*Revised October 12, 2006*

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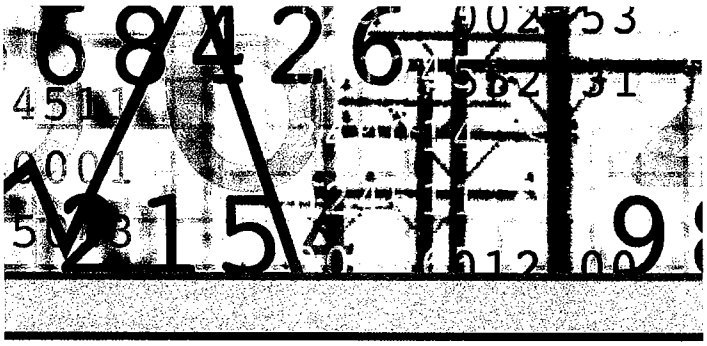
# *Appendix D–Technical Appendix*
## *For the 2006 Integrated Resource Plan*



**IPC-E-06-24**
**2006 IRP**
**(REVISED)**

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## Acknowledgement

Resource planning is a continuous process that Idaho Power Company constantly works to improve. Idaho Power prepares and publishes a resource plan every two years and expects the experience gained over the next few years will lead to modifications in the 20-year resource plan presented in this document. Idaho Power invited outside participation to help develop both the 2004 and 2006 Integrated Resource Plans.

Idaho Power values the knowledgeable input, comments, and discussion provided by the Integrated Resource Plan Advisory Council and the comments provided by other concerned citizens and customers. Idaho Power looks forward to continuing the resource planning process with its customers and other interested parties.

You can learn more about Idaho Power's resource planning process at www.idahopower.com.

**Safe Harbor Statement**

This document may contain forward-looking statements, and it is important to note that the future results could differ materially from those discussed. A full discussion of the factors that could cause future results to differ materially can be found in our filings with the Securities and Exchange Commission.

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# GLOSSARY OF TERMS

A/C – Air Conditioning

AIR – Additional Information Request

Alliance – Northwest Energy Efficiency Alliance

aMW – Average Megawatt

BOR – Bureau of Reclamation

BPA – Bonneville Power Administration

C&RD – Conservation and Renewable Discount

CAMR – Clean Air Mercury Rule

CCCT – Combined-Cycle Combustion Turbine

CDD – Cooling Degree-Days

CFB – Circulating Fluidized Bed

CFL – Compact Fluorescent Light

CHP – Combined Heat and Power

$CO_2$ – Carbon Dioxide

CRC – Conservation Rate Credit

CSPP – Cogeneration and Small Power Producers

CT – Combustion Turbine

DOE – U.S. Department of Energy

DG – Distributed Generation

DSM – Demand-Side Management

EA – Environmental Assessment

EEAG – Energy Efficiency Advisory Group

EIA – Energy Information Administration

EIS – Environmental Impact Statement

ESA – Endangered Species Act

FCRPS – Federal Columbia River Power System

FERC – Federal Energy Regulatory Commission

GDD – Growing Degree-Days

HDD – Heating Degree-Days

IDWR – Idaho Department of Water Resources

IGCC – Integrated Gasification Combined Cycle

INL – Idaho National Laboratory

IOU – Investor-Owned Utility

IPC – Idaho Power Company

IPUC – Idaho Public Utilities Commission

IRP – Integrated Resource Plan

IRPAC – Integrated Resource Plan Advisory Council

kV – Kilovolt

kW – Kilowatt

kWh – Kilowatt Hour

LIWA – Low Income Weatherization Assistance

MAF – Million Acre Feet

MMBTU – Million British Thermal Units

MW – Megawatt

MWh – Megawatt Hour

NEPA – National Environmental Policy Act

NWPCC – Northwest Power and Conservation Council

$NO_x$ – Nitrogen Oxides

OPUC – Oregon Public Utility Commission

PCA – Power Cost Adjustment

PM&E – Protection, Mitigation, and Enhancement

PPA – Power Purchase Agreement

PTC – Production Tax Credit

PUC – Public Utility Commission

PURPA – Public Utility Regulatory Policies Act of 1978

PV – Present Value

QF – Qualifying Facility

REC – Renewable Energy Credit

Rider – Energy Efficiency Rider

RFP – Request for Proposal

RPS – Renewable Portfolio Standard

RTO – Regional Transmission Organization

$SO_2$ – Sulfur Dioxide

SCCT – Simple-Cycle Combustion Turbine

WACC – Weighted Average Cost of Capital

WECC – Western Electricity Coordinating Council

## Average Annual Forecast Growth Rates (%)

| | 2006–2011 | 2006–2016 | 2006–2025 |
|---|---|---|---|
| **Sales** | | | |
| Residential Sales | 2.05 | 1.79 | 1.77 |
| Commercial Sales | 2.92 | 2.66 | 2.54 |
| Irrigation Sales | 0.05 | 0.10 | 0.12 |
| Industrial Sales | 2.57 | 2.44 | 2.34 |
| Additional Firm Sales | 0.46 | 0.90 | 0.98 |
| Firm Sales | 2.02 | 1.90 | 1.87 |
| System Sales | 2.02 | 1.90 | 1.87 |
| Firm Off-System Sales | - | - | - |
| Total Sales | 2.02 | 1.90 | 1.87 |
| **Loads** | | | |
| Residential Load | 1.98 | 1.76 | 1.75 |
| Commercial Load | 2.88 | 2.64 | 2.53 |
| Irrigation Load | -0.31 | -0.20 | -0.02 |
| Industrial Load | 2.26 | 2.22 | 2.25 |
| Additional Firm Load | 0.46 | 0.87 | 0.98 |
| Firm Load Losses | 1.97 | 1.84 | 1.85 |
| Firm Load | 1.90 | 1.81 | 1.83 |
| System Load | 1.90 | 1.81 | 1.83 |
| Firm Off-System Load | - | - | - |
| Total Load | 1.90 | 1.81 | 1.83 |
| Firm Requirement Load | 1.90 | 1.81 | 1.83 |
| **Peaks** | | | |
| Firm Peak | 2.08 | 2.08 | 2.09 |
| System Peak | 2.08 | 2.08 | 2.09 |
| Firm Off-System Peak | - | - | - |
| Total Peak | 2.08 | 2.08 | 2.09 |
| Firm Requirement Peak | 2.08 | 2.08 | 2.09 |
| Winter Peak | 0.86 | 1.28 | 1.48 |
| Summer Peak | 2.08 | 2.08 | 2.09 |
| **Customers** | | | |
| Residential Customers | 2.39 | 2.15 | 2.03 |
| Commercial Customers | 2.67 | 2.40 | 2.25 |
| Irrigation Customers | 1.55 | 1.49 | 1.41 |
| Industrial Customers | 1.10 | 1.14 | 1.00 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2006 | Feb. 2006 | Mar. 2006 | Apr. 2006 | May. 2006 | Jun. 2006 | Jul. 2006 | Aug. 2006 | Sep. 2006 | Oct. 2006 | Nov. 2006 | Dec. 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 751 | 676 | 578 | 454 | 423 | 469 | 540 | 540 | 446 | 461 | 585 | 755 |
| Commercial | 461 | 445 | 423 | 375 | 391 | 436 | 471 | 475 | 424 | 412 | 430 | 470 |
| Irrigation | 0 | 0 | 3 | 79 | 261 | 480 | 569 | 480 | 284 | 74 | 3 | 2 |
| Industrial | 275 | 270 | 264 | 267 | 265 | 277 | 277 | 279 | 292 | 294 | 288 | 275 |
| Additional Firm | 142 | 142 | 137 | 133 | 130 | 124 | 136 | 134 | 130 | 133 | 138 | 142 |
| Loss | 144 | 134 | 122 | 146 | 168 | 177 | 199 | 189 | 153 | 130 | 138 | 160 |
| Firm Load | 1,772 | 1,668 | 1,527 | 1,455 | 1,638 | 1,963 | 2,193 | 2,097 | 1,729 | 1,503 | 1,582 | 1,804 |
| Light Load | 1,639 | 1,555 | 1,413 | 1,311 | 1,470 | 1,775 | 1,965 | 1,878 | 1,543 | 1,347 | 1,470 | 1,675 |
| Heavy Load | 1,878 | 1,752 | 1,610 | 1,570 | 1,770 | 2,101 | 2,389 | 2,256 | 1,877 | 1,627 | 1,671 | 1,916 |
| System Load | 1,772 | 1,668 | 1,527 | 1,455 | 1,638 | 1,963 | 2,193 | 2,097 | 1,729 | 1,503 | 1,582 | 1,804 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,772 | 1,668 | 1,527 | 1,455 | 1,638 | 1,963 | 2,193 | 2,097 | 1,729 | 1,503 | 1,582 | 1,804 |

### Peak Load (Megawatts)

| | Jan. 2006 | Feb. 2006 | Mar. 2006 | Apr. 2006 | May. 2006 | Jun. 2006 | Jul. 2006 | Aug. 2006 | Sep. 2006 | Oct. 2006 | Nov. 2006 | Dec. 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -3 | -3 | -3 | -3 | -5 | -8 | -8 | -7 | -6 | -4 | -3 | -3 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -39 | -37 | -30 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,439 | 2,359 | 2,193 | 1,915 | 2,639 | 3,098 | 3,121 | 2,922 | 2,610 | 1,987 | 2,264 | 2,684 |
| System Peak (1 Hour) | 2,439 | 2,359 | 2,193 | 1,915 | 2,639 | 3,098 | 3,121 | 2,922 | 2,610 | 1,987 | 2,264 | 2,684 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,439 | 2,359 | 2,193 | 1,915 | 2,639 | 3,098 | 3,121 | 2,922 | 2,610 | 1,987 | 2,264 | 2,684 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2007 | Feb. 2007 | Mar. 2007 | Apr. 2007 | May. 2007 | Jun. 2007 | Jul. 2007 | Aug. 2007 | Sep. 2007 | Oct. 2007 | Nov. 2007 | Dec. 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 773 | 696 | 595 | 467 | 436 | 487 | 564 | 564 | 464 | 476 | 603 | 772 |
| Commercial | 476 | 460 | 438 | 389 | 406 | 454 | 490 | 494 | 440 | 427 | 444 | 484 |
| Irrigation | 0 | 0 | 3 | 78 | 247 | 494 | 589 | 458 | 283 | 74 | 3 | 2 |
| Industrial | 282 | 277 | 271 | 274 | 272 | 284 | 284 | 286 | 300 | 301 | 295 | 282 |
| Additional Firm | 136 | 137 | 132 | 130 | 127 | 120 | 131 | 130 | 126 | 128 | 134 | 136 |
| Loss | 147 | 138 | 126 | 150 | 171 | 183 | 206 | 192 | 157 | 134 | 142 | 163 |
| Firm Load | 1,815 | 1,708 | 1,566 | 1,487 | 1,658 | 2,022 | 2,265 | 2,124 | 1,770 | 1,541 | 1,620 | 1,839 |
| Light Load | 1,678 | 1,592 | 1,449 | 1,340 | 1,488 | 1,828 | 2,030 | 1,902 | 1,580 | 1,380 | 1,505 | 1,707 |
| Heavy Load | 1,923 | 1,794 | 1,650 | 1,605 | 1,792 | 2,163 | 2,468 | 2,284 | 1,936 | 1,657 | 1,712 | 1,953 |
| System Load | 1,815 | 1,708 | 1,566 | 1,487 | 1,658 | 2,022 | 2,265 | 2,124 | 1,770 | 1,541 | 1,620 | 1,839 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,815 | 1,708 | 1,566 | 1,487 | 1,658 | 2,022 | 2,265 | 2,124 | 1,770 | 1,541 | 1,620 | 1,839 |

### Peak Load (Megawatts)

| | Jan. 2007 | Feb. 2007 | Mar. 2007 | Apr. 2007 | May. 2007 | Jun. 2007 | Jul. 2007 | Aug. 2007 | Sep. 2007 | Oct. 2007 | Nov. 2007 | Dec. 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -5 | -5 | -4 | -5 | -9 | -13 | -14 | -12 | -9 | -7 | -5 | -5 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -44 | -46 | -44 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,496 | 2,398 | 2,258 | 1,962 | 2,686 | 3,167 | 3,208 | 2,953 | 2,655 | 2,019 | 2,302 | 2,722 |
| System Peak (1 Hour) | 2,496 | 2,398 | 2,258 | 1,962 | 2,686 | 3,167 | 3,208 | 2,953 | 2,655 | 2,019 | 2,302 | 2,722 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,496 | 2,398 | 2,258 | 1,962 | 2,686 | 3,167 | 3,208 | 2,953 | 2,655 | 2,019 | 2,302 | 2,722 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2008 | Feb. 2008 | Mar. 2008 | Apr. 2008 | May. 2008 | Jun. 2008 | Jul. 2008 | Aug. 2008 | Sep. 2008 | Oct. 2008 | Nov. 2008 | Dec. 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 786 | 707 | 604 | 473 | 444 | 500 | 582 | 581 | 475 | 486 | 614 | 784 |
| Commercial | 489 | 473 | 452 | 401 | 419 | 470 | 508 | 511 | 454 | 441 | 456 | 496 |
| Irrigation | 0 | 0 | 3 | 78 | 246 | 492 | 587 | 457 | 282 | 73 | 3 | 2 |
| Industrial | 288 | 283 | 277 | 280 | 277 | 290 | 290 | 292 | 306 | 308 | 302 | 288 |
| Additional Firm | 138 | 137 | 134 | 132 | 129 | 122 | 133 | 132 | 128 | 130 | 136 | 138 |
| Loss | 150 | 141 | 129 | 153 | 174 | 186 | 210 | 196 | 160 | 137 | 145 | 167 |
| Firm Load | 1,852 | 1,740 | 1,599 | 1,517 | 1,689 | 2,060 | 2,310 | 2,168 | 1,807 | 1,574 | 1,655 | 1,875 |
| Light Load | 1,712 | 1,623 | 1,479 | 1,367 | 1,516 | 1,862 | 2,070 | 1,942 | 1,613 | 1,410 | 1,537 | 1,740 |
| Heavy Load | 1,962 | 1,827 | 1,693 | 1,627 | 1,825 | 2,218 | 2,499 | 2,347 | 1,962 | 1,693 | 1,757 | 1,981 |
| System Load | 1,852 | 1,740 | 1,599 | 1,517 | 1,689 | 2,060 | 2,310 | 2,168 | 1,807 | 1,574 | 1,655 | 1,875 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,852 | 1,740 | 1,599 | 1,517 | 1,689 | 2,060 | 2,310 | 2,168 | 1,807 | 1,574 | 1,655 | 1,875 |

### Peak Load (Megawatts)

| | Jan. 2008 | Feb. 2008 | Mar. 2008 | Apr. 2008 | May. 2008 | Jun. 2008 | Jul. 2008 | Aug. 2008 | Sep. 2008 | Oct. 2008 | Nov. 2008 | Dec. 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -6 | -6 | -6 | -6 | -13 | -19 | -20 | -18 | -13 | -10 | -7 | -6 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -57 | -59 | -57 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,533 | 2,422 | 2,294 | 1,984 | 2,742 | 3,217 | 3,268 | 2,996 | 2,709 | 2,050 | 2,337 | 2,748 |
| System Peak (1 Hour) | 2,533 | 2,422 | 2,294 | 1,984 | 2,742 | 3,217 | 3,268 | 2,996 | 2,709 | 2,050 | 2,337 | 2,748 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,533 | 2,422 | 2,294 | 1,984 | 2,742 | 3,217 | 3,268 | 2,996 | 2,709 | 2,050 | 2,337 | 2,748 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2009 | Feb. 2009 | Mar. 2009 | Apr. 2009 | May. 2009 | Jun. 2009 | Jul. 2009 | Aug. 2009 | Sep. 2009 | Oct. 2009 | Nov. 2009 | Dec. 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 797 | 716 | 612 | 479 | 451 | 511 | 597 | 596 | 486 | 494 | 623 | 796 |
| Commercial | 502 | 485 | 465 | 413 | 431 | 485 | 524 | 527 | 468 | 453 | 468 | 508 |
| Irrigation | 0 | 0 | 3 | 78 | 245 | 491 | 586 | 456 | 282 | 72 | 2 | 2 |
| Industrial | 294 | 289 | 283 | 287 | 284 | 297 | 297 | 299 | 314 | 315 | 309 | 295 |
| Additional Firm | 140 | 141 | 136 | 133 | 131 | 124 | 135 | 134 | 130 | 132 | 137 | 140 |
| Loss | 153 | 143 | 131 | 156 | 177 | 190 | 214 | 200 | 163 | 140 | 148 | 170 |
| Firm Load | 1,886 | 1,775 | 1,630 | 1,546 | 1,719 | 2,097 | 2,354 | 2,212 | 1,843 | 1,606 | 1,687 | 1,910 |
| Light Load | 1,743 | 1,655 | 1,508 | 1,393 | 1,543 | 1,896 | 2,110 | 1,981 | 1,645 | 1,439 | 1,567 | 1,773 |
| Heavy Load | 1,998 | 1,865 | 1,727 | 1,657 | 1,870 | 2,244 | 2,547 | 2,395 | 2,001 | 1,727 | 1,792 | 2,018 |
| System Load | 1,886 | 1,775 | 1,630 | 1,546 | 1,719 | 2,097 | 2,354 | 2,212 | 1,843 | 1,606 | 1,687 | 1,910 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,886 | 1,775 | 1,630 | 1,546 | 1,719 | 2,097 | 2,354 | 2,212 | 1,843 | 1,606 | 1,687 | 1,910 |

### Peak Load (Megawatts)

| | Jan. 2009 | Feb. 2009 | Mar. 2009 | Apr. 2009 | May. 2009 | Jun. 2009 | Jul. 2009 | Aug. 2009 | Sep. 2009 | Oct. 2009 | Nov. 2009 | Dec. 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -8 | -8 | -7 | -8 | -17 | -25 | -26 | -23 | -17 | -13 | -9 | -8 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -71 | -73 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,563 | 2,450 | 2,322 | 1,998 | 2,797 | 3,271 | 3,326 | 3,049 | 2,762 | 2,080 | 2,370 | 2,796 |
| System Peak (1 Hour) | 2,563 | 2,450 | 2,322 | 1,998 | 2,797 | 3,271 | 3,326 | 3,049 | 2,762 | 2,080 | 2,370 | 2,796 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,563 | 2,450 | 2,322 | 1,998 | 2,797 | 3,271 | 3,326 | 3,049 | 2,762 | 2,080 | 2,370 | 2,796 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2010 | Feb. 2010 | Mar. 2010 | Apr. 2010 | May. 2010 | Jun. 2010 | Jul. 2010 | Aug. 2010 | Sep. 2010 | Oct. 2010 | Nov. 2010 | Dec. 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 808 | 726 | 621 | 485 | 458 | 524 | 614 | 613 | 497 | 503 | 633 | 805 |
| Commercial | 514 | 497 | 478 | 424 | 444 | 500 | 541 | 543 | 482 | 466 | 479 | 518 |
| Irrigation | 0 | 0 | 3 | 78 | 244 | 490 | 585 | 455 | 281 | 72 | 2 | 2 |
| Industrial | 301 | 296 | 290 | 293 | 290 | 304 | 304 | 306 | 321 | 322 | 316 | 301 |
| Additional Firm | 142 | 142 | 138 | 135 | 132 | 125 | 137 | 135 | 132 | 134 | 139 | 142 |
| Loss | 156 | 146 | 134 | 159 | 180 | 193 | 219 | 205 | 167 | 143 | 150 | 172 |
| Firm Load | 1,921 | 1,808 | 1,663 | 1,575 | 1,750 | 2,135 | 2,400 | 2,258 | 1,880 | 1,640 | 1,720 | 1,939 |
| Light Load | 1,776 | 1,686 | 1,539 | 1,419 | 1,571 | 1,931 | 2,151 | 2,022 | 1,679 | 1,469 | 1,598 | 1,800 |
| Heavy Load | 2,046 | 1,900 | 1,753 | 1,689 | 1,904 | 2,285 | 2,580 | 2,444 | 2,042 | 1,774 | 1,818 | 2,049 |
| System Load | 1,921 | 1,808 | 1,663 | 1,575 | 1,750 | 2,135 | 2,400 | 2,258 | 1,880 | 1,640 | 1,720 | 1,939 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,921 | 1,808 | 1,663 | 1,575 | 1,750 | 2,135 | 2,400 | 2,258 | 1,880 | 1,640 | 1,720 | 1,939 |

