

Demystifying Diesel Reduction

A set of introductory guides in support of remote community clean energy

Do you want to bring renewable energy – such as wind, solar, or hydro – to your remote community? This series, *Demystifying Diesel Reduction*, is a set of introductory guides that will give you the info you need to help get clean energy working for you.

The other guides in this series are available at pembina.org/demystifying-diesel

Utilities in Remote Communities



Who is your utility and what is their role in advancing community clean energy?

Every province or territory has a different utility. The name of your utility company is shown on your electrical bill. You can also find your utility using [The Canadian Electric Association Membership List \(CEA\)](#).

Utilities are responsible for delivering safe and reliable electricity. They operate and maintain the diesel generators and the electricity network that distributes electricity to a community. This is called the microgrid.

Utilities are important partners when you want to reduce how much diesel your community uses. They can help people improve energy efficiency, or enable the community to install solar panels on buildings. They also play a central role in effectively and safely integrating large community renewable projects onto the microgrid.



Building a relationship with the utility

If you are considering a community renewable energy project, or you want to learn how to take advantage of the utility's other programs for reducing diesel, it is important to develop a relationship with the utility. Here are some ways to do this:

- ✓ Identify a representative at the utility who has experience working on community renewable energy projects.
 - Discuss with your community diesel plant operators and their supervisors.
- ✓ Ask who they would recommend talking to about a new project on the microgrid.
- ✓ Once you've found a representative at the utility who has experience working on community renewable energy projects, ask them what utility programs are available for diesel reduction.
- ✓ Write a formal letter to the utility leadership and invite them to your community to discuss community energy goals.
- ✓ Set up regular meetings between your utility representative and the community project team.
- ✓ Invite utility representatives to attend community engagement activities.

The earlier you form this relationship with the utility, the better!

Why do we need the utility to build our own community project?

A community energy project is a big technical challenge and financial commitment for both the community and the utility.

The utility must make sure that:

- Community has enough electricity at all times.
- Project reduces diesel consumption in the generators without increasing electricity costs for the residents.
- Project seamlessly integrates with the microgrid.

This requires a lot of collaborative planning between the utility and the community project team.

