

Green Energy Meeting
DRAFT Meeting Minutes 3/10/21

Meeting called to order 5:05 pm.

Attendees: Mark Beaton, Gene Wyatt

Guests: Tony Nessralla

Mark DePasquale, CFO,CEO Green Development LLC

Tim O'Malley, Director of Operations and Maintenance, Green Development

Hannah Marina, Business Development, Green Development

Joan Levesque, Duxbury resident, came at request of Kingston resident Doreen Rily?

Mark will include letter from Green Development in minutes (see attached)

Meeting was an introduction or Green Development to the TOK Green Energy Committee. Mark D. from Green company stated the goal of his company – he has rights to the turbine that have 10 years remaining and 2.5-year renewals – proposing to take down existing turbine that is a liability to the town and erect a 1.5 Vensys 82 turbine-saving the town 5-8 hundred thousand in cost that were not back by a decommissioning bond that the town asked for from previous turbine owner
Pp agreement would be in the neighborhood of \$170,000/yr. moving to approximately \$230,000 after 10 years. Green Co is vertically integrated, owns, operates, and services its own turbine. Presently in the process of taking down an identical turbine in Ipswich.

Questions by Gene and Gene regarding icing and flicker were addressed and would be answered in greater detail at proposed meeting in the near future – Mark from Green Energy meeting will find a time and a place with the Selectmen's assistance to hold a meeting with stake holders and residents for an in depth discussion on moving forward with this project.

Mark updated GEC on solar farm on landfill - should start this spring requirement by state regarding battery back up and substation issues have been resolved

Mark mentioned the Green Energy Fund may be missing funds from Mary O'Donnell's turbine – town was to get 1% cash value of energy generated and the Green Energy Fund which goes directly to the residence of the town in the way of grants for Green Projects could use an influx of cash.

Motion 6:20 pm by Tony 2nd by Gene to adjourn.

Attachments:

Green Development LLC, profile,
Green Development LLC letter of Introduction
Vensys Technical Data



Green Development
2000 Chapel View Blvd., Suite 500
Cranston, RI 02920#

Eugene W. Wyatt, Jr.
Chair of Green Energy Committee
Kingston Town House
26 Evergreen Street
Kingston, MA 02364



People. Power. Purpose.



Company Profile

KEY FACTS:

- Founded in 2009.
- Now Rhode Island's leading wind and solar energy provider.
- Installed Rhode Island's first wind turbine.
- Committed to the preservation of natural wildlife habitats and family farms.
- Invested in the state's first and only dual-use solar-agricultural research & innovation project.
- Developed more than 70 MW in solar and wind capacity to date, with plans to add 111 MW in 2021.

HISTORY & LEADERSHIP

Green Development, founded by Mark DePasquale, is now Rhode Island's leading wind and solar energy company, distinguished by its legislative expertise, technology awareness, project management efficiency, supply chain and logistics expertise, operation and maintenance capabilities, speed to market, and transfer of knowledge to clients and the community. It is committed to land preservation, transforming the energy mix, and contributing to local economic growth.

Mr. DePasquale is a seasoned leader and entrepreneur with more than three decades of experience designing, developing, and managing over \$100,000,000 in large-scale projects. He has a long history of community involvement and a commitment to forging public-private partnerships.

EXPERTISE & KEY DIFFERENTIATORS

- Track record of managing the design, development, construction, and operation of commercial-sized wind turbines, solar arrays, and other utility projects.
- Day-to-day collaboration with a vast network of legal, finance, engineering, strategic, technology, and construction partners.
- Our rapidly growing team includes permanent and project-specific employees who have contributed to the success of the company over the past 11 years.
- One of the first energy providers in Rhode Island to offer long-term contracts to qualified off-takers via the Virtual Net Metering program.
- Experts in total lifecycle management of renewable energy projects.



