

Concern for the environment and increases in electric rates have caused some members to consider installing generation equipment to replace all or some of the electricity provided by Egyptian Electric. Your Cooperative encourages member generation of electricity (sometimes called distributed generation) when it can be done in a safe, economical and environmentally friendly manner.

Before making the decision to purchase distributed generation equipment, members should consider the economics of purchasing the equipment and whether it will lower their monthly power costs. The following is a Capital Cost Recovery Analysis that will help you determine the annual operating cost of distributed generation equipment in comparison to the cost of electricity from Egyptian Electric Cooperative. The Member Services or Engineering Department of the cooperative, or your vendor can assist in completion of this analysis.

CAPITAL COST RECOVERY ANALYSIS

1) Enter the total cost of purchasing and installing the generating equipment: \$ _____

Be sure to include any interconnection and/or insurance charges

2) Enter the amount of grants, tax credits or other financial assistance not required to be repaid: \$ _____

3) Subtract Line 2 from Line 1: \$ _____

4) Enter the estimated amount of annual maintenance costs: \$ _____

TABLE 1

	7.5%	6.5%	5.5%	4.5%	3.5%
Years	Capital Recovery Factor				
1	1.0750	1.0650	1.055	1.0450	1.0350
3	.3845	.3776	.3707	.3638	.3569
5	.2472	.2406	.2342	.2278	.2215
10	.1457	.1391	.1327	.1264	.1202
15	.1133	.1064	.0996	.0931	.0868
20	.0981	.0908	.0837	.0769	.0704
25	.0897	.0820	.0745	.0674	.0607
30	.0847	.0766	.0688	.0614	.0544
35	.0815	.0731	.0650	.0573	.0500
40	.0794	.0707	.0623	.0543	.0468

5) Enter from Table 1 either:
a) the interest rate of the funds borrowed to finance the purchase or b) the interest rate that would have been received on the funds used to make the purchase: _____

Pick the nearest interest rate from the table

6) Enter from Table 1 the number of years the generating equipment can be expected to operate or the number of years of the loan: _____

7) Enter the capital cost recovery factor from Table 1: _____

8) Enter the estimated percent of time the generating equipment will operate (enter as a whole number): _____ %

(A wind turbine may operate 25-40 percent of the time depending on geographic location and a solar panel about 20 percent. You should confirm by independent analysis the percent of time your specific equipment is likely to operate.)

9) Multiply 8) by 8760/100= the number of hours per year of operation: _____

10) Enter the rated capacity of the generating equipment in kW on line a: _____
Enter the efficiency of the generating equipment on line b: _____

11) Multiply line 10a) by line 10b) to get the usable capacity of the equipment: _____

12) Multiply 9) by 11)= kWh generated per year: _____

13) Enter your average cost per kilowatt-hour for the energy you purchased during the last 12 months (\$/kWh): \$ _____

CALCULATION OF ANNUAL OPERATING COST OF EQUIPMENT

The total annual operating cost of equipment is calculated by:

14) Multiply the net cost of the generating equipment from line 3 by the capital recovery factor from line 7: \$ _____

15) Add the annual maintenance cost of the equipment from line 4: \$ _____

16) To determine the total annual operating cost (TOC) of the equipment, add lines 13 and 14: \$ _____

17) Divide line 16, the TOC of the equipment by line 12, the kWhs to be generated each year: \$ _____

Line 16 is the total annual operating cost for the generating equipment per kilowatt-hour

18) Co-op Average Cost per kWh from line 12: \$ _____

SELF GENERATION VS. RETAIL COST FROM EGYPTIAN ELECTRIC

If the Total Annual Operating Cost per kw for generation equipment (last entry on line 16) is less than the Co-op Average Cost per kWh (line 17) then you have the opportunity to realize savings by using your generation equipment.

However, if the Total Annual Operating Cost per kilowatt-hour for generation equipment (line 16) is greater than the Co-op Average Cost per kilowatt-hour (line 17), there will not be a savings by using your own equipment.

OTHER CONSIDERATIONS

This analysis is purely for determining whether a given generation system will result in savings to the member as opposed to the member purchasing power from the cooperative. Back up power service, environmentally friendly generation and future power generation costs should also be considered when deciding whether self-generation of electricity is right for you. Your cooperative staff is always available to assist you in determining what is best for you.

WORKING TOGETHER

Electric co-ops are working together on a local, state and national basis to support increased investment in renewable energy, the wise use of energy and clean-coal technology. We must be innovative and at the same time act with integrity, accountability and commitment to our communities.

One of Illinois' electric co-ops was the first utility in Illinois to own and operate a wind turbine. Many are involved in bio-fuel projects. Several co-ops sell renewable energy certificates from the Crescent Ridge Wind Farm. Others have helped with wind speed monitoring projects. Co-ops are leading the way in developing methane digester and landfill gas projects.

Working together we can make the right decisions that continue our commitment to safe, reliable and affordable electricity. Please contact us if you have any questions.



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Your Touchstone Energy Cooperative



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A Member Guide

to

Distributed Generation