

U.C. Hastings College of the Law

FEDERAL PUBLIC LAND AND RESOURCES LAW

**Spring Semester 2011
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Renewable Energy Projects on Federal Lands

Some of the issues in the following materials are new, and some are useful reviews of and elaborations on issues discussed elsewhere in this course.

First, read excerpts from Leshy, “Federal Lands in the Twenty-First Century,” 50 Nat. Res. J. 111, 116-22 (2010):

*** We are now coming to appreciate that a destabilizing climate will change everything, including our federal lands policies. Indeed, our federal lands must and will play an important role in meeting the climate challenge.

This will hardly be the first time the nation’s public lands will be called upon to help meet national challenges. Federal lands sales helped pay off the debt the government ran up to fund the Revolutionary War. Federal lands fueled the expansion of settlement across the country through homesteading and similar land grant programs. Federal lands helped endow and establish land-grant colleges. Federal lands were crucial in constructing transcontinental railroads that stitched the nation together from sea to shining sea. Federal lands produced minerals to pay Civil War debts and feed the emerging industrial state. Federal lands produced wood to fuel the post World War II housing boom and uranium to fuel the atomic age. Federal lands produced coal and oil to try to achieve energy independence in the wake of the oil embargo in 1973, and then again after 9/11. Last but scarcely least, federal lands have proven crucial in preserving the nation’s “crown jewels,” some of our most scenic and biologically rich natural places.

* * *

A. Federal Lands and Mitigating GHG Emissions

Federal lands can make a major contribution to curtailing GHG emissions. Large-scale efforts to develop renewable energy sources will inevitably use federal lands, perhaps in vast amounts, because they contain solar and wind and geothermal

resources in some abundance. Many millions of federal acres have already been identified as having solar and wind energy potential, and such developments, especially generating stations using concentrated solar power, tend to make more extensive and intensive use of more lands than [other industrial uses like] * * * oil and gas fields, and fossil-fueled power plants.

Federal lands will also play an important role in building a new national “smart grid” of electricity transmission. This grid is needed both to create a much more efficient, integrated national electricity network, and to service new renewable generating facilities -- many of which will likely be sited beyond the reach of the existing grid. Furthermore, federal lands will be likely sites for projects to geologically sequester carbon if “carbon capture and storage” technology develops. Finally, federal lands will also furnish opportunities to biologically sequester carbon through rejuvenating forests and grasslands, although there is considerable uncertainty about our ability to do so effectively and to account for it in a useful way.

These so-called “green energy” projects do not just loom somewhere over the horizon – this train is moving out of the station now. In 2005 Congress called upon the Secretary of the Interior to approve, within 10 years, enough green energy projects on federal lands to generate at least 10,000 megawatts of electricity. [Note: Enough to power about ten million homes.] A few dozen projects are now operating on federal lands and a new “gold rush” is developing. Several hundred applications pending with the BLM and the Forest Service to build more projects, helped along by the stimulus bill enacted into law in early 2009, which made available more than \$ 6.5 billion for “green energy.”

Interior Secretary Ken Salazar uses the “moon shot” analogy to characterize the focused national effort required to move to a more carbon-friendly energy policy. * * * He promptly issued an order making the use of federal lands for green energy one of the Department’s “highest priorities,” [Secretarial Order No. 3285, March 11, 2009], and created “fast track” solar energy areas on BLM lands, as well as special renewable-energy offices to speed up the processing of applications in key states. New energy bills now being developed in Congress also have various initiatives targeting federal lands.

In responding to this new gold rush, we could use a double dose of humility and history, considering how some well-intentioned policies of the past have left unhappy legacies. Nineteenth century federal land policy encouraged the draining

of “swamplands” that we now know are ecologically invaluable wetlands. All-out efforts to promote mining have left debris and impaired water quality requiring billions of dollars to clean up. Our policy of doling out lands to railroads in a checkerboard pattern left some daunting economic, ecological and management problems we still grapple with today. Former Forest Service Chief Jack Ward Thomas, a salty sort, once grouched that “the [SOB] that invented checkerboard[ed land grant]s ought to be sitting in hell on coals roasting. For a very long time. . . . Let’s face it: ecological systems don’t come in squares.”

Even Progressive-era conservation policy, enlightened though it was for its time, operated on the basis of the “enclave theory of public land management”—the idea that specific lands were set aside for various interests, including conservation, without paying much attention to environmental values as a whole. Contemporary understanding of ecosystems compels a larger view and, while federal policies are changing in this regard, the pace of change is slow. History also shows that federal lands policies, once adopted, can be notoriously “sticky” and resistant to change—witness the Mining Law of 1872, which withstood the Progressive tide and still permits mining companies to extract valuable minerals from federal land for free.

B. Federal Lands and Mitigation Strategies: Some Recommendations

What can this history of federal lands policymaking teach us regarding the use of federal lands for green energy projects? One lesson, prominently on display in federal land grant-making for railroad construction, is the need to check the tendency to hand out federal lands for green energy projects willy-nilly, without much consideration of the consequences for other values. We do not know, for example, whether other alternatives – nuclear, rooftop solar, shale gas, offshore tidal and wind projects or others yet unimagined -- will emerge to displace the need to use vast areas of federal lands for green energy projects. Constraints like water availability may limit solar energy projects in some arid areas. While the federal lands must gear up for a possible big green energy party, it is important to keep the possibility in mind that few will attend.

Yet there is also reason for concern about the opposite problem—namely, that needed development of green energy might be stymied by “not in my backyard” or NIMBY opposition, which can easily slide into BANANA -- “build absolutely nothing anywhere near anybody.” NIMBY-ism is often used pejoratively, but it reflects a legitimate and powerful concern about the quality of life and devotion to a place. Today, most every federal acre has friends with some political or litigating power—ranchers, hunters, anglers, hikers and others—who have developed deep

attachments to landscapes and do not hesitate to advocate for preserving the quality of life bound up in their open spaces.

To the extent these advocates deploy familiar litigation tools -- like the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA), and federal land planning and management laws to slow down or stop green energy developments on federal lands --to slow down or stop green energy developments on federal lands, they put green energy on a collision course with these bedrock conservation laws. Congress will not find it easy to amend these laws to facilitate green energy, nor should it.

Secretary Salazar's 2009 initiative regarding solar energy on BLM land is a step in the right direction. The national government needs to work in close cooperation with state governments and be pro-active in the process for siting renewable energy projects and transmission lines, and not simply react to proposals from the private sector. Some good work has already been done by the Western Governors' Association (WGA) and others in identifying areas of high potential for renewable energy projects and low potential for conflict with other uses and values. It may be that conflicts that do arise can best be avoided by concentrating, rather than spreading, such projects out across the public lands, and collecting into corridors transmission lines to service them wherever possible. This is already required by existing law "to the extent practical."

Also, the government ought to consider experimenting with auctioning sites for green energy facilities by competitive bidding. Despite occasional missteps, this has worked fairly well for fossil fuels onshore and offshore. The government also ought to enforce a use-it-or-lose-it principle, preventing green energy applicants from stockpiling permitted sites for speculation. Finally, because some of these green energy facilities will likely be relatively exclusive and permanent uses of federal lands, the government might experiment with different tenure provisions; for example, auctioning off some sites in time-limited permits, and others in fee simple conditional with a reverter back into public ownership once the use ends and the land is reclaimed.

While a case can be made for the government subsidizing green energy industries until technologies mature and their competitiveness with conventional fuels is established, such subsidies should *not* take the form of free or reduced-cost access to federal lands. The principle that every public land user should pay the public owners the fair market value of these resources is a very important one to protect, even if it is not universally followed. Subsidies for green energy should take the

form of generic tax credits or other measures that leave the playing field level between public and private land. Green industry should make market-based payments—based, for example, on the value of the energy produced—to the government for its use of federal lands, just as it would to private landowners.

[END OF EXCERPT]

As suggested above, public lands can be an attractive place to site solar and wind and transmission projects, because they have large open spaces and often have significant sun and/or wind available. BLM has estimated it manages as many as 30 million acres with solar and 21 million acres with wind potential. The Forest Service also has large areas with potential for these developments.

