

Xcel Energy Renewable Development Fund  
 Minnesota Department of Commerce – Bid No. AS05  
 Minnesota Solar Rebate Program  
 FINAL REPORT

Minnesota Department of Commerce (DOC) (Solar Rebate Program)

Start Date 7/11/2002  
 End Date 9/1/2008

Grant Amount \$1,150,000  
 Funds Invoiced \$1,150,000

The Minnesota Solar Rebate Program has successfully obligated all program funds. At program completion, 140 projects were funded with \$1,075,531 in rebates. Total expenditures and obligations including personnel, advertising, training and rebates were \$1,150,000. Installed kW achievement at program end was 542.1 kW.

The average electricity production for rebate participants was 1,059 kWh per kW DC of photovoltaic capacity installed (33 reporting), which is well above the program goal of 960 kWh per kW, indicating that the program's quality control guidelines related to shading parameters for site selection appears to have been good. Current total program annual electricity production is estimated at 574,016 kWh per year. Dealer installations represented 88% of the systems by capacity (versus 12% for self-installed) with an average cost of \$8,112 per kW of capacity (versus \$6,299 for self-installed.)

Other Notes:

Rebate funding was fully obligated at the end of November 2006. The last six months of 2006 showed a sharp increase in activity with over 215 kW (46 sites) of rebate applications. In May of 2007, Governor Pawlenty proposed, and the state legislature approved, an additional \$1,000,000 of funding from the Xcel Renewable Development Fund for solar rebates for the FY2008 – 2009 biennium. In the interim, the Department maintained a waiting list in advance of the subsequent round of solar rebate funding. Before the FY2008 funding was available, there were more than 20 eligible applicants on the waiting list with 108 kW of combined capacity.

In the spring of 2008, the legislature approved \$200,000 of additional funding for the Solar Electric Rebate Program from the general fund, and solar domestic hot water was added as an eligible technology for rebates.

**FINAL BUDGET**

(FY: 7/1-6/30)	FY03	FY04	FY05	FY06	FY07	Total
Personnel	\$5,316	\$5,061	\$3,630	\$4,095	\$2,646	\$22,294
Advertising	\$14,904	\$15,494	\$12,688	\$8,546	\$0	\$51,632
Training	\$400	\$143	\$0	\$0	\$0	\$543
Rebates	\$25,300	\$97,192	\$204,484	\$170,632	\$399,294	\$1,075,531
Total*	\$45,920	\$117,889	\$220,803	\$183,272	\$401,940	<b>\$1,150,000</b>

\* 93.5% rebates, 6.5% administration

**PROGRAM DATA**

Minnesota Solar Electric Rebate Program and Statewide Capacity by fiscal year (kW)

(FY: 7/1-6/30)	Pre-rebate	FY03	FY04	FY05	FY06	FY07	FY08
Rebate Annual	0.0	12.7	49.7	104.0	85.3	183.1	81.0
Rebate Cumulative	0.0	12.7	62.3	166.3	251.6	434.7	515.8
State Cumulative	183.9	196.5	246.2	350.2	435.5	618.6	699.6

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**Minnesota Solar Electric Rebate Program Capacity by calendar year and type (kW)**

	2002*	2003	2004	2005	2006	2007	Total
Residential	1.7	14.9	56.1	41.3	83.0	80.9	277.9
Business	0.0	14.1	10.9	14.4	12.7	114.1	166.2
Non-taxable	0.0	1.0	37.9	13.1	14.5	31.6	98.0
Total	1.7	29.9	104.9	68.9	110.2	226.5	542.1
Rebates	\$3,300	\$59,560	\$204,428	\$137,762	\$220,452	\$450,029	\$1,075,531

\* Program began 7/1/2002

**Minnesota Solar Electric Rebate Program Count by calendar year and type (kW)**

	2002	2003	2004	2005	2006	2007	Total	%
Residential	1	8	29	15	26	28	107	76%
Business	0	3	3	3	2	6	17	12%
Non-taxable	0	1	3	4	3	5	16	11%
Total	1	12	35	22	31	39	140	

**Electricity Generated**

Systems Reporting Data	33
Average Generation Per System*	1,059 kWh / kW
Average Program System Size	3.9 kW
Estimated Program Generation**	574,016 kWh/yr

\* Program goal of 960 kWh/kW; \*\* Avg/system x # completed

**System Cost**

Average overall installed cost (dealer & self installed)	\$8,112/kW
Average dealer installed cost	\$8,528/kW
Dealer vs. Self Installed (by kW capacity)	88% vs. 12%

**Xcel Payments**

**Locations**

City	kW	Count
Minneapolis	118.2	28
Duluth	53.1	22
Saint Paul	30.6	7
Other	340.3	83
Total	542.1	140

Date	Xcel Paid
Jul-02	\$50,000
Apr-03	\$100,000
Jul-03	\$100,000
Mar-04	\$100,000
Dec-04	\$100,000
May-05	\$100,000
Jan-06	\$100,000
Jul-06	\$100,000
Jan-07	\$300,000
Jun-07	\$100,000
Total	\$1,150,000