electricity Transmission Corridor proposed for 45 million acres in Arizona and California pursuant to section 1221 of the 2005 EPAct. New FERC back-stop permitting authority over power line approvals within this area may lead to thousands of miles of new power lines on state and private lands, and possibly influence siting approvals on public lands within the NIETC boundary. This concurrent corridor designation process could result in significant cumulative impacts in the region.

B. Connected Actions and Indirect Effects

NEPA requires an analysis of connected actions. Connected action are closely related to the primary action and include actions that “[c]annot or will not proceed unless other actions are taken previously or simultaneously” as well as those that “[a]re interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1)(ii), (iii). In addition, indirect effects must be analyzed and those include impacts from actions that are caused by the primary project’s approval, even though they may occur “later in time” but are still “reasonably foreseeable.” 40 C.F.R. § 1508.8(b).

Importantly, the air quality and other environmental impacts of generation sources such as coal plants that may be facilitated by a project approving a power line right-of-way or corridor on public land **must** be considered as indirect effects that are caused by and reasonably foreseeable from the proposed action. In the Border Power Plant case discussed above that involved rights-of-way for power lines, the permitting agencies argued that the air quality impacts associated with the coal plants did not need to be analyzed under NEPA because “power plant emissions are not effects of the transmission line project.” Border Power Plant, 260 F.Supp.2d at 1016. The court disagreed and firmly answered in the affirmative the following question: “[W]hether the operation and emissions of those [coal power] plants must be included within the scope of the NEPA review because they are effects of the proposed federal action.” See Border Power Plant, 260 F.Supp.2d at 1014-16.

This principle is further supported by the Eighth Circuit’s opinion in Mid States Coalition for Progress v. Surface Transportation Bd., 345 F.3d 520 (8th Cir. 2004). The primary action under consideration in Mid States was the decision of the Surface Transportation Board approving new and improved railroad track originating near coal mines in Wyoming’s Powder River Basin and extending into South Dakota and Minnesota. The railroad track would allow for the transport of 100 million tons of low-sulfur coal each year, and the plaintiffs were concerned that the availability of low-cost coal would negatively affect air quality as utilities switched away from costlier, but more emission-friendly, natural gas. The defendants, including the DM&E railroad, argued that the effects on air quality from the direct action of building the railroad track were too speculative for NEPA consideration.

The court of appeals disagreed. Citing NEPA's requirements that EISs must consider and analyze "indirect effects," the court held that the pertinent inquiry in this case was whether the indirect effects from increased coal combustion were "reasonably foreseeable": "[A]n environmental effect is 'reasonably foreseeable' if it is 'sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.'" Mid States, 345 F.3d at 549 (citations omitted). The court reasoned that while the extent of the effects were difficult to ascertain, particularly with no DM&E commitments at the time with utilities to carry the coal, the nature of the effect was in fact reasonably foreseeable. Accordingly, the court held that the defendants were required under NEPA to analyze the nature of likely impacts to air quality from the proposed action. Lastly, it is important to note that the court found it significant that the defendants ignored data submitted to the agencies consisting of computer models that utilities use to forecast how future customer loads will be met – which would have aided significantly in trying to quantify the nature of the air quality effects in question. Mid States, 345 F.3d at 550.

Mid States and Border Power Plant are applicable to the instant situation. First, the exact location of the corridors, including center line, width, origination and destination, are known to the lead agencies. Second, it is undisputed in the DPEIS that new power lines will be the major use in the designated corridors. Third, there are known, existing proposals for new coal plants that are directly in line with the corridors. See Group Exhibit 5. Fourth, data about these coal plants, including total megawatts of anticipated production and anticipated levels of air pollutants, are readily available in the public domain. One such example is the proposed Toquop coal plant on the Nevada/Utah border and directly facilitated by corridor 39-113. At 750 MW of expected power, this coal plant is expected to emit 6 million tons of CO₂, 1,200 tons of sulfur dioxide, 1,600 tons of nitrous oxide and 900 tons of particulates each year. See Phoebe Sweet, *We All Need Power, but in Mesquite, Priority is Clean Air*, LAS VEGAS SUN (Feb. 7, 2008), attached as Exhibit 23. Furthermore, Western Resource Advocates compiled a summary chart (Exhibit 24) that shows the clear relationship between the corridors and existing and proposed coal power plant in the region – indeed, tracking down public information about those proposals as provided for in Exhibit 24 yields a great deal of information about planned generation sources for these projects. (Attached as Exhibit 25 is a Western Electricity Coordinating Council conceptual map for these major projects). Importantly, many of these proposed projects intend to carry varying degrees of coal-fired power, and this information too is available to the agencies. To highlight the relationship between the corridors and these major interstate proposals, Western Resource Advocates has developed series of maps, attached Group Exhibit 18, that depict how proposed routes for the TransWest Express, Frontier, High Plains Express, Mountain States Intertie, Southwest Intertie Project, Gateway West, Gateway South and the Navajo Transmission Project all line up with proposed corridors and/or their likely continuation on non-federal lands.¹⁵