Nearly 200 wind projects have been approved for BLM lands and are in varying stages of development, with more than 200 applications pending. About 160 applications have been filed already for rights of way for solar projects on more than 2 million acres of BLM land. (Most of these applications are in California's Mojave Desert, and would cover more than 1.5 million acres.)

The “greens” divide. Opinion among conservation groups and their supporters is somewhat divided on how much to promote green energy projects, and how much federal land to devote to such projects.

Green energy “hawks” mount arguments along the following lines:

The greenhouse gas problem is a planetary emergency and all possible means should be employed to reduce GHGs. Even making heroic efforts to increase energy efficiency and deploy massive amounts of local rooftop photovoltaic solar installations would still leave a need to make large investments in utility-scale renewable energy. Some federal lands have abundant wind and sun and are thus a prime venue for such projects. While this can affect habitat and environmental amenities, the overall threat of a runaway climate poses a much greater risk. Broadly considered, the total amount of land required to house enough green energy projects to supply most of the nation's electricity would be on the order of a square one hundred miles on a side, a relatively tiny slice of the nation's land.

Land protection “hawks” mount arguments like the following:

Healthy ecosystems are vital to sustaining life on earth, and efforts to address climate change should not override the need to maintain robust, intact, bio-diverse landscapes, which provide clean air, water, and other “ecosystem services” benefits. Fragile and sometimes already degraded and fragmented habitats found on federal lands are at particular risk. Projects should only be located on such lands if there are no other good alternative locations, and no other alternative ways to reduce greenhouse gas emissions. And such other alternatives do exist; e.g., on contaminated former agricultural or industrial land. Further, it is misleading to say only a relatively small amount of land will be involved, because the facilities (and the transmission lines to serve them) will be spread over, and impact, a much larger amount of total land.

By way of general background, coal currently supplies about 45% of our electricity generation; natural gas 23%, Nuclear, 20%, hydroelectric, 7%, and all other (petroleum, geothermal, wood, waste, wind, solar, etc., 5%, with most of that petroleum). So solar and wind have a long way to go to make a dent in national production.

The following materials focus mostly on solar projects, although most of the same issues are found with wind projects (and a couple of special issues with wind projects are considered further below). Here’s some background information from the BLM website:

The quality of the solar resource, over a month or a year, is an important indicator in determining the viability of a site for commercial solar development. Other site attributes include access to available water for concentrated solar power steam generation and cooling, proximity to electric transmission facilities, and site slope. The most promising areas for solar energy development on public lands are in Arizona, southern California, Nevada, and New Mexico. Parts of Utah and Colorado also have excellent levels of solar insolation.

* * *

Concentrating Solar Power Plants

CSP plants are generally large systems that use mirrors to focus sunlight to create high temperatures. The high temperatures generated by the focused sunlight are used to generate

electricity either by a heat engine causing gas to expand and move a piston or by a conventional power cycle using boiling water to create steam that turns a turbine. For a steam-driven CSP system, facilities include a solar collection system, a system for transferring the collected energy to a working fluid or to a storage system, and a system such as a turbo-generator for converting the thermal energy to electricity. Many of these power plants have a hybrid solar/fossil fuel capability that can be used during periods of low solar energy. Many also include thermal storage. These capabilities enable CSP plants to supply energy to a utility grid when it is most needed (day or night).

The lands having the best solar resources are usually arid or semi-arid. Unlike photovoltaic systems, CSP systems require sunlight that is not diffused by clouds. This limits their use to the West, with the southwest possessing some of the best solar energy resources.

There are currently three different types of centralized CSP systems: parabolic trough, solar “power tower”, and solar dish. These systems require relatively flat land with slopes not exceeding three percent to accommodate the solar collectors. The area of land required depends on the type of plant, but it is about five acres per produced megawatt (MW). It is anticipated that a commercial scale CSP facility may be in the range of 100 MW or larger and will require in excess of 500 acres. This large land base requirement can involve significant surface disturbance with an associated potential impact on a variety of resources and resource uses on the public lands. These types of facilities also require roads, water, protection from gusty winds, and security fencing. Electricity generated is sold to the utility under a power purchase agreement.

LEGAL FRAMEWORK:

The basic current law governing granting permission for such projects on federal land is the rights-of-way provisions of Title V of FLPMA, 43 USC §§ 1761 et ff.

FLPMA defines “right of way” broadly, to encompass several different property law concepts:

“(f) The term ‘right-of-way’ includes an easement, lease, permit, or license to occupy, use, or traverse public lands granted for the purpose listed in subchapter V of this chapter.” 43 USC § 1702(f).

Title V leaves a good deal of discretion to the federal land managing agencies regarding whether or not to grant such rights of way, and regarding their scope, duration, and terms and conditions. Here are some key provisions:

§ 1761. Grant, issue, or renewal of rights-of-way

(a) Authorized purposes

The Secretary [of the Interior] with respect to the public lands *** and, the Secretary of Agriculture, with respect to lands within the National Forest System *** are authorized to grant, issue, or renew rights-of-way over, upon, under, or through such lands for— *** (4) systems for generation, transmission, and distribution of electric energy ***.

§ 1763. Right-of-way corridors; criteria and procedures applicable for designation

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, and each right-of-way or permit shall reserve to the Secretary concerned the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way granted pursuant to this Act. In designating right-of-way corridors and in 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. The Secretary concerned shall issue regulations containing the criteria and procedures he will use in designating such corridors. Any existing transportation and utility corridors may be designated as transportation and utility corridors pursuant to this subsection without further review.

§ 1764. General requirements

(c) Applicability of regulations or stipulations

Rights-of-way shall be granted, issued, or renewed pursuant to this subchapter under such regulations or stipulations, consistent with the provisions of this subchapter or any other applicable law, and shall also be subject to such terms and conditions as the Secretary concerned may prescribe regarding extent, duration,

survey, location, construction, maintenance, transfer or assignment, and termination.

(d) Submission of plan of construction, operation, and rehabilitation by new project applicants; plan requirements

The Secretary concerned prior to granting or issuing a right-of-way pursuant to this subchapter for a new project which may have a significant impact on the environment, shall require the applicant to submit a plan of construction, operation, and rehabilitation for such right-of-way which shall comply with stipulations or with regulations issued by that Secretary, including the terms and conditions required under section 1765 of this title.

(e) Regulatory requirements for terms and conditions; revision and applicability of regulations

The Secretary concerned shall issue regulations with respect to the terms and conditions that will be included in rights-of-way pursuant to section 1765 of this title. Such regulations shall be regularly revised as needed. Such regulations shall be applicable to every right-of-way granted or issued pursuant to this subchapter and to any subsequent renewal thereof, and may be applicable to rights-of-way not granted or issued, but renewed pursuant to this subchapter.

* * *

(g) Rental payments; amount, waiver, etc.

The holder of a right-of-way shall pay in advance the fair market value thereof, as determined by the Secretary granting, issuing, or renewing such right-of-way. The Secretary concerned * * * may, by regulation or prior to promulgation of such regulations, as a condition of a right-of-way, require an applicant for or holder of a right-of-way to reimburse the United States for all reasonable administrative and other costs incurred in processing an application for such right-of-way and in inspection and monitoring of construction, operation, and termination of the facility pursuant to such right-of-way * * * : Rights-of-way may be granted, issued, or renewed to a Federal, State, or local government or any agency or instrumentality thereof, * * * [or to certain nonprofit associations or corporations] for such lesser charge, including free use as the Secretary concerned finds equitable and in the public interest. * * *.

* * *

(i) Bond or security requirements

Where he deems it appropriate, the Secretary concerned may require a holder of a right-of-way to furnish a bond, or other security, satisfactory to him to secure all or any of the obligations imposed by the terms and conditions of the right-of-way or by any rule or regulation of the Secretary concerned.

(j) Criteria for grant, issue, or renewal of right-of-way

The Secretary concerned shall grant, issue, or renew a right-of-way under this subchapter only when he is satisfied that the applicant has the technical and financial capability to construct the project for which the right-of-way is requested, and in accord with the requirements of this subchapter.