### Peak Load (Megawatts)

| | Jan. 2010 | Feb. 2010 | Mar. 2010 | Apr. 2010 | May. 2010 | Jun. 2010 | Jul. 2010 | Aug. 2010 | Sep. 2010 | Oct. 2010 | Nov. 2010 | Dec. 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -10 | -9 | -9 | -10 | -20 | -30 | -32 | -28 | -21 | -15 | -11 | -10 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,600 | 2,479 | 2,360 | 2,023 | 2,854 | 3,329 | 3,396 | 3,115 | 2,816 | 2,112 | 2,404 | 2,833 |
| System Peak (1 Hour) | 2,600 | 2,479 | 2,360 | 2,023 | 2,854 | 3,329 | 3,396 | 3,115 | 2,816 | 2,112 | 2,404 | 2,833 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,600 | 2,479 | 2,360 | 2,023 | 2,854 | 3,329 | 3,396 | 3,115 | 2,816 | 2,112 | 2,404 | 2,833 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May. 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 814 | 731 | 625 | 488 | 462 | 532 | 627 | 626 | 505 | 508 | 638 | 809 |
| Commercial | 522 | 507 | 487 | 433 | 454 | 512 | 554 | 556 | 493 | 476 | 488 | 526 |
| Irrigation | 0 | 0 | 3 | 78 | 243 | 487 | 583 | 453 | 280 | 71 | 2 | 2 |
| Industrial | 307 | 302 | 295 | 299 | 296 | 310 | 309 | 312 | 327 | 328 | 322 | 307 |
| Additional Firm | 144 | 144 | 140 | 137 | 134 | 127 | 139 | 137 | 134 | 136 | 141 | 144 |
| Loss | 158 | 148 | 135 | 161 | 183 | 196 | 222 | 208 | 169 | 145 | 152 | 174 |
| Firm Load | 1,945 | 1,832 | 1,686 | 1,596 | 1,772 | 2,164 | 2,435 | 2,292 | 1,908 | 1,664 | 1,744 | 1,961 |
| Light Load | 1,798 | 1,708 | 1,560 | 1,438 | 1,590 | 1,956 | 2,182 | 2,052 | 1,704 | 1,491 | 1,620 | 1,820 |
| Heavy Load | 2,071 | 1,924 | 1,777 | 1,711 | 1,928 | 2,315 | 2,652 | 2,465 | 2,072 | 1,801 | 1,843 | 2,063 |
| System Load | 1,945 | 1,832 | 1,686 | 1,596 | 1,772 | 2,164 | 2,435 | 2,292 | 1,908 | 1,664 | 1,744 | 1,961 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,945 | 1,832 | 1,686 | 1,596 | 1,772 | 2,164 | 2,435 | 2,292 | 1,908 | 1,664 | 1,744 | 1,961 |

### Peak Load (Megawatts)

| | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May. 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -11 | -11 | -11 | -12 | -23 | -35 | -37 | -33 | -25 | -18 | -13 | -11 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,625 | 2,498 | 2,384 | 2,040 | 2,907 | 3,377 | 3,459 | 3,148 | 2,869 | 2,135 | 2,428 | 2,801 |
| System Peak (1 Hour) | 2,625 | 2,498 | 2,384 | 2,040 | 2,907 | 3,377 | 3,459 | 3,148 | 2,869 | 2,135 | 2,428 | 2,801 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,625 | 2,498 | 2,384 | 2,040 | 2,907 | 3,377 | 3,459 | 3,148 | 2,869 | 2,135 | 2,428 | 2,801 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2012 | Feb. 2012 | Mar. 2012 | Apr. 2012 | May. 2012 | Jun. 2012 | Jul. 2012 | Aug. 2012 | Sep. 2012 | Oct. 2012 | Nov. 2012 | Dec. 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 816 | 732 | 626 | 488 | 464 | 538 | 637 | 636 | 511 | 511 | 641 | 817 |
| Commercial | 531 | 515 | 497 | 442 | 463 | 524 | 567 | 568 | 503 | 485 | 496 | 536 |
| Irrigation | 0 | 0 | 3 | 78 | 242 | 486 | 582 | 452 | 280 | 71 | 2 | 2 |
| Industrial | 313 | 308 | 302 | 305 | 302 | 316 | 316 | 319 | 334 | 335 | 329 | 313 |
| Additional Firm | 145 | 144 | 142 | 139 | 136 | 129 | 141 | 139 | 136 | 138 | 143 | 145 |
| Loss | 159 | 149 | 137 | 162 | 185 | 199 | 225 | 211 | 172 | 147 | 154 | 177 |
| Firm Load | 1,965 | 1,849 | 1,706 | 1,614 | 1,792 | 2,191 | 2,469 | 2,325 | 1,935 | 1,687 | 1,765 | 1,990 |
| Light Load | 1,817 | 1,724 | 1,579 | 1,455 | 1,609 | 1,981 | 2,212 | 2,082 | 1,728 | 1,511 | 1,640 | 1,847 |
| Heavy Load | 2,082 | 1,941 | 1,799 | 1,742 | 1,937 | 2,345 | 2,689 | 2,501 | 2,117 | 1,814 | 1,865 | 2,113 |
| System Load | 1,965 | 1,849 | 1,706 | 1,614 | 1,792 | 2,191 | 2,469 | 2,325 | 1,935 | 1,687 | 1,765 | 1,990 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,965 | 1,849 | 1,706 | 1,614 | 1,792 | 2,191 | 2,469 | 2,325 | 1,935 | 1,687 | 1,765 | 1,990 |

### Peak Load (Megawatts)

| | Jan. 2012 | Feb. 2012 | Mar. 2012 | Apr. 2012 | May. 2012 | Jun. 2012 | Jul. 2012 | Aug. 2012 | Sep. 2012 | Oct. 2012 | Nov. 2012 | Dec. 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -13 | -13 | -12 | -13 | -27 | -41 | -43 | -38 | -28 | -21 | -14 | -13 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,630 | 2,513 | 2,380 | 2,029 | 2,960 | 3,439 | 3,522 | 3,208 | 2,923 | 2,155 | 2,450 | 2,844 |
| System Peak (1 Hour) | 2,630 | 2,513 | 2,380 | 2,029 | 2,960 | 3,439 | 3,522 | 3,208 | 2,923 | 2,155 | 2,450 | 2,844 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,630 | 2,513 | 2,380 | 2,029 | 2,960 | 3,439 | 3,522 | 3,208 | 2,923 | 2,155 | 2,450 | 2,844 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2013 | Feb. 2013 | Mar. 2013 | Apr. 2013 | May. 2013 | Jun. 2013 | Jul. 2013 | Aug. 2013 | Sep. 2013 | Oct. 2013 | Nov. 2013 | Dec. 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 828 | 742 | 635 | 494 | 471 | 551 | 655 | 653 | 523 | 521 | 651 | 829 |
| Commercial | 543 | 527 | 510 | 454 | 476 | 539 | 585 | 585 | 517 | 498 | 508 | 547 |
| Irrigation | 0 | 0 | 3 | 78 | 242 | 485 | 581 | 452 | 279 | 70 | 2 | 2 |
| Industrial | 320 | 315 | 308 | 312 | 309 | 323 | 323 | 325 | 341 | 342 | 336 | 320 |
| Additional Firm | 147 | 148 | 143 | 141 | 138 | 131 | 143 | 141 | 137 | 139 | 145 | 147 |
| Loss | 162 | 152 | 140 | 165 | 188 | 202 | 230 | 215 | 175 | 150 | 157 | 180 |
| Firm Load | 2,000 | 1,884 | 1,739 | 1,643 | 1,823 | 2,231 | 2,516 | 2,372 | 1,973 | 1,720 | 1,798 | 2,025 |
| Light Load | 1,849 | 1,757 | 1,609 | 1,481 | 1,637 | 2,017 | 2,255 | 2,124 | 1,762 | 1,541 | 1,671 | 1,879 |
| Heavy Load | 2,119 | 1,980 | 1,841 | 1,762 | 1,970 | 2,402 | 2,722 | 2,551 | 2,158 | 1,850 | 1,900 | 2,150 |
| System Load | 2,000 | 1,884 | 1,739 | 1,643 | 1,823 | 2,231 | 2,516 | 2,372 | 1,973 | 1,720 | 1,798 | 2,025 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,000 | 1,884 | 1,739 | 1,643 | 1,823 | 2,231 | 2,516 | 2,372 | 1,973 | 1,720 | 1,798 | 2,025 |

### Peak Load (Megawatts)

| | Jan. 2013 | Feb. 2013 | Mar. 2013 | Apr. 2013 | May. 2013 | Jun. 2013 | Jul. 2013 | Aug. 2013 | Sep. 2013 | Oct. 2013 | Nov. 2013 | Dec. 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -15 | -14 | -14 | -15 | -30 | -45 | -48 | -43 | -32 | -23 | -16 | -15 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,668 | 2,531 | 2,417 | 2,055 | 3,016 | 3,510 | 3,597 | 3,278 | 2,977 | 2,187 | 2,484 | 2,895 |
| System Peak (1 Hour) | 2,668 | 2,531 | 2,417 | 2,055 | 3,016 | 3,510 | 3,597 | 3,278 | 2,977 | 2,187 | 2,484 | 2,895 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,668 | 2,531 | 2,417 | 2,055 | 3,016 | 3,510 | 3,597 | 3,278 | 2,977 | 2,187 | 2,484 | 2,895 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2014 | Feb. 2014 | Mar. 2014 | Apr. 2014 | May. 2014 | Jun. 2014 | Jul. 2014 | Aug. 2014 | Sep. 2014 | Oct. 2014 | Nov. 2014 | Dec. 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 839 | 752 | 643 | 500 | 478 | 563 | 673 | 671 | 534 | 530 | 661 | 841 |
| Commercial | 554 | 539 | 523 | 465 | 489 | 555 | 602 | 602 | 531 | 510 | 519 | 558 |
| Irrigation | 0 | 0 | 3 | 78 | 241 | 484 | 580 | 451 | 279 | 70 | 2 | 2 |
| Industrial | 327 | 321 | 314 | 318 | 315 | 329 | 329 | 332 | 348 | 349 | 343 | 326 |
| Additional Firm | 149 | 150 | 145 | 142 | 140 | 133 | 145 | 143 | 139 | 141 | 147 | 149 |
| Loss | 165 | 155 | 142 | 168 | 191 | 206 | 234 | 220 | 179 | 153 | 160 | 183 |
| Firm Load | 2,034 | 1,916 | 1,770 | 1,672 | 1,854 | 2,270 | 2,563 | 2,418 | 2,011 | 1,753 | 1,831 | 2,059 |
| Light Load | 1,880 | 1,787 | 1,638 | 1,506 | 1,664 | 2,053 | 2,297 | 2,165 | 1,795 | 1,571 | 1,701 | 1,911 |
| Heavy Load | 2,155 | 2,014 | 1,875 | 1,793 | 2,003 | 2,445 | 2,773 | 2,618 | 2,183 | 1,885 | 1,944 | 2,175 |
| System Load | 2,034 | 1,916 | 1,770 | 1,672 | 1,854 | 2,270 | 2,563 | 2,418 | 2,011 | 1,753 | 1,831 | 2,059 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,034 | 1,916 | 1,770 | 1,672 | 1,854 | 2,270 | 2,563 | 2,418 | 2,011 | 1,753 | 1,831 | 2,059 |

### Peak Load (Megawatts)

| | Jan. 2014 | Feb. 2014 | Mar. 2014 | Apr. 2014 | May. 2014 | Jun. 2014 | Jul. 2014 | Aug. 2014 | Sep. 2014 | Oct. 2014 | Nov. 2014 | Dec. 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -50 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,705 | 2,558 | 2,454 | 2,081 | 3,072 | 3,580 | 3,673 | 3,348 | 3,030 | 2,218 | 2,517 | 2,945 |
| System Peak (1 Hour) | 2,705 | 2,558 | 2,454 | 2,081 | 3,072 | 3,580 | 3,673 | 3,348 | 3,030 | 2,218 | 2,517 | 2,945 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,705 | 2,558 | 2,454 | 2,081 | 3,072 | 3,580 | 3,673 | 3,348 | 3,030 | 2,218 | 2,517 | 2,945 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2015 | Feb. 2015 | Mar. 2015 | Apr. 2015 | May. 2015 | Jun. 2015 | Jul. 2015 | Aug. 2015 | Sep. 2015 | Oct. 2015 | Nov. 2015 | Dec. 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 849 | 761 | 651 | 505 | 485 | 576 | 691 | 689 | 546 | 538 | 670 | 852 |
| Commercial | 566 | 551 | 535 | 477 | 501 | 570 | 619 | 618 | 545 | 523 | 530 | 569 |
| Irrigation | 0 | 0 | 3 | 78 | 242 | 485 | 581 | 452 | 279 | 70 | 2 | 2 |
| Industrial | 334 | 329 | 322 | 326 | 323 | 337 | 337 | 340 | 356 | 358 | 351 | 334 |
| Additional Firm | 151 | 152 | 147 | 144 | 141 | 135 | 147 | 145 | 141 | 143 | 149 | 151 |
| Loss | 168 | 157 | 145 | 171 | 194 | 210 | 239 | 224 | 182 | 156 | 163 | 186 |
| Firm Load | 2,068 | 1,949 | 1,803 | 1,701 | 1,887 | 2,313 | 2,613 | 2,468 | 2,051 | 1,788 | 1,864 | 2,094 |
| Light Load | 1,912 | 1,818 | 1,668 | 1,533 | 1,694 | 2,091 | 2,342 | 2,210 | 1,831 | 1,602 | 1,732 | 1,943 |
| Heavy Load | 2,191 | 2,048 | 1,909 | 1,824 | 2,053 | 2,475 | 2,827 | 2,671 | 2,227 | 1,923 | 1,980 | 2,212 |
| System Load | 2,068 | 1,949 | 1,803 | 1,701 | 1,887 | 2,313 | 2,613 | 2,468 | 2,051 | 1,788 | 1,864 | 2,094 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,068 | 1,949 | 1,803 | 1,701 | 1,887 | 2,313 | 2,613 | 2,468 | 2,051 | 1,788 | 1,864 | 2,094 |

### Peak Load (Megawatts)

| | Jan. 2015 | Feb. 2015 | Mar. 2015 | Apr. 2015 | May. 2015 | Jun. 2015 | Jul. 2015 | Aug. 2015 | Sep. 2015 | Oct. 2015 | Nov. 2015 | Dec. 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,743 | 2,587 | 2,492 | 2,108 | 3,132 | 3,655 | 3,754 | 3,423 | 3,088 | 2,251 | 2,552 | 2,996 |
| System Peak (1 Hour) | 2,743 | 2,587 | 2,492 | 2,108 | 3,132 | 3,655 | 3,754 | 3,423 | 3,088 | 2,251 | 2,552 | 2,996 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,743 | 2,587 | 2,492 | 2,108 | 3,132 | 3,655 | 3,754 | 3,423 | 3,088 | 2,251 | 2,552 | 2,996 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2016 | Feb. 2016 | Mar. 2016 | Apr. 2016 | May. 2016 | Jun. 2016 | Jul. 2016 | Aug. 2016 | Sep. 2016 | Oct. 2016 | Nov. 2016 | Dec. 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 860 | 770 | 659 | 511 | 492 | 589 | 709 | 707 | 558 | 547 | 680 | 864 |
| Commercial | 577 | 563 | 548 | 489 | 514 | 586 | 637 | 635 | 560 | 535 | 541 | 580 |
| Irrigation | 0 | 0 | 3 | 78 | 242 | 486 | 582 | 453 | 280 | 70 | 2 | 2 |
| Industrial | 342 | 336 | 329 | 333 | 330 | 345 | 345 | 348 | 364 | 366 | 359 | 342 |
| Additional Firm | 153 | 151 | 149 | 146 | 143 | 136 | 149 | 147 | 143 | 145 | 151 | 153 |
| Loss | 171 | 160 | 147 | 174 | 198 | 214 | 243 | 229 | 186 | 159 | 166 | 189 |
| Firm Load | 2,103 | 1,980 | 1,836 | 1,731 | 1,920 | 2,356 | 2,665 | 2,518 | 2,091 | 1,823 | 1,898 | 2,129 |
| Light Load | 1,944 | 1,847 | 1,698 | 1,560 | 1,723 | 2,130 | 2,388 | 2,254 | 1,867 | 1,633 | 1,763 | 1,976 |
| Heavy Load | 2,240 | 2,080 | 1,935 | 1,856 | 2,088 | 2,521 | 2,903 | 2,708 | 2,271 | 1,973 | 2,006 | 2,240 |
| System Load | 2,103 | 1,980 | 1,836 | 1,731 | 1,920 | 2,356 | 2,665 | 2,518 | 2,091 | 1,823 | 1,898 | 2,129 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,103 | 1,980 | 1,836 | 1,731 | 1,920 | 2,356 | 2,665 | 2,518 | 2,091 | 1,823 | 1,898 | 2,129 |

### Peak Load (Megawatts)

| | Jan. 2016 | Feb. 2016 | Mar. 2016 | Apr. 2016 | May. 2016 | Jun. 2016 | Jul. 2016 | Aug. 2016 | Sep. 2016 | Oct. 2016 | Nov. 2016 | Dec. 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,781 | 2,614 | 2,530 | 2,135 | 3,192 | 3,730 | 3,836 | 3,497 | 3,145 | 2,285 | 2,586 | 3,048 |
| System Peak (1 Hour) | 2,781 | 2,614 | 2,530 | 2,135 | 3,192 | 3,730 | 3,836 | 3,497 | 3,145 | 2,285 | 2,586 | 3,048 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,781 | 2,614 | 2,530 | 2,135 | 3,192 | 3,730 | 3,836 | 3,497 | 3,145 | 2,285 | 2,586 | 3,048 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2017 | Feb. 2017 | Mar. 2017 | Apr. 2017 | May. 2017 | Jun. 2017 | Jul. 2017 | Aug. 2017 | Sep. 2017 | Oct. 2017 | Nov. 2017 | Dec. 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 871 | 779 | 667 | 517 | 500 | 602 | 728 | 725 | 571 | 556 | 690 | 876 |
| Commercial | 589 | 575 | 561 | 501 | 527 | 602 | 655 | 652 | 574 | 548 | 553 | 592 |
| Irrigation | 0 | 0 | 3 | 78 | 242 | 486 | 583 | 453 | 280 | 70 | 2 | 2 |
| Industrial | 350 | 344 | 336 | 341 | 337 | 353 | 353 | 356 | 373 | 374 | 367 | 349 |
| Additional Firm | 155 | 155 | 151 | 148 | 145 | 138 | 151 | 149 | 145 | 147 | 152 | 155 |
| Loss | 173 | 163 | 150 | 177 | 201 | 218 | 248 | 233 | 189 | 162 | 169 | 192 |
| Firm Load | 2,139 | 2,016 | 1,869 | 1,761 | 1,953 | 2,399 | 2,717 | 2,569 | 2,133 | 1,858 | 1,932 | 2,166 |
| Light Load | 1,977 | 1,880 | 1,729 | 1,587 | 1,753 | 2,169 | 2,435 | 2,300 | 1,904 | 1,665 | 1,795 | 2,010 |
| Heavy Load | 2,266 | 2,119 | 1,970 | 1,901 | 2,111 | 2,568 | 2,960 | 2,763 | 2,316 | 2,011 | 2,042 | 2,300 |
| System Load | 2,139 | 2,016 | 1,869 | 1,761 | 1,953 | 2,399 | 2,717 | 2,569 | 2,133 | 1,858 | 1,932 | 2,166 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,139 | 2,016 | 1,869 | 1,761 | 1,953 | 2,399 | 2,717 | 2,569 | 2,133 | 1,858 | 1,932 | 2,166 |

