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**MEMBERS'  
NEWSLETTER**  
**FEBRUARY 2022**

## President's Message:

I wish you all glad tidings as we begin to emerge from the long and coldest days of winter! This is a great time to take stock as we head into spring. Yes! Here's another great solar spring and summer directly ahead of us once again! If you are interested in solar for your home or farm, this is the ideal time to call us and start planning your project for an early spring installation.

Since Greg and I installed solar on our home in 2018, each spring we excitedly watch as our production values begin to climb. Each day, we can see that we are earning slightly more solar electrons. Before we know it, we'll be in strong solar energy production season once again and we can charge our plug-in hybrid car with it too!

The Cooperative has had a busy winter getting ready for spring, busier than usual as interest in solar continues to grow. We have continued to host monthly *Save With Solar* webinars with good attendance from across western Canada. The interaction and feedback we have with participants is very valuable to us. The slideshow and presentations that Greg and Don are continually fine-tuning and adjusting are wonderful.

One of the exciting new developments we're working on is how to offer solar pergolas (free-standing, covered, backyard living spaces). When we talk to people about it, their imaginations ignite. With a solar pergola you create a space in your yard and life that pays you back in energy savings, is a piece of great enjoyment and pride, and is a lasting investment in your property.

Thanks for continuing to be interested in the activities of your Cooperative and for supporting our member-driven work! Looking forward to great developments in 2022!

Sincerely,  
*Joanne Dueck, President*



## My solar: *director Bill Lindsay*



I joined PEC in 2017 when Hudson's Hope was embarking on a solar energy project – to install photovoltaic solar panels on municipal buildings. The Site C dam was underway which I considered to be a massive error in judgment by the BC government and BC Hydro.

In August 2017, a 6.67 kW grid-tied system was setup on my residence by PEC. The total cost was approximately \$22,500. After about 9 months, my BC Hydro bills began reporting credits and that has been consistent ever since. I am able to access a website which displays how my rooftop system is working. It is no surprise that summer is when my solar panels are most productive and winter is obviously the opposite, but by overproducing in the summer I have lots of electricity credits on my account to coast through the dark winter.

I have had no problems and do not foresee any, as a PV system has no moving parts. It just quietly goes about its business of generating electricity from sunlight.

Sincerely,  
*Bill Lindsay, Director*



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# SOLAR SALES REPORT:

## *2021 was one of our best years ever!*

Although Covid-19 has negatively affected many businesses over the last 2 years, 2021 ended up being one of our best years ever and things are looking bright for 2022.

### In 2021:

- We sold and installed 85 kW of grid tie solar systems for eleven customers. These systems are spread across northeast BC and northwest Alberta from Hudson's Hope, BC to Peace River, Alberta.
- We provided maintenance for three off-grid power systems.
- We assessed many dozens of potential properties.
- A first for us was to supply and install three Electric Vehicle (EV) chargers so people can re-charge their EV at home. Two of these three chargers have grid-tie solar, so they are fueling their car from the sun!
- We supplied multiple off grid systems with new sets of batteries.

### Looking forward to 2022:

- **We have already pre-sold eight solar systems** (comprising about 63 kW) and are just waiting for the weather to warm up to install them this spring.
- We are now offering **Solar Pergolas** as a premium custom designed product. Pergolas can be either a stand-a-alone structure in the yard or can be connected to a building. They provide a wonderfully unique shaded, covered, multi-purpose space for your enjoyment. Use it for a patio, hot tub, carport or outdoor games area with soft natural lighting



*Greg Dueck,  
Solar Consultant*



**Solar Pergolas** are a new product that Peace Energy Co-op is now offering. Custom designed to fit your yard, they provide grid-tied electrical power for your home and an attractive, useful covered outdoor space.

similar to sitting under a leafy tree. The special bifacial solar photovoltaic (PV) solar panels allow some light to filter through while also creating power to displace your electrical bills. What could be better for an outdoor visit with family and friends during these trying times - while not sitting in the direct hot sunlight or the rain?

- We are considering offering **Air Source to Water Heat Pumps**. These units perform much like a refrigerator by moving energy from one area to another. They are very energy efficient and provide heating in the winter (yes even in very cold temperatures), and cooling in the summer. They also have the option of heating hot water for your house or hot tub. Let us know if Heat Pumps might be something you would be interested in.

**I expect 2022 to be a landmark year for Peace Energy.** Membership is still growing, we are developing multiple product lines and seeing great interest from our customers. Right now is the best time to plan your project for this year so please call Lee or myself so we can get you scheduled in.