§ 1765. Terms and conditions

Each right-of-way shall contain--

(a) terms and conditions which will (i) carry out the purposes of this Act and rules and regulations issued thereunder; (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 (i) protect Federal property and economic interests; (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 by the right-of-way or adjacent thereto.

Here are excerpts from a couple of the pertinent regulations BLM and the Forest Service have adopted to flesh out some of the statutory requirements:

43 CFR § 2804.23 (c):

(c) If [after reviewing pending applications,] BLM determines that competition exists, BLM will describe the procedures for a competitive bid through a bid announcement in a newspaper of general circulation in the area affected by the potential right-of-way and by a notice in the Federal Register.

43 CFR § 2806.10 What rent must I pay for my grant? (a) You must pay in advance a rent BLM establishes based on sound business management principles and, as far as practical and feasible, using comparable commercial practices. Rent does not include processing or monitoring fees and rent is not offset by such fees.

NOTES AND QUESTIONS ON THE STATUTE AND REGULATIONS:

A: Siting Decisions

1. How should the siting decisions for solar and wind energy facilities on federal lands be made? Should the federal agencies simply be reactive to private industry applications for rights-of-way on federal lands, or should the federal government be pro-active, and select in advance areas of federal land to be made available for such facilities? Should it have a hybrid policy; e.g., let industry nominate areas for consideration, and other interests nominate areas for exclusion, and the government decides.

For example, should the government pre-determine appropriate areas for siting and then auction off rights of way for sites to highest bidder? Or should there be a hybrid; e.g., first-come, first-served in some areas, but in other areas government can conduct an auction after the site has been deemed suitable and available for development? See 43 CFR § 2804.23, quoted above.

Here's BLM's 2007 solar policy on competition:

Competitive Interest

Right-of-way applications for solar energy development will generally be accepted and processed on a first-come, first-serve basis. The right-of-way regulations (43 CFR 2804.23(c)) provide authority for offering public lands under competitive bidding procedures for solar energy right-of-way authorizations. The BLM will initiate a competitive process if a land use planning decision has specifically identified an area for competitive leasing. The BLM may also consider other public interest and technical factors in determining whether to offer lands for competitive leasing. Competitive bidding will follow the procedures required by 43 CFR 2804.23(c).

B. Due Diligence

1.. Many project developers seek to secure priority access to prime sites (measured both by resource potential and by access to available transmission lines), often in advance of having any definite agreement with any electrical utilities to purchase the output of the project. This creates the possibility that, if the federal agencies grant exclusive rights of way for particular projects, tracts of federal land could be locked up indefinitely, if financing and power purchase agreements are not able to be worked out. Do the FLPMA sections above give the government the authority, or the duty, to impose “due diligence” requirements in such permits, requiring the applicant to have the project up and running within a certain time, to prevent developers from “stockpiling” or “banking” sites on public lands (and limiting the number of sites available for others, with possible adverse effects on competition)? Or should the government simply issue permits without regard for such concerns, and make such permits freely transferable from one project proponent to another, and thus leave it to the private marketplace to sort things out?

BLM updated its solar policy on due diligence issues in 2010; excerpts follow:

Diligent Development

The right-of-way regulations * * * [require] that the potential grantee be technically and financially able to construct, operate, maintain, and terminate the use of the public lands covered by the grant (43 CFR 2803.10(b) and 2804.12(a)(5)). In carrying out its obligation to limit right-of-way authorizations to qualified individuals or entities and to prevent such individuals or entities from holding right-of-way authorizations merely for purposes of speculating, controlling, or hindering development on the public lands, the BLM will focus on ensuring the applicant

meets the qualification requirements in the regulations. In addition, the BLM will include provisions requiring diligent development in each solar energy right-of-way authorization.

In ensuring that an applicant meets the regulatory requirement to demonstrate its technical and financial capability to construct, operate, maintain, and terminate the proposed solar energy facility (43 CFR 2803.10(b) and 43 CFR 2804.12(a)(5)), the BLM will consider whether the applicant has a history of successfully designing, constructing, or obtaining the funding for a project generating electrical energy. Actual ownership, development, or management of a successful similarly-sized project generating electrical energy within the last 5 years by the applicant would generally constitute evidence of financial capability. Absent such showing, the BLM will ask the applicant to estimate the capital investment necessary to bring the facility on-line and explain how the applicant intends to finance the project. * * *

*** All solar energy right-of-way grants will include a provision that specifies that ground disturbing activities cannot begin until the BLM authorized officer issues a Notice to Proceed (43 CFR 2807.10). In order to facilitate efficient development of solar energy on the public lands, the BLM will also include a requirement in each right-of-way grant that the holder begin construction of the initial phase of development within 12 months after issuance of the Notice to Proceed, but no later than 24 months after the effective date of the right-of-way authorization. Each grant will also specify that construction must be completed within the timeframes in the approved Plan of Development, but no later than 24 months after start of construction unless the project has been approved for phased development as described below. A Notice to Proceed will be issued for each phase of development.

The BLM will not authorize more than three development phases for any solar energy right-of-way authorization. If an approved Plan of Development provides for phased development, the right-of-way grant will include provisions specifying that construction of each phase (following the first) must begin within 3 years of the start of construction of the previous phase.

The BLM authorized officer may suspend or terminate the authorization when the holder fails to comply with the diligent development terms and conditions of the authorization (43 CFR 2807.17). The regulations provide that before suspending or terminating the authorization, the BLM will send the holder a written notice that gives the holder a reasonable opportunity to correct any noncompliance or to start or resume use of the right-of-way (43 CFR 2807.18). ***

C. Duration of a Right of Way:

Here is 43 U.S.C. § 1764(b): (b) Terms and conditions of right-of-way or permit

Each right-of-way or permit granted, issued, or renewed pursuant to this section shall be limited to a reasonable term in light of all circumstances concerning the project. In determining the duration of a right-of-way the Secretary concerned shall, among other things, take into consideration the cost of the facility, its useful

life, and any public purpose it serves. The right-of-way shall specify whether it is or is not renewable and the terms and conditions applicable to the renewal.

Here is BLM's 2010 update of its solar policy on the subject:

Due to the substantial investments required for typical solar energy projects and the projected life of these facilities, it is prudent and in the public interest to provide for a term of solar energy right-of-way authorizations that will provide a reasonable period of time for construction, development, and continued operations. In addition, many Power Purchase Agreements (PPAs) for the purchase of electricity generated from a solar energy facility are for terms of 20 years or longer. The BLM will therefore issue all solar energy right-of-way authorizations for a term not to exceed 30 years. Thirty years provides a reasonable period consistent with the expected needs of a solar energy facility; it also provides for operation periods that are consistent with typical PPAs. The BLM will also include in each solar energy right-of-way authorization a specific provision allowing for renewal, consistent with the regulations at 43 CFR 2807.22.

D. Environmental Issues:

1. Generic federal laws, processes, and standards apply to federal land manager decisions to grant rights of way for such projects. For example, such projects will have to be consistent with federal land use plans (or the plans amended to accommodate them) and with the multiple use and sustained yield standards of the Forest Service's MU-SY Act and FLPMA. NEPA and, where listed species may be affected, the ESA, also apply.

2. The environmental and other impacts of these projects could be significant. Wind turbines can kill birds and bats, solar concentrators may take significant amounts of water, there are aesthetic impacts, and possible conflicts with recreationists, ranchers, and miners. How much initial and ongoing regulatory control does the government retain under the provisions of FLPMA quoted above?

Can the government reserve in the permit the authority to impose additional requirements, after the permit has been issued, even if these add significant costs?

Do these provisions give the government the authority to promulgate a code of "best management practices" for green energy projects that it will require all applicants to follow? Might these have an effect of the market value of the permit? Compare the discussion in the casebook of trading regulatory

flexibility for revenue when the government auctions off resources; pp. 359-64.

