



**Kudos on commissioning,
but what's next now?**

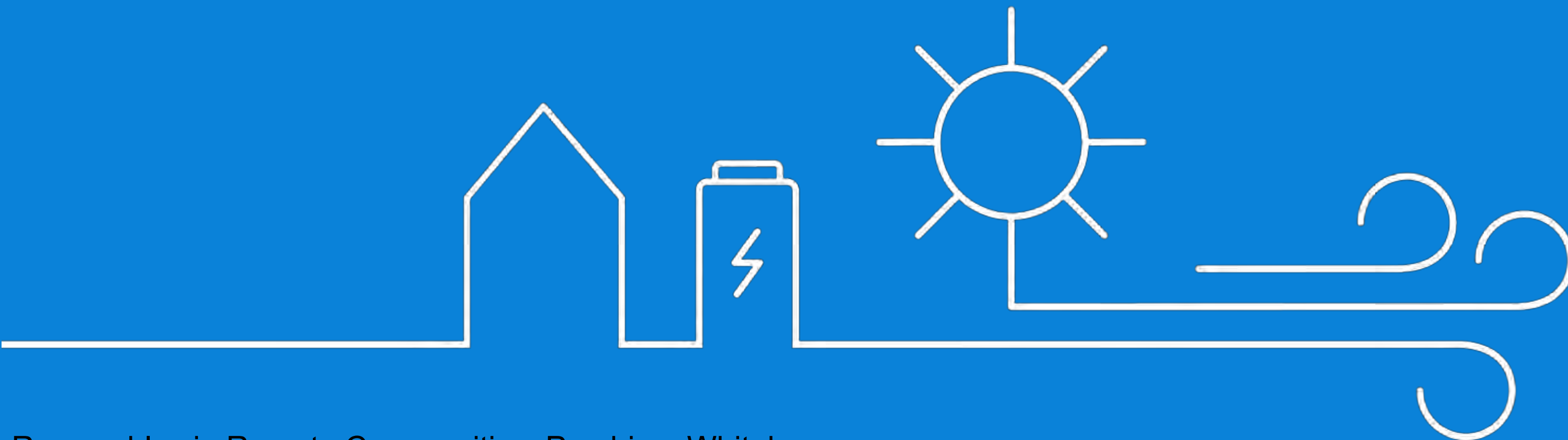
Roll up your sleeves, the project is not over yet!



NERGICA

Kudos on commissioning, but what's next now?

Roll up your sleeves, the project is not over yet!





What can we do to ensure the long-term viability of infrastructure?