Accordingly, the nature and foreseeable nature of the effects are much clearer here than in Mid States. Equally important is that region-wide, the agencies have access to load forecasts and anticipated generation resources to meet future demand in the region over the next two years. Two obvious sources of public information available to the agencies along these lines – the type of information the court in Mid States found to be a significant omission to overlook – are utility resource plans submitted for public utility commission approval at the state level, as well as regional modeling performed by the Western

¹⁵ Back to the purpose and need discussion, it is clear that many of the utilities driving these projects weighed in during scoping in some capacity back in 2005 and 2006. A lot has changed since that time in transmission planning circles within the Western Interconnection. We ask the agencies in a supplemental EIS to bring current its analysis on needed corridors. For example, the original TransWest Express and Frontier proposals have either merged with more current projects or fallen off of the horizon altogether. Consequently, many of the proposed corridors that line up directly with many of the alternative routes for these proposals – see Group Exhibit 18 – may no longer be needed, viable and many have little or no industry interest. This presents a fantastic opportunity to reexamine some of the proposed corridors for possible elimination.

Electricity Coordinating Council. See, e.g., the data available within the Technical Advisory Committee (Load and Resources Group) of the Transmission Expansion Policy Planning Committee at WECC, available at www.wecc.biz/modules.php?op=modload&name=Downloads&file=index&req=viewsdownload&sid=149. As discussed above, the Western Governors' Association made use of this type of readily available information for its Clean and Diversified Energy Initiative – all we are asking from the lead agencies is a similar effort in the current corridor planning process.

Beyond air quality impacts, these cases and recent precedent require climate change impacts to be addressed from the coal power plants that are intended to hook up to the proposed corridors. NEPA requires governmental agencies to consider impacts on the global environment, as well as local and regional impacts. For example, NEPA Section 102(F) requires that the federal government “recognize the world-wide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind’s world environment.” This broad language clearly applies to the issues of global climate change. As the Ninth Circuit recently held, federal agencies have an obligation to evaluate “the expected amount of CO₂ emitted” as a result of their activities, and the “incremental impact” that these emissions will have “on climate change or on the environment more generally in light of other past, present, and reasonably foreseeable actions” Center for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 2007 U.S. App. LEXIS 26555 at *111 (9th Cir. Nov. 15, 2007).

Beyond failing to consider the impacts of any of these reasonably foreseeable connecting coal plants, the DPEIS also fails to consider the role that advanced coal technologies such as integrated gasification combined-cycle (IGCC) technology may play in the region as applied to new coal plants. Two IGCC power plants are currently in operation in the United States, and others more are in operation worldwide. IGCC gasifies the coal instead of combusting it directly, with an efficient combined cycle power system to generate electricity. Critical is that IGCC technology is able to remove many of the pollutants before it is combusted.

IGCC technologies are more efficient than pulverized coal technologies in that they use less coal to generate each kilo-watt of electricity. The process also produces fewer air emissions and creates less solid waste. IGCC power plants use roughly 50 percent less water than new pulverized coal plants, an advantage in the arid West where water resources are increasingly scarce. Perhaps most importantly, IGCC technology lends itself to the capture and sequestration of CO₂ emissions at much lower cost than pulverized coal plants.

See Western Resource Advocates, *Western Coal at the Crossroads* (2006) at iv, available at www.westernresourceadvocates.org/energy/pdf/coal_at_xroads.pdf.