BLM's 2010 update of its solar policy contained the following:

Best Management Practices

The BLM is currently preparing a Solar Energy Development Programmatic Environmental Impact Statement (PEIS) that will identify the impacts of solar energy development and potential BMPs that could mitigate or reduce adverse impacts from solar energy development on the public lands. A preliminary set of potential BMPs has been developed as part of the preparation of the PEIS and posted at <http://teamspace/sites/rmpnepadocs> for consideration by BLM field offices as they analyze individual projects. *** This set of potential BMPs *** will continue to be modified as comments are received and as relevant information is collected from the processing of site-specific solar energy projects. This collection of potential BMPs is intended to serve as an interim resource to BLM field offices until the PEIS is completed and a Record of Decision has been issued.

The BLM Draft Mitigation Measures (October 2009) document also identifies a preliminary list of project-specific plans that will be required for each solar energy project and provides a brief description of the components of each plan. Many of the mitigation measures required for a project would be addressed within these project-specific plans. Examples of some of these plans include the Decommissioning and Site Reclamation Plan; Grading, Drainage, Erosion and Sedimentation Control Plan; Vegetation Management Plan; Habitat Restoration and Management Plan; Hazardous Materials Management Plan; Cultural Resources Management and Mitigation Plan; and Visual Restoration Monitoring and Compliance Plan. These plans are an essential part of a Plan of Development, which the BLM will require of an applicant (43 CFR 2804.25(b)). The terms and conditions of each right-of-way grant shall require that these plans be included in a Plan of Development and that the holder will fully comply with the terms of the plans.

BLM's April 4, 2007 Solar Policy also provides, regarding environmental review, as follows, in part:

Environmental Review

The scope of the environmental analysis required by the National Environmental Policy Act (NEPA) for a solar energy development project should address all aspects of the solar project, including direct, indirect, and cumulative effects of the proposed action.

The scope of the NEPA analysis and the compliance requirements with the Endangered Species Act, the Migratory Bird Treaty Act, the National Historic

Preservation Act, and other laws for a solar energy development right-of-way application should address the installation and maintenance of solar collectors, water for steam generation and cooling purposes, oil or gas used by backup generators, thermal or electrical storage, turbines or engines, access roads and electrical inverters and transmission facilities. The scope and level of site clearance should include the areas of proposed surface disturbance and areas potentially affected by the project.

The level of NEPA analysis will be determined by project scoping and the anticipated potential impacts on the environment. The level of analysis will reflect the amount of land needed for the solar energy collection and associated support facilities, the amount of surface to be disturbed, water requirements, and potential impacts on wildlife and other resources.

E. Mitigating Environmental Impacts:

1. Does the government have the authority under Title V to require an applicant to mitigate the impact of a green energy project by acquiring and deeding private land or private water rights to the government, to be used and managed for wildlife habitat and other forms of mitigation? Or to the transfer dollars to the government (over and above the fair market value of the land) to be used for things like habitat protection and other mitigation measures? Could the government require permit applicants to buy existing public lands grazing permits or mineral leases or other development “rights” in order to retire them, in mitigation for the impacts of the green energy project? Compare 43 USC § 1765(a), which requires each right-of-way to contain, among other things, * * * “terms and conditions which will * * * (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” Recall also that 43 USC § 1732(b) requires the Interior Secretary, in managing the public lands, to “take any action necessary to prevent unnecessary or undue degradation of the lands.”

2. How can protections of public lands to offset or mitigate the impacts of green energy projects be made permanent, or at least made commensurate with the life of the green energy project? The useful life of these kinds of projects can only be roughly projected, because the technologies are new and evolving. But suppose a solar facility will have a 75 year useful life. How can the management of other federal land in mitigation be secured for 75 years? Management decisions embodied in land use plans can be changed; decisions not issue mineral leases can

be reversed, etc. How, then, can such mitigation measures “stick”? If they were embodied in a habitat conservation plan under the ESA (see text, pp. 316-17), they might have some staying power, but there would have to be some relationship to endangered species.

Could the President proclaim a national monument requiring a tract of federal land to be managed in mitigation of a green energy project? Would the decision to mitigate make the resources in the monument “objects of scientific interest” qualifying for protection? See text, pp. 440-47.

3. Assuming the authority exists, should the government impose such mitigation measures? Is it required to do so by FLPMA and the applicable regulations quoted above?

4. In September 2008, BLM issued a directive on “off-site mitigation” policy (Instruction Memorandum No. 2008-204), which is applicable to rights of way as well as mineral leases and other intensive development of federal lands. Excerpts follow:

Policy/Action: Offsite mitigation consists of compensating for resource impacts by replacing or providing substitute resources or habitat at a different location than the project area. Offsite mitigation is supplemental to onsite mitigation and is used to enhance the BLM’s ability to fulfill its mission of providing multiple uses on the public lands, while ensuring its resource management objectives are met. In making decisions that are within its discretion (taking into account statutes, regulations, and contractual/property rights of the requester), the BLM has an obligation to approve only land use authorizations that are consistent with its mission and objectives. This may mean that the BLM may be unable to permit certain land use authorizations without appropriate mitigation measures. Onsite mitigation alone may not always be possible or sufficient, though often resources are present offsite that can offer suitable compensation for remaining onsite impacts. Consequently, offsite mitigation may be an effective management tool to ensure appropriate land use authorizations.

In order to ensure a sufficient relationship between offsite mitigation and the BLM’s mission to manage the public lands, offsite mitigation may be used only when the BLM can demonstrate that the proposed mitigation is reasonably necessary to accomplish an authorized BLM purpose.

When proposed offsite mitigation is geographically distant from the project area, and particularly when it occurs on non-Federal land, the connection to resources for which the BLM is responsible should be clear.

Offsite mitigation may be offered voluntarily by a project proponent, incorporated into the project proposal, and approved by the BLM as a condition of the permit authorization. In certain other cases, the BLM may find it necessary to advise the applicant that the project proposal

cannot be approved without additional onsite modification or additional mitigation, including offsite mitigation. There may be a need for offsite mitigation when:

1. Impacts of the proposal cannot be mitigated to an acceptable level onsite; and
2. It is expected that the proposed land use authorization as submitted would not be in compliance with law or regulations or consistent with land use plan decisions or other important resource objectives.

Early in the authorization/approval process, the BLM and the applicant should discuss mitigation options. Proposals for offsite mitigation should be evaluated through the National Environmental Policy Act (NEPA) process. * * *

The BLM's policy is to mitigate impacts to an acceptable level onsite whenever possible through avoidance, minimization, remediation, or reduction of impacts over time. Offsite mitigation is not to become the default resource mitigation practice for projects permitted by the BLM. Offsite mitigation is a supplemental mitigation practice identified on a case-by-case basis and must be based on the need to address important resource issues that cannot be acceptably mitigated onsite. It is not the intent of this policy to solicit or require applicant-committed mitigation that exceeds the impact of the applicant's proposed project. Furthermore, not all adverse impacts can or must be fully mitigated either onsite or offsite. A certain level of adverse impact may be acceptable and should be identified during the environmental review and acknowledged in the decision document. Under the provisions of Section 302 of the Federal Land Policy and Management Act (FLPMA), offsite mitigation cannot be substituted where the onsite use, if authorized, would cause unnecessary or undue degradation.

- Offsite mitigation may include, as appropriate:
 - o In-kind: Replacement or substitution of resources that are of the same type and kind as those being impacted.
 - Example: For every acre of new, long-term surface disturbance in important sage-grouse nesting/early brood-rearing habitat in Area (A), (X) acres of unsuitable habitat in Area (B) is reclaimed, treated, or planted to create new or suitable nesting/early brood-rearing sage-grouse habitat.
 - o Out-of-kind: Replacement or substitute resources that, while related, are of equal or greater overall value to public lands.
 - Example: For every acre of new, long-term surface disturbance in important sage-grouse nesting/early brood-rearing habitat in Area (A), the project proponent agrees to bury (Y) miles of existing power lines and remove the power poles used as hunting perches by raptors in Area (B).
 - o In-lieu-fee: Payment of funds to the BLM or a natural resource management agency, foundation, or other appropriate organization for performance of mitigation that addresses impacts of a project.

- Example: The applicant may make payment to the BLM or a conservation group based on the amount of acres that will be disturbed in exchange for commitment from the recipient to apply the funds toward local sage-grouse core habitat protection/restoration projects.

