The Future of Siting and Building Energy Infrastructure

January 13, 2010

Moderator:
Janice M. Schneider, Latham & Watkins LLP, Washington, D.C.

Panelists:
Sharon Buccino, Director, Land and Wildlife Program, Natural Resources Defense Council, Washington, D.C.
Thomas C. Jensen, Sonnenschein Nath & Rosenthal LLP, Washington, D.C.
R. Jeffrey Lyman, Goodwin Procter LLP, Boston
Jeff C. Wright, Director, Office of Energy Projects, Federal Energy Regulatory Commission, Washington, D.C.

Janice M. Schneider: As we've seen in California and other states, renewable portfolio standards and greenhouse gas legislation are driving the need for expeditious renewable energy development on the federal level. Of course, the American Recovery and Reinvestment Act,[1] also known as the Stimulus Bill, committed an unprecedented amount of federal resources toward development of renewable energy, but also placed tight deadlines on the development of eligible projects. As everyone knows, renewable energy development is also a key policy directive of the Obama Administration, in particular to help address concerns related to climate change and also to create new green jobs.

In its first year, the Administration has taken numerous steps to facilitate renewable development. These include Interior Department Secretarial Order No. 3285, which prioritizes renewable development and directs the U.S. Department of the Interior [DOI] agencies to identify renewable energy zones and transmission corridors, and to create renewable energy coordination offices to facilitate and streamline permitting. The Administration has taken action to withdraw certain public lands for solar development. They've developed programmatic analyses for renewable resources, and they are fast-tracking certain projects. They've created a renewable energy policy group. There's a new MOU [Memorandum of Understanding], a few months old, to expedite permitting of transmission facilities across federal lands, and the Administration has similarly fast tracked certain transmission projects. There's also an MOU resolving jurisdictional issues between FERC [the Federal Energy Regulatory Commission] and the Minerals Management Service for renewable energy development on the outer continental shelf and new Minerals Management Service regulations for leasing offshore areas for renewable development.

While achieving a robust percentage of renewable energy for the nation's energy mix is a critical goal toward achieving energy independence—this so-called green energy gold rush—to develop these projects is not without some controversy and opposition. These projects must comply with traditional environmental review requirements including the National Environmental Policy Act (NEPA),[2] the Endangered Species Act (ESA),[3] and the National Historic Preservation Act,[4] just to name a few, and we're starting to see the first wave of litigation against certain renewable projects.

Recently in West Virginia, the Beech Ridge Wind project was enjoined under the ESA because the project did not have an incidental take permit for listed Indiana bats. That injunction significantly curtails operation of existing turbines and halts construction of additional turbines until an incidental take permit is obtained from the U.S. Fish and Wildlife Service. According to that project developer, the injunction will cost them tens of millions of dollars in lost revenue and seriously threaten its ability to access stimulus funding, which they've estimated at about 30% of the project cost.

In California, the Sunrise Powerlink, a 120-mile 500-kV [kilovolt] transmission line, which will hook San Diego into vast renewable resources—geothermal, wind, and solar in the Imperial Valley of California—has already been challenged in state court and is expected to be challenged in federal court this year on NEPA, ESA, and national forest management grounds.

Last week, the *New York Times* carried a front page article about how the Cape Wind project off Cape Cod, Martha's Vineyard, and Nantucket Island in Massachusetts was dealt a potential blow when the National Park Service's Keeper of the National Register determined that the entirety of Nantucket Sound is a traditional cultural property under the National Historic Preservation Act and is eligible for listing on the National Register of Historic Places.[5]

Litigation is not the only forum at issue. Legislators have also gotten into the act. Sen. Dianne Feinstein (D-Cal.) introduced S. 2921, the California Desert Protection Act, just before the holidays. That bill, if enacted, would set aside and place into preservation status approximately one million

1. Pub. L. No. 111-5, 123 Stat. 115 (2009).

2. 42 U.S.C. §§4321-4370f, ELR Stat. NEPA §§2-209.
3. 16 U.S.C. §§1531-1544, ELR Stat. ESA §§2-18.
4. Pub. L. No. 89-665, 80 Stat. 915 (1966) (codified at 16 U.S.C. §§470 to 470x-6).
5. Abby Goodnough, *For Cape Cod Wind Farm, New Hurdle Is Spiritual*, N.Y. Times, Jan. 5, 2010, at A11.

acres of land through new monuments and wilderness designation. Two solar developers have already withdrawn their projects from this area, even though the bill is not yet law. The bill contains some very interesting provisions to encourage renewable energy development across the entirety of the Southwest, not just in California, and includes provisions to streamline the process and to focus potential renewable development on military lands as well. So, will this brave new world of renewable energy actually come to fruition, or will it get mired down in the same old environmental issues that energy projects have come to know and expect?

