

# Community Wind - Shelby

May 3rd, 2022



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# Community Wind Projects = Community Benefits

**Community Host Agreement** - Direct compensation to the Town of Shelby. Payment amount dependent on final system size.

**Tax Payments** - School, County, Town receive direct payments via taxes on a project or PILOT payments.

**10% Discounted Electricity** - Community Wind projects supply renewable energy to local ratepayer at a discount through the Community Distributed Generation Program in New York.



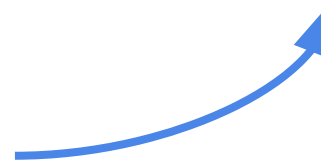
# Small Scale (Community) vs. Large Scale (Utility)

## Typical Model - Large Scale

- Large projects - electricity flows to large loads (e.g NYC)



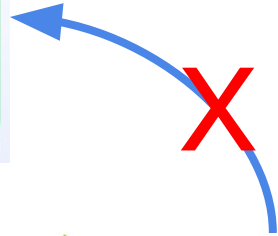
Transmission to NYC



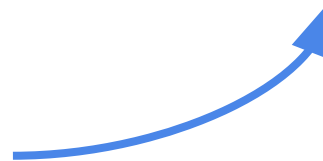
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Transmission to NYC





# Small Scale (Community) vs. Large Scale (Utility)

**Our Model - Community Scale wind energy stays in the region**



Locally generated, locally consumed at a 10% Discount



# Community Wind - Electrical Interconnection & Permitting

## Our Model - Community Scale

### Electrical Interconnection

- **Locally** generated, **locally** consumed at a **10% discount**
- **Direct to homes, schools, & businesses** in this region
- **Distribution Lines only** used for Community wind
  - Current capacity allows 1 - 2 wind turbines in Shelby

### Permitting

- Local permitting (**Home Rule projects** only)
  - Following Shelby ByLaw only, no involvement with NYS



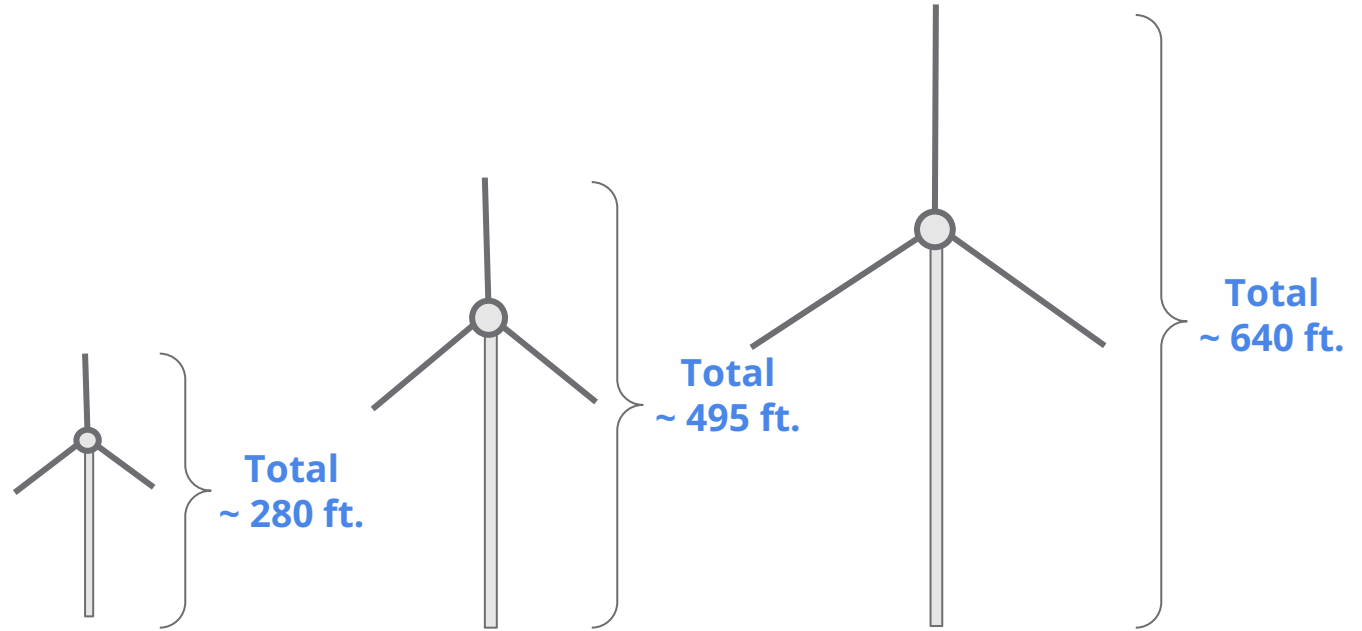
# Wind Turbines - History of Structure Heights