Depending on the circumstances, “in-kind” mitigation is generally preferred to “out-of-kind.”

Offsite mitigation may be performed on Federal lands managed by the BLM or another Federal agency. Offsite mitigation may also occur on non-Federal lands with the agreement of the surface owner or other land management agency when it provides an alternative site for conserving BLM-managed resources that have been temporarily impacted while activities are occurring on BLM-managed lands. The BLM must obtain written assurances from the agency, surface owner, and/or permit holder that offsite mitigation conducted on non-Federal lands will receive adequate management and will provide adequate protection during the expected lifetime of the development project on the BLM-managed lands.

This policy * * * does not replace or affect offsite mitigation requirements that may result from formal consultation under statute or regulation, such as Section 7 of the Endangered Species Act, the National Historic Preservation Act, or wetlands mitigation requirements available to other agencies under the Clean Water Act. * * *

BLM accompanied the directive with some questions and answers. Excerpts follow (italics added):

What is the BLM’s authority to require mitigation of impacts and to accept mitigation at another location?

The BLM’s authority to address the mitigation of impacts on public lands associated with a use authorization issued by the BLM derives from the Federal Land Policy and Management Act (FLPMA). Additional authority can be found in the statutes governing specific uses of the public lands such as the Mineral Leasing Act. The congressional declaration of policy for FLPMA states that “the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource and archeological values....” FLPMA §102(a)(8). In addition, the use, occupancy and development of public lands must be regulated by the Secretary through easements, permits, leases, licenses, or other instruments. FLPMA §302(b).

The BLM may take into account actions that are physically removed or that take place at a different location from the immediate project area, either on or off BLM-managed lands, that could serve to protect or preserve BLM resources and values in deciding whether to approve a specific use on the public lands. In some cases, the applicant’s offer to undertake certain mitigating actions may be a significant consideration in the BLM’s decision. *While the BLM does not have the authority to require an applicant to undertake mitigation offsite, the BLM can enforce the terms of a contract in which the applicant agrees to undertake specific mitigating actions offsite in order to receive the BLM’s approval of a particular use on the public lands.* The BLM may expressly condition its approval of the permit on the applicant’s commitment to take those actions, and the BLM may, if necessary, seek appropriate enforcement action to ensure the terms of the contract are met.

When is offsite mitigation appropriate? * * * Offsite mitigation may be appropriate for mitigating impacts from large development projects or closely associated smaller projects that could have undesirable cumulative effects, particularly where onsite mitigation is expected to be insufficient and it is unlikely important resource management objectives can be achieved. This may include large projects areas such as:

- Oil, gas, or geothermal fields, or individual wells that will make up a large field and associated rights-of-way;
- Major road, electrical, or pipeline rights-of-way projects;
- Wind farms or solar arrays;
- Municipal water reservoirs;
- Mining operations; and
- Recreation and Public Purposes Act leases or patents in important habitat. ***

Offsite mitigation should be designed to directly benefit an important public resource and not other permitted uses or users of that resource. For example, an energy company conducting an activity that removes a large amount of vegetation would not compensate a grazing permit holder for loss of the use of the vegetation. However, the company may partially or fully mitigate for the loss of vegetation onsite by conducting interim and final reclamation of the site. The BLM may also adjust use, grazing in this case, to reflect the loss of vegetation until such time as the vegetation returns to pre-disturbance levels.

The priority order for mitigating resource impacts onsite or offsite will be:

1. Onsite Mitigation - Onsite (avoid, minimize, rectify, or reduce in time).
2. Offsite Mitigation - Local (unless greater resource benefits can be achieved through regional or interstate mitigation).
3. Offsite Mitigation - Regional (unless greater resource benefits can be achieved through Interstate mitigation).
4. Offsite Mitigation - Interstate.

What is the process for negotiating a commitment to perform offsite mitigation?

- In early discussions with the BLM on a land use authorization, the applicant may voluntarily offer to perform mitigation services, purchase conservation easements, or contribute to a mitigation fund. Once the effects of the offered mitigation are analyzed in the NEPA document and approved by the BLM, the mitigation is incorporated into the final permit and becomes a requirement of the approved permit.
- When an applicant's proposed onsite (or offsite) mitigation is expected to be inadequate to satisfactorily address impacts of the authorized use, and the BLM anticipates that offsite mitigation may be appropriate, the BLM will notify the applicant in order to provide the applicant with an opportunity to propose alternative mitigation. For example, to avoid the need for offsite mitigation, the operator may alternatively offer a proposal for reducing surface disturbance or adjusting the pace of development. * * * The expectation is that the applicant and the BLM will discuss and seek agreement on appropriate mitigation, offsite or otherwise, prior to the BLM taking final action on a permit application.

What happens if the applicant decides not to proceed with an appropriate mitigation strategy for the impacts of the proposed action prior to the BLM issuing a decision?

- If the applicant will not agree to a mitigation strategy that reduces impacts of their proposed action to a level acceptable to the BLM * * * [t]he authorized officer may deny the permit application and return the application to the applicant. The applicant may appeal the denial to the Interior Board of Land Appeals. Before denying a permit application, * * * BLM [should] consult with the Solicitor's Office in cases where, due to existing contractual or property rights, takings or breach-of-contract claims may be raised.

What happens if the permit holder fails to perform offsite mitigation included in the approved permit?

- If operations have not begun, the BLM may revoke the permit or the holder may forfeit the permit. If operations have begun, but mitigation has not been undertaken, the holder would be issued a notice of noncompliance and given a specific time to come into compliance. In appropriate circumstances, the BLM could pursue penalties for violations, including cancellation of the permit. If operations have proceeded too far to prevent unacceptable impacts that the proposed mitigation was expected to mitigate, the BLM would seek an appropriate enforcement remedy to ensure the terms of the permit are met. The BLM may also attach the project or permit bond if one exists.

How long must offsite mitigation remain effective?

- Offsite mitigation should be designed to last as long as the onsite impacts it was designed to mitigate.
- Offsite mitigation should be designed for the long term when onsite resource losses are anticipated to be long-term, such as in the construction of a large water reservoir or wind farm.
- Offsite mitigation projects should be monitored, as appropriate, to evaluate the effectiveness of the mitigation activities and to ensure that they continue to provide adequate mitigation benefits. The BLM's decision should identify whether the BLM or the permit holder is responsible for monitoring the success of offsite mitigation and whether monitoring reports must be filed with the BLM. The applicant shall be held responsible for taking necessary actions to ensure the mitigation is successful.

When can offsite mitigation take the form of monetary contributions toward conservation projects?

- The BLM may accept an offer of volunteered monies to contribute to larger efforts to mitigate the impact of multiple actions when it is not feasible to require individual applicants to manage specific mitigation efforts. Such monies are only to be used for on-the-ground projects, land purchases, land exchanges, and conservation easements. In order to qualify as offsite mitigation, the funds collected must be identified for specific types of mitigation projects, and either the BLM or other parties should be identified as responsible for implementation of the project(s), depending on its location, whether on or off BLM lands. Before accepting money intended for expenditure off of BLM lands, managers must confirm that they have sufficient authority to expend funds in the proposed manner, such as grant or

cooperative agreement authority. Often this authority may be found in FLPMA section 307(c) or in the Wyden Amendment¹. The BLM, however, will not waive or forgo onsite mitigation of impacts through payment of monies. The NEPA analysis and decision document must be specific regarding what types of projects will be funded and how the projects will contribute to the BLM's long-term resource management goals.

- Where the effectiveness of mitigation will depend on speculative future contributions from other applicants, such contributions cannot form the basis for a Finding of No Significant Impact (FONSI) * * * in a NEPA decision document ***.

How are financial contributions for mitigation on Federal lands or in carrying out the Wyden Amendment received and managed?

