Gaining Advantage in a Dynamic Project Landscape
Four Decades of Pursuing a Diversified Energy Portfolio at CPS Energy

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Senior Vice President
CPS Energy
CPS Energy – Background

• Electric & Gas utility serving the greater San Antonio area
  • Oldest energy utility in Texas – Founded in 1860
  • First service was gas lights in front of The Alamo
  • Celebrating 150 years of operation
• One of the largest municipally-owned utilities in the U.S.
  • 707,000 electric customers
  • 323,000 natural gas customers
  • 3,600 employees
• Outstanding customer satisfaction track record
  • Low electric rates – 2009 Residential rates averaged about 9¢/kwh

<table>
<thead>
<tr>
<th>J.D. Power Survey – Southern Region</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Residential Customers</td>
<td>2nd</td>
<td>1st</td>
<td>3rd</td>
</tr>
<tr>
<td>Gas Residential Customers</td>
<td>2nd</td>
<td>1st</td>
<td>n/a</td>
</tr>
</tbody>
</table>
CPS Energy’s Vision 2020

• Goals for Renewable Energy
  • 1,500 MW of renewable energy capacity by 2020
  • 100 MW from renewable sources other than wind by 2020

• Goals for Energy Efficiency & Conservation
  • Save for Tomorrow Energy Plan (STEP) will help avoid 771 MW of electric load growth by 2020

• Drive local economic development by maintaining retail electric rates at least 10% lower than other major Texas cities
Main Take-Aways

• Energy diversification and energy independence have been cornerstones of CPS Energy’s strategy for the past four decades

• Renewable energy is growing fast, but there are challenges to overcome, and traditional energy sources are still important

• Uncertainty around natural gas prices is a significant risk for all new energy projects including nuclear, coal and renewables, as well as plant upgrades
Four Decades of Energy Mix Diversification at CPS Energy

1970
- Gas – Steam 100.0%
- Coal 25.2%
- Nuclear 16.3%
- Gas – CC 9.4%
- Nuclear 14.8%
- Coal 28.0%
- Gas – CT & CC 10.2%
- Renewables 10.9%
- Nuclear 16.4%
- Gas – Steam 47.8%
- Coal 33.5%
- Installed Capacity 5,113 MW

1980
- Gas – Steam 74.8%
- Coal 30.9%
- Nuclear 16.3%
- Gas – CC 9.4%
- Nuclear 14.8%
- Coal 28.0%
- Gas – CT & CC 10.2%
- Renewables 10.9%
- Nuclear 16.4%
- Gas – Steam 47.8%
- Coal 33.5%
- Installed Capacity 3,452 MW

1990
- Gas – Steam 52.8%
- Coal 30.9%
- Nuclear 16.3%
- Gas – CC 9.4%
- Nuclear 14.8%
- Coal 28.0%
- Gas – CT & CC 10.2%
- Renewables 10.9%
- Nuclear 16.4%
- Gas – Steam 47.8%
- Coal 33.5%
- Installed Capacity 4,632 MW

2000
- Gas – Steam 47.8%
- Coal 28.0%
- Nuclear 14.8%
- Gas – CC 9.4%
- Nuclear 14.8%
- Coal 28.0%
- Gas – CT & CC 10.2%
- Renewables 10.9%
- Nuclear 16.4%
- Gas – Steam 47.8%
- Coal 33.5%
- Installed Capacity 5,113 MW

2010
- Gas – Steam 29.1%
- Coal 33.5%
- Nuclear 16.4%
- Gas – CT & CC 10.2%
- Renewables 10.9%
- Nuclear 16.4%
- Gas – Steam 47.8%
- Coal 33.5%
- Installed Capacity 6,800 MW
970 Megawatts of New Generation Capacity in 2010

Spruce Unit 2
780 Megawatts
PRB Low-Sulfur Coal

Braunig Peaking Turbines
190 Megawatts
Natural Gas / Fuel Oil
Diverse Energy Mix Keeps CPS Energy’s Residential Bills Low

$0.19
$0.17
$0.15
$0.13
$0.11
$0.09
$0.07
$0.05

Avg REP
CPSE

Mar '08  Sep '08  Feb '09  May '09  Aug '09  Nov '09  Feb '10  May '10  Aug '10
CPS’ Renewable Energy Projects

Projects in Commercial Operation

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>709.0 MW</td>
</tr>
<tr>
<td>Landfill Gas</td>
<td>9.6 MW</td>
</tr>
<tr>
<td>Total</td>
<td>718.6 MW</td>
</tr>
</tbody>
</table>

Projects in Development

<table>
<thead>
<tr>
<th>Type</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>150.0 MW</td>
</tr>
<tr>
<td>Solar</td>
<td>41.4 MW</td>
</tr>
<tr>
<td>Total</td>
<td>191.4 MW</td>
</tr>
</tbody>
</table>