Planning & Design



Site Development



Project Financing



Solar & Wind Construction



Operation & Maintenance

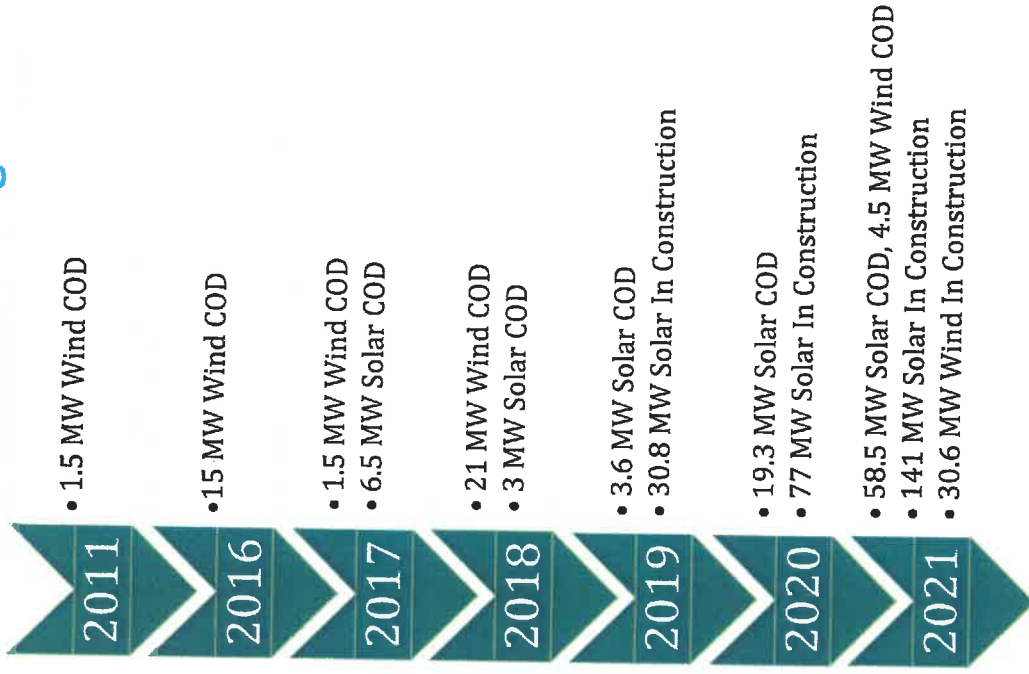


Asset Management

PROJECT HIGHLIGHTS

- **GDIM Solar** – A 38.4 MW AC ground mount solar array project located in North Smithfield, RI.
- **Johnston Wind Farm**– A 7- turbine, 21 MW wind farm in Johnston, RI.
- **Coventry Wind** – A 6-mile interconnection and a 10-turbine, 15 MW wind farm in Coventry, RI.
- **GD West Greenwich Nooseneck** – A 20 MW AC ground mounted solar project in West Greenwich, RI.
- **Providence Wind I-III** – A 3-turbine 4.5 MW wind project in Providence, RI.

Projects Completed & In Progress—February 2021





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February 11, 2021

Keith R. Hickey
Town Administrator
Kingston Town House
26 Evergreen Street
Kingston, MA 02364

Dear Administrator Hickey,

We are aware that the Town of Kingston hosts a defunct Hyundai wind turbine that is both a safety hazard and financial burden to the Town of Kingston in its current condition. We are currently under contract with Kingston Wind Independence, LLC for all the entitlements on this project.

Green Development can propose a solution to alleviate the town's liability for the Hyundai turbine, putting an end to legal battles with the existing turbine owner. We can deliver a state-of-the-art turbine from a reputable manufacturer—one that meets all the noise requirements of the original permit. The project can be fully operational by the end of 2021, once more generating revenue for the town.

The Vensys 1.5MW turbine that we are proposing utilizes the latest direct-drive technology. Our team of wind energy experts prides itself on delivering quality installations and superior workmanship. We are 100% confident we can meet all of the project's permit requirements.

Green Development, LLC ("Green") is a Rhode Island-based renewable energy company that has been developing, constructing, operating, and maintaining utility-scale wind and solar projects since 2009. As the largest developer of onshore wind in Rhode Island, our current portfolio includes 19 wind turbines, with three additional 1.5MW turbines under construction at the Port of Providence. All the turbines that we have built are operated and maintained by our asset management team.

One of our turbines is located on land owned by the Town of Portsmouth, RI. That project involved decommissioning a defunct gearbox-based turbine and replacing it with a quieter, safer wind turbine. In the process, we paid off the town's remaining debt associated with the broken, decaying turbine, which had become a safety concern, and removed it. We now own the new turbine and sell power to the Town of Portsmouth, relieving them of any risk or liability associated with the asset.

