



Providing Sustainable Power Solutions for a Cleaner World



STRICTLY CONFIDENTIAL



About Us

- ❑ **Flowgen Technology.** Flowgen is a privately held Swiss clean tech company founded in 2015. The company established Flowgen Power Systems USA in January 2021 with manufacturing operations planned for 2022.
- ❑ **What We Do.** Innovative technology company that specializes in the design & manufacture of renewable turnkey microgrids, cloud controls, & energy services that support customers requiring cost predictability, energy resilience & achieves their sustainability commitments.
- ❑ **Differentiation.** Our controllable distributed energy resources (i.e., proprietary wind, solar, & storage) minimize operational costs and maximize energy utilization.

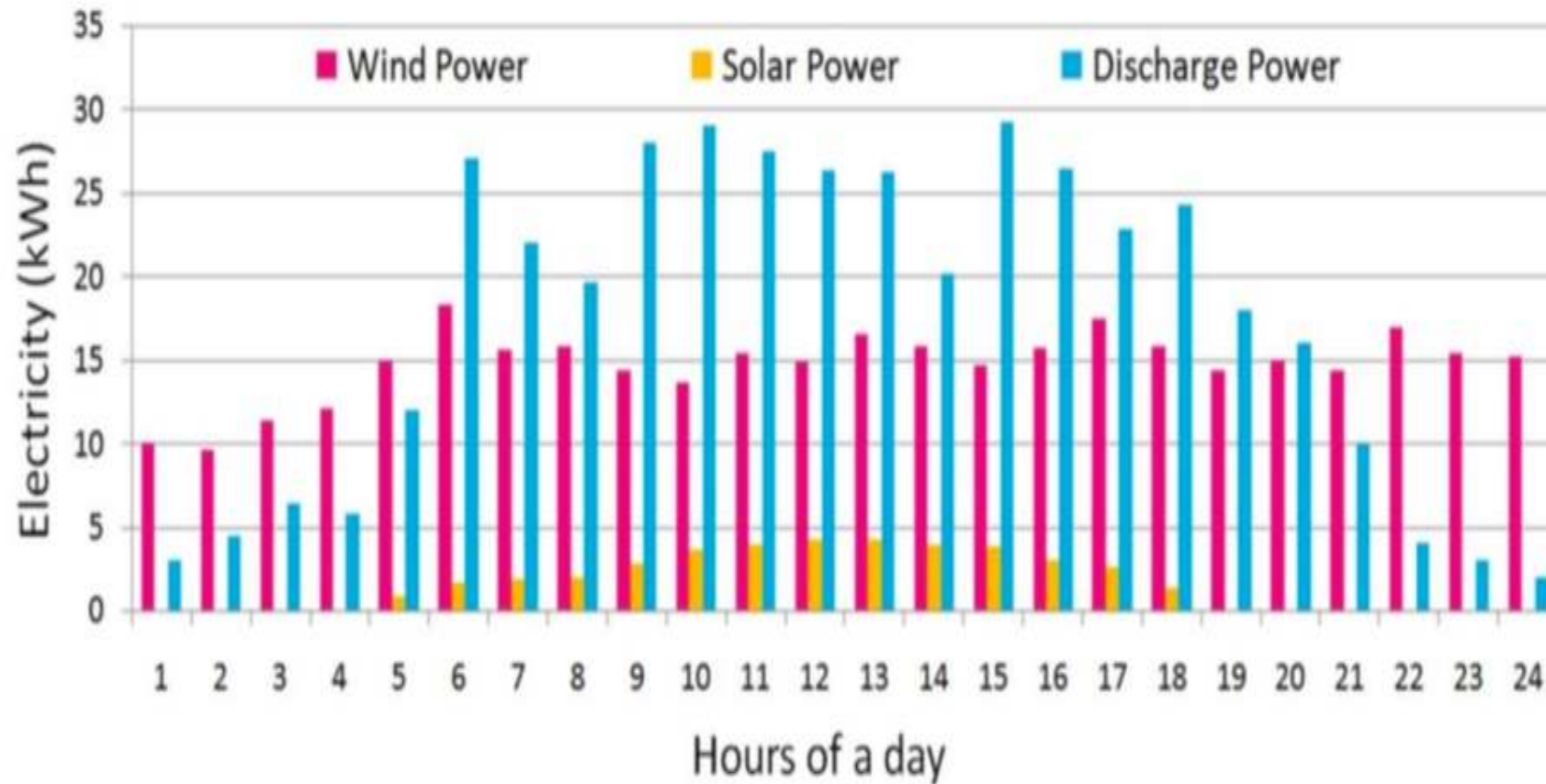
We Improve Renewable Energy Microgrid Performance!

