Chapter 13
RENEWABLE ENERGY DEVELOPMENT ON THE FEDERAL PUBLIC LANDS: CATCHING UP WITH THE NEW LAND RUSH

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Synopsis

§ 13.01 Introduction[*1]

The federal public lands have long played a pivotal role in the development and expansion of our national agenda and aspirations.[2] From the California Gold Rush of 1848 to the western Colorado oil shale boom of the late 1970s, these lands contain natural resources and

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[1]The author thanks Andrew W. Ingersoll, senior associate at Farella Braun + Martel LLP, for his assistance in the preparation of this chapter.

[2]For purposes of this chapter, the term "federal public lands" is defined as those lands over which the United States retains title and which have not been withdrawn or reserved for a specific purpose (e.g., military lands, national parks, or Indian reservations), specifically focusing on those public lands managed by the Bureau of Land Management (BLM) pursuant to the Federal Land Policy and Management Act of 1976 (FLPMA), 43 U.S.C. §§ 1701-1782 (elec. 2009).

environmental attributes central to the character of the American West.[3] Today, a modern-day land rush promises to define a new era for the federal public lands, one that will require even greater vigilance to balance both the use of natural resources and protection of the environment. Unlike the resource booms that preceded it, however, this land rush focuses not on what is *in* the land but what is available *above* it—specifically, solar and wind resources, which are uniquely situated on the federal public lands and necessary to achieve national goals of energy independence and greenhouse gas emission reductions.

This chapter provides an overview of the renewable energy land rush and its implications for federal public land management and regulation. Section 13.02 discusses the causes for the sudden growth in solar and wind energy project applications on the federal public lands and the management and environmental issues posed by these projects. Section 13.03 outlines the current legal and policy framework for regulating the development of large-scale solar and wind projects, including current efforts underway to address the application and development process. Section 13.04 concludes with observations regarding the constraints of the existing regulatory model in facilitating large-scale solar and wind project development, and the path that lies ahead in attempting to balance the need to develop these renewable resources while simultaneously protecting the environment and honoring the multiple use mandate for the public lands.

§ 13.02 The Renewable Energy Land Rush Is Underway

[1] The Driving Forces for Solar and Wind Project Demand on the Federal Public Lands

The increased focus on developing renewable energy on the federal public lands results from a unique confluence of energy issues and characteristics inherent to the lands themselves. While the driving forces behind the surge in solar and wind project applications on the federal public lands are complex and varied, they can be grouped into three general areas: market forces, government intervention, and resource availability.

[a] The Confluence of Conventional and Renewable Energy Costs

The price gap between conventional fuels and renewable energy has narrowed substantially in recent years, leading to increased interest in solar and wind power projects. The period from 2003 to 2008 witnessed one of the largest increases in fossil fuel prices in our nation's history. During this time, the price of oil rose to a record level above $145.00 per

[3] Technically speaking, the California Gold Rush of 1848 commenced prior to the extension of federal administrative authority over public domain lands in California following the acquisition of those lands as a result of the Mexican American War and adoption of the Treaty of Guadalupe Hidalgo (1848). Kenneth N. Owens, Riches for All: The California Gold Rush and the World, 16-17 (2002).

barrel, and natural gas prices for electricity production peaked at record levels above $12.00 per million BTUs.[4] Although more variable depending on the relevant geographic market, coal prices similarly reached record levels during this time period, striking $150 per short ton in northern Appalachia.[5] While fossil fuel prices have retreated substantially since their highs, the potential for return to these levels and continued volatility in these markets remain concerns of consumers, utilities, and energy producers.

During the time period when conventional fuels reached their peak levels, renewable energy technology costs have substantially decreased. These technology efficiencies are largely attributed to the support for solar and wind technology in Europe where "feed-in tariffs" in Germany and Spain (which require utilities to purchase renewable power at above-market rates) drove an exponential growth in technology development and deployment.[6] Between 2004 and 2009, thin-film photovoltaic solar panel manufacturers tripled the efficiency of the technology, reducing manufacturing costs from over $3.00 to $.98 per watt.[7] Wind turbine manufacturers have gone a step further, claiming to reduce wind power production costs to $1.00 per watt installed.[8] While there remains a significant price gap between fossil fuels and solar and wind on a per-kilowatt-hour cost basis, this gap is closing, and some predict "grid parity" as soon as 2012.[9] Imposition of a cap-and-trade system for greenhouse gases, presently being considered by Congress, would only accelerate the competitiveness of wind and solar.

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[4]U.S. Energy Information Administration, Official Energy Statistics for the U.S. Government, *available at* http://tonto.eia.doe.gov/dnav/pet/hist/rwtcd.htm (Cushing, OK WTI daily spot price), and http://tonto.eia.doe.gov/dnav/ng/hist/n3045us3m.htm (U.S. natural gas electric power prices).

[5]U.S. Energy Information Administration, Official Energy Statistics for the U.S. Government, *available at* http://www.eia.doe.gov/cneaf/coal/page/coalnews/coalmar.html (historic average weekly coal commodity spot price for northern Appalachia).

[6]Miguel Mendonca, "Feed-In Tariffs: Accelerating the Deployment of Renewable Energy," 25-58 (World Future Council 2007) (describing German and Spanish feed-in tariff history and success).

[7]Press Release, First Solar, "First Solar Passes $1 per Watt Industry Milestone" (Feb. 24, 2009), *available at* http://investor.firstsolar.com/phoenix.zhtml?c=201491&p=irolnewsArticle&ID=1259614.

[8]Carli Ghelfi, "The Race for Affordable Wind" (June 2, 2008), *available at* http://cleantech.com.

[9]Martin LaMonica, "Solar-Power Prices Slide Toward Grid Parity," CNET News (Feb. 24, 2009), *available at* http://news.cnet.com/8301-11128_3-10170650-54.html.

