

A Next Generation Utility

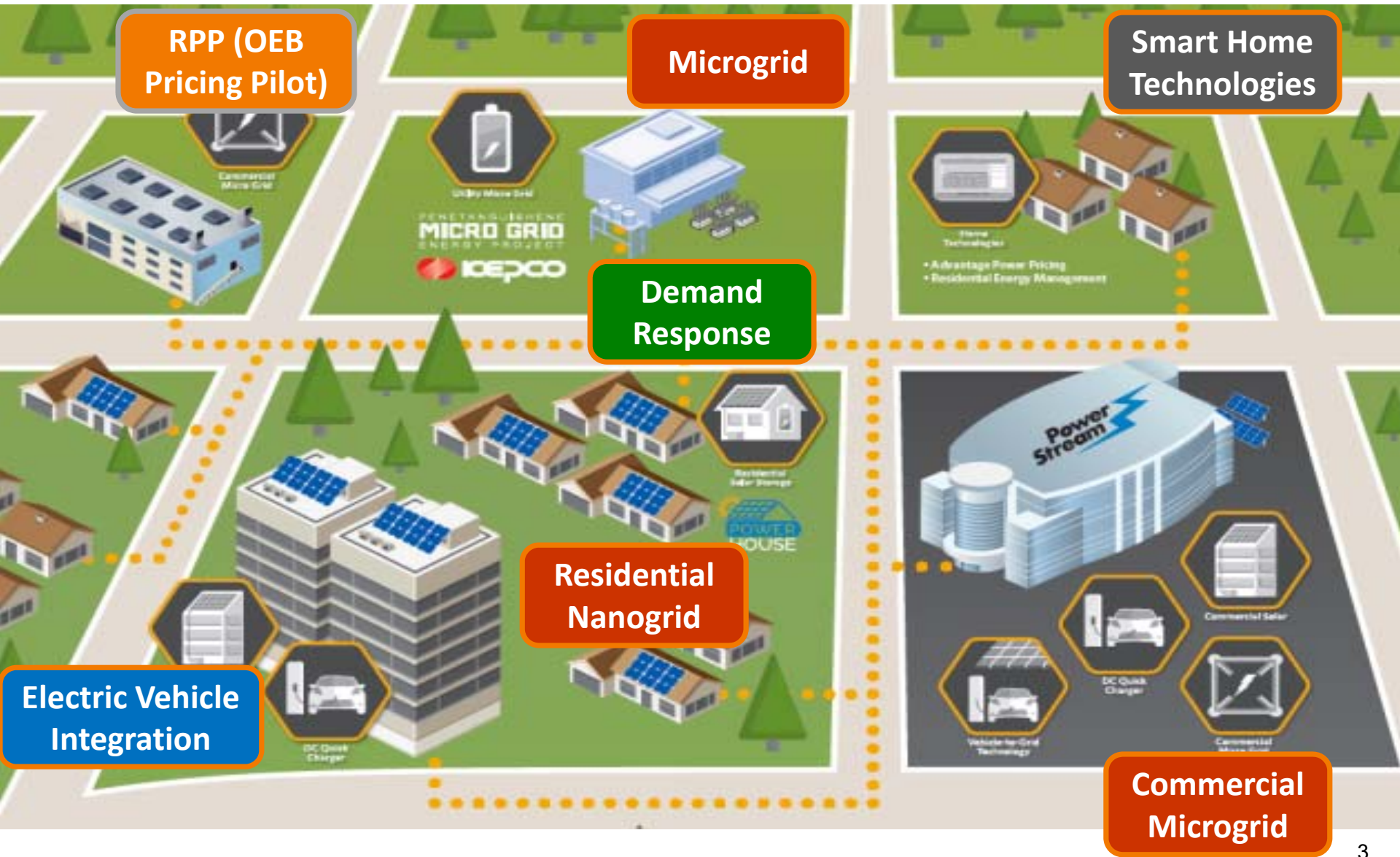


CCRE Microgrids & Distributed Energy: Is There A Revolution Coming?
The PowerStream Journey & Perspective... So Far

