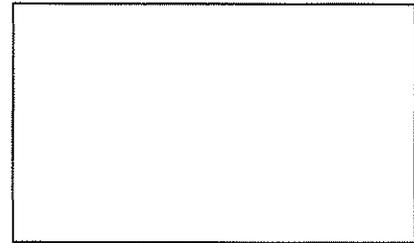




GLOUCESTER CITY COUNCIL CALENDAR OF BUSINESS
SPECIAL CITY COUNCIL
WEDNESDAY, NOVEMBER 9, 2011
7:00 P.M.
FRIEND ROOM, SAWYER FREE LIBRARY
SCM2011-009



SPECIAL CITY COUNCIL MEETING

AGENDA

ACTION

COMMUNICATIONS:

1. Memorandum from Mayor Kirk re: Use of Restored Local Aid
2. Request from Gloucester Fishermen Athletic Association re: acceptance of gift of \$100,000 (One Hundred Thousand Dollars) for partial payment of engineering services for plans for renovation of Newell Stadium

(Refer B&F)

(Refer B&F)

WORKSHOP/PRESENTATION:

Blackburn Wind Turbine Project - Risks vs. Rewards

ROLL CALL – Steve Curcuru

Linda T. Lowe, City Clerk

Meeting dates are subject to change. Check with City Clerk's Office.

NEXT REGULAR CITY COUNCIL MEETING, November 15, 2011

NOTE: The Council President may rearrange the Order of Business in the interest of public convenience.

The listing of matters is those reasonably anticipated by the Chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

City Hall
Nine Dale Ave
Gloucester, MA 01930



TEL 978-281-9700

FAX 978-281-9738

ckirk@ci.gloucester.ma

CITY CLERK
GLOUCESTER, MA

11 OCT 31 PM 3:51

CITY OF GLOUCESTER
OFFICE OF THE MAYOR

MEMORANDUM

[Handwritten signature]
TO: City Council
FR: Mayor Carolyn A. Kirk
RE: Use of Restored Local Aid
DT: October 31, 2011

Dear Councilors,

As you know from the Memorandum from Senator Tarr's office dated October 28, 2011, Gloucester stands to receive \$244,250 in Unrestricted General Government Aid. This amount reflects what was cut during last spring's state budget. Given that the state produced a surplus at the close of the fiscal year, we are pleased that the Commonwealth is returning this money to cities and towns. We expect to receive the money today, and we have had a number of questions about it that we would like to address right away.

It is not often that we are in the situation of having to decide what to do with extra money. This represents a modest windfall to Gloucester, and these funds can be used in any of the following ways:

- Any funds not appropriated must be closed to fund balance (free cash) at the end of FY12;
- The funds can be appropriated as an available revenue during FY12, or;
- The funds can be applied as estimated receipts when setting the FY12 tax rate.

While it is a goal of the city to improve fund balance, we are making progress in that area through our overall financial management plan for the city.

The FY12 budget is set, and we anticipate covering any shortfalls through good expense management and FY11 free cash which will be certified in the month of November.

If we apply the funds as estimated receipts when setting the FY12 tax rate, we are able to reduce the amount of taxes raised in order to meet the FY12 revenue budget.

It is the recommendation of the Administration that we take this opportunity to give the taxpayers of Gloucester a break. As outlined in the State of the City report, pressure has remained on the property tax because of the decline in local and state revenues, rising fixed costs, and the need to maintain core service levels for citizens.

While the result may only be a small tax savings for the property owner, I believe it is the right message to send – that the taxpayers have stepped up during these tough economic times for the city, and we now have a small way to say “thank you.” In addition, once FY11 free cash is certified, we will make every attempt to apply some of those funds to our FY12 estimated receipts which would result in an additional tax break for the citizens.

Under separate cover and in the next Mayor's Report, the Administration will be making the formal request to the City Council to apply these funds to the city's estimated receipts when setting the FY12 tax rate.

Zimbra

ckirk@gloucester-ma.gov

Gloucester UGGA Reversion Funding Memo

From : Bruce E Tarr (SEN) <Bruce.Tarr@masenate.gov>
Sender : Richard M. Gould (SEN) <Richard.Gould@masenate.gov>
Subject : Gloucester UGGA Reversion Funding Memo

Fri, Oct 28, 2011 03:13 PM

1 attachment

To : ckirk@gloucester-ma.gov, jduggan@gloucester-ma.gov, weather.vane
 <weather.vane@verizon.net>, sefgiam62@aol.com, btobey@gloucester-ma.gov,
 rwhynott@gloucester-ma.gov, pmcgeary@gmail.com, acmulcahey@comcast.net,
 scourcuru@gloucester-ma.gov, jackleahardy@verizon.net, greg@gregverga.com

Commonwealth of Massachusetts



Massachusetts General Court
 State House, Boston Massachusetts 02133-1053

State Senator Bruce Tarr
 Room 308, State House
 Senate Minority Leader
 Boston, MA 02133
 First Essex and Middlesex District
 722-1310

Tel. (617) 722-1600
 Fax. (617)

Memorandum

To: Municipal Officials
From: Senator Bruce Tarr
Date: October 28, 2011
Re: UGGA Reversion Funding

I am pleased to inform you that the City of Gloucester is scheduled to receive \$244,250 in Unrestricted General Government Aid (UGGA) from the Commonwealth next week. The funding is to be distributed in one lump sum on Monday, October 31.

The scheduled payment reflects the difference between the \$3,378,096 in UGGA funding that Gloucester received in Fiscal Year 2011 and the \$3,133,846 the city was allocated in the current Fiscal Year 2012 budget, effectively level-funding this account.

During last spring's budget debate, the House and the Senate agreed to utilize half of any surplus funding available at the end of Fiscal Year 2011 to restore the \$65 million that had been cut statewide from the UGGA account. Had this agreement not been in place, the money would have reverted back to the General Fund. Given the many fiscal challenges communities are facing, returning this money to our cities and towns represents one of the most effective ways to alleviate some of this financial burden and maintain essential services at the municipal level.

