



U.S. Department of the Interior
Bureau of Land Management

Public Land Renewable Energy – Fiscal Year 2022 Report to Congress

November 2023



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Excerpt from the Energy Act of 2020

43 U.S.C. § 3002(f)

(1) IN GENERAL —

Not later than February 1 of the first fiscal year beginning after December 27, 2020, and each February 1 thereafter, the Secretary shall submit to the Committee on Energy and Natural Resources and the Committee on Environment and Public Works of the Senate and the Committee on Natural Resources of the House of Representatives a report describing the progress made under the program established under subsection (a) during the preceding year.

(2) INCLUSIONS —

Each report under this subsection shall include—

(A) projections for renewable energy production and capacity installations; and

(B) a description of any problems relating to leasing, permitting, siting, or production.



Wind farm in Wyoming on BLM-managed public lands.

Executive Summary

In accordance with the Energy Act of 2020 (referred to as the Energy Act hereafter), this report summarizes the Department of the Interior's (DOI's) fiscal year (FY) 2022 activities and accomplishments supporting onshore renewable energy on public lands managed by the Bureau of Land Management (BLM).

The vast areas of contiguous public lands across the Western United States provide substantial opportunity for the deployment of onshore renewable energy. In FY 2022, the BLM advanced the national goal to support 25 gigawatts (GW) (or 25,000 megawatts (MW)) of electricity from solar, wind, and geothermal energy through the management of public lands and administration of Federal laws as required by 43 U.S.C. 3004(b). To meet Congress' direction under the Energy Act, as well as the Biden-Harris administration's goal of a carbon pollution-free power sector by 2035 and the challenge of processing increasing applications for renewable energy on public lands, the BLM is implementing a framework to advance clean energy infrastructure by funding new staffing capacity, enhancing permitting coordination efficiencies, updating relevant land use plan decisions, and revising agency regulations and policies. This report describes the BLM's continued progress on these efforts, which has helped facilitate the interagency achievement of 8,560 MW of clean energy in 2021 and 2022. This represents 34 percent of the national 2025 goal.

Consistent with the reporting request in 43 U.S.C. § 3002(f)(2)(A), sections 1 through 3 of this report describe the BLM's activities to enhance permitting coordination; the BLM's permitting accomplishments for FY 2022; and the agency's 5-year projection for permitting renewable energy on public lands. Section 4 of this report provides information to the Committees¹ related to challenges and opportunities associated with permitting and siting renewable energy on public land to satisfy the direction in 43 U.S.C. § 3002(f)(2)(B). Within Section 4, the BLM included technical advice relating to challenges and opportunities for the Committees' awareness and consideration.

¹ Committee on Energy and Natural Resources; Committee on Environment and Public Works of the Senate; and Committee on Natural Resources of the House of Representatives.

Section 1 – Record Permitting for Renewable Energy in 2022

The BLM authorizes three primary categories of renewable energy generation on public lands: solar, wind, and geothermal. The BLM issues rights-of-way under Title V of the Federal Land Policy and Management Act of 1976, as amended, for solar and wind energy projects and for electricity transmission lines to support renewable energy projects. The BLM authorizes geothermal projects under the Geothermal Steam Act of 1970, as amended, by issuing leases, permitting drilling operations to verify resources, and approving utilization plans to develop powerplants. As projects are approved and constructed on public lands, the BLM maintains appropriate oversight, including inspection and enforcement, until the projects are decommissioned, and the underlying public lands are adequately restored.

The Energy Act directs DOI to establish and implement a program to prioritize and improve Federal permit coordination for onshore renewable energy. For this purpose, the BLM established Renewable Energy Coordination Offices (RECOs). Pursuant to 43 U.S.C. § 3002(b), key Federal departments and agencies signed a memorandum of understanding (MOU) in November 2021 to improve renewable energy project permit coordination on public lands. Through the RECOs and the MOU, the BLM authorized Federal permits that added 5,670 MW of clean energy to the grid in FY 2022. This is nearly double the 2,890 MW supported in FY 2021.

