Anderson Ranch Powerplant
Boise Project

Ancillary Services

<table>
<thead>
<tr>
<th>Anderson Ranch Ancillary Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinning Reserve</td>
</tr>
<tr>
<td>Non-Spinning Reserve</td>
</tr>
<tr>
<td>Replacement Reserve</td>
</tr>
<tr>
<td>Regulation/Load Following</td>
</tr>
<tr>
<td>Black Start</td>
</tr>
<tr>
<td>Voltage Support</td>
</tr>
</tbody>
</table>

Generators

<table>
<thead>
<tr>
<th>Anderson Ranch Generators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Number and Capacity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unit #</th>
<th>Original Capacity (kW)</th>
<th>Capacity Increased (kW)</th>
<th>Present Capacity (kW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>13,500</td>
<td>6,500</td>
<td>20,000</td>
</tr>
<tr>
<td>2</td>
<td>13,500</td>
<td>6,500</td>
<td>20,000</td>
</tr>
<tr>
<td>Units</td>
<td>27,000</td>
<td>13,000</td>
<td>40,000</td>
</tr>
</tbody>
</table>
Anderson Ranch Powerplant
30-100 MW

Generation

Anderson Ranch
Fiscal Year Net Generation

Anderson Ranch
Monthly Net Generation

Anderson Ranch
Water Supply

Water Spilled
Water Supply
Prime Laboratory Benchmarks

Benchmark 1
Wholesale Firm Rate

![Wholesale Firm Composite Rate](image)

Benchmark 2
Reclamation’s Production Cost as Percentage of Wholesale Firm Rate

![Reclamation O&M Production Cost as Percentage of Wholesale Firm Rate](image)

Fiscal Year 2007
Anderson Ranch Powerplant
30-100 MW

Benchmark 3
Production Cost

**Anderson Ranch Operation Costs**

**Anderson Ranch Maintenance Costs**

**Fiscal Year 2007**
- Payroll: 54%
- Benefits: 12%
- Travel: 1%
- Other: 6%

**Fiscal Year 2007**
- Payroll: 40%
- Benefits: 16%
- Other: 11%
- Supplies: 4%
- Equipment: 2%
- Admin: 23%
Benchmark 3
Production Costs

Anderson Ranch Powerplant
30-100 MW

Fiscal Year 2007
Total Production Costs
External Comparison

External Group Average = $54.6/MWh
Reclamation Group Average = $9.1/MWh

Fiscal Year 2007
Total Production Costs
External Comparison

External Group Average = $30,336/MW
Reclamation Group Average = $25,237/MW
## Anderson Ranch FY 2007 Equivalent Work Staffing Year Levels

<table>
<thead>
<tr>
<th>Year Levels</th>
<th>Equivalent Work Year Staffing Charged to Powerplant</th>
<th>Leave Additive</th>
<th>Denver and Washington Equivalent Work Year Staffing Additive</th>
<th>Total Equivalent Work Year Allocated to Powerplant</th>
<th>Total Equivalent Staffing Work Year per Generating Unit</th>
<th>Total Equivalent Staffing Work Year per Megawatt</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>0.10</td>
<td>0.01</td>
<td>0.04</td>
<td>0.13</td>
<td>0.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Operation</td>
<td>0.95</td>
<td>0.10</td>
<td>0.00</td>
<td>1.05</td>
<td>0.52</td>
<td>0.03</td>
</tr>
<tr>
<td>Maintenance</td>
<td>2.03</td>
<td>0.22</td>
<td>0.00</td>
<td>2.25</td>
<td>1.12</td>
<td>0.06</td>
</tr>
<tr>
<td>Total Staffing</td>
<td>3.08</td>
<td>0.33</td>
<td>0.04</td>
<td>3.43</td>
<td>1.71</td>
<td>0.09</td>
</tr>
</tbody>
</table>

### Graphs

#### Anderson Ranch Equivalent Work Year per Unit

- **Graph Title:** Anderson Ranch Equivalent Work Year per Unit
- **Legend:**
  - Maintenance
  - Operation
  - General

#### Anderson Ranch Equivalent Work Year per Unit 2007

- **Graph Title:** Anderson Ranch Equivalent Work Year per Unit 2007
- **Legend:**
  - General 4%
  - Maintenance 65%
  - Operation 3%

#### Anderson Ranch O&M Equivalent Work Years per Unit

- **Graph Title:** Anderson Ranch O&M Equivalent Work Years per Unit

#### Anderson Ranch O&M Equivalent Work Years per MW

- **Graph Title:** Anderson Ranch O&M Equivalent Work Years per MW
FY-97 Unit 1 out for generator cooling coil leak repair and Unit 2 out for two transformer differential trips
Benchmark 7
Scheduled Outage Factor

Anderson Ranch
Scheduled Outage Factor

Number of Starts

Anderson Ranch
Average Starts per Unit
### Benchmark Data Comparison

<table>
<thead>
<tr>
<th>Fiscal Year 2007</th>
<th>Anderson Ranch Powerplant</th>
<th>Reclamation Average 30-100 MW Group</th>
<th>Total Reclamation Average</th>
<th>Industry Average</th>
<th>Best Performers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wholesale Firm Rate Mills/kWh</td>
<td>24.8</td>
<td>Not Applicable</td>
<td>*22.45</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Production Cost as Percentage of Wholesale Firm Rate</td>
<td>0.04%</td>
<td>Not Applicable</td>
<td>12.1%</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>O&amp;M Cost $/MWh</td>
<td>8.50</td>
<td>7.85</td>
<td>2.76</td>
<td>***54.63</td>
<td>1.00</td>
</tr>
<tr>
<td>O&amp;M Costs $/MW</td>
<td>27,231</td>
<td>24,132</td>
<td>7,847</td>
<td>***30,336</td>
<td>2,897</td>
</tr>
<tr>
<td>O&amp;M Equiv Work Year per MW</td>
<td>0.08</td>
<td>0.10</td>
<td>0.03</td>
<td>Not Available</td>
<td>0.00</td>
</tr>
<tr>
<td>Availability Factor</td>
<td>88.7</td>
<td>81.3</td>
<td>82.3</td>
<td>**88.64</td>
<td>98.5</td>
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<tr>
<td>Forced Outage Factor</td>
<td>0.00</td>
<td>0.2</td>
<td>2.6</td>
<td>**2.61</td>
<td>0.0</td>
</tr>
<tr>
<td>Scheduled Outage Factor</td>
<td>11.3</td>
<td>18.5</td>
<td>15.1</td>
<td>**8.74</td>
<td>0.0</td>
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*Weighted by Net Generation
**2006 NERC Average
*** Energy Information Administration Data