Lliam Hildebrand says he had a moment of clarity during an apprenticeship at a steel-fabricating shop in Victoria, Canada. He was learning the metal-working skills he would need to become a boilermaker, to eventually move on to work on the many steel vessels -- including furnaces, pipelines, "cokers" and "exchangers" -- that make up the oil industry's vast infrastructure in Alberta, Canada's oil sands fields.

During that apprenticeship, Hildebrand would come into the fabricating shop and see a pressure vessel on one side of the shop being made for the oil sands, and at the same time, on the other side of the shop, his own project -- a wind farm weather station. Hildebrand says he walked into the shop one morning, and the contrast between the two ventures struck him sharply. That was the moment when he realized, "We are the trade -- the building trade -- that's really going to help address [climate change]."

From then on he has felt as though he's been living two lives. Coming out of his apprenticeship, he started looking for jobs in the renewable sector, but was unable to find work. Six years ago, he reluctantly decided to apply his skills where there were
plenty of jobs: the Canadian oil sands fields.

To see more stories like this, visit "Planet or Profit?" (http://truth-out.org/news/item/22419-planet-or-profit)

But after years of working in an industry that one top climate scientist has called "the biggest carbon bomb on the planet," Hildebrand came to realize that he was not the only oil worker in Alberta who felt "guilty about developing the infrastructure that is creating climate change."

Opportunity in the Oil Plunge

Last spring, when oil prices began to fall, Hildebrand banded together with like-minded coworkers and began building an oil and gas worker-led nonprofit called "Iron & Earth (http://www.ironandearth.org/)," which officially launched this month during a press conference in Edmonton. Through the nonprofit, the oil sands workers hope to help others who have been laid off diversify their skill sets and facilitate the necessary training to transition them to the renewable energy sector. They also want to help incorporate renewable energy projects into oil sands workers' current scope of work.
than 100,000 jobs were lost (http://business.financialpost.com/news/energy/oil-industry-to-lose-100000-jobs-by-the-end-of-2015-as-policy-uncertainties-low-prices-decimate-sector?__lsa=099e-7818) there in 2015, due to the global drop in oil prices.

"We are a group of workers who not only want to diversify our work scope based on job need, but also based on a values-based mission, to ensure that we're creating and building a future that's going to be sustainable," Hildebrand told Truthout. "The drop in oil prices was certainly a catalyst to help amplify these conversations, and created the pressure to ... create a catch-all organization that’s going to make projects happen and get workers' hands on some renewable energy projects."

Moreover, not every oil worker with experience in Alberta's oil sands needs to retrain in order to transition to the renewable sector, according to Hildebrand, who says a lot of trades are "directly transferable." Hildebrand has worked on several renewable energy projects himself, including a biomass plant and the wind farm weather station that inspired him during his apprenticeship. "I didn't require any retraining for that. All I required was the blueprints and the steel, and the facility to build it," he said.

From Oil Sands to "Solar Skills"

Iron & Earth's first project is its "Solar Skills" campaign to facilitate the retraining of 1,000 laid-off electricians from Alberta's oil industry, to help build 100 solar installations on public buildings throughout the province beginning this fall. In the future, as the group takes on different campaigns focused on geothermal, biomass, biofuel and wind energy, they hope to attract other kinds of oil and gas workers, such as pipefitters and iron workers, as well as workers from other building trades, to retrain in those sectors.

The group is asking for provincial funding from Alberta's New Democratic Party government for its first campaign. But according to Hildebrand, the project has even drawn interest from the likes of oil giant Enbridge, which sent a representative to the group's first press event last week. Another solar company, Suncor, has also expressed interest. "Right now we're just trying to focus on a specific, tangible campaign because we're still young and small, and trying to stay within our capacity," Hildebrand said.

One electrician who currently works in the oil sands industry and plans to undergo training via the Solar Skills campaign is Iron & Earth's director, Adam Cormier, from Newfoundland. Cormier, who's worked as an electrician for seven years, plans to grow the organization on Canada's east coast by starting a Newfoundland chapter and connecting with oil and gas workers and renewable energy companies there.

Cormier has been working in extractive industries for about two years now, not only in Alberta, but also in the Labrador region of Newfoundland, where he worked on
mining infrastructure. As an electrician in the oil sands, he provides temporary
time, and also tests motors and lights. He hopes
that, through Iron & Earth’s Solar Skills campaign, he will one day be able to oversee
the installation of solar panels.

The oil plunge hit Newfoundland hard. The oil-dependent province is facing a deficit
of nearly $2 billion (http://www.cbc.ca/news/canada/newfoundland-labrador
/fiscal-update-newfoundland-labrador-1.3376486), and thousands of skilled workers
have been laid off since the price drop began. However, Cormier sees this
transitional time as a necessary moment, independent of prices. "The fact of the
matter is, even if oil prices go back up, and they probably will, Canada still needs to
meet its commitment under the Paris [United Nations 21st Conference of Parties]
agreement. So, regardless of whether or not oil prices stay low or go back up, we
need to diversify our energy economy to include renewables," Cormier says.

Cormier, like Hildebrand, began having misgivings about working in the oil and gas
industry as he learned more about the scientific consensus regarding human-caused
climate disruption. "For me, being aware of [climate change], and at the same time
working in the oil sands ... it really gets you thinking about your contribution to
either the problem, or the solution."