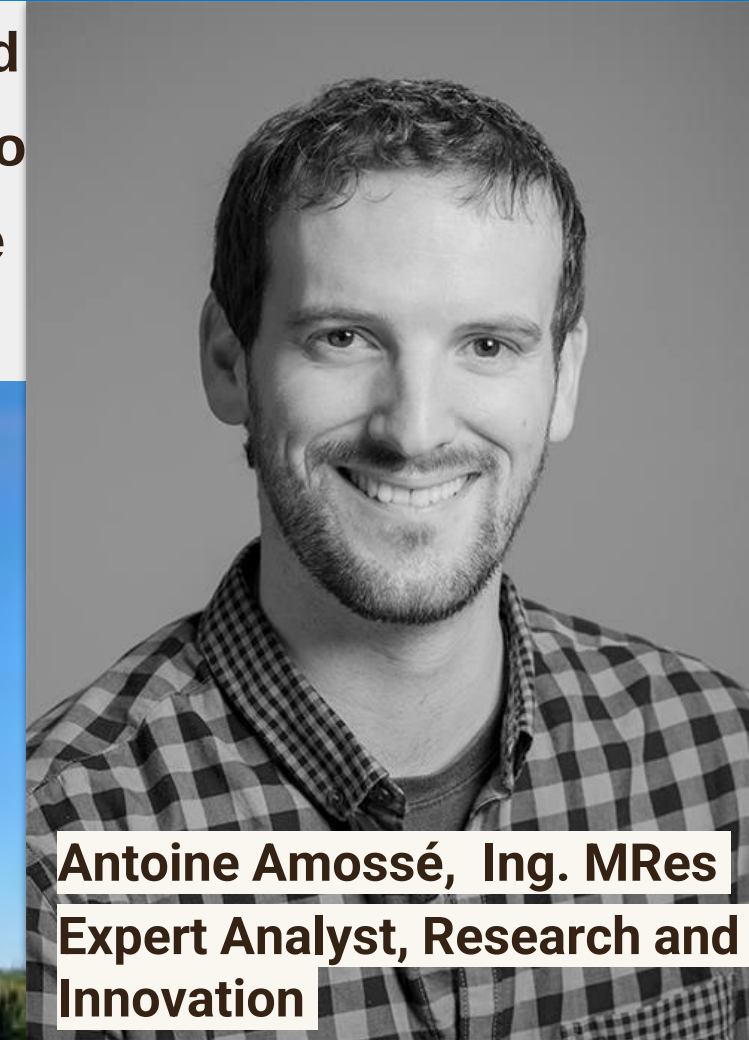
Creating Opportunities for Renewables

ENERGICA Renewable
Energy Research
and Innovation

NERGICA



A diverse, highly-qualified and experienced team dedicated to empowering others to engage in the energy transition



Antoine Amossé, Ing. MRes
Expert Analyst, Research and Innovation



Alexandra Gellé, PhD
Knowledge broker

Centre of applied research and innovation in renewable energy



Solar
power



Wind
power



Hybrid
solutions

ENERGICA



Development



Optimization



Support

ENERGICA

College Centre for Technology Transfer

CCTT

SYNCHRONEX
Le réseau des CCTT

Technology Access Centre

CAT

Tech-Access  Canada

NON-PROFIT ORGANIZATION
AT YOUR SERVICE



Développement
économique Canada
pour les régions du Québec

Canada Economic
Development
for Quebec Regions



Conseil national de
recherches Canada

National Research
Council Canada



NSERC
CRSNG

Canada 

Fonds de recherche
Nature et
technologies

Québec 

Économie, Science
et Innovation

Québec 



le
Relais
DE LA CACHE

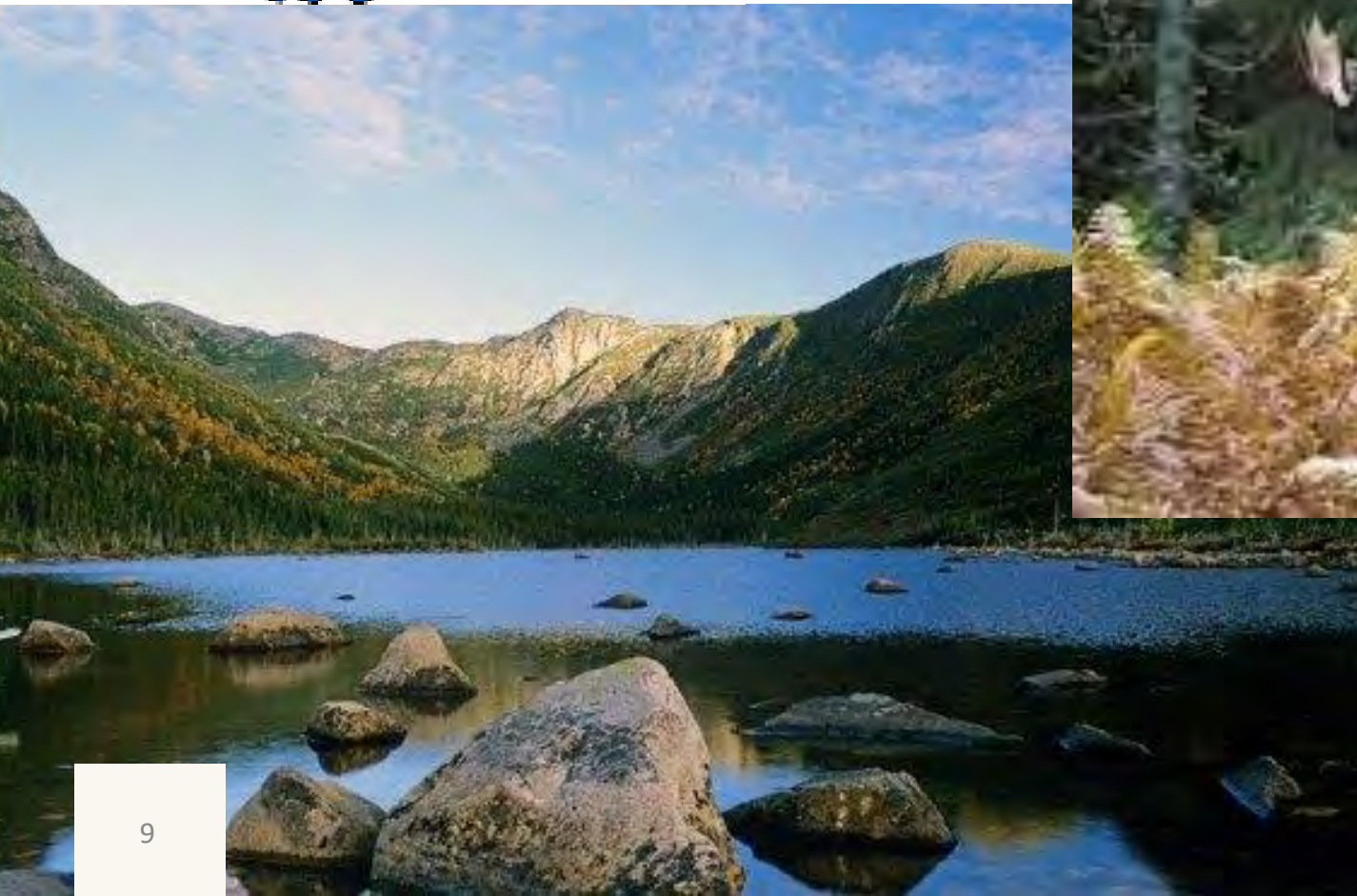
DÉPANNEUR | HÉBERGEMENT
NOURRITURE | ESSENCE

