

2016-17 SVTC Solar Scorecard Guidance Document

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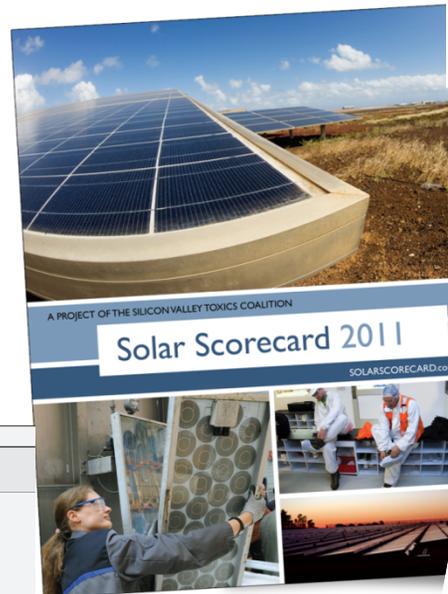
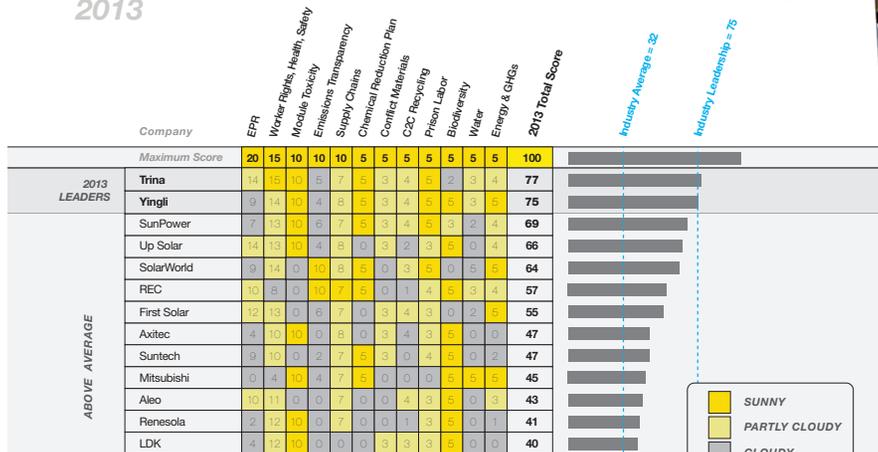


SVTC's Just & Sustainable Solar Industry Initiative

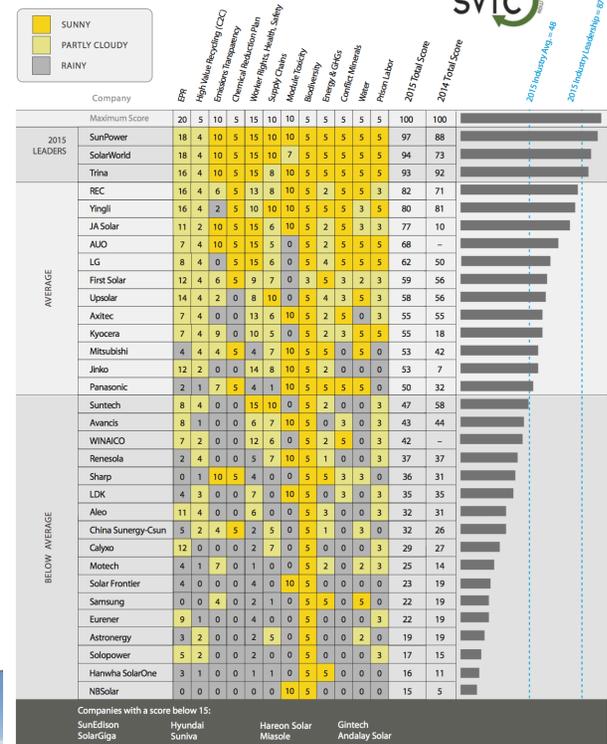
Scoring Criteria:

- Extended Producer Responsibility – 15
- Emissions Reporting & Reduction – 15
- Workers Rights, Health and Safety – 15
- Supply chain – 15
- Conflict Minerals – 10
- Module Toxicity – 10
- Water – 10
- Energy & GHGs – 10

SOLAR SCORECARD 2013



2015 SOLAR SCORECARD



2015 SOLAR SCORECARD
A PROJECT OF THE SILICON VALLEY TOXICS COALITION

SVTC's Vision
The Silicon Valley Toxics Coalition (SVTC) believes that we still have time to ensure that the PV sector is safe for the environment, workers, and communities. SVTC envisions a safe and sustainable solar PV industry that:

- 1) Takes responsibility for the environmental and health impacts of its products throughout their life-cycle, including adherence to a mandatory policy for responsible recycling.
- 2) Implements and monitors equitable environmental and labor standards throughout product supply chains.
- 3) Pursues innovative approaches to reducing and eliminating toxic chemicals in PV manufacturing.

For over three decades, SVTC has been a leader in encouraging electronics manufacturers to take responsibility for their products. This includes recycling workers from toxic exposure and preventing hazardous e-waste dumping in developing countries like India, Ghana, and China that lack the proper infrastructure to protect workers or the environment.

The Purpose
The Scorecard is a resource for consumers, institutional purchasers, investors, installers, and anyone who wants to purchase PV modules from responsible product stewards. The Scorecard reveals how companies perform on SVTC's sustainability and social justice benchmarks to ensure that the PV manufacturers protect workers, communities, and the environment. The PV industry's continued growth makes it critical to take action now to reduce the use of toxic chemicals, develop responsible recycling systems, and protect workers throughout global PV supply chains. Many PV companies want to produce truly clean and green energy systems and are taking steps to implement more sustainable practices. SVTC is committed to helping these companies achieve that goal. At the same time, we need to create and enforce policies that ensure the safety and enforce environmental protection of the entire sector.

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2016-17 Survey & Scorecard Updates

- SVTC continues to score Solar companies' websites, survey responses, interviews and personal communications, and news sources and publicly available data to inform the scorecard.
- The 2016 Solar Scorecard will report on the top 40 companies, which represents an estimated 80-85% of the market share. SVTC also scores smaller companies who request to participate so the companies listed are not exclusively the top 40.
- The number of categories in the scorecard are fewer, but the requirements and metrics with the metrics have been included.
 - EPR and high materials recycling have been combined.
 - Prison labor is part of worker health and safety.
 - Chemical reduction and emissions transparency are now combined.
 - Biodiversity has been eliminated because the scope on the scorecard is PV manufacturers, not developers.
- The 2016 Solar Scorecard reflects input from ongoing conversations to establish a Sustainability Leadership Standard for Photovoltaics.

General Information – no info here is scored

Criteria
1.1 Manufacturer name
1.2 Total volume of PV modules manufactured in 2015 (MW _p)
1.3 PV module manufacturing capacity as of Jan 1st 2015 (MW _p)
1.4 List all countries where PV-related manufacturing occurs

Extended Producer Responsibility (EPR) – 15 points

Issue: PV modules at the end-of-life have a recipe for e-waste—valuable metals mixed with toxic materials. There is a growing concern that PV modules will be found in future e-waste streams sent to developing countries. There are numerous materials used in PV that are finite resources and making PV from recycled materials will reduce waste, improve recycling markets and lessen the overall impact on natural resources.

Goal: Companies have a global take-back and responsible recycling program and support policies that move in this direction.