Our first speaker is Jeff Wright, director of the Office of Energy Projects at the Federal Energy Regulatory Commission. The office is responsible for the licensing, safety, and administration of nonfederal hydroelectric projects; the processing of applications for the construction and operation of natural gas pipelines and storage facilities; and the siting and safety of liquefied natural gas terminals. Additionally, Mr. Wright's office administers the supplemental siting authority for interstate electric transmission facilities that was granted to FERC under the Energy Policy Act of 2005.[6]

Our next speaker will be R.J. Lyman. Mr. Lyman is a partner at Goodwin Procter LLP in Boston, Massachusetts, where he represents clients on all aspects of commercial real estate and renewable energy project development, including site acquisition, project permitting, debt and equity financing, and property disposition. Mr. Lyman began his career as a project manager at a consulting engineering firm representing independent power producers and other energy and commercial developers. He's also been privileged to serve as the assistant environmental secretary in Massachusetts and the director of the Massachusetts EPA under former Massachusetts Gov. William Weld, and he presently serves on taskforces for Massachusetts Gov. Deval Patrick on the Commonwealth's Solar Development Initiative and its greenhouse gas policy.

Following R.J. is Tom Jensen. Tom is a nationally recognized expert on natural resources, energy, and environmental law and policy, and he leads the natural resources practice in the Washington, D.C., office of Sonnenschein Nath & Rosenthal LLP. Tom's recent engagements include a wide variety of renewable energy work, hydropower regulation, public land special use permitting, NEPA compliance, ESA issues, electric transmission and pipeline siting, and wave and wind power development. He was formerly the majority counsel to the U.S. Senate Committee on Energy and Natural Resources and a senior official on the President's Council on Environmental Quality under the Clinton Administration.

Finally, we have Sharon Buccino. Sharon is a senior attorney and the director of the NRDC's [Natural Resources Defense Council's] land and wildlife program. Her work focuses on protecting America's public lands in the courts, before the U.S. Congress, and at federal agencies. She's litigated cases under NEPA, the National Historic Preservation Act, and the Freedom of Information Act. Before joining NRDC in 1993, Sharon clerked for the Alaska Supreme Court and worked for a private law firm in Washington, D.C.

I. Regulatory Policy at FERC

Jeff C. Wright: Throughout my years at FERC, I've been occupied with more traditional forms of infrastructure: the gas pipelines, storage, liquefied natural gas, and hydro facilities. All are fraught with environmental issues, but the principles, themes, and policies of the Obama Administration emphasized renewable energy.

Politics, when coupled with the demand for energy and the supply of energy, shapes regulatory policy at FERC, which ultimately will produce necessary energy infrastructure. Now, the change in the Administration is reflected at FERC by the philosophical change in the FERC chairmanship, now occupied by Jon Wellinghoff. The chairman sees energy efficiency, demand site management, and energy conservation as highly important issues during his time in office.

The economy will recover, there will be an increase in energy demand, and to meet this demand, renewable energy is going to figure prominently in FERC's activities. We at FERC are doing as much as we can with the authority we do have to encourage the use of renewables via the construction of new electric transmission facilities. As the former FERC chairman said, if you're for renewables, you're for more transmission lines.

The three legs of getting more electric transmission facilities in this country are planning, ratemaking, and siting. I would say in the areas of planning and ratemaking, the FERC has authority to participate in these areas. However, our siting authority is somewhat limited. Now, FERC, pursuant to the Energy Policy Act of 2005, received backstop authority to site electric transmission facilities in congested areas, also known as the National Interest Electric Transmission Corridors that are designated by the U.S. Department of Energy (DOE). To date, DOE has designated two of these corridors in the Mid-Atlantic area and in the far southwestern United States.

This authority is also subject to certain limitations. First and foremost, the transmission facilities have to relieve congestion. The other notable limitation is that the responsible state siting authority must have one year to consider the proposal before the project sponsors can approach FERC. Needless to say, this has not spawned a wellspring of filings at FERC.

The one application we did allow into the program was the Devers-Palo Verde No. 2 interstate project in Arizona and California. In that case, the California Public Utilities Commission approved the project, but the Arizona Corporation Commission (ACC) subsequently denied the project. However, after almost one year in the prefiling stage, Southern California Edison, the project sponsor, decided to withdraw the application to FERC for backstop authority, and instead chose to concentrate on the California-only portion of the project. That is a kind of practical situation you might find yourself in after being unsuccessful with the state authority

6. Pub. L. No. 109-58, 119 Stat. 594.

(in this case, Arizona); do you really want to anger the state agency that you may have to deal with on a regular basis by coming to FERC?