[b] Government Intervention in the Market

In response to rising conventional fuel costs and increasing recognition of the adverse impacts from greenhouse gas emissions on air quality and climate change, public interest has driven greater government tax incentives to defray the cost of project development and mandates to develop renewable energy sources. On the incentive side, these programs include the federal production tax credit for wind power and investment tax credit for solar power, which provide tax incentives of up to 30%. Congress recently extended these programs in the American Recovery and Reinvestment Act of 2009, which went a step further by creating grants-in-lieu of tax credits and directing hundreds of millions of dollars to research, development, and loan programs.[10]

Perhaps the government program with the greatest single impact on renewable energy demand is the establishment of state-based renewable portfolio standards (RPS), through which state governments require that regulated utilities generate certain percentages, or specified amounts, of renewable energy by specific deadlines. While some RPS were initiated as early as the 1990s, the vast majority were implemented after 2001. Moreover, since 2001, RPS legislation has become increasingly aggressive. For example, in the southwest, California's RPS require 20% renewable energy supply by 2010 and 33% by 2020.[11] Mandatory standards now exist in 29 states and the District of Columbia, and Congress is presently considering legislation to establish a national renewable energy standard.[12]

[c] The Attraction of Public Lands for Solar and Wind Development

The siting of solar and wind projects sufficient to meet utility-scale power needs requires certain land and resource characteristics uniquely available on the federal public lands. While the land production capacity and grade requirements differ depending upon the relevant technology (even within the wind and solar fields themselves), as a general matter, utility-scale projects can range in size from a few megawatts (MW) to more than 1,000 MW. Such projects typically require large, open, and generally level, undeveloped tracts ranging in size from several thousand acres to

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[10] *See* American Recovery and Reinvestment Act of 2009, §§ 1101, 1603, Pub. L. No. 111-5 (2009).

[11] California established its RPS in 2001 (Senate Bill 1078, Sher, Chapter 516, Statutes of 2002) and, through executive order, Governor Arnold Schwarzenegger recently accelerated the production level to 33% by 2020 (Executive Order S-14-08).

[12] *See* NREL Energy Analysts Dig into Feed-In Tariffs (June 12, 2009), *available at* http://www.nrel.gov/features/20090612-fits.html. There are an additional five states with voluntary, rather than mandatory, goals. *See* U.S. Department of Energy, Energy, Efficiency and Renewable Energy (June 16, 2009), *available at* http://apps1.eere.energy.gov/states/maps/renewable_portfolio_states.cfm.

more than 50,000 acres. They require access for interconnection to major transmission lines. Finally, and most importantly, for optimal efficiency, these projects need to be situated in areas with consistently high levels of sunshine and wind.

Each of the required characteristics is present in abundance on the federal public lands in the West, lands that remain largely undeveloped, crossed with major utility transmission lines, and recognized as containing the highest density of solar and wind resources in the United States. Recognizing this potential, in 2005 Congress mandated that the Secretary of the Department of the Interior (DOI) install 10,000 MW of non-hydropower renewable energy projects on the public lands by 2015.[13] The Bureau of Land Management (BLM) itself estimates that it manages 30 million acres of public lands with solar potential, and another 20.6 million acres with wind potential.[14] DOI Secretary Ken Salazar recently estimated that the public lands in the West could generate 206 gigawatts of wind energy and 2,900 gigawatts of solar energy—collectively about three times current national electricity generating capacity.[15]

[2] The Resulting Impacts and Challenges for BLM's Administration of the Federal Public Lands

Driven by market and government forces and resource availability, the demand for siting large or utility-scale renewable energy projects on the federal public lands has skyrocketed in the past several years. While there was no installed solar generating capacity on BLM lands at the time of this writing, 223 solar project applications have been filed since 2005, covering more than 2.3 million acres of public land. At the same time, wind project applications have doubled, from 192 authorized projects in varying stages of development to more than 200 new applications with ever-increasing size and generating capacity. Nowhere is this demand felt more acutely than in California, where 156 solar and wind projects await approval for an area covering nearly 1.4 million acres, most of which are located in the Mojave Desert region.[16]

The unprecedented rise in solar and wind project applications quickly outstripped BLM's capacity to process these applications, presenting

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[13] Energy Policy Act of 2005, Pub. L. No. 109-58, § 211 (2005).

[14] *See* Renewable Energy and the BLM: Solar (Jan. 2009), and Renewable Energy and the BLM: Wind (Jan. 2009), *available at* http://www.blm.gov.

[15] *See* Secretary of the Interior Ken Salazar, Remarks to the American Wind Energy Association, Chicago, Illinois (May 5, 2009), *available at* http://www.doi.gov/secretary/speeches/050509_speech.html.

[16] *See* California Renewable Energy Summary Statistics as of April 2009, *available at* http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/pa/energy.Par.63078.File.dat/Renew_Energy_2_09_summary.pdf (as of Aug. 1, 2009).

a number of unique management and environmental challenges. On the management side, the sheer number of the proposed projects has overwhelmed staffing levels and BLM's ability to catalogue—let alone process—these applications through the myriad of Federal Land Policy and Management Act (FLPMA), National Environmental Policy Act (NEPA), Endangered Species Act (ESA), and other federal and state approvals. Moreover, these projects present new challenges to FLPMA's existing application process, which has historically focused on providing noncompetitive "rights-of-way" (discussed in section 13.04[1]) for roads, pipelines, and transmission lines, and does not, on its face, address the types of applications filed with BLM today that may seek to develop thousands of acres of land.

Today's solar and wind project developers often seek to secure access to the optimal resource and transmission sites prior to securing the definitive utility power purchaser agreement (PPA) often necessary to initiate and finance project development. Consequently, speculative applications have the potential to lock up large tracts of federal land for an indefinite period of time and, in many cases, could result in multiple applicants waiting in line for the opportunity to develop the same tract of land. BLM's existing rental fee structure—typically based on the fair market value of actual land involved—also appears ill-suited to address the valuable and long-term revenue stream to be derived from generating power from the public lands.

The environmental challenges presented by large-scale solar and wind projects are significant. These challenges range from potential impacts to wildlife and habitat resulting from surface construction and development (and, in the case of wind turbines, from operation), to aesthetic impacts associated with installing rows of wind turbines or acres of solar panels, mirrors, or collectors. These potential impacts are compounded by relatively new and continually evolving technologies, with varying degrees of land-use impact (e.g., need for concrete footings or pads), resource needs (e.g., water for steam generation or cooling), and unpredictability regarding long-term effectiveness, operation, and time frame for decommissioning. Finally, unlike more traditional road or transmission line access, the significant size of these projects presents compatibility challenges for other uses of the federal public lands, including natural resource protection, recreational access, grazing, and mineral or oil and gas exploration.