Image : Radio-Canada, Isabelle Larose

Gesgapegiag community – Relais de la Cache



Mi'gmaq community, Gaspé Peninsula, tourism complex



Gesgapegiag Stand-alone Microgrid

-
- Legend:**
- Electric (PV)
 - - - - - Electric (generator)
 - - - - - Thermal
- The diagram illustrates a hybrid energy system for a greenhouse. It features three PV arrays (15° West, Due North, 15° East) connected to MPPT controllers. These feed into two battery banks, each with an inverter-charger. A propane generator and two boilers (propane and electric) also provide power. A SCADA control system monitors the entire setup. The greenhouse has an electric load (ventilation system) and a thermal load (heating).

- Propane gensets (24 kW each)

- SCADA system
- Weather instrumentation

Relais de la Cache – Infrastructure



And then winter arrived!



Technical issue

PV panels covered by snow



Battery not charging

Over-usage of propane gensets

Issue with propane at low temps

Shutdown

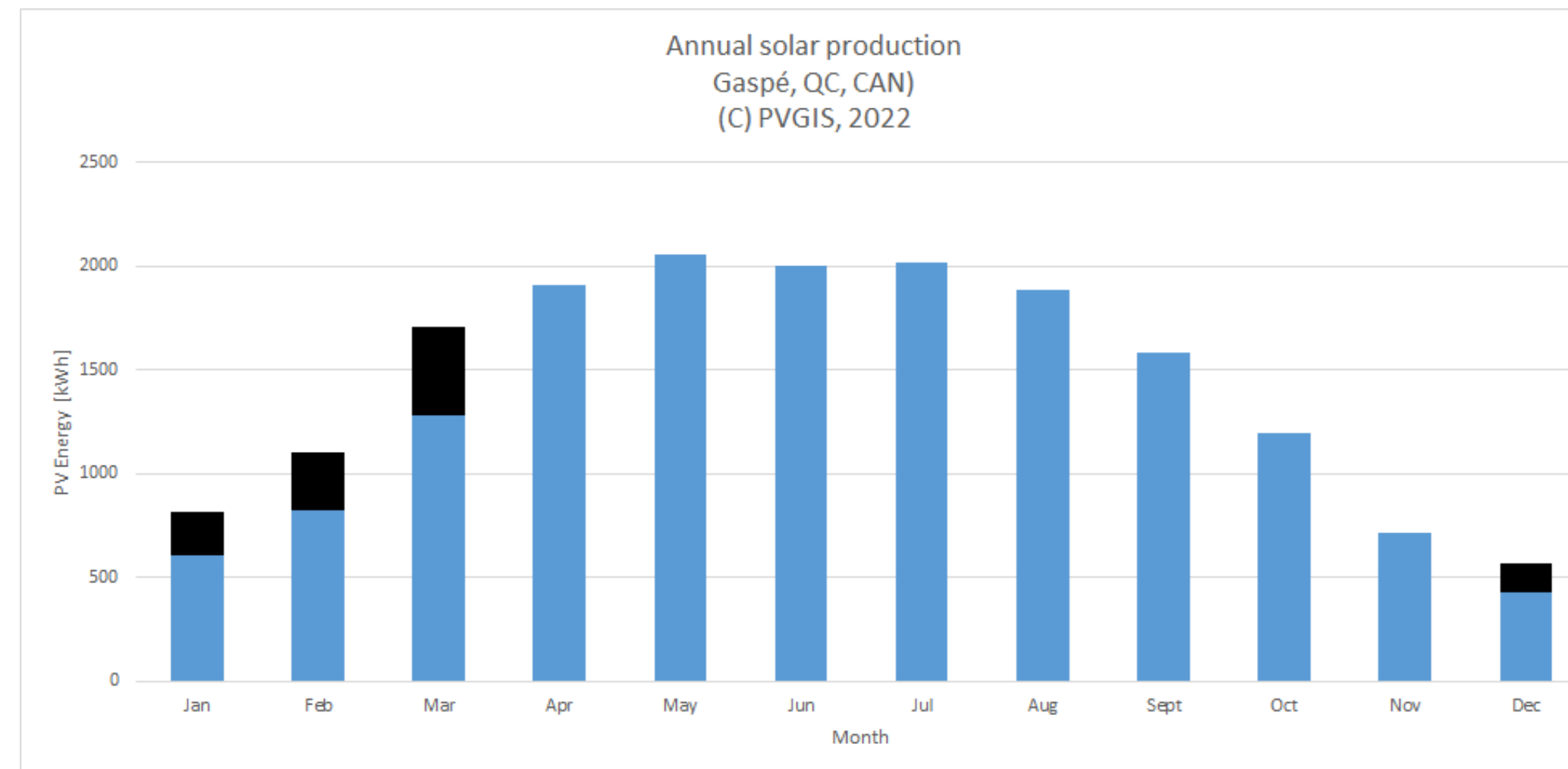
Shutdown

Solar energy in cold climate – a reality



In your opinion: How much energy loss is due to snow coverage?

- 1%
- 6% *annual*
- 10%
- 25% *winter prod. over 4 months*



Take-home messages from Relais de la Cache



Snow accumulation



**Awareness & management
in cold climate**



Skilled worker retention



**Mentorship & competitive
benefits**



**Limited funds for training
and unexpected operation**



**Programs including
training and maintenance
for early stages**

Take-home messages from Relais de la Cache



Bonnie Jerome

Administrative assistant for economic development, Mi'gmaq of Gesgapegiag

“I would like it if when other communities in Quebec, or even elsewhere in Canada, see that [...], they say ‘Wow, we could do that, too.’ ”





Inuit in Nunavik – Tarquti's global approach



*Inuit communities, Nunavik:
a dozen villages*

A dedicated Nunavik company for a green future

Renewable energy developer working
toward a better future
for Nunavimmiut in respect of the
environment and social acceptability



Andy Pirti
**Tarquti, Commercial Affairs
& Finance Manager**



Inuit in Nunavik – Tarquti’s global approach



*Inuit communities, Nunavik:
a dozen villages*

An Inuit-owned company



Since 2017: initiated clean energy projects
tailored to the needs and concerns of each community



Nergica | 2022

Tarquti & Nergica – A long-lasting relationship!