I hope this information is helpful, but please feel free to contact me at (617) 722-1600 or at bruce.tarr@masenate.gov if I can be of any further assistance.



Bulletin

2011-15B

TO: Mayors/Boards of Selectmen, City Councils, Managers, Finance Directors,
Accountants/Auditors, Treasurers, Assessors, and Finance Committees

FROM: Gerard D. Perry, Director of Accounts

DATE: October 28, 2011

SUBJECT: Additional State Aid Affecting FY12 Municipal Budgets

On October 27, 2011, Governor Deval Patrick signed Chapter 142 of the Acts of 2011, which appropriated \$65M in a supplemental budget for cities and towns of the Commonwealth of Massachusetts. This additional local aid will be distributed to municipalities on Monday, October 31, 2011. The file for your distribution can be found at <http://www.mass.gov/Ador/docs/dls/mdmstuf/LocalAidDist/65million.xls>.

Please be advised that this revenue may be used in any one of the following ways:

- Applied as estimated receipts when setting the FY12 tax rate;
- Appropriated as an available fund during FY12, or;
- Any funds not appropriated must be closed to fund balance (free cash) at the end of FY12.

If you have any questions, please feel free to contact your Bureau of Accounts field representative.

Gloucester Fishermen Athletic Association

CITY CLERK
GLOUCESTER, MA

11 NOV -3 PM 2: 13

November 2, 2011

GFAA Board
of Directors

Richard Wilson
Chairman
Renewal of Newell
Stadium Committee

Jonathan Pope
GFAA President

Linda Rogers
Vice President

Timothy Philpott
Treasurer

Ellen Preston
Secretary

Clare MacDonald

Robert Parsons

Janda Ricci-Munn

Jay Somers

June Steel

Molly Ziergiebel

Gregory Verga
Ex Officio

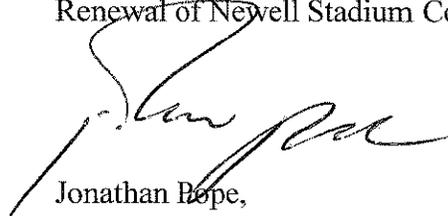
Mayor Carolyn Kirk
City of Gloucester

The Gloucester Fishermen Athletic Association requests that the City Council accept our gift of one hundred thousand dollars to the City of Gloucester for the sole purpose of partial payment of engineering services for the plans for the renovation of Newell Stadium. These funds come from donations by the citizens and friends of this community as well as local businesses, most notably Gorton's of Gloucester, Rockport National Bank and the Sudbay Motor Group.

Thank You,



Richard Wilson
Chairman
Renewal of Newell Stadium Committee



Jonathan Pope,
President
Gloucester Fishermen Athletic Association



City Hall
Nine Dale Ave
Gloucester, MA 01930

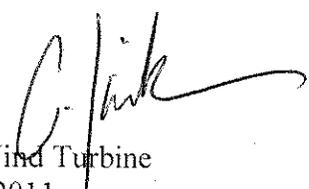


TEL 978-281-9700
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ckirk@ci.gloucester.ma.us

CITY OF GLOUCESTER
OFFICE OF THE MAYOR

MEMORANDUM

TO: City Council
FR: Mayor Kirk
RE: Municipal Wind Turbine
DT: October 24, 2011



Dear Councilors,

A number of months ago, the Administration requested of the EDIC that they evaluate the possibility of a municipally owned wind turbine along with any role they may play in the process.

Attached for your information is their report and recommendation. Perhaps a logical next step is to have the EDIC and Administration present this report to the City Council, and engage in a roundtable discussion regarding follow-up.

The letter dated October 20, 2011 from the EDIC also includes a late addition from Becky Bernie, Chair of the EDIC and states as follows:

P.S. As the above letter inadvertently went to you (Mayor) without the board's final review, I want to make sure that their input is included and these submitted points be emphasized: . . . Really feel that it is a "fantastic opportunity" this proposal presents and that the EDIC realizes the great potential and gain to Gloucester to take on, . . . I do believe that it is the City by way of some new entity/department that needs to be in charge of the project, not the EDIC, and that entity needs to be up and running by the time the turbine is ready to go online, . . . that the Mayor and her Administration has to carry the ball, not the EDIC, and take the lead in presenting the project both to the City residents and the City Council. Finally, as it is stated above the EDIC emphasizes that we are willing to continue to support this project conceptually, even spend money on necessary additional consulting or research.

GLOUCESTER EDIC

Economic Development & Industrial Corporation

October 20, 2011

Mayor Carolyn Kirk
City Hall
9 Dale Avenue
Gloucester, MA 01930

RECEIVED

OCT 20 2011

Mayor's Office

Dear Mayor Kirk,

The Economic Development & Industrial Corporation (EDIC) is pleased to advise the Administration on the potential city Blackburn Wind Turbine project that was forwarded to the EDIC in the beginning of the summer. The EDIC has worked diligently to resolve two main issues: what role can the EDIC play in a unique project such as this, and was there enough information available to evaluate the project and formulate recommendations. The EDIC felt the latter should be dealt with first by having the Feasibility Study (which defines the proposal's economic potential and viability) peer reviewed by technical consultants, and draw from their experience to better understand the role that could be played by the EDIC.

The EDIC wants to make it clear upfront that it acknowledges the wind turbine projects require careful consideration with a balancing of risk and reward, and that while the EDIC has validated the Feasibility Study through its consultants and review, the risk tolerance associated with this project will have to be further evaluated by the Administration and City Council.

The attached summarizes the PowerPoint presentation prepared by Harris Miller Miller and Hanson and its sub-consultants, which was presented to the EDIC at its last meeting, held on October 19, 2011.

