

January 17, 2019

**VIA E-MAIL AND FEDERAL EXPRESS**

Mr. Darrell Nitschke  
Executive Secretary  
North Dakota Public Service Commission  
600 E. Boulevard, Dept. 408  
Bismarck, ND 58505-0480

**RE: Harmony Solar ND, LLC's Application for a Certificate of Site Compatibility  
for the Harmony Solar Project in Cass County, North Dakota  
Case No. PU-18-219/OAH File No. 20180389**

Dear Mr. Nitschke:

Based on comments made by the North Dakota Public Service Commission ("Commission") during its working session in the above-captioned matter on January 16, 2019, Harmony Solar ND, LLC ("Harmony Solar"), has revised the Decommissioning Plan provided in Late-Filed Exhibit No. 15. Therefore, enclosed for filing are an original and ten (10) copies of this letter and Harmony Solar's Revised Late-Filed Exhibit No. 15. Electronic versions of this letter and the enclosed documents were filed today with the Commission via e-mail.

If you have any questions, please let me know.

Sincerely,



MOLLIE M. SMITH

MMS/ms/65695549  
Enclosures

cc: Judge Timothy J. Dawson (via e-mail, w/ encl.)  
John Schuh (via e-mail, w/ encl.)  
Patrick Fahn (via e-mail, w/ encl.)  
Betsy Engelking (via e-mail, w/ encl.)  
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**Revised Late-filed Exhibit 15- Decommissioning plan**

Harmony Solar ND, LLC

Mollie Smith, Fredrikson&Byron, P.A.

Harmony Solar ND, LLC  
Harmony Solar Project  
Docket No. PU-18-219

**Revised Late-Filed Exhibit No. 15 – Decommissioning Plan**

North Dakota does not have specific decommissioning plan or financial assurance requirements for solar facilities. However, Harmony Solar ND, LLC (“Harmony Solar”), is committed to ensuring the Project is properly decommissioned at the end of its useful life. Therefore, Harmony Solar commits to the following with respect to decommissioning restoration and financial assurance for the Harmony Solar Project.

**Project Decommissioning and Site Restoration:**

Decommissioning of the Project would begin within twelve (12) months after abandonment or the end of its useful life, and would be completed within twenty-four (24) months after abandonment or the end of its useful life, unless the Commission approves a different schedule. Project decommissioning will include:

- Removing all facilities to a depth of four feet below grade. Any soil disturbance associated with decommissioning would include topsoil segregation.
- Removing the operation and maintenance facility and access roads, unless the landowners request in writing that all or any portion of a facility remain in place and the Commission approves the request.
- Restoration of the Project site, including: decompaction; revegetation; and reclamation to the approximate original topography that existed prior to construction of the facility with topsoil respread over the disturbed areas at a depth similar to that in existence prior to the disturbance.

Following decommissioning, the site will be restored so as to be able to return to the agricultural production that existed prior to construction of the solar facilities.

**Decommissioning Financial Assurance:**

Harmony Solar would provide the following financial assurance for the Project equal to the following:

- Fifty percent (50%) of the Project’s estimated decommissioning cost prior to commercial operation;
- One hundred percent (100%) of the Project’s decommissioning cost at year 10 of operation.

Harmony Solar also proposes that an updated decommissioning cost estimate be provided at year 10 of operation, which would be used to update, as needed, the decommissioning cost financial

security required at year 10 of operation. Harmony Solar will provide financial assurance in the form of an irrevocable letter of credit.

A decommissioning cost estimate for the Project provided by Westwood Engineering (a North Dakota-licensed engineering firm) is attached as **Exhibit A**. The total estimated cost to decommission the Project is \$8,932,776. Therefore, the initial fifty percent (50%) of the Project's estimated decommissioning cost estimate for the Project is \$4,466,388.

As compared to the framework proposed above by Harmony Solar, providing 100 percent of the Project's estimated decommissioning cost prior to commercial operation would cost approximately \$600,000 more in fees to maintain the irrevocable letter of credit. As discussed further below, because of the high level of reliability of the solar modules that would be used by Harmony Solar for the Project, this additional cost does not provide a corresponding benefit.

Harmony Solar will source solar modules from Bloomberg New Energy Finance Tier 1 manufacturers that provide third-party verification of their module performance, as well as warranties on the module output, such as Jinko, First Solar, Trina, and Hanwha. These manufacturers are among the most well-established module vendors in the industry, with all four ranking as a top performer in DNV GL's 2018 PV Module Reliability Scorecard.<sup>1</sup>

As a routine part of their production process, these manufacturers engage third-party quality certification companies, such as TUV and DNV GL, to provide an independent analysis of and reports regarding their manufacturing processes, quality control programs, and end-product performance testing. These reports are used to demonstrate company and technology bankability. Any modules selected by Harmony Solar for the Project will be warrantied to produce more than 80 percent of their nameplate capacity after 25 years of service. In addition to performance level warranties, the panels will also have equipment defect warranties for a period of 25-30 years. Further, analysis of solar panel modules conducted by the National Renewable Energy Laboratory in 2014 concluded that "[a]bout 90% of the normal systems and about 85% of all systems, including systems with known issues, performed to within 10% or better of expected performance."<sup>2</sup>

Given the high level of demonstrated reliability of the class of solar panels that will be used for the Project, and the high value in continued operation of the Project once constructed, Harmony Solar believes the additional cost of providing full decommissioning cost financial assurance prior to commercial operation is not warranted.

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<sup>1</sup> Available at <https://www.dnvgl.com/news/2018-pv-module-reliability-scorecard-121786>.

<sup>2</sup> See Jordan, D.C., and S.R. Kurtz, *Reliability and Geographic Trends of 50,000 Photovoltaic Systems in the USA* (Sept. 2014), available at <https://www.nrel.gov/docs/fy14osti/62801.pdf>.