FERC does not want to usurp the state siting authority. States did transmission siting for years and did a wonderful job. Nevertheless, with the advent of renewables and especially wind, the source of the energy is often many miles and many state lines away from where it will be used, and probably the best solution would be to give FERC full backstop authority. That is, allow the states to do their job, but when no decision appears to be forthcoming, allow the project sponsor to come to FERC.

FERC would act as lead agency and establish the time lines for other agency permitting. There have been a couple of Senate attempts to permit backstop authority to carry only renewable energy, and the Bingaman proposal to allow backstop authority to transmit all energy sources.[7] On the U.S. House of Representatives side, the Waxman-Markey Bill[8] had the rather odd notion of only proposing a backstop solution in the Western Interconnection; there is no mention of what to do in the Eastern Interconnection. I would expect that to change if it got traction in the Senate.

Recently, FERC entered into an MOU with the DOI, the U.S. Departments of Agriculture, Commerce, Defense, DOE, the U.S. Environmental Protection Agency (EPA), the Council on Environmental Quality (CEQ), and the Advisory Council on Historic Preservation regarding coordination in federal agency review of electric transmission facilities on federal land. In essence, this is a document that sets up a coordination procedure to site electric transmission facilities on federal lands, and FERC has little, really, if any, role in this.

In this setup, DOE, under authority they were granted in the Energy Policy Act of 2005, will act as the lead agency for what are deemed qualifying projects. Typically, the lead agency for these types of projects would be the Bureau of Land Management [BLM] or the Forest Service, and those projects located within the transmission corridors I mentioned earlier are specifically excluded from this MOU.

That sums up FERC's current role on electric transmission, but I would be remiss if I didn't mention FERC's responsibilities in hydro, as some might say, the original renewable. FERC has authority for the licensing, safety, and administration of nonfederal hydro projects, and we have over 1,600 hydro projects including over 2,500 dams under our jurisdiction. This authority includes the licensing, relicensing, amendments to the license, exemptions for those projects under five megawatts, and exemptions for conduits. This includes not only conventional hydro but also hydrokinetics—those projects that take advantage of the tides, the waves, ocean current, and inland water flows to produce electricity.

FERC has jurisdiction over hydrokinetic projects on the outer continental shelf. We have issued preliminary permits for 140 projects with the potential for over 8.4 gigawatts, and we have 44 preliminary permits pending with the potential for about 3.5 gigawatts. We have 63 projects in our prefiling and pilot programs totaling 7.3 gigawatts. That's a significant amount of clean energy that can be added to the grid.

Finally, I will add that renewables are an intermittent energy source. The wind tends not to blow during the peak demand hours, the sun doesn't shine all the time, and in order to stabilize the grid and provide reliable electric service, there's going to have to continue to be electric generation from traditional sources. However, I don't see growth in coal and nuclear sources. In coal, unless carbon capture and sequestration technology becomes economic, I would expect no growth. And nuclear power, even with growth, requires a long time line before plants come into service.

I would submit that accompanying the growth in renewables, we'll probably see a renewed interest in natural gas. If and when we can harness the technologies and the economics for electricity storage, then we can see a reduction in traditional forms of electric generation. However, not all of this will exactly ameliorate all the environmental problems that we foresee. With electric transmission, there is a viewshed problem. We are going to face dilemmas in the future in trying to establish more electric transmission facilities to try to get that clean energy, especially the wind energy, over long distances to where it's needed. Dealing with not only the economics but also with the environmental laws that will rule over these programs is going to be an incredible job.

II. Initiatives in the Northeast

R. Jeffrey Lyman: I'm going to try to focus my attention here in the Northeast, where the bulk of my practice is. The issues that we typically encounter are a bit different than some more commonly arising in other parts of the country.

A couple of prefatory notes: 20 years ago, *The Economist* pointed out that had the early explorers landed on the West Coast, New England would be a national park. We have a comparatively small quantity of either state- or federally controlled public lands, and so most of the discussions here in the East about siting facilities do not have that overlay so common in California and other parts in the West. In New England, the kinds of issues we encounter mostly come with a typical New England reticence and the lack of hospitality.

The Reid transmission proposals are universally thought to be potentially harmful to the interest of the northeastern states, both on environmental and economic development bases. The governors of all six New England states and several of our neighboring states to the south—New Jersey, New York, and Pennsylvania—all have written opposing proposals that would enable, not just the transmission of renewable-generated power from the middle part of the country, but also coal power, thus stifling efforts to develop in-state renewable sources.

Similarly, across the border in Canada, hydropower is not only plentiful in concept, it actually is substantial in current capacity. Central Maine Power is moving forward with a transmission line proposal that would enable sources of

7. S. 1766, 110th Cong. (2007).
8. H.R. 2454, 111th Cong. (2009).

power from many locales, including Quebec hydropower, to come into New England, again, at substantially lower cost than locally developed renewable power.

