Testimony of Laura Abram

Director of Project Execution and Public Affairs - First Solar, Inc.

United States Senate Committee on Homeland Security and Governmental Affairs'

Permanent Subcommittee on Investigations

Hearing on Oversight of Federal Infrastructure Permitting and FAST-41

May 2, 2019

Introduction

Good morning Chairman Portman, Ranking Member Carper and members of the Committee on Homeland Security and Governmental Affairs' Permanent Subcommittee on Investigations. I am pleased to be here today to discuss First Solar's experience with FAST-41 and the Permitting Council and recommended solutions to ensure successful and timely permitting of energy infrastructure projects on federal lands that will help our country reach its goal of American energy dominance.

My name is Laura Abram and I am the Director of Project Execution and Public Affairs for First Solar. For more than a decade, I have had the privilege to collaborate across federal agencies within the Department of Interior (DOI) to develop the first and largest solar power plants on federal lands, including in collaboration with tribal communities. My testimony today will present information from my direct experience, with a focus on permitting of the Desert Quartzite Solar Project.

The messages I hope to leave with you today are these: Number one, solar is one of the lowest cost energy resources today and is an important part of America's energy mix. Number two, federal lands are ideal for responsible solar development that avoids or minimizes resource conflicts. Yet we face challenges to utilizing federal lands because certain policies in place today have created substantial hurdles including burdensome permitting processes, lack of resources to ensure timely completion of Right of Way grants, access to available land, and high rents that are not competitive with private lands. Number three, FAST-41 and the Permitting Council have played an important role in addressing timely permitting of infrastructure projects and should expand its role to further improve inter-agency collaboration and streamlining of the environmental review and approval process. This is a critical component in enabling federal lands to continue to be used to meet America's energy demands.

To begin with, I would like to provide you with a high-level overview of First Solar. First Solar is an American solar manufacturer and the largest U.S. provider of thin-film PV panels. First Solar has extensive experience and a proven track-record developing, constructing and operating the world's largest solar power plants. We have shipped over 20 gigawatts (GW) worldwide, and have over 6,000 megawatts (MW) of technology in operation, construction or contracted development across the U.S, including 2,500 MW on federal land. The company has created American jobs and economic benefits across the value chain, including approximately 30 million construction workhours, equivalent to 15,000 one-year construction jobs. Over $1 billion is spent annually with U.S. suppliers in over 35 states,

resulting in over 7,000 indirect jobs. First Solar's world-class 600 MW manufacturing facility in Perrysburg, Ohio has been in operation since 2002 and employs about 1,250 full-time associates. Last year First Solar broke ground on a new 1.2 GW manufacturing facility in Ohio which will directly employ over 500 full-time associates. Shortly after, Pilkington glass announced a $265 million investment in the first new float glass factory built in over a decade to service our Ohio operations. These investments were the result of strong demand, competitive corporate tax rates and solar tariffs designed to level the playing field with foreign competition.

Solar Technology Growth, Economic and Job Benefits

Over the past decade, solar technology and efficiency has dramatically improved and the cost of solar has rapidly decreased, driving increased utility and commercial demand. While conventional baseload resources have historically been used to ensure a cost-effective power mix, large-scale solar power prices have plummeted in the last few years, making it one of the lowest-cost sources for electricity generation available today. There are more than 35,000 MW of large-scale solar projects in operation today, with another 74,000 MW under development. Additionally, the solar industry fuels the economy and creates American jobs. In 2018, the solar industry generated a $17 billion investment in the American economy. It ranks third in total employment among energy industries, behind only petroleum and natural gas. Since 2010, solar employment has grown 159%, from just over 93,000 to more than 242,000 jobs in all 50 states. Veterans now make up 9% of solar workers, compared to 7% of the overall U.S. workforce.

Solar on Federal Lands and Importance of FAST-41 and the Permitting Council

As demand for solar energy continues to grow, it places more importance on the availability of federal lands due to their high solar insolation values, topography, access to available transmission, and location near high-energy load centers. In 2010, BLM approved the 50 MW Silver State North Project, developed and constructed by First Solar, which was the first solar project on federal lands. As of March 2018, BLM approved 25 solar projects, totaling 6,319 megawatts (MW) of installed capacity. This includes the 550 MW Desert Sunlight project developed and constructed by First Solar. The project is located in Riverside County, CA and is the largest solar plant on federal land and one of the largest in the world. Several projects are currently proposed by solar developers, including three in Riverside County, Calif., four in Nevada near Las Vegas, and one in southern Wyoming. Together, these projects are expected to generate more than 2.5 GW of solar power capacity. One of these projects in Riverside County, the 450 MW Desert Quartzite project, is being developed by First Solar and is a FAST-41 project.