I would also like to challenge every member to talk with a family member, colleague or friend about Peace Energy Cooperative. Invite them to become a member, join and participate in our social media pages, participate in our *Save With Solar* webinar series and to contact us regarding any potential projects. Have a great 2022!

## MEMBER PROFILE:

# EV Climate Hero Ernie Freeman



Fort St. John resident and longtime Peace Energy Co-op member Ernie Freeman is not just an “early adopter” of electric vehicles; he is an EV innovator, an experimenter and an envelope pusher, big time.

### IN THE BEGINNING

With an electrical background as a helicopter maintenance engineer, Ernie became fascinated with the idea of using electrical energy for ground transportation, way back in the 1970’s.

“I could see the advantage of going electric due to the efficiency as well as environmental positive impacts,” explains Ernie. “But I also had a selfish reason: I was getting older and wanted to get behind the wheel of an EV while I still could.”

That’s when General Motors was beginning to play around with the EV concept, eventually producing the popular EV-1. Ernie was keen to buy one, (they were leasing them in Vancouver at the time) but with no success. Then suddenly GM cancelled the program and scrapped all their EV’s (you might have seen the video “*Who Killed the Electric Car?*”).

### I’LL JUST BUILD ONE

Disappointed but not discouraged, Ernie decided to build his own. He modified a Chevy Vega Station Wagon (“not exactly a light weight choice”), but it worked. Packed with all sorts of lead acid batteries both under the hood and in the back of the wagon, it had a range of about 20 miles and a top speed of 80 kph. Amazingly, the provincial government office happily assigned it what was probably the first code of E for electric in the registration and insurance process in northeast BC.

Of course he gave lots of demonstration rides around the area. “It had its limits but certainly surprised me with what it could do,” says Ernie, “and what really impressed me was the lack of noise.”

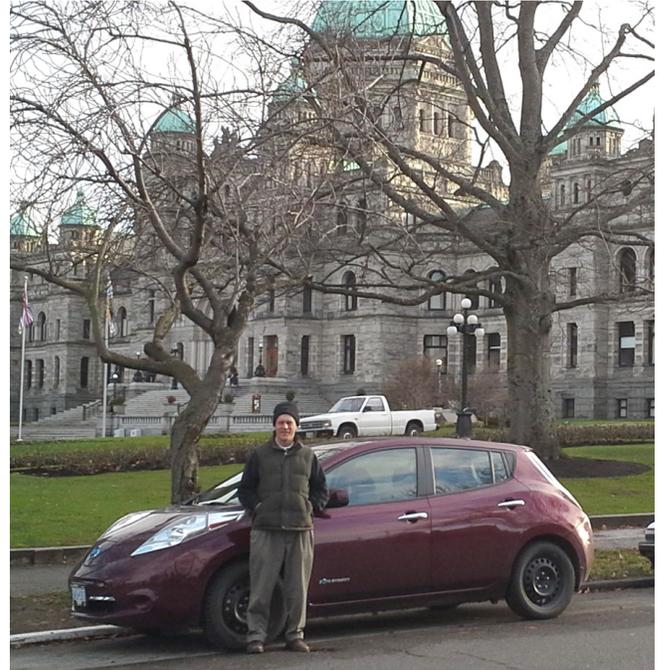
His next EV adventure started with the 2016 purchase of the brand new Nissan Leaf: fully electric, 160 km range (short by modern standards, but impressive back then). The problem was lack of charging infrastructure.

“The same year I contacted the Ministry of Transportation asking if I could be of help to determine how to get Fast Chargers into the highway system.” Working with a provincial policy analyst and the help of a university student, Ernie started his biggest adventure yet: he drove his Leaf to Victoria from Fort St. John and back, in December!

### COLLECTING THE COLD HARD FACTS

It was -35 C when he left home. “Fortunately it warmed up to about -26 C on my way back.”

And remember, this is when there was almost no EV



*Ernie Freeman arrives in Victoria with his all-electric Nissan Leaf, December 2016. “Fortunately it warmed up to about -26 C on my way back.”*

charging infrastructure in the province. That’s why he went, to find out first hand what was needed and where.

To find his electric fuel on the long road to Victoria, he had to innovate. “My favourite location was either an RV site or a welder’s shop. I was also equipped to use 240 Volt dryer or stove outlets. Last resort – I could use the trickle charger that came with the car. So even though I had a few bumps in the road there were lots of people who really helped out and I thank all of them many times over.”

His range dropped by about 30% at -30 C, but he expected this and planned for it. “The vehicle exceeded my expectations. During extreme winter driving I never had any performance issues. The drive train worked flawlessly as well as all the electronics. My trip helped to provide hard ‘cold’ facts to the officials that were planning charger infrastructure throughout the Province.”