- Monetary contributions to perform mitigation activities on the BLM lands must be made directly to the BLM in accordance with a formal agreement and with prior approval of the appropriate State Director.
- The BLM may also receive and manage funds for mitigation of certain activities on non-Federal lands under the authority of the Wyden amendment or similar authorities. There must be an agreement reflecting the assent of necessary parties to the proposed mitigation, which must include State or Federal agencies with regulatory responsibility for the affected resource. Before accepting money intended for expenditure off of BLM lands, managers must confirm that they have sufficient authority to expend funds in the proposed manner, such as grant or cooperative agreement authority. ***

How do we address mitigation on non-Federal lands to be managed by non-Federal parties?

- It is permissible for non-Federal parties to carry out offsite mitigation on non-Federal lands. In such circumstances, the BLM's role is to consider the proposed mitigation in its permitting decision, as well as to ensure that it is provided information on the progress and/or completion of proposed offsite mitigation. Funds for mitigation to be performed on non-Federal lands must be managed by a third party, such as a State agency or a conservation organization. The donor should enter into an agreement with the recipient and the relevant regulatory agency(ies) documenting the purposes for which the funds will be utilized ***.

Can offsite mitigation be used to compensate for unnecessary or undue degradation onsite?

- No. The FLPMA requires the BLM to take action "...to prevent unnecessary or undue degradation of the lands." FLPMA section 302(b). Unnecessary or undue degradation is not allowed on the public lands. A project proposal that will result in unnecessary or undue degradation must be either denied or mitigated onsite to eliminate the potential for causing unnecessary or undue degradation. Offsite mitigation does not directly mitigate impacts

¹ The Wyden Amendment, 16 U.S.C. 1011, provides: "For fiscal year 1997 and each fiscal year thereafter appropriations made for the Bureau of Land Management ... may be used by the Secretary of the Interior for the purpose of entering into cooperative agreements with the heads of other Federal agencies, tribal, State, and local governments, private and nonprofit entities, and landowners for the protection, restoration, and enhancement of fish and wildlife habitat and other resources on public or private land and the reduction of risk from natural disaster where public safety is threatened that benefit these resources on public lands within the watershed."

onsite and therefore may not be used to compensate for unnecessary or undue degradation of the public lands.

Reconsider the questions above in light of BLM's policy.

F. Fiscal Issues:

1. FLPMA generally requires the permittee to pay the “fair market value thereof, as determined by the Secretary.” § 1764(g), above. See also the regulation excerpted above, 43 CFR § 2806.10. (Fair market value is discussed in connection with the Burford case, text pp. 621-28.) How should fair market value be determined here? By what a green energy project developer would pay to a private landowner to site the project on private land? Are the two situations comparable? What if there are few such projects, so the number of “comparables” is limited?
2. Can the Secretary impose what functionally may look something like a royalty, by basing “fair market value” on a share of the amount of energy produced by the green energy project? Recall the government routinely imposes a royalty when it leases publicly owned minerals like coal, oil and gas. Are the situations comparable?

In June 2010, BLM adopted a “Solar energy Interim Rental Policy” (Instruction Memorandum No. 2010-141). Excerpts follow:

Rental Fees

*** [T]he rental schedule for solar right-of-way authorizations will consist of two components: (1) a base rent to be paid upon issuance of the authorization, and (2) a MW capacity fee that will be implemented over a 5-year period once the facility begins generating electricity.

Base Rent

The BLM will calculate and bill the applicant a base rent to be paid upon the date of issuance of the right-of-way authorization consistent with the provisions of 43 CFR 2806.11. As calculated in conformance with the county rates set forth below, the base rent is a per-acre fee that will be charged, regardless of the stage of development or operations, on the entire public land acreage described in the right-of-way authorization. * * *

The BLM published regulations in 2008 that used land values published by the National Agricultural Statistics Service (NASS) to establish rental fees for linear right-of-way facilities on

the public lands. Per-acre rental fees were established for every county in the U.S. based on the published NASS land values. The per-acre rental fees vary from county to county based on the different rural/agricultural land values in each county. The BLM used a 50 percent encumbrance factor of the land for linear types of rights-of-way to determine the annual rental fee. The BLM will use the same NASS data to establish the base rent for solar energy right-of-way authorizations; however, a 100 percent encumbrance factor will be used to reflect the high density land use common to solar energy projects. The encumbrance factor is a measure of the degree that a particular type of facility encumbers a right-of-way area or excludes other types of land uses. The 100 percent encumbrance factor for solar energy projects reflects the fact that a solar energy project is encumbering the entire right-of-way area to the exclusion of all other uses.

The BLM will adjust base rents for states and counties that are used for solar energy authorizations each year, based on the Implicit Price Deflator-Gross Domestic Product (IPD-GDP) index. * * * The following is a list of the current calendar year (CY) 2010 solar energy base rental fee rates by state and county:

* * *

California	CY 2010 Base Rent Fees
Imperial County	\$188.34 per acre
Kern County	\$ 94.16 per acre
Riverside County	\$313.88 per acre
San Bernardino County	\$125.56 per acre
Other counties	Double the linear right-of-way rental fee

Nevada	CY 2010 Base Rent Fees
Clark County	\$188.34 per acre

As an example, the base rent for a 4,000 acre solar energy right-of-way authorization in Clark County, Nevada, would be \$753,360 per year (4,000 acres x \$188.34 per acre).

Megawatt Capacity Fee

The BLM will charge a MW capacity fee in addition to the base rent for each solar energy right-of-way authorization. The MW capacity fee captures the increased industrial use value of the authorization, above the limited rural/agricultural land value captured by the base rent. The MW capacity fee will be calculated based on the total authorized MW capacity approved by the BLM authorized officer for the project, or an approved phase of development. This capacity fee will be charged on an annual basis upon the start of generation of electricity from the facility.

To allow for a reasonable and diligent testing and operational period, the BLM will provide for a 5-year implementation of the MW capacity fee after the start of generation operations (at the rates of 20 percent the first year, 40 percent the second year, 60 percent the third year, 80 percent the fourth year, and 100 percent the fifth and subsequent years of operations). * * *

The MW capacity fee established by this IM is: \$5,256 per MW for photovoltaic (PV) solar projects; \$6,570 per MW for concentrated PV and concentrated solar power (parabolic trough, power tower and solar dish/engine) projects without storage capacity; and \$7,884 per MW for concentrated solar power projects with storage capacity of 3 hours or more. The difference in the MW capacity fee for PV solar projects, concentrated PV, and concentrated solar power projects is dependent on the differences in the efficiency or capacity factor of each technology. These technologies include PV technologies (20 percent efficiency factor), concentrated PV and concentrated solar power without storage capacity (25 percent efficiency factor), and concentrated solar power technologies with storage capacity of 3 hours or more (30 percent efficiency factor). The BLM will periodically review the efficiency factors for the various solar technologies and update the MW capacity fee to reflect improvements in technology.

The MW capacity fee is calculated using a formula that includes an average electricity price of \$0.06 per kilowatt hour and an average Federal bond yield of 5.0 percent. The Federal bond yield reflects the rate of return the public would expect for the use of Federal resources. * * *

As an example, the MW capacity fee for a 400-MW photovoltaic solar energy right-of-way authorization would be \$2,102,400 per year (400 MW x \$5,256 per MW), implemented over a 5-year period after start of generation. The MW capacity fee for a 400-MW concentrated PV or concentrated solar power right-of-way authorization without storage capacity would be \$2,628,000 per year (400 MW x \$6,570 per MW), implemented over a 5-year period after start of generation. The MW capacity fee for a 400-MW concentrated solar power right-of-way authorization with storage capacity of 3 hours would be \$3,153,600 per year (400 MW x \$7,884 per MW), implemented over a 5-year period after start of generation. * * *

The following * * * language will be included in all solar energy right-of-way authorizations to * * * provide for rent adjustments consistent with regulatory changes or provisions of new or revised statutory authorities:

“For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental, which includes both base rent and a megawatt capacity fee, as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and as far as practicable and feasible, in accordance with comparable commercial practices. The rental provisions of this authorization may also be modified consistent with the provisions of any regulatory changes or pursuant to the provisions of any new or revised statutory authorities.”

