1. **General Information**

1.1 Manufacturer name

1.2 Total volume of PV modules manufactured in 2017 (MW$_p$)

1.3 PV module manufacturing capacity as of Jan 1st 2017 (MW$_p$)

1.4 List all countries where PV-related manufacturing occurs

2. **Extended Producer Responsibility, Recycling, Green Design - 15 points**

2.1 Does your company publicly support public policies based on the definition of extended producer responsibility (EPR) in regions where you manufacture and sell PV modules? (3 pts)
   a) Yes
   b) No

2.2 Does your company currently set aside money to finance the collection and management of end-of-life PV modules in Europe through PV Cycle or an equivalent program? (3 pts)
   a) Yes
   b) No

2.3 Is your company actively involved in establishing a collection and management of end-of-life PV modules in the USA through SEIA or an equivalent program? (3 pts)
   a) Yes
   b) No

2.4 Does your website let customers know how to recycle/take back their PV modules in all markets in which they sell? Please provide URL for all markets in the comments. (2 pts)
   a) Yes
   b) No

2.5 Are waste or scrap PV modules from your factories sent to a recycling facility with a documented environmental management system and worker safeguards and protections consistent with ISO 14001? Please describe in the comments. (2 pts)
   a) Yes
   b) No
c. No, we do not recycle our PV modules.

2.6 Has your company offered “design for recycling,” cradle-to-cradle,” or similar training to product designers in the past three years? (2 pts)
   a) Yes
   b) No

3. **Chemical Use Reporting, Waste Reduction & Management of Substances**

3.1 Does your company post Information regarding chemical emissions including chemical waste, hazardous waste disposal and/or heavy metals on the company website or sustainability report? (+2)
   a) Yes
   b) No

3.2 Does your company post Information regarding criteria air pollutants (SO\textsubscript{x}, NO\textsubscript{x}, VOCs, particulate matter) on the company website or sustainability report? (+2)
   a. Yes
   b. No

3.3 Do you post information regarding ozone depleting substances on the company website or sustainability report? (+2)
   a. Yes
   b. No

3.4 Do you post information regarding landfill waste disposal on the company website or sustainability report? (+2)
   a. Yes
   b. No

3.5 What is the monetary value of significant fines & total number of non-monetary sanctions for non-compliance with environmental laws and regulations in 2018? (+2)

$___________ Total number_________

3.6 Do your PV modules contain cadmium or lead? If so, what is the maximum concentration found in any homogenous material? Please mark all that apply. (+2)
   a. Yes, cadmium at concentrations greater than 0.01% or 100 ppm.
   b. Yes, cadmium at concentrations less than 0.01% or 100 ppm.
   c. Yes, lead at concentrations greater than 0.10% or 1,000 ppm.
   d. Yes, lead at concentrations less than 0.10% or 1,000 ppm.
   e. No
3.7 Have you or your manufacturer declared the minimum percentage of recycled content in your product for each of the following components? If yes, please provide the percentage to the left of each components and the documentations stating the minimum percentage of recycled content in material supplied to manufacturer. (+2)
   a. Yes
   b. No

Optional: add percentage of recycled content if known
___ semiconductor material (feedstock, powder, or wafer)
___ glass
___ frame material
___ transparent conductive layer
___ metal pastes and contacts
___ ribbon
___ solder
___ encapsulant
___ backsheet

3.8 Are the electric cables used in your company’s PV modules halogen-free? (+1)
   a. Yes
   b. No

4. **Worker Rights, Health, and Safety**

4.1 Does your company have a worker code of conduct that addresses worker rights, health and safety? (+5)
   a. Yes
   b. No

4.2 What percentage of your manufacturing employees or workers who manufacture your brand name products are paid more than the minimum wage for the region/country? (2 pts) _______%

4.3 What are your workday case rates for the following regions? (2 pts)
Global: ___, Americas: ___, Europe, Middle East, and Africa: ___, Asia Pacific and Japan: ___

4.4 What are your recordable incident rates for the following regions? (2 pts)
Global: ___, Americas: ___, Europe, Middle East, and Africa: ___, Asia Pacific and Japan: ___

4.5 What share of manufacturing facilities (based on production output) has received Occupational Health and Safety Management (OHSAS 18001) Certification? (2 pts) _______________%

4.6 Does your company currently use prison labor (e.g. UNICOR) during any aspect
of the product lifecycle including end-of-life recycling and disposal? (2 pts)
   a. Yes
   b. No

5. **Socially Responsible Supply Chains**

5.1 Does your company have enforceable commitment from suppliers to protect workers and the environment? (5 pts)
   
   a. Yes
   b. No

5.2 What percentage of new suppliers since 2015 have been screened using labor and human rights practices criteria. Include compliance with laws on: Minimum wages, Working hours, Compensation for overtime, Health and safety practices, Non discrimination, Freedom of association and collective bargaining, Child labor, or Forced labor. (2 pts)

