

WIND ANALYTICS™ REPORT

Prepared for:



REPORT SECTIONS



SECTION 1
WIND ENERGY ANALYSIS



SECTION 2
WIND TURBINE SELECTION



SECTION 3
FINANCIAL ANALYSIS



SECTION 4
NEXT STEPS



Analysis Summary

Project Summary

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Best Investment Option

Turbine Make	Gaia Wind
Turbine Model	133 11kW
Height	42.7 m
Rotor Diameter	13.0 m
Gross Cost	\$152,000
Available Incentives	\$114,093
Net Cost	\$37,907
Return on Investment	360%
Annual Return	11.45%
Effective Energy Price	3.5 cents/kWh
Payback	11 Years

January 2012

Dear Mr & Mrs Sample,

We are pleased to present you with this comprehensive analysis for installing a distributed wind turbine on your property located at 123 Sample Road, Anytown, USA.

In determining the optimal scenario for your property we employed Wind Analytics precision wind analysis software to choose the best physical location to install a wind turbine. By evaluating only certified wind turbines and carefully calculating the best location, we maximize your projected economic benefit.

The recommended wind turbines are chosen by first narrowing the list to only 3rd party verified and tested machines and then selecting the best options based on your energy needs, available wind resource, and project goals. Our installation and equipment partner Talco Inc. together with GLO Management Solutions has provided an estimate of total installed project costs which we have used for this report. A final quote will be rendered just prior to installation, based on market prices at that time.

Your Wind Analytics Report includes all of the relevant data needed to make an informed decision about the purchase of a distributed wind turbine, including: Detailed wind resource information about your property, together with turbine energy production. Specifications for up to three turbines that best fit your property's wind resource, and your project goals. Project costs factors including: upfront costs, incentives, and net cost. Project benefit factors, such as the annual rate of return and total earnings for your potential investment. We are happy to schedule a call to discuss the findings of this report with you, please contact your sales representative to set this up.

Thanks,

George Obsuth

GLO Management Solutions, L.L.C.

GLO Green Energy "a division of GLO Management Solutions"

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Property Analysis



Define Study Area

Permitting Factors

Securing a permit is typically required before the turbine installation. Your installer will help you work with your local government to secure a permit.

Restrictions such as setbacks and heights are considered when defining the wind study area.

Such rules change regularly and your installer may adjust the final installation point based on any changes in these rules.

Installation Factors

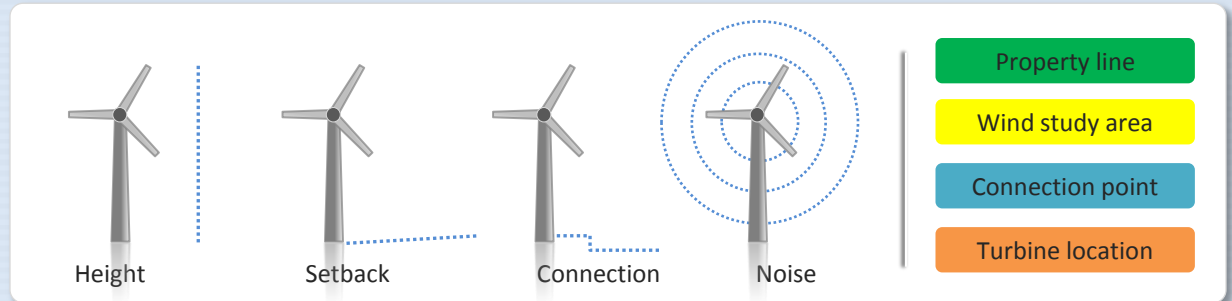
Placing a wind turbine near the point of connection reduces costs of installation. We take this into consideration when choosing the optimal installation point.

Some points on the property may be found to be more appropriate for a wind turbine foundation. Your installer may adjust the final installation point accordingly.

Study Area and Optimal Turbine Location



Site considerations for turbine placement



Regional Wind Analysis



Terrain Effects

Wind Roses

The wind energy roses are graphs that show how much wind energy comes from each direction.

The regional wind rose is based directly on data from your local meteorological stations.

The property wind rose is a profile of the available wind on your property calculated based on the impact of all land cover and terrain surrounding the site.