Key findings include:

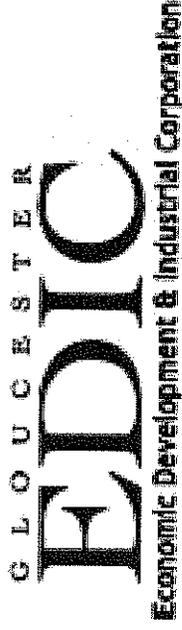
- *The potential Blackburn Wind Turbine project is viable and the economics are very strong, and with a city ownership model the project could provide approximately \$500k/year annually.*
- *If a city owned project is desirable it should be developed first before consideration of alternatives due to the value of the city's wind resources and specifics of the regulation governing net metering.*

The EDIC also recognizes that these projects have long lead and execution time, both because great detail is needed to assess project economics, and because the end results include projecting future energy costs for 20 plus years. The EDIC has experience with large, complex projects, contracting, and project management, and is well suited to support the Administration with this project development and construction should it be pursued. If the proposal moves forward to a viable project beyond development and construction management, the city will benefit from forming a board with specific expertise to act as the city interface and monitor for the life of the project.

The EDIC will continue to provide support and extend the use of its consultant team for further proposal analysis, and help the Administration develop a comprehensive wind development strategy. With other proposals under current consideration, the attached city-sponsored wind project information is an important component to the current deliberations. If you have any questions or comments regarding the contents of this memorandum or attachments, or to set up a presentation of this material, do not hesitate to contact myself or Alan Hagstrom.

Regards,
Becky Bernie,
Chair of the EDIC

Independent Review of Boreal Wind Turbine Feasibility Report: For the Gloucester EDIC



HMMH TEAM

Stephen Barrett, HMMH – Wind / Environmental
Dennis Loria, LEEC – Performance/ Capital Costs
Jason Gifford, SEA - Financial

October 19, 2011



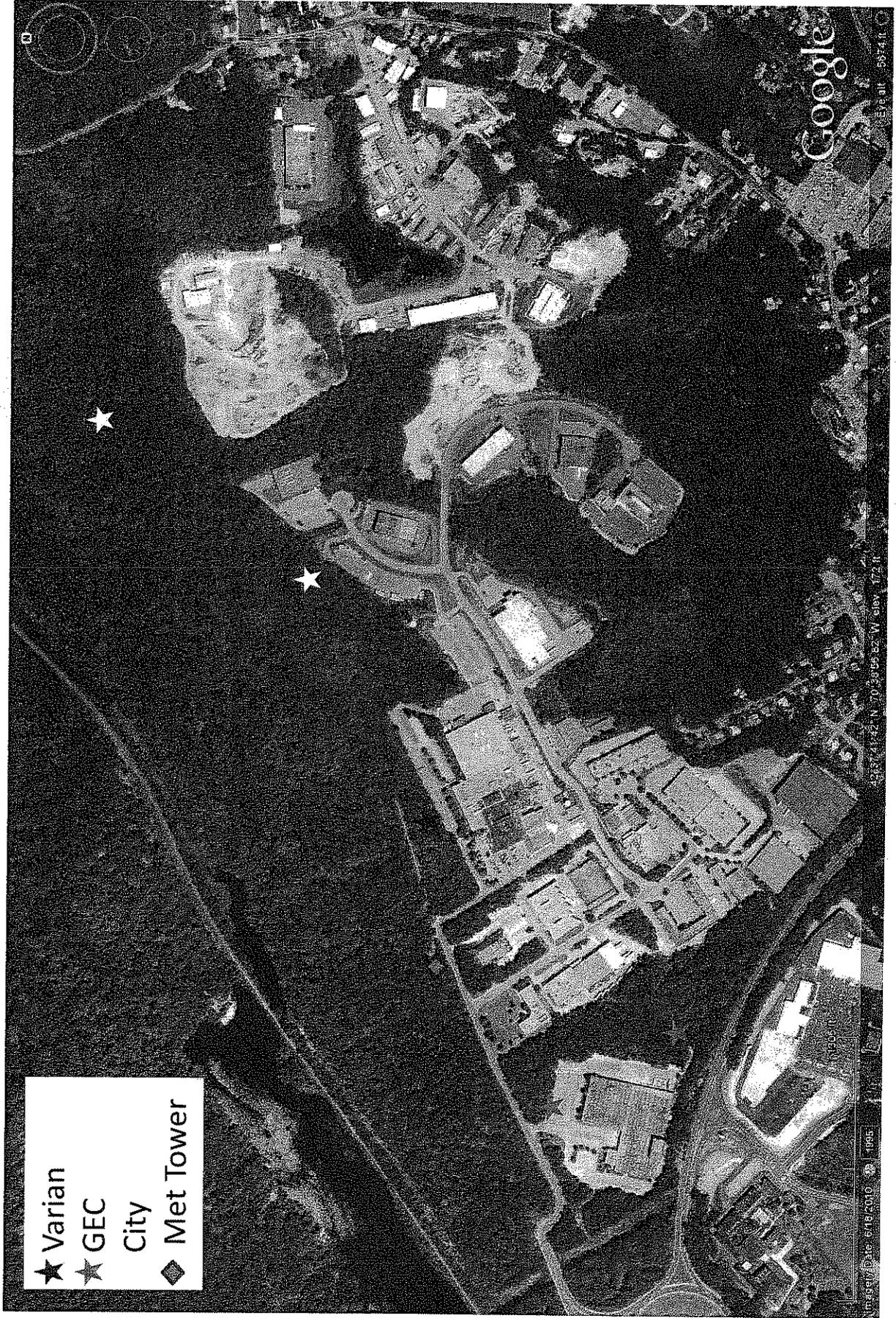
Findings on Blackburn Wind Turbine

- Boreal Report conclusions are reasonable; Report financial projections are comparable to ours; project economics are very strong.
- Good site for a wind project (supported by Varian and GEC projects).
- City-owned project provides highest financial return (~\$500k annually).
- 3rd Party option on City land provides ~ 50% less financial benefit.
- Financials on 3rd Party option useful for comparing to other opportunities (e.g., GEC).
- City may gain up to 25% savings on electricity from 3rd party on City land Does this assume ITC
- Private entity selling wind power to City also likely to make tax and lease payments so can't compare to other options (e.g., GEC) strictly on electricity price offer
- Time is of the essence for 3rd party project – feasibility of any 3rd party project decreases at end of year due to expiring federal incentives
- City's net metering credits are finite and comparatively more valuable. They can support only one wind project. If City-owned project is desired, it should be developed first.
- If private 3rd party deal is executed, City-owned option becomes infeasible
- However, City could always consider a 3rd party project in future as long as tax credits are renewed