So, the first point to understand about renewable power project development in the Northeast is that the insularity, if I can be negative about it, or the local economic development opportunities, if I want to be positive about it, that are important policy priorities at the state level here in each of the New England states and some of the Mid-Atlantic states are framed by those two broader proposals.

We have in all of the New England states, and New York to a lesser extent, a tradition of home rule leading to fractured jurisdictional authority over the permitting of not just renewable energy or nonrenewable energy projects, but all economic development activity that has both a state and a county component or regional component. That has been the long tradition here in New England. It remains a sacrosanct principle, more core to our view of ourselves and how our governance works here than I've encountered in other parts of the country, and yet a significant impediment, certainly when you're talking about linearity of facilities such as transmission or even axial distribution lines, but even when you're talking about single-point generation facilities of any magnitude.

There have been and remain on the drawing boards in several New England states a number of efforts to institute reforms to consolidate and streamline those permitting processes, sometimes using the state level mini-NEPAs as here in Massachusetts, and sometimes taking an existing system as in Maine with the development of regional impact mechanism, and carving it out and creating a separate one-stop-shopping mechanism for projects.

These have most commonly been used to good effect here in New England for wind projects. It's true—in kilowatt hour terms but also in capital deployed and number of projects—that onshore wind has been our one reasonable recurrent success story from the perspective of deployment of renewable projects. Even there, we still see some significant tug and tussle at the state level as a policy matter.

Here in Massachusetts, for example, we are looking at a wind siting reform bill, currently pending in the legislature, which would in essence take the usual 100-megawatt threshold for state siting council review of a generation project and drop that down to two megawatts for wind projects. The many projects that typically come along here that are in the low double-digit number of megawatts of capacity would in fact be captured there, rather than having to go through multiple steps with multiple agencies at the state and local levels.

That legislation remains pending, although it's already being invoked as a model in several of the neighboring states. It's now been anywhere from five to nine years, during which any of the six currently proposed wind projects throughout the state have continued through the torturous path of either securing the permits or dealing with the appeals. This mechanism would actually not only consolidate the review process, but would streamline the appeal process so that, win or lose, a would-be appellant would go to the state siting board; win or lose, an aggrieved party could then go to the state's highest court, and that would be it.

Here in this part of the country, we consider a three-stop, probably reasonably projected three-and-a-half-year permitting process, to be remarkable streamlining, and so there's a lot of patting ourselves on the back. In contrast, we see that our other most plentiful, locally available renewable resource—biofuels, particularly from existing forestry resources in northern New England—remain a subject of substantial, continuing policy discussion.

Again, Massachusetts, which amongst the six New England states has been most aggressive in promoting renewable project development, has had the greatest opposition to individual projects. The Commonwealth is presently considering—has implemented—a moratorium as it considers a master plan for looking at the long-term total biofuel project appetite that the Commonwealth has from a long-term sustainable greenhouse gas emission perspective. A laudable goal to be sure, but one that comes after several years of progress for what would have aggregated amongst the various projects to several hundred megawatts worth of biofuels projects and a handful of different projects across the Commonwealth, now all on hold.

In contrast, we do see in northern New England that increasingly small projects, a couple of megawatt projects, biofuels projects, are being implemented in order to power public facilities, but larger scale commercial facilities—utility-scale facilities—are few and far between.

My last point is the number of BrightFields projects—the concerted effort by public and private parties to try to reuse capped landfills. We happen to have a lot in this part of the country, as you can imagine, and they tend to be actually fairly closely located to load centers. And so if the facilities can be built with distribution voltages, all the better, but even if the transmission voltages are sometimes required, the long-term grid upgrade issues are less prominent.

In the Northeast, with the notable exception of New Jersey, we are substantially less far along in our REC [renewable energy certificate] program development and refinement than certainly California, with which I'm sure we're all familiar, but even than some of the other states throughout the country. And there seems to be, especially in the solar context, only a nascent sense of what it is—maybe appropriate pricing or a mechanism for setting a floor on pricing.

In contrast, Vermont, a small-load state with lots of progressive policies over the years, has in fact implemented a feed-in tariff building on its now three-year-old program for trying to streamline renewables development. I think its greatest supporters in Vermont would even acknowledge that they probably had pricing that was a bit too generous, given the fact that they had 18 times as many bids as they had capacity available under the legislatively authorized system. That's a nice problem to have, and they have obviously put together a queue, but they're working through the implementation of that.