Here is BLM’s 2008 wind policy on the subject of rentals, adopted in December 2008:

Rent: The rental fee for a development grant * * * is \$4,155 per megawatt of the total anticipated installed capacity of the wind energy project on public land based on the approved POD, a capacity factor of 30 percent, a Federal rate of return of 5.27 percent, and an average purchase price of \$0.03 per kilowatt hour. The Federal rate of return is based on the 10-year average of the 30-year Treasury bond yield (January 1998 to January 2008). The rental fee is a fixed annual BLM-wide rent based on the following formula:

Annual rent = (Anticipated total installed capacity in kilowatts on public land as identified in the approved POD) x (8760 hours per year) x (30 percent capacity factor) x (5.27 percent federal rate of return) x (\$0.03 average price per kilowatt hour).

Example for one megawatt (1,000 kW) of anticipated total installed capacity on public land:

Annual rent = (1,000 kW) x (8760 hours) x (0.30 capacity) x (0.0527 rate of return) x (\$0.03 per kWh) or \$4,155 per megawatt of anticipated total installed capacity on public land.

The annual rental fee will be phased in as follows:

- First year - 25 percent of the total rental fee or \$1,039 per megawatt
- Second year - 50 percent of the total rental fee or \$2,078 per megawatt
- Third year - 100 percent of the total rental fee or \$4,155 per megawatt

The full annual rental fee will apply at any time prior to 3 years upon the start of commercial operations of the project. The rental fee is paid annually, in advance, on a calendar-year basis consistent with the regulations (43 CFR 2806.12). The BLM will not assess a separate turbine installation fee (an additional one-time payment for each turbine installation), a production rental fee, or other fees as part of the wind energy rental fee. Any separate linear right-of-way authorizations issued for offsite facilities to support the wind energy project, such as electrical transmission lines, will be subject to the linear right-of-way rental provisions of 43 CFR 2806.20.

All wind energy right-of-way holders are subject to rent in accordance with this IM, unless they are specifically exempt from rent by statute or regulation. Some

holders or facilities may be exempt from rent pursuant to the Rural Electrification Act of 1936, as amended (43 CFR 2806.14(d)).

Question: Develop some arguments that BLM has no authority to levy a charge for a right of way that was based on the amount of electricity generated. Would the strength of the argument depend upon whether a private landowner could levy such a charge for the use of her private land for a solar or wind project?

G. The role of state law:

1. What is the role of state law, if any, to the federal decision on whether to grant the right of way for such green energy projects, and what terms and conditions to impose? See § 1763 (referring to state land use policies, among other things); § 1764 (c), referring to “other applicable law”; and § 1765(a), referring to “compliance” with certain “state standards.” What, if anything, do the Granite Rock and Ventura County cases teach on this point? In State of Montana v. Johnson, 738 F.2d 1074 (9th Cir., 1984), the court held that § 1765(a)(iv) did not require the applicant for a federal right of way to obtain a state certification of compliance with its environmental laws. It interpreted the statute to require the applicant to comply with state “substantive standards” for environmental protection, but not to require the applicant to comply with state procedural requirements. The court addressed the character of applicable state “standards” as follows:

Montana maintains that its general requirement of “minimum adverse environmental impact” is a “state standard for ... environmental protection” under § 505(a)(iv) of FLPMA. * * * The district court held that Montana's broad requirement of “minimum adverse environmental impact” was too subjective and vague to serve as a “standard” for purposes of § 505(a)(iv). We agree. By itself, the general requirement would be incapable of offering any guidance to the Secretaries of Interior and Agriculture.

* * * Although Montana's broad requirement is not a “standard” under § 505(a)(iv), at least if it stands by itself, our inquiry does not end there. Montana has promulgated a host of detailed substantive provisions with which it wants BPA to comply. If those specific provisions are “state standards for ... environmental protection” in their own right, then § 505(a)(iv) will make them directly applicable to BPA's [the right-of-way applicant] activities on federal lands.

Whether Montana's specific substantive provisions are “state standards for ... environmental protection” in their own right turns on whether their ad hoc, route-specific nature prevents them from being “standards.” The district court held that Montana's specific provisions were not “standards” because they had been adopted on an ad hoc basis. If the specific provisions were previously promulgated and if they regulated other

power lines in Montana, the parties would agree that the provisions apply to BPA's activities on federal lands.

* * * [W]e hold that Montana's specific measures for environmental protection are “standards” despite their lack of previous promulgation and widespread applicability. First, the provisions which Montana seeks to impose upon BPA concretely regulate how BPA should construct and operate the power line. They therefore meet the ordinary conception of “standards.” One * * * typical measure specifies that 5.0 lbs/acre of Bluebunch wheatgrass must be reseeded on dry sites at high elevation after construction. Such detailed regulation of future activities falls within the ordinary meaning of “standards.”

* * * The language of § 505(a)(iv) evinces the principal purpose of allowing states to impose more stringent measures for environmental protection on right-of-way grantees than the federal government requires. The central purpose of more stringent environmental protection at the option of the state is furthered by according states the discretion to impose route-specific requirements on federal grantees. In many instances, a state could not effectively protect the environment if it were restricted to promulgating, in advance, quantifiable standards that apply in numerous instances. Because each power line crosses a unique environment, the trade-offs involved in environmental protection must frequently be made on an ad hoc, case-by-case basis. To take one example, protection of the environment often requires weighing the benefits of routing a power line away from an environmentally sensitive area against the costs of doing so.

* * * We hold that Montana's specific measures for environmental protection are “state standards for ... environmental protection” in their own right under § 505(a)(iv) of FLPMA. Therefore, Montana's specific measures are directly applicable to BPA's activities on federal lands.

On the other hand, in Citizens for a Better Henderson v. Hodel, 768 F.2d 1051 (9th Cir. 1985), the court held that § 1765(a)(iv) did not require federal right-of-way applicants to conform to local zoning ordinances or plans, and thus a town regulation that would prevent use of a right of way granted across federal lands “conflicts with and must give way to” the federal right of way.

H. The Legal Nature of a Right of Way:

1. Given the teachings of the preceding materials on BLM’s authority to regulate the use of rights of way, how would you characterize the legal status of a right of way permit granted under FLPMA? Does the holder of a rights of way permit for a green energy project have a property right or contract right, good against the government? Compare Judge Breyer’s discussion of this issue in the Meadow

Green-Wildcat decision in the text, pp. 345-46, and Justice Breyer’s analysis of the regulatory framework and terms and conditions imposed in offshore oil leases in Mobil Oil, p. 347. How would his analysis apply to a right of way permit for a large, long-lived concentrating solar power plant? Look, for example, at §1764(b) and (c), *supra*, discussing the Secretary’s authority to include terms and conditions in the permit, and the applicability of regulations and stipulations.

I. Government Retention versus Disposition:

1. Should the government simply sell off (privatize) land for such projects? Solar concentrating projects in particular will likely be long-term, very intensive uses of land that do not allow for other “multiple uses.” Might such sites be candidates for privatization? Do they serve any national interest by remaining in public ownership?
2. FLPMA generally allows the BLM to sell public lands under certain circumstances; see 43 USC § 1713, quoted and discussed in the text at pp. 449-53. Does the sale of green energy sites on public lands meet the terms of the statute quoted there?
3. Could, or should, the lands be sold with a provision that would revert title in the national government once the useful life of the green energy project has ended, and the land is cleaned up, revegetated, etc.?
4. Under current law the revenue from sales of public land goes into the general federal treasury, unless it meets the terms of the Federal Land Transaction Facilitation Act, discussed on p. 452, in which case the revenue can be used to buy inholdings and other lands of exceptional conservation value. Should FLTFA be used to turn the sales of sites for green energy projects into a fund more acquiring mitigation land?
5. Instead of by sales, should green energy sites be conveyed into private ownership by land exchange? Land exchanges are discussed in the casebook on pp. 454-65.

Meanwhile, Congress has not been totally quiescent on this subject. Hearings were held in September in the U.S. House of Representatives on the Consolidated Land,

Energy, and Aquatic Resources Act of 2009 (HR 3534), issued by Nick Joe Rahall, then Chair of the House Natural Resources Committee. It contains the following provisions:

SEC. 501. COMMERCIAL WIND AND SOLAR LEASING PROGRAM.