<b>Decade</b>	<b>Tower (ft.)</b>	<b>Blades (ft.)</b>	<b>Total Height (ft.)</b>	<b>RPM</b>	<b>Sound</b>
<b>2000's</b>	200	80	280	20+	Loud
<b>2010's</b>	330	165	495	15	Quieter
<b>2020's</b>	400	240	640*	8	Quietest

*\*This is roughly the tip height of Community Wind Turbines, which must be less than 5 MW capacity. Some land-based wind turbines are reaching up to 850ft.*

# Wind Turbines - History of Structure Heights

Decade	2000's	2010's	2020's
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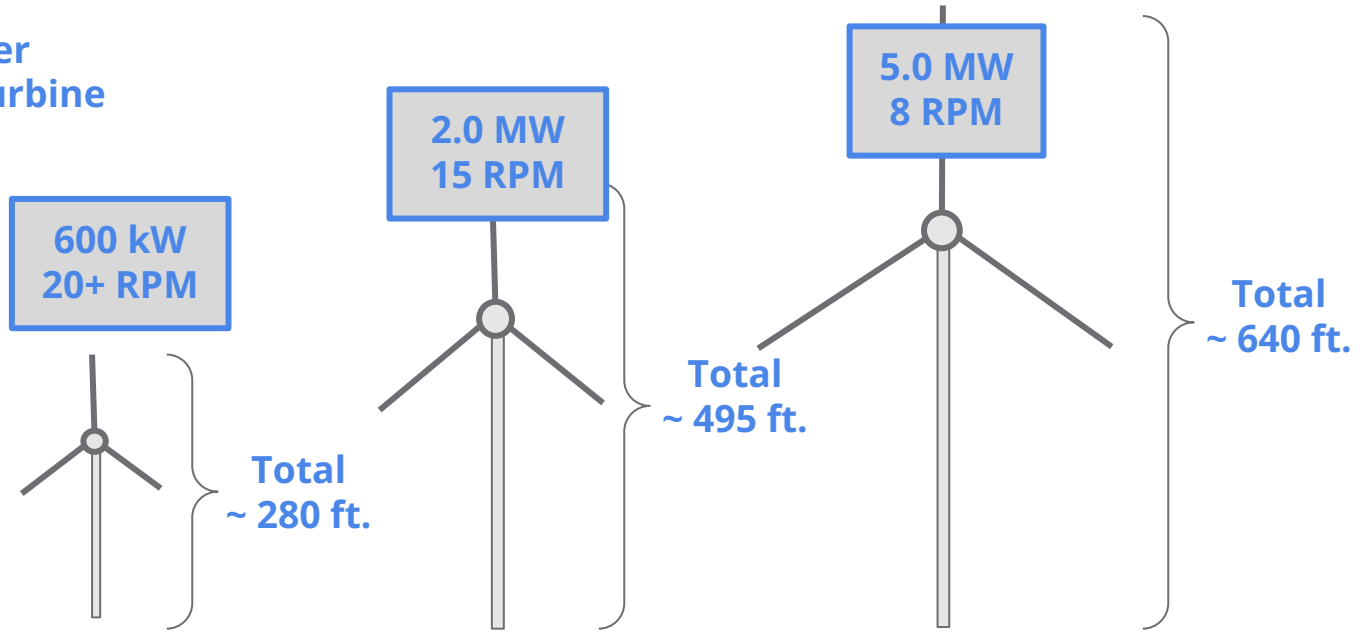
*Note all dimensions are approximate*



# Wind Turbines - Slower, Quieter, more Capacity

Decade	2000's	2010's	2020's
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Slower RPM's, Quieter  
More capacity per turbine



*Note all dimensions are approximate*

# Wind Turbines - History Summary

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2000's	200	80	280	20+	Loud
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**Community Scale - Slower & Quieter**

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# Potential Size(s) of Community Wind Turbines

**Generator Size** - Potential range between 3.5MW - 5MW. 5MW is the maximum limit for a project due to interconnection restrictions.

**Visual Appearance** - Danish design - 3 bladed, upwind turbine (industry standard)

**Wind Turbine Manufacturers** - Potential vendors include General Electric and Vestas.

**Wind Turbine Type** - Type Certified\* to international standards required by financial and insurance institutions



*\*IEC 61400-5:2020 specifies requirements to ensure the engineering integrity of wind turbine blades as well as an appropriate level of operational safety throughout the design lifetime.*



# Contact Information & Landing Page

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Any questions please direct folks to the “Contact Us” form:

**Contact Us**

*Please contact us if you have comments, questions, or would like updates on the project.*

Email\*

First name

Last name

City

Comments or Questions

Would you like us to send you project status updates?\*

- Yes
- No