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Public Policy Considerations
in Transmission Planning

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Transmission planning is changing. In response to evolving public expectations for the U.S. electricity system, regulators are requiring that considerations including public policy goals be included in regional planning efforts.

Accounting for the full range of affirmative obligations, which include safeguarding reliability, reducing carbon emissions, keeping costs reasonable, facilitating clean generation technologies and avoiding unnecessary impacts on the landscape, will be critical. There is much work to do, especially when accounting for sensitive wildlife and ecological concerns for which there are statutory protections. Recognizing this need and developing new methods to do so early in project development will minimize risks to project investors and better serve the public interest.

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Regional planning processes traditionally do not fully value the ecological, biological and cultural resources impacted by electric transmission lines. Instead, project proposals have stumbled upon regulatory intervention, public opposition, and late-stage litigation because these impact considerations have been left until the siting phase. Sensitive landscape resources and their accompanying legal protections have posed significant risks to transmission project completion when not accounted for from the outset in grid upgrades.

Changing grid planning to include early consideration of lands and wildlife values can save projects time and money, help ensure legal compliance and provide opportunities to address stakeholders' concerns. This leads to avoided delays, reduced conflicts and transmission lines that protect the environment better.

In not accounting for the costs associated with transmission, we risk undermining other economic values derived from the landscape that benefit human and ecosystem health, such as clean water, clean air, cultural and historic resources, species habitat and aesthetic qualities that cannot be replaced. Emerging approaches and geospatial tools can improve transmission planning and provide the foresight needed to build



good projects. Early stakeholder engagement can help identify potential concerns within a particular solution, or route selection and help avoid conflict and litigation. This should accelerate the development and construction of well-located transmission needed to serve remotely constrained renewable energy resources that are becoming an increasing part of the U.S. electrical supply mix.

Generation projects take less time to build than transmission lines, so smarter planning that leads to shorter development times for transmission benefits utilities, their customers and investors and generators who are putting multibillion-dollar projects together. Recent experience has demonstrated how, left unaccounted for, land-use consequences can



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represent a significant risk to business investments. Take, for example, San Diego Gas & Electric Co.'s Sunrise Powerlink proposal, a 117-mile, 500-kV electric line from Imperial County, California, to San Diego that is under construction.

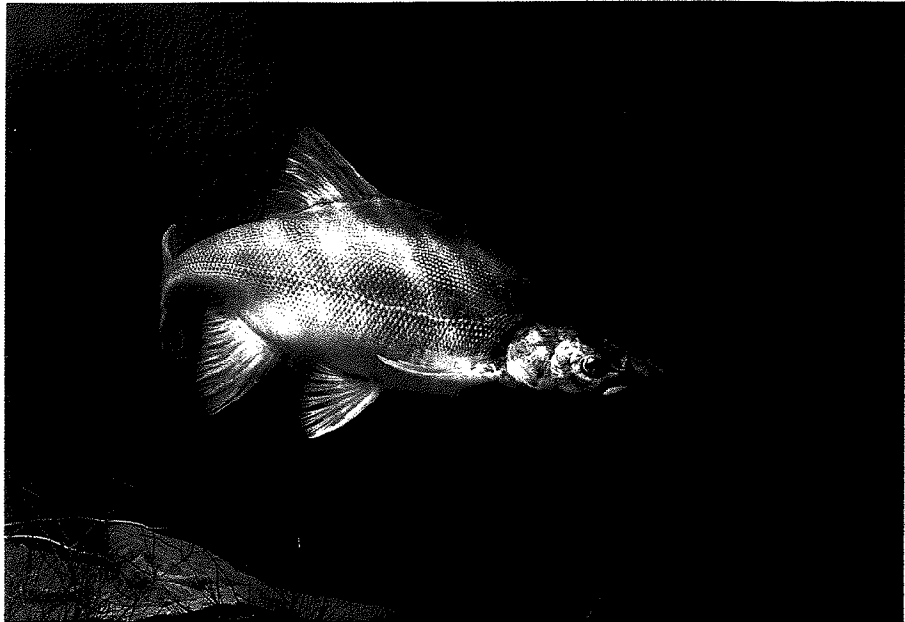
The proposed original route ran through the Cleveland National Forest and California's largest state park and wilderness area. During the environmental review process, stakeholders including the state parks agency raised concerns about the proposed route's effects on sensitive resources and lands protected by law from development.

