

Corridor EIS Archives

From: corridoreiswebmaster@anl.gov
Sent: Monday, July 10, 2006 8:42 PM
To: Corridor EIS Archives
Subject: Preliminary Draft Corridor Map Comment M0134

Attachments: APS's_Comments_on_the_Preliminary_Draft_Energy_Corridor_Maps_EPAct_Section_368_M0134.pdf



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Thank you for your comment, Karilee Ramaley.

The comment tracking number that has been assigned to your comment is M0134. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: July 10, 2006 08:41:43PM CDT

Preliminary Draft Corridor Map Comment: M0134

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Attachment: W:\karilee\APS's Comments on the Preliminary Draft Energy Corridor Maps EPAct Section 368.pdf

Questions about submitting comments over the Web? Contact us at:
corridoreiswebmaster@anl.gov or call the Preliminary Draft Corridor Map Webmaster at
(630)252-6182.



PINNACLE WEST
CAPITAL CORPORATION
LAW DEPARTMENT

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July 10, 2006

Ms. Julia Souder
Office of Electricity Delivery and Energy Reliability
Room 8H-033
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Re: Comments on the Preliminary Draft Energy Corridor Maps, EPAct Section 368

Dear Ms. Souder:

Arizona Public Service Company ("APS") appreciates the opportunity to comment on the "Preliminary Draft Maps of Potential Energy Corridors" made available to the public in early June, 2006. APS spoke at the Public Scoping Meeting held in Phoenix, Arizona on November 3, 2005, filed comments in response to the Notice of Intent to prepare a draft Programmatic Environmental Impact Statement ("PEIS") implementing Section 368 of the Energy Policy Act of 2005 (P.L. 109-58) ("2005 EPAct"), and has provided additional information to the Departments of Energy, Interior and Agriculture ("Departments") for the preparation of the PEIS.

APS, the largest electric utility in Arizona, serves more than 1 million customers in one of the fastest growing areas of the country. APS's service territory covers 11 of the state's 15 counties and many of our transmission lines cross federal lands, as well as state, tribal and privately owned lands. APS anticipates that trend to continue well into the future, especially in light of the significant portion of the west that constitutes federal or tribal lands. APS has worked successfully with various federal agencies in the past to develop utility corridors that have been incorporated into the agencies' Resource Management Plans and is hopeful that such a successful partnership will continue.

OVERVIEW

APS is encouraged by the efforts taken by the PEIS team. It is clear that the team has accomplished much toward the completion of the PEIS. As the process moves forward, APS urges the Departments to:

- Carry forward all existing utility corridors and consider whether they can be widened;
- Evaluate all existing high voltage transmission and pipeline routes for designation as utility corridors;
- Consider and coordinate with corridors already designated by states on state or other land;
- Designate alternative routes around state or tribal land;
- Expand the proposed corridor width to at least one mile, but preferably 2-5 miles, to facilitate the siting of multiple facilities in a single corridor without adversely impacting safety or reliability; and
- Consider including corridors for distribution facilities of at least 69kV on federal lands to facilitate serving load centers that may be surrounded by federal lands.

APS has addressed most of these issues in its prior comments and in testimony submitted by Robert Smith, APS Manager of Transmission Planning, to the House Subcommittees on Water and Power and on Forests and Forest Health. Mr. Smith's filed written statement is attached and is incorporated by reference. APS also supports the comments filed by the Edison Electric Institute ("EEI"). Because those comments address many of the above-referenced concerns, we will not restate all of them here. Instead, we ask that the Departments give the attached comments serious consideration and we highlight certain key issues and concerns in the following paragraphs.

Also attached is a map again indicating those locations where APS believes corridors are needed for future transmission lines. APS noted that a number of the corridors we identified were not included on the preliminary maps. Because federal lands encompass much of the northern and eastern borders of Arizona, it will be critical that utility corridors be designated across those lands to facilitate the development of the west's resources. For example, federal and tribal lands run across almost the entire northern border of Arizona. To access renewable and clean coal resources in Wyoming and other northern states, Arizona will need to bring those resources in across transmission lines crossing those federal lands.

COMMENTS

A. *All Existing Designated Utility Corridors Should be Retained with at Least the Same Corridor Width.*

The preliminary maps provided by the Departments do not appear to include already existing designated utility corridors as corridors to be carried forward. APS strongly believes that utility corridors already included in Resource Management Plans or otherwise designated previously should be carried forward, with at least the same corridor width already designated, without the need for PEIS review. APS encourages the Departments to clarify that already designated corridors are being carried forward and that the maps included in the PEIS are for *additional* corridors. APS also urges the Departments to consider whether any existing designated corridors can be widened and, if so, only the *widening* of the corridors should be considered in the PEIS process.

B. *Existing Transmission Facility and Pipeline Routes should be Designated as Corridors*

Existing transmission facilities and pipelines often provide excellent locations for the siting of additional energy infrastructure provided there is sufficient room to accommodate the added facilities. APS urges the Departments to designate as utility corridors all transmission elements identified and referenced in the November 7, 2005 "Report to Congress: Corridors and Rights-of-Way on Federal Lands," by the U.S. Department of Agriculture, U.S. Department of the Interior, U.S. Department of Energy, and the Council on Environmental Quality.

C. *Coordination of Federal Lands Corridors with State and Tribal Preferences and the Need for Wider Corridors and Alternative Routes*

The attached comments by Mr. Smith on behalf of APS discuss the need for corridors wider than 3,500 feet to provide the flexibility needed to avoid environmentally sensitive areas, address engineering, technical and vegetation management constraints, and allow lines to be built with sufficient separation to meet the Western Electric Reliability Council reliability requirements and reduce the risk of simultaneous outages of multiple lines.