The sudden rise in solar and wind project applications and unique challenges presented by these projects have forced BLM largely into a reactionary role. Given the earlier influx of wind project applications, in 2005 BLM completed a Programmatic Environmental Impact Statement (PEIS) pursuant to NEPA for wind energy development in 11 western states, which resulted in amending 52 land use plans to address wind project development (discussed in section 13.03[3][a]). Faced with a

backlog of 125 solar project applications in May 2008, BLM, along with the Department of Energy (DOE), issued a notice of intent to prepare a PEIS for solar project development and simultaneously instituted a two-year moratorium on filing new applications in Arizona, California, Colorado, New Mexico, Nevada, and Utah pending completion of its study.[17] Within several weeks of BLM's decision, the agency rescinded the moratorium in response to widespread industry and public opposition.[18]

While the number of projects and the acreage covered presents a virtually unprecedented demand on federal agencies, the demand is unlikely to slacken. New government policies—including the economic stimulus push at the federal level, existing state and anticipated federal climate change legislation, and increasing state renewable portfolio standards—portend a continuing flood of project applications and mounting pressure to approve projects for development.

§ 13.03 The Current Regulatory Framework for Approving Solar and Wind Projects

[1] The Federal Land Policy and Management Act Right-of-Way Process

Pursuant to BLM's solar and wind development policies, BLM processes applications to site solar and wind projects on public lands pursuant to Title V of FLPMA and BLM's implementing regulations.[19] FLPMA Title V governs the grants of rights-of-way "over, upon, under and through" the federal public lands and authorizes rights and privileges for a specified use of the land for a defined period of time and under terms and conditions imposed by the agency.[19.1] FLPMA vests BLM with considerable—although not unfettered—discretion in approving or rejecting applications for rights-of-way.[20] When BLM exercises its discretionary authority to reject

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[17] *See* 73 Fed. Reg. 30,908 (May 29, 2008). This PEIS is discussed in § 13.03[3][b] of this chapter.

[18] BLM to Continue Accepting Solar Energy Applications (July 2, 2008), *available at* http://www.blm.gov.

[19] 43 U.S.C. §§ 1761-71 (elec. 2009); 43 C.F.R. subpt. 2804 (elec. 2009). *See* U.S. Department of the Interior, Bureau of Land Management, Solar Energy Development Policy, Instruction Memo. No. 2007-097 (Apr. 4, 2007) [hereinafter BLM's 2007 Solar Policy]; U.S. Department of the Interior, Bureau of Land Management, Wind Energy Development Policy, Instruction Memo. No. 2009-043 at 1-3 (Dec. 19, 2008) [hereinafter BLM's 2008 Wind Policy].

[19.1] 43 U.S.C. § 1761.

[20] Fallini v. BLM, 162 IBLA 10, 34, GFS(MISC) 16(2004).

a right-of-way application, however, it must provide a reasonable basis for its decision that is supported by the administrative record.[21]

BLM's ultimate review of any proposed activity on public land centers around FLPMA's multiple use mandate and resource management plan (RMP) model. FLPMA directs BLM to conduct inventories and establish RMPs to manage tracts or areas of the public lands, taking into account, among other things, principles of multiple use and sustained yield; a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences; and consideration of the present and potential uses of the public lands.[22] As aptly described by the Supreme Court:

> "Multiple use management" is a deceptively simple term that describes the enormously complicated task of striking a balance among the many competing uses to which land can be put, "including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and [uses serving] natural scenic, scientific and historical values."[23]

Today, solar and wind energy only add to this complex balancing act.

BLM's implementing regulations describe those lands under the agency's jurisdiction that are available for right-of-way grants. The relevant areas include any lands under BLM's jurisdiction *except* where such lands are excluded from rights-of-way pursuant to statute, regulation, or public land order; where the lands are specifically segregated or withdrawn from right-of-way uses; or where the agency, in RMPs or in the analysis of an application, identifies areas that are inappropriate for right-of-way uses.[24] Thus, unless the relevant public lands are excluded or withdrawn from right-of-way uses in one of the aforementioned ways, such lands are presumptively open for siting solar and wind projects, and BLM may process right-of-way applications pursuant to FLPMA. In this regard, BLM's RMP process is critical in identifying those areas that are either compatible or not compatible with solar or wind project development.

[2] BLM's Project-Specific Policies and Guidance

Beyond FLPMA and its implementing regulations, BLM has supplemented its procedures for processing and evaluating solar and wind project applications through separate internal guidance policies, known as Instructional Memoranda (IM). These policies are further expanded and clarified by additional agency guidance documents and orders and, particularly in the case of wind energy, identify development policies and

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[21] Orion Energy, LLC, 175 IBLA 81, 89, GFS(MISC) 27(2008); Union Telephone Company, Inc., 173 IBLA 313, 327, GFS(MISC) 6(2008).

[22] 43 U.S.C. § 1712(a), (c) (elec. 2009).

[23] Norton v. S. Utah Wilderness Alliance, 542 U.S. 55, 58 (2004) (citation omitted).

[24] 43 C.F.R. § 2802.10 (elec. 2009).

best management practices (BMPs) (further discussed in § 13.04[3]).[25] While the policies differ depending upon the applicable technology and contain specific details beyond the scope of this chapter, several elements common to both solar and wind project development merit attention and are outlined below.

[a] BLM's Promotion of Solar and Wind Energy Development

BLM's policies reaffirm the congressional directive contained in the Energy Policy Act of 2005 mandating the development of "at least" 10,000 MW of non-hydropower renewable energy projects on the federal public lands by 2015.[26] In furtherance of this requirement, BLM's policies both "encourage" development of wind and solar energy and, in the case of solar, state that the agency's "general policy is to facilitate environmentally responsible commercial development of solar energy projects on public lands and to use solar energy systems on BLM facilities when feasible."[27] BLM's 2007 Solar Policy further provides that BLM intends to identify right-of-way applications for solar energy projects "as a high priority Field Office workload" and to process those applications in a timely manner.[28]

BLM's commitment to promote wind and solar development on the public lands received recent support from DOI Secretary Salazar through the establishment of a Departmental Task Force on Energy and Climate Change, which makes the development, production, and delivery of renewable energy one of DOI's "highest priorities."[29] In an effort to begin to address the backlog of right-of-way applications and establish a more coordinated approach to process solar and wind project applications, Secretary Salazar also announced the opening of four new BLM Renewable Energy Coordination Offices.[30]

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[25] *See, e.g.*, BLM's 2008 Wind Policy, *supra* note 19, and BLM's 2007 Solar Policy, *supra* note 19; Secretary of the Interior, Order No. 3285: Renewable Energy Development by the Department of the Interior (March 11, 2009). Note, however, that the DOI's Instructional Memoranda and analogous policy statements do not constitute regulations with the force and effect of law, and do not bind the agency or the public at large. *See* Biodiversity Conservation Alliance, 174 IBLA 174, 180, GFS(O&G) 8(2008).

[26] Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, § 211.

[27] BLM's 2008 Wind Policy, *supra* note 19, at 11; *see also* BLM's 2007 Solar Policy, *supra* note 19, at 1.

