Spring Creek Powerplant
Central Valley Project

Ancillary Services

<table>
<thead>
<tr>
<th>Spinning Reserve</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Spinning Reserve</td>
<td>Yes</td>
</tr>
<tr>
<td>Replacement Reserve</td>
<td>Yes</td>
</tr>
<tr>
<td>Regulation/Load Following</td>
<td>Yes</td>
</tr>
<tr>
<td>Black Start</td>
<td>No</td>
</tr>
<tr>
<td>Voltage Support</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Generators

<table>
<thead>
<tr>
<th>Spring Creek 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>75,000</td>
<td>15,000</td>
<td>90,000</td>
</tr>
<tr>
<td>2</td>
<td>75,000</td>
<td>15,000</td>
<td>90,000</td>
</tr>
<tr>
<td>2 units</td>
<td>150,000</td>
<td>30,000</td>
<td>180,000</td>
</tr>
</tbody>
</table>

The maximum operational capacity is 190,000 kW
Spring Creek Powerplant
100-500 MW

Generation

**Spring Creek Fiscal Year Net Generation**

- **GWh**
  - 0
  - 200
  - 400
  - 600
  - 800
  - 1000

- **Years**
  - 1998
  - 2000
  - 2002
  - 2004
  - 2006

- **Net Generation**
  - Line graph showing net generation over fiscal years.
  - Y-axis: GWh
  - X-axis: Years

- **10 Year Average**
  - Line graph showing 10-year average.

**Spring Creek Monthly Net Generation**

- **GWh**
  - 0
  - 10
  - 20
  - 30
  - 40
  - 50
  - 60
  - 70
  - 80

- **Months**
  - Oct
  - Dec
  - Feb
  - Apr
  - Jun
  - Aug

- **10-Year Average**
  - Line graph showing 10-year average.

**Spring Creek Water Supply**

- **Thousand Acre-Feet**
  - 0
  - 500
  - 1000
  - 1500
  - 2000

- **Years**
  - 1998
  - 2000
  - 2002
  - 2004
  - 2006

- **Water Spilled**
  - Bar graph showing water spilled.
- **Water Supply**
  - Bar graph showing water supply.
Prime Laboratory Benchmarks

Benchmark 1
Wholesale Firm Rate

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

Reclamation O&M Production Cost as Percentage of Wholesale Firm Rate

Other WAPA Costs 79%
Other Project Costs 98%
Spring Creek 2%
Fiscal Year 2007
Benchmark 3
Production Cost

Spring Creek Powerplant
100-500 MW

Spring Creek Operation Costs

Spring Creek Operation Costs
Fiscal Year 2007

Spring Creek Maintenance Costs

Spring Creek Maintenance Costs
Fiscal Year 2007
**Spring Creek Powerplant**

**100-500 MW**

**Benchmark 3**

**Production Cost**

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**Spring Creek Operation and Maintenance Costs**

![Graph showing the trend of Spring Creek Operation and Maintenance Costs from 1998 to 2006.](chart)

**Spring Creek Operation and Maintenance Costs**

**Fiscal Year 2007**

![Pie chart showing the distribution of Spring Creek Operation and Maintenance Costs.](chart)

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**Total Production Costs**

**Fiscal Year 2007**

**External Comparison**

![Bar chart showing the total production costs of 107 external plants compared to Spring Creek.](chart)

- **External Group Average**: $63.9/MWh
- **Reclamation Group Average**: $4.9/MWh

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**Total Production Costs**

**Fiscal Year 2007**

**External Comparison**

![Bar chart showing the total production costs of 107 external plants compared to Spring Creek.](chart)

- **External Group Average**: $21,167/MW
- **Reclamation Group Average**: $9,854/MW

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**Spring Creek Operation and Maintenance Costs**

- **Operation**: 49%
- **Maintenance**: 51%
**Spring Creek FY 2007 Equivalent Work Staffing Year Levels**

<table>
<thead>
<tr>
<th>Equivalent Work Year</th>
<th>Leave</th>
<th>Denver and Washington</th>
<th>Total Equivalent</th>
<th>Total Equivalent</th>
<th>Total Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Staffing Charged to Powerplant</td>
<td>Additive</td>
<td>Equivalent Work Year Allocated to Powerplant</td>
<td>Staffing Work Year per Generating Unit</td>
<td>Staffing Work Year per Megawatt</td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>0.00</td>
<td>0.00</td>
<td>0.04</td>
<td>0.04</td>
<td>0.02</td>
</tr>
<tr>
<td>Operation</td>
<td>0.07</td>
<td>0.01</td>
<td>0.00</td>
<td>0.08</td>
<td>0.04</td>
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<tr>
<td>Maintenance</td>
<td>0.57</td>
<td>0.06</td>
<td>0.00</td>
<td>0.63</td>
<td>0.31</td>
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<tr>
<td>Total Staffing</td>
<td>0.64</td>
<td>0.06</td>
<td>0.04</td>
<td>0.74</td>
<td>0.37</td>
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</tbody>
</table>
Spring Creek Powerplant
100-500 MW

Benchmark 5
Availability Factor

Benchmark 6
Forced Outage Factor
Benchmark 7
Scheduled Outage Factor

FY-01 – Re-gasketed transformers
FY-01 and FY-02 – Re-gasketed transformers and installation of penstock flow meters.
<table>
<thead>
<tr>
<th></th>
<th>Fiscal Year 2007</th>
<th>Spring Creek Powerplant</th>
<th>Reclamation Average 100-500 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>13.7</td>
<td>Not Applicable</td>
<td><strong>22.45</strong></td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Production Cost as Percentage of Wholesale Firm Rate</td>
<td>0.6%</td>
<td>Not Applicable</td>
<td>12.1%</td>
<td>Not Applicable</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>O&amp;M Cost $/MWh</td>
<td>1.90</td>
<td>4.44</td>
<td>2.76</td>
<td>***63.88</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>O&amp;M Costs $/MW</td>
<td>2,897</td>
<td>10,502</td>
<td>7,847</td>
<td>***21,167</td>
<td>2,897</td>
<td></td>
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<tr>
<td>O&amp;M Equiv Work Year per MW</td>
<td>0.00</td>
<td>0.04</td>
<td>0.03</td>
<td>Not Available</td>
<td>0.00</td>
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<tr>
<td>Availability Factor</td>
<td>64.2</td>
<td>83.5</td>
<td>82.3</td>
<td>**88.64</td>
<td>98.5</td>
<td></td>
</tr>
<tr>
<td>Forced Outage Factor</td>
<td>0.1</td>
<td>1.2</td>
<td>2.6</td>
<td>**2.61</td>
<td>0.0</td>
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<tr>
<td>Scheduled Outage Factor</td>
<td>35.7</td>
<td>15.4</td>
<td>15.1</td>
<td>**8.74</td>
<td>0.0</td>
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</tbody>
</table>

*Weighted by Net Generation  
**2006 NERC Average  
*** Energy Information Administration Data