IGCC technology results in significantly less criteria pollutant emissions and would enhance possibilities to capture and manage CO₂ thus greatly reducing the global warming impacts to the extent that proposed coal plants that are facilitated by the corridor designations employ this technology. Thus, IGCC in combination with efficiency and renewable energy could factor into a balanced regional energy policy for the region. At a bare minimum, the EIS needs to analyze the potential for this technology to be used in the region, including whether corridors may play a role in IGCC demonstration projects with carbon capture and sequestration. A useful alternative or portion of an alternative for corridor location is to what extent corridors might be better located to facilitate potential IGCC coal plants in order that they have the

best opportunity for carbon sequestration and storage, including the best locations for corridors to transport captured CO₂ via pipeline if necessary for sequestration.¹⁶

C. Non-Federal Lands Impacts and Environmental Justice

NEPA requires that an EIS fully analyze and assess the impacts of “indirect effects.” Indirect effects include those “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects . . . related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8(b).

Exhibit 5 that depicts corridor designations, their likely continuation after they leave public lands and existing/proposed coal plants, tells a compelling story in terms of other lands, including tribal lands, that may be adversely affected by this proposal. As a preliminary note, the depiction of the “likely continuation” of these corridors onto non-federal lands is the same as the agency’s recognition of this fact found at page 2-19 of the DPEIS. This “likely continuation” is also supported by an on-the-ground reality: a power line or pipeline connecting points A and B will not suddenly “stop” once it leaves a public land unit and arrives on someone’s private land or at tribal lands. Indeed, the incentives that make future rights-of-way likely within the designated public land corridors strongly suggest that the industry proponents will simultaneously be seeking to continue the corridor on these lands. These impacts to immediately adjacent non-federal lands are wholly ignored in the EIS and need a rigorous examination in a supplement PEIS. This includes the numerous instances of tribal lands, e.g. the Navajo and other reservations, which have public land corridors proposed that lead directly into these important lands.¹⁷

The likely indirect, if future, impacts on tribal lands immediately adjacent to public lands corridors raises the important issue of environmental justice. An important function of Executive Order 12898 (E.O. 12898), embodied within NEPA and implementing regulations, is to address this issue. Native American communities often bear a disproportionate share of industrialization’s harmful byproducts, such as resource contamination and resource extraction. These communities often lack the political agency and economic leverage required for effective participation in environmental decision-making processes. Compounding these problems, the persistence of structural prejudice in modern American society often manifests itself in the decision-making processes that affect Native American communities, as a disregard for the concerns of those communities. Seeking to mitigate the federal government’s contribution to these disparities, President Clinton in 1994 signed Executive Order 12898: “Federal Actions to Address

¹⁶ To the extent coal is considered as a potential energy source to connect to any corridor, our position is that any such facility should capture and sequester its greenhouse gas emissions (CO₂) and employ acceptable, responsible practices during the entire life cycle of coal operations, including the activities of mining, burning, water use, combustion and waste ash disposal.

¹⁷ The agencies must consult with, invite, and offer opportunities for federally-recognized Indian Tribes to collaborate and participate in the planning process. This is to satisfy the necessary Government-to-Government consultation with Tribes stipulated under Executive Order 13175. The agencies state that they sought such consultation, in order to “ensure that the designation of energy corridors considers and accounts for the interests of Indian Tribes.” DPEIS at pp. 1-21 – 122. However, based on the documentation attached as exhibits to Appendix C, the vast majority of written contact was conducted through form letters. There is little documentation in the DPEIS supporting the contention that the agencies have made significant efforts to engage in robust consultation with Indian Tribes that did not respond to the form letters, or that the consultation letters inviting participation specifically identified cultural or religious properties of significance that would be relevant to the Tribes’ participation. Form letters and informal discussion about potential impacts does not rise to the level of meaningful consultation with affected Tribes. Pueblo of Sandia v United States, 50 F.3d 856, 860-862 (10th Cir. 1995).

Environmental Justice in Minority Populations and Low Income Populations.”¹⁸ These types of impacts need to be acknowledged in the first instance and then analyzed, avoided and mitigated before the current designation process concludes.

