

IRON + EARTH



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YEAR
PROGRESS
REPORT

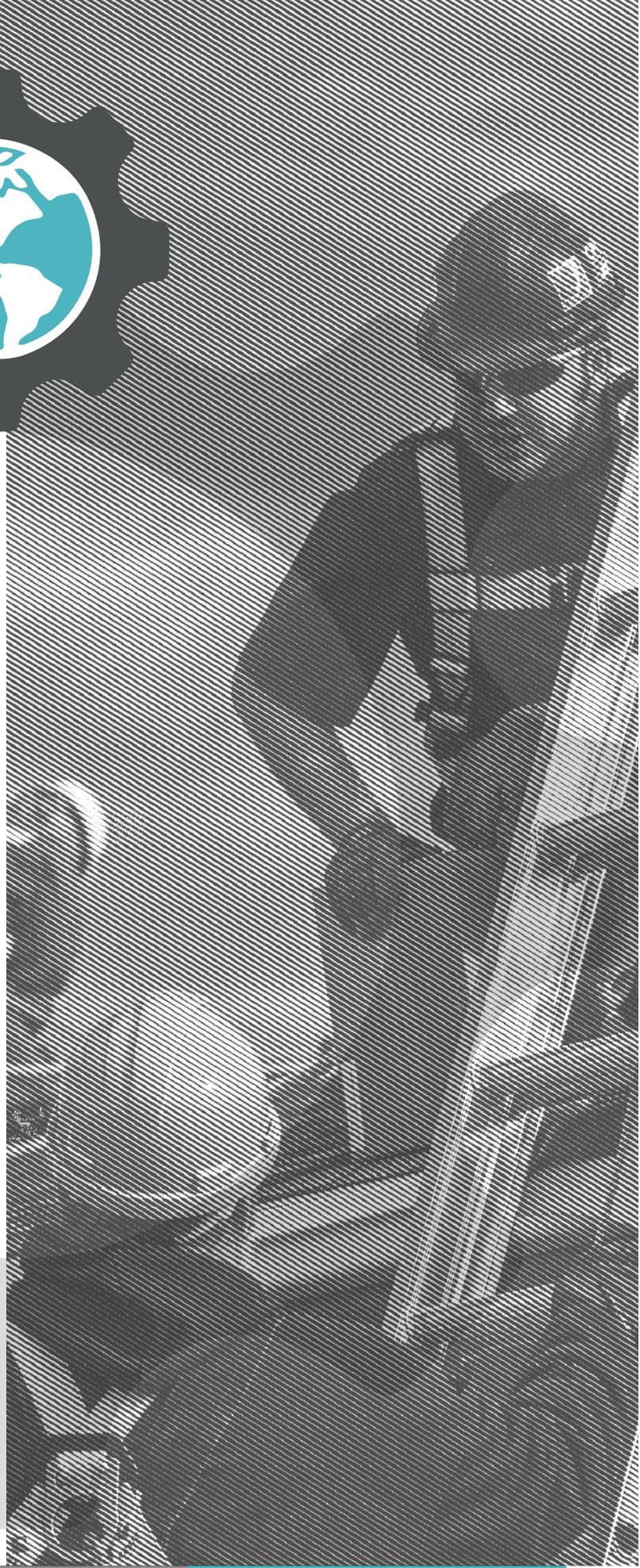
LAUNCHING FORWARD



Iron & Earth formed around the lunchroom tables of the oilsands in 2015. We were in the middle of an oil price crash which resulted in over 100,000 (roughly one in three) oilpatch employees losing their jobs by 2017¹. We knew our dependence on the fossil fuel industry was a risk to our livelihoods and so we began holding lunch-time meetings on the jobsite to discuss the potential of diversifying into the renewable energy sector. Many of us could see a clear path to reinventing ourselves as energy industry workers, not just fossil fuel industry workers. Beyond the financial benefits, we were excited about the opportunity to help build a more sustainable energy future.

So, in Spring 2016 we launched Iron & Earth to empower ourselves to create a better future for ourselves, our co-workers, and the planet. Within months we had inspired over 100 media stories and garnered a supporter base of thousands of Canadians and hundreds of fossil fuel industry workers. A powerful movement had begun.

This progress report has been written to celebrate what we have accomplished in our first couple of years and share a bit about where we are going. Please share this report with any friends, family or colleagues who may be inspired by our work or interested in getting involved. Contact info@ironandearth.org with any questions or comments.