CPS Energy is a leader in Renewable Energy with more than 900 MW under contract.
Blue Wing Solar Project

- Developer – Juwisolar
- Equity Owner – Duke Energy
- Off-Take – CPS Energy
- Scheduled COD – Dec. 2010
- Capacity – 14.4 MW
- Deal Structure – 30 yr PPA
- Solar Technology – Thin Film
- Location – San Antonio, TX
Challenges for Renewable Energy

- Cost / Financing

- Intermittency / Forecasting
  - Financial Risk in ISO Markets

- Transmission Congestion Risk
Cost of Renewable Energy is Dropping, But Still More Expensive

<table>
<thead>
<tr>
<th>Energy Source</th>
<th>Cents/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td></td>
</tr>
<tr>
<td>Natural Gas</td>
<td></td>
</tr>
<tr>
<td>Purchased Power</td>
<td></td>
</tr>
<tr>
<td>IGCC Coal w/ CCS</td>
<td></td>
</tr>
<tr>
<td>Wind</td>
<td></td>
</tr>
<tr>
<td>Solar Thermal</td>
<td></td>
</tr>
</tbody>
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CPS Energy 2009 IRP Study
Overcoming the Cost Hurdle for Renewable Energy

Renewable energy’s cost premium can be overcome by:

• Cost averaging with less expensive resources in a larger portfolio
• Retail demand for “Green Power” at premium pricing
• Regulatory requirements such as Renewable Portfolio Standards (RPS) or Feed-in-Tariffs (FIT)

CPS Energy’s 2010 Forecast Energy Mix For Retail Electric Sales (MWh)
Wind Energy Forecasting is a Challenge
Financial Risk Worn by “Wind Takers” in ISO Markets

Over-Scheduled at High Prices

Under-Scheduled at Negative Prices

SQ1 Schedule  MCPE - W  SQ1 Generation

Top Uncertainties for New Energy Development & Plant Upgrades

- Natural Gas Prices
- Greenhouse Gas Legislation
- Cost and Availability of Capital
Natural Gas Prices are the Biggest Unknown

Increasing Risk Duration

<table>
<thead>
<tr>
<th></th>
<th>Capital</th>
<th>Technology</th>
<th>Carbon</th>
<th>Fuel Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nuclear</strong></td>
<td><img src="#" alt="High Risk" /></td>
<td><img src="#" alt="Medium Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
</tr>
<tr>
<td><strong>Natural Gas</strong></td>
<td><img src="#" alt="Medium Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
</tr>
<tr>
<td><strong>New Coal w/CCS</strong></td>
<td><img src="#" alt="High Risk" /></td>
<td><img src="#" alt="Medium Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
<td><img src="#" alt="Low Risk" /></td>
</tr>
</tbody>
</table>

Relative Risk Legend:
- High Risk
- Medium Risk
- Low Risk

42nd ANNUAL ECC CONFERENCE
engineering and construction contracting conference
Weak Economy + Surplus of Shale Gas = Lower Gas Prices
High Degree of Uncertainty in Long-Term Gas Price Forecasting

CPS Energy IRP Studies
Key Factors for “Retrofit vs. Retire” Decisions for Existing Coal-Fired Plants

- Expected remaining plant life and utilization factors
  - Natural gas prices/wholesale electric prices
  - Wind energy build-out
  - New environmental regulations/constraints
  - Other standard variables (efficiency, condition, etc.)
- Carbon pricing impact on CO₂ emissions
- Capital requirements for other regulatory upgrades and efficiency/reliability upgrades
CPS Energy’s Analysis of JT Deely Plant Shows Favorable Economics

- **Significant positive NPV under current long-range forecast for natural gas prices**
  - Break-even natural gas price is more than 30% below the Dec-2009 forecast for 2015-2035

- **Significant positive NPV even under Waxman-Markey “High CO₂ Price” scenario**

- **Significant positive NPV even with 27 GW of wind energy build out in Texas by 2018**
  - ERCOT forecasts 19 GW of wind

### Table

<table>
<thead>
<tr>
<th></th>
<th>Deely 1</th>
<th>Deely 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (MW)</td>
<td>430</td>
<td>430</td>
</tr>
<tr>
<td>COD</td>
<td>1976</td>
<td>1977</td>
</tr>
<tr>
<td>Fuel</td>
<td>PRB Coal</td>
<td>PRB Coal</td>
</tr>
<tr>
<td>PM Control</td>
<td>Baghouse</td>
<td>Baghouse</td>
</tr>
<tr>
<td>SCR for NOx</td>
<td>No</td>
<td>2011</td>
</tr>
<tr>
<td>FGD for SOx</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Analyzed retrofitting Deely 1 & 2 with FGD scrubbers and the 2ⁿᵈ SCR vs. retiring the plant early and building a new natural gas H-class combined cycle plant.