It is critically important to ensure responsible development of large-scale solar on federal land that avoids, minimizes and mitigates impacts in compliance with the National Environmental Policy Act (NEPA). However, the NEPA process can take many years and cost companies millions of dollars before gaining approval to begin construction of a project on public land. Establishment of the FAST-41 and Permitting Council in 2015, as well as new regulations implemented by the current administration that require NEPA to be completed within one year, have begun to streamline the permitting process. These

changes should not short-cut environmental review, including sufficient studies critical to protecting resources, but they can help to more efficiently expedite the permitting process.

Fast-41 and the Permitting Council have supported First Solar in expediting permitting on two projects including:

- The 100 MW Aiya Solar Project, located on tribal land owned by the Moapa Southern Paiute Tribe – received its Record of Decision in 2016
- The 450M MW Desert Quartzite Solar Project, located on BLM land in Riverside County, California – in development

The Aiya solar project on tribal land was led by the Bureau of Indian Affairs (BIA) and permitting was completed in approximately 1.5 years. This demonstrates a very fast process due to its FAST-41 status and excellent collaboration between the BIA, BLM, the Moapa Band of Paiutes and First Solar.

The Desert Quartzite project has been in active development for approximately five years and permitting is expected to be complete in September 2019. This project has faced many permitting challenges that have caused up to two years in delays, however FAST-41 and the Permitting Council have provided First Solar with support in helping to navigate the various issues and to assist in keeping the project on schedule. Although First Solar did not have many inter-agency issues, the Permitting Council did play a key role in supporting us in coordinating issues across local, state and federal levels within the BLM. First Solar has also received support from the Department of Interior and BLM who have been responsive to concerns and have helped facilitate resolution of issues.

While the original Plan of Development for Desert Quartzite was submitted in 2008, First Solar did not move forward with active permitting until 2014 due to other project priorities. In 2016, after two years of studies and completion of scoping meetings, BLM was planning to publish the Draft Environmental Impact Statement (DEIS). At that time, there were BLM resource constraints and turnover in personnel. The new team decided to withhold publication of the DEIS to ensure that it considered Conservation Management Actions (CMAs) outlined in the Desert Renewable Energy Conservation Plan (DRECP) published in 2016 at the end of the Obama Administration. First Solar raised concerns with this approach because the Desert Quartzite project was expressly exempted from the DRECP; however BLM believed that the CMAs represented best science and asked First Solar to do a comprehensive analysis of which CMAs the project complied with.

Unfortunately, this caused significant delay in the schedule and the DEIR was published two years later in August of 2018. First Solar met with the FAST-41 Permitting Council several times to get support in addressing these issues. The Permitting Council was very responsive in tracking progress and checking in frequently with BLM and First Solar to ensure the project stayed on schedule. Due to the Government shutdown and additional permitting issues, the project was put on Pause by BLM for approximately 2.5 months. Challenges are common in large, complex solar infrastructure projects and therefore, it is important to have the support of the Permitting Council to help resolve inter-governmental issues

quickly and effectively. It is also important to estimate approximate times for permit completion and ensure a new schedule can be put in place rapidly to keep the project moving forward. First Solar would like to thank the Permitting Council for its hard work and diligence in helping to address schedule challenges, the Department of Interior for collaborating with us to address issues and concerns, and the BLM for their continued hard work and dedication to expedite the required Desert Quartzite federal permits.

Based on our direct experience, First Solar recommends that FAST-41 and the Permitting Council play a more active role in the permitting process from the beginning and assist, not only to keep the project on schedule, but to serve as a central point of contact for project proponents and to help navigate the often complex issues and inter-governmental challenges that can cause project delays. For example, if the Permitting Council could have played a role in facilitating a decision on whether to delay the project for two years to analyze permitting conditions from which the project was exempted, perhaps this delay could have been avoided or reduced. As another example, the Permitting Council should intervene when a project schedule is put on an extended or ill-defined Pause preventing a revised schedule from being updated on the permitting dashboard. In addition to FAST-41 and Permitting Council support, more resources are needed to adequately staff agencies that support the NEPA process including resource and cultural specialists at local BLM offices and timely coordination with the Fish and Wildlife Service. Re-establishment and staffing of Renewable Energy Coordination Offices would also be key to making permitting more efficient.