I'd close by just coming back to Cape Wind to illustrate that its now seven-year-long path through a whole series of

entitlements is probably no different here in the Commonwealth than you see on public lands projects at scale in other parts of the country. The Cape Wind developers nearly a decade ago identified Nantucket Sound as a desirable area for siting a utility-scale wind project for two virtues.

One is that the seabed is quite shallow in the midst of Nantucket Sound. It is ringed, as Janice said, by the backside of Cape Cod, by Nantucket and Martha's Vineyard, in a triangular shape. It's a pretty good-sized water body, and it happens to have a fairly shallow bed in its midst. Obviously that, as a technical matter, helps along with the anchoring and construction issues. It also has the virtue of having—as a consequence of the state jurisdictional boundaries—a small hole in the donut of state jurisdictional waters, which are federal waters, which the Cape Wind developers perceived as a potentially competitive advantage.

Unfortunately, both of those characteristics turned out to have been disadvantageous. You all know about the most recent step in the saga of Cape Wind, which is the Secretary of the Interior's determination of eligibility for National Register listing as a result of that shallow portion of the seabed having previously been dry land on which the Wampanoag Tribe, one of the native peoples' tribes here in the Commonwealth, had as a burial ground and considered otherwise, additionally, to have important cultural, religious, and spiritual resonance for them.

Of course, that federal jurisdictional area comes with its own set of considerations and concerns that mean that while Cape Wind comes ashore through state waters and on the state lands for their interconnection—and therefore for much of the last handful of years while they've been trying to permit the project they've been dealing with state-level issues—now, they find themselves dealing with federal issues as nettlesome as some of the state issues.

That all said, the most recent development is now 24 to 48 hours old: Cape Wind has proposed some modifications to the layout of its turbines, maybe some reductions in the total number of turbines. We don't know whether the modifications are acceptable to the Wampanoag people, much less to the DOI itself, but they are nevertheless a reflection of a collective interest in trying to come to closure on that project.

III. Challenges for Practitioners

Thomas C. Jensen: I'm going to soar up to 30,000 feet to bring the broader context and then come back down to some concrete examples.

Today's practitioner confronts three different conundrums on any significant project, whether the project is generation, transmission, fuel, etc.

First, we are faced with a set of energy development-oriented policies created during the last decade that indelibly reflect the forces of boom economic times. The bubble drove load demand and all sorts of choices made in the private and public sectors, and it coincided with the rise of the influence of the environmental community and those others who have put a priority on transforming our energy system away from carbon-based fuels to something else under the renewables rubric.

Those two forces—the boom in our economic system and the boom in environmental policy—have now come to be confronted by a collapse in the economy, which in many cases, geographic areas, and energy utility service territories, means we are looking at flat or even declining load growth. We're also faced with some of the most credit-worthy institutions in the American economy having trouble getting financing at affordable or rational rates.

What that means is that while we have policies that are churning hard to push decisions through the political system, we're confronting a financial system in a market condition that is unfriendly to that, or unwelcoming, or even disinterested, which leaves policymakers as the dominant motivating force to bring a renewable-oriented energy system. So, you have a conundrum where you have policies created in a different time being implemented in an unfriendly environment, and that calls for acute sensitivity to what works, what doesn't, where you have leverage, where you don't, and what your clients are actually working with in terms of platform for their decisions.

I think the second major conundrum is that you are dealing with bureaucrats who have capital like they have never had before, largely through the stimulus-related programs, and are trying to work through decisions with, in most cases, utilities who might well be described as capitalists with bureaucracy.

So, on the one hand you have bureaucrats with capital, and on the other hand you have capitalists with bureaucracy, and it is a very difficult communications environment. Because utilities are so regulated and so regimented internally, they operate differently from many of our clients who are true to the simple capitalist model. That certainly includes investment funds and other equity income managers.

I think the third conundrum is that we are fundamentally wrestling with decisions on energy facility siting that pit energy regulators against natural resource managers.

These are, again, very difficult cultural environments to try to reconcile. Our job as lawyers practicing in this area is to bring a capacity to hybridize judgment among these different polarities or extremities of view. And the places where you see success occurring for clients seeking to build, regulate, manage, and participate in energy facility siting, I think, are those places where there are individuals, and in some cases institutions, that have trained themselves to be successful hybridizers of these different cultural, political, and social viewpoints and characteristics.

I would like to point to at least one very encouraging example. I have no role in relation to this, so my praise is utterly objective. There is a high-voltage transmission project under review in Arizona and New Mexico, the SunZia project. The developers of that project made a smart choice early on, long before placing specific plans. They began developing relationships built around policy goals, around concerns, around issues with natural resource managers both in the private sector, in the NGO world, and in Indian government.