[28] BLM's 2008 Wind Policy, *supra* note 19, at 2.

[29] Order No. 3285, *supra* note 25.

[30] Press Release, U.S. Dep't of the Interior, "Secretary Salazar Pledges to Open Four Renewable Energy Permitting Offices, Create Renewable Energy Teams" (May 5, 2009).

[b] The Application and Plan of Development Process

BLM's processing of right-of-way applications proceeds through three principal levels of review under BLM's regulations, commencing with submitting an application (a Standard Form or SF-299 application), followed by filing a more detailed Plan of Development (POD), and concluding with environmental review pursuant to NEPA and related federal and state statutes. As an "action authorized, funded or carried out" by BLM, the issuance of a right-of-way grant also triggers compliance with consultation requirements under section 7 of the ESA—an issue particularly relevant for solar and wind development in light of many of the desert and alpine environments involved—and section 106 of National Historic Preservation Act (NHPA), as well as other applicable federal and state statutes.[31]

Prior to submission of an SF-299 application, BLM's policies encourage the authorized officer to schedule a pre-application meeting with the prospective applicant. The purpose of this meeting is to facilitate preparation and processing of the application; to identify "potential issues and land use conflicts" that could impact the authorized officer's decision to grant or not grant the right-of-way authorization; and, if appropriate, to consider potential alternative site locations.[32] The policies further require the submission and approval of a detailed POD for construction and operation, which BLM now requires prior to initiating its NEPA review process for project development and, in the case of solar projects, within 90 days following the filing of a right-of-way application.[33]

[c] Determining Site Priority

Unlike competitive bidding processes that exist for oil and gas and geothermal leasing on the federal public lands, FLPMA's right-of-way grant process has historically addressed access issues (e.g., road rights-of-way) that are inherently noncompetitive. For both solar and wind project applications, BLM accepts and processes applications on a "first-come, first-served" basis.[34] A competitive bidding process may, however, be initiated where an RMP specifically identifies an area for competitive leasing or, in the solar context, where other "public interest and technical"

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[31] 16 U.S.C. § 1536(a) (elec. 2009).

[32] *See* BLM 2007 Solar Policy, *supra* note 19, at 2-3; BLM 2008 Wind Policy, *supra* note 19, at 3.

[33] BLM 2007 Solar Policy, *supra* note 19, at 3; BLM 2008 Wind Policy, *supra* note 19, at 6. *See also* BLM Solar Energy Plan of Development (July 3, 2008), and BLM Wind Energy Plan of Development (2009), *available at* http://www.blm.gov.

[34] BLM 2007 Solar Policy, *supra* note 19, at 5, and BLM 2008 Wind Policy, *supra* note 19, at 8.

factors merit competitive leasing.[35] Notably, until the issuance of a grant, it is generally recognized that the applicant does not possess a property interest in federal land and such application may be superseded by any number of authorized federal actions.[36]

[d] Requiring Due Diligence

BLM must also deter land speculators from locking up tracts of public land that could impede actual development. This need, however, must be carefully balanced against the realities of utility-scale energy project development, which will typically require producers to first secure a PPA prior to proceeding with project financing and development. BLM has thus far addressed this issue in two ways. First, BLM's regulations require a detailed submission of applicant information, including the applicant's technical and financial capability to construct, operate, maintain, and terminate the project.[37] Second, BLM requires that project construction commence within three years of the issuance of a right-of-way grant (for solar projects) and within two years of the issuance of a development authorization (for wind projects).[38]

[e] Terms and Conditions on the Grant

FLPMA itself mandates that BLM impose terms and conditions to "minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment . . . [and] require compliance with applicable air and water quality standards. . . ."[39] The terms and conditions range from the requirement to comply with applicable federal and state laws and regulations to individual project-specific requirements.[40] As discussed further below, BLM recently instituted BMPs for wind project development and at the time of this writing was in the process of doing

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[35] BLM 2007 Solar Policy, *supra* note 19, at 5.

[36] New England Fish Co., 42 IBLA 200, 204, GFS(MISC) 75(1979) ("No rights vest in the applicant [for a right-of-way application] until the grant is approved by the Secretary."); U.S. Dep't of the Interior, Office of the Solicitor, Solicitor's Opinion M-36910, The BLM Wilderness Review and Valid Existing Rights (Oct. 5, 1981) (distinguishing between "vested rights," "valid existing rights," and "applications" or "proposals"), GFS(O&G) SO-1(1982).

[37] 43 C.F.R. § 2804.12 (elec. 2009).

[38] BLM 2007 Solar Policy, *supra* note 19, at 5-6, and BLM 2008 Wind Policy, *supra* note 19, at 9-10.

[39] 43 U.S.C. § 1765(a)(ii), (iii) (elec. 2009). See generally 43 C.F.R. § 2804.26 (elec. 2009) (describing the criteria upon which an application may be rejected); § 2804.25(d) (describing subsequent environmental review under NEPA); § 2805.12 (describing terms and conditions). *See also* BLM National Environmental Policy Act Handbook H-1790-1, Chapter 4 and related appendices for potential categorical exclusions.

[40] *See generally* 43 C.F.R. § 2805.12 (elec. 2009).

the same for solar projects, which will result in a more uniform set of industry-wide terms and conditions.

As a general matter, the period or term of a right-of-way grant is not limited by FLPMA or BLM's implementing regulations. In recognition of the considerable project development costs and commitment, BLM's policies do envision the duration of solar and wind projects to extend through the useful life of the project technology, which for both solar and wind projects is generally 30 years and may be extended.[41] The issuance of a grant is merely a possessory interest in the land and is by no means exclusive. BLM's policies make clear that the agency retains the authority to authorize other compatible uses within the scope of the right-of-way during the term of the grant. Moreover, BLM's regulations and policies require that project developers reclaim the relevant area following grant termination, and bonding to ensure compliance with the applicable terms and conditions in the grant.[42]

[f] Expedited Review for Testing and Monitoring

While the issue has not yet been addressed for solar projects, in the wind context, BLM's policy provides for the expedited issuance of a three-year "site specific" or "project area" grant to permit preliminary site testing and monitoring. The site or area grant applicant need not file a POD and may be subject to use of a categorical exclusion from NEPA compliance depending on the scope of the proposed activity.[43] Moreover, the issuance of an area grant temporarily precludes others from filing right-of-way applications for the designated area.[44] In theory, this limited grant may not be renewed without the filing of a separate right-of-way development application and POD for project development, which places severe time constraints on wind developers to establish transmission access and execute a PPA in a relatively short period of time.