Close collaboration among key Federal agencies increased permitting through regular coordination and the sharing of best practices and lessons learned from decades of permitting major infrastructure projects. The RECOs serve as the centerpiece of interagency collaboration and foster an enhanced team approach to environmental review to support informed Federal decision making for renewable energy and improved conservation outcomes. The National RECO facilitates an annual interagency review process that serves to collaboratively update and optimize Federal permit coordination for onshore renewable energy. The essential program areas addressed within FY 2022 are summarized in this report, including comprehensive coordination enhancements, strategic agreements, and updated plans and policies.

Section 1.1 – Department Finalizes RECO MOU and Robust Coordination Improves Permitting Reviews

MOU Improves Federal Agency Coordination on Renewable Energy

The Energy Act directed the DOI to enter into an MOU with the Department of Agriculture (USDA), Department of Defense (DOD), and Environmental Protection Agency (EPA) for the purposes of implementing the direction of the Energy Act. DOI decided to include the Department of Energy (DOE) as a signatory to the MOU due to DOE's involvement with renewable energy and ability to advise on Federal agency coordination improvements to enhance reviews for renewable energy projects. The signatories agreed to facilitate improved coordination on renewable energy activities by establishing interagency teams with qualified staff to facilitate the preparation of environmental analyses, accelerate renewable energy decision making, and coordinate specific agency review requirements. The MOU also provides a structure for subsequent interagency cost-sharing or funds transfer agreements (43 U.S.C. § 3002(e)) that supports 13 new dedicated positions within U.S. Fish and Wildlife Service (FWS) regional offices to support FWS permitting components. The strong consensus and support brokered among senior department leaders in the MOU is resulting in well-informed decisions and productive coordination across agencies, accelerating onshore renewable energy permitting.

Enhanced Coordination Solves Problems in Real Time

The BLM hosted weekly interagency renewable energy coordination meetings with leadership and program staff from BLM state offices, the National Park Service (NPS), and FWS regional offices. Additionally, the BLM regularly engaged with the DOD, U.S. Forest Service (USFS) (representing USDA), DOE, and EPA. These coordination activities are critical to multilateral exchange of relevant information on all renewable energy applications, with special emphasis given to prioritized projects. These meetings provided opportunities to elevate issues, challenges, and concerns, and fostered partnership to build cooperative resolutions. The consistent coordination improved permitting reviews on dozens of renewable energy projects and interconnected transmission lines. Similarly, the BLM RECO's regular engagement with solar, wind, and geothermal energy developers resulted in application submissions that include more environmentally thoughtful proposals that are better aligned with other resource objectives and long-term land management goals.

Section 1.2 – Strategic Investment to Accelerate Permitting

In FY 2022, the BLM allocated nearly \$13.5 million to support the creation of 56 new permanent RECO staff and applied \$3 million toward agreements with the National Renewable Energy Laboratory (NREL), FWS, and DOE to support renewable energy permitting on public land. Additional funding has been made available in FY 2023 to continue these agreements. The BLM also funded a programmatic agreement with the State of California to update the procedures on conservation of cultural and historical resources, which will yield improved coordination on public lands within the Desert Renewable Energy Conservation Plan in southern California.

The BLM will incorporate NREL's solar energy assessment into updated solar energy planning on public lands to help identify new preferred solar application areas. The BLM began a programmatic update to its 2012 Western Solar Plan in early FY 2023 to consider strategic and targeted land use plan amendments that will open new areas to solar deployment and position the BLM to offer expanded opportunities for solar energy deployment over the coming decades. The BLM's partnership with NREL also allowed for virtual technical workshops to inform BLM management and staff on advancements in solar, wind, and geothermal energy development as well as battery storage technologies. The workshops were valuable to calibrate agency personnel to best management practices associated with renewable energy development as the BLM considers proposals on public land and undertakes environmental review efforts.