¹<https://business.financialpost.com/commodities/energy/100000-jobless-energy-workers-struggle-for-a-place-in-the-new-economy>

OUR PURPOSE

Our **top level goal** is to help ensure a prosperous transition towards global carbon neutrality by 2050. **Our mission** in pursuit of this goal is to empower fossil fuel industry and Indigenous workers to build a sustainable energy economy.

Our vision is that fossil fuel industry and Indigenous workers will play a leading role in building the energy infrastructure required to reach global climate targets. Our vision of Iron & Earth's role in creating this future, is that by 2050 we will have empowered hundreds of thousands of worker members to establish chapters, host events, run advocacy campaigns, develop renewable energy projects and carry out renewable energy training programs around the world.



OUR PILLARS:

PROBLEMS WE HELP SOLVE,
OUR SOLUTIONS
& OUR TACTICS



BUILDING COMMUNITY FOR WORKERS & SUPPORTERS

Many workers desire renewable energy jobs but lack a community where they can safely pursue or advocate for such a future. We help create such a community by bringing members together to carry out high impact events, campaigns, projects and programs. These actions help forge relationships and networks that create a lasting foundation for positive change.



DEVELOPING RENEWABLE ENERGY CAREERS

Many workers don't know where to start their effort to establish a career in renewable energy. We aim to provide a clear pathway by reaching workers with the message that their skills are transferable and to connect these workers with the training, resources, and networks they require to position themselves in the renewable energy industry.



BUILDING SUPPORT FOR A PROSPEROUS TRANSITION

There is insufficient support from the public, government and industry to ensure the world reaches climate targets, while also enabling a prosperous transition for workers. We help build this support through amplifying the voice of workers and supporters calling for specific solutions to be implemented.



BUILDING DEMONSTRATION PROJECTS

Many people believe that renewable energy is not yet viable or relevant for their community. We make the benefits of these technologies tangible through developing community based sustainable energy projects that act as case-studies for what's possible. We further increase the positive impact of these projects with integrated hands-on training programs for fossil fuel industry and Indigenous workers from the area.

KEY PERFORMANCE

INDICATORS TO DATE



BUILDING COMMUNITY FOR WORKERS & SUPPORTERS

- + 700+ fossil fuel industry worker members
- + 6000+ supporters
- + 10+ shop talk nights hosted
- + 10+ core team members (mostly volunteers)
- + 2 years as a participant of the Energy Futures Lab

DEVELOPING RENEWABLE ENERGY CAREERS

- + 3 solar training programs hosted
- + 40+ people trained in solar (primarily electricians from the fossil fuel industry)
- + 5 Indigenous community members trained in solar
- + Hundreds of workers connected with information, resources and networks to further their careers

BUILDING SUPPORT FOR A PROSPEROUS TRANSITION

- + 150+ media stories generated, including international coverage, national top stories and front page coverage
- + 3 press conferences hosted
- + 1 policy document published (Workers' Climate Plan)
- + 12+ presentations at conferences and panel discussions
- + 1 speaker series tour hosted across Newfoundland and Labrador
- + Four "Iron & Earth Energy Hour" radio shows hosted
- + Many meetings with top union officials, federal ministers, MPs and MLAs to promote our solutions

BUILDING DEMONSTRATION PROJECTS

- + One Solar Daycare project fully funded and developed in partnership with the Louis Bull Tribe
- + One 365 Greenhouse project in mid-stage development in Newfoundland and Labrador
- + One Renewable School project in mid-stage development in partnership with the Louis Bull Tribe



OUR INITIATIVES TO DATE



CHAPTERS

Chapters are at the core of our organizing model and our ability to achieve scale for two reasons. First, it is at the chapter level where critical relationships between workers and supporters are able to form. Secondly, regional contexts and solutions can only be understood and developed at the regional level.

Our chapters focus on building relationships between workers and supporters who align with our vision and core strategy. Once this foundation has been established, chapter members identify challenges and/or opportunities that Iron & Earth is uniquely positioned to address. These members then design and deploy campaigns, projects, programs, or events tailored to address the identified need or opportunity. Chapters also help support the deployment of national initiatives.

