MINNESOTA POLLUTION CONTROL AGENCY
520 Lafayette Road North
St. Paul, MN 55155-4194

Module or inverter recycling reporting form

Commerce Solar for Schools Program (Minn. Stat. § 216C.375)
State of Minnesota Grant Contract
Counts of module type and inverter model
January 1 – December 31

Doc Type: Reporting

Background: As part of the Minnesota Department of Commerce's (Department) Solar for Schools program (mn.gov/solar4schools), under the terms of the State of Minnesota Grant Contract, Clause 2 *Grantee's Duties,* Exhibit A denotes Grantee and/or Developer responsibility for tracking and recycling all System equipment that ceases to function as intended (for any reason), including counts of module and inverter type. This must be reported on an annual basis, by March 31 for the previous calendar year, to the Minnesota Pollution Control Agency (MPCA). Per the terms of Exhibit A, *Grantee Duties,* Sub. 6, reporting is required for projects (6.1) at system level work order execution, (6.2) throughout an operations and maintenance contract, (6.3) while system components are under warranty, (6.4) throughout a third-party ownership contract, and (6.5) at the system's end of life decommissioning. This applies to all Grantees under the Department's Solar for Schools Program.

Instructions: Please provide the previous calendar year data below for modules and/or inverters that were recycled or shipped for reuse. Contractors do not need to report data on solar modules that arrive damaged and go back to the manufacturer or manufacturer representative; or inverters as defined on page 3 below that are under warranty and returned to the manufacturer. This form is due annually on March 31; close of business at 4:30 p.m. Email completed form as an attachment to amanda.cotton@state.mn.us. For questions, call 651-757-2211.

For full definitions, see page 3.

Date (mm/dd/yyyy)**:** _____

Contact information		**SFS Project information**	
Primary contact:		SFS Project ID:	
Title:		College/District name:	
Email:		District ID:	
Phone:		Installation site/building:	

☐ **Nothing to report**

Module

1. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _____
   Reuse: ☐ Yes ☐ No ☐ Unknown

2. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _____
   Reuse: ☐ Yes ☐ No ☐ Unknown

3. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _
   Reuse: ☐ Yes ☐ No ☐ Unknown

Inverter, as defined on page 3 (next page)

1. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _____
   Reuse: ☐ Yes ☐ No ☐ Unknown

2. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _____
   Reuse: ☐ Yes ☐ No ☐ Unknown

3. **Brand:** _ **Model number:** _____ **Count:** _____
   Operating condition: Select from dropdown list: **Physical condition:** ☐ Intact ☐ Damaged
   Name of shipped to facility: _____
   Name of destination facility for recycling (if not the shipped to facility): _
   Reuse: ☐ Yes ☐ No ☐ Unknown

Definitions:

Destination Facility: It is the intention of the MPCA that photovoltaic (PV) modules and inverters, as defined below, be managed according to the e-waste guidelines in Minnesota, which means that they are managed similarly to universal waste. Modules may be delivered to a ship to facility, also known as a collection or consolidation facility, in Minnesota for the purpose of accumulation and must ultimately be delivered to a Destination Facility. Destination facility means a facility that treats, disposes of, or recycles PV module and/or inverter waste, or more generally e-waste or universal waste. Destination Facility is defined in federal rules, at 40 CFR 273.9. Destination Facilities may be regulated the same as hazardous waste treatment, storage, and disposal facilities, or they may be regulated by other state and federal programs and standards.

Photovoltaic (PV) Inverter: The PV inverter function is to convert and condition electrical power of a PV module to AC (alternating current). The PV inverter is the only device necessary to implement the PV inverter function. If separate devices are required to perform this function, the PV inverter is defined as their sum. This includes, but is not limited to: PV-string inverters with included maximum power point trackers; central inverters; micro inverters; bi-directional inverters; and a combination of a DC (direct current) optimizer plus the inverter in systems where both are necessary. (As defined in NSF/ANSI 457,Sustainability Leadership Standard for Photovoltaic Modules and Photovoltaic Inverters.)

Material Recycling: Reprocessing, by means of a manufacturing process (or processes), of a used material into a product, a component incorporated into a product, or a secondary (recycled) raw material; excluding energy recovery and the use of the product as a fuel. (Adapted from the International Standards Organization.) Manufacturing can include thermal, mechanical, chemical processes.

Ship to facility: A 'ship to facility', also known as a collection or consolidation facility, is similar to the second type of handler described in the Universal Waste Rule, that is, a person who receives waste from generators or other handlers, consolidates the waste, and then sends it on to other handlers, recyclers, or treatment/disposal facilities. Universal waste handlers accumulate universal waste, but do not treat, recycle, or dispose of the waste. Handlers must manage the waste in a manner that prevents releases to the environment, and respond immediately to any releases. They are allowed to engage in simple low risk activities to sort or physically or mechanically separate components of the waste materials to reduce volume and facilitate management and handling of the materials as they are shipped to one or more destination facilities. A ship to facility may engage in testing and evaluation of incoming materials to determine the potential for refurbishment and reuse. Ship to facilities may not treat, dilute, or dispose of wastes.