Next Steps

- More information required about terms of PPA from other options to compare to 3rd Party Scenario at Blackburn (% electricity price savings, tax payment to City)
- Research on comparable contracts would be informative
- Decide whether City or 3rd party ownership will be pursued
- Then either:
 - move forward with permitting and MassCEC funding to pursue a City-owned project, or
 - negotiate successfully with either GEC or respondents to an RFP for a 3rd party owner to lease land for at Blackburn

Wind Energy Proposals – Blackburn Industrial Park



Purpose

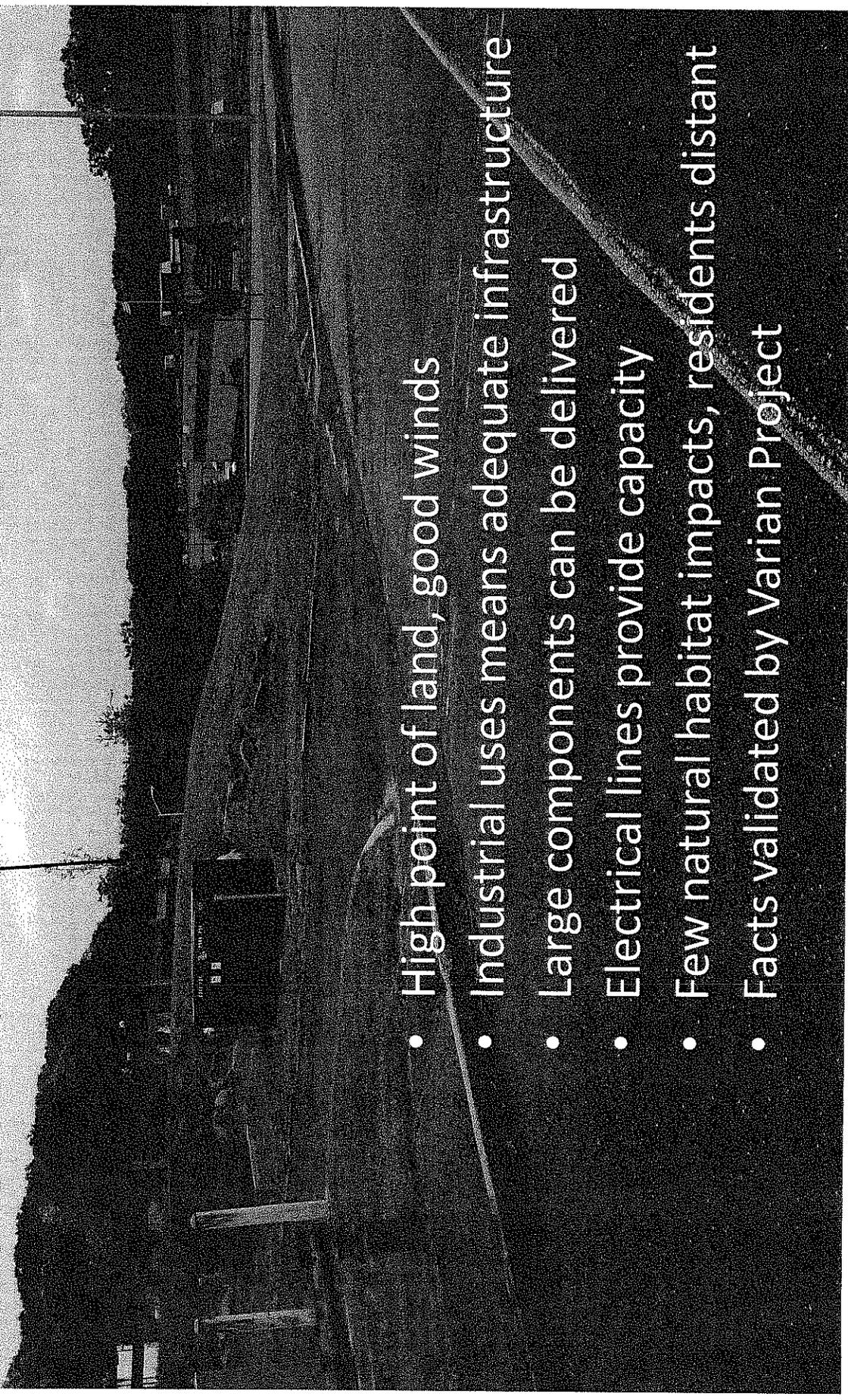
Provide an independent review of Boreal Report

- large project requires second opinion
- Have potential fatal flaws been addressed?
- Have the fundamental project aspects been conservatively assessed? (Wind resource)
- Are cost-based assumptions conservative?
- Does financial analysis stand-up to scrutiny?
- What else needs to be considered to lower City's risk with proceeding?