IRON & EARTH EAST

Iron & Earth East is the Atlantic Canadian chapter of Iron & Earth, headquartered in St. John's, NL. Founded by Adam Cormier and now led by Delia Warren, the chapter has hosted two solar training programs, a province-wide Speaker Series campaign, an Iron & Earth Energy Hour radio show, and a number of Shop Talk Nights. In late 2017, they delivered NL's first-ever CSA approved training course in partnership with Gridworks Energy. This course trained 17 people in solar installation, with graduates of

the program getting an opportunity to install a 3KW solar energy system as part of their 365 Greenhouse project in development. They hosted a second training program in partnership with Solar Installers Canada in the summer of 2018.

IRON & EARTH EDMONTON

Iron & Earth Edmonton formed in the beginning of 2018, led by Ian Wilson, who came to our organization as a participant of our Louis Bull Solar Daycare project. Our chapter was a key stakeholder in the Alberta Narratives Project², where Ian hosted a number of roundtable discussions with fossil fuel industry workers regarding their perspectives on climate change. The chapter is now leading the fundraising and development of our largest project to date, the Louis Bull Renewable School.

IRON & EARTH CALGARY

Iron & Earth Calgary formed in late 2016 and hosted Shop Talk Nights on a nearly monthly basis for over a year. Led at the time by Victoria Waye, the chapter represented our organization at meetings hosted by the US Embassy and at energy industry conferences across Alberta. Our Calgary chapter activities are currently on hold while we raise funds for a Chapter Director.



² albertanarrativesproject.ca



CAMPAIGNS

Our campaigns focus primarily on building support for a prosperous transition. We have designed two campaigns that have brought the power of our membership to bear on an issue, which has led to some action and progress towards implementing our solutions and vision.

SOLAR SKILLS

The first campaign we launched is the Solar Skills Campaign, focused on an initial goal of upskilling 1000 fossil fuel industry and Indigenous workers into solar energy. We have gathered over 5000 signatures in support of this goal and these efforts have led to many meetings with industry stakeholders and government officials. This campaign is what shaped the development of our first two solar projects to date, as well as our two renewable energy projects currently in development. As we begin scaling up our training programs we believe we will accelerate towards our goal of 1000 trainees.

WORKERS' CLIMATE PLAN

The second campaign we launched was the Workers' Climate Plan, which began through our engagement in the federal government's climate strategy consultations. Over a four month period, we gathered input from 217 skilled trade workers in the energy industry and 824 members of the general public. Through this engagement, we developed a four point plan, calling for the government to:

- 1.** Provide short-term training and expanded apprenticeship programs to help energy sector workers upgrade skills and join the renewable energy workforce
- 2.** Retool existing manufacturing facilities to produce more renewable energy products in Canada
- 3.** Support incubators and multi-stakeholder initiatives to help existing oil and gas contractors and unions transition into the renewable energy industry
- 4.** Integrate renewable energy and industrial-scale energy efficiency technologies into existing oil and gas infrastructure.

The launch of our Workers Climate Plan report led to an invitation to Luxembourg, where Delia Warren presented at the International Labour Organization's Academy on Social & Solidarity Economy. On June.12/2018, Linda Duncan (NDP MP for Edmonton Strathcona) presented the report in the House of Commons³. This report continues to be a useful tool for articulating our vision and for promoting worker generated policy solutions.



³ <https://openparliament.ca/debates/2018/6/12/linda-duncan-2/>



PROJECTS & PROGRAMS

Our renewable energy projects and renewable energy training programs are both unique in that they are integrated—the training programs involve the installation of working renewable energy systems. This approach benefits workers who gain knowledge and practical skills through experiential learning, benefits remote communities that don't otherwise have access to these training programs, and helps get renewable energy systems installed at a reduced cost.

THE LOUIS BULL SOLAR DAYCARE⁴

Our first project was the Louis Bull Solar Daycare project which involved training 15 fossil fuel industry workers into solar energy, including five Louis Bull community members. Iron & Earth was able to provide full subsidies for the trainees and secure the funding for the solar energy system installed on the community daycare. The project incorporated meaningful cross-cultural learning experiences such as a pipe ceremony and

a sweat lodge ceremony for the trainees. Desmond Bull, who was the key project lead in the community, explained that “the cultural integration really helped this program be a lot more successful. Some of the non-indigenous trainees had never taken part in a pipe ceremony or a sweat lodge ceremony and these activities were very meaningful. This project was an example of what reconciliation looks like in action. I think it goes back to understanding what the treaties are—that we as First Nations and Canadian citizens need to take care of each other, take care of the land, and take care of the future generations.” We are now working with the Louis Bull Tribe on a second larger project, called the Louis Bull Renewable School.