XI. ESA and NHPA Compliance

A. Endangered Species Act

Congress enacted the Endangered Species Act (ESA) as “a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.” 16 U.S.C. § 1531(b). As the Supreme Court observed, the statute “afford[s] endangered species the highest of priorities.”¹⁹ To achieve its objectives, Congress directed the U.S. Fish and Wildlife Service (FWS) to list species that are “threatened” or “endangered,” as defined by the ESA. 16 U.S.C. § 1533; § 1532(6), (20).

Once a species is listed, Section 7 of the ESA mandates that every federal agency “consult” with FWS, as well as with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS – collectively referred to as “FWS” below unless specified) when taking any action that “may affect” listed species.” 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).²⁰ The purpose of the Section 7 consultation process is to insure that no agency actions “jeopardize the continued existence” of a listed species. *Id.* To facilitate the consultation process, the “action agency” prepares a “biological assessment,” which identifies the listed species in the action area and evaluates the proposed action's effect on the species. 16 U.S.C. § 1536(c); 50 C.F.R. §§ 402.02, 402.12.

The agencies did not consult with the FWS or prepare a biological assessment, deciding that the designation of energy corridors will have “no effect” on listed species and critical habitat, because it would be too difficult to assess potential impacts on listed species. DPEIS at 1-14. The agencies’ conclusion is contraverted by the Draft PEIS, which identifies hundreds of species in the areas where corridors may be designated, identified the impacts to species from construction and operation of facilities in the corridors, and acknowledges that “[p]ortions of the corridors would likely include areas occupied by listed species or within critical habit.” DPEIS at 1-14 and Tables 3.8-5 (identifying listed species), Table 3.8-8 (identifying impacts to wildlife from construction of energy transport facilities), Table 3.8-9 (identifying impacts to wildlife from operation of energy transport facilities) and Table 3.8-10 (identifying impacts to threatened, endangered and other special status species from construction and operation of facilities). Further, the NMFS has disagreed with the agencies’ conclusion, sending in formal comments to emphasize that:

- Designation “may affect” listed species;
- The DPEIS has not presented any reason to discount likely adverse affects on listed species; and
- Consultation under the ESA is required.

DPEIS at 1-14. The agencies have refused to adhere to the recommendations of the NMFS constituting a refusal to comply with the ESA.

¹⁸ Executive Order 12898: “Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations”. Exec. Order No. 12,898, 59 Fed. Reg. 7629 (Feb. 16, 1994).

¹⁹ TVA v. Hill, 437 U.S. 153, 194 (1978).

²⁰ See also Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv., 422 F.3d 782, 790 (9th Cir. 2005).

By designating energy corridors without taking steps to consider potential adverse effects to protected species and to incorporate appropriate limitations on potential projects, the agencies are failing to comply with the mandates of the ESA to ensure that its actions are “not likely to jeopardize the continued existence of any endangered or threatened species.” 16 U.S.C. § 1536(a)(2). In fact, the agencies’ designations of energy corridors and the resulting development in those corridors are likely to jeopardize the continued existing of many endangered or threatened species.

B. National Historic Preservation Act

A federal “undertaking” triggers the Section 106 process, which requires the lead agency to identify historic properties affected by the action and to develop measures to avoid, minimize, or mitigate any adverse effects on historic properties. 16 U.S.C. § 470f; 36 C.F.R. §§ 800.4, 800.6. Because the designation of energy corridors is an “undertaking,” Section 106 review must occur prior to approving these designations in the record of decision.

The NHPA stipulates that consultation among agency official(s) and other parties with an interest in the effects of the undertaking on historic properties commence at the early stages of project planning, focusing on the opportunity to consider a broad range of alternatives. 36 C.F.R. § 800.1(c). Compliance with Section 106 is applicable “at any stage where the Federal agency has authority . . . to provide meaningful review of . . . historic preservation goals.”²¹ Therefore, the agencies cannot rely on later review process as a justification for refusing to comply with the NHPA.

The agencies claim that they satisfied Section 106 requirements through an overview of the types of cultural resources that could be found in the areas where corridors are designated and a general data request to agencies with management responsibilities, but note that the data received was not consistent or complete; in fact, one state did not respond at all to the inquires. DPEIS at pp. 3-263, 3-266, Appendix R (Cultural Resources Data Request). Further, State Historic Preservation Officers were not given the opportunity to review changes to corridor locations based on data received. Appendix R, p. R-3.