The BLM committed FY 2022 funding to support 13 new FWS staff dedicated to assist the BLM RECOs and the priority renewable energy workload. The additional FWS staff enhance interagency coordination and the FWS's ability to engage on priority projects and perform regulatory permitting requirements under key environmental laws, including the Endangered Species Act, Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act. The additional FWS staff also enable the agencies to advance programmatic efforts that yield economies of scale to reduce project timelines.

The BLM partnered with the DOE's Argonne National Laboratory to develop a solar energy resources website, www.blmsolar.anl.gov, to serve as a clearinghouse of information related to solar energy permitting, including permitting requirements. The website explains the permitting process; provides links to Federal laws, regulations, orders, and authorizations; and describes the relevant activities within the BLM and other agencies.

Section 1.3 – Renewable Energy Program Planning and Policy Updates

To implement new authority under the Energy Act, the BLM published a new chapter in BLM Manual 2806 to reduce acreage rents and megawatt fees for wind and solar energy development projects on public

land. The updated rates apply to existing and future solar and wind energy projects. The BLM determined that the reduction promotes the greatest use of wind and solar energy resources, consistent with the statutory direction in Section 3103 of the Energy Act.

The BLM also published Instruction Memorandum No. 2022-027 to update and clarify bureau policy for the initial screening and prioritization for solar and wind energy applications. The screening and prioritization policy improves workload management in BLM district and field offices by focusing staff on solar and wind energy development projects with the greatest technical and financial feasibility and with the fewest anticipated conflicts with natural and cultural resources.

The BLM also made substantial progress on two renewable energy focused rulemaking efforts. The BLM issued a proposed rule, *Rights of Way, Leasing and Operations for Renewable Energy*, which would revise regulations associated with renewable energy, including reducing certain fees for wind and solar projects by around 80 percent, facilitating development in priority areas by streamlining review of applications, and delivering certainty for renewable energy developers. This proposed rule would update BLM regulations based on new statutory authority, including that granted in the Energy Act. The BLM also made progress toward issuing a proposed rule, *Regulations Pertaining to Leasing and Operations for Geothermal*, addressing recommendations made in the 2013 Office of Inspector General report on geothermal resources management. The proposed rule would update the Geothermal Resources Operational Orders, which were established more than 4 decades ago. The proposed rule would also make changes to the BLM's geothermal regulations to implement provisions of the Energy Act and to remove obsolete provisions related to the Energy Policy Act of 2005.

Section 2 – Expanding Staffing and Expertise to Advance Clean Energy

In 2022, the BLM began processes to hire an additional 56 full-time employees to fill RECO positions within the bureau. As of September 30, 2022, the BLM filled 44 of these positions. The additional expertise and permitting review capacity provided by these new staff will help the bureau process more renewable energy applications and nominations.

Over the past year, the BLM also observed an increase of applications by renewable energy developers in states that have not previously seen substantial interest in large-scale renewable energy permitting, such as Idaho, Montana, Oregon, and Washington. As a result, the BLM National RECO prioritized funding for project managers in these states and is considering adding new RECOs for these states that would include interdisciplinary staff to support the new environmental review and permitting workload related to solar and wind energy proposals.

Section 2.1 – Renewable Energy Coordination Offices

In accordance with 43 U.S.C. § 3002(c), the BLM RECOs implement improved permitting coordination, which also supports the goals of Executive Order 14008, “Tackling the Climate Crisis at Home and Abroad.” The National RECO is part of BLM Headquarters under the BLM’s Assistant Director for Energy, Minerals, and Realty Management. The National RECO provides policy direction through regular engagement with the state RECOs and leads national coordination functions for the Secretary of the Interior’s program to improve Federal permitting for onshore renewable energy. The BLM established state RECOs in the Arizona, California, and Nevada State Offices and a regional RECO to support program work across Colorado, New Mexico, Utah, and Wyoming. These field RECOs are demonstrating new efficiencies through well-coordinated review efforts for renewable energy project applications. As the remaining RECO positions are filled, the BLM anticipates that interagency review coordination optimization will continue.