A Blue-Green Transition

The oil sands workers are also hoping to attract the support of their own labor
unions, seeking alliances with the International Brotherhood of Boilermakers and
the International Brotherhood of Electrical Workers, for a start. They don’t have any
official partnerships yet, but have arranged meetings with union leaders and
representatives from renewable energy companies to talk about how they can work
together to diversify their trades.

Hildebrand says that while some of the largest unions in Canada have been
supportive of renewable energy development, a majority of the country’s
building-trade unions haven’t been as enthusiastic. "We’re hopeful that we can be a
catalyst to help our unions realize ... the enormous opportunity that renewable
energy development has for our trade, because a large portion of renewable energy
development is going to be in industrial steel projects," Hildebrand says.

One strategy for appealing to organized labor is to draw attention to changes in
working conditions: The renewable energy offers a decrease in occupational health
hazards. Studies show that oil-and-gas workers are killed on the job at a fatality rate
that is nearly seven times greater (https://www.osha.gov/SLTC/oilgaswelldrilling/) than the rate for many other industries, and that oil and gas workers are exposed to
greater levels of carcinogens (http://www.latimes.com/science/sciencenow/la-sci-
sn-fracking-benzene-worker-health-20140910-story.html) like benzene. (Of course,
the renewable sector isn't perfect either, safety-wise: "There's no doubt that working
in renewables is going to be much cleaner than working in oil and gas, but we're still
going to have a lot of dangers," Cormier cautioned.)

The workers of Iron & Earth hope to develop relationships with all of the major building trade unions in Alberta and Canada more widely, and as they grow, reach out to unions and workers across the continent, including the US, where the oil plunge has also affected thousands of workers in shale fields. Those workers, too, are transitioning to the renewable sector amid massive layoffs.

**US Oil Workers Transition Amid Shale Bust**

With oil prices remaining below $30 per barrel well into 2016, oil and gas companies in the US are continuing to lay off workers. The oil, gas and coal industries in the US saw employment drop (http://www.theguardian.com/business/2016/feb/07/oil-industry-stain-economic-recovery-barack-obama) by 6.6 percent in 2015, with 104,514 jobs lost, an increase from 4,137 in 2014.

The brunt of that loss has fallen on southern states, Texas chief among them. The state ranked third (http://www.theguardian.com/business/2016/feb/07/oil-industry-stain-economic-recovery-barack-obama) in employment growth in 2014, but plummeted to 32nd place last year. But as oil and gas loses in Texas, wind energy in the state is thriving -- and laid-off oil-and-gas workers are finding jobs in the state's wind and solar sectors.

According to the American Wind Energy Association, Texas leads the nation (http://awea.files.cms-plus.com/FileDownloads/pdfs/texas.pdf) in wind power, with more than 17,000 megawatts of wind energy generation, and more than 5,000 megawatts of wind generation under construction. Solar is moving more slowly, but is still finding a place in Texas, ranking ninth in the nation (http://bizbeatblog.dallasnews.com/2016/03/why-isnt-texas-number-one-in-solar-power-answer-is-blowing-in-the-wind.html/) for solar power in 2015.

Mortenson Construction recruiter Matthew Ehrenberg told Truthout that the Minneapolis-based company has a number of solar and wind projects across Texas and Utah, including its Alamo 7 solar plant in Haskell, Texas. Ehrenberg said the company hired about 500 individuals to work on the project as of March 21, and while he couldn't pin down an exact percentage of workers who were hired from the oil-and-gas sector, he called the percentage significant.

A workforce-development board for the West Central Texas region arranged a hiring event for Mortenson, during which the company hired about 60 individuals. According to business resource consultant Steve Collins, about 60 to 75 percent of those hired were from the oil field.

Ehrenberg says the company conducted a job survey in January that showed it hired about 130 people from the Haskell area for the Alamo 7 project, with "a big portion" being "oil-and-gas industry folks." Another 400 people, many from the oil-and-gas sector, are working on the company’s Alamo 6 project in Pecos County. The company
also recently hired about 90 people to work on a plant in Utah -- another state that has experienced oil-and-gas layoffs.

Ehrenberg agreed with Hildebrand of Iron & Earth that oil workers' skills translate well to solar projects.

While oil and gas workers transitioning to the renewable sector may not make as much money as they did when oil prices were high, in the long run, their new jobs may prove to be more stable. "One of the biggest complaints that I get from applicants is that [oil and gas] is up and down," Ehrenberg said. "If they're on an oil rig, one week they're working and the next week they're not working, and so it's ... very frustrating for families, but ... [solar is] not based on a commodity price."

Ehrenberg and Cormier expect the industry to continue to expand across the South in the coming months, as oil prices remain low. "Diversifying our economy to include renewables is a win-win-win," says Cormier. "It's a win for our personal health both as workers on the job sites and the overall benefit that is transmitted to society from having less ... coal plants, and it's a win for the planet and for future generations to come."

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CANDICE BERND (/AUTHOR/ITEMLIST/USER/47429)

Candice Bernd is an Editor/Staff Reporter with Truthout. With her partner, she is writing/producing Don't Frack With Denton (https://www.facebook.com/dontfrackwithdenton?fref=nf), a documentary chronicling how her hometown became the first city to ban fracking in Texas - and why some went to jail to defend it.

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