In my experience watching a major interstate transmission project move forward, I've never seen one that has had an easier time. It is a product of careful cultural planning by the developers early on. They made the right investment decision, which is usually a hard one for the private sector, to front-load some of the painstaking planning and collaboration work. And I think that's a powerful example as we look for models for success in any other part of the energy facility siting world.

I'll briefly touch on the Obama Administration's nine-agency MOU. This MOU, which has just enough weakness in it to have been acceptable to all the agencies, is not yet tested. There are potentially a couple of test cases coming that I'm aware of; I think other panelists may have some other ideas. But there is at least one test case. It involves a proposed power line being built in New Jersey and Pennsylvania that will cross a couple of units of the National Park System: the Appalachian National Scenic Trail and the Delaware Water Gap.

A proposal has been made to the Administration to tap the MOU to try to reconcile two very different planning and development schedules, one proposed by the regional transmission grid coordinator of the PJM system—which covers transmission in that part of the country, the upper Mid-Atlantic—and the Park Service. The Park Service has identified a roughly three-year NEPA review for their portion of the project that crosses their lands; most of the project is not on federal land. The regional transmission regulator is seeking to have the project developed in a schedule that would require roughly a two-year NEPA review or less. We have energy culture in conflict with public land management culture, and now a request to the Administration to tap the MOU to try to reconcile those two policy arenas.

A utility in Florida has long owned a corridor of land that is now surrounded by Everglades National Park. The utility corridor was there first. The park was expanded on top of it, and Congress last year authorized the park to trade the land inside the park that the utility owns for land along the outer strip, the outer edge, a highly developed, almost industrialized, eastern edge of the park. The Park Service's current proposal for NEPA review includes a variety of alternative analyses that, I think, I can safely characterize as being viewed by the utility world as absurd, ridiculous, utterly unreasonable, and reflecting no rational judgments about how energy transmission systems actually work. There is a stark conflict in cultural views, understanding of engineering principles, a complete lack of communication around finances, and it is the sort of project that will ultimately make its way much farther up the food chain, I suspect, because the transmission proposal for that corridor is tied to a multibillion-dollar plan to develop two nuclear power facilities in South Florida. Call them renewable, call them not renewable—nuclear power plants are certainly major, major non-carbon generation sources. It could well be an important part of the response to greenhouse gas emissions.

I think these are interesting concrete examples. They may well prove to be the test of the Administration's new policy.

IV. Location and NRDC Tools

Sharon Buccino: I'm going to take a few minutes to focus on the importance of location. As the director of the Land and Wildlife Program at NRDC, my work focuses on the onshore side of things and the indispensable role that the public lands in the West play in delivering a sustainable and a prosperous clean energy future. So, I can present the western counterpoint to the eastern presentation and focus that R.J. provided.

I'd like to step through the mapping tools that NRDC has developed using the Google Earth tool. You can access it through NRDC's website, www.nrdc.org. What we have tried to do is map and help project proponents, developers, regulators, and citizens in affected areas to get a better picture of the land and the resources involved, and to help identify the areas where there is overlap between the least impact in terms of environmental resources and the greatest energy potential.

We used three basic screens in the overlays that we have created using Google Earth. The first one represents the categories where development or the transmission would be prohibited under current law. That simply summarizes and puts in one place areas such as national parks or refuges, inventoried roadless areas, or wilderness study areas. The second category is restricted areas. This is referring to restrictions that would exist in land management plans, for example, that BLM or the Forest Service develops for the lands there. Managing some of those areas might be, but are not necessarily, an absolute prohibition, but you could have restrictions tied to areas of critical environmental concern or key wildlife habitat. The third screen represents the areas that we have identified as should be avoided or areas where you're clearly going to run into some widespread public controversy. Just a couple of examples of these areas are citizen-proposed wilderness lands or some of the state parks and wildlife areas. Looking at a map like this allows conversations to happen and solutions to be achieved that avoid the most controversial sites.

I did want to touch on BLM activities related to the Solar Programmatic Environmental Impact Statement. I think this is another good example of an effort to invest in good planning and address suitability from the beginning. It does take an investment upfront, but hopefully it pays off in the end in terms of reducing the overall time that's needed to get a project done and actually enabling the project to get done and avoid litigation down the road.

The programmatic environmental impact statement is being developed together by DOE and the DOI. The idea is to identify the environmental impacts of utility-scale solar energy development and the ways to mitigate that, to do that at the programmatic level, so that then as you move forward with specific projects you don't have to reinvent the wheel, and you can tier to that document and the analysis that is being done in that document.

BLM has recognized the need to move quickly in terms of getting projects done in the best areas, rather than just hav-

ing to deal with the large numbers of solar applications that they are getting, kind of on a first-come-first-served basis. I think they're wisely trying to plan and direct and accelerate and really reward projects that go to areas where there's the greatest energy potential but the least environmental impact.

