

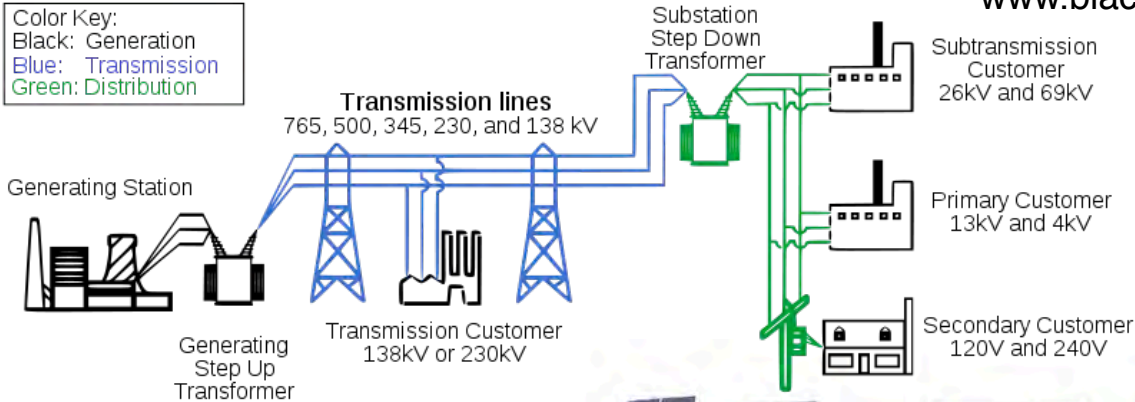


Blacksburg Wind & Solar Power

A joint effort of Virginia Tech, the YMCA, and the Community

www.blacksburgwindpower.com

Color Key:
 Black: Generation
 Blue: Transmission
 Green: Distribution



www.blacksburgwindpower.com

Cortney V Martin

Virginia Tech

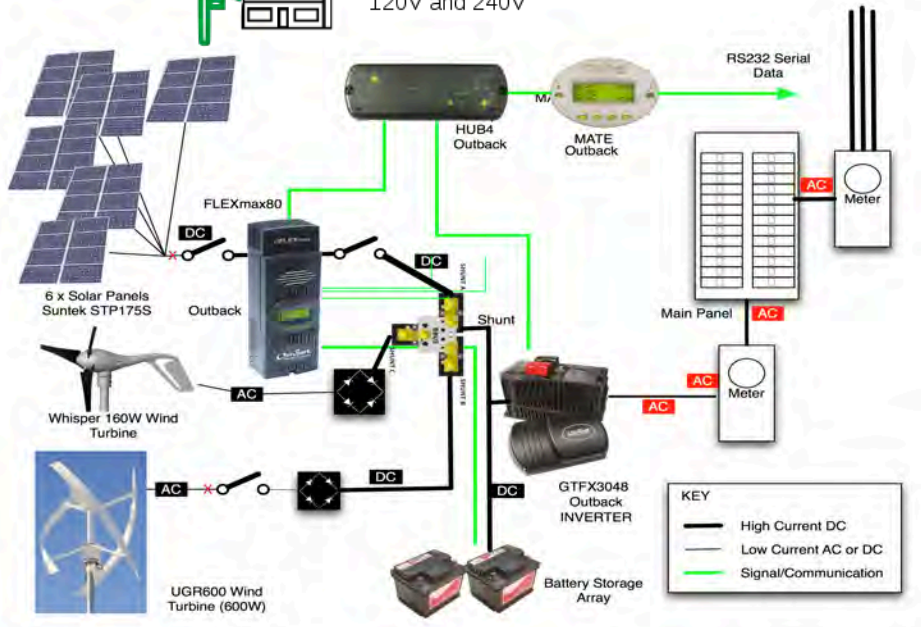
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Blacksburg,

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Typical Costs

Every installation is different and may be cheaper or more expensive than this analysis

* Solar

* Minimum suggested investment \$15,000

* Equipment & Installation \$6 to \$10 per watt

• Example: 1.875 kW Solar Array, Inverter and Installation:

• Equipment & Installation \$8 Roof mount * 1875 = \$ 15,000

• Total \$15,000 for 1.875 kW array (78% more than we have here (1kW))

• 8.43kWh/day average (351Watts on average for 24hrs) - 3,076kWh/YR

* Incentives

* Federal: 30% Tax credit - once (Proof of qualified expense needed)

This is a tax credit for tax you have paid - can be claimed up to 6yrs after installation

* State: \$1,400 to \$1,800 tax credit /kW rated solar - Once (Application & Approval needed)

* SREC (Solar Renewable Energy Credit) - Approx \$50 per MWh installed



How did we go about it

- * Identified a good location (we chose for education over optimal wind)
- * Coordinated agreement with the Town of Blacksburg on a pilot test program to install wind turbine and solar panels
- * Found wind turbine and solar panels at right spec, price AND availability
- * Found reputable local contractor to install the equipment and get it up and running



Zoning Questions?
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Building Questions?
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Safety Official
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TOWN OF Blacksburg *a special place*

- * Today, wind turbines and solar panels are not clearly permitted in Town Code.
- * Town supports sustainable energy sources.
- * YMCA talked to Town early in process
- * Educational opportunities of pilot test program to help staff with updating Town Code regulations on wind turbines and solar panels.
- * Professional Engineer designed plans submitted to Town to obtain building permit.



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