Additional support for wider corridors, as well as for alternative routes or corridors, is raised by the need for the siting of transmission lines to be coordinated across federal, state and tribal lands. Because transmission lines often cross federal as well as state and/or tribal lands, a utility must work with all impacted agencies to identify an appropriate route or routes. The preliminary maps issued by the Departments, however, identify corridors only on certain federal lands that simply terminate when they intersect state or tribal lands. Without corridors of sufficient width or the availability of alternative routes around state and tribal lands, it will be difficult to site future energy infrastructure. APS therefore strongly urges the Departments to (i) designate corridors of at least one mile in width,

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and preferably 2-5 miles, (ii) designate alternative corridors around state or tribal lands to facilitate siting, and (iii) coordinate their efforts with the impacted states and tribes.

Perhaps the concerns being raised regarding the designation of wider corridors stems from a fundamental misunderstanding of what a "corridor" means with respect to the siting of a transmission line. APS typically has worked with the Bureau of Land Management ("BLM"), for example, to identify corridors of at least one mile in width for a single transmission line (wider for multiple lines). That does not mean, however, that the entire one-mile width ultimately is used for the construction of the transmission line. Instead, APS works within that corridor to identify a route designed to minimize impacts and avoid sensitive areas. With proper planning, the actual right of way ultimately granted and used for construction and operation of the transmission line is only a portion of the wider "corridor." In most cases less than 200 feet of right-of-way is required for a single transmission line. Without the wide corridor, however, APS would not have the flexibility required to work with the BLM or another federal land agency to minimize impacts. Like EEI, APS encourages the Departments to clarify the definition of energy corridors.

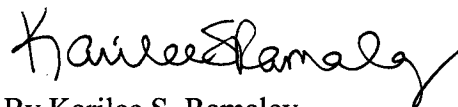
D. *Use of Highways and Other Linear Features for Corridors Provide Further Support for Wider Corridors*

APS appreciates that the Departments have identified highways as possible locations for energy corridors. APS often has sited transmission lines along highways and other linear features (such as the Central Arizona Project) in order to minimize the impact on the environment and the communities in which the lines are located. APS is concerned, however, that corridors already containing such large linear features could be limited to 3,500 feet in width. If the highway or other linear feature is considered the center line of the corridor, for example, the ability to site a transmission line will have been severely restricted.

Thank you again for the opportunity to provide comments on the preliminary corridor maps. APS looks forward to working with you and the Departments as preparation of the PEIS continues. If you have any questions or need any additional information, please feel free to contact me.

Sincerely,

Arizona Public Service Company



By Karilee S. Ramaley

Cc: Robert D. Smith, APS
Paul E. Herndon, APS

**Statement of Robert Smith
On behalf of Arizona Public Service Company
And
The TransWest Express Project**

**Before
The House Subcommittee on Water and Power
And
The House Subcommittee on Forests and Forest Health**

June 27, 2006

My name is Robert Smith and I am the Manager of Transmission Planning and Engineering for Arizona Public Service Company (APS). On behalf of APS, I participate in several regional transmission planning organizations that continue to evaluate the need for investment in the high-voltage transmission system throughout the West. I also am the Project Manager for the TransWest Express Project (TransWest Express). I appreciate the opportunity to testify before this joint subcommittee hearing on behalf of APS and TransWest Express.

APS, Arizona's largest and longest-service electricity utility, serves more than 1 million customers in 11 of the state's 15 counties. With headquarters in Phoenix, APS is the largest subsidiary of Pinnacle West Capital Corporation (NYSE: PNW). In late 2005, APS announced the initiation of a feasibility study for TransWest Express, which is designed to allow Arizona and other western states increased capability to access electricity generated from coal and wind resources in Wyoming. I will discuss TransWest Express in more detail later in my comments.

I am here today first to thank you for including provisions in the Energy Policy Act of 2005 (EPAAct 2005 or Act) to address the continuing and growing need for additional high-voltage electricity infrastructure in the West. Through my involvement in various regional planning efforts and the Western Congestion Assessment Task Force (WCATF), it has become clear to me that additional interstate transmission is needed to ensure grid reliability in the future. That same transmission also will help consumers access reliable, affordable and environmentally responsible sources of energy. It is therefore important that the efforts begun in the EPAAct 2005 be implemented in a timely and complete manner.

I also am here to express APS's appreciation for the genuine effort and commitment demonstrated by the Departments of Energy and Interior, the United States Forest Service, and the Defense Department (collectively, the Departments) to accomplish the tasks that Congress set for them under Section 368 of the Act. Because securing corridors for energy rights-of-way across federal land is critical if western energy infrastructure needs are to be met in a reasonable time frame, we value the dedication of agency personnel to accomplishing their tasks. APS is encouraged that the goal of better interagency cooperation, clearly necessary for multi-jurisdictional regional issues, appears to be improving and should provide long term benefits to the public. APS looks forward to continuing to participate in the Section 368 process and to providing comments on the more detailed maps that we understand will soon be issued by the Departments.

APS, like other electric utilities, continually evaluates where it needs both new and upgraded transmission facilities to serve its customers' needs. APS also has worked successfully in the past with various federal agencies, including the Bureau of Land Management, to develop utility corridors that have been incorporated into the agencies' Resource Management Plans and used by APS or others for HV and EHV transmission lines. Because of the value that APS has experienced in siting in designated utility corridors, APS supports the Section 368 requirement that federal land agencies designate energy corridors by August 2007.