[g] The Interest Conveyed and Competing Uses

The issuance of a grant is merely a possessory interest in the land and is by no means exclusive. BLM's policies make clear that the agency retains ownership of subsurface and related resources and the right to authorize other compatible uses within the scope of the right-of-way, but the agency acknowledges that, at least in the solar context, other compatible uses are unlikely due to the intensive nature of both photovoltaic and concentrating

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[41] BLM 2007 Solar Policy, *supra* note 19, at 4; BLM 2008 Wind Policy, *supra* note 19, at 3.

[42] 43 C.F.R. § 2805.12(g) (elec. 2009); BLM's 2008 Wind Policy, *supra* note 19, at 8.

[43] BLM 2008 Wind Policy, *supra* note 19, at 4-7, 10.

[44] *Id.* at 5-6.

solar technology.[45] Moreover, the grant conveyed is subject to "valid existing rights," which recognizes the potential for preexisting and potentially conflicting mineral interests and oil and gas lease interests—an issue that should be addressed during the pre-application meeting and application process.[46]

[h] Cost Sharing

The right-of-way grant process provides BLM authority to impose both cost sharing and rental fee requirements on project applicants, and these financial components continue to evolve as part of the regulatory process. As an initial matter, BLM requires applicants to enter into a cost sharing agreement with the agency through which the applicant submits a deposit and reimburses BLM for the agency's costs incurred in processing a right-of-way application (including NEPA compliance) and monitoring compliance after a grant has been issued.[47]

[i] Rental Fees

Project proponents must reimburse the federal government for the "fair market value" of the relevant land.[48] For the more typical linear rights-of-way, this fee is established based on a per-acre schedule tied to the land value for a particular use in the relevant geographic area or, in some instances is determined by appraisal.[49] For wind power projects, BLM has established an annual rental fee of $4,155 per MW of the total installed project capacity, payable on an escalating basis.[50] For solar power projects, BLM's existing policy provides that rental fees be determined based on the appraisal method for comparable lands in a similar stage of development. Reflecting a distinction in the extent of land use associated with solar and wind, however, BLM's solar policy provides that, "[s]ince the rental payment reflects the full use of the public land for solar facilities, similar to a lease for industrial purposes, there are no additional royalty payments for electric generation."[51] While this policy makes sense in terms of recognizing compatible uses on wind versus solar sites, it does not reflect the vast distinctions among various solar technologies, some of which are more land intensive (e.g., thin film photovoltaic) while others are more invasive in terms of grading and resource use (e.g., concentrating solar or

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[45] 42 C.F.R. § 2805.15 (elec. 2009); BLM 2007 Solar Policy, *supra* note 19, at 4.

[46] 43 C.F.R. § 2805.14 (elec. 2009).

[47] 43 C.F.R. §§ 2804.28, 2805.16 (elec. 2009).

[48] 43 U.S.C. § 1764(g) (elec. 2009).

[49] 43 C.F.R. § 2806.20 (elec. 2009).

[50] BLM 2008 Wind Policy, *supra* note 19, at 8.

[51] BLM 2007 Solar Policy, *supra* note 19, at 4.

solar thermal). This remains an issue to be resolved in conjunction with BLM's solar PEIS process.

[j] Incorporating Solar and Wind Projects into Land Use Planning

One of the central tenets of FLPMA is the land use or RMP planning process, which provides the framework for applying FLPMA's "multiple use and sustained yield" mandate within designated areas of public lands.[52] The land use planning process considers both present and future uses of the public lands and requires designation and protection of areas of critical environmental concern.[53] For projects implicating new and updated land use plans, BLM must identify and consider existing and potential areas for solar and wind energy development and the potential impacts on the local environment and community of making such lands available for development. Although BLM commenced this process by conducting a study of solar, wind, biomass, and geothermal sites in 2003, given the length of time necessary to update individual RMPs, few plans today include specific identification of solar and wind potential and related impacts and alternatives for planning purposes.[54]

Where the relevant RMP does not already address solar and wind project development within the affected area (as is typically the case), BLM's policies make clear that issuance of right-of-way grants for wind and solar projects will require amendment of the relevant land use plan. BLM recognizes, however, that the RMP amendment and environmental analysis for the specific project proposal may be prepared and processed concurrently.[55] To some degree, the Wind PEIS, discussed below, may have lessened this issue in the context of wind development, since that process resulted in the amendment of 52 individual RMPs to incorporate programmatic policies and BMPs and identify specific areas where development would not be allowed.

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[52] 43 U.S.C. § 1712(a), (c) (elec. 2009).

[53] *Id.* at § 1712(c).

[54] Bureau of Land Management, U.S. Dep't of the Interior, Assessing the Potential for Renewable Energy on Public Lands (Feb. 2003). For example, the 2005 West Mojave Plan Amendment to the California Desert Conservation Area—an area which lies in the heart of the Mojave Desert and is the focus on dozens of solar and wind project applications—contains only brief identification of solar and wind energy potential and no analysis of the potential impacts of any of the plan's alternatives on solar or wind energy development within the area. *See* Final Environmental Impact Report and Statement for the West Mojave Plan at 3-277 (Jan. 2005).

[55] BLM 2007 Solar Policy, *supra* note 19, at 2; BLM 2008 Wind Policy, *supra* note 19, at 1.

[3] BLM's Solar and Wind Energy Development Programs

In an effort to address the rising wave of solar and wind project applications and establish comprehensive program guidance for the development of solar and wind projects on the federal public lands, BLM initiated and, in the case of wind energy, adopted an energy development program and accompanying PEIS under NEPA.[56] The Solar Energy Development PEIS (Solar PEIS), being jointly prepared with the DOE, was originally slated for issuance in draft in spring 2009 but at the time of this writing was anticipated in fall 2009.[57] This process is particularly instructive in understanding both BLM's objectives and future directions for wind energy—and possibly solar—development on the federal public lands.

[a] BLM's Wind Energy Development Program and PEIS

In 2003, BLM embarked upon a process to develop a wind energy development program and, in conjunction with that process, prepared a PEIS pursuant to NEPA and a Programmatic Biological Assessment (PBA) pursuant to the ESA.[57.1] The objectives of the program and PEIS were two-fold:

> (1) to assess the environmental, social and economic impacts associated with wind energy development on BLM-administered land, and (2) evaluate a number of alternatives to address the question of whether the proposed action presents the best management approach for the BLM to adopt, in terms of mitigating potential impacts and facilitating wind energy development.[58]

The geographic scope of the analysis covered all BLM-administered lands in 11 western states, excluding Alaska.