Siting

Blackburn Industrial Park is a good place for a wind project

- High point of land, good winds
- Industrial uses means adequate infrastructure
- Large components can be delivered
- Electrical lines provide capacity
- Few natural habitat impacts, residents distant
- Facts validated by Varian Project



Environmental

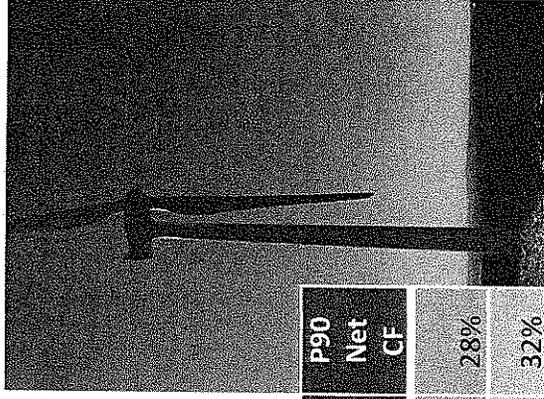
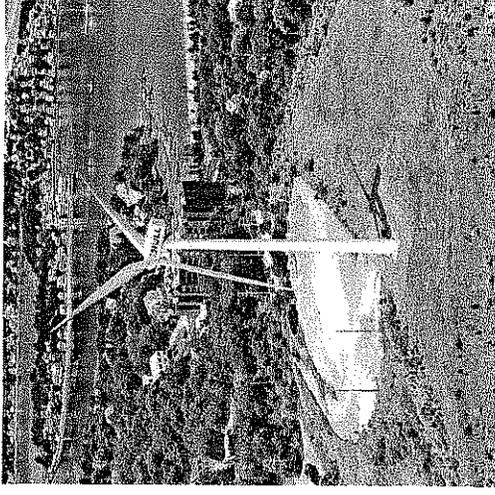
- Location 1 better than 2
- Noise analysis required; expected impacts low
- Flicker analysis required; expected impacts low
- Must address Watershed Lands
- Developed nature of site and access limits impacts

Wind Resources

- Flaws in Met Tower data; however most addressed in the analysis
- Wind direction measurements faulty
- Large gaps in 5 year data
- Wake effect from Varian turbine a consideration
- Overall – faults identified and addressed

Energy Production

- Production must address energy losses
- Out of 4 loss categories, Boreal addressed 2
- Boreal loss = 5.45%; our estimate is 11%
- Revised energy production for two turbines:



Turbine Capacity, MW	Total Loss Factor	P50 Gross kWh	P50 Gross CF	P50 Net kWh	P50 Net CF	P90 Gross kWh	P90 Net kWh	P90 Net CF
GE 1.6	11%	5,297,300	38%	4,714,597	34%	4,369,109	3,888,507	28%
Vestas 1.8	11%	6,837,600	43%	6,085,464	39%	5,709,396	5,081,362	32%

Project Cost Estimates

- Project cost estimates appear to be 5% high based on mid-2010 costs.
- Primary difference: turbine and electric costs

	GE 1.6	Vestas 1.8
Boreal Total Cost, \$000	\$ 5,088	\$ 5,962
Boreal Total Cost, \$/kW	\$ 3,180	\$ 3,310
EEC Total Cost, \$000	\$ 4,840	\$ 5,706
EEC Total Cost, \$/kW	\$ 3,030	\$ 3,170

- 2011/2012 costs expected to be lower

Economic Feasibility Analysis

Executive Summary

1. Review of Boreal Report reveals reasonable methodology with appropriate attention to key wind project economic drivers.
2. Results of independent **financial** review favor the installation of a 1,800 kW Vestas wind turbine generator owned by the City.
 - **See next slide for quantitative comparison of City and 3rd Party ownership**
 - Non-monetary factors must also be considered.
3. Even with production estimated at the 90% probability of exceedence level, a Vestas 1,800 kW is expected to generate cash benefits sufficient to cover all debt service obligations and create savings opportunities for the City.
4. Based on the uncertainty surrounding Federal RE incentives for projects not on-line by 12/31/12, and the attractiveness of pro forma financials based on long-term, tax-free bonding, City ownership may better accomplish EDIC's economic objectives.
 - **Financial benefits to the City through a 3rd-Party Owned project are beholden to achieving eligibility for the cash payment in lieu of the Federal ITC (construction – or potentially expenditure – milestones by 12/31/11)**

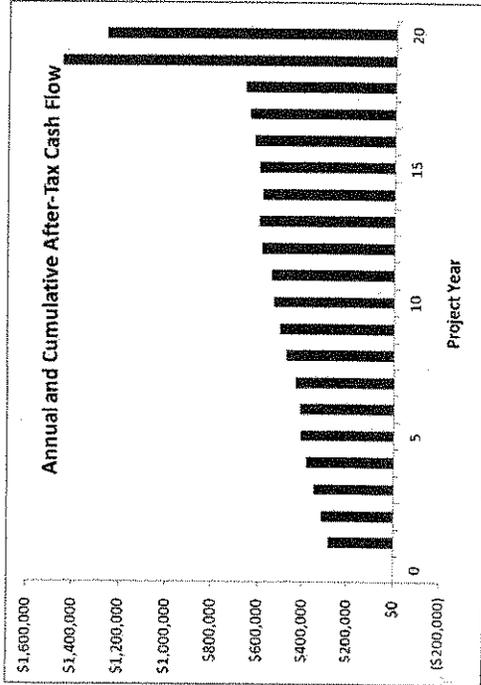
Results for Vestas 1,800 kW

(assuming long-term average wind resource value (P50))

1. Estimate of Free Cash Flow through City Ownership

1. Net Present Value: \$10.7 million
2. Average Annual Cash Flow: \$500,000*

* During Debt Repayment

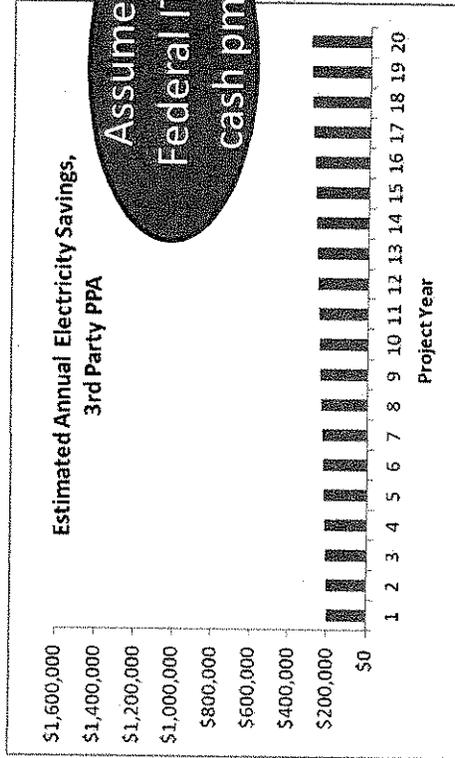


2. Estimate of Electricity Bill Savings through 3rd Party Ownership

1. Net Present Value: \$4.6 million
2. Average Annual Savings: \$250,000
3. Assumes payment to 3rd party of 75% of net metering credits earned.