Section 3 – Focusing on Renewable Energy Projects

As the nation’s largest land manager, the BLM is uniquely positioned to lead responsible renewable energy development in the Western United States. Permitting solar, wind, and geothermal projects on public lands is a significant component of the BLM’s energy workload. Equally important is the BLM’s role in permitting interconnect generation-tie (gen-tie) lines, which are critical to supporting renewable energy on non-Federal lands. Moreover, the BLM is often the lead Federal agency for National Environmental Policy Act (NEPA) analysis on complex and controversial high-voltage, long-distance transmission lines. Upgraded and new high-voltage transmission lines are vital to enhancing the western electric grid and unlocking additional renewable energy deployment opportunities. In FY 2022 and early FY 2023, the BLM issued Notices to Proceed for two major transmission projects—Ten West and TransWest Express—allowing construction to begin on these new lines that will provide access to market for new renewable energy projects on public lands. Sections 3.1-3.3 of this report summarize these activities.

Section 3.1 – The BLM Permitted 5,670 MW in FY 2022

During FY 2022, the BLM permitted 21 projects (including 13 located on public lands and eight with interconnection lines on public lands) that support development of 5,670 MW of onshore solar and geothermal energy generation capacity (no wind projects were approved in FY 2022) (Table 1). Combined, the BLM’s permitting support for FY 2022 reflects a 96% increase over the FY 2021 total of 2,890 MW. The BLM also anticipates continued increases in its year-over-year permitting, consistent with the projections in section 3.2 of this report.

Table 1. FY 2022 permitting that directly supports solar and geothermal energy.

Date Approved	State	Project	Type	Megawatts
10/20/2021	Nevada	Grass Valley Solar	Solar (Gen-Tie)	340
11/23/2021	Nevada	Dixie Meadows	Geothermal	60
12/7/2021	Utah	Hornshadow Solar	Solar (Gen-Tie)	250
12/17/2021	Nevada	Luning II Solar	Solar	70
12/20/2021	California	Victory Pass Solar	Solar	200
12/20/2021	California	Arica Solar	Solar	265
1/5/2022	New Mexico	San Juan Solar	Solar (Gen-Tie)	600
1/13/2022	California	Oberon Solar	Solar	500
1/25/2022	Nevada	Star Peak - Humboldt House (Phase 1)	Geothermal	20
1/27/2022	California	Blythe Mesa	Solar (Gen-Tie)	485
3/11/2022	Utah	Minersville Solar Energy	Solar	600
3/30/2022	Nevada	Crescent Valley Geothermal	Geothermal	0
4/28/2022	Arizona	Heliogen SR2	Solar	165
4/29/2022	Utah	Ormat Bailey Mountain	Geothermal	0
5/18/2022	Arizona	HV Sunrise	Solar (Gen-Tie)	150
6/9/2022	Nevada	Tamarack	Solar (Gen-Tie)	60
6/10/2022	New Mexico	Sunbelt Solar	Solar (Gen-Tie)	100
8/10/2022	California	Bellefield	Solar (Gen-Tie)	1,500
9/16/2022	New Mexico	Ancient Trails Solar	Solar	1
9/16/2022	Arizona	Elisabeth Solar I	Solar	300
9/16/2022	California	Ormesa 1 Upgrade	Geothermal	4
TOTAL				5,670

Section 3.2 – Prospective Permitting Projections for Fiscal Years 2023 through 2027²

As of September 30, 2022, the BLM prioritized processing for 54 environmental review and permitting activities that represent nearly 32,000 MW of onshore renewable energy (summarized in section 3.3). In addition to the priority energy workload, the BLM has more than 50 pending solar, wind, and geothermal projects that are in early stages of conformance review. Figure 1 shows the geographic distribution of these 100-plus projects proposed on public land.

