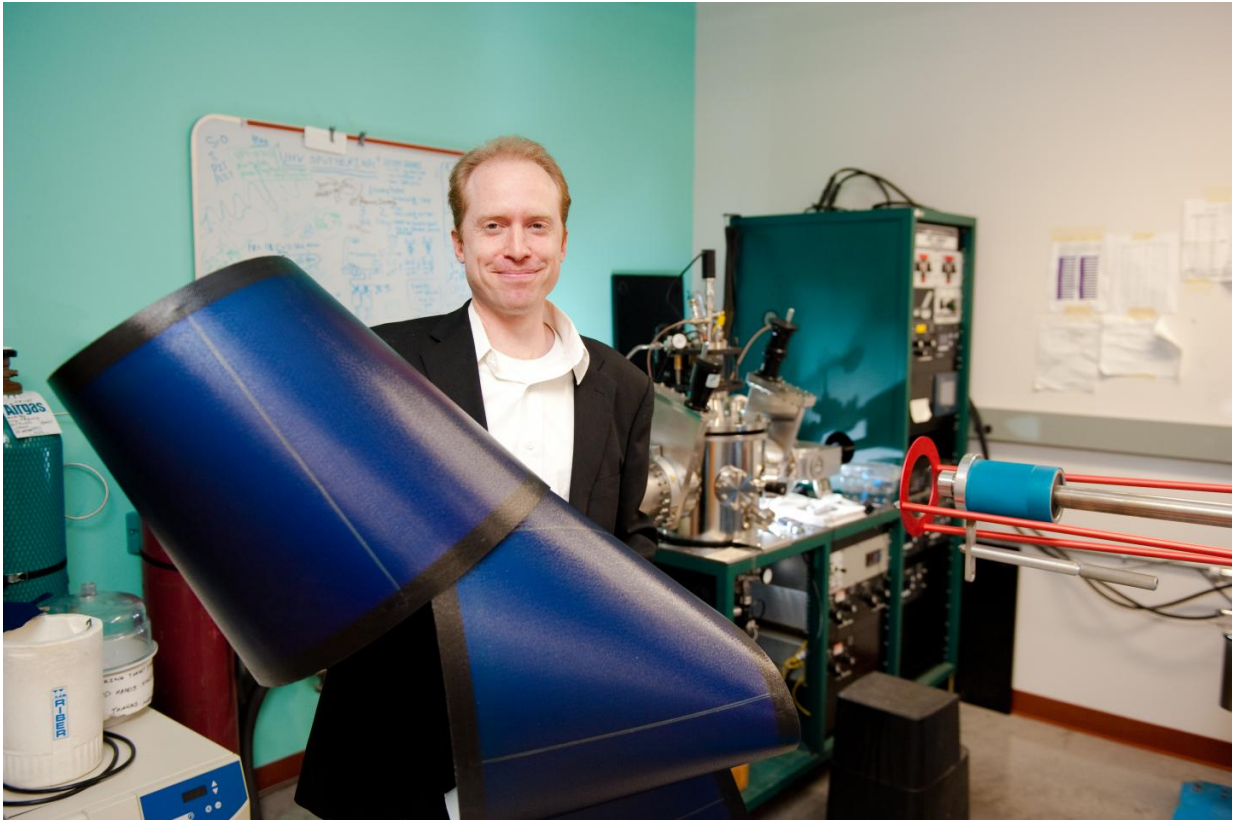


# Coal to solar: Retraining the energy workforce

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Joshua Pearce's lab at Michigan Tech focuses on the accessibility of solar and 3-D printing technologies. Credit: Michigan Tech, Sarah Bird

As more coal-fired power plants are retired, industry workers are left without many options. There is a light at the end of the tunnel, though.

In a new study published in *Energy Economics*, researchers from Michigan Technological University and Oregon State University offer hope for coal workers for high-quality employment in the rapidly expanding solar photovoltaic industry.

Joshua Pearce, who holds a dual appointment in materials science and engineering as well as electrical and computer engineering at Michigan Tech, helped assess what it would take to retrain workers for a different energy field.

"Although coal investors can simply call their brokers to move their money to more profitable industries, coal workers are left with pink slips and mortgages," Pearce says. "Fortunately, the solar energy industry sector is growing at an incredible rate—and they are hiring."

Along with co-author Edward Louie, of the School of Public Policy at Oregon State University, Pearce found that the growth of solar-related employment could absorb the layoffs in the coal industry in the next 15 years. To determine this, Louie and Pearce compared existing coal industry jobs—and the salaries and skill sets of these positions—to ones in the solar industry. Then they estimated the cost of returning to school and re-training time.

Pearce notes that the estimates are simply examples and could vary, although there are numerous low cost options for solar training that people could pursue while still employed. He adds that the appendices from the study will be most useful to current coal workers, where people can look up an existing job and go over the best potential fits in the solar industry and the training necessary.

"Many of these [coal](#) miners have transferable skill sets already," says Christopher Turek, the director of Solar Energy International. "These range from mechanical and electrical expertise, all the way to their

confidence in working in a highly technical field with a strong focus on safety."

Currently, based on data from The Solar Foundation, the photovoltaic energy industry is bringing on new workers 12 times faster than the overall economy. As of November 2015, the [solar industry](#) employs 208,859 solar workers, which is already larger than the roughly 150,000 jobs remaining in the [coal industry](#). And the photovoltaic [energy](#) sector is expected to continue expanding.

**More information:** Edward P. Louie et al, Retraining investment for U.S. transition from coal to solar photovoltaic employment, *Energy Economics* (2016). [DOI: 10.1016/j.eneco.2016.05.016](https://doi.org/10.1016/j.eneco.2016.05.016)

Provided by Michigan Technological University

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