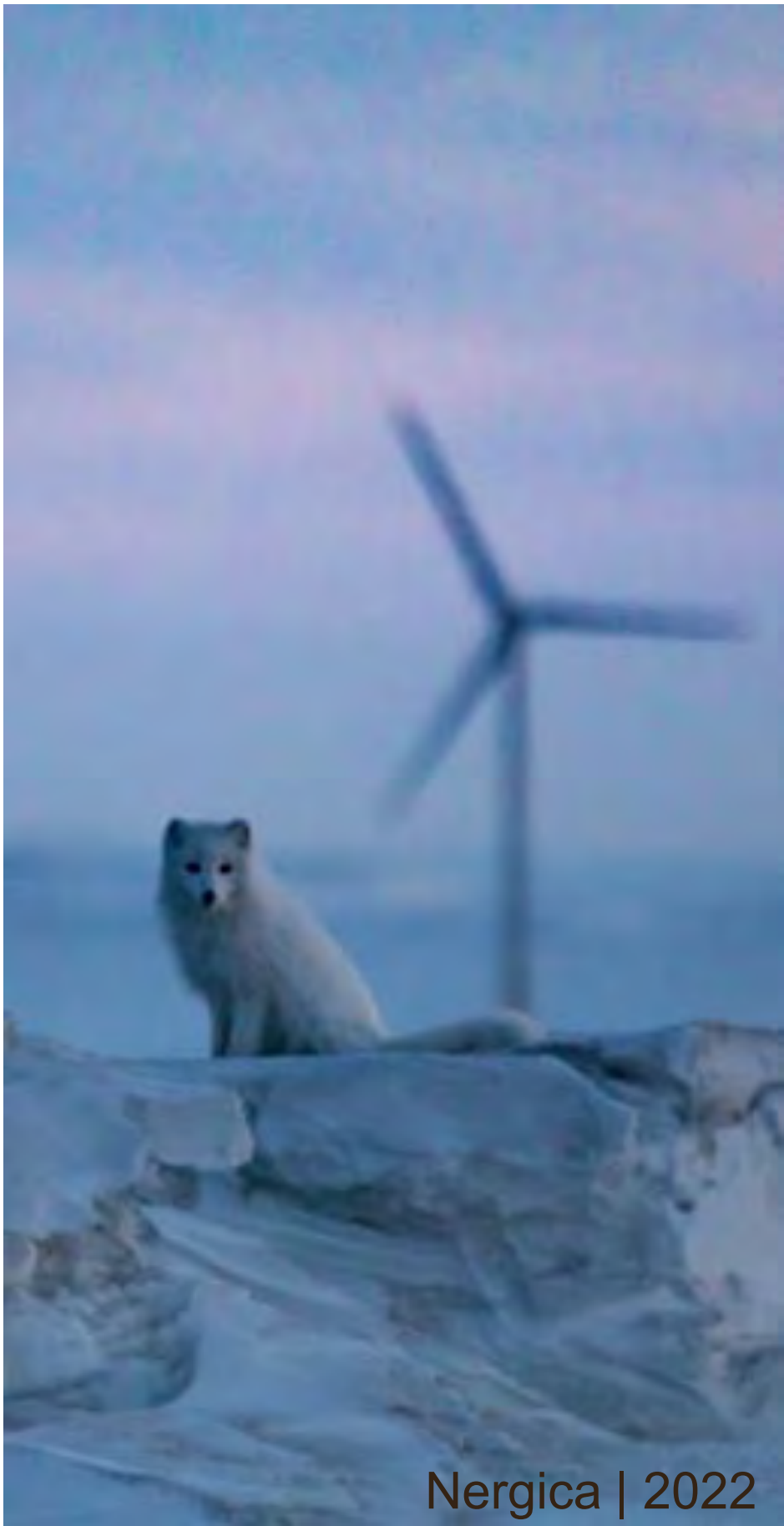
Extensive Research Project

An extensive research project in collaboration with NERGICA on various types of green technologies and the integration of renewable energies into Nunavik’s distribution network.



Frédéric Côté
Nergica, General Manager

“Tarquti is of great importance for the energy transition in Northern Quebec. With Tarquti’s proposal, the Inuit will be trained, equipped and supported to carry out projects that will meet their needs, respect their way of life and generate local benefits for them.”