⁴www.youtube.com/watch?v=TJy7lgscto4&t=13s

IRON & EARTH EAST 365 GREENHOUSE

Through the leadership of our east coast chapter, Iron & Earth has engineered a one of a kind renewable energy assisted greenhouse. We call it the 365 Greenhouse to reflect that it can produce food year-round, which is made possible through the utilization of renewable energy technologies. Our first 365 Greenhouse will begin construction in St. John's in the summer/fall of 2019. The food produced at the greenhouse will be used as part of a social enterprise for the Autism Society of Newfoundland and Labrador. This project will demonstrate the benefits of renewable energy, provide skill development for trainees, and educate the public on local food security and sustainability.



THE LOUIS BULL RENEWABLE SCHOOL

The Louis Bull Renewable School project will be the first of its kind in Canada, including six renewable energy installations integrated into the community K-9 school. Each of these systems will be complimented by training programs that will ensure members of the Louis Bull Tribe, as well as fossil fuel industry workers from nearby communities, can develop new skills and gain experience through being involved in hands-on installations. This training will also help ensure that the Louis Bull Tribe has capacity within their community to maintain these systems, which will include:

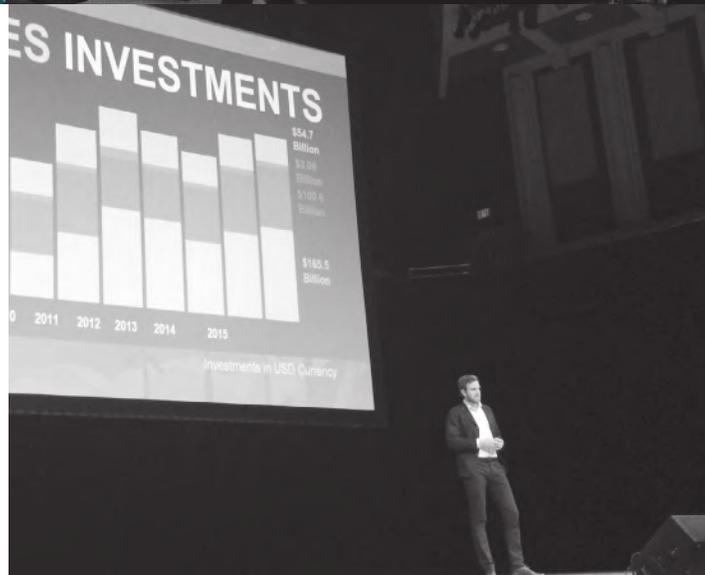
1. One grid tied 20kW solar PV energy system (5 day hands on training)
2. One expandable solar hot water heating system to supplement the current natural gas (5 day hands on training)
3. One or two wind turbines - with the size and number to be determined based on funding availability (5 day hands on training)
4. One level 2 electric vehicle charging station (3 day hands on training)
5. Two solar powered radar speed signs (1 day hands on training)
6. One solar power lighting system for the school's signage (1 day hands on training)





4

EVENTS



SHOP TALK NIGHTS

Our chapters regularly host Shop Talk Nights with unique themes that help bring workers and supporters together in a way that helps further our mission. A common format for these events is to have an expert present to our membership on a subject related to the sustainable energy industry. Workers are able to use these opportunities to build relationships with each other and to network with industry stakeholders. Presenters have

included renewable energy business owners, renewable energy training providers, recruitment specialists, and academics who have focused their studies on renewable energy issues.

SPEAKER SERIES

Another event series we have developed is our Speaker Series, the first of which involved a tour to key communities in Newfoundland and Labrador educating workers about the region's significant potential for generating clean energy with wind and the barriers to wind energy development in the province.

VISIONING MEETINGS

We hosted our first organizational visioning event in Edmonton, which included participants from BC, Alberta, Saskatchewan and Newfoundland and Labrador. Feedback and ideas from our membership and supporters contributed significantly to the direction we have gone since that meeting. We hope to host these visioning meetings annually starting in 2019.



PARTICIPATION



ENERGY FUTURES LAB PARTICIPATION

We have had the honour of being an Energy Futures Lab⁵ participant for the past two years and this has been vital in helping Iron & Earth establish strong stakeholder partnerships across the entire energy sector in Alberta. Through the EFL, we established our relationship with Desmond Bull from the Louis Bull Tribe as well as secured financial support from our first major industry partners, Enbridge and Suncor Energy.

