

Distributed Wind Stories from the Field

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Carleton's Wind Turbines



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U.S. DEPARTMENT
of ENERGY **BATTELLE**



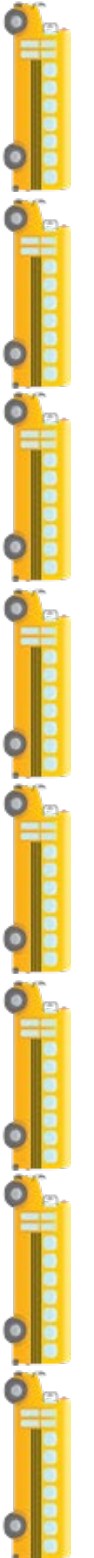
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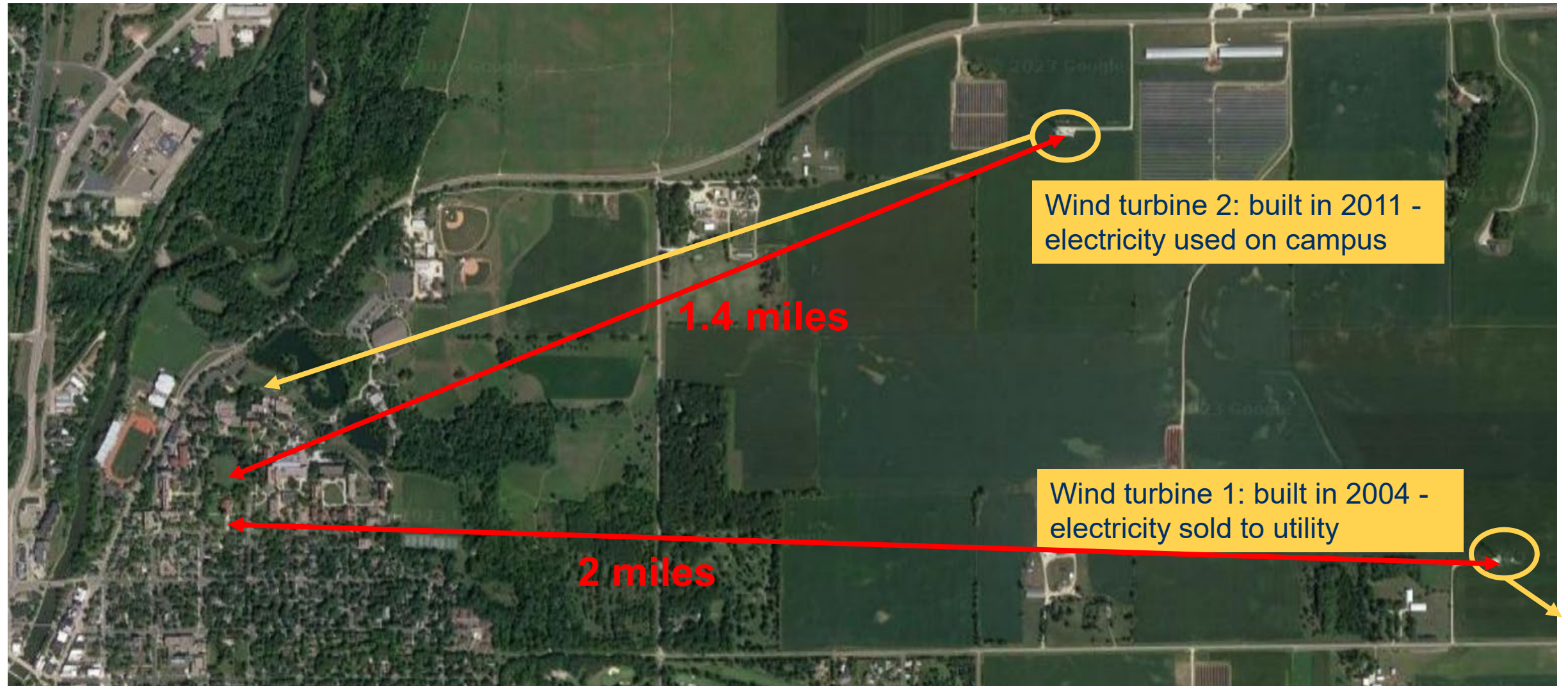
Size of Wind Turbines

80 m (262 feet)

41 m (134 feet)