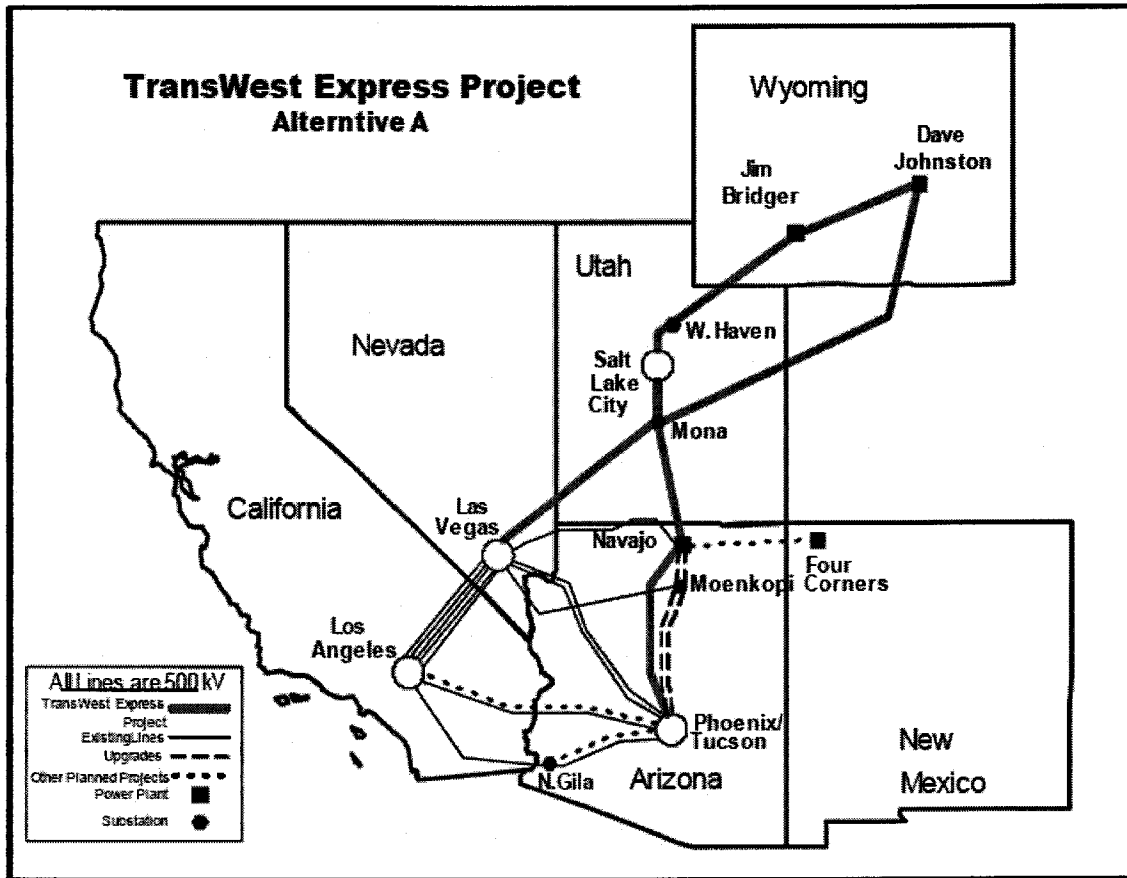
Annual system load growth throughout the Southwest is 3-5%, which is approximately three times the national average. It is anticipated that the demand in Arizona alone will grow by an additional 9000 MW by 2020. In order to meet the rapid growth in demand experienced in Arizona over the last several years, and the expected continuing rapid growth, APS and the other Arizona utilities have constructed a number of high voltage (HV) and extra high voltage (EHV) transmission projects within Arizona and have several more planned. Included as Attachment 1 to my testimony is a map showing APS's current plans for new facilities between 2005-2014. Attachment 2 is a map that shows existing corridors that could be widened to accommodate additional transmission lines and potential new corridors that APS believes would be beneficial. Both maps were included in APS's Section 368 comments. I am not going to repeat our comments here, but will note that APS believes the corridors indicated on those maps meet the Section 368 goals, and we are hopeful that the federal agencies will designate these corridors in the programmatic environmental impact statement (PEIS) currently being prepared.

Based on APS's assessment of its future resource needs, including both transmission and generation, APS announced TransWest Express in late 2005. APS has been actively seeking input from interested stakeholders, has formed four groups (transmission feasibility, permitting, economic, and legal and negotiating) to conduct the feasibility study, and has held several public stakeholder meetings over the past 8 months. We also routinely update the regional planning groups that could be impacted by the project, as well as the Western Electric Coordinating Council (WECC). Finally, we are coordinating our efforts with the Frontier Project and are updating the various state, local and tribal jurisdictions that the project may touch.