### Peak Load (Megawatts)

| | Jan. 2017 | Feb. 2017 | Mar. 2017 | Apr. 2017 | May. 2017 | Jun. 2017 | Jul. 2017 | Aug. 2017 | Sep. 2017 | Oct. 2017 | Nov. 2017 | Dec. 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,819 | 2,645 | 2,568 | 2,163 | 3,252 | 3,806 | 3,919 | 3,573 | 3,203 | 2,319 | 2,622 | 3,101 |
| System Peak (1 Hour) | 2,819 | 2,645 | 2,568 | 2,163 | 3,252 | 3,806 | 3,919 | 3,573 | 3,203 | 2,319 | 2,622 | 3,101 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,819 | 2,645 | 2,568 | 2,163 | 3,252 | 3,806 | 3,919 | 3,573 | 3,203 | 2,319 | 2,622 | 3,101 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2018 | Feb. 2018 | Mar. 2018 | Apr. 2018 | May. 2018 | Jun. 2018 | Jul. 2018 | Aug. 2018 | Sep. 2018 | Oct. 2018 | Nov. 2018 | Dec. 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 883 | 789 | 676 | 522 | 507 | 616 | 748 | 745 | 583 | 566 | 700 | 888 |
| Commercial | 601 | 588 | 575 | 513 | 541 | 619 | 673 | 670 | 589 | 562 | 564 | 603 |
| Irrigation | 0 | 0 | 3 | 79 | 243 | 487 | 584 | 454 | 281 | 70 | 2 | 2 |
| Industrial | 358 | 352 | 344 | 349 | 345 | 361 | 361 | 364 | 381 | 383 | 375 | 357 |
| Additional Firm | 156 | 157 | 153 | 150 | 147 | 140 | 153 | 151 | 147 | 149 | 154 | 157 |
| Loss | 176 | 165 | 153 | 180 | 205 | 222 | 253 | 238 | 193 | 165 | 172 | 195 |
| Firm Load | 2,175 | 2,051 | 1,903 | 1,792 | 1,987 | 2,445 | 2,771 | 2,622 | 2,175 | 1,895 | 1,967 | 2,203 |
| Light Load | 2,010 | 1,912 | 1,761 | 1,615 | 1,784 | 2,210 | 2,483 | 2,347 | 1,942 | 1,697 | 1,828 | 2,044 |
| Heavy Load | 2,304 | 2,155 | 2,006 | 1,934 | 2,148 | 2,616 | 3,019 | 2,820 | 2,379 | 2,038 | 2,079 | 2,339 |
| System Load | 2,175 | 2,051 | 1,903 | 1,792 | 1,987 | 2,445 | 2,771 | 2,622 | 2,175 | 1,895 | 1,967 | 2,203 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,175 | 2,051 | 1,903 | 1,792 | 1,987 | 2,445 | 2,771 | 2,622 | 2,175 | 1,895 | 1,967 | 2,203 |

### Peak Load (Megawatts)

| | Jan. 2018 | Feb. 2018 | Mar. 2018 | Apr. 2018 | May. 2018 | Jun. 2018 | Jul. 2018 | Aug. 2018 | Sep. 2018 | Oct. 2018 | Nov. 2018 | Dec. 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,859 | 2,675 | 2,608 | 2,192 | 3,312 | 3,883 | 4,003 | 3,650 | 3,260 | 2,354 | 2,659 | 3,155 |
| System Peak (1 Hour) | 2,859 | 2,675 | 2,608 | 2,192 | 3,312 | 3,883 | 4,003 | 3,650 | 3,260 | 2,354 | 2,659 | 3,155 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,859 | 2,675 | 2,608 | 2,192 | 3,312 | 3,883 | 4,003 | 3,650 | 3,260 | 2,354 | 2,659 | 3,155 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2019 | Feb. 2019 | Mar. 2019 | Apr. 2019 | May. 2019 | Jun. 2019 | Jul. 2019 | Aug. 2019 | Sep. 2019 | Oct. 2019 | Nov. 2019 | Dec. 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 894 | 799 | 684 | 528 | 515 | 630 | 768 | 764 | 596 | 575 | 710 | 901 |
| Commercial | 614 | 600 | 589 | 526 | 554 | 636 | 692 | 689 | 605 | 575 | 576 | 615 |
| Irrigation | 0 | 0 | 3 | 79 | 243 | 488 | 585 | 455 | 281 | 71 | 2 | 2 |
| Industrial | 366 | 360 | 352 | 356 | 353 | 369 | 369 | 372 | 390 | 392 | 384 | 366 |
| Additional Firm | 158 | 159 | 154 | 152 | 149 | 142 | 154 | 152 | 149 | 151 | 156 | 159 |
| Loss | 179 | 168 | 156 | 183 | 208 | 226 | 258 | 243 | 197 | 168 | 175 | 199 |
| Firm Load | 2,211 | 2,086 | 1,938 | 1,824 | 2,022 | 2,491 | 2,826 | 2,675 | 2,218 | 1,932 | 2,003 | 2,240 |
| Light Load | 2,044 | 1,945 | 1,793 | 1,643 | 1,815 | 2,252 | 2,533 | 2,396 | 1,980 | 1,731 | 1,861 | 2,079 |
| Heavy Load | 2,343 | 2,192 | 2,052 | 1,955 | 2,185 | 2,682 | 3,058 | 2,878 | 2,426 | 2,077 | 2,116 | 2,378 |
| System Load | 2,211 | 2,086 | 1,938 | 1,824 | 2,022 | 2,491 | 2,826 | 2,675 | 2,218 | 1,932 | 2,003 | 2,240 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,211 | 2,086 | 1,938 | 1,824 | 2,022 | 2,491 | 2,826 | 2,675 | 2,218 | 1,932 | 2,003 | 2,240 |

### Peak Load (Megawatts)

| | Jan. 2019 | Feb. 2019 | Mar. 2019 | Apr. 2019 | May. 2019 | Jun. 2019 | Jul. 2019 | Aug. 2019 | Sep. 2019 | Oct. 2019 | Nov. 2019 | Dec. 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,899 | 2,705 | 2,648 | 2,221 | 3,372 | 3,961 | 4,088 | 3,728 | 3,318 | 2,390 | 2,696 | 3,209 |
| System Peak (1 Hour) | 2,899 | 2,705 | 2,648 | 2,221 | 3,372 | 3,961 | 4,088 | 3,728 | 3,318 | 2,390 | 2,696 | 3,209 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,899 | 2,705 | 2,648 | 2,221 | 3,372 | 3,961 | 4,088 | 3,728 | 3,318 | 2,390 | 2,696 | 3,209 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2020 | Feb. 2020 | Mar. 2020 | Apr. 2020 | May. 2020 | Jun. 2020 | Jul. 2020 | Aug. 2020 | Sep. 2020 | Oct. 2020 | Nov. 2020 | Dec. 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 906 | 809 | 693 | 534 | 522 | 644 | 788 | 785 | 610 | 585 | 720 | 913 |
| Commercial | 626 | 613 | 603 | 538 | 569 | 654 | 712 | 707 | 620 | 589 | 588 | 627 |
| Irrigation | 0 | 0 | 3 | 79 | 243 | 489 | 586 | 456 | 282 | 71 | 2 | 2 |
| Industrial | 374 | 368 | 360 | 365 | 361 | 378 | 377 | 381 | 399 | 401 | 393 | 374 |
| Additional Firm | 160 | 158 | 156 | 153 | 150 | 144 | 156 | 154 | 150 | 152 | 158 | 160 |
| Loss | 182 | 171 | 159 | 186 | 212 | 230 | 263 | 248 | 201 | 172 | 178 | 202 |
| Firm Load | 2,248 | 2,119 | 1,973 | 1,855 | 2,058 | 2,537 | 2,882 | 2,730 | 2,262 | 1,970 | 2,039 | 2,278 |
| Light Load | 2,078 | 1,976 | 1,826 | 1,672 | 1,847 | 2,294 | 2,583 | 2,445 | 2,020 | 1,764 | 1,894 | 2,114 |
| Heavy Load | 2,382 | 2,225 | 2,090 | 1,990 | 2,239 | 2,715 | 3,118 | 2,956 | 2,456 | 2,118 | 2,165 | 2,407 |
| System Load | 2,248 | 2,119 | 1,973 | 1,855 | 2,058 | 2,537 | 2,882 | 2,730 | 2,262 | 1,970 | 2,039 | 2,278 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,248 | 2,119 | 1,973 | 1,855 | 2,058 | 2,537 | 2,882 | 2,730 | 2,262 | 1,970 | 2,039 | 2,278 |

### Peak Load (Megawatts)

| | Jan. 2020 | Feb. 2020 | Mar. 2020 | Apr. 2020 | May. 2020 | Jun. 2020 | Jul. 2020 | Aug. 2020 | Sep. 2020 | Oct. 2020 | Nov. 2020 | Dec. 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,940 | 2,734 | 2,689 | 2,250 | 3,433 | 4,039 | 4,175 | 3,807 | 3,375 | 2,426 | 2,733 | 3,264 |
| System Peak (1 Hour) | 2,940 | 2,734 | 2,689 | 2,250 | 3,433 | 4,039 | 4,175 | 3,807 | 3,375 | 2,426 | 2,733 | 3,264 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,940 | 2,734 | 2,689 | 2,250 | 3,433 | 4,039 | 4,175 | 3,807 | 3,375 | 2,426 | 2,733 | 3,264 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2021 | Feb. 2021 | Mar. 2021 | Apr. 2021 | May. 2021 | Jun. 2021 | Jul. 2021 | Aug. 2021 | Sep. 2021 | Oct. 2021 | Nov. 2021 | Dec. 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 918 | 819 | 702 | 540 | 530 | 658 | 809 | 805 | 623 | 595 | 731 | 927 |
| Commercial | 639 | 626 | 617 | 551 | 583 | 672 | 732 | 727 | 636 | 603 | 600 | 639 |
| Irrigation | 0 | 0 | 3 | 79 | 244 | 489 | 587 | 456 | 282 | 71 | 2 | 2 |
| Industrial | 383 | 377 | 368 | 373 | 370 | 386 | 386 | 389 | 408 | 410 | 401 | 382 |
| Additional Firm | 161 | 162 | 158 | 155 | 152 | 145 | 158 | 156 | 152 | 154 | 160 | 162 |
| Loss | 185 | 174 | 161 | 190 | 215 | 234 | 268 | 253 | 205 | 175 | 181 | 205 |
| Firm Load | 2,286 | 2,158 | 2,009 | 1,888 | 2,094 | 2,585 | 2,940 | 2,787 | 2,307 | 2,008 | 2,076 | 2,317 |
| Light Load | 2,114 | 2,012 | 1,859 | 1,701 | 1,880 | 2,337 | 2,635 | 2,495 | 2,060 | 1,799 | 1,929 | 2,150 |
| Heavy Load | 2,435 | 2,267 | 2,118 | 2,024 | 2,278 | 2,766 | 3,160 | 3,016 | 2,505 | 2,173 | 2,193 | 2,448 |
| System Load | 2,286 | 2,158 | 2,009 | 1,888 | 2,094 | 2,585 | 2,940 | 2,787 | 2,307 | 2,008 | 2,076 | 2,317 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,286 | 2,158 | 2,009 | 1,888 | 2,094 | 2,585 | 2,940 | 2,787 | 2,307 | 2,008 | 2,076 | 2,317 |

### Peak Load (Megawatts)

| | Jan. 2021 | Feb. 2021 | Mar. 2021 | Apr. 2021 | May. 2021 | Jun. 2021 | Jul. 2021 | Aug. 2021 | Sep. 2021 | Oct. 2021 | Nov. 2021 | Dec. 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -47 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,981 | 2,766 | 2,731 | 2,279 | 3,493 | 4,118 | 4,263 | 3,886 | 3,433 | 2,464 | 2,771 | 3,320 |
| System Peak (1 Hour) | 2,981 | 2,766 | 2,731 | 2,279 | 3,493 | 4,118 | 4,263 | 3,886 | 3,433 | 2,464 | 2,771 | 3,320 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,981 | 2,766 | 2,731 | 2,279 | 3,493 | 4,118 | 4,263 | 3,886 | 3,433 | 2,464 | 2,771 | 3,320 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2022 | Feb. 2022 | Mar. 2022 | Apr. 2022 | May. 2022 | Jun. 2022 | Jul. 2022 | Aug. 2022 | Sep. 2022 | Oct. 2022 | Nov. 2022 | Dec. 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 930 | 829 | 711 | 546 | 538 | 674 | 831 | 827 | 638 | 605 | 742 | 940 |
| Commercial | 652 | 639 | 632 | 565 | 598 | 690 | 752 | 746 | 653 | 618 | 613 | 651 |
| Irrigation | 0 | 0 | 3 | 79 | 244 | 490 | 587 | 457 | 282 | 71 | 2 | 2 |
| Industrial | 392 | 385 | 377 | 382 | 378 | 395 | 395 | 398 | 417 | 419 | 411 | 391 |
| Additional Firm | 163 | 164 | 159 | 156 | 154 | 147 | 160 | 158 | 154 | 156 | 161 | 164 |
| Loss | 189 | 177 | 164 | 193 | 219 | 239 | 274 | 258 | 209 | 179 | 185 | 209 |
| Firm Load | 2,325 | 2,195 | 2,046 | 1,921 | 2,131 | 2,635 | 2,999 | 2,844 | 2,353 | 2,048 | 2,113 | 2,356 |
| Light Load | 2,150 | 2,046 | 1,893 | 1,731 | 1,913 | 2,382 | 2,688 | 2,547 | 2,101 | 1,834 | 1,964 | 2,187 |
| Heavy Load | 2,476 | 2,306 | 2,157 | 2,060 | 2,319 | 2,819 | 3,267 | 3,059 | 2,555 | 2,216 | 2,233 | 2,479 |
| System Load | 2,325 | 2,195 | 2,046 | 1,921 | 2,131 | 2,635 | 2,999 | 2,844 | 2,353 | 2,048 | 2,113 | 2,356 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,325 | 2,195 | 2,046 | 1,921 | 2,131 | 2,635 | 2,999 | 2,844 | 2,353 | 2,048 | 2,113 | 2,356 |

### Peak Load (Megawatts)

| | Jan. 2022 | Feb. 2022 | Mar. 2022 | Apr. 2022 | May. 2022 | Jun. 2022 | Jul. 2022 | Aug. 2022 | Sep. 2022 | Oct. 2022 | Nov. 2022 | Dec. 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,023 | 2,798 | 2,773 | 2,310 | 3,554 | 4,197 | 4,352 | 3,967 | 3,490 | 2,502 | 2,810 | 3,376 |
| System Peak (1 Hour) | 3,023 | 2,798 | 2,773 | 2,310 | 3,554 | 4,197 | 4,352 | 3,967 | 3,490 | 2,502 | 2,810 | 3,376 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,023 | 2,798 | 2,773 | 2,310 | 3,554 | 4,197 | 4,352 | 3,967 | 3,490 | 2,502 | 2,810 | 3,376 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2023 | Feb. 2023 | Mar. 2023 | Apr. 2023 | May. 2023 | Jun. 2023 | Jul. 2023 | Aug. 2023 | Sep. 2023 | Oct. 2023 | Nov. 2023 | Dec. 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 942 | 840 | 720 | 553 | 547 | 689 | 853 | 849 | 652 | 616 | 753 | 953 |
| Commercial | 665 | 653 | 647 | 579 | 613 | 709 | 773 | 766 | 670 | 633 | 626 | 663 |
| Irrigation | 0 | 0 | 3 | 79 | 245 | 491 | 588 | 457 | 283 | 71 | 2 | 2 |
| Industrial | 401 | 394 | 385 | 390 | 386 | 404 | 404 | 407 | 427 | 429 | 420 | 400 |
| Additional Firm | 165 | 165 | 161 | 158 | 155 | 149 | 161 | 159 | 155 | 157 | 163 | 165 |
| Loss | 192 | 180 | 167 | 196 | 223 | 243 | 279 | 264 | 213 | 182 | 188 | 212 |
| Firm Load | 2,364 | 2,232 | 2,083 | 1,955 | 2,169 | 2,685 | 3,059 | 2,903 | 2,400 | 2,088 | 2,152 | 2,396 |
| Light Load | 2,186 | 2,081 | 1,928 | 1,761 | 1,947 | 2,427 | 2,742 | 2,599 | 2,143 | 1,870 | 1,999 | 2,224 |
| Heavy Load | 2,505 | 2,345 | 2,196 | 2,110 | 2,344 | 2,873 | 3,333 | 3,122 | 2,606 | 2,259 | 2,274 | 2,544 |
| System Load | 2,364 | 2,232 | 2,083 | 1,955 | 2,169 | 2,685 | 3,059 | 2,903 | 2,400 | 2,088 | 2,152 | 2,396 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,364 | 2,232 | 2,083 | 1,955 | 2,169 | 2,685 | 3,059 | 2,903 | 2,400 | 2,088 | 2,152 | 2,396 |

### Peak Load (Megawatts)

| | Jan. 2023 | Feb. 2023 | Mar. 2023 | Apr. 2023 | May. 2023 | Jun. 2023 | Jul. 2023 | Aug. 2023 | Sep. 2023 | Oct. 2023 | Nov. 2023 | Dec. 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,066 | 2,830 | 2,816 | 2,340 | 3,615 | 4,277 | 4,443 | 4,048 | 3,547 | 2,540 | 2,850 | 3,433 |
| System Peak (1 Hour) | 3,066 | 2,830 | 2,816 | 2,340 | 3,615 | 4,277 | 4,443 | 4,048 | 3,547 | 2,540 | 2,850 | 3,433 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,066 | 2,830 | 2,816 | 2,340 | 3,615 | 4,277 | 4,443 | 4,048 | 3,547 | 2,540 | 2,850 | 3,433 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2024 | Feb. 2024 | Mar. 2024 | Apr. 2024 | May. 2024 | Jun. 2024 | Jul. 2024 | Aug. 2024 | Sep. 2024 | Oct. 2024 | Nov. 2024 | Dec. 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 955 | 850 | 729 | 559 | 555 | 705 | 876 | 871 | 667 | 626 | 764 | 967 |
| Commercial | 678 | 667 | 662 | 593 | 628 | 728 | 794 | 787 | 687 | 648 | 638 | 676 |
| Irrigation | 0 | 0 | 3 | 79 | 245 | 491 | 589 | 458 | 283 | 71 | 2 | 2 |
| Industrial | 410 | 403 | 394 | 399 | 395 | 413 | 413 | 417 | 437 | 438 | 430 | 409 |
| Additional Firm | 166 | 165 | 162 | 160 | 157 | 150 | 163 | 161 | 157 | 159 | 164 | 167 |
| Loss | 195 | 183 | 171 | 200 | 227 | 248 | 285 | 269 | 218 | 186 | 191 | 216 |
| Firm Load | 2,404 | 2,268 | 2,121 | 1,989 | 2,207 | 2,736 | 3,120 | 2,963 | 2,448 | 2,128 | 2,190 | 2,436 |
| Light Load | 2,222 | 2,114 | 1,962 | 1,792 | 1,981 | 2,473 | 2,796 | 2,653 | 2,186 | 1,906 | 2,035 | 2,261 |
| Heavy Load | 2,547 | 2,381 | 2,246 | 2,133 | 2,385 | 2,946 | 3,376 | 3,187 | 2,678 | 2,288 | 2,314 | 2,587 |
| System Load | 2,404 | 2,268 | 2,121 | 1,989 | 2,207 | 2,736 | 3,120 | 2,963 | 2,448 | 2,128 | 2,190 | 2,436 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,404 | 2,268 | 2,121 | 1,989 | 2,207 | 2,736 | 3,120 | 2,963 | 2,448 | 2,128 | 2,190 | 2,436 |

### Peak Load (Megawatts)

| | Jan. 2024 | Feb. 2024 | Mar. 2024 | Apr. 2024 | May. 2024 | Jun. 2024 | Jul. 2024 | Aug. 2024 | Sep. 2024 | Oct. 2024 | Nov. 2024 | Dec. 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -16 | -16 | -15 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,108 | 2,861 | 2,860 | 2,371 | 3,677 | 4,358 | 4,534 | 4,130 | 3,605 | 2,579 | 2,890 | 3,490 |
| System Peak (1 Hour) | 3,108 | 2,861 | 2,860 | 2,371 | 3,677 | 4,358 | 4,534 | 4,130 | 3,605 | 2,579 | 2,890 | 3,490 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,108 | 2,861 | 2,860 | 2,371 | 3,677 | 4,358 | 4,534 | 4,130 | 3,605 | 2,579 | 2,890 | 3,490 |