Relative to City Ownership, 3rd Party Ownership provides:

- 1) Reduced risk: no debt or operating cost obligations; less production risk
- 2) Lesser, but possibly more stable, cash benefits



Common Financial Assumptions

Review of common assumptions (Boreal & HMMH Team analysis):

- First commercial operation year = 2013
- City of Gloucester assumed to be project owner in majority of cases
- City of Gloucester assumed tax exempt
 - No tax payments made
 - No depreciation benefits monetized, no federal PTC, ITC or Cash Grants obtained
 - A tax exempt grant from the MA CEC is incorporated, however.
- 0.6% Discount Rate on free cash flows (for NPV calculation)
 - To facilitate comparability with results from the Boreal Report
- Decommissioning Reserve:
 - For consistency, none assumed in this review, although this topic should be addressed by the City and lender in case such a fund is necessary.

Financial Assumptions - Differences

Cost, production and financing assumptions explain (modest) differences between Boreal Report and HMMH team review:

Assumption	Original Feasibility Study	October 2011 Review
Installed Cost, O&M Costs and Production Estimates	Per Boreal Report	Per HMMH team analysis
Interest During Construction	None, or not itemized	6 months @ 5%/yr
Debt Service Reserve Account	None, or not itemized	6 months reserve
O&M Reserve Account	None, or not itemized	3 months reserve
Interest on Reserves	None, or not itemized	0.5%
Terms of Bond Financing	15 Years 3.5% None, or not itemized	18 Years 4.5% 3% of bond amount
Net Metering Credit Forecast Methodology	Current Basic Service, Transmission, Transition & Distribution Rates escalated by inflation.	Basic Service for NEMA zone averaged over 12 month period from 2/2011 to 1/2012, then forecasted using an index created from NYMEX Natural Gas Futures. Transition charges are assumed to go to zero over a 5-year period. Transmission and Distribution charges are escalated by inflation (CPI)
Net Metering Credit & Renewable Energy Credit Forecast	See next slide	

Net Metering Prices

The importance to project economics of becoming a qualified net metering generator cannot be overstated

Summary of Forecasted Net Metering and Renewable Energy Credits: 2013 - 2032 (All prices are in nominal dollars)						
Year	Net Metering Credit Forecast (cents/kWh)		Renewable Energy Credit Forecast (cents/kWh)		Original Feasibility Study	October 2011 Review
	Original Feasibility Study*	October 2011 Review**	Original Feasibility Study	October 2011 Review		
2011	13.008	12.63				
2012	13.33	12.80				
2013***	13.67	13.06	2.00		2.00	2.34
2014	14.01	13.35	2.00		2.00	2.53
2015	14.36	13.64	2.00		2.00	2.86
2016	14.72	13.94	2.00		2.00	3.15
2017	15.09	14.26	2.00		2.00	3.31
2018	15.46	14.60	2.00		2.00	3.11
2019	15.85	14.94	2.00		2.00	3.15
2020	16.25	15.29	2.00		2.00	3.53
2021	16.65	15.62	2.00		2.00	3.76
2022	17.07	15.97	2.00		2.00	3.96
2023	17.49	16.32	2.00		2.00	3.82
2024	17.93	16.69	2.00		2.00	4.28
2025	18.38	17.05	2.00		2.00	4.18
2026	18.84	17.42	2.00		2.00	3.63
2027	19.31	17.81	2.00		2.00	3.63
2028	19.79	18.20	2.00		2.00	3.63
2029	20.29	18.62	2.00		2.00	3.63
2030	20.80	19.03	2.00		2.00	3.63
2031	21.32	19.45	2.00		2.00	3.63
2032	21.85	19.90	2.00		2.00	3.63

* Assumes inflation at 2.5% per year

** Methodology described on previous slide

*** First year of commercial operation

Results for Vestas 1800 kW: City as project owner

Turbine Capacity	Wind Resource	20-Year NPV @ 0.6%		Minimum Debt Service Coverage
Vestas 1800 kW, 80 m tower MA CEC Grant @ \$400K		Original FS	October 2011 Review	Original FS
	P50	\$10.9 m	\$11.3 m	Not Reported
	P90	\$10.7 m	\$7.6 m	Not Reported
				October 2011 Review
				1.67* Year 1
				1.34* Year 1

Turbine Capacity	Wind Resource	20-Year NPV @ 0.6%		Minimum Debt Service Coverage
Vestas 1800 kW, 80 m tower MA CEC Grant @ \$0		Original FS	October 2011 Review	Original FS
	P50	Not Reported	\$10.7 m	Not Reported
	P90	\$6.5 m	\$7.0 m	Not Reported
				October 2011 Review
				1.55* Year 1
				1.25* Year 1

* Denotes estimation that cash flow available for debt service will exceed debt payment obligation by the stated multiplier. Lender's required minimum debt service coverage ratio expected to be approximately 1.20 in any individual year. Based on this analysis, the project is expected to meet its bond repayment obligations and generate additional free cash flow (or avoided cost, if retail electricity bills are offset with net metering credits).

Results for GE 1600 kW: City as project owner

Turbine Capacity	Wind Resource	20-Year NPV @ 0.6%		Minimum Debt Service Coverage
GE 1600 kW, 80 m tower MA CEC Grant @ \$400K		Original FS	October 2011 Review	Original FS
	P50	\$8.3 m	\$7.9 m	Not Reported
	P90	\$8.3 m	\$4.9 m	Not Reported
				October 2011 Review
				1.51* Year 1
				1.19* Year 1
Turbine Capacity	Wind Resource	20-Year NPV @ 0.6%		Minimum Debt Service Coverage
GE 1600 kW, 80 m tower MA CEC Grant @ \$0		Original FS	October 2011 Review	Original FS
	P50	Not Reported	\$7.3 m	Not Reported
	P90	\$4.8 m	\$4.3 m	Not Reported
				October 2011 Review
				1.39* Year 1
				1.09** Year 1

* Denotes estimation that cash flow available for debt service will exceed debt payment obligation by the stated multiplier. Lender's required minimum debt service coverage ratio expected to be approximately 1.20 in any individual year. Based on this analysis, the project is expected to meet its bond repayment obligations and generate additional free cash flow (or avoided cost, if retail electricity bills are offset with net metering credits).