Now the EV revolution is in full swing, with fast chargers coming in strong, even up north. Ernie’s adventures also proved the reliability of EVs under the most severe driving conditions.

“I am a proud Canadian and especially proud of the Province in which I live that supports these advances. We’re building a better foundation – for all of us.”

Thanks to Peace Energy Co-op member Ernie Freeman, our northern EV climate hero!

## Lee Quenneville joins our Peace Energy Co-op Team

We are excited to say we have hired a vibrant and energetic solar consultant for our Dawson Creek office. Lee is our new Solar Technology Trainee, and he is quickly picking up on all the ins and outs of Peace Energy Cooperative and solar design and sales.

“I am a nature and outdoor enthusiast, and have always wanted to be part of the solution to our environmental problems,” he explains. “I feel very

fortunate to be part of the Co-op and learning from the people here who have such a high level of expertise. The more I learn about solar and the longer I work here, the more it gives me hope for the future.”

Lee is available to help you with your solar project through our Dawson Creek office. Great to have you on board Lee!



## From office administrator Tammy Lawrence: Important info for members

**LEAVE A LASTING LEGACY:** Add someone special as a joint member to continue your legacy and beliefs for future generations. Contact me to find out how!

**KEEP YOUR MEMBER INFO CURRENT!** We sometimes have to send members important documents, announcements and cheques! Please make sure your mailing address, email and phone numbers are up-to-date. (Your contact info is very important and will never be used by or shared with anyone else without your consent.)

**CLASS A INVESTMENT SHARES AVAILABLE FOR PURCHASE:** please call me to make the arrangements to purchase these valuable shares that are available for a short time only.

**NEW DIRECTORS WILL SOON BE NEEDED:** elections will be held online prior to our April AGM. There will be 3 director positions required to replace those directors whose terms will expire in 2022. Thank you to Al Mottishaw, David Mossing and Kole Casey for completing their second, 3 year term. Call or email me for details if you are interested.

**OUR AGM IS FAST APPROACHING,** and we would like to see you there. We intend to survey our members to find out the best date, time and day of the week to hold the 2022 April AGM. Please watch your email for the eBallot survey and let us know what would work best for you. Thank you!



**Tammy Lawrence**  
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**Left:** this large 36 kW ground mount was recently completed on a farm near Dawson Creek. This should render their large operation net zero.



**Above:** this 10 kW array on a C-Can was just finished for a business near Chetwynd. The C-Can provides an excellent mounting structure for the array plus lots of useful storage.

**Left:** this proud PEC member is now powering her Fort St. John town house with an 8 kW solar array, as well as her EV and Ebike. She is one of the growing number of people who are combining solar home power with solar powered transportation.

**Right:** this 14 kW farm shop grid tied array is near Fort St. John. The inset shows the inverter connected to the shop's power panel, surprisingly simple and small for such a powerful solar array.



**Left:** this 7 kW grid-tied array in Fort St. John shows how an array can be split up on various areas of the roof, with some facing south, some east and some west. Together they render this lucky home net zero.

# Alberta Community Energy Project: ACEP UPDATE



## OUR VISION:

- A solar farm in north west Alberta wholly owned by Peace Energy Co-op and its members, feeding clean power into the Alberta grid, providing a financial return to the Co-op and our member/investors.
- 2 to 4 megawatts (MW) in size, stationary ground mounted and may include some agricultural opportunities.

## THE LATEST:

- This past November the one-year environmental assessment was essentially completed. No problems were identified that would adversely affect the planned solar farm layout or operation.
- With the environmental assessment in hand, Solas Engineering Consultants are now completing the 4 MW design.
- When the preliminary 4 MW design is completed,

- Solas will assist us in submitting our project to the local grid operator ATCO who will begin the Phase One Grid Interconnect study.
- Other studies that will need to be completed before the Public Information Process (PIP) starts include glint/glare and sound studies.
- When all studies are complete later this year, our business plan can then be completed to evaluate the project's potential value to the Cooperative and our member/investors.
- If the business plan looks promising, public meetings in the Town of Peace River and area will then be held to provide information to the community and rural neighbourhood, to address any concerns and to assess local investment potential.
- It is our intention to complete the Alberta Utilities Commission (AUC) process in 2022. A successful application could lead to an investment share offering for our members shortly thereafter.



*A 2 megawatt ACEP solar farm would have about 7000 fixed-tilt ground mounted solar panels (about twice as many as shown here) feeding power into the wholesale energy system*

*in Alberta, making profit for the Co-op and our member investors.*