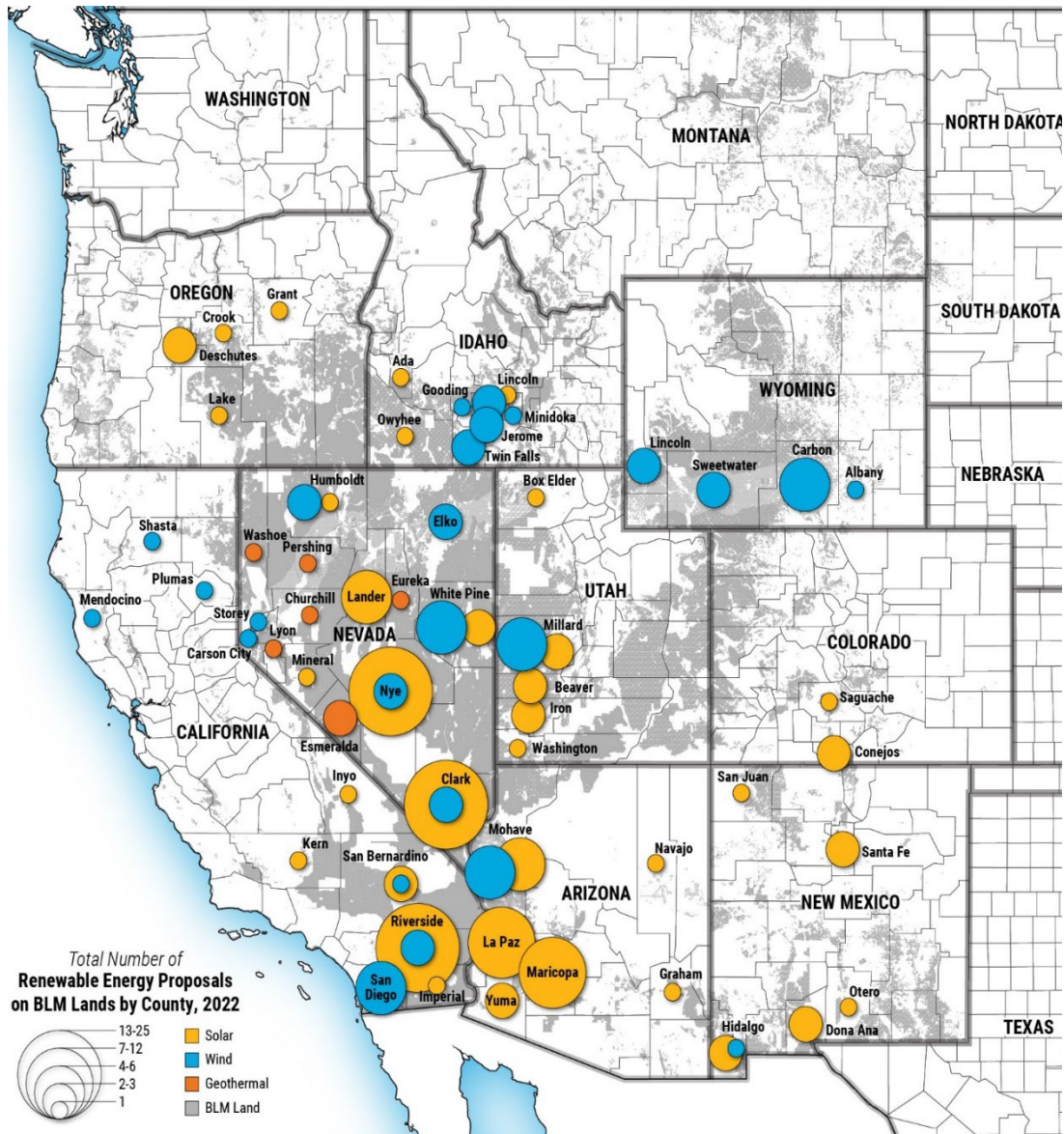


Figure 1. BLM pending project workload for solar, wind, and geothermal energy based on proponent-initiated applications and nominations as of September 2022.

