POWER RESOURCE PLANNING & ERCOT UPDATE

INTRODUCTION BY:
Cris Eugster
Chief Operating Officer

PRESENTED BY:
Frank Almaraz
SVP, Commercial Operations

January 28, 2019

Informational Only
AGENDA

• PLANNING PROCESS
• SEASONAL PREPAREDNESS
• RESERVE MARGINS
• CUSTOMER PARTNERSHIP
• SUMMER OUTLOOK
Reserve Margin: The extent to which supply of available power resources exceeds the maximum amount demanded by our customers.
We strategically manage our resources for the demands of our community.

25-Year:
- Strategic Planning
- Economic and population trends
- Planning for new resources and retirements
- “Flex Path”

5-Year:
- Detailed capital and O&M plans
- Financial goals

1-Year:
- Operational Planning
- Sales and purchases of power

Seasonal
Weekly
Daily
Hourly

We strategically manage our resources for the demands of our community.
RIGOROUS OPERATIONAL MANAGEMENT

• Involves representatives from across operations
• Full range of preparatory activities:
  – Weather forecasting
  – Reserve margin planning
  – Testing, and system maintenance activities
• Major maintenance on our systems performed between summer and winter peak seasons
SEASONAL PREPAREDNESS

- Seasonal preventive & predictive maintenance
- System checks, procedure reviews & testing
- Demand Response testing
- Gas and coal supply analysis
- Net position analysis – decisions on purchases or sales
- Supply audits & staging
- Certify Completion of Preparedness to Senior Management & ERCOT
- Transmission lines in service
- Capacitor bank maintenance
- Inspections & testing
- Load shed plan updates (emergency only)
The period from 2009 – 2018 included 2 strategic supply additions resulting in historically high reserve margins.
Low ERCOT reserve margin could lead to higher market prices this summer. Our reserve margin helps protect customers from exposure to high prices.

* The Dec 2018 CDR forecast of 8.1% was decreased to 7.4% with the removal of 470 MW Gibbons Creek Plant, announced on 12/21/18.
CPS ENERGY CUSTOMER PROGRAMS

- Commercial Demand Response – 100 MW
- My Thermostat Rewards – 100 MW
- Reduce My Use Program – 12 MW
- Total – 212 MW

We partner with over 220,000 customers to protect from high market prices and avoid additional transmission costs.
CURRENT CAMPAIGN

• Educate customers on programs & rebates
• Reinforce extreme weather impact on energy bills
• Encourage business customers to sign up for “Manage My Account”

Website, billboards, bus signs, radio, print ads, and digital advertising in dual languages that reach our diverse customer base.
ERCOT MARKET OUTLOOK
WINTER/SUMMER 2019

ERCOT Winter Forecast
• Normal temperatures / above normal rain through March – adequate resources

Summer Outlook
• Normal temperature and rainfall outlook
• El Nino conditions and end of drought are the drivers
• 7.4% reserve margin forecasted due to load growth and delays / cancellations of planned generation projects

Above average rainfall over the last few months ended drought conditions. Normal to moderate temperatures this coming summer.
CONTINGENCY PLANNING FOR SUMMER 2019

Summer 2019 Reserve Margin = 886 MW, or 16%

- Resources Available: 6,272 MW
- Expected Peak Demand: 5,386 MW

We continue to manage our reserve margin to meet the needs of the community, and have the expertise to create solutions should we need additional resources.
FLEXIBLE PATH TO MANAGING RESERVE MARGIN

- Energy Efficiency
- Demand Response
- Additional renewable energy
- Short-term purchases
- Flexible Generation Options
- Energy storage
- Innovative Distributed Energy programs

More to Come!
Thank You
Appendix
<table>
<thead>
<tr>
<th>Term</th>
<th>Acronym (if applicable)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>-</td>
<td>Electrical Generation facilities available to meet customer demand on an as-needed basis.</td>
</tr>
<tr>
<td>Capacity, Demand &amp; Reserves</td>
<td>CDR</td>
<td>Periodically, ERCOT issues a public report that projects these market metrics for future months.</td>
</tr>
<tr>
<td>Decommissioning</td>
<td>-</td>
<td>Planned shut-down and permanent removal from service of equipment, plant, etc.</td>
</tr>
<tr>
<td>Electric Reliability Council of Texas</td>
<td>ERCOT</td>
<td>Entity that manages the flow of electric power on the Texas Interconnection that supplies power to Texas customers - representing 85% of the state's electric load.</td>
</tr>
<tr>
<td>Layup / Mothball</td>
<td>-</td>
<td>The deactivation and preservation of equipment / production facility to prevent corrosion damage and allow for future return to service.</td>
</tr>
<tr>
<td>Peak Demand</td>
<td>-</td>
<td>The maximum periodic load demand imposed on a power supply system.</td>
</tr>
<tr>
<td>Reserve Margin</td>
<td>-</td>
<td>(Total Resources - Firm Load Forecast) / Firm Load Forecast. Applies to the peak demand for one hour of the year.</td>
</tr>
</tbody>
</table>
# Recent Generator Announcements

## Changes to Reserve Margin

<table>
<thead>
<tr>
<th>Generator Announcement</th>
<th>Description of Change</th>
<th>ERCOT Reserve Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2018 CDR</td>
<td>• Baseline summer 2019 Reserve Margin</td>
<td>8.1%</td>
</tr>
<tr>
<td>Gibbons Creek</td>
<td>• From “Seasonal Mothball” to “Indefinite Mothball” status</td>
<td>7.4%</td>
</tr>
<tr>
<td>Generation Station</td>
<td>• Announced 12/21/18</td>
<td></td>
</tr>
<tr>
<td>(470 MW - Coal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S R Bertron Units</td>
<td>• From “Mothball” to “Decommissioned and Retired Permanently”</td>
<td>7.4% (no change)</td>
</tr>
<tr>
<td>(280 MW - Gas)</td>
<td>• Announced 12/28/18</td>
<td></td>
</tr>
</tbody>
</table>

Sources: ERCOT Form – Notice of Suspension of Operations of a Generation Resource as applicable to generating units above.