## Expected Case Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2025 | Feb. 2025 | Mar. 2025 | Apr. 2025 | May. 2025 | Jun. 2025 | Jul. 2025 | Aug. 2025 | Sep. 2025 | Oct. 2025 | Nov. 2025 | Dec. 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 967 | 861 | 738 | 565 | 563 | 721 | 899 | 894 | 682 | 637 | 776 | 980 |
| Commercial | 691 | 680 | 677 | 607 | 644 | 748 | 816 | 808 | 704 | 663 | 651 | 688 |
| Irrigation | 0 | 0 | 3 | 79 | 245 | 492 | 590 | 459 | 284 | 71 | 2 | 2 |
| Industrial | 419 | 412 | 403 | 408 | 404 | 423 | 422 | 426 | 447 | 448 | 440 | 419 |
| Additional Firm | 168 | 168 | 164 | 161 | 158 | 152 | 165 | 162 | 159 | 160 | 166 | 168 |
| Loss | 198 | 186 | 174 | 203 | 231 | 253 | 291 | 275 | 222 | 189 | 195 | 220 |
| Firm Load | 2,443 | 2,308 | 2,159 | 2,023 | 2,246 | 2,788 | 3,183 | 3,024 | 2,496 | 2,169 | 2,229 | 2,476 |
| Light Load | 2,259 | 2,152 | 1,998 | 1,823 | 2,016 | 2,520 | 2,852 | 2,707 | 2,229 | 1,943 | 2,071 | 2,298 |
| Heavy Load | 2,589 | 2,425 | 2,287 | 2,170 | 2,427 | 3,001 | 3,443 | 3,273 | 2,711 | 2,333 | 2,367 | 2,617 |
| System Load | 2,443 | 2,308 | 2,159 | 2,023 | 2,246 | 2,788 | 3,183 | 3,024 | 2,496 | 2,169 | 2,229 | 2,476 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,443 | 2,308 | 2,159 | 2,023 | 2,246 | 2,788 | 3,183 | 3,024 | 2,496 | 2,169 | 2,229 | 2,476 |

### Peak Load (Megawatts)

| | Jan. 2025 | Feb. 2025 | Mar. 2025 | Apr. 2025 | May. 2025 | Jun. 2025 | Jul. 2025 | Aug. 2025 | Sep. 2025 | Oct. 2025 | Nov. 2025 | Dec. 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -50 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,152 | 2,895 | 2,904 | 2,401 | 3,738 | 4,440 | 4,627 | 4,213 | 3,662 | 2,619 | 2,930 | 3,547 |
| System Peak (1 Hour) | 3,152 | 2,895 | 2,904 | 2,401 | 3,738 | 4,440 | 4,627 | 4,213 | 3,662 | 2,619 | 2,930 | 3,547 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,152 | 2,895 | 2,904 | 2,401 | 3,738 | 4,440 | 4,627 | 4,213 | 3,662 | 2,619 | 2,930 | 3,547 |

## Expected Case Sales and Load Forecast Annual Summary

### Billed Sales (Megawatt-hours)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 4,862,268 | 5,028,163 | 5,129,950 | 5,218,358 | 5,315,450 | 5,373,289 | 5,407,204 | 5,507,578 | 5,603,702 | 5,699,278 |
| Commercial | 3,800,997 | 3,938,173 | 4,061,269 | 4,177,796 | 4,293,773 | 4,384,049 | 4,469,715 | 4,587,155 | 4,702,480 | 4,818,204 |
| Irrigation | 1,643,080 | 1,639,190 | 1,633,080 | 1,629,431 | 1,626,475 | 1,617,721 | 1,615,071 | 1,612,422 | 1,609,760 | 1,612,308 |
| Industrial | 2,421,451 | 2,485,427 | 2,537,510 | 2,596,445 | 2,656,152 | 2,708,334 | 2,765,435 | 2,823,076 | 2,881,748 | 2,949,296 |
| Additional Firm | 1,182,934 | 1,143,360 | 1,162,503 | 1,177,194 | 1,194,104 | 1,210,114 | 1,227,715 | 1,240,656 | 1,257,431 | 1,274,235 |
| Firm Sales | 13,910,730 | 14,234,313 | 14,524,313 | 14,799,225 | 15,085,955 | 15,293,506 | 15,485,140 | 15,770,885 | 16,055,122 | 16,353,323 |
| System Sales | 13,910,730 | 14,234,313 | 14,524,313 | 14,799,225 | 15,085,955 | 15,293,506 | 15,485,140 | 15,770,885 | 16,055,122 | 16,353,323 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 13,910,730 | 14,234,313 | 14,524,313 | 14,799,225 | 15,085,955 | 15,293,506 | 15,485,140 | 15,770,885 | 16,055,122 | 16,353,323 |

### Generation Month Sales (Megawatt-hours)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 4,872,705 | 5,034,133 | 5,151,940 | 5,223,934 | 5,318,318 | 5,374,513 | 5,430,481 | 5,512,941 | 5,608,872 | 5,704,471 |
| Commercial | 3,807,410 | 3,943,800 | 4,077,862 | 4,182,961 | 4,297,571 | 4,387,575 | 4,487,202 | 4,592,111 | 4,707,351 | 4,823,108 |
| Irrigation | 1,643,102 | 1,639,191 | 1,633,086 | 1,629,432 | 1,626,473 | 1,617,722 | 1,615,077 | 1,612,423 | 1,609,762 | 1,612,309 |
| Industrial | 2,425,530 | 2,488,836 | 2,548,189 | 2,600,283 | 2,659,566 | 2,712,026 | 2,776,742 | 2,826,856 | 2,885,549 | 2,953,105 |
| Additional Firm | 1,182,934 | 1,143,360 | 1,162,503 | 1,177,194 | 1,194,104 | 1,210,114 | 1,227,715 | 1,240,656 | 1,257,431 | 1,274,235 |
| Firm Sales | 13,931,681 | 14,249,320 | 14,573,580 | 14,813,805 | 15,096,033 | 15,301,949 | 15,537,217 | 15,784,986 | 16,068,965 | 16,367,228 |
| System Sales | 13,931,681 | 14,249,320 | 14,573,580 | 14,813,805 | 15,096,033 | 15,301,949 | 15,537,217 | 15,784,986 | 16,068,965 | 16,367,228 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 13,931,681 | 14,249,320 | 14,573,580 | 14,813,805 | 15,096,033 | 15,301,949 | 15,537,217 | 15,784,986 | 16,068,965 | 16,367,228 |
| Loss | 1,360,067 | 1,394,827 | 1,427,012 | 1,451,237 | 1,479,180 | 1,499,115 | 1,521,363 | 1,546,529 | 1,574,734 | 1,603,795 |
| Required Generation | 15,291,747 | 15,644,147 | 16,000,592 | 16,265,042 | 16,575,213 | 16,801,064 | 17,058,580 | 17,331,515 | 17,643,699 | 17,971,023 |

### Average Load (Average Megawatts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 556 | 575 | 587 | 596 | 607 | 614 | 618 | 629 | 640 | 651 |
| Commercial | 435 | 450 | 464 | 478 | 491 | 501 | 511 | 524 | 537 | 551 |
| Irrigation | 188 | 187 | 186 | 186 | 186 | 185 | 184 | 184 | 184 | 184 |
| Industrial | 277 | 284 | 290 | 297 | 304 | 310 | 316 | 323 | 329 | 337 |
| Additional Firm | 135 | 130 | 133 | 134 | 137 | 139 | 140 | 142 | 144 | 146 |
| Loss | 155 | 159 | 162 | 166 | 169 | 171 | 173 | 177 | 180 | 183 |
| Firm Load | 1,746 | 1,786 | 1,822 | 1,857 | 1,892 | 1,918 | 1,942 | 1,978 | 2,014 | 2,051 |
| Light Load | 1,588 | 1,624 | 1,657 | 1,689 | 1,721 | 1,744 | 1,766 | 1,799 | 1,832 | 1,866 |
| Heavy Load | 1,870 | 1,913 | 1,951 | 1,988 | 2,025 | 2,054 | 2,080 | 2,119 | 2,157 | 2,197 |
| System Load | 1,746 | 1,786 | 1,822 | 1,857 | 1,892 | 1,918 | 1,942 | 1,978 | 2,014 | 2,051 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,746 | 1,786 | 1,822 | 1,857 | 1,892 | 1,918 | 1,942 | 1,978 | 2,014 | 2,051 |

### Peak Load (Megawatts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -8 | -14 | -20 | -26 | -32 | -37 | -43 | -48 | -54 | -54 |
| Demand Response | -37 | -46 | -59 | -73 | -78 | -78 | -78 | -78 | -78 | -78 |
| Firm Peak Load | 3,121 | 3,208 | 3,268 | 3,326 | 3,396 | 3,459 | 3,522 | 3,597 | 3,673 | 3,754 |
| System Peak (1 Hour) | 3,121 | 3,208 | 3,268 | 3,326 | 3,396 | 3,459 | 3,522 | 3,597 | 3,673 | 3,754 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,121 | 3,208 | 3,268 | 3,326 | 3,396 | 3,459 | 3,522 | 3,597 | 3,673 | 3,754 |

## Expected Case Sales and Load Forecast Annual Summary

### Billed Sales (Megawatt-hours)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 5,795,818 | 5,895,126 | 5,997,530 | 6,100,905 | 6,206,045 | 6,314,869 | 6,427,310 | 6,541,021 | 6,655,530 | 6,772,209 |
| Commercial | 4,935,524 | 5,055,838 | 5,179,326 | 5,304,556 | 5,432,315 | 5,563,441 | 5,698,184 | 5,834,756 | 5,972,690 | 6,112,112 |
| Irrigation | 1,614,777 | 1,617,289 | 1,619,769 | 1,622,199 | 1,624,614 | 1,626,988 | 1,629,358 | 1,631,660 | 1,633,955 | 1,636,206 |
| Industrial | 3,016,981 | 3,086,155 | 3,156,872 | 3,229,166 | 3,303,072 | 3,378,626 | 3,455,865 | 3,534,826 | 3,615,548 | 3,698,070 |
| Additional Firm | 1,293,573 | 1,306,995 | 1,322,898 | 1,339,087 | 1,356,188 | 1,368,805 | 1,383,131 | 1,396,756 | 1,413,077 | 1,424,582 |
| Firm Sales | 16,656,674 | 16,961,402 | 17,276,395 | 17,595,913 | 17,922,235 | 18,252,730 | 18,593,847 | 18,939,019 | 19,290,800 | 19,643,178 |
| System Sales | 16,656,674 | 16,961,402 | 17,276,395 | 17,595,913 | 17,922,235 | 18,252,730 | 18,593,847 | 18,939,019 | 19,290,800 | 19,643,178 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 16,656,674 | 16,961,402 | 17,276,395 | 17,595,913 | 17,922,235 | 18,252,730 | 18,593,847 | 18,939,019 | 19,290,800 | 19,643,178 |

### Generation Month Sales (Megawatt-hours)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 5,819,653 | 5,900,622 | 6,003,045 | 6,106,491 | 6,231,254 | 6,320,840 | 6,433,315 | 6,547,027 | 6,682,049 | 6,778,394 |
| Commercial | 4,954,054 | 5,060,951 | 5,184,474 | 5,309,777 | 5,452,375 | 5,568,897 | 5,703,674 | 5,840,255 | 5,994,219 | 6,117,660 |
| Irrigation | 1,614,783 | 1,617,291 | 1,619,771 | 1,622,200 | 1,624,620 | 1,626,990 | 1,629,359 | 1,631,661 | 1,633,962 | 1,636,207 |
| Industrial | 3,029,177 | 3,090,135 | 3,160,940 | 3,233,325 | 3,316,393 | 3,382,972 | 3,460,308 | 3,539,368 | 3,630,098 | 3,702,817 |
| Additional Firm | 1,293,573 | 1,306,995 | 1,322,898 | 1,339,087 | 1,356,188 | 1,368,805 | 1,383,131 | 1,396,756 | 1,413,077 | 1,424,582 |
| Firm Sales | 16,711,241 | 16,975,992 | 17,291,128 | 17,610,880 | 17,980,831 | 18,268,505 | 18,609,786 | 18,955,068 | 19,353,405 | 19,659,660 |
| System Sales | 16,711,241 | 16,975,992 | 17,291,128 | 17,610,880 | 17,980,831 | 18,268,505 | 18,609,786 | 18,955,068 | 19,353,405 | 19,659,660 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 16,711,241 | 16,975,992 | 17,291,128 | 17,610,880 | 17,980,831 | 18,268,505 | 18,609,786 | 18,955,068 | 19,353,405 | 19,659,660 |
| Loss | 1,636,984 | 1,663,237 | 1,694,077 | 1,725,346 | 1,761,219 | 1,789,845 | 1,823,395 | 1,857,361 | 1,896,072 | 1,926,598 |
| Required Generation | 18,348,226 | 18,639,228 | 18,985,205 | 19,336,227 | 19,742,050 | 20,058,349 | 20,433,181 | 20,812,430 | 21,249,476 | 21,586,259 |

### Average Load (Average Megawatts)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 663 | 674 | 685 | 697 | 709 | 722 | 734 | 747 | 761 | 774 |
| Commercial | 564 | 578 | 592 | 606 | 621 | 636 | 651 | 667 | 682 | 698 |
| Irrigation | 184 | 185 | 185 | 185 | 185 | 186 | 186 | 186 | 186 | 187 |
| Industrial | 345 | 353 | 361 | 369 | 378 | 386 | 395 | 404 | 413 | 423 |
| Additional Firm | 147 | 149 | 151 | 153 | 155 | 157 | 158 | 160 | 161 | 163 |
| Loss | 186 | 190 | 193 | 197 | 201 | 204 | 208 | 212 | 216 | 220 |
| Firm Load | 2,089 | 2,128 | 2,167 | 2,207 | 2,248 | 2,290 | 2,333 | 2,376 | 2,419 | 2,464 |
| Light Load | 1,900 | 1,935 | 1,971 | 2,007 | 2,044 | 2,082 | 2,121 | 2,160 | 2,200 | 2,241 |
| Heavy Load | 2,237 | 2,279 | 2,322 | 2,364 | 2,407 | 2,451 | 2,498 | 2,545 | 2,591 | 2,639 |
| System Load | 2,089 | 2,128 | 2,167 | 2,207 | 2,248 | 2,290 | 2,333 | 2,376 | 2,419 | 2,464 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,089 | 2,128 | 2,167 | 2,207 | 2,248 | 2,290 | 2,333 | 2,376 | 2,419 | 2,464 |

### Peak Load (Megawatts)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 |
| Demand Response | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 |
| Firm Peak Load | 3,836 | 3,919 | 4,003 | 4,088 | 4,175 | 4,263 | 4,352 | 4,443 | 4,534 | 4,627 |
| System Peak (1 Hour) | 3,836 | 3,919 | 4,003 | 4,088 | 4,175 | 4,263 | 4,352 | 4,443 | 4,534 | 4,627 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,836 | 3,919 | 4,003 | 4,088 | 4,175 | 4,263 | 4,352 | 4,443 | 4,534 | 4,627 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2006 | Feb. 2006 | Mar. 2006 | Apr. 2006 | May. 2006 | Jun. 2006 | Jul. 2006 | Aug. 2006 | Sep. 2006 | Oct. 2006 | Nov. 2006 | Dec. 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 774 | 695 | 592 | 461 | 431 | 485 | 557 | 555 | 460 | 472 | 601 | 780 |
| Commercial | 468 | 450 | 427 | 381 | 398 | 442 | 475 | 478 | 426 | 414 | 433 | 477 |
| Irrigation | 0 | 0 | 4 | 107 | 309 | 527 | 598 | 500 | 301 | 82 | 3 | 2 |
| Industrial | 275 | 270 | 264 | 267 | 265 | 277 | 277 | 279 | 292 | 294 | 288 | 275 |
| Additional Firm | 142 | 143 | 137 | 133 | 130 | 125 | 137 | 134 | 130 | 133 | 138 | 142 |
| Loss | 147 | 137 | 124 | 152 | 177 | 184 | 204 | 193 | 156 | 133 | 140 | 163 |
| Firm Load | 1,806 | 1,694 | 1,548 | 1,502 | 1,710 | 2,039 | 2,247 | 2,139 | 1,766 | 1,527 | 1,603 | 1,840 |
| Light Load | 1,669 | 1,579 | 1,432 | 1,353 | 1,535 | 1,844 | 2,014 | 1,916 | 1,577 | 1,368 | 1,489 | 1,708 |
| Heavy Load | 1,913 | 1,780 | 1,632 | 1,621 | 1,848 | 2,182 | 2,448 | 2,301 | 1,918 | 1,652 | 1,694 | 1,954 |
| System Load | 1,806 | 1,694 | 1,548 | 1,502 | 1,710 | 2,039 | 2,247 | 2,139 | 1,766 | 1,527 | 1,603 | 1,840 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,806 | 1,694 | 1,548 | 1,502 | 1,710 | 2,039 | 2,247 | 2,139 | 1,766 | 1,527 | 1,603 | 1,840 |

### Peak Load (Megawatts)

| | Jan. 2006 | Feb. 2006 | Mar. 2006 | Apr. 2006 | May. 2006 | Jun. 2006 | Jul. 2006 | Aug. 2006 | Sep. 2006 | Oct. 2006 | Nov. 2006 | Dec. 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -3 | -3 | -3 | -3 | -5 | -8 | -8 | -7 | -6 | -4 | -3 | -3 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -39 | -37 | -30 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,473 | 2,406 | 2,275 | 1,924 | 2,673 | 3,116 | 3,163 | 2,945 | 2,617 | 2,025 | 2,317 | 2,790 |
| System Peak (1 Hour) | 2,473 | 2,406 | 2,275 | 1,924 | 2,673 | 3,116 | 3,163 | 2,945 | 2,617 | 2,025 | 2,317 | 2,790 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,473 | 2,406 | 2,275 | 1,924 | 2,673 | 3,116 | 3,163 | 2,945 | 2,617 | 2,025 | 2,317 | 2,790 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2007 | Feb. 2007 | Mar. 2007 | Apr. 2007 | May. 2007 | Jun. 2007 | Jul. 2007 | Aug. 2007 | Sep. 2007 | Oct. 2007 | Nov. 2007 | Dec. 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 797 | 715 | 610 | 474 | 445 | 504 | 582 | 579 | 478 | 488 | 619 | 798 |
| Commercial | 484 | 465 | 442 | 395 | 413 | 459 | 494 | 497 | 442 | 429 | 447 | 491 |
| Irrigation | 0 | 0 | 4 | 106 | 294 | 543 | 618 | 477 | 301 | 81 | 3 | 2 |
| Industrial | 282 | 277 | 271 | 274 | 272 | 284 | 284 | 286 | 300 | 301 | 295 | 282 |
| Additional Firm | 136 | 137 | 132 | 130 | 127 | 120 | 131 | 130 | 126 | 128 | 133 | 137 |
| Loss | 150 | 140 | 128 | 156 | 179 | 190 | 211 | 196 | 161 | 136 | 144 | 167 |
| Firm Load | 1,849 | 1,734 | 1,587 | 1,535 | 1,729 | 2,101 | 2,321 | 2,166 | 1,808 | 1,564 | 1,642 | 1,876 |
| Light Load | 1,710 | 1,617 | 1,468 | 1,383 | 1,552 | 1,899 | 2,080 | 1,939 | 1,614 | 1,401 | 1,525 | 1,741 |
| Heavy Load | 1,959 | 1,822 | 1,673 | 1,656 | 1,869 | 2,248 | 2,528 | 2,329 | 1,978 | 1,682 | 1,735 | 1,992 |
| System Load | 1,849 | 1,734 | 1,587 | 1,535 | 1,729 | 2,101 | 2,321 | 2,166 | 1,808 | 1,564 | 1,642 | 1,876 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,849 | 1,734 | 1,587 | 1,535 | 1,729 | 2,101 | 2,321 | 2,166 | 1,808 | 1,564 | 1,642 | 1,876 |