² Prospective permitting decision timing assumes the following: (1) applicants will provide all necessary requirements in a reasonable time; (2) interagency staff prioritizes renewable energy projects; and (3) funding is available to increase BLM staffing according to planned Renewable Energy Coordination Offices.

Section 3.3 – Priority Renewable Energy Projects Undergoing Environmental Review in FY 2023-2027

The following figure 2 represents the projected megawatt potential for the renewable energy applications the BLM has in its review queue through FY 2027.

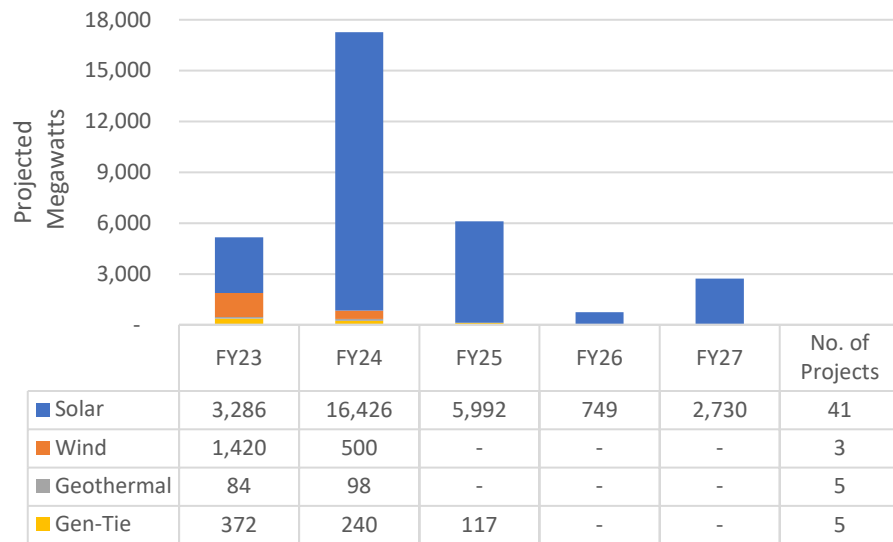


Figure 2. Projected permitting megawatts by fiscal year for solar, wind, and geothermal energy projects through FY 2027.

The BLM is also the lead Federal agency under NEPA for four proposed major high-voltage transmission infrastructure projects that cross public land. The projects undergoing Federal review span portions of Arizona, Nevada, New Mexico, and Utah. These major electric transmission projects are important to reliability across parts of the western grid and to unlocking new opportunities for clean energy deployment. The projects include Greenlink West and Greenlink North (Nevada); SunZia (Arizona/New Mexico); and Transcanyon Cross-Tie (Nevada/Utah).

Section 4 – Challenges and Opportunities

Since its establishment in 1946, the BLM has continually enhanced its administration and management of the vast public domain for numerous public interests. As the needs of the nation and its citizens grow and change over time, the BLM adapts and enhances its management to meet them. This section focuses on current challenges related to leasing, siting, permitting, or producing renewable energy on public lands and actions currently being undertaken to address them.

Challenge 1: Implement requirements of the Inflation Reduction Act of 2022. The Inflation Reduction Act was signed on August 16, 2022. Section 50265 of the act provides that the BLM “may not issue a right-of-way for wind or solar energy development on Federal land” unless it has (1) held an onshore oil and gas lease sale during the 120-day period ending on the date of the issuance of the right-of-way and (2) “the sum total of acres offered for lease in onshore lease sales during the 1-year period ending on the date of the issuance...is not less than the lesser of” 2,000,000 acres or 50 percent of the acreage for which expressions of interest have been submitted for lease sales during that period.

Action: There is ongoing coordination among the BLM renewable energy program and the BLM fluid minerals program to ensure compliance with the law while taking steps to issue solar and wind development rights-of-way. The BLM has drafted policy guidance based on the new statutory requirements to provide structure and consistent procedures for the BLM to follow. The BLM has also added provisions to the proposed solar and wind energy rulemaking to help implement the requirements of Section 50265.