About PowerStream

- Leading energy company that is also the **2nd largest municipally-owned LDC in Ontario**.
- Provides service to more than **380,000 customers** residing or owning a business in 15 communities
- Employs over **500 employees**.
- Has more than **\$1.3 billion in assets**.
- Jointly **owned by the municipalities** of Barrie, Markham and Vaughan.
- Currently undergoing a **merger with three other utilities** in the Greater Toronto Hamilton Area
 - ***growing from 380,000 to 1 million customers***







- Rosewater Battery not working. Need to decommission and bring in market leader a bi-directional battery (Sunverge, Tesla, Eguana)

About PowerStream & KEPCO Partnership



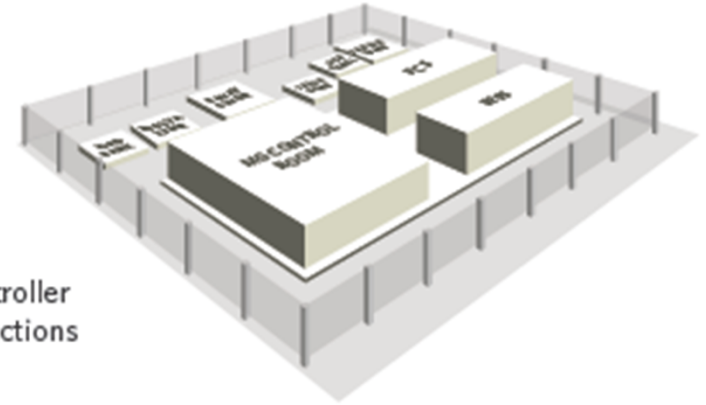
- PowerStream and Korea Electric Power Corporation (KEPCO) launched a utility-scaled Microgrid in Penetanguishene, Ontario, Canada. This Microgrid is also helping to reinforce the existing grid by increasing resiliency and operational flexibility.
- PowerStream and KEPCO entered a Joint Development Agreement, offering the innovative MiDAS Microgrid Solution to communities and customers.
- PowerStream is recognized as one of *the “Ten Best Smart Grid Solution Provider”* for 2016 by *Energy CIO Insights*.
- KEPCO is ranked the *1st in the electric utility* sector for 2016 on the *Forbes Global 2000 public companies list*.

Welcome to PowerStream and KEPCO Penetanguishene Microgrid



Key Features:

- Interconnected to feeder F1 out of Robert Street MS
- 750kVA Power Conversion System (PCS)
- 500kWh Lithium Ion, Samsung batteries
- Autonomous Microgrid Controller
- Distribution Automation Functions