The EFL is a multi-stakeholder platform that convenes diverse voices in the energy system. It is a trusted bridge-builder, connecting innovators working in different areas of the energy system and taking advantage of their divergent perspectives. As a group,

we have developed a vision for an energy future that is aligned with the emerging social, economic and environmental demands of the 21st Century. As an EFL participant, we are able to amplify Iron & Earth initiatives through this focused group of change-makers, potential funders, mentors, and well-networked leaders.

CONFERENCE AND EVENT PARTICIPATION

Iron & Earth has presented at over a dozen conferences. Below is a snapshot of some of these events we are proud to have been a part of!

⁵<http://energyfutureslab.com/initiatives/renewable-skills-campaign/>

HOW WE INTEND TO SCALE

OUR INITIATIVES AND IMPACT

1 - CHAPTERS

We aim to establish chapters in every province in Canada and in a number of other countries where fossil fuel industry and Indigenous workers can benefit from our work. At a minimum, these chapters will host regular events and ideally each chapter will run campaigns and develop their own projects and/or programs.

2 - CAMPAIGNS

We will continue to run campaigns that reshape public perspectives, media narratives, and energy policy. These campaigns will continue at a national level and increasingly at a regional level as we increase the capacity of our chapters.

3 - PROJECTS & PROGRAMS

In 2019 we will be completing our two largest projects to date—our first 365 Greenhouse and first Renewable School project. The Renewable School projects are able to be replicated at other schools that wish to have renewable energy technologies and curriculum at their school (elementary, high school or college/university). The renewable assisted 365 Greenhouse projects can be replicated in other communities that would benefit from increased food security and increased renewable energy sources. The cost per project will go down as we scale these efforts.

4 - EVENTS

We plan to support each of our chapters to host quarterly Shop Talk Nights to build and maintain a community base of engaged members and supporters. We would also like to organize more Speaker Series tours across Canada and begin hosting Visioning Meetings on an annual basis.

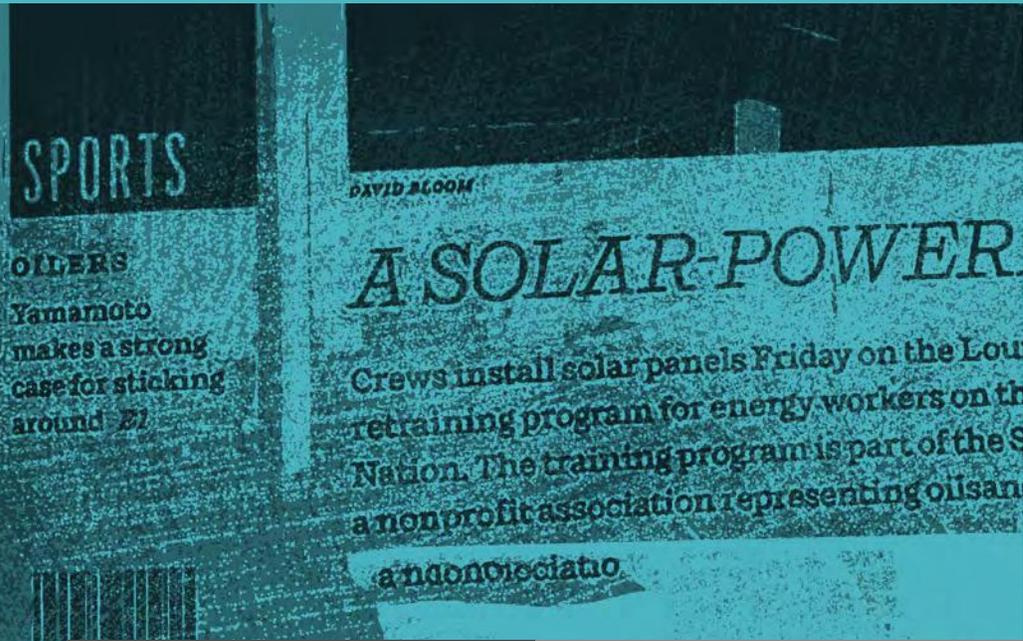
5 - PARTICIPATION

In addition to organizing and hosting events, we hope to increase our capacity to participate in local community events and energy related conferences.



MEDIA COVERAGE

Iron & Earth has received significant global media attention, with over 150 media stories to date, including international coverage, national top stories and front page coverage. We were also a feature story in the 2017 broadcast of 24 Hours of Climate Reality⁶ which reached over half a billion (yes, with a b) households on television around the world. Below are some images of some of these news stories.