** DSCR positive but expected to be below 1.2 for first 3 years. Ability to finance project will be lender-specific.

Sensitivity Analyses:

Vestas 1,800 kW, w/o MA CEC

Funding

Sensitivity: Change in 20-Year NPV Due To Variation of:

		Installed Cost and Net Capacity Factor					
		Capacity Factor					
		30%	31%	32.23%	34%	36%	38.59%
Installed Cost (\$/kW)	NPV \$M	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900	\$2,900
		\$6.5	\$7.1	\$7.8	\$8.8	\$10.0	\$11.5
		\$6.2	\$6.8	\$7.5	\$8.5	\$9.7	\$11.2
		\$5.8	\$6.3	\$7.0	\$8.1	\$9.2	\$10.7
		\$5.7	\$6.2	\$7.0	\$8.0	\$9.1	\$10.6
		\$5.4	\$6.0	\$6.7	\$7.7	\$8.9	\$10.4

Results for Vestas 1800 kW: 3rd Party as project owner

Key Assumptions Varied from City-Owned Case	
Tax benefits monetized, when present • Investment Tax Credit • Accelerated Depreciation	Debt Terms: • Interest @ 6.5% • 12 Year Term • 50% Debt to Total Capital
No MA CEC Funding	After-Tax Equity IRR target: 15%

Turbine Capacity	Wind Resource	3 rd Party 20-Year NPV @ 15.0%	City Pays 3 rd Party for Electricity, as a % of Net Metering Credit Value
Vestas 1800 kW, 80 m tower Owned by 3 rd Party MA CEC Grant @ \$0	P50 w/ ITC	\$0.6 m	75% <small>(25% of net metering credits retained)</small>
	P50 w/o ITC	(\$0.6 m) 20-year IRR ≈ 10% Does not reach 15% target	100% <small>(0% of net metering credits retained)</small>

Potential property tax and lease payments EXCLUDED. Cash benefits, when present, could be divided between electricity savings and these other payment types.

3rd Party Ownership provides:

- 1) Reduced risk: no debt or operating cost obligations; less production risk
- 2) Lesser, but possibly more stable, cash benefits