Solar & Storage System Limitations. Due to limited sunlight hours during the day, a solar system designed to provide 24 hours worth of power must generate that in approximately 1/5 of the day. Therefore, the system would need to generate enough power in ~5 hours to last 24, with the ability to store at least 19 hours worth of energy. Solar power is low in density, requiring large surface areas. Installations require site improvements and lengthy transmission lines

Flowgen Controllable DER (i.e., Wind, Solar & Storage) Microgrid Advantages v Solar & Storage Only

1. **Our proprietary horizontal small wind turbine (HSWT) generates power around the clock**
2. **HSWT 's integrated with solar dramatically reduce the microgrid storage system requirements , resulting in lower CAPEX cost with higher energy density and a smaller carbon footprint (fewer chemical batteries = good for the environment).**
3. **Wind and solar are complimentary energy resources.** When the sun is strong & temperatures are high, wind tends to be weak. Conversely, when wind is strong & skies are cloudy with rain & moisture, sunlight is minimal.
4. **HSWT's easier/faster to permit than large wind turbines & they qualify for the USA Self Generation Incentive Program(SGIP) further reducing System CAPEX.**

Flowgen Microgrid Hourly Generated Electricity(example)

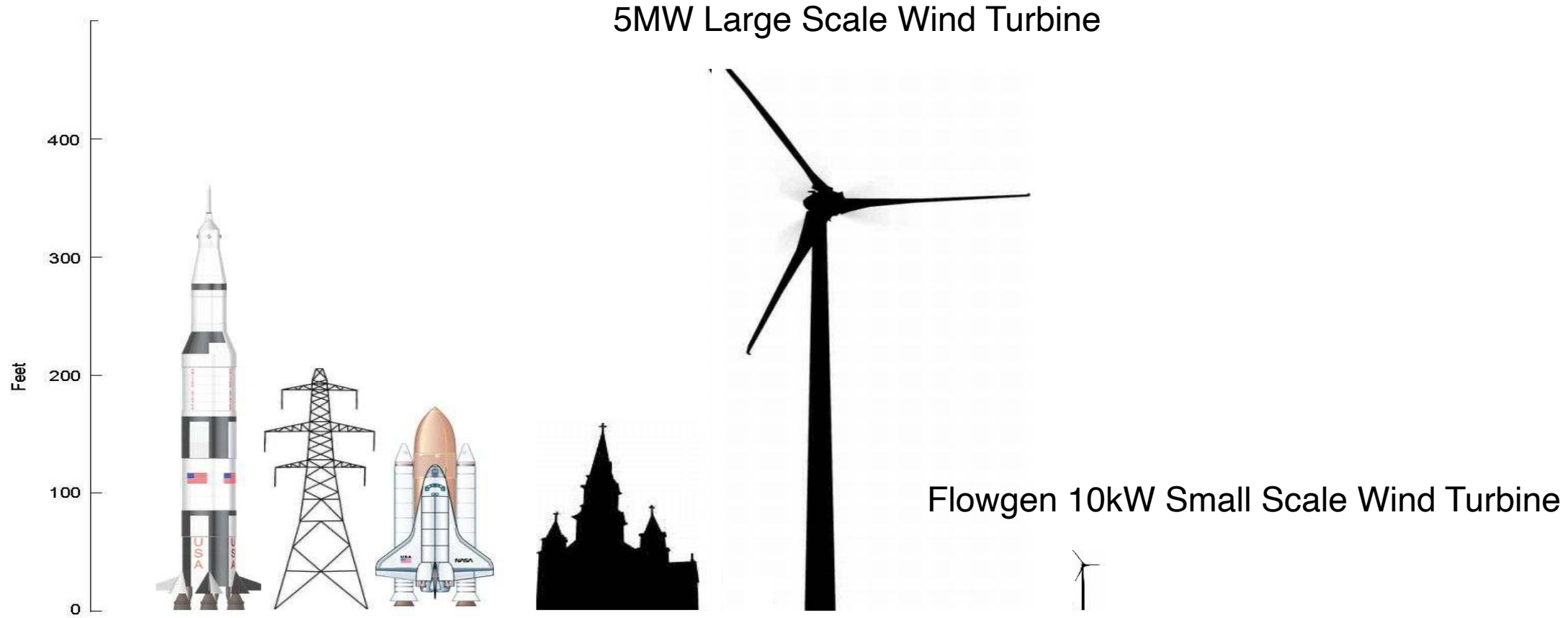


Flowgen Advance Horizontal Small Wind Turbines