Significant milestones since 2021



✓ Wind measurement towers operational in 5 Nunavik communities

Quaqtaq	Kangiqsujaq	Puvirnituk	Salluit	Kuujuuaq
				

✓ Solar panel projects

Centralized	Roof-top	Cabin Kit
		

A resilient and strong team, with locally-based agents

Local Agents



**Joë
Lance**
Interim
General
Manager



**Andy
Pirti**
Commercial
Affairs &
Finance
Manager



**Janice
Grey**
Communications
& Social
Engagement
Manager



**Coming
Soon**
Manager
Project
Development
(Engineer)



3 Project Managers

**12 Community Energy
Transition Leaders (Full-time)**

10 Nunavik
Inuit Employed



**Eugene
Putugu**
Puvirnituk



**Saima
Mark**
Kuujuuaq



**Putulik
Nulukie**
Puvirnituk



**Eyetsiak
Papigatuk**
Salluit



**Juupi
Tuniq**
Salluit



**Naalak
Mifsud**
Kangiqsujaq



**Adamie
Michaud**
Quaqtaq



**Putulik
Kulula-Lance**
Quaqtaq

Support Team

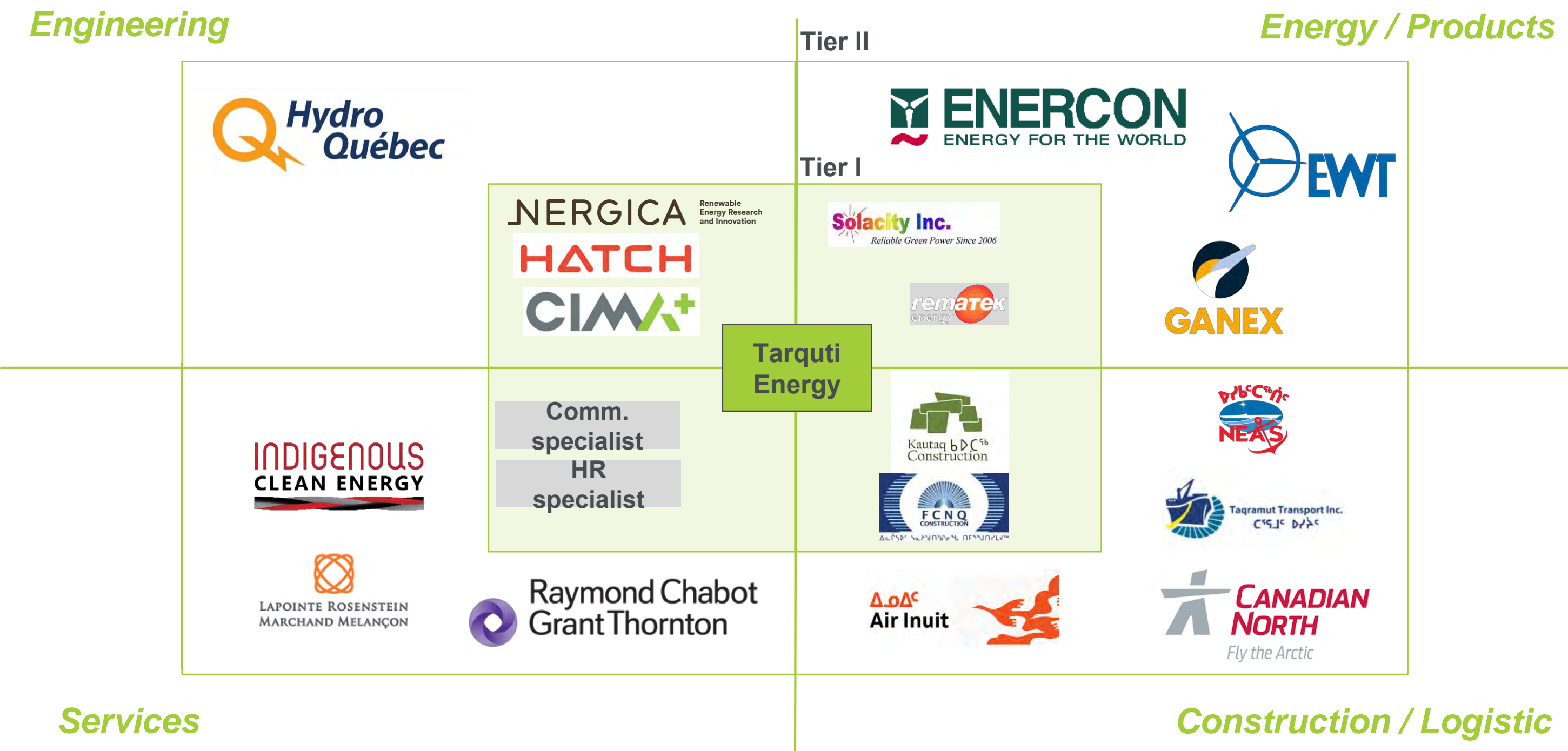


**Marc
Bernier**
Technician



**Dany
Awad**
Engineer, HATCH

Working hand in hand with renowned service & equipment providers



Tarquti's take-home messages



**Arctic-adapted equipment
unavailability**



**Surround oneself with
experts familiar with
northern conditions**



**Funding programs not
aligned with global
objectives**



**Programs with larger
vision & holistic approach**



Workforce shortage



**Early community training
and partnership**

Tarquti's take-home messages



Tarquti's bold vision to bring clean energy to Nunavik is beginning to pay off thanks to hard work and strong community engagement