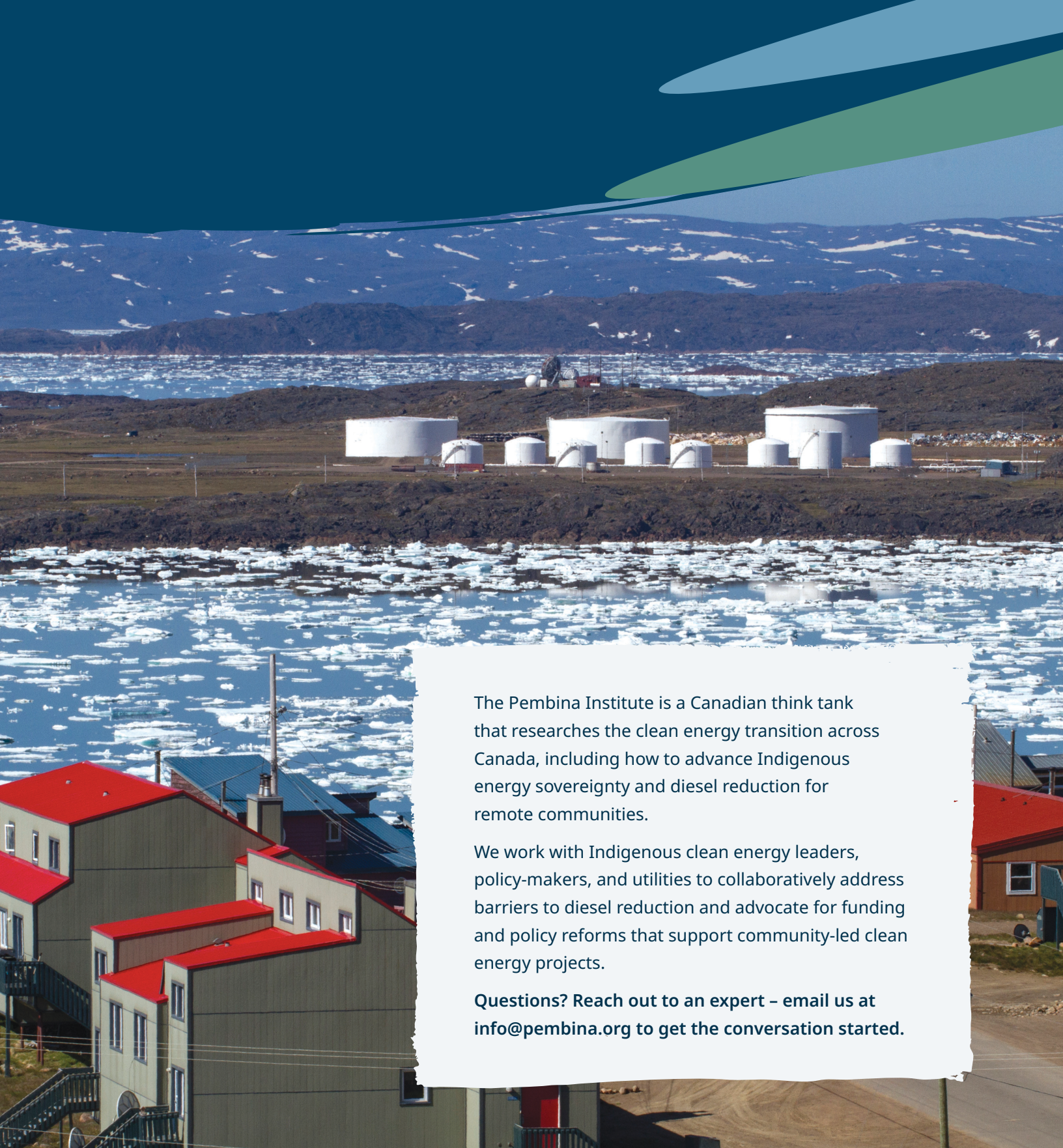


Understanding utility terms and policies

These discussions can get very technical very quickly. Here are a few terms utilities use that will be good to understand as you move forward with a community renewable energy project:

- **Energy efficiency upgrades:** Improvements to a building that reduce its energy consumption, such as new windows, improved insulation, and efficient appliances.
- **Demand-side management (DSM):** Strategies, programs, and technologies that optimize how and when electricity is used in a community, for example, incentivizing energy use during off-peak hours, programmable thermostats and smart meters.
- **Net metering:** A utility program to connect small-scale renewable energy projects (usually rooftop solar) to the grid. The electricity generated is used primarily for a single building, and surplus electricity is sold to the utility.
- **Independent power producer (IPP):** Non-utility groups (such as communities and developers) that build medium-to large-scale renewable energy generation projects to sell the electricity generated.
- **IPP policy:** A framework for utilities to buy power from a large community-owned renewable energy project (such as a run-of-river hydro plant, wind turbine, or solar field).
- **Power purchase agreement (PPA):** Long-term contracts between an IPP (seller) and, in remote communities, a regulated electric utility (buyer). These contracts determine how long IPPs will sell electricity to the microgrid and for what price.
- **Interconnection study:** A study required by utilities to evaluate how to safely and reliably connect a new energy project to the microgrid.
- **System impact study (SIS):** A component of the interconnection study. The SIS determines what the renewable energy project's impacts will be to the existing electricity system.





The Pembina Institute is a Canadian think tank that researches the clean energy transition across Canada, including how to advance Indigenous energy sovereignty and diesel reduction for remote communities.

We work with Indigenous clean energy leaders, policy-makers, and utilities to collaboratively address barriers to diesel reduction and advocate for funding and policy reforms that support community-led clean energy projects.

Questions? Reach out to an expert – email us at info@pembina.org to get the conversation started.

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