Flowgen wind turbines generate electricity by using the natural power in the wind. When the wind changes direction, motors turn the nacelle, and the blades along with it, to face into the wind (this movement is called yaw).



Small vs. Large Scale Wind Turbine Comparison



Flowgen Horizontal Small Wind Turbine Competitive Advantage!

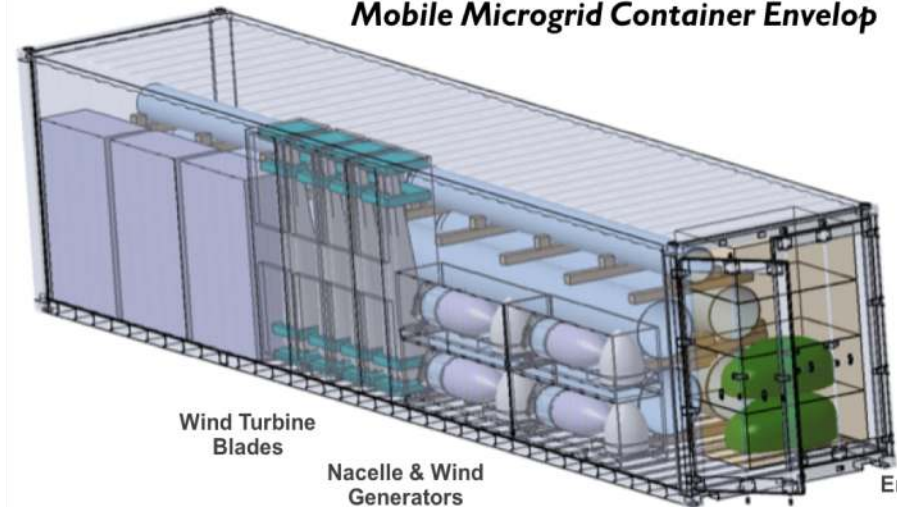
Parameter	Flowgen 10kW HSWT	Nearest Competitor 10kW
Nominal Rated Power	10kW at 10m/s (22.34 mph)	8.9 kW at 11m/s (24.5 mph)
Sound Level	32dB	42.9 dB(A)
Rated Annual Energy	15,000 kWh at 5 m/s (11.23 mph)	13,800 kWh at 5 m/s (11,23 mph)
Cut-in Wind Speed	2.5 m/s (5 mph)	3.4 m/s (7.5 mph))
Cut-out Wind Speed	20m/s (50 mph)	15.6 m/s (35 mph)
Nominal Power	10 kW @ 11 m/s (27 mph)	10 kW @ 12 m/s (27 mph)
Max. Wind Speed	55 m/s (123 mph)	60 m/s (134 mph)
Rotor Diameter:	3.2 m (23 ft)	7 m (23 ft)
HSWT Weight	354 lb (183kg)	1200 Lb. (545 kg)
Temperature Range	-50 to + 60 Deg. C	-40 to + 60 Deg. C
Generator	Permanent Magnet Alternator	Permanent Magnet Alternator
Output Form	3Ø, AC, (240/220 VAC, 1Ø, 60 Hz)	3Ø, AC, (240/220 VAC, 1Ø, 60 Hz)
Output kWh/ year	10,000-20,000 depending on wind resource	8,000-18,000 depending on wind resource
Average System \$Cost	\$20k~\$40k depending on tower & install costs	\$40k~\$60k depending on tower & install costs
Avg. Install \$/Watt	\$2.~ \$4 depending on volume	\$5~ \$7 depending on volume
O&M Avg. \$/MWh	\$0.05 per kWh of usage	\$0.10 per kWh of usage