The Wind PEIS identified and addressed three potential program alternatives. These encompassed: (1) implementation of a wind energy development program on all BLM lands on which wind project development may be technically and economically viable under BLM's maximum potential

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[56] *See* Bureau of Land Management, U.S. Department of the Interior, Record of Decision, Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments (Dec. 2005), *approving* Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States [hereinafter Wind PEIS].

[57] *See* Bureau of Land Management, U.S. Department of the Interior, Solar PEIS Schedule Update (Apr. 27, 2009), and Public Scoping Period Extended to September 14, 2009 (July 27, 2009), *available at* http://solareis.anl.gov.

[57.1] Wind PEIS, *supra* note 56.

[58] *Id.* at ES-1.

development scenario (MPDS);[59] (2) a more limited development program based on project development only in areas where projects currently exist or are in process of approval; and (3) a no-action alternative focused on the preexisting case-by-case project analysis. In its Record of Decision (ROD), BLM selected its MPDS alternative. From the 174.7 million acres of land BLM manages in the 11 western states analyzed, BLM's model predicted that 160,100 acres of land could be developed over the next 20 years, and BLM based its environmental impacts analysis and ultimate decision on this assumption.[59.1] To put this in context, at the time BLM approved the ROD, there were three operating wind energy projects totaling 21,161 acres on BLM lands.[60]

A critical component of BLM's PEIS and program adoption is the development and incorporation of specific programmatic policies and BMPs. BLM's programmatic policies provide, among other things, that the agency will not issue right-of-way grants for development in areas that are part of the National Landscape Conservation System (e.g., Wilderness Areas) and Areas of Critical Environmental Concern (ACEC), as well as areas where resource impacts cannot be mitigated or will conflict with existing or planned multiple use activities or land use plans.[61] These policies further provide that, to the extent possible, wind energy policies shall be developed in a manner that will not prevent other land uses, such as mineral extraction, livestock grazing, and recreational use. For purposes of individual project NEPA compliance, BLM envisioned that some projects could proceed by tiered environmental assessment (EA) tied to the PEIS to the extent the PEIS addressed anticipated issues and

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[59] BLM's MPDS predicts the acreage of BLM land that contains economically viable wind speeds and is not located in an area restricted from development (e.g., areas of critical environmental concern). This scenario was further refined through a "wind deployment system" model that further limited the scale of development by considering economic factors likely to limit development in the next 20 years including transmission capacity, irregularity of wind energy, wind technology limitations, and other economic barriers. *See* Wind PEIS, *supra* note 56, at 2-2 to 2-3.

[59.1] *See* Wind PEIS, *supra* note 56, at 2-5.

[60] *See* Gregory M. Adams, "Bringing Green Power to the Public Lands: The Bureau of Land Management's Authority and Discretion to Regulate Wind-Energy Developments," 21 J. Envtl. L. & Litig. 445, 459 (2006).

[61] Bureau of Land Management, U.S. Dep't of the Interior, BLM Wind Energy Development Program Policies and Best Management Practices, Attachment A to Wind PEIS ROD, at A-2 (Dec. 2005). Of note, BLM later clarified the prohibition of wind project development in ACECs, explaining that ACECs "will not be universally excluded from wind energy site testing and monitoring or wind energy development but will be managed consistent with the management prescriptions for the individual ACEC." BLM 2008 Wind Policy, *supra* note 19, at 10.

concerns—an action that could streamline NEPA compliance in many instances but which remains far from certain in practice.[62]

The BMPs, incorporated into BLM's 2008 Wind Policy, are applicable to all wind energy activities on BLM-administered public lands. As the agency explained, the BMPs "establish environmentally sound and economically feasible mechanisms to protect and enhance natural and cultural resources [and] identify the issues and concerns that need to be addressed by project-specific plans."[63] BMP examples include use of existing roads where possible; monitoring environmental and species conditions during construction, operation, and decommissioning; configuration of equipment (such as wind turbines) to avoid landscape features known to attract raptors; integration of project features into the surrounding landscape; and development of storm water management plans.[64]

In conjunction with issuing its ROD on the Wind PEIS, BLM amended 52 land use plans to incorporate the programmatic policies and BMPs.[65] In some instances, these amendments also incorporated the identification of specific areas where wind energy development would be excluded, but these amendments were not comprehensive and did not include the designation of the specific areas approved for wind energy development. For those land use plans not amended—which include all of the plans for Arizona and California—BLM explained that those areas would be addressed in conjunction with ongoing or upcoming land use plan amendments.[66]

[b] BLM's Solar Energy Development Program and PEIS

Confronted with a later and more significant surge in solar right-of-way applications, in May 2008 BLM and DOE announced the initiation

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[62] In the absence of the amendment of the relevant RMP and further NEPA review, BLM's ability to tier to the PEIS for site-specific NEPA compliance remains uncertain because the Wind PEIS did not specifically identify suitable lands and evaluate the environmental impacts associated with the development of wind energy projects on those lands. *See, e.g.*, Pennaco Energy, Inc. v. U.S. Dep't of the Interior, 377 F.3d 1147, 1156-1157(10th Cir. 2004) (addressing need for site-specific NEPA analysis of coalbed methane development where underlying RMP and NEPA review did not address environmental impacts associated with resource development).

[63] BLM 2008 Wind Policy, *supra* note 19, at 9.

[64] *See* Bureau of Land Management, U.S. Dep't of the Interior, BLM Wind Energy Development Program Policies and Best Management Practices, Attachment A to Wind PEIS ROD, at A6-A12 (Dec. 2005).

[65] Bureau of Land Management, U.S. Dep't of the Interior, BLM Land Use Plan Amendments to Adopt the Wind Energy Development Program, Attachment B to Wind PEIS ROD (Dec. 2005).