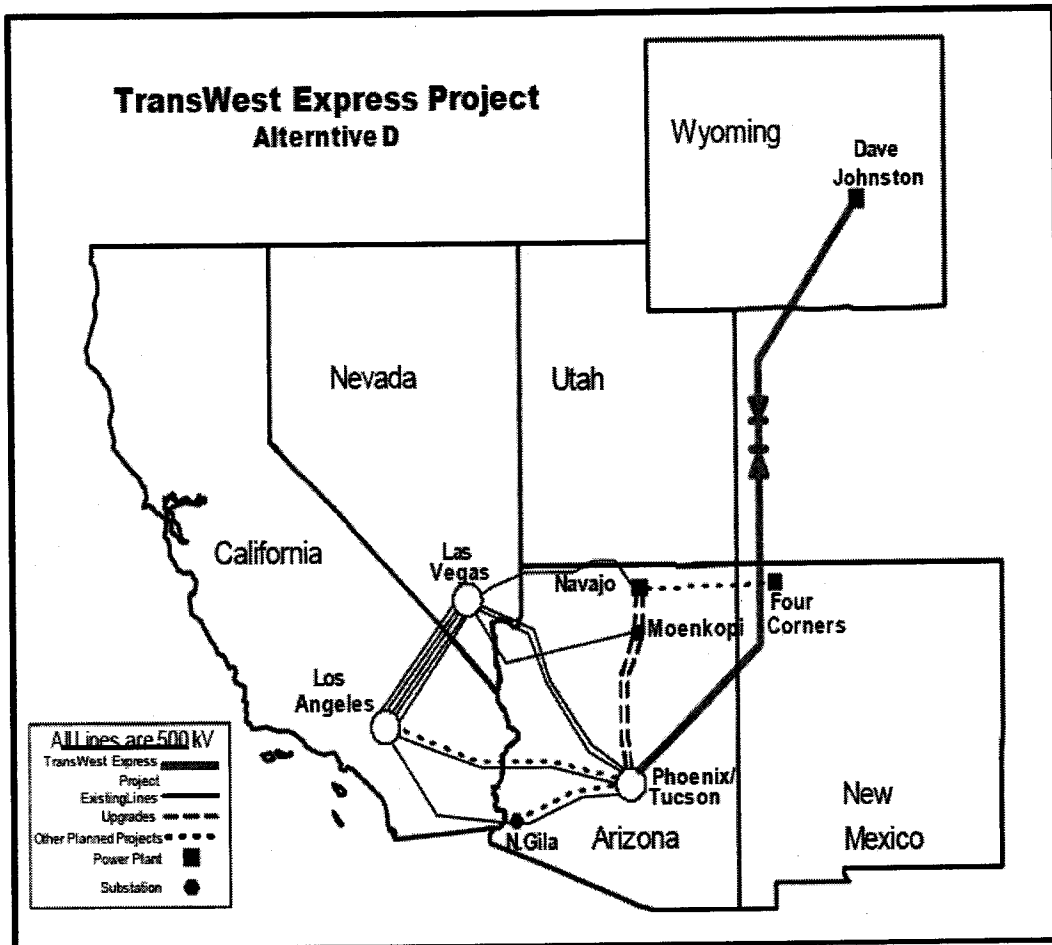
TransWest Express seeks to provide access for APS and the Southwest to coal (including advanced clean coal technologies) and wind resources in Wyoming. The access to these resources will support a balanced resource portfolio for the Southwest and will facilitate the more effective use of domestic energy resources. In addition, and equally as important, TransWest Express will strengthen the reliability of the western transmission system and provide benefits to states throughout the West. All of the routes under consideration for the project are consistent with and supported by both the Report to the Western Governors Association titled "Conceptual Plans for Electricity Transmission in the West" (August 2001) and the Rocky Mountain Area Transmission Study (RMATS) reports. Both of those reports noted that electric transmission in the West is constrained and that those constraints result in the underutilization of the region's vast wind and coal resources.

APS is well along the way with the Phase 1 feasibility study for TransWest Express and we expect to complete it by the end of 2006. APS is modeling several alternatives consisting of two AC or one DC transmission lines along various routes from Wyoming to the Southwest and is assessing the environmental and other siting issues raised by the potential routes. We have completed the initial transmission and permitting analyses, as well as the APS internal economic studies. The results of those analyses show project alternatives that are feasible across a wide range of assumptions and we anticipate beginning the permitting process by early 2007.

The following diagram shows one of the 500 kV AC transmission line alternatives under consideration for TransWest Express:



The following diagram shows one of the DC transmission line alternatives being evaluated:



To fulfill the goal of opening access for Arizona and the Southwest to Wyoming's wind and coal resources, TransWest Express will be required to cross federal lands. Siting, although never an easy process, will be facilitated if TransWest Express is able to use pre-designated utility corridors on those federal lands

APS believes that the timely implementation of Section 368 will:

- Assist the federal land agencies in addressing the anticipated need for new energy infrastructure in the West in their planning efforts;
- encourage that planning to be conducted in a coordinated West-wide manner so that designated corridors address the need to deliver power across federal land from often remote power sources to loads or markets needing access to that power;
- assure that the environmental work accomplished during the designation process does not need to be repeated when transmission projects ultimately are sited in pre-designated corridors, thereby streamlining the actual siting of new facilities within the corridors; and
- reduce the uncertainties of siting on federal lands when companies are able to avail themselves of pre-designated corridors, as uncertainty is always a crucial component when major projects have to be financed in the capital markets.

APS will submit comments to the federal agencies regarding the proposed corridor maps, but notes the following concerns and issues that we believe should be considered:

- The preliminary maps issued by the federal agencies do not include already existing corridors as corridors to be carried forward. It is not clear if that is intended to imply that those corridors will not be redesignated or whether they will remain in place and the corridors on the map are additional corridors. APS believes that the agencies need to carry forward all of the existing corridors

already included in Resource Management Plans and that the PEIS should address *additional* utility corridors.