City of Gloucester Wind Turbine Feasibility Study & Business Models

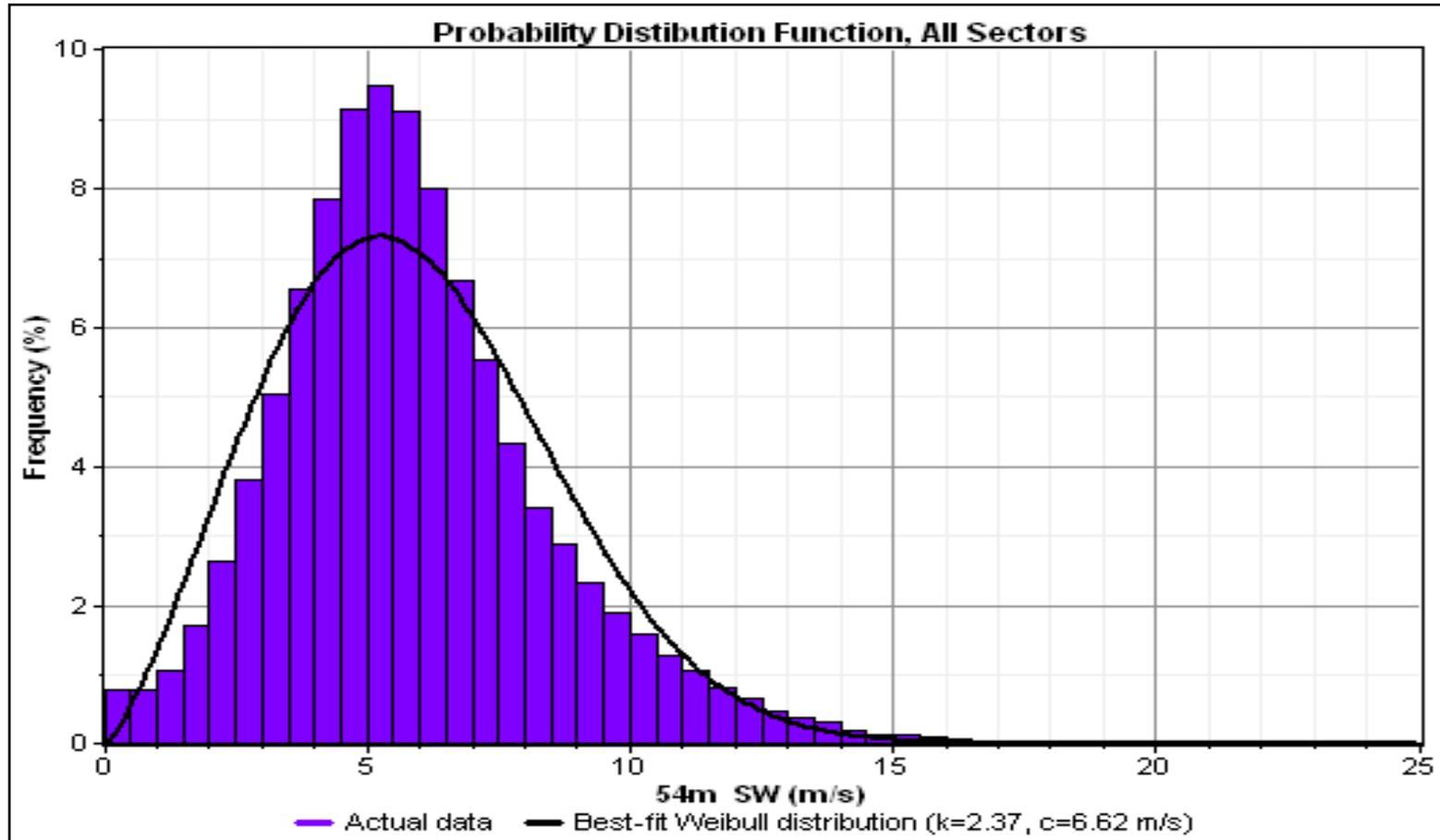


Wind Energy Development for Blackburn

May, 2011



Wind Resources



Vestas V100

- 1.8 MW nameplate capacity
- 130 meters to tip of blade (425')
 - 80m tower (262')
 - 100m blade diameter (328')
- 6,837,600 kWh/yr based on anticipated wind speeds (P50)



Self-Owned Financial Metrics

Turbine Model	Years to Cash Flow Positive	IRR-10 Years	IRR-20 Years	NPV-10 Years	NPV-20 Years
Elecon 600 (600 kW)	17.8	n/c	5%	(\$693,868)	\$649,559
Directwind 900 (900 kW)	15.8	n/c	9%	(\$542,286)	\$1,562,102
FL 1500 / 77 (1.5 MW)	8.1	11%	22%	\$465,444	\$5,178,752
GE_1.6-82.5 (1.6 MW)	3.4	43%	46%	\$2,001,340	\$8,315,454
Vestas V100 1.8 (1.8 MW)	2.9	53%	54%	\$2,887,882	\$10,942,880
Sany 9320IIIIE (2.0 MW)	2.2	89%	89%	\$4,290,687	\$13,297,900

Development Drivers for City

- Net Metering
 - Queue definition
 - Room under the 3% cap
 - Federal legality
- Ability and appetite to finance
- 30% federal tax credit for third-party developers
 - Runs out end of 2011
 - Must have made significant investment by year-end
- Major Risks
 - Transportation risk still not clarified
 - Value of energy
 - Net Metering

Best Potential Options for Gloucester

- Gloucester owns & self-finances
 - Downside is City owns all the risk and leaves tax benefits on the table
- Gloucester seeks a PPA (via general investors or established ESCOs)
 - Leases land and negotiates an attractive PPA price with developer
 - Could put request out to bid and solicit multiple offers
 - Still some risk (fixed price vs. discount off-of standard offer)
- Gloucester seeks a PPA (via Private Placement or Intrastate Offering)
 - Same general model, but investors could be *de facto* primarily local investors
 - Need to be careful to not run afoul of SEC rules
 - Benefit to locals who desire to taking the risk, while the City gets revenues, savings and certainty of a PPA

City Financing Options

- Municipal Debt
- Clean Renewable Energy Bonds
 - Zero interest, but with issuing costs ~2.5 to 3.5% interest
 - No new solicitations planned
- Rural Utility Service
 - Lower cost loans are applicable as of 2008, even though Gloucester is not a rural community

MA Community Outright Ownership is Special

- Ownership of IOU Communities have been special cases
 - Falmouth's first turbine was paid entirely by grants. Second turbine was approved by Town Meeting with bonding by Town
 - Portsmouth, RI purchased a turbine on its own, but did not perform sufficient due diligence as the turbine manufacturer went bankrupt and Portsmouth was not fully prepared for the contingency
 - Barnstable WWTP plant was funded with ARRA funds
- Municipal Light community ownership more



Potential Pitfalls & Risks of City as (Partial) Owner

- Risks: Availability, wind resource, production, O&M costs, value of energy & RECs, transportation costs to Cape Ann
- Need to carefully structure ownership to not run afoul of
 - Public ownership of electric generation projects
 - Losing project tax exemption
- Net Metering Risk
 - Not getting in under the cap
 - Federal legality. Per Portsmouth, RI case, potentially ruling that generation is only valued at avoided costs (e.g., wholesale rates)
- Legal expenses and transactional risks of



Drivers toward Private Ownership and PPAs

- Tax incentives only can be used by for-profit entities, and are a big proportion of the returns (30 to 50%)
 - Private investment has larger risk tolerance than public investment
- High interest rates for large infrastructure investments
 - Municipalities may want to conserve borrowing capability for other projects.
- Puts all the operating and maintenance risk on the private owner rather than City

Town of Kingston – Consummated, but not yet built

- Lease
 - Tax payments will decrease lease payment
 - Guaranteed 3,000,000 kWh to be sold to Town
 - Town has little responsibility or risk (except electricity price risk)

- PPA – Negotiated Rates

Years 1 through 3	<u>.089</u> \$/kWh
Years 4 through 6	<u>.094</u> \$/kWh
Years 7 through 9	<u>.099</u> \$/kWh
Years 10 through 12	<u>.104</u> \$/kWh
Years 13 through 15	<u>.109</u> \$/kWh

Innovative Model

- Gloucester seeks a PPA (via Private Placement or Intrastate Offering)
 - Private ownership, but could be small group of local investors
 - Some models allow for different types of investment
 - Active vs. passive income
 - Most of the risk & reward on the investors
 - Direct City benefits from lease, beneficial PPA

Conclusions – Potential Next Steps

- There are no critical flaws with a utility scale wind turbine installation at the proposed sites
 - The project is able to be permitted and has significant economic and environmental benefit
- Apply for the Block 6 MassCEC Design and Construction grant (June 1st) or Block 7 ~October
- Clear up uncertainties:
 - Engage VSEA and/or quarry owner on potential for easements to access the site locations (3 to 6 months)
- Procure a project management team to act as owner's engineer for the design and construction phases of the project (Issue RFP and engage team: 3 to 4 month process)
 - Proceed to permitting, design, engineering and construction phases
- Issue RFP for PPA and engage winning bidder (3 to 4 months)
 - Eligibility for greatest tax credits ends 12/31/11
- Design and implement public outreach program (life of project)

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