Joë Lance

Tarquti Interim General Manager

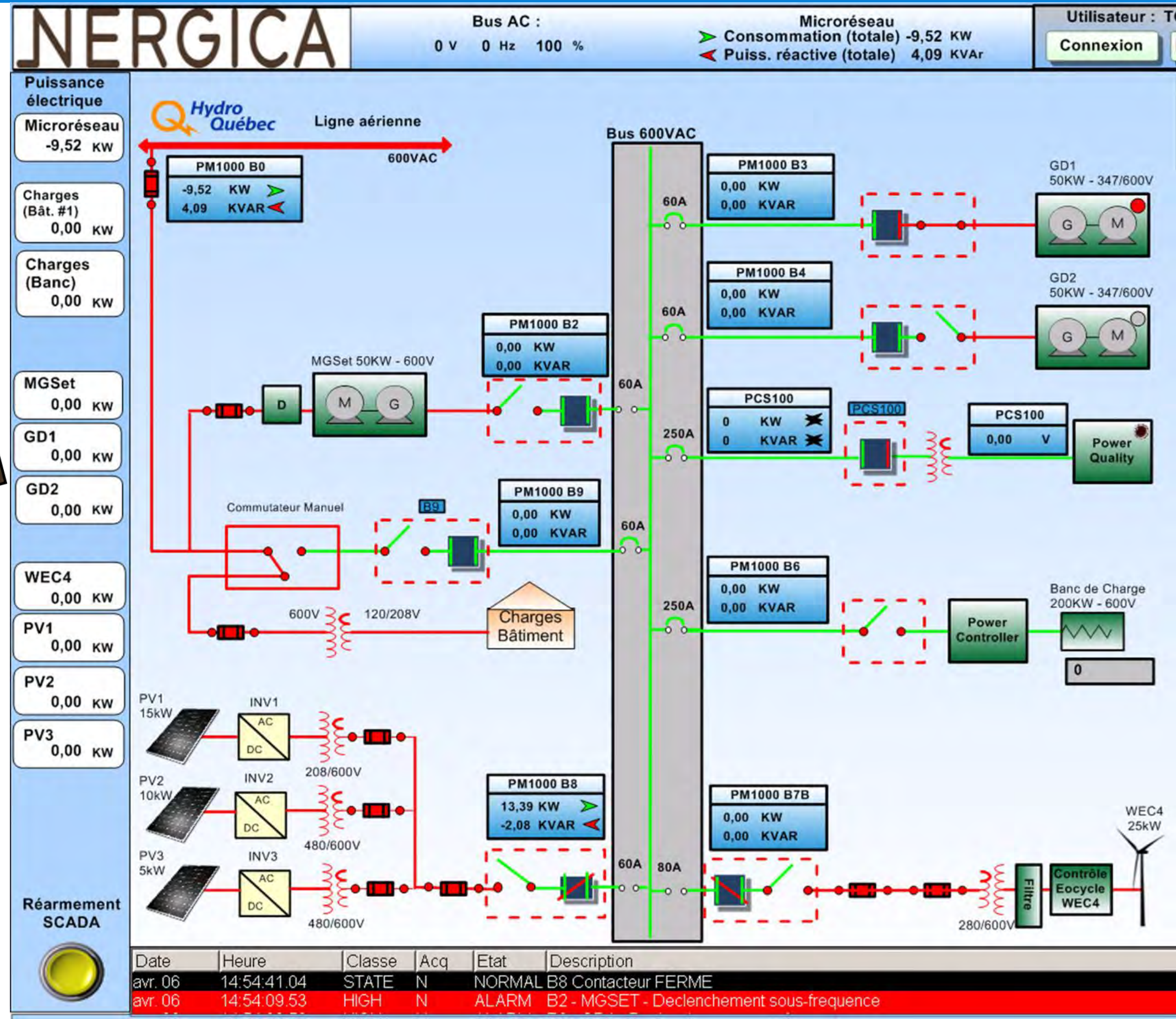