Flowgen's
Independent
“Mobile Green
Power Hubs” Sets
up in 24 Hours
Generating Clean
Power From Nature



Inverters

Mobile Microgrid Container Envelop



Turbine
Mounting
Masts

Wind Turbine
Blades

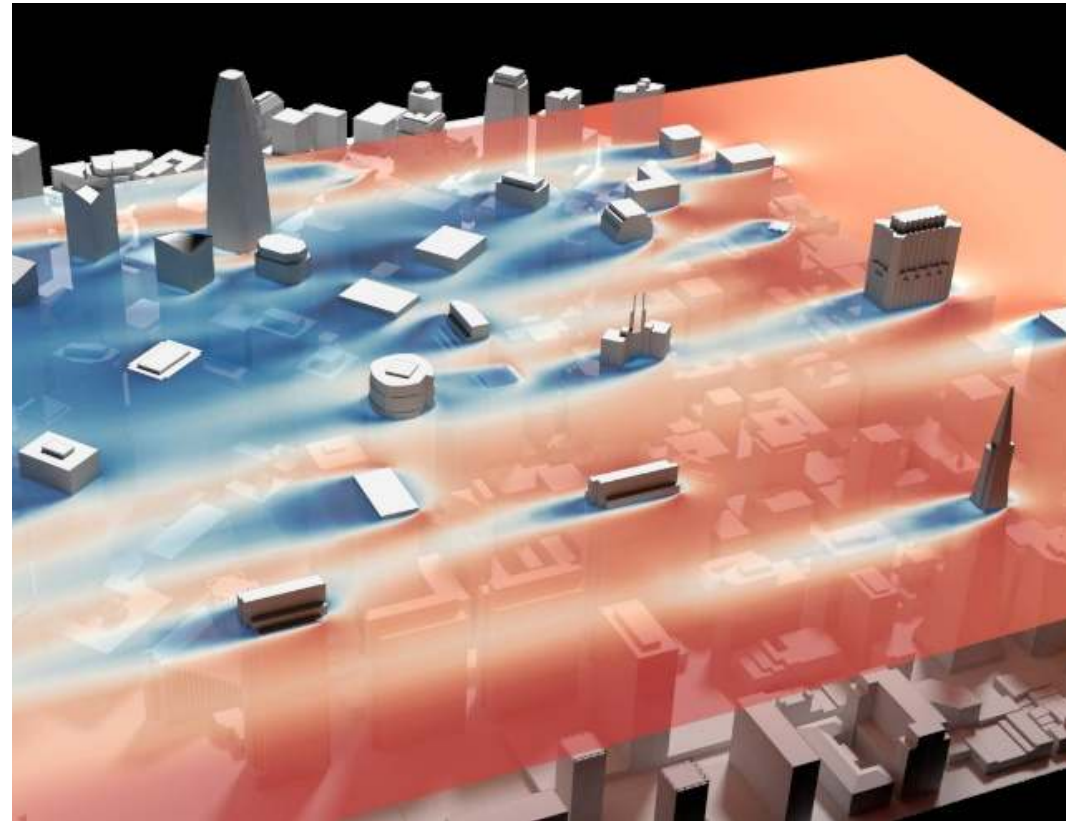
Nacelle & Wind
Generators

Energy Storage
Batteries

CFD Location Analysis Eng. Services

Customization Design through Computational Fluid Dynamics (CFD)

- We analyze the best wind turbine power locations for a given site at the beginning of a project with the help of specialized software as well as official satellite data.
- CFD enables our design team to optimize the microgrid energy output, increase kWh through detailed analysis of surrounding and installations, maximize ROI's.

