Agenda

1. Project Description
2. Related Solar & LED Projects
3. Terminal 1 Electric Use & Demand
4. RDF Project Benefits
5. Questions & Discussion
RDF Project EP4-13
MSP Airport Solar Project

Location: MSP Terminal 1 Blue parking ramp
Size: 1,471 kW DC or 1,008 kW AC
Equipment: tenKsolar XT-A, 410-volt panels
Energy output: 1,453,036 kWh
Total Cost: $7,577,895
RDF Grant: $2,022,507

Unique Elements:
* 9-foot clear structural canopy
* Marketing-sponsorship agreement
* Financing without tax credits; 100% Qualified Energy Conservation Bonds @ .075%
RDF Project Leverage

Additional solar PV on Terminal 1 Red Ramp
Size: 1,539 kW DC or 1,224 kW AC
Annual output: 1,764,401 kWh

LED lighting upgrade in four parking ramps
7,200 halide fixtures replaced

4 additional EV charging stations
Estimates of solar capacity and production

MAC 2015 Electricity Use - T1

<table>
<thead>
<tr>
<th>Parking Ramp</th>
<th>DC (kW)</th>
<th>AC (kW)</th>
<th>Solar Capacity</th>
<th>Production (kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red ramp solar nameplate</td>
<td>1,539</td>
<td>1,224</td>
<td>55%</td>
<td>1,764,401</td>
</tr>
<tr>
<td>Blue ramp solar nameplate</td>
<td>1,471</td>
<td>1,008</td>
<td>45%</td>
<td>1,453,036</td>
</tr>
<tr>
<td>Total solar production capacity in AC</td>
<td></td>
<td></td>
<td></td>
<td>3,217,437 *</td>
</tr>
</tbody>
</table>

* MAC/Ameresco Measurement & Verification Agreement guarantees the collective output of Blue and Red ramps solar
MAC Terminal 1  2015
Electric Use
114 million kWh

T1 includes terminal building and parking ramps

Solar PV Impact on T1 Annual kWh

Xcel Supplied 97%
Red Ramp Solar 1.6%
Blue Ramp Solar 1.3%
Energy and Demand Reductions

Blue Ramp Solar: 1,453,036 kWh
Red Ramp Solar: 1,764,401 kWh
LED energy savings: 6,600,000 kWh
Total peak demand reduction: 1,000 kW
Solar & LED Impact on T1 Annual kWh

- Xcel Supplied: 91%
- Red Ramp Solar: 1.6%
- Blue Ramp Solar: 1.3%
- LED: 6%
Solar Capacity Impact on Meeting Peak Demand

T1 Monthly Peak Demand in 2015

These columns show maximum peak solar output to illustrate the relationship to monthly T1 peak demand. Actual monthly
Project Benefits-Economic

Jobs Created: 253 direct, in-direct at tenKsolar

Sales tax and property tax exemption for MAC

$380,759 per year in energy cost savings total projects

$10 million NPV saved over 30 years
Project Benefits-Environmental

Reduction of 6,813 tons annually in GHG

Equivalent of 1,434 fossil fuel vehicles off the road for a year

Solar energy visibility for 35 million people pass thru MSP annually
Project Benefits - Ratepayers

Leverage of RDF funds for $25.4 million in energy projects

Reductions in peak demand at Terminal 1

RDF grant reimbursement at project completion

Visibility for Xcel Energy at MSP and 35 million passengers/year

Reinforces working relationship between MAC and Xcel
Thank you!

Discussion and Q & A

Project funding provided, in part, by customers of Xcel Energy through a grant from the Renewable Development Fund.