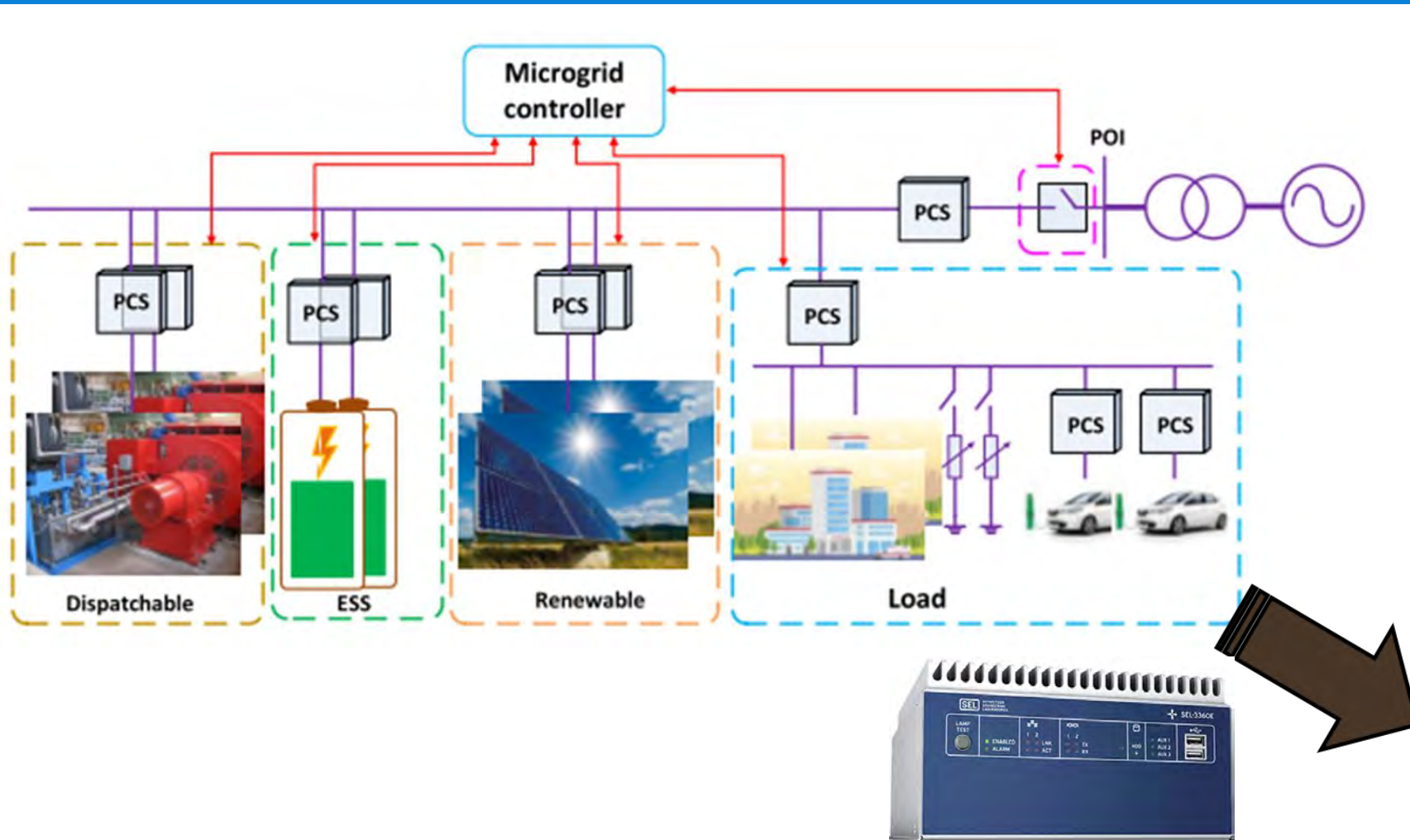