Federal Land Cost and Land Availability Challenges

It is important to understand that streamlining permitting alone will not ensure successful development of energy infrastructure projects on federal lands. Solutions must be implemented to ensure projects are cost competitive and there is access to enough available land to meet growing American energy demands. Currently, companies are moving away from development of solar and wind projects on federal land and this will not change unless these issues are addressed.

A series of land use planning actions by the BLM has resulted in the majority of federal land in the Western U.S. being declared off limits for development of large-scale solar facilities. The Programmatic Environmental Impact Statement (PEIS), which began a decade ago, and the Desert Renewable Energy Conservation Plan (DRECP) intended to conduct landscape level planning that would provide dedicated land for the development of utility-scale renewable energy generation and transmission, while simultaneously providing for the long-term conservation and management of federal lands to protect environmental, cultural, and physical resources. While this is a worthy goal, the final plans imposed a variety of arbitrary exclusions and setbacks unrelated to any science. As a result, far less land is available today than is needed to meet the public's growing demand for solar energy, and far more could be made available without loss of resource values. Lands in the Development Focus Areas (DFAs) under the DRECP are encumbered with Conservation Management Actions (CMAs) that make development impossible. Similarly, decisions by BLM in Southern Nevada have in practice sharply restricted solar

development in an area with growing commercial demand and a newly enacted 50% renewable portfolio standard requirement.

Solar technology and construction practices have significantly changed since the PEIS was developed in 2009, which excluded lands that did not have enough solar irradiance or the slope of the land was too steep. Solar projects are developed across the U.S. in areas that have far less solar irradiance and steeper slopes and can still deliver cost-competitive and reliable energy to the electric grid. Additionally, construction practices that once scraped the land have now evolved to "light-on-the-land" site preparation techniques that keep the root structure in place or just mow the existing vegetative growth without impacting the natural landscape. In fact, at some sites such as the Topaz Solar Farm in San Luis Obispo California, sheep are used to maintain growth of grasses under the panels, and kit fox-friendly fences allow the kit fox to return to the site and thrive in the shade of the panels. A site that was originally thought to be a threat to kit fox is now the haven for many of them. Pollinator-friendly solar sites are also being developed to support healthy bee populations and ecosystem.

It is important for BLM, the conservation community and the solar industry to take a step back and re-evaluate land use planning efforts so they align with current technology and construction practices and impose restrictions only as necessary for conservation of important resources. In 2017, BLM issued a request for comments to begin re-evaluation of the DRECP and has begun to evaluate some of the more problematic CMAs. It is important for any changes made to balance both conservation and solar development goals in a way that is a win-win for both.

As we work to address these public land use issues, we must also be sure that solar projects developed on BLM land are cost competitive. A project is not viable if it does not have a power purchase agreement with utilities, Community Choice Aggregators (CCAs) or corporate buyers for the sale of the energy generated. The BLM's Solar and Wind Energy Rule was intended to support solar development on BLM-managed land, but instead resulted in charging rents that vastly exceed fair market value, megawatt capacity fees that unnecessarily increase the cost of land and are not found in private land contracts, and excessive bonding requirements. This has made development on public land uncompetitive with private land. For example, the BLM land Lease and Megawatt Capacity annual fee in Zone 8 (Riverside County) where the Desert Quartzite project is located, is 150% greater than a competitive private land solar project.

To address these issues, on June 6, 2018, the U.S. Department of the Interior Royalty Policy Committee (RPC), including representatives of government, tribes, and renewable energy companies, unanimously approved recommendations related to both the Bureau of Land Management's (BLM) rule on Competitive Processes, Terms, and Conditions for Leasing Public Lands for Solar and Wind Energy Development and Technical Changes and Corrections, 81 Fed. Reg. 92,122 (Dec. 19, 2016) (the "Rule"), including for those projects subject to the BLM's Western Solar Plan. The discussions in the RPC document are consistent with this testimony regarding rents and bonds, and should be implemented.

Conclusion

Many developers are now avoiding development on public lands because of these challenges. Responsible construction of solar infrastructure on federal lands can and should be a bipartisan priority. Many of the challenges can be addressed by FAST-41 and the Permitting Council, rules that provide streamlined permitting, more flexible approaches to land availability, ensuring that rents and other commercial issues are competitive with private land markets and re-establishing and adequately staffing Renewable Energy Coordination Offices to enable thorough consideration of resource issues and timely, effective and efficient permitting and issuance of ROW grants. These solutions represent a bipartisan and coordinated approach to the advancement of American energy development.

Thank you very much for the opportunity to testify here today. I would be happy to answer any questions you may have.