MiDAS Microgrid Solution

Deployments

Penetanguishine

- Battery 500 kWh
- PCS 750 kW
- Grid Tied, Utility Scale
- On a feeder

Ga-sa Island

- PV, Wind, Diesel
- Battery 3MWh
- PCS 1,250 kVA
- Remote Microgrid

Palgeum, Shin-an

- PV
- Battery 1 MWh
- PCS 1,000 KVA
- Grid Tied, Utility Scale

Bigeum, Shin-an

- Wind
- Battery 250kWh
- PCS 500 kVA
- Grid Tied, Utility scale

Anjwa, Shin-an

- PV, Diesel
- Battery 100 kWh
- PCS 50 kVA
- Grid Tied, Commercial

Cityview Microgrid

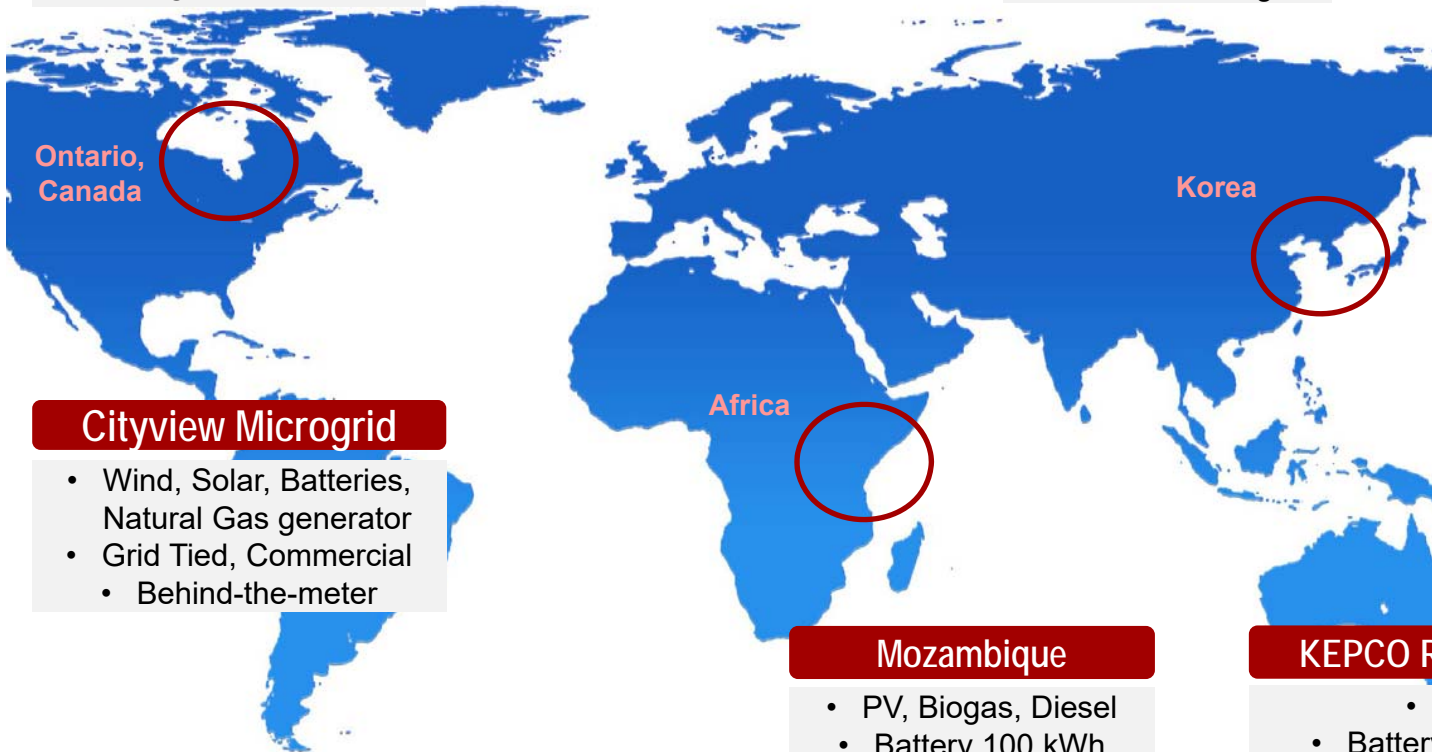
- Wind, Solar, Batteries, Natural Gas generator
- Grid Tied, Commercial
- Behind-the-meter

Mozambique

- PV, Biogas, Diesel
- Battery 100 kWh
- PCS 50 kVA
- Remote Microgrid

KEPCO RI, Daejeon

- PV
- Battery 200 kWh
- PCS 100 KVA
- Grid Tied, Commercial



MICROGRID- Residential Scale

POWER.HOUSE



SAVE
Money

PROTECT
Against Outages

GENERATE
Your Own Power



**Power
Stream**

Introducing **POWER.HOUSE.**

*Power your home with solar...
even after the sun goes down!*

Program Details:

- Reduce electricity bill, up to \$100 per month
- Offering, first time in Ontario, Net Metering on Time-of -Use
 - No-worry system; owned, operated and maintained by PowerStream
- Upfront payment towards installation \$3500
- Monthly service fee \$20 over 5 year contract
- Upfront cost guaranteed payback in 5 years
 - Installation over 2-3 days
- System commissioned and dispatch model programmed by PowerStream

www.PowerStream.ca/PowerHouse

SAVE Money

PROTECT Against Outages

GENERATE Your Own Power

POWER. HOUSE.



Final Thought



“The world is moving so fast today that those who say it can’t be done are usually interrupted by those doing it.”