[66] *Id.* at B-2.

of a process to develop a solar energy development program for utility-scale solar projects and conduct an accompanying PEIS.[67] The purpose of the proposed solar program closely tracks that of the wind energy development program. The program and PEIS aim to determine whether the agencies should develop and implement agency-specific programs that would establish environmental policies and mitigation strategies (e.g., BMPs) for solar development on BLM-administered land in six western states: Arizona, California, Colorado, New Mexico, Nevada, and Utah.[68] DOE is providing technical support for BLM's analysis and independently evaluating the development of its own program of environmental policies and mitigation strategies to apply to projects supported by DOE on federal, state, and private lands.[69]

Much like the wind energy development program, the agencies' proposed action is intended to identify BLM-administered land in the six-state study area upon which solar project development is likely to occur over the next 20 years, through a "reasonably foreseeable development" model.[69.1] This analysis includes identifying those lands that may be environmentally suitable for solar energy development and, conversely, those areas to be excluded from such development. As a result, the proposed Solar PEIS scope excludes from consideration lands that BLM has previously identified as "environmental sensitive," including ACECs. BLM envisions amending the applicable land use plans to identify these areas and incorporate its environmental policies and mitigation strategies. Further, like the Wind PEIS process, the agencies anticipate that the Solar PEIS will facilitate, but not replace, project-specific environmental analysis through tiering to the PEIS.[69.2]

Unlike the Wind PEIS, however, the agencies are considering whether the designation by BLM of additional electricity transmission corridors on BLM-administered lands is necessary to facilitate utility-scale solar energy development—a critical issue for project development that implicates transmission corridor studies occurring at both the regional and state

[67] 73 Fed. Reg. 30,908 (May 29, 2008).

[68] *Id.* at 30,908-909.

[69] *Id.* at 30,909. By way of example, this would include projects financed by and through DOE's loan guarantee program.

[69.1] Id. at 30,910.

[69.2] *Id.*

level.[70] In fact, on April 27, 2009, the agencies announced a postponement for issuance of the draft PEIS until fall 2009 to, among other things, await preliminary results of the Western Governors' Association's Western Renewable Energy Zone transmission study.[71] On July 27, 2009, BLM and DOE extended the public comment period until Sept. 14, 2009.[71.1]

On June 30, 2009, during preparation of the draft PEIS, BLM and DOE announced the location of 24 "solar energy study areas" on BLM-administered lands that the agencies would consider designating Solar Energy Zones (SEZs) as part of the Solar PEIS process.[72] The agencies describe SEZs as "specific locations determined best suited for large-scale production of solar energy," but it is not yet clear whether or how BLM would administer SEZs for solar development, which could include competitive or noncompetitive procedures.[73] The solar energy study areas each encompass at least 2,000 acres of land, are situated near access roads and transmission routes, have slopes of less than 5%, and exclude environmentally sensitive areas. In total, these areas encompass approximately 676,000 acres of BLM lands.[74]

Interestingly, of the 220-plus solar project applications pending on BLM land, only 35 are for parcels situated within the solar energy study areas.[75] Thus, the solar energy study areas being evaluated in the PEIS process—which could become SEZs—do not directly address the vast majority of pending solar project applications, many of which reflect executed PPAs with power purchasers, pending transmission interconnection requests,

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[70] At the time of this writing, the Western Governors' Association in conjunction with DOE was conducting a four-phase study to identify "Western Renewable Energy Zones," which are those areas throughout the Western Interconnection grid that feature the potential for large-scale development of renewable resources in areas with strong resource availability and low environmental impacts, and to facilitate the development of high voltage transmission in these areas. *See* http://www.westgov.org/wga/initiatives/wrez. Several states also are conducting their own statewide transmission initiatives, led by California's Renewable Energy Transmission Initiative, which seeks to identify transmission projects to support renewable energy development, designate transmission corridors, and facilitate transmission and generation project permitting. *See* http://www.energy.ca.gov/reti/background.html.

[71] *See* Solar Energy Development Programmatic EIS Information Center, PEIS Schedule Update (Apr. 27, 2009), *available at* http://www.solareis.anl.gov.

[71.1] *Id.*

[72] 74 Fed. Reg. 31,307 (June 30, 2009).

[73] *Id.* at 31,308.

[74] *See* Bureau of Land Management, Q&As: BLM Solar Programmatic Environmental Impact Statement at 3, 5 (June 29, 2009), *available at* http://www.doi.gov/news/09_News_Releases/SolarEnergyQA.pdf.

[75] *Id.* at 6.

and the investment of significant time and resources in project-related studies. Despite the announcement of the solar energy study areas, BLM will continue to process solar applications filed prior to June 30, 2009, both within and outside of these study areas, and to accept new solar applications on lands outside of the study areas.[76] These applications will be subject to BLM's existing application procedures, but to the extent a project is not approved until after issuance of the PEIS ROD, that project may be subject to mitigation requirements in the ROD.[77] Applications filed after June 30, 2009, on lands within the solar energy study areas will, however, not be processed until after the ROD has been issued for the Solar PEIS.[78]

§ 13.04 Towards a Comprehensive Regulatory Solution

The renewable energy land rush on the federal public lands is well under way and placing unprecedented pressures and demands on our existing public land management system. These challenges will continue to mount as new solar and wind project applications are filed, existing applications are processed, and public land managers struggle to balance mounting pressure to approve projects with multiple use and environmental responsibilities. Further complicating this balance will be the likely wave of litigation, both from public interest organizations opposing approved projects and project applicants challenging project denials and the imposition of terms and conditions. The important question that needs to be asked is whether we are doing enough to create a regulatory structure to address the multitude of issues presented by utility-scale solar and wind project development.

[1] Will the FLPMA Model Work?

As the foregoing discussion illustrates, it is far from certain whether the existing FLPMA right-of-way process—even as supplemented by evolving DOI policies and guidance—can meet these new challenges in a manner that satisfies the varied needs of constituencies. At a minimum, DOI should strive to: (1) quickly resolve the current administrative backlog of project applications; (2) streamline the review and approval process to place solar and wind projects into operation; (3) create objective permitting expectations and realistic timelines for project developers; (4) achieve a fair market value return for use of the public lands; (5) protect sensitive environmental and cultural resources; (6) provide multiple use access to the public lands; and (7) preserve future uses of these lands.

Faced with overwhelming demands on an already-stressed land use planning and management system, DOI officials and local land use

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[76] 74 Fed. Reg. 31,307, 31,308.

[77] *Id.*

[78] *Id.*

managers are making tremendous strides by formulating development policies and undertaking programmatic level planning. These efforts, as evidenced by BLM's recent wind energy development program, constitute a critical and necessary step in the planning process by attempting to identify suitable lands for energy development, establishing BMPs for project analysis and mitigation, and creating a tiering process under NEPA to expedite environmental review for individual projects.

The ultimate question is whether this reactive approach is sufficient, particularly in light of the challenges posed by the ever-increasing number and scale of utility-scale solar and wind development projects. Actual project proposals will very likely dwarf the relatively modest amount of acreage identified (or, in the case of solar, being identified) through the programmatic planning process. In the case of wind, for example, while the Wind PEIS identified some 160,000 acres of public lands for likely development in an 11-state region over 20 years, there are currently right-of-way applications for wind projects on over 957,000 acres of public lands in California alone.[79] While increased technological efficiencies for both solar and wind may well lead to reduced project size and scale to achieve the same level of energy output (with less-intensive land and resource impacts), these efficiencies likely will further reduce the price differential with conventional fuels and allow the siting of projects in marginal locations not previously considered economically viable, thereby leading to even greater demand for public land access.