Proponents said a modified route was not economically feasible. Without a compromise route, the project was halted by litigation for nearly five years.

In 2010, final permits were issued for the line along a modified route that included more than 80 miles of underground direct current cables. It was similar to a proposal by other stakeholders in comments nearly a decade earlier.

Other transmission proposals exemplify how to maximize early stakeholder engagement during planning phases. If built, the proposed SunZia Southwest Transmission Project would site two 500-kV lines crossing 460 miles in southern New Mexico and Arizona and providing up to 3,000 MW of transmission capacity for accessing wind generated in central New Mexico and solar generated in southwestern New Mexico and southeastern Arizona.

The area in question involves lands with high conservation values, including the Bosque del Apache National Wildlife Refuge,



Rio Grande, Wilderness Study Areas and other proposed wildernesses and the proposed Organ Mountains National Conservation Area in New Mexico. Stakeholders were engaged a year before the formal notice from the Bureau of Land Management (BLM) and often with field tours, meetings and Q-and-A sessions while the BLM's formal process has moved more slowly. More than 2,400 miles of alternative alignments are under study, including routes added to address stakeholders' specific comments and concerns. Conservation groups are active, and some have indicated preliminary support for the project. Although controversial, SunZia has shown that early stakeholder involvement can be valuable in project planning and development.

Applicable law, especially federal law, which generally is triggered by large-scale transmission lines, will require a thorough consideration of environmental consequences. For instance, the National Environmental Policy Act requires a hard look at environmental impacts and consideration of alternatives, use of quality data and opportunities for public review. The Endangered Species Act requires consultation with the Fish & Wildlife Service and National Oceanic and Atmospheric Administration regarding threatened and endangered species, as well as measures to protect those species and their habitats. The Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act protect important bird habitats. The National Historic Preservation Act requires identification of historic properties, measures to avoid, minimize or mitigate adverse effects and consultation with tribal and state officials. Stakeholder opposition often leads to similar evaluations by project proponents to try to address public resistance. Recognizing and planning for environmental and public concerns is a path toward

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meeting legal obligations and forestalling controversy.

Whether new infrastructure is needed to serve remotely constrained renewable resources or as additional transfer capacity to drive down regional prices, early consideration of lands and wildlife resources should be the new business as usual. Planning entities and utilities should invest in improving analytic and technical capacity to address these issues by developing better decision-support tools. Efforts of the Western Governors' Association in its Western Renewable Energy Zones project and the Western Electricity Coordinating Council are refining and using such tools. In addition, the national labs are assisting the Eastern Interconnection States' Planning Council in developing decision-support systems in the East, as well, and the Bureau of Ocean Energy Management, Regulation and Enforcement is working with states and other stakeholders to avoid important marine habitat and migration corridors while planning for offshore renewables and new transmission. These types of decision-support systems provide the means by which competing public policy objectives can be accommodated and are essential tools in an increasingly policy-driven environment.

Transmission planning increasingly will be driven by a fuller range of public policies and priorities, both federal and state. Federal Energy Regulatory Commission Order 1000 provides the stimulus to

transmission planners to make those objectives a significant part of the planning process. Many understand the public policy objectives to include environmental and energy policy objectives. The number of federal and state initiatives to imbue landscape and wildlife considerations earlier in the planning processes is growing. The convergence of these state and federal trends, as well as new modeling tools and analytical methodologies being developed by planning authorities across the nation, demonstrates the timeliness, feasibility and necessity of better incorporating environmental impacts into U.S. transmission planning.

Transformative investments will be needed to build a grid for tomorrow's energy needs. To build a strong network that supplies reliable power and works with U.S. environmental and cultural resources, these investments must be guided by policies that learn from experience and minimize last-minute surprises. Environmental planning holds the key to better projects that will be completed more expeditiously with broader overall support and better ecological, carbon-reduction and community outcomes.

As the nation seeks new solutions to its energy needs, it is time to use the best information that can inform infrastructure planning and to strive for those solutions that are high performers on energy supply and conservation impact. **ELP**

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