(a) In General- Pursuant to the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) and the National Forest Management Act of 1976 (16 U.S.C. 1600 et seq.), the Secretary, acting through the Director, may issue leases, on a competitive basis, for commercial solar or wind energy development on Federal lands under the administrative jurisdiction of the Bureau of Land Management or of the Forest Service, except that the Secretary may not issue any such lease on National Forest System lands over the objection of the Secretary of Agriculture.

(b) Final Regulations- Not later than 18 months after the date of enactment of this Act, the Secretary of the Interior shall publish final regulations establishing a commercial wind and solar leasing program under subsection (a).

(c) Commencement of Commercial Leasing for Solar and Wind Energy on Public Lands- Not later than 90 days after completion of regulations required under subsection (b), or as soon as practicable thereafter, and following consultation with affected governors and other stakeholders, the Secretary shall conduct lease sales under the regulations under this subtitle.

(d) Easements, Special-use Permits, and Rights-of-way- Upon completion of regulations required under subsection (b), easements, special-use permits, and rights-of-way shall not be available for commercial wind and solar projects on Federal lands under the administrative jurisdiction of the Bureau of Land Management or Forest Service, except for the placement and operation of testing or data collection devices or facilities that will not result in the commercial sale of electric power.

* * *

(g) Diligent Development Requirements- The Secretary shall, by regulation, designate work requirements and milestones to ensure that diligent development is carried out under each lease issued under this subtitle.

SEC. 502. LAND MANAGEMENT. The Secretary, in consultation with the Director of the Bureau of Land Management and the Chief of the Forest Service, shall issue regulations that--

- (1) establish the duration of leases under this subtitle;
- (2) require the holder of a lease granted under this subtitle to--
 - (A) furnish a surety bond or other form of security, as prescribed by the Director;
 - (B) upon completion of activities authorized by the lease provide for--
 - (i) the restoration of the area that is subject to the lease to the condition in which the area existed before the granting of the lease; or
 - (ii) mitigation activities if restoration to such condition is impractical; and
 - (C) comply with such other requirements as the Director and affected Federal land manager consider necessary to protect the interests of the public and the United States; and
- (3) establish best management practices and require renewable energy operators to comply with those practices to ensure the sound, efficient, and environmentally responsible development of wind and solar resources on Federal lands in a manner that shall avoid, minimize, and mitigate actual and anticipated impacts to habitat and ecosystem function resulting from such development and to areas proposed for wilderness or other protection.

SEC. 503. REVENUES.

- (a) Establishment of Payment Requirements- The Secretary shall establish royalties, fees, rentals, bonus bids, or other payments for leases issued under this subtitle, that shall--
- (1) encourage development of solar and wind energy on public lands;
 - (2) ensure a fair return to the United States; and
 - (3) be commensurate with similar payments for the development of solar and wind energy on State and private lands.
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(b) Deposit- All revenues for payments established under this section shall be deposited in the general fund of the Treasury.

Questions:

1. How would this legislation, if enacted, address the questions in the preceding material?
2. How would it change Interior's policies?
3. Could the executive branch do everything provided for in this bill under existing law? If so, is this bill necessary?
4. Are the three standards for setting lease payments in § 503(a)(1)-(3) consistent with each other? To the extent they conflict with each other, how would or should the executive resolve the conflicts among them in setting lease payments?

Migratory Birds, Eagles, and Wind Policy. One of the big concerns about wind projects is their impact on migratory birds. Here's what the December 2008 BLM policy has to say on the subject:

Wildlife and Migratory Birds

In July 2003, the Fish and Wildlife Service (FWS) issued "Voluntary Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines." The guidelines are currently being reviewed by a Wind Turbine Guidelines Advisory Committee established under the Federal Advisory Committee Act (FACA) to provide further advice and recommendations to the Secretary of the Interior (Secretary) on effective measures to avoid or minimize impacts to wildlife and their habitats from wind energy facilities. The voluntary interim guidelines are not mandatory requirements in BLM land use plan decisions. Until the Secretary determines the applicability of final guidelines for the Department of the Interior (DOI) agencies, the FWS interim guidelines should only be used as a general guide to assist the BLM in siting decisions and the design of pre-development surveys, mitigation measures, and post-construction monitoring for site-specific projects.

The BLM Washington Office IM 2008-050 (December 18, 2007) provides interim guidance for Federal responsibilities under the Migratory Bird Treaty Act. This guidance addresses analysis of BLM land use planning decisions to avoid or minimize measurable negative impacts to migratory bird populations. The BLM guidance on migratory birds and the FWS guidelines may be used for site-specific wind energy projects to assist in developing mitigation measures for avoiding or minimizing impacts to wildlife and avoiding or minimizing measurable negative impacts to migratory birds. ***

Here is the core of the BLM 2007 “interim guidance:”

* * *

Best Management Practices: Best Management Practices to avoid or minimize the possibility of the unintentional take of migratory birds should be applied to all practices and projects. Practices should be applied to provide long-term benefits and improved vegetation community condition. If the proposed project or action does have the potential to impact migratory bird species populations which have been identified as occurring within the project or action area, evaluate options to mitigate the project to minimize or eliminate the identified impacts during periods of concentrated nesting activity. Examples include:

- a. Minimize/avoid impacts to nesting migratory birds by imposing a Timing Limitation on use authorizations to mitigate vegetative disturbing activities during the primary portion of the nesting season. Most migratory birds nest between May 15 to July 15, but dates should be adjusted for the species and environmental conditions. Timing limitations may be modified based upon the species affected and the timing or intensity of breeding activity of the species of Birds of Conservation Concern involved.
 - b. Where disturbance cannot be avoided, the scale and the length of time of disturbance may be considered mitigating circumstances.
 - c. Inspect and clear an area for migratory bird nesting. These clearances could be performed by BLM or other qualified personnel. Factors to weigh in considering this option include vegetation type, vegetation density, timing and cost.
 - d. Explore opportunities to replace and prioritize habitat and habitat changes on or off site based upon the needs of Birds of Conservation Concern.
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Now read pages 895-906 of the textbook, addressing the Migratory Bird Treaty Act, and ponder the following questions:

1. Try to answer the questions in notes 1-3, 6-7, and 9 on pp. 903-05. Most are relevant to the issue of how to handle migratory bird impacts of green energy projects. For example, how important is intention; i.e., are accidental killings subject to the Act? See note 5, p. 904, and recall the discussion of scienter questions in Justice Scalia's dissent in the Sweet Home case, text, p. 313.
 2. Compared to other sources of bird mortality, green energy projects are very small contributors. See the statistics in note 8 on pp. 904-05. (Also, on the website is a link to a short FWS paper on the subject.) The American Bird Conservancy estimates that U.S. wind turbines kill between 75,000 and 275,000 birds per year. A study of the wind farm at Altamont Pass about 40 miles east of San Francisco estimated that the wind projects there kill about 10,000 birds a year, including 80 golden eagles as well as red-tailed hawks and burrowing owls. Should the government be vigilant in controlling the bird impacts of wind projects when it is doing little about far larger threats, like house cats? Should green energy projects simply be exempted from the MBTA on policy grounds?
 3. How does the MBTA differ from the ESA on the question of bird impacts from wind projects? What if the birds known to be killed by such projects are on the endangered species list? See note 6, p. 904.
 4. The government occasionally does bring high-profile MBTA cases; e.g., in addition to the cases in note 5 on p. 904, in July 2009 Pacificorp, an Oregon-based utility, paid \$1.5 million in fines, restitution and equipment improvements after 232 eagles were killed by its power lines in Wyoming, and the next month ExxonMobil pled guilty to MBTA violations involving the deaths of several dozen birds at its operation in several states, and paid \$600,000 in fines and fees.
 5. Defenders of wind projects say that they are learning better methods to minimize bird deaths, including in turbine design, more bird-sensitive placement (away from nesting sites, ridgelines, migratory routes, or where raptors hunt for small animals), building towers higher and with more space between them, and even using radar to detect the approach of migratory birds and temporarily shutting down turbines.
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