

How to Make Solar Even More Sustainable

Eric Louie, March 28, 2012.

Sure, solar power is greener than electricity from fossil fuel, but that doesn't guarantee that all solar panels are made sustainably. For corporations buying or investing in solar panels for their environmental benefits, it makes sense to keep track of the sustainability leaders -- and to be wary of the potential risks of associating with manufacturers with less sustainable practices.

The good news, though, is that many solar manufacturers are highly aware of the issue, according to a new report from San Francisco-based nonprofit **As You Sow**. The group, which advocates for environmental and social corporate responsibility, supports solar energy and put out the report -- titled *Clean & Green: Best Practices in Photovoltaics* -- as a guide for investors, consumers and others.

"I was really pleased to see how much awareness there was," said Amy Galland, the report's author, adding that solar companies likely want to avoid the criticisms about sustainability that other industries have faced.

Because the solar industry is built on the concept of protecting the environment, it can face extra scrutiny in cases where it fails to do so.

Many in the industry already recognize this: Last fall at JinkoSolar in China, where demonstrations over a polluted river sometimes turned violent, the company quickly took action to address the problem, Galland said.

And this month, the Solar Energy Industries Association made its first official solar industry commitment to environmental and social responsibility via a document promoting industry standards in those areas. The founding companies in that include Dow Solar, SunPower, Suntech, Trina Solar, and Yingli Solar.

"You're seeing an industry that's really responsive," Galland said.

However, it still has room for improvement. Only 11 companies responded to the more than 100 surveys that As You Sow sent out, for example. "We do hope the rest of the industry becomes more transparent and thinking about it," Galland said.

Many of the respondents were industry leaders that could provide good examples for others to follow, she added. For instance, the responding companies beat emissions standards, have started their own initiatives to reduce their water use and are participating in voluntary worker safety programs, she said.

The report notes the inherent benefits of solar panels over fossil fuels, such as the fact that solar is renewable and that panels are safer for workers to produce than fossil-fuel equipment. But it also discusses some challenges, including the toxic substances used to make solar panels, as well as problems with some companies and suppliers failing to comply with health and safety codes.

From deciding where to make solar panels to planning for the end of their usefulness, the report highlights how captur-



ing the renewable energy can be more environmentally friendly.

Buyers might consider the manufacturing location, for example. Depending on where they are, solar factories use electricity from different types of fuels to make the panels – and, therefore, have widely varying carbon footprints. In China, 81 percent of electricity comes from conventional thermal sources, while 45 percent of U.S. electricity comes from coal.

The end-of-life aspects also play a role in determining panels' sustainability. First Solar, for example, has a prefunded collection and recycling program that stands out in the industry, with up to 95 percent of the old panels' semiconductor material reusable for new panels, the report notes.

Other recommendations from the report include management practices, such as board independence and transparency, as well as tying executive compensation to environmental health and safety.

For more information about the report, visit <http://www.asyousow.org>.