Economics for Colorado PV

- Incentives
- Financing
- Expenses
- Case Study
- Q&A
Incentives

• Xcel Energy Solar*Rewards
  – Small Program 0.5 – 10kW
    • $4.50/watt paid upon completion
  – Medium Program 10.1 – 100kW
    • $2.00/watt paid upon completion
    • $115/MWh production REC
  – Large Program 100.1 kW – 2MW
    • $200,000 paid upon completion
    • Bid process
Incentives

• Xcel Energy Solar*Rewards
  – SOREC and REC
  – 20 year contract
  – Insurance Requirement
  – Net Metering
  – Monitoring
Incentives

EPAct 2005

- 30% Federal Investment Tax Credit
- $2000 cap for residential
- One system per year
- Extended till end of 2008

[www.SEIA.org](http://www.SEIA.org) has Tax Guide
Solar. 100% Sun.
Financing

- Building owner financing
- Mortgage or HELOC
- 90-180 SAC Programs
- Debt Financing through SBA and others
- Equipment Lease Programs
- Power Purchase Agreements (PPA)
Financing

Power Purchase Agreements

- No capital requirement for Host
- Only way for NPO to benefit from ITC
- Off-balance sheet
- 5-year accelerated depreciate 50% in 1st year
- Severe termination clauses
- Named as additionally insured
Solar.  100% Sun.
Expenses

• Third-party Monitoring fees
• Homeowner’s policy requirements
• Liability Insurance Premiums
• Legal Fees and Transaction Costs
• Income tax on Rebate
• Property Taxes ($900/kW on PPA only)
• Interest expense
• Operation and Maintenance
# Case Study: Residential

3kW Residential System on Pitched Roof

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid-tied Installed</td>
<td>$22,500</td>
</tr>
<tr>
<td>A37 Rebate</td>
<td>$ 6,000</td>
</tr>
<tr>
<td>Xcel SOREC</td>
<td>$ 7,500</td>
</tr>
<tr>
<td>After Rebate</td>
<td>$ 9,000</td>
</tr>
<tr>
<td>30% ITC</td>
<td>$ 2,000</td>
</tr>
<tr>
<td>Final Cost</td>
<td>$ 7,000</td>
</tr>
</tbody>
</table>
Case Study: Residential

3kW Residential System on Pitched Roof

Annual Production: 4378kWh
Annual Savings ($0.10/kWh): $437.80
Simple Payback: 16 Years

Electricity Prices
NPV
Resale Value
Real Payback
Case Study: Residential

3kW Residential System on Pitched Roof

www.FindSolar.com

Monthly Payment @ .6.5% $44
Increased Property Value $5,500
25-year Utility Savings $12,000 - $19,000
IRR 7.0% - 12.0%
Years to Breakeven 5 – 9 years (2 yrs)
CO2 avoided 77 tons (154K auto miles)
Case Study: Residential

10kW Commercial System on Flat Roof

Grid-tied Installed $80,000
A37 Rebate $20,000
Xcel SOREC $25,000
After Rebate $35,000
30% ITC $24,000
Final Cost $11,000
# Case Study: Commercial

10kW Commercial System on Flat Roof


<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Payment @ .6.5%</td>
<td>$70</td>
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<tr>
<td>Increased Property Value</td>
<td>$22,100</td>
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<tr>
<td>5-year accelerated depreciation</td>
<td>YES</td>
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<tr>
<td>IRR</td>
<td>19.0% - 36.0%</td>
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<tr>
<td>Years to Breakeven</td>
<td>2.4 years</td>
</tr>
<tr>
<td>CO2 avoided</td>
<td>287 tons</td>
</tr>
</tbody>
</table>

CO2 avoided: 287 tons
Case Study: Commercial

![Graph showing PPA vs. Installed Cost for Colorado systems less than 100kw.](image)
Final Questions?
Thank You!

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