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From: Greg Kremer, Grantee for Distributed Energy Resources Grant Number 04-26

Subject: July 2005 Status Report for Distributed Energy Resources Project # 04-26

Summary: The hybrid energy system production remained similar to previous months, with 103 KWH this month compared to 112 KWH the prior month. My monthly energy use returned to normal (42.5 KWH), but I was still able to send about 60.5 KWH to the grid. After almost a year of full system operation the 12 month average for my electric bill is -48.1 KWH, so I have consistently produced more electricity than I used. One other item to note is that AEP installed a new digital meter for my house in the middle of the month that apparently can display negative values.

The following items are being reported in accordance with the project agreement:

Photographs of the DER system installation site:

No new photos.

Log of activities performed to get approval for installation of the DER system (siting, permitting, zoning, interconnection, and net metering agreements):

- The net metering agreement is in place and all billing issues have been resolved. AEP is now hand billing my account.

Actual Project Costs [system design, equipment (itemized), installation, fees (itemized)]:

- \$21,797 as previously reported.

Electric bill usage information (starting one year before system installation, and noting major changes to the project site's energy profile): [All values in KWH, E indicates Estimated reading]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2003	267	229_E	178	165	135	139	183	183	124_E	185_E	52	158
2004	130	130	66	72	47	5	-59.4	-42.1	-40	-14.4	-25.4	-20.2
2005	1.2	-32	-86	-102.2	-68.3	-87.5	-60.5					
12 mo. avg	10	-3.5	-16	-31	-40	-48	-48.1					

Note: 12 month averages have been corrected. Calculations shown in previous reports contained an error.

Monthly Energy production measured by the DER system metering equipment:

Table of Energy Production and Use (all values in KWH)								
Date	AC In	AC Out	AEP Meter	Total Produced	Cumulative Production	Actual Use	Sent to grid	Cumulative sent to grid
			29204.2					
June 04	NA	NA		75 KWH	75 KWH			
July 04	22	NA	29129.6	75	150			74.6
Aug. 04	60.5	18.5	29087.5	80	230	37.9	42.1	116.7
Sept. 04	100.5	70	29047.5	91.5	321.5	51.5	40	156.7
Oct. 04	140	92	29033.1	61.5	383	47.1	14.4	171.1
Nov. 04	167	121	29007.7	56	439	30.6	25.4	196.5
Dec. 04	207	144	28987.5	63	502	42.8	20.2	216.7
Jan. 05	254.5	144	28988	47.5	549.5	48.7	-1.2	215.5
Feb. 05	298	181	28956	81	630.5	49	32	247.5
Mar. 05	341	270	28870	132	762.5	46	86	333.5
Apr 05	373	379	28767.8	141	903.5	38.8	102.2	435.7
May 05	408.5	458.5	28699.5	115	1018.5	46.7	68.3	504
June 05	420	559	28612	112	1130.5	24.5	87.5	592.2
July 05	463.5	618.5	-25 *	103	1233.5	42.5	60.5	652.7
Aug 05								
Sept 05								

* AEP installed a new digital meter for my house in the middle of the month (~July 18) that apparently can display negative values

The "AC IN" meter records energy to the core loads (battery backup, refrigerator, furnace fan, and a few lights and outlets). The "AC Out" meter records energy to all other loads and the grid. AEP meter values are for the end of the month.

Notes on System Performance (downtime, maintenance, repair costs, weather, etc.):

- System seems to be working fine, but the wind is very low so the solar is dominating.
- I rechecked my refrigerator with a "Watts Up" meter and found it was using close to 40 KWH per month (checked on a hot and humid day with AC off).

Public Education Activities:

- Did energy checks on friends and family's appliances and convinced some to purchase more efficient refrigerators.
- Worked with my Church to replace 54 60 Watt incandescent bulbs with 23 Watt (90 W equivalent) CFL bulbs, which should result in saving a significant amount of energy.
- Continuing conversations in the community and at the University.