Section 106 regulations require BLM to “make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey.” 36 C.F.R. § 800.4(b)(1). As part of this duty, BLM must account for information communicated to it by parties expressing an interest in historic properties affected by the undertaking.²² While the initial efforts conducted by the agencies are a good first step, further efforts are required prior to the designation of energy corridors, including documentation of the extent of data that needs to be compiled, specific requirements for inventory of proposed locations, and obtaining at least a minimum level of data for each state.

To satisfy the Section 106 compliance requirement, the Responsible Agency Official must consult with the State Historic Preservation Officer(s) (SHPO), and appropriate Tribes and/or Tribal Historic Preservation Officer(s) (THPO). The agencies’ present designation process has also denied SHPOs and THPOs their required right to consultation. This must be rectified.²³

²¹ Morris County Trust for Historic Preservation v. Pierce, 714 F.2d 271, 280 (3d Cir. 1983) (emphasis added); Vieux Carre Property Owners v. Brown, 948 F.2d 1436, 1444-45 (5th Cir. 1991).

²² Pueblo of Sandia v. United States, 50 F.3d 856, 860–61 (10th Cir. 1995).

²³ We also ask the agencies to address the concerns raised by the Advisory Council on Historic Preservation, attached at Exhibit 26 (noting issues with following the procedures set forth in 36 C.F.R. §§ 800.3 through 800.6).

Section 110 of the NHPA obligates the agencies to identify sites that may be eligible for the National Register. The DPEIS acknowledges this obligation as an ongoing effort of various agencies, but does not include any commitments to further compliance in connection with designation of these energy corridors. DPEIS at 3-261. The agencies should take this opportunity to analyze the information obtained to identify eligible site and to commit to or require commitments to further inventory and submissions of proposals for listing. The agencies should maximize the opportunity to obtain and use information on cultural resources to fulfill their obligations under the NHPA and increase our knowledge and protection of our cultural heritage.

XII. A Supplemental Environmental Impact Statement is Required

NEPA requires that agencies shall prepare supplements to draft EISs if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1)(ii). In the present case, our groups and the interested public have brought forth information that is both new and significant relevant to the process and to addressing environmental concerns. This information includes:

- (a) Methodologies for regional transmission planning that can lessen the need for transmission corridors;
- (b) Specific quantitative assessments and data on how applying energy efficiency and similar measures can result in less corridors and tremendous environmental benefits;
- (c) Engineering analyses and solutions to maximize current grid assets that have been shown to have significant environmental benefits by lessening the overall need for new corridors;
- (d) Public databases utilized by the Western Governors’ Association and transmission planning groups within the Western Interconnection that contain valuable data to inform future transmission needs, location and associated corridor needs;
- (e) New maps showing the relationship of corridors to coal plants and information about how the corridors may directly exacerbate global warming;
- (f) New maps that show corridors in relation to geothermal, solar and wind power resources that suggest the need for an alternative focusing on facilitating those important resources;
- (g) Numerous reasonable alternatives that need rigorous development and analysis;
- (h) Significant impacts to highly-valued public lands including national parks, monuments, roadless areas, proposed wilderness areas and recreation areas;
- (i) Improvements to draft Interagency Operating Procedures, mitigation measures and Best Management Practices; and
- (j) Other activities and programmatic studies for numerous projects in the region that may have significant cumulative impacts together with the corridor designations.

Each of these categories of new and significant information arguably requires that the current draft PEIS be supplemented; without question, when considered in combination, the agencies must develop these alternatives and study this new information in a supplemental EIS. Indeed, a SEIS that seriously looks at

these issues, develops these alternatives and employs comprehensive regional transmission planning to designate smart corridors will make tremendous strides in gaining public support and enthusiasm for this effort.

XIII. Conclusion

We appreciate the opportunity to comment on the DPEIS for the designation of west-wide energy transmission corridors. We look forward to working with the agencies to comprehensively plan for transmission corridors in order to designate smart corridors – i.e., corridors that are needed, focused on renewable energy resources and that ensure long-lasting protection for lands and wildlife resources in the western United States.

Sincerely,

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On Behalf of All Commenting Organizations