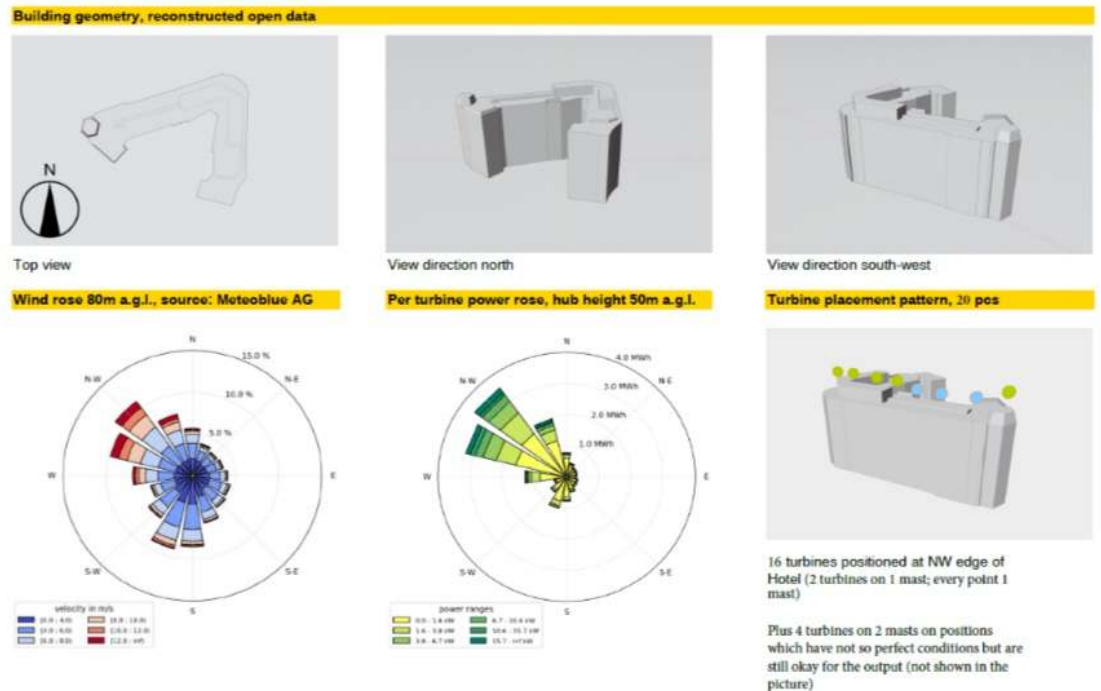


Flowgen Hybrid Microgrids can Expand Existing Renewable Energy Projects kW & kWh Capacity

Large Solar & Storage Building Footprints have limited Renewable Energy Growth Capacity



Strategic Placement of Small Footprint Wind Turbines Compliments/Increases Existing RE Project kW Capacity



FlowGen Development & Management AG

USA Microgrid Project

Site Summary

- **0.10MW**
- Partner: Billion \$ Telecom Tower Company
- Technology: Hybrid Microgrid (i.e., wind, solar & storage)



- Site layout & designs completed
- Project funded
- Design completed
- Permit approvals in process: Q4'2021
- Under construction: Sept 2021
- Commissioning date: Q4'2021