Local Land Cover

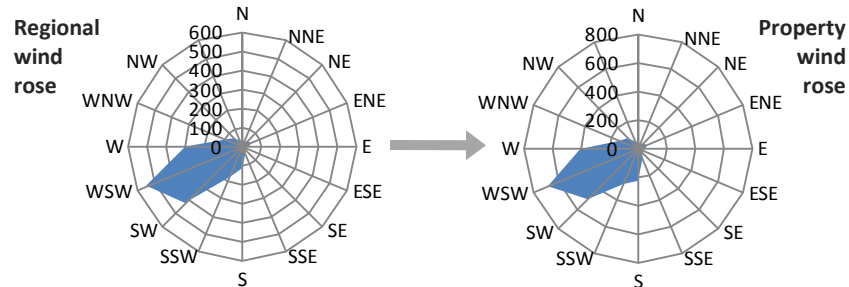
Wind energy is significantly affected by variances in local land cover and terrain. The more built up the terrain, the higher the “roughness.”

High roughness means lower energy. Wind Analytics reviews 16 areas, covering a three-quarter mile radius from your property when calculating local terrain effects on your wind.

Local Land Cover/Terrain Effects



Changes from regional to property wind rose



Map key

Water	Forest
Barren	Suburban
Grassland	Dense Sub.
L. Country	Urban
H. Country	Skyscraper

Property Wind Analysis



Obstacle Effects

Relevant Obstructions

Nearby obstructions may reduce your available wind energy. Wind Analytics identifies relevant obstructions by height and distance within a quarter-mile radius from each point studied.

Wind energy is then adjusted by calculating the wake effect of each identified obstruction.

This can be a major factor in determining the optimal wind energy point on your site.

Types of Obstructions

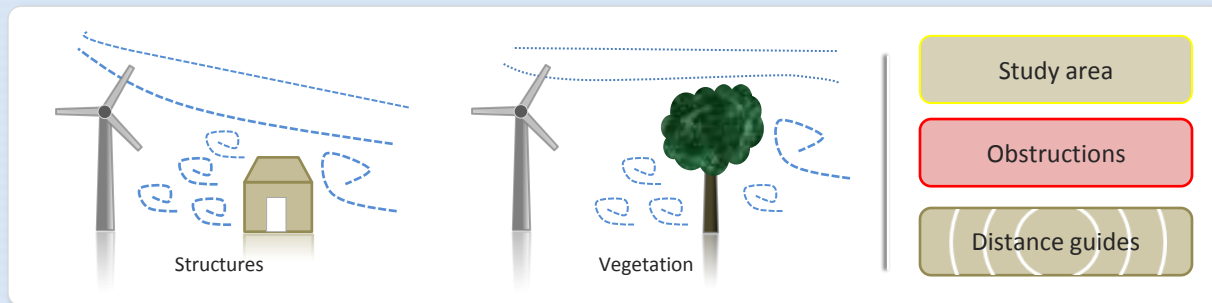
Different types of obstructions effect the wind differently. Typically we look for buildings or trees, however obstructions can also be fences, signs, radio towers, or prominent terrain features.

Since some obstructions, such as vegetation, allow some wind to pass through, Wind Analytics also accounts for object porosity.

Local terrain effects



Obstacle effects on wind resource



Turbine Selection



Best Turbine Choices

Cost Considerations

Wind turbine capacity, required tower height, and installed cost are first considered when selecting turbines that meet your project goals.

Installing a wind turbine on a taller tower usually results in more energy generated, but is also more expensive and can make permitting more challenging. Capacity refers to the maximum power a wind turbine can generate at a given wind speed, more capacity does not always mean more energy.

Wind Considerations

Matching the optimal wind turbine power curve to your wind speed distribution will maximize energy.

Wind Analytics calculates the wind speed distribution within the study area on your property. The distribution is then matched to a database of verified wind turbine power curves, based on your energy needs, to determine the best fit.



3,399

kWh/typical year

Rated Capacity	2.4 kW
Rotor Diameter	3.7 m
Tower Height	36.6 m
Installed Cost	\$28,430
Net Cost	\$8,004
Energy Per Year	3,399 kWh
Annual Return	-4.08%
Lifetime Earnings	\$4,169



11,963

kWh/typical year

Rated Capacity	5.0 kW
Rotor Diameter	6.4 m
Tower Height	36.6 m
Installed Cost	\$55,000
Net Cost	\$11,000
Energy Per Year	11,963 kWh
Annual Return	4.90%
Lifetime Earnings	\$21,117



43,493

kWh/typical year

Rated Capacity	11.0 kW
Rotor Diameter	13.0 m
Tower Height	42.7 m
Installed Cost	\$152,000
Net Cost	\$37,907
Energy Per Year	43,493 kWh
Annual Return	11.45%
Lifetime Earnings	\$128,412

Project Economics



Project Scenarios

Project Incentives

Your available incentives are subtracted from project costs to arrive at the net cost for your system. These values for three turbines are displayed in the table to the right. Annual maintenance has already been factored in.

Keep in mind that you will need to cover up to the full cost of the system before receiving the incentive benefits in the following months. Speak to your installer to discuss available financing options.

