Business Item 2013-191: Authorization to Execute a Power Purchase Agreement and Land Lease for Solar Energy at the Blue Lake WWTP

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Environment Committee, July 9, 2013

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Today's Agenda

- Benefits of Solar
- Financial Analysis Approach
- Blue Lake Project Update
- The Future of Solar at MCES

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Solar – Early Barriers

- High capital cost of solar panels
- Low electric rates meant avoided costs were low
- Federal tax incentives not available to government agencies.
- Limited staff experience and conservative assumptions.
- Approaches tried:
  - Traditional procurement/financing
  - State bonding
  - PFA “Green Reserve”
  - Wind source proposal to Xcel

Solar Now

- Solar panel prices have dropped by 75%.
- Electric rates and avoided costs have escalated substantially.
- At our initiative a new solar standby credit was implemented June 1 of this year.
- The legislature passed a new solar mandate, creating value for solar renewable energy credits.
- Council passed a new sustainability policy expanding the definition of economic feasibility.
- This approach utilizes a competitively-selected 3rd party and PPA helps procure Federal Solar Tax benefits and Renewable Development Fund Grant.

Blue Lake Solar PV System

- 5 to 10 acres
- Partnership with Oak Leaf LLC
- Fixed panel system
- No Council capital; and little risk

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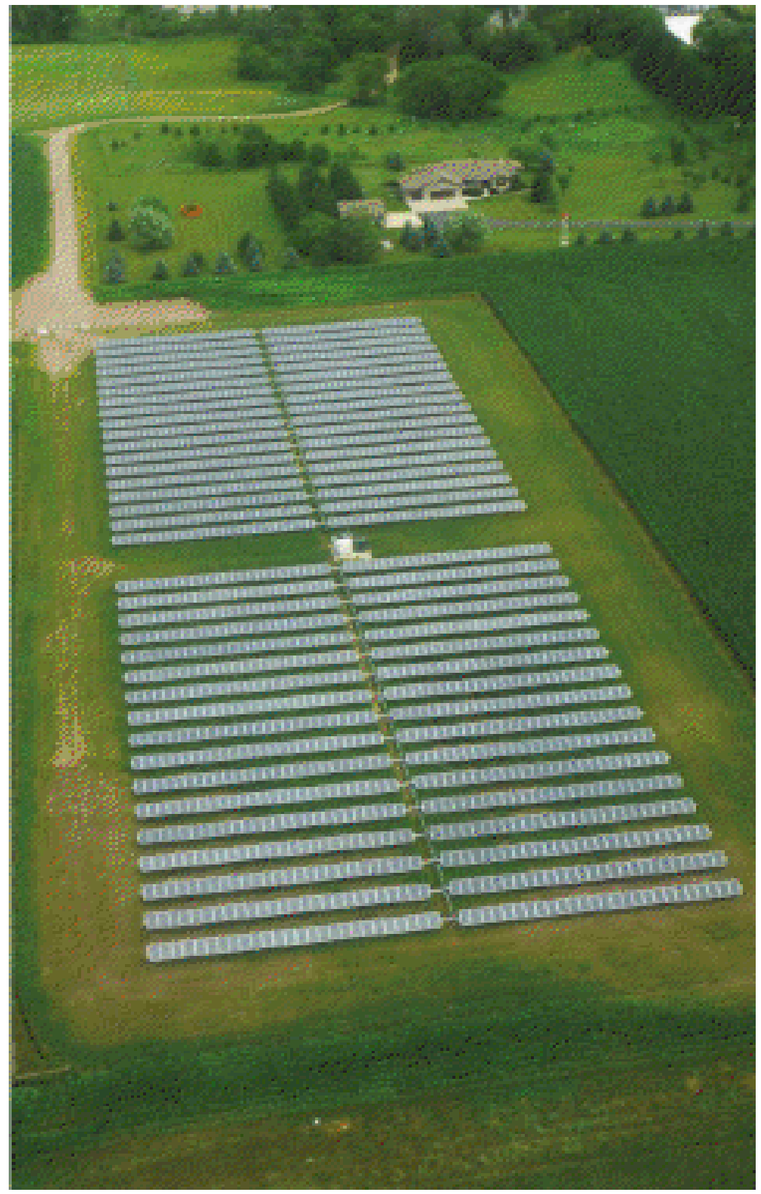
Blue Lake Solar PV Proposal Today

