



NORTHWIND SOLAR
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PROJECT STUDY

City of Antigo Wastewater Treatment Plant

Antigo, WI

Project Objectives:

- ✓ **Reduce carbon impact**
- ✓ **Utilize Available Incentives**
- ✓ **Battery addition** for cost offset through rate arbitrage and peak demand shaving

Energy & Environment:

Offsets 847,419 lbs of CO₂/year

Equivalent to emissions from:

- 🌍 **43,252** gallons of gasoline consumed per year
- 🌍 **426,978 lbs of coal** not burned for one year
- 🌍 **386 acres of U.S. forests'** annual carbon uptake
- 🌍 **26,106,143** smartphones charged for one year

**Source: EPA greenhouse gas equivalencies calculator*

352.1 kW Grid Tied Solar & BESS

- **(726) Solar Modules:** Hanwha Qcells QPeak Duo XL G10 485
- **(3) Inverters:** CPS 110 kW with standard wirebox & 20 amp fuses
- **(1) Battery:** ELM C-BESS 125kW
- **Racking:** Sinclair ground array racking
- **Monitoring:** Online performance monitoring

What's Next?...

Contact Northwind Solar to explore solar for your business. Get a free estimate package for preliminary budgeting and schedule a no-obligation site visit with our professional design & sales team.





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Project Incentives

- ✓ Focus On Energy Rebate
- ✓ 30% Federal Tax Refund (direct pay)
- ✓ OEI Grant

Financial Performance

Total Project Cost:	\$1,010,900
<i>Installed Solar Cost</i>	<i>\$1.93/watt</i>
Focus On Energy Rebate:	-\$37,429
OEI Grant	-\$490,000
Federal Direct / Elective Pay	-\$292,041.30
Net System Cost:	\$191,429.70
Estimated Years to Cost Recovery:	3.25 years
10-Year Energy Value:	\$517,590.53
30-Year Levelized Cost of Energy*:	\$0.014/kWh

Battery Energy Storage System

The battery is designed to lower utility costs through rate arbitrage and peak-demand shaving. In short, it charges when electricity is cheap and discharges when prices peak "buy low, use high" cutting the municipality's energy and demand charges.

*Levelized Cost of Energy

Solar PV technology allows an owner to "fix" the cost of electricity produced over the lifetime of the installed equipment. Without solar, customers pay ever-increasing retail rates of energy to their utility provider. The Levelized Cost of Energy represents the cost-per-kWh of solar-derived electricity. In short, the levelized cost of energy is the net system cost divided by the total lifetime energy produced.

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**Northwind Solar is a
worker-owned cooperative!**