### Peak Load (Megawatts)

| | Jan. 2007 | Feb. 2007 | Mar. 2007 | Apr. 2007 | May. 2007 | Jun. 2007 | Jul. 2007 | Aug. 2007 | Sep. 2007 | Oct. 2007 | Nov. 2007 | Dec. 2007 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -5 | -5 | -4 | -5 | -9 | -13 | -14 | -12 | -9 | -7 | -5 | -5 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -44 | -46 | -44 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,530 | 2,445 | 2,342 | 1,971 | 2,721 | 3,186 | 3,251 | 2,975 | 2,662 | 2,056 | 2,355 | 2,832 |
| System Peak (1 Hour) | 2,530 | 2,445 | 2,342 | 1,971 | 2,721 | 3,186 | 3,251 | 2,975 | 2,662 | 2,056 | 2,355 | 2,832 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,530 | 2,445 | 2,342 | 1,971 | 2,721 | 3,186 | 3,251 | 2,975 | 2,662 | 2,056 | 2,355 | 2,832 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2008 | Feb. 2008 | Mar. 2008 | Apr. 2008 | May. 2008 | Jun. 2008 | Jul. 2008 | Aug. 2008 | Sep. 2008 | Oct. 2008 | Nov. 2008 | Dec. 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 810 | 726 | 619 | 481 | 453 | 518 | 600 | 597 | 490 | 498 | 630 | 810 |
| Commercial | 497 | 478 | 456 | 408 | 426 | 475 | 512 | 514 | 457 | 442 | 459 | 504 |
| Irrigation | 0 | 0 | 4 | 106 | 292 | 541 | 616 | 476 | 300 | 81 | 3 | 2 |
| Industrial | 288 | 283 | 277 | 280 | 277 | 290 | 290 | 292 | 306 | 308 | 302 | 288 |
| Additional Firm | 139 | 137 | 135 | 131 | 129 | 122 | 133 | 131 | 129 | 130 | 135 | 139 |
| Loss | 153 | 143 | 130 | 159 | 182 | 194 | 216 | 200 | 164 | 139 | 147 | 170 |
| Firm Load | 1,886 | 1,767 | 1,621 | 1,565 | 1,761 | 2,140 | 2,367 | 2,211 | 1,845 | 1,598 | 1,676 | 1,912 |
| Light Load | 1,744 | 1,648 | 1,500 | 1,410 | 1,581 | 1,934 | 2,121 | 1,980 | 1,648 | 1,431 | 1,557 | 1,774 |
| Heavy Load | 1,999 | 1,856 | 1,716 | 1,678 | 1,903 | 2,304 | 2,560 | 2,394 | 2,004 | 1,718 | 1,780 | 2,020 |
| System Load | 1,886 | 1,767 | 1,621 | 1,565 | 1,761 | 2,140 | 2,367 | 2,211 | 1,845 | 1,598 | 1,676 | 1,912 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,886 | 1,767 | 1,621 | 1,565 | 1,761 | 2,140 | 2,367 | 2,211 | 1,845 | 1,598 | 1,676 | 1,912 |

### Peak Load (Megawatts)

| | Jan. 2008 | Feb. 2008 | Mar. 2008 | Apr. 2008 | May. 2008 | Jun. 2008 | Jul. 2008 | Aug. 2008 | Sep. 2008 | Oct. 2008 | Nov. 2008 | Dec. 2008 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -6 | -6 | -6 | -6 | -13 | -19 | -20 | -18 | -13 | -10 | -7 | -6 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -57 | -59 | -57 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,567 | 2,469 | 2,380 | 1,993 | 2,777 | 3,235 | 3,312 | 3,020 | 2,716 | 2,088 | 2,390 | 2,859 |
| System Peak (1 Hour) | 2,567 | 2,469 | 2,380 | 1,993 | 2,777 | 3,235 | 3,312 | 3,020 | 2,716 | 2,088 | 2,390 | 2,859 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,567 | 2,469 | 2,380 | 1,993 | 2,777 | 3,235 | 3,312 | 3,020 | 2,716 | 2,088 | 2,390 | 2,859 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2009 | Feb. 2009 | Mar. 2009 | Apr. 2009 | May. 2009 | Jun. 2009 | Jul. 2009 | Aug. 2009 | Sep. 2009 | Oct. 2009 | Nov. 2009 | Dec. 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 821 | 735 | 627 | 487 | 460 | 530 | 616 | 613 | 501 | 506 | 639 | 822 |
| Commercial | 509 | 491 | 469 | 419 | 439 | 490 | 528 | 530 | 471 | 455 | 471 | 516 |
| Irrigation | 0 | 0 | 4 | 106 | 292 | 540 | 615 | 475 | 299 | 80 | 3 | 2 |
| Industrial | 294 | 289 | 283 | 287 | 284 | 297 | 297 | 299 | 314 | 315 | 309 | 295 |
| Additional Firm | 140 | 140 | 136 | 133 | 131 | 123 | 134 | 133 | 131 | 132 | 138 | 140 |
| Loss | 156 | 146 | 133 | 161 | 186 | 198 | 220 | 205 | 167 | 142 | 150 | 173 |
| Firm Load | 1,921 | 1,802 | 1,653 | 1,594 | 1,791 | 2,178 | 2,412 | 2,256 | 1,882 | 1,630 | 1,709 | 1,947 |
| Light Load | 1,776 | 1,680 | 1,529 | 1,436 | 1,608 | 1,969 | 2,161 | 2,020 | 1,680 | 1,460 | 1,588 | 1,807 |
| Heavy Load | 2,035 | 1,894 | 1,750 | 1,709 | 1,949 | 2,330 | 2,609 | 2,442 | 2,044 | 1,753 | 1,815 | 2,058 |
| System Load | 1,921 | 1,802 | 1,653 | 1,594 | 1,791 | 2,178 | 2,412 | 2,256 | 1,882 | 1,630 | 1,709 | 1,947 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,921 | 1,802 | 1,653 | 1,594 | 1,791 | 2,178 | 2,412 | 2,256 | 1,882 | 1,630 | 1,709 | 1,947 |

### Peak Load (Megawatts)

| | Jan. 2009 | Feb. 2009 | Mar. 2009 | Apr. 2009 | May. 2009 | Jun. 2009 | Jul. 2009 | Aug. 2009 | Sep. 2009 | Oct. 2009 | Nov. 2009 | Dec. 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -8 | -8 | -7 | -8 | -17 | -25 | -26 | -23 | -17 | -13 | -9 | -8 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -71 | -73 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,596 | 2,497 | 2,410 | 2,007 | 2,834 | 3,289 | 3,372 | 3,073 | 2,769 | 2,118 | 2,423 | 2,909 |
| System Peak (1 Hour) | 2,596 | 2,497 | 2,410 | 2,007 | 2,834 | 3,289 | 3,372 | 3,073 | 2,769 | 2,118 | 2,423 | 2,909 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,596 | 2,497 | 2,410 | 2,007 | 2,834 | 3,289 | 3,372 | 3,073 | 2,769 | 2,118 | 2,423 | 2,909 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2010 | Feb. 2010 | Mar. 2010 | Apr. 2010 | May. 2010 | Jun. 2010 | Jul. 2010 | Aug. 2010 | Sep. 2010 | Oct. 2010 | Nov. 2010 | Dec. 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 833 | 746 | 636 | 493 | 468 | 542 | 634 | 630 | 513 | 515 | 649 | 831 |
| Commercial | 522 | 503 | 482 | 431 | 452 | 506 | 545 | 547 | 484 | 467 | 483 | 526 |
| Irrigation | 0 | 0 | 4 | 106 | 291 | 539 | 614 | 475 | 299 | 80 | 3 | 2 |
| Industrial | 301 | 296 | 290 | 293 | 290 | 304 | 304 | 306 | 321 | 322 | 316 | 301 |
| Additional Firm | 142 | 142 | 138 | 135 | 133 | 126 | 138 | 136 | 132 | 133 | 140 | 142 |
| Loss | 159 | 149 | 136 | 164 | 189 | 201 | 225 | 209 | 171 | 145 | 153 | 176 |
| Firm Load | 1,957 | 1,836 | 1,685 | 1,623 | 1,823 | 2,217 | 2,459 | 2,302 | 1,920 | 1,664 | 1,742 | 1,977 |
| Light Load | 1,809 | 1,712 | 1,559 | 1,463 | 1,636 | 2,005 | 2,203 | 2,061 | 1,714 | 1,490 | 1,619 | 1,835 |
| Heavy Load | 2,084 | 1,929 | 1,776 | 1,741 | 1,983 | 2,373 | 2,643 | 2,492 | 2,085 | 1,800 | 1,841 | 2,089 |
| System Load | 1,957 | 1,836 | 1,685 | 1,623 | 1,823 | 2,217 | 2,459 | 2,302 | 1,920 | 1,664 | 1,742 | 1,977 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,957 | 1,836 | 1,685 | 1,623 | 1,823 | 2,217 | 2,459 | 2,302 | 1,920 | 1,664 | 1,742 | 1,977 |

### Peak Load (Megawatts)

| | Jan. 2010 | Feb. 2010 | Mar. 2010 | Apr. 2010 | May. 2010 | Jun. 2010 | Jul. 2010 | Aug. 2010 | Sep. 2010 | Oct. 2010 | Nov. 2010 | Dec. 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -10 | -9 | -9 | -10 | -20 | -30 | -32 | -28 | -21 | -15 | -11 | -10 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,634 | 2,526 | 2,450 | 2,032 | 2,891 | 3,348 | 3,442 | 3,140 | 2,823 | 2,149 | 2,457 | 2,948 |
| System Peak (1 Hour) | 2,634 | 2,526 | 2,450 | 2,032 | 2,891 | 3,348 | 3,442 | 3,140 | 2,823 | 2,149 | 2,457 | 2,948 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,634 | 2,526 | 2,450 | 2,032 | 2,891 | 3,348 | 3,442 | 3,140 | 2,823 | 2,149 | 2,457 | 2,948 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May. 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 839 | 750 | 640 | 496 | 472 | 552 | 647 | 644 | 521 | 521 | 655 | 836 |
| Commercial | 531 | 512 | 492 | 440 | 462 | 518 | 559 | 560 | 495 | 477 | 491 | 534 |
| Irrigation | 0 | 0 | 4 | 106 | 290 | 536 | 612 | 472 | 298 | 79 | 2 | 2 |
| Industrial | 307 | 302 | 295 | 299 | 296 | 310 | 309 | 312 | 327 | 328 | 322 | 307 |
| Additional Firm | 143 | 143 | 140 | 137 | 134 | 128 | 140 | 137 | 134 | 136 | 141 | 144 |
| Loss | 161 | 150 | 137 | 166 | 191 | 204 | 228 | 212 | 173 | 147 | 155 | 178 |
| Firm Load | 1,981 | 1,860 | 1,709 | 1,645 | 1,845 | 2,246 | 2,494 | 2,337 | 1,949 | 1,689 | 1,766 | 2,000 |
| Light Load | 1,832 | 1,734 | 1,581 | 1,482 | 1,657 | 2,031 | 2,235 | 2,093 | 1,740 | 1,513 | 1,641 | 1,856 |
| Heavy Load | 2,110 | 1,954 | 1,801 | 1,764 | 2,008 | 2,404 | 2,717 | 2,514 | 2,116 | 1,827 | 1,866 | 2,103 |
| System Load | 1,981 | 1,860 | 1,709 | 1,645 | 1,845 | 2,246 | 2,494 | 2,337 | 1,949 | 1,689 | 1,766 | 2,000 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,981 | 1,860 | 1,709 | 1,645 | 1,845 | 2,246 | 2,494 | 2,337 | 1,949 | 1,689 | 1,766 | 2,000 |

### Peak Load (Megawatts)

| | Jan. 2011 | Feb. 2011 | Mar. 2011 | Apr. 2011 | May. 2011 | Jun. 2011 | Jul. 2011 | Aug. 2011 | Sep. 2011 | Oct. 2011 | Nov. 2011 | Dec. 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -11 | -11 | -11 | -12 | -23 | -35 | -37 | -33 | -25 | -18 | -13 | -11 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,659 | 2,545 | 2,475 | 2,049 | 2,945 | 3,396 | 3,506 | 3,173 | 2,877 | 2,172 | 2,481 | 2,918 |
| System Peak (1 Hour) | 2,659 | 2,545 | 2,475 | 2,049 | 2,945 | 3,396 | 3,506 | 3,173 | 2,877 | 2,172 | 2,481 | 2,918 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,659 | 2,545 | 2,475 | 2,049 | 2,945 | 3,396 | 3,506 | 3,173 | 2,877 | 2,172 | 2,481 | 2,918 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2012 | Feb. 2012 | Mar. 2012 | Apr. 2012 | May. 2012 | Jun. 2012 | Jul. 2012 | Aug. 2012 | Sep. 2012 | Oct. 2012 | Nov. 2012 | Dec. 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 841 | 752 | 642 | 497 | 474 | 558 | 658 | 654 | 527 | 524 | 658 | 844 |
| Commercial | 539 | 521 | 501 | 449 | 472 | 530 | 572 | 572 | 506 | 486 | 500 | 544 |
| Irrigation | 0 | 0 | 4 | 106 | 289 | 535 | 611 | 472 | 297 | 78 | 2 | 2 |
| Industrial | 313 | 308 | 302 | 305 | 302 | 316 | 316 | 319 | 334 | 335 | 329 | 313 |
| Additional Firm | 145 | 144 | 141 | 139 | 136 | 129 | 142 | 139 | 136 | 138 | 144 | 145 |
| Loss | 163 | 152 | 139 | 168 | 193 | 207 | 231 | 215 | 176 | 149 | 156 | 180 |
| Firm Load | 2,002 | 1,877 | 1,729 | 1,664 | 1,867 | 2,275 | 2,529 | 2,371 | 1,976 | 1,711 | 1,788 | 2,029 |
| Light Load | 1,850 | 1,750 | 1,600 | 1,499 | 1,676 | 2,057 | 2,266 | 2,123 | 1,764 | 1,533 | 1,661 | 1,883 |
| Heavy Load | 2,121 | 1,971 | 1,823 | 1,796 | 2,017 | 2,435 | 2,754 | 2,550 | 2,161 | 1,840 | 1,889 | 2,154 |
| System Load | 2,002 | 1,877 | 1,729 | 1,664 | 1,867 | 2,275 | 2,529 | 2,371 | 1,976 | 1,711 | 1,788 | 2,029 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,002 | 1,877 | 1,729 | 1,664 | 1,867 | 2,275 | 2,529 | 2,371 | 1,976 | 1,711 | 1,788 | 2,029 |

### Peak Load (Megawatts)

| | Jan. 2012 | Feb. 2012 | Mar. 2012 | Apr. 2012 | May. 2012 | Jun. 2012 | Jul. 2012 | Aug. 2012 | Sep. 2012 | Oct. 2012 | Nov. 2012 | Dec. 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -13 | -13 | -12 | -13 | -27 | -41 | -43 | -38 | -28 | -21 | -14 | -13 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,664 | 2,560 | 2,472 | 2,037 | 2,999 | 3,458 | 3,570 | 3,234 | 2,931 | 2,193 | 2,503 | 2,963 |
| System Peak (1 Hour) | 2,664 | 2,560 | 2,472 | 2,037 | 2,999 | 3,458 | 3,570 | 3,234 | 2,931 | 2,193 | 2,503 | 2,963 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,664 | 2,560 | 2,472 | 2,037 | 2,999 | 3,458 | 3,570 | 3,234 | 2,931 | 2,193 | 2,503 | 2,963 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2013 | Feb. 2013 | Mar. 2013 | Apr. 2013 | May. 2013 | Jun. 2013 | Jul. 2013 | Aug. 2013 | Sep. 2013 | Oct. 2013 | Nov. 2013 | Dec. 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 853 | 762 | 651 | 503 | 482 | 572 | 676 | 672 | 540 | 533 | 668 | 857 |
| Commercial | 551 | 533 | 514 | 461 | 484 | 546 | 589 | 589 | 520 | 499 | 511 | 555 |
| Irrigation | 0 | 0 | 4 | 106 | 289 | 534 | 610 | 471 | 297 | 78 | 2 | 2 |
| Industrial | 320 | 315 | 308 | 312 | 309 | 323 | 323 | 325 | 341 | 342 | 336 | 320 |
| Additional Firm | 147 | 147 | 143 | 140 | 137 | 131 | 143 | 141 | 137 | 139 | 146 | 147 |
| Loss | 165 | 155 | 142 | 171 | 197 | 211 | 236 | 220 | 179 | 152 | 159 | 184 |
| Firm Load | 2,037 | 1,913 | 1,762 | 1,693 | 1,898 | 2,315 | 2,577 | 2,418 | 2,014 | 1,745 | 1,821 | 2,064 |
| Light Load | 1,883 | 1,783 | 1,630 | 1,526 | 1,704 | 2,093 | 2,309 | 2,165 | 1,798 | 1,563 | 1,692 | 1,916 |
| Heavy Load | 2,158 | 2,010 | 1,866 | 1,816 | 2,051 | 2,493 | 2,787 | 2,601 | 2,203 | 1,876 | 1,924 | 2,192 |
| System Load | 2,037 | 1,913 | 1,762 | 1,693 | 1,898 | 2,315 | 2,577 | 2,418 | 2,014 | 1,745 | 1,821 | 2,064 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,037 | 1,913 | 1,762 | 1,693 | 1,898 | 2,315 | 2,577 | 2,418 | 2,014 | 1,745 | 1,821 | 2,064 |

### Peak Load (Megawatts)

| | Jan. 2013 | Feb. 2013 | Mar. 2013 | Apr. 2013 | May. 2013 | Jun. 2013 | Jul. 2013 | Aug. 2013 | Sep. 2013 | Oct. 2013 | Nov. 2013 | Dec. 2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -15 | -14 | -14 | -15 | -30 | -45 | -48 | -43 | -32 | -23 | -16 | -15 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,702 | 2,578 | 2,511 | 2,064 | 3,056 | 3,529 | 3,647 | 3,304 | 2,984 | 2,224 | 2,537 | 3,016 |
| System Peak (1 Hour) | 2,702 | 2,578 | 2,511 | 2,064 | 3,056 | 3,529 | 3,647 | 3,304 | 2,984 | 2,224 | 2,537 | 3,016 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,702 | 2,578 | 2,511 | 2,064 | 3,056 | 3,529 | 3,647 | 3,304 | 2,984 | 2,224 | 2,537 | 3,016 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2014 | Feb. 2014 | Mar. 2014 | Apr. 2014 | May. 2014 | Jun. 2014 | Jul. 2014 | Aug. 2014 | Sep. 2014 | Oct. 2014 | Nov. 2014 | Dec. 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 864 | 772 | 659 | 509 | 490 | 585 | 695 | 690 | 552 | 542 | 678 | 869 |
| Commercial | 563 | 545 | 527 | 473 | 497 | 561 | 606 | 605 | 534 | 512 | 522 | 566 |
| Irrigation | 0 | 0 | 4 | 106 | 288 | 533 | 609 | 470 | 297 | 78 | 2 | 2 |
| Industrial | 327 | 321 | 314 | 318 | 315 | 329 | 329 | 332 | 348 | 349 | 343 | 326 |
| Additional Firm | 149 | 150 | 144 | 142 | 139 | 133 | 145 | 144 | 139 | 142 | 147 | 149 |
| Loss | 168 | 157 | 144 | 174 | 200 | 214 | 240 | 224 | 183 | 155 | 162 | 187 |
| Firm Load | 2,071 | 1,945 | 1,794 | 1,722 | 1,929 | 2,356 | 2,624 | 2,465 | 2,053 | 1,778 | 1,854 | 2,098 |
| Light Load | 1,915 | 1,814 | 1,660 | 1,552 | 1,732 | 2,130 | 2,352 | 2,207 | 1,832 | 1,593 | 1,723 | 1,948 |
| Heavy Load | 2,194 | 2,044 | 1,900 | 1,846 | 2,085 | 2,536 | 2,839 | 2,669 | 2,229 | 1,912 | 1,969 | 2,217 |
| System Load | 2,071 | 1,945 | 1,794 | 1,722 | 1,929 | 2,356 | 2,624 | 2,465 | 2,053 | 1,778 | 1,854 | 2,098 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,071 | 1,945 | 1,794 | 1,722 | 1,929 | 2,356 | 2,624 | 2,465 | 2,053 | 1,778 | 1,854 | 2,098 |