- While APS understands the concern that agencies might have had about public reaction to something that might be perceived as “over designation,” it is critical that utility corridors be wide enough to provide the flexibility needed to avoid environmentally sensitive areas, address engineering, technical and vegetation management constraints, and allow lines to be built with sufficient separation to reduce the risk of simultaneous outages of multiple lines. We believe that the drivers for decision making ought to be: (1) anticipated need; (2) an unbiased assessment about how to meet those needs where federal lands must be involved (*i.e.*, avoiding sensitive land unless no other options are available and setting an appropriate higher burden for demonstrating need and no other feasible alternatives when sensitive lands are involved); and (3) the technical requirements governing co-location of energy facilities of the same type or differing types. The agencies have preliminarily proposed corridors of only 3,500 feet wide. Such a narrow corridor not only would be narrower than many previously designated corridors, but does not meet the criteria listed above. APS believes that corridors should be no less than one mile wide and preferably 3-5 miles wide.

Unfortunately, Arizona is quite familiar with the issues raised by lines that were built within a too-narrow corridor. Included as Attachments 3-4 to my testimony are photographs demonstrating the impact that fires, for example, can have on transmission lines that have been constructed within close proximity of each

other. APS and Salt River Project (SRP) both serve the Phoenix metropolitan area. The photographs show the SRP Coronado to Silverking 500kV and APS Cholla to Saguaro 500kV lines, both of which recently had to be taken out of service because of the Potato Complex fire in Arizona. The need to take both lines out of service at the same time potentially could have been avoided if the lines could have been built with a larger separation between them. Although the lines were constructed with spacing that sought to balance the need for a right-of-way, the public desire for consolidation, and the need to minimize impact (visual and ground disturbance) and cost, we have learned over the years that additional spacing can be critical to ensure reliability. That is one reason that APS has advocated for widening of existing corridors and for the designation of new corridors to avoid construction of new lines in already existing common corridors.

- APS also understands that the Departments are planning to define procedures for siting within designated corridors, as well as the management practices that should be employed. Such practices and procedures will be very important to us and other electric utilities. Meaningful siting procedures that recognize the substantial environmental work that already will have been completed as part of the PEIS will be critical to making the designated corridors useful for their intended purposes. For example, if the siting procedures required within a designated corridor are not appreciably streamlined compared to those required for siting outside a corridor, companies will have less incentive to avail themselves of these corridors. The procedures developed also should draw from

the experiences of those states recognized as having efficient and effective siting processes, such as the Arizona Corporation Commission's transmission line siting committee. To the extent possible, the federal process also should coordinate with state processes.

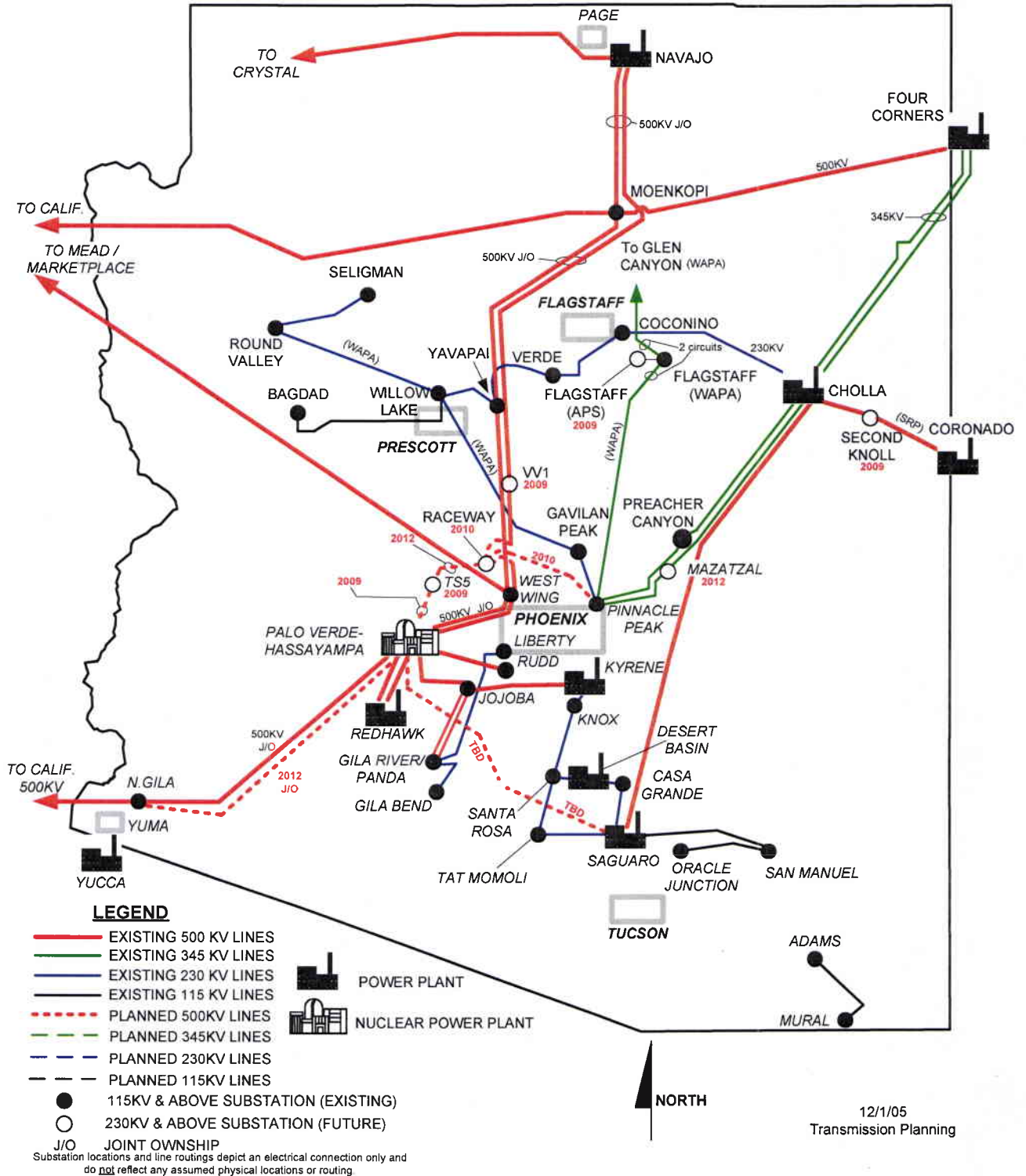
- We also firmly believe that the best management practices developed for designated corridors need to recognize that mandatory reliability standards for vegetation management will soon be in place as required by the EPAct 2005. Through the Edison Electric Institute (EEI), we have signed a Memorandum of Understanding (MOU) with the federal land agencies and the Environmental Protection Agency (EPA), which we hope upon implementation will lead to more timely, technically and environmentally sound vegetation management of transmission rights-of-way (ROWs) on federal land. In addition, the Section 1211(c) of EPAct 2005 requires expedited approvals for steps necessary to comply with mandatory reliability standards. The management practices developed for designated energy corridors is one of the first places where the Departments can begin to implement the MOU and Section 1211(c) to assure that reliability standards can be met.
- The United States Fish and Wildlife Service (USFWS) has an important role to play in helping the Departments complete their assignments under Section 368 on time. The active and consistent participation of USFWS in the process will be required for the Departments to reach the final designations of energy corridors