Choosing the Right Project

Do you want to maximize your savings, or fit your budget?

Consider the Project Benefits to find the right turbine for your situation. The turbine with the greatest Total Earnings will maximize savings over the life of the project, while the highest Annual Rate of Return will be the best investment for the money.



Project Costs and Incentives	<i>Skystream 3.7</i>	<i>Endurance S343 5kW</i>	<i>Gaia 133 11kW</i>
Equipment Costs +	\$20,155	\$35,000	\$112,000
Installation Costs +	\$8,275	\$20,000	\$40,000
Gross Cost =	\$28,430	\$55,000	\$152,000
Cash Rebates/Grants -	\$11,897	\$27,500	\$68,493
Federal Grant/Tax Credit -	\$8,529	\$16,500	\$45,600
Depreciation (Year 1) -	\$0	\$0	\$0
Other Incentives -	\$0	\$0	\$0
Available Incentives =	\$20,426	\$44,000	\$114,093
Net Cost =	\$8,004	\$11,000	\$37,907
Project Benefits	<i>Skystream 3.7</i>	<i>Endurance S343 5kW</i>	<i>Gaia 133 11kW</i>
Energy	3,399 kWh/year	11,963 kWh/year	43,493 kWh/year
Return on investment (ROI)	52%	195%	360%
Annual Rate of Return	-4.08%	4.90%	11.45%
Payback Period	> 25 Years	17 Years	11 Years
Effective energy cost (LCOE)	8.0 cents/kWh	3.7 cents/kWh	3.5 cents/kWh
2011 Market Price for Energy	8.2 cents/kWh	8.2 cents/kWh	8.2 cents/kWh
2035 Market Price for Energy*	21.0 cents/kWh	21.0 cents/kWh	21.0 cents/kWh
Annual Savings on Electric Bill 2011	\$79	\$382	\$3,071
Annual Savings on Electric Bill 2035	\$292	\$1,493	\$7,919
Total Earnings by 2035 (est.)	\$4,169	\$21,117	\$128,412

*Estimate based on 4% annual growth rate

Next Steps



Starting Your Project

Site Visit

Our installation partner, GLO Management Solutions will send a qualified installer to visit your site at your convenience.

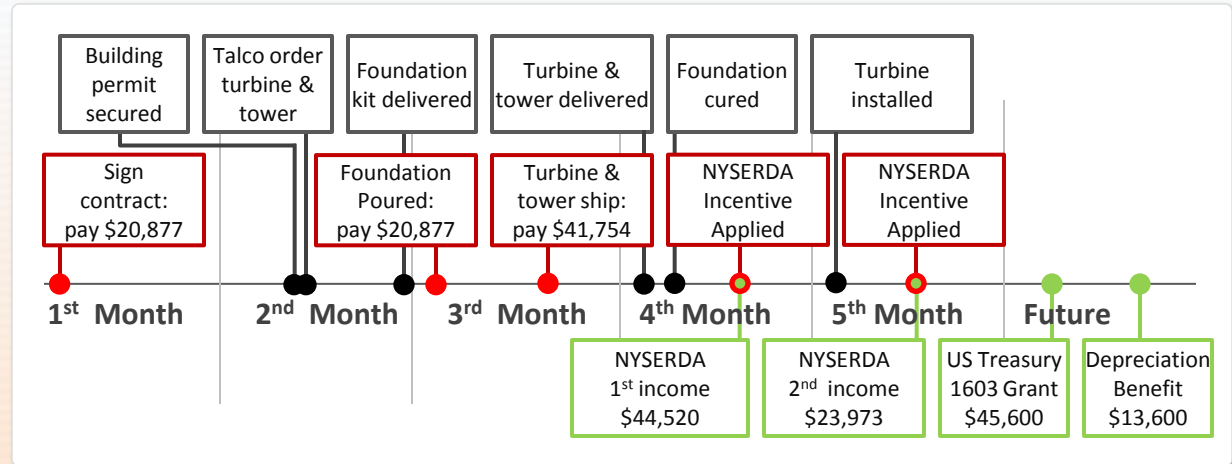
A site visit is required to begin planning the construction work. The installer will locate where the foundation will be laid, where interconnection will take place, and examine your electrical system to plan for the addition of your new wind turbine.

Final Quote

Approving the final quote is the last step before installation. The final quote contains specific details about installation at your site.

A deposit is required to begin work. Financing options for qualified clients may be available.

Project Timeline



Talco Client Testimonials

“Our company has been around nearly 100 years; these wind turbines will help us to continue for another 100 with minimal impact on our environment!”

– Brad Jr., E.B. Stone

“Talco Electronics has been instrumental in helping us provide turn key wind solutions to our customers”

– C. Stahl