San Juan Generating Station Update

MAUREEN GANNON, EXECUTIVE DIRECTOR, ENVIRONMENT & SAFETY
OVERVIEW

SAN JUAN GENERATING STATION UPDATE

• PNMR Profile
• Annual Emissions
• San Juan Generating Station
  • Current
  • 2017 Changes
• Capacity Mix
• What’s Ahead
PNMR PROFILE

NM AND TX SERVICE TERRITORIES

- New Mexico
- More than 500,000 customers
- Fully integrated generation, transmission and distribution company
- San Juan Generating Station serves 2M customers in Southwest

- Texas/ERCOT region
- About 235,000 end users
- Transmission and distribution company
ANNUAL EMISSIONS


NOx, SO2 and CO2 Annual Emissions

Mercury & Particulate Matter Annual Emissions
SAN JUAN GENERATING STATION

CURRENT STATE

- San Juan Generating Station is a four unit coal-fired generator located west of Farmington, New Mexico.
- The plant has a net capacity of 1,683 megawatts:
  - Unit 1, 340 MW
  - Unit 2, 340 MW
  - Unit 3, 496 MW
  - Unit 4, 507 MW
- The oldest unit (Unit 2) online in 1973, and the newest unit (Unit 4) online in 1982.
- As part of the NM state plan to address the Regional Haze Rule, SNCR installed on Units 1 and 4 in 2015 to further reduce nitrogen oxide emissions.
SAN JUAN UNITS 2 & 3 RETIREMENT

• 2017 San Juan Units 2 and 3 Retirement
  • Units 2 and 3 retired by the end of 2017
  • Will reduce CO2 emissions by approximately 6 million metric tons per year
  • Reduces PNM’s carbon dioxide emissions system-wide by about 23%
  • After 2017, PNM, Tucson Electric, the City of Farmington, Los Alamos County and the Utah Association of Municipal Power Systems, and PNM Merchant will co-own Units 1 and 4
  • Operating & fuel supply agreements run until 2022

**San Juan Generating Station Emissions Reductions (Based Upon Permit Limits**)

<table>
<thead>
<tr>
<th>San Juan</th>
<th>NOx</th>
<th>SO2</th>
<th>Particulate Matter</th>
<th>Mercury</th>
<th>CO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Reductions after 2009 Environmental Pollution Control Upgrades</td>
<td>44% ↓</td>
<td>71% ↓</td>
<td>&gt; 72% ↓</td>
<td>99% ↓</td>
<td>N/A</td>
</tr>
<tr>
<td>2012** Emissions (tons per year)</td>
<td>21,000</td>
<td>10,500</td>
<td>2,380</td>
<td>0.005</td>
<td>11,906,236</td>
</tr>
<tr>
<td>Emission Reductions from 2012 to 2018 Revised State Implementation Plan (2 unit shutdown/2 unit selective non-catalytic reduction)</td>
<td>62% ↓</td>
<td>67% ↓</td>
<td>50% ↓</td>
<td>50% ↓</td>
<td>47% ↓</td>
</tr>
<tr>
<td>Projected Emissions in 2018 (tons per year)</td>
<td>8,011</td>
<td>3,483</td>
<td>1,184</td>
<td>0.002</td>
<td>6,359,750</td>
</tr>
</tbody>
</table>

* Mercury and CO₂ numbers are based upon actual emissions since there are currently no permit limits for these constituents.
** 2012 chosen as base year to match the base year of EPA’s Clean Power Plan for reduction of CO₂ emissions for fossil generation.
### Current Capacity Mix (% MW), 2015

- Renewables: 15%
- Coal: 35%
- Natural Gas: 35%
- Nuclear: 15%

### Forecasted Capacity Mix (% MW), 2018

- Renewables: 15%
- Coal: 16%
- Natural Gas: 40%
- Nuclear: 29%
WHAT’S AHEAD

INTEGRATED RESOURCE PLAN (IRP)

• PNM’s 2017 – 2036 Integrated Resource Plan underway
  • Examines a 20-yr resource plan horizon- revisiting every 3 years
  • Analysis elements includes analyzing San Juan under two scenarios:
    • Continuation
    • Abandonment after current fuel supply agreement
  • Results in a resource map and documents actions to achieve plan (4-year action plan)
  • Improve plan through public advisory
  • File with NM PRC for review & acceptance

• Schedule
  • July 2016 – February 2017: Build assumptions, scenarios and sensitivities; discuss analysis plan and findings
  • March- June 2017: Review/discuss draft report
  • July 1, 2017: File final report with NM PRC

• For more information, go to www.pnm.com/irp
Thank you