across federal lands. USFWS will be critical to the development and review of streamlined siting procedures and the best management practices designed for the corridors. We urge you to assure that USFWS is taking on this responsibility and fully participating and responding to needs identified in interagency corridor effort.

- Finally, while I've primarily discussed energy corridors on federal land, I want to take a moment to discuss the new Section 216(h) of the Federal Power Act, established by EPAct 2005. This provision gives the Department of Energy (DOE) lead agency responsibility to coordinate the issuance of all federal authorizations required for transmission projects. This primarily means the authorizations required to cross federal land, including USFWS review. It requires a coordinated process to ensure that the federal authorizations are issued based on the same consolidated record of review, in a timely fashion and, to the maximum extent practicable, coordinated with state siting processes. We are pleased that DOE, the federal land agencies, and the Federal Energy Regulatory Commission (FERC) have commenced the implementation of the consolidated review. Effective and judicious development and implementation of that review process are essential to facilitate the timely construction of the transmission projects required to meet the infrastructure needs of the West. We also encourage DOE and FERC to implement a federal process that can be coordinated with and implemented at the same time as the state siting process is being implemented.

Thank you for holding this hearing and providing all of us speaking today the opportunity to discuss the infrastructure siting issues we are attempting to address. APS looks forward to working with you on these issues.

APS EHV & OUTER DIVISION 115/230 KV TRANSMISSION PLANS 2006 - 2015



TransWest Express Project

Potential Corridors

Attachment 4

LEGEND

-  Corridors containing existing transmission facilities that should be retained
-  Corridors with no existing transmission facilities that should be designated for future projects
-  Bureau of Land Management
-  Bureau of Indian Affairs
-  U.S. Forest Service
-  National Park Service
-  Department of Defense
-  U.S. Fish & Wildlife Service
-  State/Private

