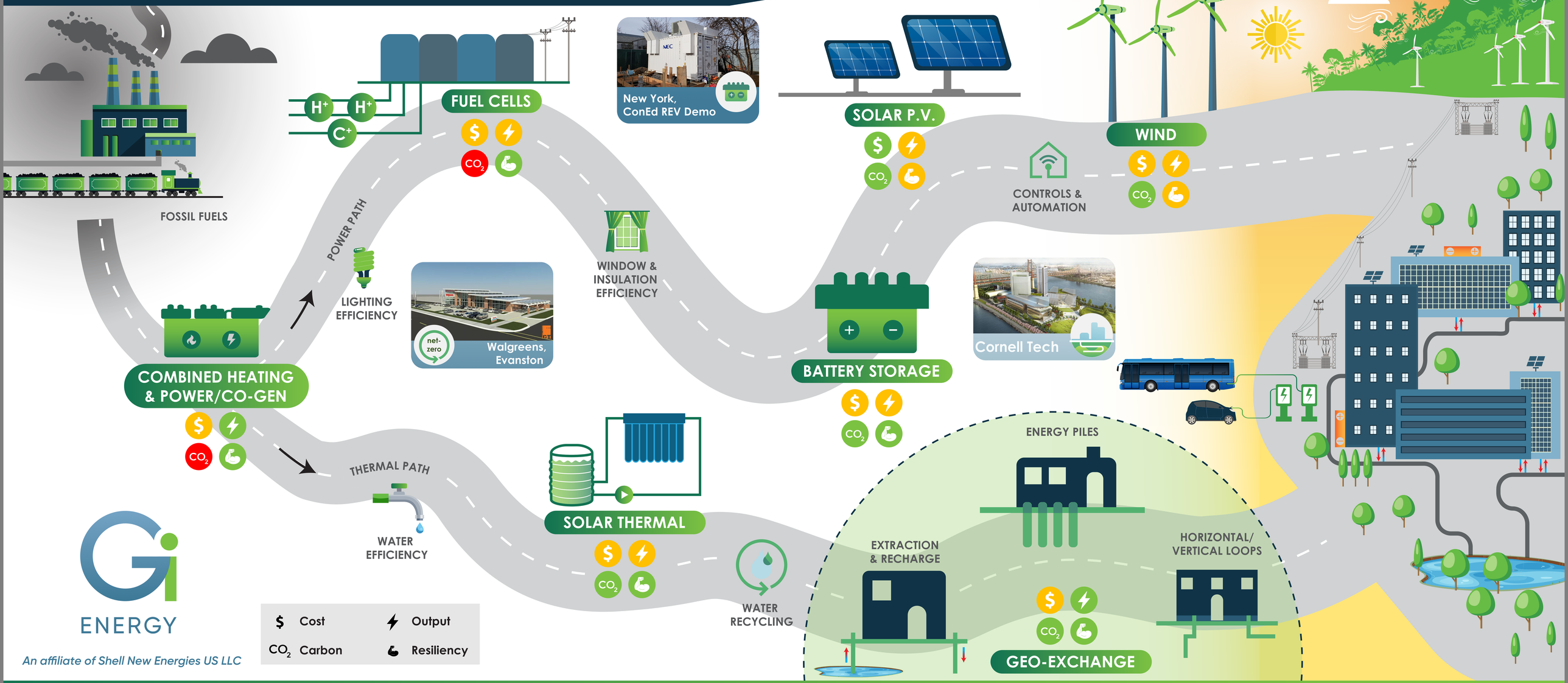
THE ROAD TO ABSOLUTE ZERO



ENERGY

An affiliate of Shell New Energies US LLC

OUR OBJECTIVE IS ZERO CARBON, NOT NET-ZERO. ACHIEVING ZERO REQUIRES IMAGINATION, PLANNING AND FUNDING. THE TECHNOLOGY EXISTS!

GI ENERGY

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Walgreens Net-Zero Store

Walgreens

Features

GIE integrated a GSHP system with natural ventilation, daylighting, solar PV and wind turbine

Net-zero energy: during normal operations, store requires no energy from electricity grid

Further Information

First 100% CO2 refrigeration integrated with geothermal in US

LEED Platinum and Green Chill Platinum ratings

Walgreens approached us to discuss reducing the environmental impact of their business by investment in sustainable energy solutions.

GI Energy designed a net-zero store, coordinated all HVAC trades and optimized entire construction process.

Purpose of Project

Key objectives were to decrease the store's reliance on utility companies and the power grid, and not to increase long-term maintenance costs for the site.

Contact us if you have any questions on this project:

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GI ENERGY
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Cornell Tech Campus

Cornell Tech Campus, NYC

CORNELL TECH

Features

- **80 boreholes** spaced 20 ft. apart to a **depth of 400 ft.**
- Provides the majority of the building's heating and cooling load
- Seamless integration with General Contractor was required

GI Energy provided **engineering, procurement** and **construction** for a **Ground Source Heat Pump** system for the Bloomberg Center on Cornell's new STEM campus on Roosevelt Island, NY.

Technical Information

This system, **the first of its kind** in the United States, uses a unique annulus system to increase the efficiency of the ground loop. It takes advantage of river water penetration through the local bedrock to accelerate thermal dissipation.

Project Infomation

The Bloomberg Center is one of the largest aspiring net-zero buildings in the US. When completed in 2043, the entire campus will house 2,500 residents.

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Con Edison Battery Storage Demo, New York, NY

Financial Information

- When Con Edison does not call for the systems, GI Energy will participate in available NYISO wholesale markets, sharing proceeds with Con Edison
- This model may allow utilities to procure battery storage services at a lower cost than other structures
- The systems are owned and financed by Shell

Technical Information

- Four 1 MW / 1 MWh FTM batteries
- Con Edison will be able to call for the systems' discharge during their networks critical peak times
- Increased local grid reliability through the deployment of the batteries maximizes value to the utility

GI Energy is working with **Con Edison** to demonstrate a novel front-of-the-meter (FTM) battery storage business model under the Reforming the Energy Vision (REV) process. The 5-year demonstration project shows how customer-sited, third-party owned batteries provide benefits to both the utility (through installation in constrained network areas) and customers (through regular lease payments).

Services Provided

- Site acquisition
- Permitting
- Engineering, procurement & construction
- Financing
- Energy market services
- Operations & maintenance

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