Criteria	Description	Points Possible
2.1 Commitment to global EPR in principle	<i>Reports to SVTC that they support public policies based on EPR in the regions they manufacture and sell PV modules.</i>	+3 — Direct communication to SVTC or evidence of policy support from website.
2.2 EPR in Europe	<i>Sets aside money to finance the collection and management of end-of-life PV modules in Europe through PV Cycle or an equivalent program</i>	+3 — PV Cycle or equivalent
2.3 EPR in USA	<i>Company is actively involved in establishing a collection and management of end-of-life PV modules in the USA through SEIA or individual efforts</i>	+3 — SEIA EPR effort or equivalent
2.4 Website	<i>Website lets customers know how to recycle/take back their PV modules in all markets in which they sell</i>	+2 — website describes where to recycle
2.5 Environmental management of EoL PV	<i>All recycling activities take place at a facility with a documented environmental management system and worker safeguards and protections consistent with ISO 14001</i>	+2 — SEIA EPR effort or equivalent
2.6 Design for Recycling	<i>Company offered “design for recycling” or similar training or seminars to product designers in the past 3 years</i>	+2 — Yes

Emissions Reporting & Reduction – 15 points

Issue: PV manufacturing relies on the use of hazardous chemicals similar to those used in the semiconductor and electronics industries, which led to widespread contamination at manufacturing sites (Silicon Valley has the highest concentration of Superfund sites in the USA).

Goal: Companies disclose chemical emissions information on their website

Criteria	Description	Points Possible
3.1 Chemical Emissions	<i>Reports chemical emissions including chemical waste, hazardous waste disposal and/or heavy metals on the company website or sustainability report</i>	+5 — For reporting chemical waste, hazardous waste, or heavy metals
3.2 Criteria Air Pollutants	<i>Reports criteria air pollutant emissions on the company website or sustainability report</i>	+3 — for reporting all NO_x, SO_x, Volatile Organic Compounds, Particulate matter (PM) emissions
3.3 Ozone Depleting Substances	<i>Reports ozone depleting substances on the company website or sustainability report</i>	+2 — website reports emissions of ozone depleting substances
3.4 Landfill disposal	<i>Reports the amount of waste disposed of for landfill or equivalent on the company website or sustainability report</i>	+2 — website reports landfill disposal
3.5 Compliance	<i>Monetary value of significant fines & total number of non-monetary sanctions for non-compliance with environmental laws and regulations</i>	+3 —reports value & number

Workers' Rights, Health and Safety – 15 points

Issues: PV manufacturing should be done in a way that protects worker rights, health and safety. Prison labor does not have the same oversight as non-prison labor and prisoners may be exposed to higher levels of pollution in the workplace.

Goal: Companies protect workers' rights, health and safety and can prove it. SVTC's overall goals for worker protections can be found on our Green Job's Platform on our website.

Criteria	Description	Points Possible
4.1 Formal Commitment	<i>Companies adopt a formal commitment that protects worker rights, health, and safety that goes beyond compliance with local laws and regulations</i>	+5 — For a company policy or signing onto the SEIA commitment, EICC code of conduct or equivalent; +5 for a strong policy, but missing critical elements
4.2 Living Wage	<i>Commitment to providing living wages for employees. Reports percentage of employees paid more than minimum wage.</i>	+2 — If 100% Or, +1 — If 50% or >
4.3 Work Day Case Rate	<i>Report and show improvements in workday case rates. Based on reporting criteria used Bureau of Labor Statistics http://www.bls.gov/iif/osheval.htm</i>	+2 — Reports work day case rates by region
4.4 Recordable Incident Rates	<i>Report and show improvements in workday case rates</i>	+2 — Reports recordable incident rates by region
4.5 OHSAS certification	<i>Company has OHSAS certification or equivalent for 100% of their facilities</i>	+2 — If 100% Or, +1 — If 50% or >
4.6 Prison Labor Free	<i>Company has an explicit policy forbidding prison labor</i>	+ 2 – Yes

Supply Chain – 15 points

Issue: As global supply chains become increasingly complex, it is often not known what is happening regarding worker and environmental impacts in the supply chain

Goal: Companies have their suppliers from across the lifecycle report chemical emissions; have companies adopting binding commitments to monitoring and improving the environmental, health, and safety of their operations.