- RFP issued and 3rd party vendor selected, pending favorable financial arrangements.
- A Power Purchase Agreement (PPA) negotiated.
  - Yielding fair pricing
- Oak Leaf takes construction, technology, and production risk.



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Financial Analysis Approach

	Current Bill			Solar Addition		
	Use	Rate	Total	Use	Rate	Total
Supplemental Charge						$ 24.61
Affordability Charge			$ 2.02			$ 4.04
Basic Service Charge			$ 51.61			$ 51.61
Demand Charge-Standby		2.15	$ -		2.15	$ -
On-Peak Stby KWh		0.03621	$ -		0.03621	$ -
Off-Peak Stby KWh		0.02106	$ -		0.02106	$ -
On-Peak Energy	586,721	0.03621	$ 21,245.17	474,388	0.03621	$ 17,177.58
Off-Peak Energy	1,138,929	0.02106	$ 23,985.84	1,084,596	0.02106	$ 22,841.58
Total Energy	1,725,650			1,558,983		
Firm On-Peak Demand Wtr	831	$7.49	$ 6,227.19	831	$7.49	$ 6,227.19
Firm On-Peak Demand Smr	416	$11.29	$ 4,696.64	416	$11.29	$ 4,696.64
Interim Solar Capacity Credit				1,247	$ (5.15)	$ (6,424.11)
Control On-Peak Demand 1-C	1,183	$3.71	$ 4,387.45	1,141	$3.71	$ 4,232.85
Off-Peak Demand	0	$1.25	$ -	0	$1.25	$ -
Total On Demand	2,430			2,388		
Hours	700			643		
Energy Charge Credit	739,070	0.011	$ (8,129.77)	589,321	0.011	$ (6,482.53)
Fuel Cost Charge On-Pk	586,721	0.036497	$ 21,413.56	474,388	0.036497	$ 17,313.73
Fuel Cost Charge Off-Pk	1,138,929	0.021626	$ 24,630.48	1,084,596	0.021626	$ 23,455.47
Resource Adj/ kW Jan-13	2,430	0.238	$ 578.34	2,388	0.238000	$ 568.42
Resource Adj/ kWh Jan-13	1,725,650	0.002339	$ 4,036.30	1,558,983	0.002339	$ 3,646.46
Interim Rate Adj.			$ 7,245.30			$ 6,735.07
Subtotal			**$ 110,370.11**			**$ 94,068.60**
Sales Tax 6.875%			$ 7,587.95			$ 6,467.22
Total Amount			**$ 117,958.05**			**$ 100,535.82**

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Significant Uncertainties

- Production
- Xcel's prices, including fuel
- Capacity Credit
- Grant Award
- Value of Solar Renewal Energy Credits (RECs)

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Triple Bottom Line Benefits

- Social
- Economic
  - Expected financial benefits for rate payers over life cycle
- Environmental

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Blue Lake Solar Project Schedule

- Obtain authorization for regional administrator to sign
- Grant funding selection – Summer 2013
- Permitting – Fall 2013
- Grant negotiations completed – January 2014
- Construct solar PV system – May 2014

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Motion on Blue Lake Project

- Authorize Regional Administrator to Sign Power Purchase Agreement.
- Authorize Regional Administrator to Sign Lease.

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Additional Solar Projects

- New solar paradigm means demand for solar will increase.
  - MCES has identified 4 additional sites with space, load profile, and rate structure to favor a solar addition.
  - Metro Transit has identified 9 potential sites.