REFERENCE FEATURES

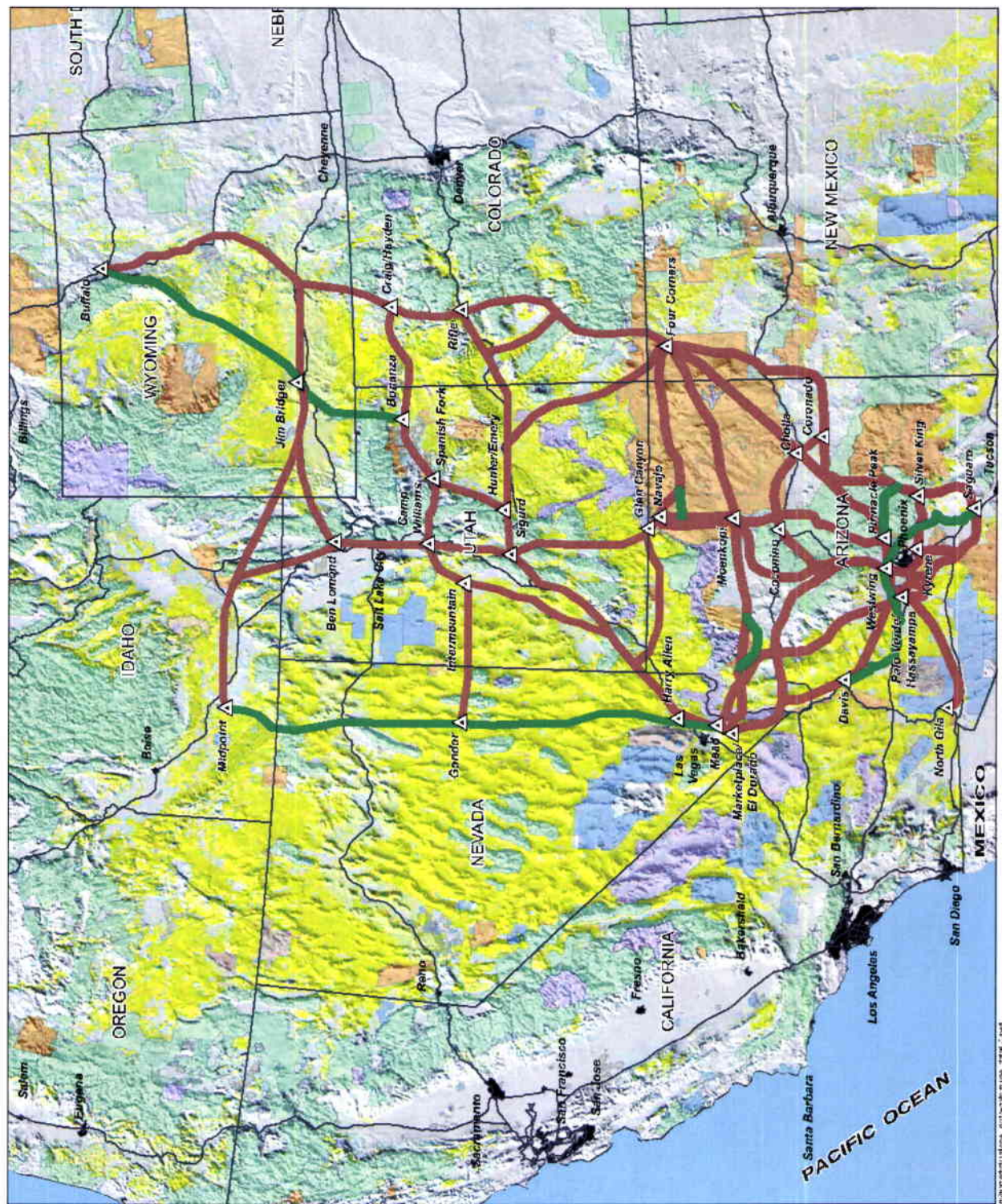
-  State Boundary
-  Major Interstate
-  Major Substation



Data Source Information

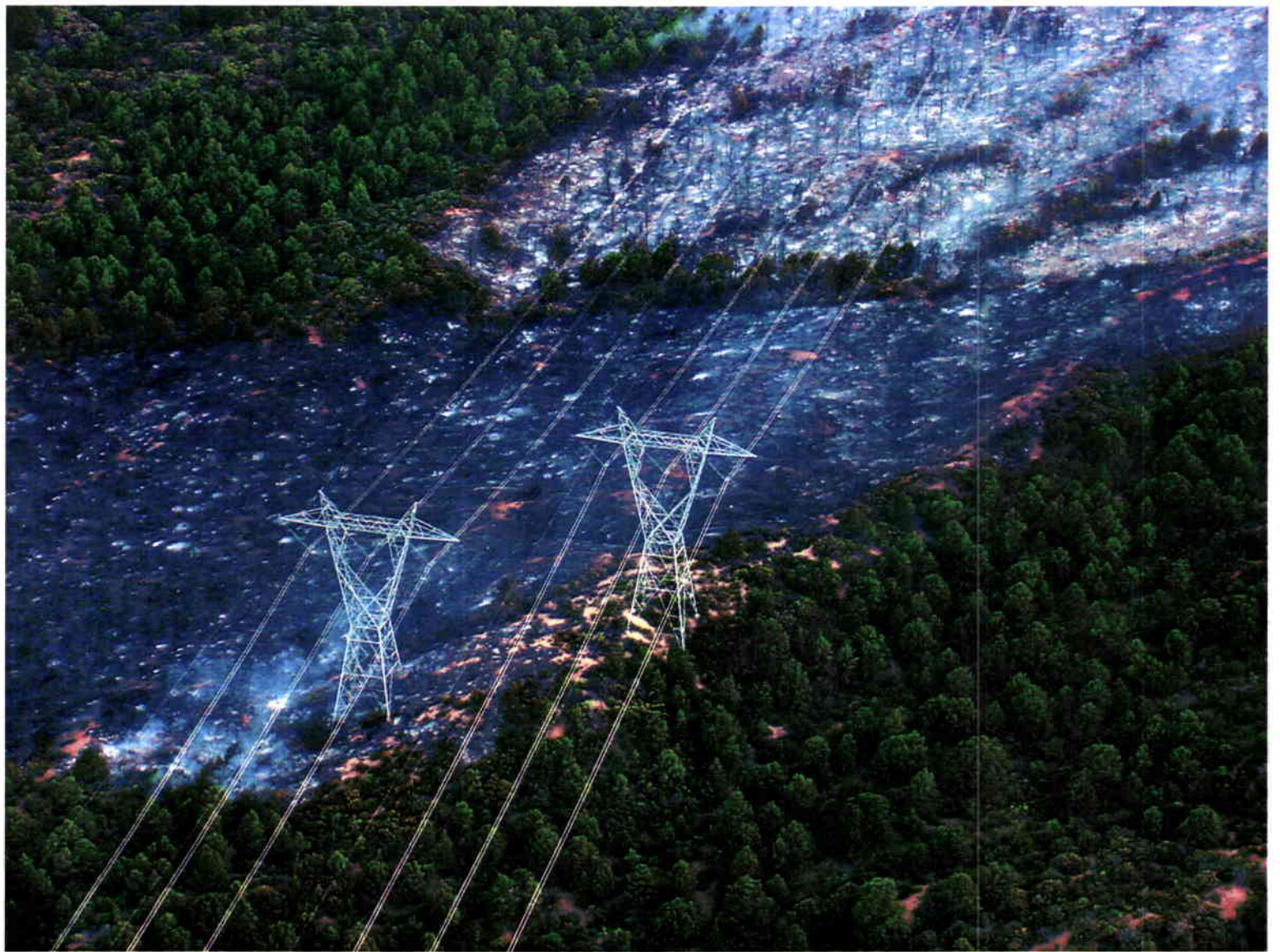
Land Ownership and BLM Field Office Boundaries: BLM Denver Service Center, 2/04
 NOTE: Transmission corridors and substation locations are preliminary and do not necessarily represent proposed facilities.