They have actually identified their 24 proposed solar energy study zones. The official comment period is closed, but BLM is now working through the details of these specific projects. There was a formal notice of proposed withdrawal for these areas, and there are the specific maps that are available on BLM's website. They have proposed to withdraw these lands from sale or settlement or entry under the mining laws. They would still be open for mineral leasing. The withdrawal is also subject to valid existing rights, but the idea is to identify the areas where they want to steer and feel that the solar energy development is most appropriate. So, it's another good example of focusing on the importance of location, good planning, and addressing suitability upfront.

V. Discussion

Janice M. Schneider: What are the practice tips that each of you would suggest as being key to successfully developing renewable energy projects?

Jeff C. Wright: Start your relationships early. At FERC, it doesn't matter what kind of project it is, we have processes set up, and we know that NEPA review is probably the critical path, if you will, of getting any energy infrastructure sited at the federal level. We've established prefiling programs. When a proponent gets the very germ of an idea that they want to do an infrastructure project, they come to us. Whoever's in charge, should get that process working in parallel, instead of the kind of serial processing that takes infrastructure a much longer time to site than need be.

Talk to those local elected officials. Talk to the NGOs [nongovernmental organizations] that are active in that area. Talk to the landowners in that area. Tom made a good point: don't come to him with a map with lines on it. There you have instant opposition.

What I would finally advocate is that you won't eliminate conflict, but what you will do is you'll get at least an awareness, you'll have some people that will like your project, some people that won't, but you won't have as much animosity as if you'd come out at them cold.

R. Jeffrey Lyman: At the end of the day, as the would-be developer of a renewable project, you have two masters. You have a utility or other off-taker of the power and your private financing capital source. It's common for all of us, and for good and understandable reasons, to focus these days on public dollars.

But if you focus on, for example, the §1603, Grants in Lieu, plus accelerated depreciation, you still only got about 50% of your total capital for your project accounted for, and that leaves a lot of money to be gathered. If you have the good fortune to have somebody who's financing a project off balance sheet capital, that's terrific. But most commonly, there's going to be some commercial debt, and there may be some pretty high-hurdle rates for some of the cash equity.

In addition to the relationships that Jeff talked about, see if you can figure out what your capital's going to be, or at least try to understand the kind of capital you're going to be looking at and what its demands are going to be.

Thomas C. Jensen: I represent an Indian tribe with a small but strategically placed reservation in California. The tribe in the last year received correspondence from a federal agency and set of public entities who had drawn alternative alignments for a proposed power line in that part of California.

Whoever did the homework for the planners for this project had overlooked not only the reservation owned by the tribe, but also about five years' worth of acquisitions of lands taken either into trust or otherwise acquired by the tribe because of very significant and fairly well-recognized cultural properties. The preferred alignment ran right through these lands and right through probably the deepest pocket in that half of California. That power line has now been scrubbed, in large part because of the opposition organized by an entity that was presented with a map and told that it was about to be the host of a preferred alignment of the 500-kV power line. There are very credible, reputable, experienced, important, well-compensated people involved in planning this project, and what happened is dumbfounding.

R. Jeffrey Lyman: This is the principle I've often invoked when somebody's coming early in their project conceptualization: they'll say "what's the most important permit" or "who's the most important constituency"? My answer is always, "the one you failed to pay attention to."

Thomas C. Jensen: So much of the idea-making associated with energy infrastructure has been rooted in engineering and physics and, to some degree, in finance structure and its ratemaking. The cultural change we are a part of as we decarbonize the economy and reinvent our energy infrastructure is a cultural change in whose concepts of good policy dominate in the early, middle, and later stages of decisionmaking. You don't have to look too far afield to figure out which profession connects point A to point B with a straight line across the landscape.

Janice M. Schneider: I agree with everything that's been said, particularly the culture point. When you're dealing with developers, you're dealing with engineers, and a lot of them need to work through the education process in terms of the environmental values and perspectives that others involved in the process have, including some of the state and federal agencies whose requirements need to be addressed.

Jeff mentioned that NEPA is often the critical path for projects that require discretionary federal approvals. Many private projects now applying for loan guarantees and/or grants under the Recovery Act have to go through the NEPA process because of the discretionary approval from DOE

for those loans and guarantees. We're seeing just hundreds and hundreds of applications on the public lands out West for rights-of-way and other discretionary approval. I wanted to pose this question to all of the panelists: how is it that the agencies are going to be able to handle this increased workload associated with all of these new projects while still ensuring that a complete and legally defensible environmental review is done in a timely manner?