We can build the renewable future: Oil sands worker group

Iron & Earth is an oil sands worker-led group th calling for training and opportunities to work on renewable energy projects. On Commodities w talk with Lliam Hildebrand, executive director, w after working in the oil sands realized that his tr skills could be used to transition the world to

⁶energyfutureslab.com/initiatives/renewable-skills-campaign/

HOW ARE WORKERS BENEFITING?

POSITIVE IMPACT FOR WORKERS



Fossil fuel industry workers have led Iron & Earth from its inception and we have engaged thousands of coworkers through our chapters, campaigns, projects, programs and events. These initiatives have helped many of these workers establish new connections, develop their careers, gain new information and gain new experiences. One story that demonstrates these benefits is through the story of our Edmonton Chapter Director, Ian Wilson.

MEET IAN WILSON

Hi, my name is Ian Wilson and I'm an oil and gas worker. The industry has kept my family and me fed and clothed since the 1990's. When I'm not working as an electrician, I'm thinking about work or talking about work. I don't have any tattoos, but the coolest one I ever saw was on a co-worker. He had a tattoo of his Red Seal on his arm. If I had to put something meaningful and important permanently on my body, that would be it. I intend to apply this level of pride in my work to the renewable energy industry in whatever way I can.

I participated in Iron & Earth's first Solar Skills training program and I plan to implement my new found skills by starting my own renewable energy business with this knowledge. I feel that I can inspire and help others to do the same or similar things and if I can achieve this, and it will further prove the benefits of the upskilling and the advocacy that Iron & Earth provides.

The world is changing and I'm not just referring to the climate. Collectively, people are coming to the realization that we have one planet and we had better take care of

it. I recall being a kid in the 70's and reading my favourite comic books with ads from then US President Jimmy Carter asking us to take care of our planet and to "reduce, reuse, and recycle". He actually had solar modules installed on the White House! Ronald Reagan, well, he had them removed when he took office.

The pendulum is swinging back the other way again though. The current swing of this particular pendulum affects me because I, along with many other Albertans, know the ins and outs of the oil and gas industry. There's a need for workers to acquire some different skills to remain employable and successful within the framework of this recent movement toward clean energy. Iron & Earth recognizes this and is an advocate for the oil and gas worker and other people, such as the people in Indigenous communities, who want to successfully make that transition. I was moved when I learned of the motivation behind the formation of Iron & Earth. I could relate and I saw the logic behind it. I said to myself that I had better get on board before that train left the station without me...

CONCLUSION

Thank you for taking the time to read this progress report. We are proud of what we have accomplished in the past two and a half years and we look forward to our next stages of growth. Making a difference in the lives of workers is what keeps us inspired as we continue pushing for positive change.

Our rapid growth has at times been overwhelming for our small team and we have certainly hit some speed bumps along our journey. We believe this is an inevitable consequence of being at the forefront of innovation. We have learned a great deal and are more prepared than ever to fulfill our ambitious vision and mission thanks to our core volunteers, key partnerships, funders and donors.

As a worker-led organization, Iron & Earth is uniquely positioned to support fossil fuel industry and Indigenous workers in a way that no other organization can. We have first-hand understanding of the unique challenges that workers are facing during this transition - because we are navigating them ourselves.

It is of utmost importance that the work of Iron & Earth can continue to grow. Please reach out to us at info@ironandearth.org with any feedback on this report or our work in general. If you are interested in supporting our work, please donate here:
www.ironandearth.org/donate

THANKS

THANKS TO OUR PAST AND CURRENT FUNDERS

Alberta EcoTrust
Atlantic Canada Opportunities Agency
Bullfrog Energy
Catherine Donnelly Foundation
City of Edmonton
Conservation Corps of Newfoundland and Labrador
Council of Canadians (System Change Legacy Award)
Enbridge
Glasswaters Foundation
International Brotherhood of Electrical Workers - Local 2330
Suncor Energy Foundation
Telus
Trades NL

THANKS TO OUR PAST AND CURRENT PARTNERS!

Autism Society of Newfoundland and Labrador
Beothuk Energy
Caden Energy
Decentralized Energy Canada
Eclipse Sustainability Projects
Elemental Energy
Energy Futures Lab
Gridworks Energy Group
Louis Bull Tribe
Newfoundland and Labrador Environmental Industry Association (NEIA)
Newo Global Energy
Solar Installers Canada (SIC)