### Peak Load (Megawatts)

| | Jan. 2014 | Feb. 2014 | Mar. 2014 | Apr. 2014 | May. 2014 | Jun. 2014 | Jul. 2014 | Aug. 2014 | Sep. 2014 | Oct. 2014 | Nov. 2014 | Dec. 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -50 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,738 | 2,605 | 2,550 | 2,089 | 3,113 | 3,599 | 3,723 | 3,375 | 3,038 | 2,255 | 2,570 | 3,068 |
| System Peak (1 Hour) | 2,738 | 2,605 | 2,550 | 2,089 | 3,113 | 3,599 | 3,723 | 3,375 | 3,038 | 2,255 | 2,570 | 3,068 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,738 | 2,605 | 2,550 | 2,089 | 3,113 | 3,599 | 3,723 | 3,375 | 3,038 | 2,255 | 2,570 | 3,068 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2015 | Feb. 2015 | Mar. 2015 | Apr. 2015 | May. 2015 | Jun. 2015 | Jul. 2015 | Aug. 2015 | Sep. 2015 | Oct. 2015 | Nov. 2015 | Dec. 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 875 | 781 | 667 | 515 | 497 | 598 | 713 | 709 | 564 | 551 | 688 | 880 |
| Commercial | 575 | 557 | 540 | 484 | 510 | 577 | 624 | 622 | 548 | 524 | 534 | 578 |
| Irrigation | 0 | 0 | 4 | 106 | 288 | 534 | 610 | 471 | 297 | 78 | 2 | 2 |
| Industrial | 334 | 329 | 322 | 326 | 323 | 337 | 337 | 340 | 356 | 358 | 351 | 334 |
| Additional Firm | 151 | 152 | 147 | 144 | 141 | 134 | 147 | 145 | 141 | 144 | 149 | 150 |
| Loss | 171 | 160 | 147 | 177 | 203 | 218 | 245 | 229 | 186 | 158 | 165 | 190 |
| Firm Load | 2,106 | 1,979 | 1,827 | 1,752 | 1,963 | 2,399 | 2,676 | 2,516 | 2,093 | 1,813 | 1,888 | 2,134 |
| Light Load | 1,947 | 1,845 | 1,690 | 1,578 | 1,762 | 2,169 | 2,398 | 2,252 | 1,869 | 1,624 | 1,754 | 1,981 |
| Heavy Load | 2,232 | 2,079 | 1,934 | 1,878 | 2,135 | 2,567 | 2,895 | 2,723 | 2,272 | 1,949 | 2,005 | 2,255 |
| System Load | 2,106 | 1,979 | 1,827 | 1,752 | 1,963 | 2,399 | 2,676 | 2,516 | 2,093 | 1,813 | 1,888 | 2,134 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,106 | 1,979 | 1,827 | 1,752 | 1,963 | 2,399 | 2,676 | 2,516 | 2,093 | 1,813 | 1,888 | 2,134 |

### Peak Load (Megawatts)

| | Jan. 2015 | Feb. 2015 | Mar. 2015 | Apr. 2015 | May. 2015 | Jun. 2015 | Jul. 2015 | Aug. 2015 | Sep. 2015 | Oct. 2015 | Nov. 2015 | Dec. 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,776 | 2,634 | 2,589 | 2,117 | 3,174 | 3,674 | 3,805 | 3,450 | 3,096 | 2,289 | 2,605 | 3,121 |
| System Peak (1 Hour) | 2,776 | 2,634 | 2,589 | 2,117 | 3,174 | 3,674 | 3,805 | 3,450 | 3,096 | 2,289 | 2,605 | 3,121 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,776 | 2,634 | 2,589 | 2,117 | 3,174 | 3,674 | 3,805 | 3,450 | 3,096 | 2,289 | 2,605 | 3,121 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2016 | Feb. 2016 | Mar. 2016 | Apr. 2016 | May. 2016 | Jun. 2016 | Jul. 2016 | Aug. 2016 | Sep. 2016 | Oct. 2016 | Nov. 2016 | Dec. 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 886 | 791 | 675 | 520 | 504 | 612 | 732 | 727 | 576 | 560 | 697 | 892 |
| Commercial | 586 | 569 | 553 | 496 | 523 | 593 | 641 | 639 | 563 | 537 | 545 | 589 |
| Irrigation | 0 | 0 | 4 | 106 | 289 | 535 | 611 | 472 | 297 | 78 | 2 | 2 |
| Industrial | 342 | 336 | 329 | 333 | 330 | 345 | 345 | 348 | 364 | 366 | 359 | 342 |
| Additional Firm | 153 | 151 | 149 | 146 | 144 | 136 | 150 | 147 | 143 | 146 | 151 | 152 |
| Loss | 174 | 163 | 150 | 180 | 207 | 222 | 250 | 233 | 190 | 161 | 168 | 193 |
| Firm Load | 2,141 | 2,010 | 1,860 | 1,782 | 1,996 | 2,443 | 2,728 | 2,566 | 2,134 | 1,848 | 1,922 | 2,170 |
| Light Load | 1,980 | 1,874 | 1,721 | 1,606 | 1,792 | 2,208 | 2,445 | 2,298 | 1,905 | 1,655 | 1,785 | 2,014 |
| Heavy Load | 2,281 | 2,111 | 1,960 | 1,911 | 2,172 | 2,614 | 2,972 | 2,760 | 2,317 | 2,000 | 2,031 | 2,283 |
| System Load | 2,141 | 2,010 | 1,860 | 1,782 | 1,996 | 2,443 | 2,728 | 2,566 | 2,134 | 1,848 | 1,922 | 2,170 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,141 | 2,010 | 1,860 | 1,782 | 1,996 | 2,443 | 2,728 | 2,566 | 2,134 | 1,848 | 1,922 | 2,170 |

### Peak Load (Megawatts)

| | Jan. 2016 | Feb. 2016 | Mar. 2016 | Apr. 2016 | May. 2016 | Jun. 2016 | Jul. 2016 | Aug. 2016 | Sep. 2016 | Oct. 2016 | Nov. 2016 | Dec. 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,814 | 2,661 | 2,629 | 2,144 | 3,234 | 3,750 | 3,888 | 3,525 | 3,154 | 2,322 | 2,640 | 3,175 |
| System Peak (1 Hour) | 2,814 | 2,661 | 2,629 | 2,144 | 3,234 | 3,750 | 3,888 | 3,525 | 3,154 | 2,322 | 2,640 | 3,175 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,814 | 2,661 | 2,629 | 2,144 | 3,234 | 3,750 | 3,888 | 3,525 | 3,154 | 2,322 | 2,640 | 3,175 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2017 | Feb. 2017 | Mar. 2017 | Apr. 2017 | May. 2017 | Jun. 2017 | Jul. 2017 | Aug. 2017 | Sep. 2017 | Oct. 2017 | Nov. 2017 | Dec. 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 897 | 800 | 684 | 526 | 512 | 626 | 752 | 747 | 589 | 570 | 707 | 904 |
| Commercial | 599 | 582 | 566 | 508 | 536 | 609 | 659 | 657 | 577 | 550 | 556 | 601 |
| Irrigation | 0 | 0 | 4 | 106 | 289 | 535 | 612 | 473 | 298 | 78 | 2 | 2 |
| Industrial | 350 | 344 | 336 | 341 | 337 | 353 | 353 | 356 | 373 | 374 | 367 | 349 |
| Additional Firm | 154 | 155 | 151 | 147 | 145 | 138 | 152 | 149 | 145 | 147 | 153 | 155 |
| Loss | 177 | 165 | 152 | 183 | 210 | 226 | 254 | 238 | 194 | 164 | 171 | 196 |
| Firm Load | 2,177 | 2,046 | 1,893 | 1,812 | 2,030 | 2,487 | 2,781 | 2,618 | 2,176 | 1,884 | 1,956 | 2,207 |
| Light Load | 2,013 | 1,908 | 1,752 | 1,633 | 1,822 | 2,249 | 2,493 | 2,344 | 1,942 | 1,687 | 1,817 | 2,048 |
| Heavy Load | 2,307 | 2,150 | 1,996 | 1,956 | 2,194 | 2,662 | 3,030 | 2,816 | 2,362 | 2,038 | 2,067 | 2,343 |
| System Load | 2,177 | 2,046 | 1,893 | 1,812 | 2,030 | 2,487 | 2,781 | 2,618 | 2,176 | 1,884 | 1,956 | 2,207 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,177 | 2,046 | 1,893 | 1,812 | 2,030 | 2,487 | 2,781 | 2,618 | 2,176 | 1,884 | 1,956 | 2,207 |

### Peak Load (Megawatts)

| | Jan. 2017 | Feb. 2017 | Mar. 2017 | Apr. 2017 | May. 2017 | Jun. 2017 | Jul. 2017 | Aug. 2017 | Sep. 2017 | Oct. 2017 | Nov. 2017 | Dec. 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,853 | 2,692 | 2,669 | 2,172 | 3,295 | 3,826 | 3,972 | 3,602 | 3,211 | 2,357 | 2,675 | 3,230 |
| System Peak (1 Hour) | 2,853 | 2,692 | 2,669 | 2,172 | 3,295 | 3,826 | 3,972 | 3,602 | 3,211 | 2,357 | 2,675 | 3,230 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,853 | 2,692 | 2,669 | 2,172 | 3,295 | 3,826 | 3,972 | 3,602 | 3,211 | 2,357 | 2,675 | 3,230 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2018 | Feb. 2018 | Mar. 2018 | Apr. 2018 | May. 2018 | Jun. 2018 | Jul. 2018 | Aug. 2018 | Sep. 2018 | Oct. 2018 | Nov. 2018 | Dec. 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 909 | 810 | 692 | 532 | 520 | 640 | 772 | 766 | 602 | 579 | 717 | 917 |
| Commercial | 611 | 594 | 580 | 521 | 550 | 626 | 678 | 675 | 592 | 563 | 568 | 612 |
| Irrigation | 0 | 0 | 4 | 106 | 290 | 536 | 613 | 473 | 298 | 78 | 2 | 2 |
| Industrial | 358 | 352 | 344 | 349 | 345 | 361 | 361 | 364 | 381 | 383 | 375 | 357 |
| Additional Firm | 156 | 157 | 152 | 149 | 148 | 140 | 153 | 151 | 146 | 149 | 155 | 157 |
| Loss | 180 | 168 | 155 | 186 | 214 | 230 | 259 | 243 | 197 | 168 | 174 | 199 |
| Firm Load | 2,214 | 2,081 | 1,928 | 1,844 | 2,065 | 2,533 | 2,836 | 2,672 | 2,219 | 1,920 | 1,991 | 2,244 |
| Light Load | 2,047 | 1,941 | 1,784 | 1,661 | 1,854 | 2,290 | 2,542 | 2,392 | 1,981 | 1,720 | 1,850 | 2,083 |
| Heavy Load | 2,346 | 2,187 | 2,032 | 1,990 | 2,232 | 2,711 | 3,089 | 2,874 | 2,427 | 2,065 | 2,104 | 2,383 |
| System Load | 2,214 | 2,081 | 1,928 | 1,844 | 2,065 | 2,533 | 2,836 | 2,672 | 2,219 | 1,920 | 1,991 | 2,244 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,214 | 2,081 | 1,928 | 1,844 | 2,065 | 2,533 | 2,836 | 2,672 | 2,219 | 1,920 | 1,991 | 2,244 |

### Peak Load (Megawatts)

| | Jan. 2018 | Feb. 2018 | Mar. 2018 | Apr. 2018 | May. 2018 | Jun. 2018 | Jul. 2018 | Aug. 2018 | Sep. 2018 | Oct. 2018 | Nov. 2018 | Dec. 2018 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,893 | 2,722 | 2,711 | 2,201 | 3,356 | 3,903 | 4,058 | 3,679 | 3,269 | 2,392 | 2,712 | 3,287 |
| System Peak (1 Hour) | 2,893 | 2,722 | 2,711 | 2,201 | 3,356 | 3,903 | 4,058 | 3,679 | 3,269 | 2,392 | 2,712 | 3,287 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,893 | 2,722 | 2,711 | 2,201 | 3,356 | 3,903 | 4,058 | 3,679 | 3,269 | 2,392 | 2,712 | 3,287 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2019 | Feb. 2019 | Mar. 2019 | Apr. 2019 | May. 2019 | Jun. 2019 | Jul. 2019 | Aug. 2019 | Sep. 2019 | Oct. 2019 | Nov. 2019 | Dec. 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 921 | 820 | 701 | 538 | 527 | 654 | 793 | 787 | 615 | 589 | 728 | 929 |
| Commercial | 623 | 607 | 594 | 534 | 564 | 643 | 697 | 693 | 608 | 577 | 580 | 624 |
| Irrigation | 0 | 0 | 4 | 106 | 290 | 537 | 614 | 474 | 299 | 78 | 2 | 2 |
| Industrial | 366 | 360 | 352 | 356 | 353 | 369 | 369 | 372 | 390 | 392 | 384 | 366 |
| Additional Firm | 158 | 159 | 154 | 151 | 150 | 142 | 155 | 154 | 148 | 151 | 156 | 158 |
| Loss | 183 | 171 | 158 | 189 | 217 | 235 | 265 | 248 | 201 | 171 | 177 | 203 |
| Firm Load | 2,251 | 2,117 | 1,963 | 1,876 | 2,101 | 2,580 | 2,892 | 2,726 | 2,262 | 1,957 | 2,027 | 2,282 |
| Light Load | 2,081 | 1,974 | 1,816 | 1,690 | 1,886 | 2,333 | 2,592 | 2,441 | 2,020 | 1,753 | 1,884 | 2,118 |
| Heavy Load | 2,385 | 2,224 | 2,079 | 2,011 | 2,270 | 2,778 | 3,129 | 2,932 | 2,474 | 2,105 | 2,142 | 2,423 |
| System Load | 2,251 | 2,117 | 1,963 | 1,876 | 2,101 | 2,580 | 2,892 | 2,726 | 2,262 | 1,957 | 2,027 | 2,282 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,251 | 2,117 | 1,963 | 1,876 | 2,101 | 2,580 | 2,892 | 2,726 | 2,262 | 1,957 | 2,027 | 2,282 |

### Peak Load (Megawatts)

| | Jan. 2019 | Feb. 2019 | Mar. 2019 | Apr. 2019 | May. 2019 | Jun. 2019 | Jul. 2019 | Aug. 2019 | Sep. 2019 | Oct. 2019 | Nov. 2019 | Dec. 2019 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,933 | 2,752 | 2,753 | 2,229 | 3,417 | 3,981 | 4,144 | 3,758 | 3,327 | 2,428 | 2,749 | 3,343 |
| System Peak (1 Hour) | 2,933 | 2,752 | 2,753 | 2,229 | 3,417 | 3,981 | 4,144 | 3,758 | 3,327 | 2,428 | 2,749 | 3,343 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,933 | 2,752 | 2,753 | 2,229 | 3,417 | 3,981 | 4,144 | 3,758 | 3,327 | 2,428 | 2,749 | 3,343 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2020 | Feb. 2020 | Mar. 2020 | Apr. 2020 | May. 2020 | Jun. 2020 | Jul. 2020 | Aug. 2020 | Sep. 2020 | Oct. 2020 | Nov. 2020 | Dec. 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 932 | 830 | 710 | 544 | 535 | 669 | 814 | 807 | 629 | 599 | 738 | 942 |
| Commercial | 636 | 620 | 608 | 547 | 578 | 661 | 717 | 712 | 624 | 591 | 592 | 636 |
| Irrigation | 0 | 0 | 4 | 106 | 290 | 538 | 615 | 475 | 299 | 78 | 2 | 2 |
| Industrial | 374 | 368 | 360 | 365 | 361 | 378 | 377 | 381 | 399 | 401 | 393 | 374 |
| Additional Firm | 159 | 158 | 156 | 152 | 152 | 144 | 157 | 155 | 150 | 153 | 158 | 160 |
| Loss | 186 | 174 | 161 | 193 | 221 | 239 | 270 | 253 | 205 | 174 | 180 | 206 |
| Firm Load | 2,288 | 2,150 | 1,998 | 1,908 | 2,137 | 2,628 | 2,949 | 2,782 | 2,306 | 1,995 | 2,063 | 2,320 |
| Light Load | 2,115 | 2,005 | 1,849 | 1,719 | 1,918 | 2,376 | 2,643 | 2,491 | 2,059 | 1,787 | 1,917 | 2,153 |
| Heavy Load | 2,425 | 2,258 | 2,116 | 2,046 | 2,325 | 2,812 | 3,190 | 3,011 | 2,504 | 2,145 | 2,191 | 2,452 |
| System Load | 2,288 | 2,150 | 1,998 | 1,908 | 2,137 | 2,628 | 2,949 | 2,782 | 2,306 | 1,995 | 2,063 | 2,320 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,288 | 2,150 | 1,998 | 1,908 | 2,137 | 2,628 | 2,949 | 2,782 | 2,306 | 1,995 | 2,063 | 2,320 |

### Peak Load (Megawatts)

| | Jan. 2020 | Feb. 2020 | Mar. 2020 | Apr. 2020 | May. 2020 | Jun. 2020 | Jul. 2020 | Aug. 2020 | Sep. 2020 | Oct. 2020 | Nov. 2020 | Dec. 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -51 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 2,973 | 2,781 | 2,796 | 2,258 | 3,479 | 4,059 | 4,231 | 3,837 | 3,384 | 2,464 | 2,786 | 3,400 |
| System Peak (1 Hour) | 2,973 | 2,781 | 2,796 | 2,258 | 3,479 | 4,059 | 4,231 | 3,837 | 3,384 | 2,464 | 2,786 | 3,400 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 2,973 | 2,781 | 2,796 | 2,258 | 3,479 | 4,059 | 4,231 | 3,837 | 3,384 | 2,464 | 2,786 | 3,400 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2021 | Feb. 2021 | Mar. 2021 | Apr. 2021 | May. 2021 | Jun. 2021 | Jul. 2021 | Aug. 2021 | Sep. 2021 | Oct. 2021 | Nov. 2021 | Dec. 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 945 | 840 | 718 | 550 | 544 | 685 | 836 | 829 | 643 | 609 | 749 | 956 |
| Commercial | 649 | 633 | 622 | 560 | 593 | 679 | 737 | 731 | 640 | 605 | 605 | 648 |
| Irrigation | 0 | 0 | 4 | 107 | 291 | 538 | 616 | 475 | 299 | 78 | 2 | 2 |
| Industrial | 383 | 377 | 368 | 373 | 370 | 386 | 386 | 389 | 408 | 410 | 401 | 382 |
| Additional Firm | 161 | 162 | 157 | 154 | 153 | 146 | 159 | 157 | 151 | 154 | 160 | 162 |
| Loss | 189 | 177 | 164 | 196 | 225 | 243 | 275 | 258 | 209 | 178 | 184 | 210 |
| Firm Load | 2,327 | 2,189 | 2,034 | 1,941 | 2,174 | 2,677 | 3,007 | 2,839 | 2,352 | 2,034 | 2,101 | 2,360 |
| Light Load | 2,151 | 2,041 | 1,882 | 1,748 | 1,951 | 2,420 | 2,695 | 2,542 | 2,100 | 1,822 | 1,952 | 2,190 |
| Heavy Load | 2,478 | 2,300 | 2,144 | 2,081 | 2,365 | 2,864 | 3,233 | 3,073 | 2,554 | 2,201 | 2,220 | 2,493 |
| System Load | 2,327 | 2,189 | 2,034 | 1,941 | 2,174 | 2,677 | 3,007 | 2,839 | 2,352 | 2,034 | 2,101 | 2,360 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,327 | 2,189 | 2,034 | 1,941 | 2,174 | 2,677 | 3,007 | 2,839 | 2,352 | 2,034 | 2,101 | 2,360 |