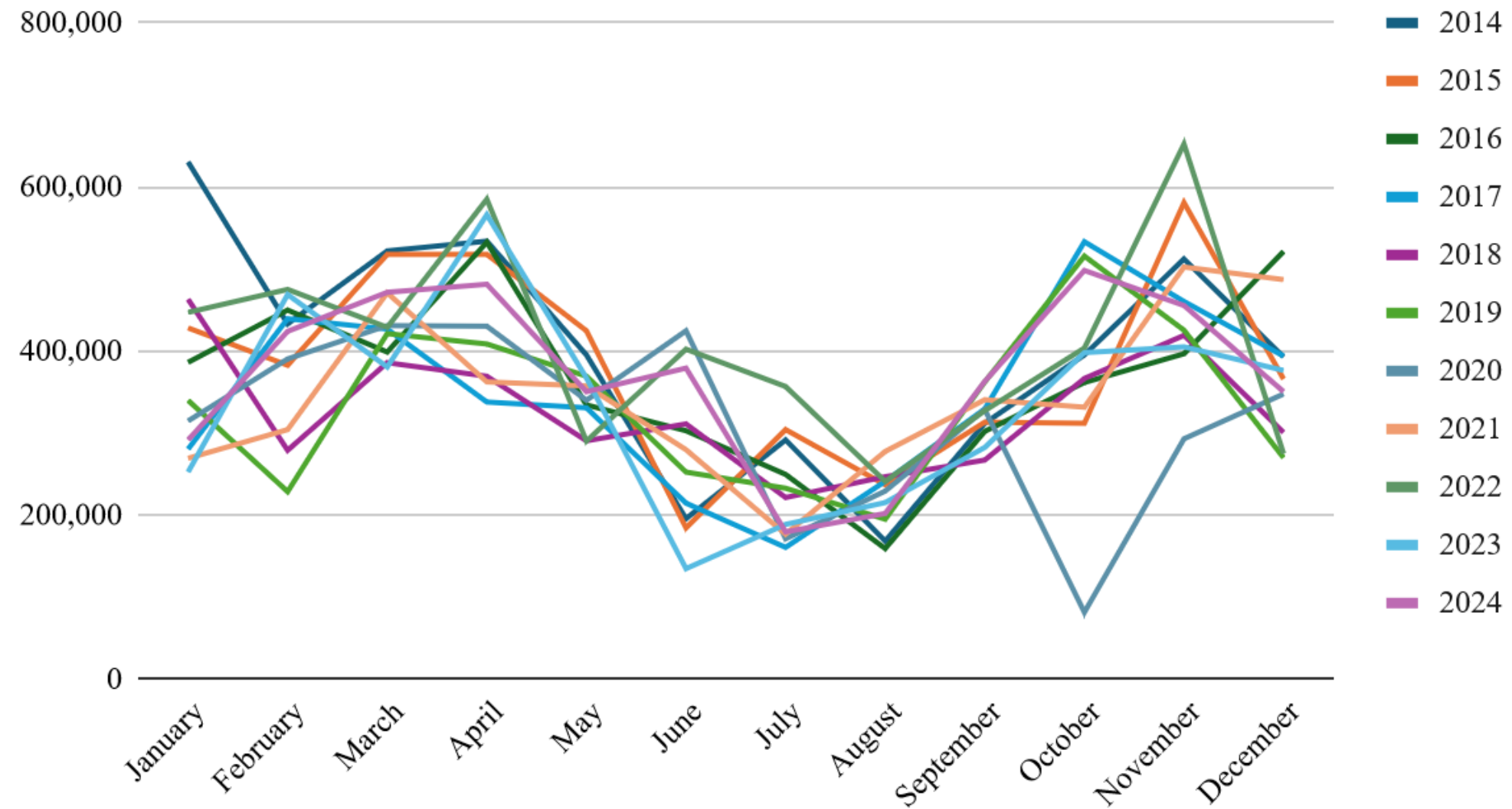


Wind Turbines



Monthly Energy Production

Monthly production from 2004 wind turbine



Wind Turbine Comparison

	2004 Turbine	2011 Turbine
Make and model	Vestas V82	General Electric XLE
Average annual production	4,289 MWh	3,952 MWh
Average value of each kWh	\$0.033 / kWh	\$0.10 / kWh
Average annual value	\$140k	\$400k
Capital cost (parts and labor)	\$1.8M	\$2.8M
Additional annual costs (insurance, maintenance contract, land lease, etc)	\$70k - \$100k	

Lessons Learned

- Confirm the wind turbine has QF (Qualified Facility) status once installed
- Have a good maintenance contract

Questions?