Challenge 2: Incorporating “Buy American.” In an effort to strengthen production of domestic goods and materials, the President signed a determination on June 6, 2022, permitting the use of Defense Production Act Title III authorities for domestic clean energy technologies (e.g., solar, transformers and electric grid components, heat pumps, insulation, electrolyzers, fuel cells, platinum group metals), reiterating the Administration’s commitment to a carbon pollution-free electricity sector. This invocation of the Defense Production Act accelerates and supports domestic manufacturing needed for clean energy and is intended to strengthen domestic supply chains. On August 9, 2022, the President signed into law the Creating Helpful Incentives to Produce Semiconductors for America Act, also known as the “CHIPS Act,” which further promotes domestic manufacturing of important clean energy components. Finally, the Bipartisan Infrastructure Law (BIL), signed on November 15, 2021, provides funding for electric vehicles and clean energy technologies, including manufacturing of energy storage and its components. The BLM is seeking to incorporate these initiatives into its management and administration of the public lands, to the degree legally permissible.

Action: If the BIL results in significant increases in domestic manufacturing over the next 5 years, the BLM is considering potential ways it may prioritize or incentivize solar and wind energy development authorizations where domestically made American items make up a substantive portion of the overall project cost, including through the ongoing solar and wind rulemaking process. The BLM may have flexibility to offer a fee or rate reduction to solar and wind energy development facilities that use American-made parts and materials.

Challenge 3: Maximize use of cost recovery funding for solar and wind energy on public land. The BLM has authority to collect reasonable fees for costs incurred in processing and monitoring rights-of-way pursuant to the Federal Land Policy and Management Act. Further, 43 CFR 2800 provides implementing regulations for the costs related to processing and monitoring rights-of-way. The collection of cost recovery fees for solar and wind energy development projects requires an agreement between the applicant and BLM.

Action: The BLM is actively working on a policy to maximize the collection and use of reimbursable costs for solar and wind energy on public lands. The intent is to support improved bureau and interagency capabilities to quickly and efficiently process solar and wind energy applications and expand the use of appropriated funding to support programmatic renewable energy activities.

Challenge 4: Enhance the geothermal program by creating an operational database.

The bureau's geothermal record system is obsolete and does not meet new information technology security requirements. As a result, the BLM currently lacks an automated database management system to track permitting and operational activities.

Action: The BLM has prioritized funding for a new geothermal energy database with robust capabilities for tracking and reporting. The development and system deployment are scheduled for completion in FY 2024.

Challenge 5: Pursue new categorical exclusion authorities for the geothermal program. Categorical exclusions (CXs) are categories of actions that a Federal agency has determined (after review by the Council on Environmental Quality) do not have a significant effect on the human environment (individually or cumulatively). As a result, neither an environmental assessment nor an environmental impact statement is typically required to comply with NEPA unless an extraordinary circumstance is present. CXs do not supplant non-NEPA legal requirements, such as consultation under the National Historic Preservation Act, Tribal consultation, or compliance with the Endangered Species Act.

Action: The BLM is prioritizing the development of substantiation packages for two new administrative CXs for early phases of geothermal energy activities. The first proposed CX is similar to a CX currently used by the USFS related to exploration activities. The second proposed CX covers activities associated with resource confirmation drilling.

Section 5 – Conclusion

In FY 2022, the BLM permitted 21 projects on public lands that support development of 5,670 MW of onshore renewable energy. As described, the BLM is also actively undertaking numerous program activities and robust interagency coordination in support of further enhancements and efficiencies. The BLM is proud to support responsible onshore energy development on public lands as a part of the bureau's multiple use and sustained yield mission. Combined, the BLM's permitting accomplishments from fiscal years 2021 and 2022 have supported 8,560 MW (34%) of the 25,000 MW national goal required by the Energy Act. The BLM and its interagency partners are making substantial progress toward meeting or exceeding the national goal and appreciate the Committees' interest and support related to these activities.