____________________

5.3 What percentage of new suppliers since 2015 have been screened using environmental criteria. Include compliance with laws on: air pollution, water pollution, hazardous waste management. (2 pts)

____________________

5.4 What percentage of current suppliers with OHSAS certification or equivalent for 100% of their facilities? (1 pt)

____________________

5.5 Does your company or manufacturer disclose conflict minerals that are necessary to the functionality or production of those products in conformance with Rule 13p-1 under the U.S. Securities Exchange Act of 1934? Can you verify that your supply chain does not contain conflict minerals from the Democratic Republic of the Congo (DRC), Angola, Burundi, Central African Republic, Republic of the Congo, Rwanda, South Sudan, Tanzania, Uganda, Malawi and Zambia as per the due diligence guidance outlined by the OECD and can produce documentation? (+5)
   
   a. Yes, we have conducted due diligence to confirm that there are no conflict minerals in our supply chain.
   
   b. No, we have done due diligence, but cannot confirm the country of origin of potential conflict minerals.
   
   c. No
6. **Energy Use & Greenhouse Gas (GHG) Emissions**

6.1 Do you report the overall direct and indirect energy consumption used to make your PV module by primary energy sources? (3 pts)
   a. Yes, on our website.
   b. Yes, to a third party (e.g. Carbon Disclosure project, Global Reporting Initiative).
   c. No

6.2 Do you report the greenhouse gas emissions annually? (3 pts)
   a. Yes, on our website.
   b. Yes, to a third party (e.g. Carbon Disclosure project, Global Reporting Initiative).
   c. No

6.3 Does your company post Information regarding perfluorocarbon (SF$_6$/NF$_3$, CHF$_3$, CF$_4$, C$_2$F$_6$) emissions on the company website or sustainability report? (2 pts)
   a. Yes
   b. No
   c. We do not use perfluorocarbons

6.4 If there is a high-GWP gas that is being used, are there specific abatement systems installed, and maintained? (2 pts)
   a. Yes
   b. No
   c. No high-GWP gas is being used

6.5 Are there controls present, to ensure minimal leakage of high-GWP gases and a leak detection system in place to limit emissions of high-GWP gases?
   a. Yes
   b. No

7. **Water**

7.1 Do you post the volume of water that is used in production each year on your website? (4 pts)
   a. Yes (please provide URL).
   b. No

7.2 Do you post your annual volume of wastewater discharged on your website? (2 pts)
   a. Yes (please provide URL).
   b. No

7.3 Do you post the following wastewater discharge quality indicators on your website? If yes, please provide the URL (2 pts):
   a. Chemical oxygen demand
      Yes ☐ No ☐
b. Biological oxygen demand  Yes ☐  No ☐
c. Heavy metals  Yes ☐  No ☐
d. Totally suspended solids  Yes ☐  No ☐

URL:

7.4 Have you ensured that the product is manufactured in facilities that have established a water management policy for efficient use of water in manufacturing operations? (1 pt)
   a. Yes
   b. No

7.5 Do the manufacturing facilities demonstrate an average of 1% reduction per year of facility-wide total water withdrawal per unit of PV module production (in MW) from the inventory baseline? (1 pt)
   a. Yes
   b. No
   c. Not sure

8. **Packaging:**

8.1 Does any of your product packaging contain lead, Mercury, cadmium, hexavalent chromium above a total of 100 ppm for four metals combined? (3 pts)
   a. Yes
   b. No
   c. Not sure

8.2 Is any of your paper-based material used in product packaging bleached with chlorine compounds? (Except invoices and shipping documents)(2 pts)
   a. Yes
   b. No
   c. Not sure

8.3 Are all your non-reusable packaging components >= 25 g separable by material type without use of tools? (1 pt)
   a. Yes
   b. No
   c. Not sure

8.4 What is the percentage of recycled fibers in paper-based packaging. (Alternative paper-based packaging materials (including, but not limited to, bamboo, mushrooms, bagasse, and straw) are exempt from this question and the calculation of recycled content. (1 pt)
8.5 Is all the plastic >= 25 g used for your product packaging labeled with material type in accordance with ISO 11469/1043, ASTM D 7611/D7611M, or DIN 7? (plastic films and plastic strapping are excluded). (1 pt)
   a. Yes
   b. No
   c. Not sure

8.6 What is the percentage of post-consumer recycled plastic in your product packaging components? (plastic protective and stretch wraps are excluded) (The percentage is calculated by the mass of post-consumer divided by the total mass of plastics in packaging). (2 pts)

___________________

9. **Life Cycle Assessment:**

9.1 Have you done a Life Cycle Assessment (LCA) on your core product in accordance to ISO 14040/14044 within 5 years? (8 pts)

   a. Yes
   b. No

9.2 If yes, is it public available? Can you provide a link to the documentation of third party review of the LCA? (2 pts)

___________________