### Peak Load (Megawatts)

| | Jan. 2021 | Feb. 2021 | Mar. 2021 | Apr. 2021 | May. 2021 | Jun. 2021 | Jul. 2021 | Aug. 2021 | Sep. 2021 | Oct. 2021 | Nov. 2021 | Dec. 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -47 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,015 | 2,813 | 2,839 | 2,288 | 3,540 | 4,138 | 4,321 | 3,917 | 3,442 | 2,501 | 2,824 | 3,458 |
| System Peak (1 Hour) | 3,015 | 2,813 | 2,839 | 2,288 | 3,540 | 4,138 | 4,321 | 3,917 | 3,442 | 2,501 | 2,824 | 3,458 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,015 | 2,813 | 2,839 | 2,288 | 3,540 | 4,138 | 4,321 | 3,917 | 3,442 | 2,501 | 2,824 | 3,458 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2022 | Feb. 2022 | Mar. 2022 | Apr. 2022 | May. 2022 | Jun. 2022 | Jul. 2022 | Aug. 2022 | Sep. 2022 | Oct. 2022 | Nov. 2022 | Dec. 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 957 | 851 | 728 | 557 | 552 | 700 | 858 | 851 | 658 | 619 | 760 | 969 |
| Commercial | 662 | 647 | 637 | 574 | 608 | 698 | 758 | 751 | 656 | 620 | 617 | 661 |
| Irrigation | 0 | 0 | 4 | 107 | 291 | 539 | 617 | 476 | 300 | 79 | 2 | 2 |
| Industrial | 392 | 385 | 377 | 382 | 378 | 395 | 395 | 398 | 417 | 419 | 411 | 391 |
| Additional Firm | 162 | 163 | 159 | 156 | 155 | 147 | 160 | 159 | 154 | 156 | 161 | 163 |
| Loss | 192 | 180 | 167 | 199 | 229 | 248 | 281 | 264 | 214 | 181 | 187 | 213 |
| Firm Load | 2,366 | 2,226 | 2,072 | 1,974 | 2,211 | 2,727 | 3,068 | 2,897 | 2,399 | 2,074 | 2,139 | 2,399 |
| Light Load | 2,187 | 2,076 | 1,917 | 1,779 | 1,985 | 2,465 | 2,749 | 2,594 | 2,142 | 1,857 | 1,987 | 2,227 |
| Heavy Load | 2,520 | 2,339 | 2,183 | 2,117 | 2,406 | 2,918 | 3,341 | 3,116 | 2,604 | 2,244 | 2,260 | 2,524 |
| System Load | 2,366 | 2,226 | 2,072 | 1,974 | 2,211 | 2,727 | 3,068 | 2,897 | 2,399 | 2,074 | 2,139 | 2,399 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,366 | 2,226 | 2,072 | 1,974 | 2,211 | 2,727 | 3,068 | 2,897 | 2,399 | 2,074 | 2,139 | 2,399 |

### Peak Load (Megawatts)

| | Jan. 2022 | Feb. 2022 | Mar. 2022 | Apr. 2022 | May. 2022 | Jun. 2022 | Jul. 2022 | Aug. 2022 | Sep. 2022 | Oct. 2022 | Nov. 2022 | Dec. 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,057 | 2,845 | 2,884 | 2,318 | 3,602 | 4,218 | 4,411 | 3,998 | 3,499 | 2,539 | 2,863 | 3,517 |
| System Peak (1 Hour) | 3,057 | 2,845 | 2,884 | 2,318 | 3,602 | 4,218 | 4,411 | 3,998 | 3,499 | 2,539 | 2,863 | 3,517 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,057 | 2,845 | 2,884 | 2,318 | 3,602 | 4,218 | 4,411 | 3,998 | 3,499 | 2,539 | 2,863 | 3,517 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2023 | Feb. 2023 | Mar. 2023 | Apr. 2023 | May. 2023 | Jun. 2023 | Jul. 2023 | Aug. 2023 | Sep. 2023 | Oct. 2023 | Nov. 2023 | Dec. 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 970 | 861 | 737 | 563 | 561 | 716 | 881 | 874 | 673 | 630 | 771 | 983 |
| Commercial | 675 | 660 | 652 | 588 | 623 | 717 | 779 | 771 | 673 | 635 | 630 | 673 |
| Irrigation | 0 | 0 | 4 | 107 | 291 | 540 | 617 | 477 | 300 | 79 | 2 | 2 |
| Industrial | 401 | 394 | 385 | 390 | 386 | 404 | 404 | 407 | 427 | 429 | 420 | 400 |
| Additional Firm | 165 | 166 | 160 | 158 | 156 | 149 | 162 | 160 | 155 | 157 | 164 | 165 |
| Loss | 195 | 183 | 170 | 203 | 233 | 252 | 286 | 269 | 218 | 185 | 190 | 217 |
| Firm Load | 2,406 | 2,264 | 2,109 | 2,008 | 2,250 | 2,778 | 3,129 | 2,957 | 2,446 | 2,114 | 2,177 | 2,440 |
| Light Load | 2,224 | 2,111 | 1,951 | 1,810 | 2,019 | 2,512 | 2,804 | 2,648 | 2,184 | 1,893 | 2,023 | 2,264 |
| Heavy Load | 2,549 | 2,379 | 2,223 | 2,167 | 2,431 | 2,973 | 3,408 | 3,180 | 2,656 | 2,287 | 2,300 | 2,590 |
| System Load | 2,406 | 2,264 | 2,109 | 2,008 | 2,250 | 2,778 | 3,129 | 2,957 | 2,446 | 2,114 | 2,177 | 2,440 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,406 | 2,264 | 2,109 | 2,008 | 2,250 | 2,778 | 3,129 | 2,957 | 2,446 | 2,114 | 2,177 | 2,440 |

### Peak Load (Megawatts)

| | Jan. 2023 | Feb. 2023 | Mar. 2023 | Apr. 2023 | May. 2023 | Jun. 2023 | Jul. 2023 | Aug. 2023 | Sep. 2023 | Oct. 2023 | Nov. 2023 | Dec. 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -16 | -17 | -34 | -51 | -54 | -48 | -36 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,100 | 2,877 | 2,929 | 2,349 | 3,664 | 4,298 | 4,503 | 4,080 | 3,557 | 2,578 | 2,903 | 3,576 |
| System Peak (1 Hour) | 3,100 | 2,877 | 2,929 | 2,349 | 3,664 | 4,298 | 4,503 | 4,080 | 3,557 | 2,578 | 2,903 | 3,576 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,100 | 2,877 | 2,929 | 2,349 | 3,664 | 4,298 | 4,503 | 4,080 | 3,557 | 2,578 | 2,903 | 3,576 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2024 | Feb. 2024 | Mar. 2024 | Apr. 2024 | May. 2024 | Jun. 2024 | Jul. 2024 | Aug. 2024 | Sep. 2024 | Oct. 2024 | Nov. 2024 | Dec. 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 982 | 872 | 746 | 569 | 569 | 733 | 905 | 897 | 688 | 640 | 783 | 996 |
| Commercial | 688 | 674 | 667 | 602 | 639 | 736 | 800 | 792 | 690 | 650 | 643 | 686 |
| Irrigation | 0 | 0 | 4 | 107 | 292 | 541 | 618 | 477 | 301 | 79 | 2 | 2 |
| Industrial | 410 | 403 | 394 | 399 | 395 | 413 | 413 | 417 | 437 | 438 | 430 | 409 |
| Additional Firm | 166 | 164 | 162 | 159 | 158 | 150 | 163 | 162 | 157 | 159 | 165 | 166 |
| Loss | 199 | 186 | 173 | 206 | 236 | 257 | 292 | 275 | 222 | 188 | 194 | 220 |
| Firm Load | 2,445 | 2,300 | 2,147 | 2,043 | 2,288 | 2,830 | 3,191 | 3,018 | 2,494 | 2,154 | 2,216 | 2,480 |
| Light Load | 2,261 | 2,144 | 1,987 | 1,841 | 2,054 | 2,559 | 2,859 | 2,702 | 2,227 | 1,930 | 2,059 | 2,302 |
| Heavy Load | 2,591 | 2,415 | 2,274 | 2,190 | 2,473 | 3,047 | 3,452 | 3,246 | 2,729 | 2,316 | 2,341 | 2,633 |
| System Load | 2,445 | 2,300 | 2,147 | 2,043 | 2,288 | 2,830 | 3,191 | 3,018 | 2,494 | 2,154 | 2,216 | 2,480 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,445 | 2,300 | 2,147 | 2,043 | 2,288 | 2,830 | 3,191 | 3,018 | 2,494 | 2,154 | 2,216 | 2,480 |

### Peak Load (Megawatts)

| | Jan. 2024 | Feb. 2024 | Mar. 2024 | Apr. 2024 | May. 2024 | Jun. 2024 | Jul. 2024 | Aug. 2024 | Sep. 2024 | Oct. 2024 | Nov. 2024 | Dec. 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -16 | -16 | -15 | -17 | -34 | -51 | -54 | -48 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,142 | 2,908 | 2,975 | 2,379 | 3,726 | 4,379 | 4,595 | 4,162 | 3,615 | 2,617 | 2,943 | 3,636 |
| System Peak (1 Hour) | 3,142 | 2,908 | 2,975 | 2,379 | 3,726 | 4,379 | 4,595 | 4,162 | 3,615 | 2,617 | 2,943 | 3,636 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,142 | 2,908 | 2,975 | 2,379 | 3,726 | 4,379 | 4,595 | 4,162 | 3,615 | 2,617 | 2,943 | 3,636 |

## 70th Percentile Sales and Load Forecast

### Average Load (Average Megawatts)

| | Jan. 2025 | Feb. 2025 | Mar. 2025 | Apr. 2025 | May. 2025 | Jun. 2025 | Jul. 2025 | Aug. 2025 | Sep. 2025 | Oct. 2025 | Nov. 2025 | Dec. 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 995 | 883 | 756 | 576 | 578 | 750 | 929 | 920 | 703 | 651 | 794 | 1,010 |
| Commercial | 702 | 688 | 683 | 616 | 654 | 756 | 822 | 812 | 708 | 665 | 656 | 698 |
| Irrigation | 0 | 0 | 4 | 107 | 292 | 541 | 619 | 478 | 301 | 79 | 2 | 2 |
| Industrial | 419 | 412 | 403 | 408 | 404 | 423 | 422 | 426 | 447 | 448 | 440 | 419 |
| Additional Firm | 168 | 169 | 163 | 161 | 159 | 152 | 165 | 163 | 158 | 160 | 167 | 168 |
| Loss | 202 | 189 | 176 | 210 | 240 | 262 | 298 | 280 | 227 | 192 | 197 | 224 |
| Firm Load | 2,486 | 2,341 | 2,186 | 2,078 | 2,328 | 2,883 | 3,254 | 3,079 | 2,543 | 2,196 | 2,255 | 2,521 |
| Light Load | 2,298 | 2,182 | 2,022 | 1,872 | 2,090 | 2,606 | 2,916 | 2,757 | 2,271 | 1,967 | 2,095 | 2,340 |
| Heavy Load | 2,634 | 2,459 | 2,314 | 2,228 | 2,515 | 3,104 | 3,521 | 3,333 | 2,762 | 2,361 | 2,395 | 2,664 |
| System Load | 2,486 | 2,341 | 2,186 | 2,078 | 2,328 | 2,883 | 3,254 | 3,079 | 2,543 | 2,196 | 2,255 | 2,521 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,486 | 2,341 | 2,186 | 2,078 | 2,328 | 2,883 | 3,254 | 3,079 | 2,543 | 2,196 | 2,255 | 2,521 |

### Peak Load (Megawatts)

| | Jan. 2025 | Feb. 2025 | Mar. 2025 | Apr. 2025 | May. 2025 | Jun. 2025 | Jul. 2025 | Aug. 2025 | Sep. 2025 | Oct. 2025 | Nov. 2025 | Dec. 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -17 | -16 | -15 | -17 | -34 | -50 | -54 | -47 | -35 | -26 | -18 | -16 |
| Demand Response (MW) | 0 | 0 | 0 | 0 | 0 | -80 | -78 | -71 | 0 | 0 | 0 | 0 |
| Firm Peak Load | 3,185 | 2,942 | 3,021 | 2,410 | 3,788 | 4,461 | 4,689 | 4,246 | 3,672 | 2,656 | 2,983 | 3,696 |
| System Peak (1 Hour) | 3,185 | 2,942 | 3,021 | 2,410 | 3,788 | 4,461 | 4,689 | 4,246 | 3,672 | 2,656 | 2,983 | 3,696 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,185 | 2,942 | 3,021 | 2,410 | 3,788 | 4,461 | 4,689 | 4,246 | 3,672 | 2,656 | 2,983 | 3,696 |

## 70th Percentile Sales and Load Forecast Annual Summary

### Billed Sales (Megawatt-hours)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 4,998,197 | 5,167,721 | 5,273,003 | 5,364,603 | 5,464,619 | 5,525,263 | 5,561,958 | 5,665,098 | 5,763,903 | 5,862,138 |
| Commercial | 3,841,226 | 3,979,546 | 4,103,786 | 4,221,377 | 4,338,345 | 4,429,590 | 4,516,234 | 4,634,665 | 4,750,970 | 4,867,680 |
| Irrigation | 1,788,305 | 1,784,413 | 1,778,302 | 1,774,653 | 1,771,697 | 1,762,943 | 1,760,293 | 1,757,644 | 1,754,982 | 1,757,530 |
| Industrial | 2,422,952 | 2,485,427 | 2,537,510 | 2,596,445 | 2,656,152 | 2,708,334 | 2,765,435 | 2,823,076 | 2,881,748 | 2,949,296 |
| Additional Firm | 1,182,934 | 1,143,360 | 1,162,503 | 1,177,194 | 1,194,104 | 1,210,114 | 1,227,715 | 1,240,656 | 1,257,431 | 1,274,235 |
| Firm Sales | 14,233,615 | 14,560,466 | 14,855,104 | 15,134,273 | 15,424,917 | 15,636,244 | 15,831,635 | 16,121,137 | 16,409,035 | 16,710,880 |
| System Sales | 14,233,615 | 14,560,466 | 14,855,104 | 15,134,273 | 15,424,917 | 15,636,244 | 15,831,635 | 16,121,137 | 16,409,035 | 16,710,880 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 14,233,615 | 14,560,466 | 14,855,104 | 15,134,273 | 15,424,917 | 15,636,244 | 15,831,635 | 16,121,137 | 16,409,035 | 16,710,880 |

### Generation Month Sales (Megawatt-hours)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 5,008,756 | 5,173,895 | 5,295,628 | 5,370,326 | 5,467,617 | 5,526,613 | 5,585,838 | 5,670,580 | 5,769,186 | 5,867,442 |
| Commercial | 3,847,698 | 3,985,286 | 4,120,615 | 4,226,640 | 4,342,236 | 4,433,210 | 4,533,961 | 4,639,717 | 4,755,936 | 4,872,680 |
| Irrigation | 1,788,324 | 1,784,413 | 1,778,308 | 1,774,655 | 1,771,695 | 1,762,944 | 1,760,299 | 1,757,645 | 1,754,984 | 1,757,531 |
| Industrial | 2,425,530 | 2,488,836 | 2,548,189 | 2,600,283 | 2,659,566 | 2,712,026 | 2,776,742 | 2,826,856 | 2,885,549 | 2,953,105 |
| Additional Firm | 1,182,934 | 1,143,360 | 1,162,503 | 1,177,194 | 1,194,104 | 1,210,114 | 1,227,715 | 1,240,656 | 1,257,431 | 1,274,235 |
| Firm Sales | 14,253,242 | 14,575,789 | 14,905,243 | 15,149,098 | 15,435,220 | 15,644,906 | 15,884,555 | 16,135,452 | 16,423,086 | 16,724,994 |
| System Sales | 14,253,242 | 14,575,789 | 14,905,243 | 15,149,098 | 15,435,220 | 15,644,906 | 15,884,555 | 16,135,452 | 16,423,086 | 16,724,994 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 14,253,242 | 14,575,789 | 14,905,243 | 15,149,098 | 15,435,220 | 15,644,906 | 15,884,555 | 16,135,452 | 16,423,086 | 16,724,994 |
| Loss | 1,396,358 | 1,431,623 | 1,464,372 | 1,489,006 | 1,517,378 | 1,537,731 | 1,560,455 | 1,585,976 | 1,614,586 | 1,644,050 |
| Required Generation | 15,649,599 | 16,007,412 | 16,369,615 | 16,638,104 | 16,952,598 | 17,182,637 | 17,445,010 | 17,721,429 | 18,037,673 | 18,369,045 |

### Average Load (Average Megawatts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 572 | 591 | 603 | 613 | 624 | 631 | 636 | 647 | 659 | 670 |
| Commercial | 439 | 455 | 469 | 482 | 496 | 506 | 516 | 530 | 543 | 556 |
| Irrigation | 204 | 204 | 202 | 203 | 202 | 201 | 200 | 201 | 200 | 201 |
| Industrial | 277 | 284 | 290 | 297 | 304 | 310 | 316 | 323 | 329 | 337 |
| Additional Firm | 135 | 130 | 133 | 134 | 137 | 139 | 140 | 142 | 144 | 146 |
| Loss | 159 | 163 | 167 | 170 | 173 | 176 | 178 | 181 | 184 | 188 |
| Firm Load | 1,786 | 1,827 | 1,864 | 1,899 | 1,935 | 1,961 | 1,986 | 2,023 | 2,059 | 2,097 |
| Light Load | 1,625 | 1,662 | 1,695 | 1,727 | 1,760 | 1,784 | 1,806 | 1,840 | 1,872 | 1,907 |
| Heavy Load | 1,914 | 1,958 | 1,996 | 2,034 | 2,072 | 2,100 | 2,127 | 2,167 | 2,205 | 2,246 |
| System Load | 1,786 | 1,827 | 1,864 | 1,899 | 1,935 | 1,961 | 1,986 | 2,023 | 2,059 | 2,097 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 1,786 | 1,827 | 1,864 | 1,899 | 1,935 | 1,961 | 1,986 | 2,023 | 2,059 | 2,097 |

### Peak Load (Megawatts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -8 | -14 | -20 | -26 | -32 | -37 | -43 | -48 | -54 | -54 |
| Demand Response (MW) | -37 | -46 | -59 | -73 | -78 | -78 | -78 | -78 | -78 | -78 |
| Firm Peak Load | 3,163 | 3,251 | 3,312 | 3,372 | 3,442 | 3,506 | 3,570 | 3,647 | 3,723 | 3,805 |
| System Peak (1 Hour) | 3,163 | 3,251 | 3,312 | 3,372 | 3,442 | 3,506 | 3,570 | 3,647 | 3,723 | 3,805 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,163 | 3,251 | 3,312 | 3,372 | 3,442 | 3,506 | 3,570 | 3,647 | 3,723 | 3,805 |

## 70th Percentile Sales and Load Forecast Annual Summary

### Billed Sales (Megawatt-hours)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 5,961,354 | 6,063,348 | 6,168,444 | 6,274,528 | 6,382,438 | 6,494,082 | 6,609,379 | 6,725,979 | 6,843,410 | 6,963,033 |
| Commercial | 4,986,002 | 5,107,332 | 5,231,854 | 5,358,132 | 5,486,963 | 5,619,179 | 5,755,039 | 5,892,744 | 6,031,827 | 6,172,410 |
| Irrigation | 1,759,999 | 1,762,512 | 1,764,992 | 1,767,421 | 1,769,836 | 1,772,211 | 1,774,580 | 1,776,882 | 1,779,178 | 1,781,428 |
| Industrial | 3,016,981 | 3,086,155 | 3,156,872 | 3,229,166 | 3,303,072 | 3,378,626 | 3,455,865 | 3,534,826 | 3,615,548 | 3,698,070 |
| Additional Firm | 1,293,573 | 1,306,995 | 1,322,898 | 1,339,087 | 1,356,188 | 1,368,805 | 1,383,131 | 1,396,756 | 1,413,077 | 1,424,582 |
| Firm Sales | 17,017,910 | 17,326,341 | 17,645,060 | 17,968,334 | 18,298,498 | 18,632,903 | 18,977,993 | 19,327,187 | 19,683,040 | 20,039,523 |
| System Sales | 17,017,910 | 17,326,341 | 17,645,060 | 17,968,334 | 18,298,498 | 18,632,903 | 18,977,993 | 19,327,187 | 19,683,040 | 20,039,523 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 17,017,910 | 17,326,341 | 17,645,060 | 17,968,334 | 18,298,498 | 18,632,903 | 18,977,993 | 19,327,187 | 19,683,040 | 20,039,523 |