Please feel free to contact me on my direct line or by email at any time, (401) 580-2060, md@green-ri.com. I look forward to answering any questions that you may have.

Best regards,

Mark DePasquale
CEO and Owner
Green Development, LLC

Cc: Jason P. Silva, Inspector of Buildings & Zone Enforcement Officer
Eugene W. Wyatt, Jr., Chair of Green Energy Committee
Joseph F. Casna Jr., Chair of Board of Health

A Green Development LLC Case Study

Green Development Replaces an Irreparable Wind Turbine for the Town of Portsmouth, RI & Assumes Responsibility for Future Maintenance



PROBLEM

In 2008, the Town of Portsmouth, RI, demonstrated its commitment to renewable energy by installing a wind turbine at Portsmouth High School—the second large-scale turbine in the state. By late 2012, the wind turbine had stopped producing energy, and the company that had installed the turbine had gone out of business. The town had secured a loan to purchase the gearbox-based turbine, and a significant portion of the loan was still outstanding. State agencies and wind turbine experts pursued various avenues to have the turbine repaired, but it was finally determined to be irreparable.

SOLUTION

Green Development removed the defunct gearbox-based turbine and replaced it with a late-model Vensys direct-drive 1.5 MW turbine, which Green owns, operates, and maintains. In exchange, Green repaid the loan for the old equipment on the town's behalf, and the new turbine was erected and operational in August of 2016. Green now sells power from the project to the Town of Portsmouth, the Portsmouth School Department, and the YMCA of Greater Providence through the virtual net metering program.

KEY PROJECT FACTS

Location:

Education Lane, Portsmouth, RI

Commercial Operation Date:

Q3 2016

Equipment:

(1) Vensys V82 1.5 MW Turbine with 82-meter blades, mounted on an 85-meter tower

Approximate Annual System Production:

4,717,000 kWh



Mark DePasquale
Chief Executive Officer

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PRODUCT BENEFITS

- ▼ Dispensing with a gearbox means lower repair and maintenance costs and a higher yield.
- ▼ High-quality permanent magnets prevent electrical excitation losses, which additionally increases the energy yield.
- ▼ The air-cooling system used for the generator and the VENSYS frequency converter saves on additional components, cooling agents and maintenance work.
- ▼ The blade pitch system with a toothed belt drive is lubrication-free, resistant to wear and requires little maintenance.

A detailed black and white photograph of a wind turbine nacelle. The nacelle is the central housing for the generator and other mechanical components. It is shown from a perspective that highlights its cylindrical shape and the various ports and sensors on its top surface. The nacelle is mounted on a vertical shaft, and the blades are visible extending from the sides. The lighting creates strong highlights and shadows, emphasizing the metallic texture and complex engineering of the component.

VENSYS 82

1.5 MW

VENSYS 82

1.5 MW

Operating data

Rated power	1.5 MW
Cut-in wind speed	3 m/s
Cut-out wind speed	22 m/s
Operating temperature	-20 °C to +40 °C

Sound power

Optimized for maximum performance	104.4 dB(A)
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(Sound-reduced operating modes available)

Rotor

Diameter	82.3 m
Swept area	5,320 m ²
Rotational direction	Clockwise
Rated speed	17.3 rpm
Blade type	EBT 40
Power control	Pitch
Primary braking system	Single-blade adjustment, triple redundant

Generator

Type	Synchronous generator with permanent magnet excitation
Construction type	Direct drive

Yaw system

Construction principle	Geared electric motors
Braking system	Hydraulic brake calipers

Converter

Type	IGBT full power converter
Frequency	50 Hz / 60 Hz

Tower

Hub heights	58 m 85 m 100 m
Material	Steel tube

Design

Hub heights (m) 58 85	IEC IIA
Hub heights (m) 58 100	IEC IIIA



POWER CURVE VENSYS 82

Wind speed m/s	AEP [MWh] VENSYS 82 - EBT 40
5.0	2,746.4
5.5	3,430.2
6.0	4,113.2
6.5	4,774.8
7.0	5,400.1
7.5	5,978.9
8.0	6,504.0
8.5	6,970.5

Power (kW)