Jeff C. Wright: On the hydro side, we're able to handle the influx of the hydrokinetics. We're keeping our heads above water—pun fully intended—but at some point, we are getting stress points, and we probably do need more people. Now, if we flip to electric transmission, if we were to get full backstop authority with no limitations on what that authority brings, I need more people. It just can't be done with what I have. To have a complete environmental and defensible review, I need people who can concentrate on that subject matter.

Thomas C. Jensen: The applicants have to become much more like government in taking on, in good faith and with great care, the challenge of identifying and documenting and readying for policy analysis the substantive and procedural issues associated with government decisionmaking around these projects. It's one element of privatization that probably has gotten least scrutiny and is most critical.

R. Jeffrey Lyman: These last two questions illustrate something I suspect all the panelists will agree is a common theme here. If you want to be a good counselor to somebody undertaking projects of these sorts in this scale, you need to be able to think like and respect and understand those from the other professional disciplines—engineering and the natural resources sciences—in order to help make sure that team does work in ways so that there's not some silly straight line, A to B, and similarly, needs to be able to be a good translator to and translator from government, so that you can make the job of Jeff and his colleagues the least burdensome possible.

That said, it happens to be my view that, with all due respect, the agencies will fall short, and you will have to do the thorough review. At the end of the day, that is not a debatable point because otherwise there will be litigation, and at the very least it yields process delay and maybe worse than that. The only way to at least lessen that blow is, as Tom says, think proactively about how to present, how to communicate, and how to prepare in a way that is as user-friendly as possible from a government perspective.

Jeff C. Wright: We get more and more applications for renewable energy projects. The scrutiny, the initial clearing of that project, you might get more projects rejected before we even process because you'll see probably more regulations, more stringent regulations on how you file projects, how they come into the agency. Given the lack of manpower, we're going to look for things that are probably close to letter-perfect in meeting what we need, so we can be able to process on a somewhat timely basis and in compliance with NEPA.

Janice M. Schneider: Sharon, as developers and the feds and perhaps other state agencies get closer together to address these timing issues, does that raise any concerns with you?

Sharon Buccino: There is a very valuable role for the developers in terms of helping work through the analysis that is needed, that is legally provided for, as long as the agency then takes its own independent and objective view of the information that's provided. What I would suggest is that, as developers do that analysis, it's done, not in a way that's viewed in terms of just defending the position that they want to take, but identifying the issues that are there and really working through them with the various stakeholders and doing that analysis, as opposed to coming to the table with a specific point of view that then the developer just wants to defend.

R. Jeffrey Lyman: It's not just thinking like a fed. It's thinking like the other stakeholders, thinking like Sharon.

Audience Member: Do any of the panelists have thoughts on the utility of existing state power plant siting statutes and processes for accommodating renewable energy facilities? And what kind of changes, if any, to these existing processes would you consider most useful to advancing renewable energy development?

Thomas C. Jensen: Anything from California may or may not be representative of the rest of the country, but it is always worth paying attention to. You do have a good example of California law recently accommodating plans for a very, very large transmission project. It's called the Tehachapi Renewable Transmission Project in southern California that just got approval to build a very big power line over to the Tehachapi Wind Resource Area to support about 4,500 megawatts of wind and solar to the Los Angeles Basin. In a state that places pretty high demands under its own environmental planning rules as well as utility planning rules, you have a recent example of success in at least giving authority to site a big project that will itself be the enabler of billions of dollars of other renewable projects.

Janice M. Schneider: In California, the current siting process includes both compliance with their own mini-NEPA, the California Environmental Quality Act, but also an evidentiary hearing process.

For the Tehachapi project, there was a 10-day evidentiary hearing that perhaps is the sort of thing that policymakers will look at and question: do we want to continue to expend the resources and the time associated with going through the evidentiary hearing process, and instead replace it with something that is more streamlined and modified?

Obviously, the various states have very differing processes, and I think that in terms of developing renewable resources, the question policymakers will want to ask is when we look

at our own state siting authority, is it generating the type of information that we want to have or is it not? You can obviously get into a debate about whether evidentiary hearings are useful or not.

Sharon Buccino: The Wyoming Infrastructure Authority has tried to play a pretty constructive role related to wind, and they have focused on the idea that I had emphasized in terms of siting and location and figuring out where the zones are that make the best sense in terms of the least environmental impact.

For example, they have done mapping that looks at where the sage grouse are, the critical habitat there. So, you have the whole eastern part of the state identified as prime for when and where the state wants developers to go. The difficulty has been that that hasn't been where the developers have gone. That's created some conflict and has prevented moving things forward. But I do think the Wyoming Infrastructure Authority is a good example of state siting authority that people may want to look at as well.

Janice M. Schneider: Great. I want to thank all of our panelists for their time and their very engaging views. Thanks again for joining us.