Criteria	Description	Points Possible
5.1 Formal Commitment	<i>Enforceable commitment from suppliers to protect workers and the environment.</i>	+10 — For a company policy or signing onto the SEIA commitment, EICC, UNGC, or SA8000; Or, +5 for a strong policy, but missing critical elements
5.2 Labor and human rights screening	<i>Percentage of new suppliers since 2015 that were 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.</i>	+2 — If data are reported
5.3 Environmental impacts screening	<i>Percentage of new suppliers since 2015 that were screened using environmental criteria. Specify the environmental criteria in the comments.</i>	+2 — If data are reported
5.4 OHSAS certification	<i>Percentage of current suppliers with OHSAS certification or equivalent for 100% of their facilities</i>	+1 — If data are reported

Module Toxicity & Materials – 10 points

Issue: Using toxic materials in PV poses a risk to the environment and workers, and increases operating and disposal costs.

Goal: Companies have no toxic substances in its PV modules.

Criteria	Description	Points Possible
6.1 Eliminate Heavy Metals	<i>Companies that do not contain toxic heavy metals. Some manufacturers have been able to significantly reduce the toxicity of their modules to very low levels. The levels of Cd and Pb allowed in products under RoHS is the threshold used for claims to be cadmium or lead free.</i>	+5 – for no more Pb or Cd than allowed under RoHS.
6.2 Recycled Content	<i>PV modules should have high content of recycled materials to reduce life cycle impacts</i>	+3 – Reports recycled content
6.3 Halogen-free	<i>Electric cables are halogen-free</i>	+2 – Yes

Energy Use & GHG Emissions – 10 points

Issue: Reporting on energy use and GHGs will encourage manufacturers to use the cleanest energy possible to make PV.

Goal: Companies report energy use, sources of energy, and greenhouse gas emissions (GHGs).

Criteria	Description	Points Possible
7.1 Energy Use Reporting	<i>Companies report energy use annually or on their website, and/or report information to a third party.</i>	+4 Reports energy use annually to third party Or, +3 Reports energy use annually
7.2 GHG Emissions Reporting	<i>Companies report GHG emissions annually or on their website, and/or report information to a third party.</i>	+4 Report GHGs to third party Or, +3 Reports GHGs
7.3 Perfluorocarbons	<i>Reports perfluorocarbon emissions on the company website or sustainability report</i>	+2 — Website or sustainability documentation reports perfluorocarbon emissions or manufacturers use zero perfluorocarbons

Conflict Minerals – 10 points

Issue: Tin is a conflict mineral and its use in PV is widespread.

Goal: Companies confirm through due diligence that there are no conflict minerals in their products.

Criteria	Description	Points Possible
8.1 OECD Guidelines	<i>PV manufacturing 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</i>	+10 Documents OECD due diligence and <u>can</u> confirm 100% conflict-free Or, +5 Document OECD Due Diligence, but <u>cannot</u> confirm conflict-free Or, +3 Starting the due diligence process

Water – 10 points

Issue: There are significant amounts of water used and wastewater emissions for making PV.

Goal: Companies do not pollute the water and reduce the amount used in production. One place to start is to require manufacturers disclose water use and emissions.

Criteria	Description	Points Possible
9.1 Report Water Use	<i>Company recognizes the importance of reducing impacts to water use for PV module manufacturing facilities. Water withdrawal is the amount of water removed from all sources (surface, ground, rain, municipal water, etc.).</i>	+5 — Companies report volume of water use
9.2 Report Wastewater	<i>Company tracks volume of wastewater generated from manufacturing</i>	+3 — If wastewater data provided
9.3 Wastewater quality indicators	<i>Company reports several water quality indicators to characterize water quality.</i>	+2 — Reports COD, BOD, DSS, or other quality indicators