More fundamentally, while solar and wind project developers are working diligently to design projects to accommodate other land uses and protect sensitive resources, particularly species and habitat, many projects may require dedication of the land to a single use for the 20- to 30-year duration of the project. This raises clear tension with FLPMA's multiple use mandate and planning requirements. Nowhere is this tension more apparent than in BLM's California Desert District (CDD), encompassing 11 million acres of public land. As recently explained by BLM's Acting California State Director, after factoring in protected lands, designated ACECs, and conservation areas, the available area within the CDD is reduced to 2.95 million acres—an area which also encompasses important wildlife and plant species, scenic values, and access for other multiple uses ranging from hiking to off-road vehicle access.[80] At the same time, there

[79] The BLM Perspective, Renewable Energy Development on Public Lands (2009), *available at* http://www.ivedc.com/CMS/Media/3.-IID-Energy-Summit-Miller.ppt.

[80] Statement of James Abbott, Acting California State Director, Bureau of Land Management, U.S. Dep't of the Interior, Oversight Hearing "Solar Energy Development on Federal Lands: The Road to Consensus," U.S. House of Representatives Natural Resources Committee, Subcommittee on Energy and Mineral Resources (May 11, 2009).

are solar and wind project applications seeking access to over one million acres of these lands.[81]

[2] The Unresolved Question of NEPA Compliance

Perhaps the most significant near-term issue facing solar and wind project development on the public lands is the uncertainty surrounding the NEPA process and timing. BLM's project application pipeline is already substantial, and that pipeline continues to grow with few large-scale projects moving into the "Notice of Intent" stage. Moreover, while BLM's programmatic processes and policies seek to streamline project-specific NEPA compliance through tiered EAs, it is not clear that this goal is being achieved for wind projects, or that it will be achieved for solar projects that will almost certainly require full Environmental Impact Statement compliance—a process that a recent report found averaged 3.4 years for all federal agencies.[82]

One of the critical considerations is BLM's ability to tier to a PEIS without first amending, and conducting NEPA compliance for, the relevant RMP. This issue is not new as, in the coalbed methane context, BLM conducted resource-specific supplementation of RMPs, a process that may serve as a model for solar and wind project planning.[83] Congress also possesses authority to exempt certain projects or classes of projects from, or otherwise streamline, the NEPA process.[84] Although not specifically tied to renewable energy projects, Congress has required that projects funded under the American Recovery and Reinvestment Act of 2009 be completed on "an expeditious basis" and by "the shortest existing applicable process" under NEPA—a process which remains to be defined.[85]

[3] The Difficult Choices Ahead

There is no magic regulatory bullet to address the difficult management decisions that lie ahead as the need for solar and wind project access to

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[81] As of 2009, BLM documented that there were 63 wind project applications within the CDD representing 427,503 acres of public land and 65 solar project applications within the CDD representing 575,320 acres of public land. *See* The BLM Perspective, Renewable Energy Development on Public Lands, *supra* note 79.

[82] Piet de Witt and Carole de Witt, "How Long Does It Take to Prepare an Environmental Impact Statement," 10 Environmental Practice, Journal of the National Association of Environmental Professionals 164 (2008).

[83] *See, e.g.,* Final Supplement to the Montana Statewide Oil and Gas Environmental Impact Statement and Proposed Amendment of the Powder River and Billings Resource Management Plans (October 2008).

[84] *See* Daniel Mandelker, NEPA Law and Litigation, § 5:6 (2009) (statutory NEPA exemptions).

[85] American Recovery and Reinvestment Act of 2009, § 1609, Pub. L. No. 111-5 (2009) (mandating expeditious NEPA review for stimulus-funded projects).

the public lands increases. On the one hand, FLPMA's right-of-way grant process—developed to provide "linear" access to the public lands in terms of road, transmission, and pipeline access—is not well-suited to address the large-scale solar and wind projects and their associated long-term resource needs and environmental impacts in a multiple use setting. On the other hand, the traditional model of resource-specific leasing applied to address access and development of analogous energy resources from beneath the public lands, such as the Mineral Leasing Act of 1920 or Geothermal Steam Act of 1970, does not directly resolve the more-pressing surface access issues presented by large-scale solar and wind projects.[86] Instead, the answer to the current regulatory dilemma for solar and wind project development may lie somewhere between these two models.

The existing FLPMA framework and land use planning model, particularly in combination with solar and wind programmatic policies and BMPs, effectively guide overall principles and policies for management of the federal public lands, while also delegating authority to the land use manager and planning process to implement those principles and policies at the local level. In this way, FLPMA's multiple use management process serves as a democratic model in action, developing planning decisions among often-conflicting resources and interest groups through both consensus and litigation. With the exception of environmental resources and protection, however, the FLPMA model does not elevate the importance of one use over another—an issue of critical importance if development of large-scale solar and wind projects on the public lands is ever to take place at the levels required to meet varied public policy goals. In this regard, specific congressional guidance, either through defined priorities for solar and wind project development under FLPMA or through resource-specific statutes providing for the lease of the public lands for these uses, appears to be the critical missing link to guide evaluation and, ultimately, approval of these projects.

Unless and until the compatibility of large-scale solar and wind projects with FLPMA's multiple use demands is squarely addressed or, alternatively, ironed out over the long-term on a case-by-case basis, interest groups will continue to push to limit those areas open for solar and wind project development. This is perhaps best exemplified by efforts, at the time of this writing, to withdraw an estimated 800,000 acres of BLM lands in

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[86] Statutes such as the Mineral Leasing Act of 1920, 30 U.S.C. §§ 181-287, and Geothermal Steam Act of 1970, 30 U.S.C. §§ 1001-1026, predominantly focus on the need to identify specific in-situ resources for ownership and development purposes and to establish the framework and procedures pursuant to which these resources are leased from the federal government (e.g., location, competitive bidding, royalties, lease conditions). These statutes do not directly address surface access to these resources when they occur within the public lands, which is perhaps the most significant management issue presented by large-scale solar and wind development projects.

California from solar and wind project development.[87] At the same time, our renewable energy needs will only continue to increase.

[87] *See* Richard Simon, "Feinstein Wants Desert Swath Off-Limits to Solar, Wind," L.A. Times, March 25, 2009.