FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

November 3-4, 2015
Houston, TX

Best Practices

Escalation Rates

Hosted by:

FEMP
Federal Energy Management Program

CenterPoint Energy
Best Practices: Escalation Rate

Value of future energy savings

• Provides purchasing power for implementing a robust, comprehensive and customized ECM set

• Provides an option for paying back financing in the shortest possible time
Best Practices: Escalation Rate

Cautions:

• Over-estimating future energy savings
  – Savings < Costs

• Under-estimating the value of future energy savings may result in
  – Cutting potential ECMs = exposure to higher future energy costs
  – Missing site objectives and goals
  – Longer payback term = greater interest costs
Hypothetical Project #1

<table>
<thead>
<tr>
<th>Year-1 Savings</th>
<th>Escalation Rate</th>
<th>Payback Term</th>
<th>Future Value of Energy Savings (Total payments potential)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1M</td>
<td>0%</td>
<td>20 years</td>
<td>$20M</td>
</tr>
<tr>
<td>$1M</td>
<td>2%</td>
<td>20 years</td>
<td>$24.8M</td>
</tr>
<tr>
<td>$1M</td>
<td>2.5%</td>
<td>20 years</td>
<td>$26.2M</td>
</tr>
</tbody>
</table>

These future savings can be used to buy more capital or payback financing faster!
Hypothetical Project #2

<table>
<thead>
<tr>
<th>Investment</th>
<th>Interest Rate</th>
<th>Escalation Rate</th>
<th>Years to pay off</th>
<th>Total Interest Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10M</td>
<td>6%</td>
<td>1%</td>
<td>15 Years</td>
<td>$5.4M</td>
</tr>
<tr>
<td>$10M</td>
<td>6%</td>
<td>4%</td>
<td>12 years</td>
<td>$4.6M</td>
</tr>
</tbody>
</table>

Increased escalation rate supports larger payments, resulting in a shorter payback and lower interest paid.
Best Practices: Escalation Rate

How can we capture the power of future energy costs to maximize the work we can get done today?
Escalation Rates – Source

• DOE’s Energy Information Administration (EIA) develops energy price forecasts

• NIST uses EIA’s forecasts in FEMP tools
  – Life-cycle cost
  – EERC, a calculator that provides average escalations given project term and area of country
Energy Escalation Rate Calculator (EERC)

- EERC reflects forecasts (for energy prices and inflation) of government experts
- Recommended by DOE FEMP
- Used by Industry and Agencies

*Has been proven accurate and eliminates lots of negotiation*

Download EERC 2.0-15

http://energy.gov/eere/femp/energy-escalation-rate-calculator-download
**High escalation rate**

**Benefit:**
- more “future dollar savings” to spend on ECMs
- Shortest payback term = lowest interest costs

**Risk:**
- over-estimated “future savings” won’t cover costs of ECMs

**Low escalation rate**

**Benefit:**
- Ensure savings cover payments

**Risk:**
- Leave “future savings” on the table
- Longest payback = highest interest costs

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**Use the tool!**

<table>
<thead>
<tr>
<th>Escalation Rate</th>
<th>Benefit</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>More future savings, shorter payback term, lower interest costs</td>
<td>Over-estimated savings might not cover ECM costs</td>
</tr>
<tr>
<td>Low</td>
<td>Ensure savings cover payments</td>
<td>Leave savings on the table, longer payback, higher interest costs</td>
</tr>
</tbody>
</table>
For More Information and Assistance


Direct UESC Project Support:
http://energy.gov/eere/femp/contacts-federal-utility-energy-service-contracts