NERGICA



Our infrastructure for your needs



A real-scale platform ready to be used for:

- Wind/solar testing & integration
- Controller algorithms
- Training & expertise development
- Much more! What do you need?

Wind energy parallel Training & Services

- AEC wind turbine maintenance program
- O&M companies based in Gaspé
- Automation & monitoring services +++

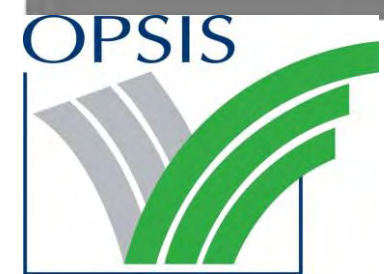


GROUPE
OHMEGA

Électricité et plomberie
Construction et services



Automatisation et informatique industrielle
Centre de contrôle (GONOCC)



Suspendem

lechéol inc.



Conclusion: Why Nergica?

NERGICA

Our site & experts



Our accessibility



Our expertise





CONCLUSION – FOR COMMUNITIES

- Prepare for next steps, even before commissioning
- Prepare and train your team early
- Prepare your budget for the unexpected





CONCLUSION – FOR THE GOVERNMENT

- Support post-commissioning steps, too
- Support O&M programs





CONCLUSION – FOR THE INDUSTRY

- Adapt your technology
- Adopt a two-eyed seeing approach
- Engage local leadership and actors



NERGICA

**In need of training,
technical advice or
support for your
renewable energy
project?**

www.nergica.com



Contact us

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info@nergica.com

418-368-6162

Merci for your attention