November 28, 2005



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APS

Potential Corridors for Future Transmission Lines

LEGEND

Transmission Line Corridors

- Corridors submitted by APS during scoping and identified on the preliminary corridor map released by the Department of Energy
- Corridors identified by APS in collaboration with National Grid and WIAor evaluation since scoping
- Corridors previously submitted by APS and not identified on the preliminary corridor map released by the Department of Energy that need to be reconsidered

Jurisdiction/Ownership

- Bureau of Land Management
- Bureau of Indian Affairs
- U.S. Forest Service
- National Park Service
- Department of Defense
- U.S. Fish & Wildlife Service
- State/Private

REFERENCE FEATURES

- State Boundary
- Major Interstate
- Major Substation



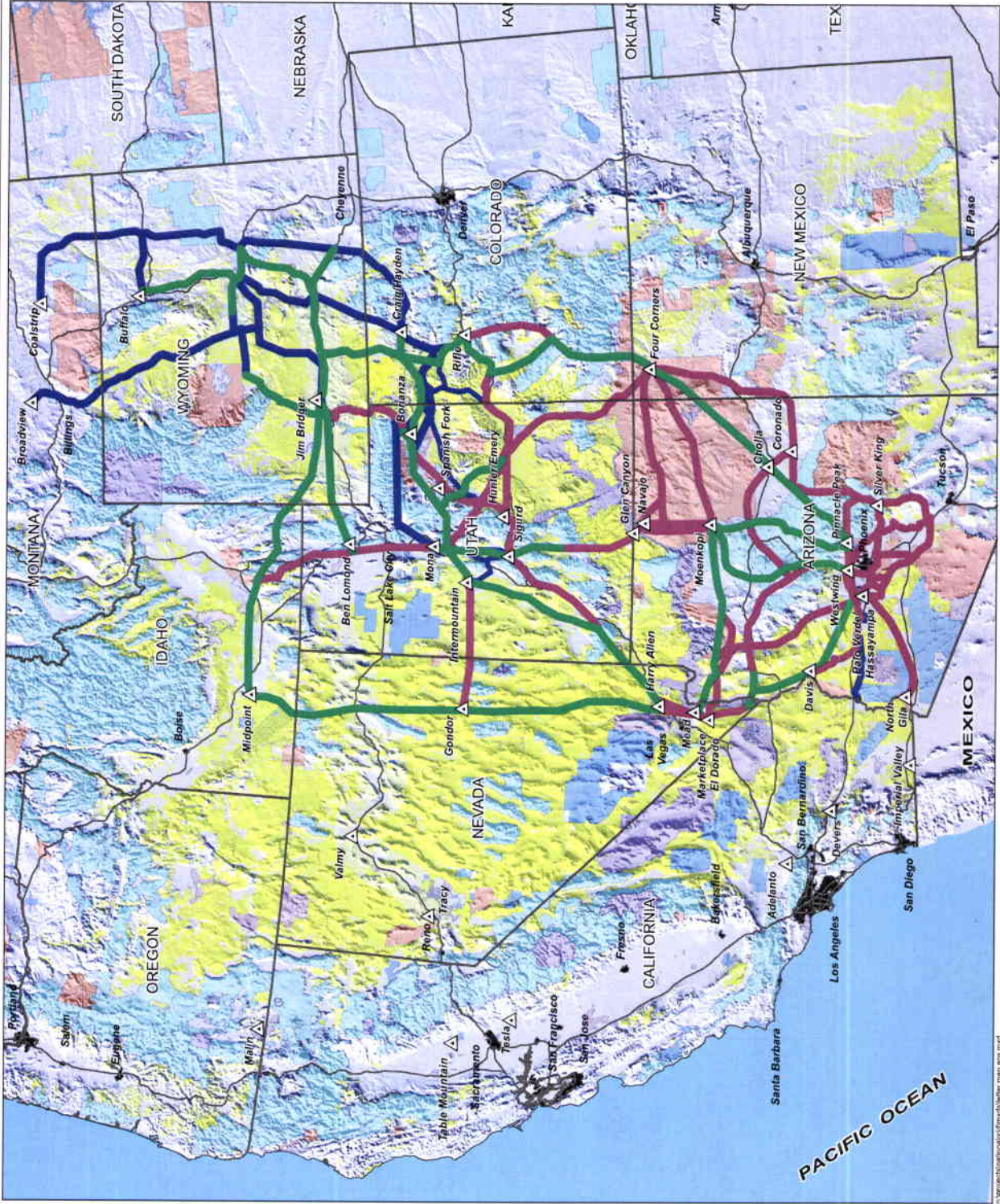
Data Source Information

Land Ownership and BLM Field Office Boundaries: BLM Denver Service Center, 2004.

NOTE: Transmission corridors and substation locations are schematic and do not necessarily represent precise locations.



July 10, 2006



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