



Rochelle Municipal Utilities **Business and Financial Analysis**

Memo

To: Dave Plyman
From: Dan Westin
Date: March 19th 2013
Re: Council Recommendation for Application for Solar Plant Grant

RMU has been made aware of a short fuse Solar Power Plant grant possibility with Illinois Department of Commerce and Economic Development (DCEO).

This grant opportunity would cover 40 % of a solar plant. The grant application is due no later than April 8th and as it is a competitive process may close earlier.

RMU has gathered all information required for the grant application and has created a business case analysis.

The purpose of a Solar Plant at the Tech Park is primarily to promote Solar Power as an alternative energy source which fits very efficiently into the RMU energy mix given its high correlation with the summer peak demands that are so important for us to manage.

The value of the plant would be :

1. To provide electrical energy to the Tech Centers administrative functions.
2. To create for a Rochelle promotion of a residential/commercial program with solar power which would be a self funding process to add renewable energy into RMU's power mix.
3. To provide for essential learnings about solar power as a long term investment into Rochelles technology knowledge base and recognition of its proactive approach.

RMU staff recommends that council approves going forward with this grant application.

Business Case summarized as follows:

Cost of system (25.8kw):	\$ 100,000
Grant money	\$ - 40,000
<u>Investment by RMU:</u>	<u>\$ 60,000</u>

Yearly value created:

Value of energy produced	\$ 2,800
Value of Solar Renewable Energy Credits	\$ 3,000
Value of reducing demand peak per year (PJM \$136/MWDay)	\$ 1,281
Value of internal grid (RMU) avoided demand per year	\$ 1,200
<u>Sum</u>	<u>\$ 8,281</u>
Net present value 10 years 3 % interest	\$ 70,634

Return on Investment Tech Center plant alone: 17.72 %

The promotional value of a City Solar plant has been calculated as follows:

Using the Renewable Credits and the Peak Demand cost avoidance, each residential system (5.5 kw) added, using a conservative incentive program, creates a value to the utility of : (NPV 10 years 3 %)

\$ 11,834

Just 5 of these systems added would add \$ 59,170 to the Tech Center Solar Plant business case. This represents an ROI of 456 %.

The 10 year period is conservative. Most of these systems last 20 years.