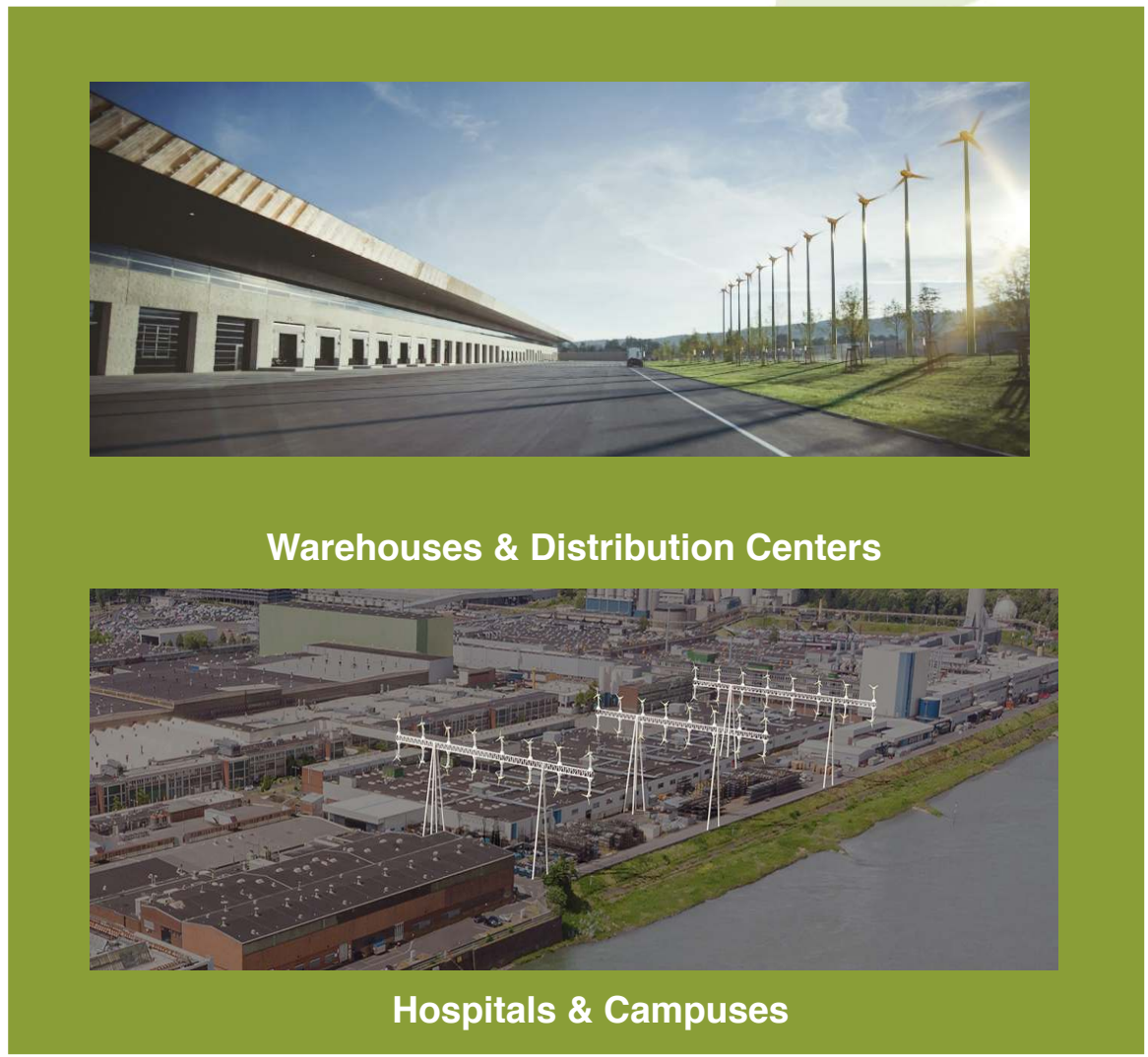
Expected Results:

- **90% utility bill off-set /\$27,000 electricity savings per/yr.**
- **100% reduction in diesel fuel consumption and maintenance**
- **Levelized Cost of Electricity(LCOE)kWh :\$0.08 vs \$0.14**
- **CAPEX ROI (after 26% SGIP + 26% ITC incentives): 4.4 years**

FlowGen Hybrid Microgrid Power Design Visualizations



Suburban High-Rise Communities



The Flowgen Partnership Advantage

There is an unprecedented momentum for leaving the fossil fuel age behind us!

1. Energy Efficiency: *Controllable Hybrid Microgrids = Reduced kWh Energy Consumption ,Cost Savings & Attractive ROI's.*
2. Security of Supply: *Designed to keep operating & the lights on during power failures = Business & Home Productivity & Safety.*
3. Sustainability: *Reduction in carbon fuels = Minimizes Carbon Footprint & Safeguards the Planet.*



Flowgen Hybrid Microgrids

1. In-house Wind & Hybrid Microgrid design
2. Automated Mfg. produces low-cost components
3. In-process quality control –automotive standards
4. Project financing options & EAAS
5. Power performance guarantees



Certified ISO Supply Chain Partners

1. Green Line Const. Bankable Solar Systems
2. CE+T Bankable Inverters & PMS
3. CE+T Cloud-Based Monitoring & Control System
4. Strong warranty & spare parts programs



EPC Microgrid Installation Partners

1. Kiewit Design Engineering & Construction
2. Licensed & bonded
Workmanship guarantee

FlowGen Advanced Technology + Automation + Vertical Integration = Reduced Project Risk & Cost

THANK YOU!

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