### Generation Month Sales (Megawatt-hours)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 5,985,795 | 6,068,954 | 6,174,068 | 6,280,223 | 6,408,266 | 6,500,162 | 6,615,491 | 6,732,091 | 6,870,558 | 6,969,319 |
| Commercial | 5,004,786 | 5,112,545 | 5,237,103 | 5,363,456 | 5,507,297 | 5,624,743 | 5,760,638 | 5,898,354 | 6,053,651 | 6,178,073 |
| Irrigation | 1,760,006 | 1,762,513 | 1,764,993 | 1,767,423 | 1,769,843 | 1,772,212 | 1,774,581 | 1,776,884 | 1,779,184 | 1,781,429 |
| Industrial | 3,029,177 | 3,090,135 | 3,160,940 | 3,233,325 | 3,316,393 | 3,382,972 | 3,460,308 | 3,539,368 | 3,630,098 | 3,702,817 |
| Additional Firm | 1,293,573 | 1,306,995 | 1,322,898 | 1,339,087 | 1,356,188 | 1,368,805 | 1,383,131 | 1,396,756 | 1,413,077 | 1,424,582 |
| Firm Sales | 17,073,337 | 17,341,140 | 17,660,002 | 17,983,513 | 18,357,987 | 18,648,895 | 18,994,149 | 19,343,454 | 19,746,568 | 20,056,220 |
| System Sales | 17,073,337 | 17,341,140 | 17,660,002 | 17,983,513 | 18,357,987 | 18,648,895 | 18,994,149 | 19,343,454 | 19,746,568 | 20,056,220 |
| Firm Off-System Sales | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Sales | 17,073,337 | 17,341,140 | 17,660,002 | 17,983,513 | 18,357,987 | 18,648,895 | 18,994,149 | 19,343,454 | 19,746,568 | 20,056,220 |
| Loss | 1,677,711 | 1,704,311 | 1,735,564 | 1,767,251 | 1,803,616 | 1,832,610 | 1,866,602 | 1,901,014 | 1,940,245 | 1,971,159 |
| Required Generation | 18,751,049 | 19,045,451 | 19,395,566 | 19,750,764 | 20,161,603 | 20,481,505 | 20,860,751 | 21,244,468 | 21,686,813 | 22,027,379 |

### Average Load (Average Megawatts)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Residential | 681 | 693 | 705 | 717 | 730 | 742 | 755 | 769 | 782 | 796 |
| Commercial | 570 | 584 | 598 | 612 | 627 | 642 | 658 | 673 | 689 | 705 |
| Irrigation | 200 | 201 | 201 | 202 | 201 | 202 | 203 | 203 | 203 | 203 |
| Industrial | 345 | 353 | 361 | 369 | 378 | 386 | 395 | 404 | 413 | 423 |
| Additional Firm | 147 | 149 | 151 | 153 | 155 | 157 | 158 | 160 | 161 | 163 |
| Loss | 191 | 195 | 198 | 202 | 205 | 209 | 213 | 217 | 221 | 225 |
| Firm Load | 2,135 | 2,174 | 2,214 | 2,255 | 2,295 | 2,338 | 2,381 | 2,425 | 2,469 | 2,515 |
| Light Load | 1,941 | 1,977 | 2,013 | 2,050 | 2,087 | 2,126 | 2,165 | 2,205 | 2,245 | 2,286 |
| Heavy Load | 2,286 | 2,329 | 2,372 | 2,415 | 2,458 | 2,503 | 2,550 | 2,598 | 2,644 | 2,693 |
| System Load | 2,135 | 2,174 | 2,214 | 2,255 | 2,295 | 2,338 | 2,381 | 2,425 | 2,469 | 2,515 |
| Firm Off-System Load | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Load | 2,135 | 2,174 | 2,214 | 2,255 | 2,295 | 2,338 | 2,381 | 2,425 | 2,469 | 2,515 |

### Peak Load (Megawatts)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Energy Efficiency (MW) | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 | -54 |
| Demand Response (MW) | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 | -78 |
| Firm Peak Load | 3,888 | 3,972 | 4,058 | 4,144 | 4,231 | 4,321 | 4,411 | 4,503 | 4,595 | 4,689 |
| System Peak (1 Hour) | 3,888 | 3,972 | 4,058 | 4,144 | 4,231 | 4,321 | 4,411 | 4,503 | 4,595 | 4,689 |
| Firm Off-System Peak | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Peak Load | 3,888 | 3,972 | 4,058 | 4,144 | 4,231 | 4,321 | 4,411 | 4,503 | 4,595 | 4,689 |

## Hydroelectric and Thermal Plant Data

| Hydroelectric Power Plants | Nameplate kVA | Nameplate kW | Estimated Non-Coincidental Maximum kW |
|---|---|---|---|
| American Falls | 102,600 | 92,340 | 112,420 |
| Bliss | 86,250 | 75,000 | 80,000 |
| Brownlee | 650,444 | 585,400 | 728,000 |
| Cascade | 13,800 | 12,420 | 14,000 |
| Clear Lake | 3,125 | 2,500 (1) | 2,400 |
| Hells Canyon | 435,000 | 391,500 | 450,000 |
| Lower Salmon | 70,000 | 60,000 | 70,000 |
| Malad - Lower | 15,500 | 13,500 | 15,000 |
| Malad - Upper | 9,650 | 8,270 | 9,000 |
| Milner | 62,890 | 59,448 | 59,448 |
| Oxbow | 211,112 | 190,000 | 220,000 |
| Shoshone Falls | 14,900 | 12,500 (1) | 12,500 |
| Strike, C J | 90,000 | 82,800 | 89,000 |
| Swan Falls | 28,600 | 25,000 | 25,547 |
| Thousand Springs | 11,000 | 8,800 (1) | 8,000 |
| Twin Falls | 56,175 | 52,737 | 54,300 |
| Upper Salmon "A" | 18,000 | 18,000 | 20,000 |
| Upper Salmon "B" | 18,000 | 16,500 | 19,000 |
| **Total Hydro** | 1,897,046 | 1,706,715 | |

| Thermal, Natural Gas, and Diesel Power Plants | Generator Nameplate Rating Gross kVA | Generator Nameplate Rating Gross kW | Estimated Maximum Dependable Capability (MDC) Net kW |
|---|---|---|---|
| Bridger (IPC Share) | 811,053 | 770,501 | 706,667 |
| Boardman (IPC Share) | 59,000 (2) | 56,050 (2) | 58,500 (3) |
| Valmy (IPC Share) | 315,000 | 283,500 | 260,650 |
| **Total Thermal** | 1,185,053 | 1,110,051 | 1,025,817 |
| Bennett Mountain | 192,000 | 172,800 | 171,900 |
| Evander Andrews (Danskin) | 105,882 | 90,000 | 100,000 |
| **Total Natural Gas** | 297,882 | 262,800 | 271,900 |
| Salmon Diesel | 6,880 | 5,000 | 5,500 |
| **Total IPC Generation** | 3,386,862 | 3,084,566 | |

(1) A power factor rating of 0.8 is assumed on four units (Clear Lake, Unit #2 at Shoshone Falls, and Units #1 and #2 at 1000 Springs) with a total kVA rating of 6,127 kVA on which there is no nameplate kW rating.

(2) The Boardman generator nameplate ratings increased from 59,000 gross kVA to 67,600 gross kVA and from 56,050 gross kW to 64,200 gross kW. This was due to a rotor rewind, addition of H2 coolers, and static exciter.

(3) The HP/IP turbine was upgraded to boost generator output to 58,500 net kW.

**Idaho Power Company**
**Qualifying Facilities**
**Cogeneration and Small Power Production Projects**

| Project | Contract On-line Date | Contract End Date | Project | Contract On-line Date | Contract End Date |
|---|---|---|---|---|---|
| **Hydro Projects** | | | | | |
| Barber Dam | Apr-1989 | Apr-2024 | Lowline Canal | May-1985 | Apr-2005 |
| Birch Creek | Nov-1984 | Oct-2019 | Magic Reservoir | Jun-1989 | May-2024 |
| Black Canyon #3 | Apr-1984 | Apr-2019 | Malad River | May-1984 | Apr-2019 |
| Blind Canyon | Dec-1994 | Dec-2014 | Marco Ranches | Aug-1985 | Jul-2020 |
| Box Canyon | Feb-1984 | Feb-2019 | Mile 28 | Jun-1994 | May-2029 |
| Briggs Creek | Oct-1985 | Oct-2020 | Mitchell Butte | May-1989 | May-2024 |
| Bypass | Jun-1988 | Jun-2023 | Mora Drop | Oct-2006 | Estimated |
| Canyon Springs | Oct-1984 | Non firm | Mud Creek S&S | Feb-1982 | Feb-2017 |
| Cedar Draw | Jun-1984 | May-2019 | Mud Creek White | Jan-1986 | Jan-2021 |
| Clear Springs Trout | Nov-1983 | Oct-2018 | Owyhee Dam CSPP | Aug-1985 | Aug-2015 |
| Crystal Springs | Apr-1986 | Mar-2021 | Pigeon Cove | Oct-1984 | Oct-2019 |
| Curry Cattle Company | Jun-1983 | Jun-2018 | Pristine Springs | May-2005 | Apr-2015 |
| Dietrich Drop | Aug-1988 | Aug-2023 | Pristine Springs #3 | May-2005 | Apr-2015 |
| Elk Creek | May-1986 | May-2021 | Reynolds Irrigation | May-1986 | May-2021 |
| Falls River | Aug-1993 | Aug-2028 | Rim View | Nov-2000 | Non firm |
| Faulkner Ranch | Aug-1987 | Aug-2022 | Rock Creek #1 | Sep-1983 | Sep-2018 |
| Fisheries Development Co | Jul-1990 | Non firm | Rock Creek #2 | Apr-1989 | Mar-2024 |
| Geo Bon #2 | Nov-1986 | Nov-2021 | Sagebrush | Sep-1985 | Aug-2020 |
| Hailey CSPP | Jun-1985 | Jun-2020 | Sahko Hydro | Jun-2006 | Non firm |
| Hazelton A | Jun-1990 | Jun-2010 | Schaffner | Aug-1986 | Jul-2021 |
| Hazelton B | May-1993 | Apr-2028 | Shingle Creek | Aug-1983 | Jul-2018 |
| Horseshoe Bend Hydroelectric | Sep-1995 | Sep-2030 | Shoshone #2 | May-1996 | Apr-2031 |
| Jim Knight | Jun-1985 | Jun-2020 | Shoshone CSPP | Jun-1982 | Jun-2017 |
| Kasel and Witherspoon | Mar-1984 | Feb-2019 | Snake River Pottery | Nov-1984 | Nov-2019 |
| Koyle Small Hydro | Apr-1984 | Mar-2019 | Snedigar | Jan-1985 | Dec-2019 |
| Lateral #10 | May-1985 | Apr-2020 | Sunshine Power #2 | Dec-1987 | Dec-2022 |
| Lemoyne | Jun-1985 | Jun-2020 | Tiber Dam | Jun-2004 | May-2024 |
| Little Wood Rvr Res | Feb-1985 | Feb-2020 | Trout–Co | Dec-1986 | Nov-2021 |
| Littlewood–Arkoosh | Aug-1986 | Jul-2021 | Tunnel #1 | Jun-1993 | May-2028 |
| Low Line Midway Hydro | Mar-2007 | Estimated | White Water Ranch | Aug-1985 | Jul-2020 |
| Lowline #2 | Apr-1988 | Apr-2023 | Wilson Lake Hydro | May-1993 | May-2028 |
| **Total Hydro Nameplate MW Rating** | | **141.10** | | | |
| **Thermal Projects** | | | | | |
| Magic Valley | Nov-1996 | Nov-2016 | Simplot Pocatello | Mar-2006 | Feb-2016 |
| Magic West | Dec-1996 | Nov-2016 | TASCO–Nampa | Sep-2003 | Aug-2008 |
| | | | TASCO–Twin Falls | Aug-2001 | Aug-2006 |
| **Total Thermal Nameplate MW Rating** | | **37.00** | | | |
| **Biomass Projects** | | | | | |
| CO-GEN CO | Jan-2006 | Jan-2007 | Pocatello Waste | Dec-1985 | Dec-2020 |
| Emmett Facility | Dec-2007 | Estimated | Tamarack CSPP | Jun-1983 | May-2018 |
| Hidden Hollow Landfill Gas | Oct-2006 | Sep-2026 | Treasure Valley digester | May-2007 | Estimated |
| | | | Vaagen Brothers Lumber Inc | Sep-1995 | Aug-2010 |
| **Total Biomass Nameplate MW Rating** | | **43.26** | | | |
| **Wind Projects** | | | | | |
| Arrow Rock Wind | Dec-2007 | Estimated | Lewandowski Farms | Mar-2005 | Mar-2010 |
| Burley Butte Wind | Dec-2007 | Estimated | Milner Dam Wind | Dec-2007 | Estimated |
| Cassia Farm | Dec-2007 | Estimated | Notch Butte Wind | Dec-2007 | Estimated |
| Cassia Gulch | Dec-2007 | Estimated | Oregon Trail Wind | Dec-2007 | Estimated |
| Fossil Gulch Wind | Sep-2005 | Sep-2025 | Pilgrim Stage Station Wind | Dec-2007 | Estimated |
| Golden Valley Wind | Dec-2007 | Estimated | Salmon Falls Wind | Dec-2007 | Estimated |
| Horseshoe Bend Wind Park | Feb-2006 | Feb-2026 | Thousand Springs Wind | Dec-2007 | Estimated |
| Lava Beds Wind | Dec-2007 | Estimated | Tuana Gulch Wind | Dec-2007 | Estimated |
| **Total Wind Nameplate MW Rating** | | **206.80** | | | |
| **Geothermal Projects** | | | | | |
| Raft River Geothermal #1 | Jan-2007 | Estimated | | | |
| **Total Geothermal Nameplate MW rating** | | **10.00** | | | |
| **Total Nameplate MW Rating** | | **438.16** | | | |

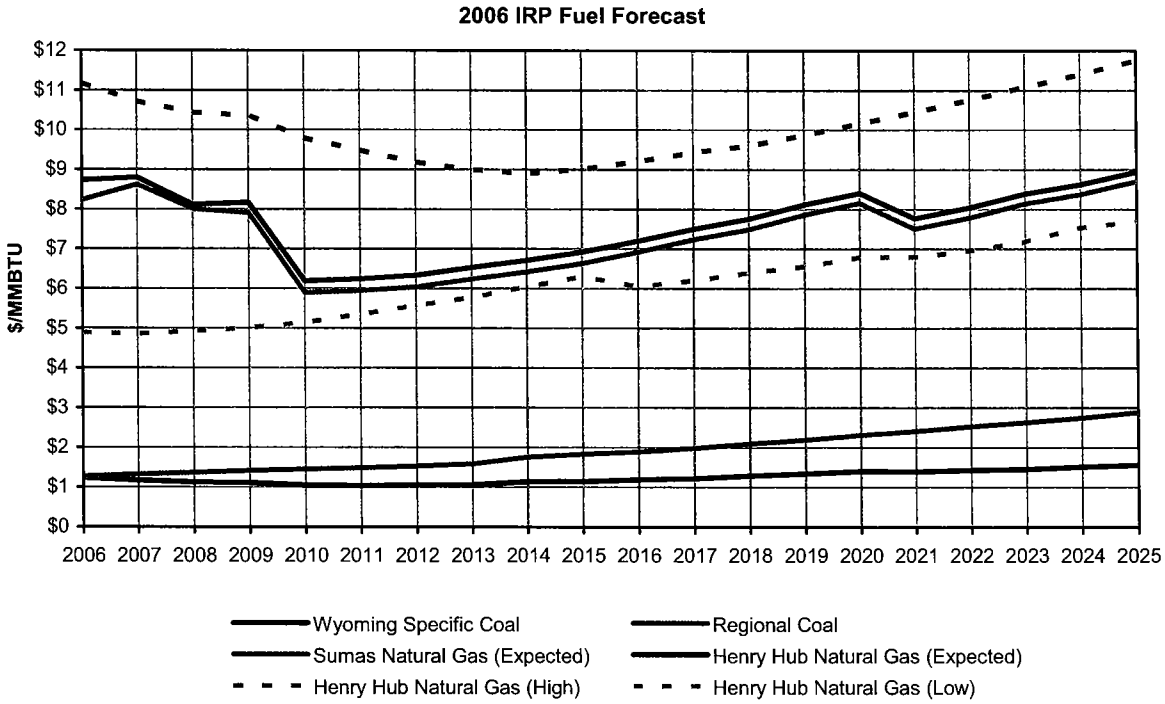
**Cogeneration and Small Power Production Project (CSPP) Generation Information**

The above is a summary of the Nameplate rating for the CSPP projects under contract with Idaho Power. In the case of CSPP projects, Nameplate rating of the actual generation units is not an accurate or reasonable estimate of the actual energy these projects will deliver to Idaho Power. Historical generation information, resource specific industry standard capacity factors, and other known and measurable operating characteristics are accounted for in determining a reasonable estimate of the energy these projects will produce. The application of this information to the portfolio of CSPP projects resulted in the average annual MW from CSPP projects being 130 MW.

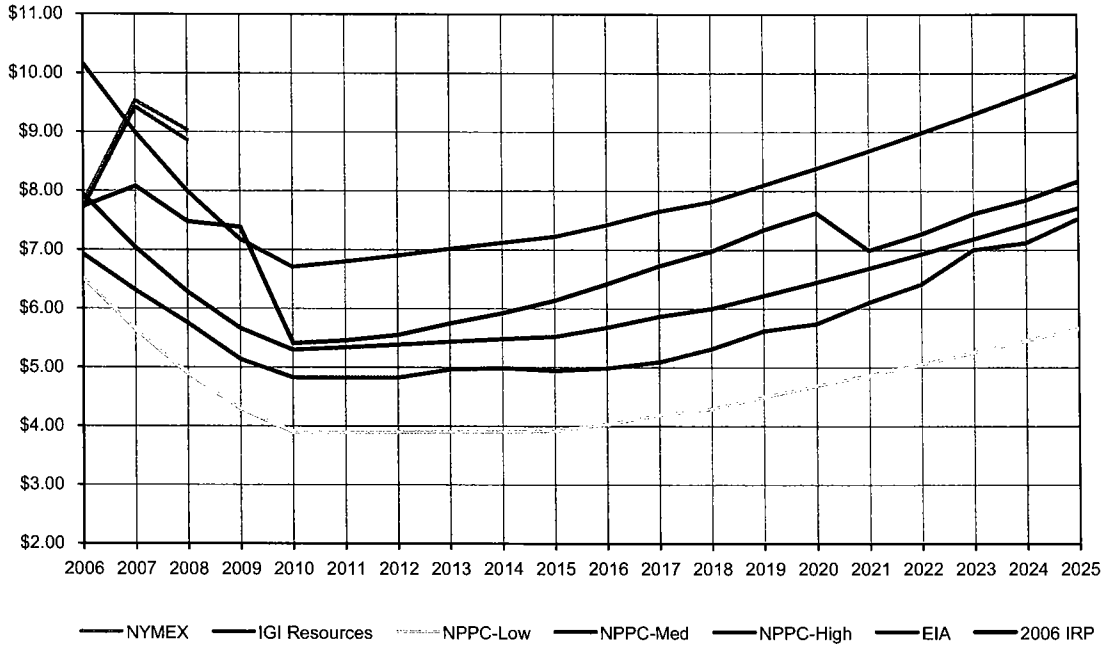
## Coal and Natural Gas Price Forecasts Used in Aurora Modeling ($/MMBTU Delivered–Nominal)

| Year | Wyoming Specific Coal[1] | Regional Coal[2] | Sumas Natural Gas (Expected) | Henry Hub Natural Gas (Expected) | Henry Hub Natural Gas (High) | Henry Hub Natural Gas (Low) |
|---|---|---|---|---|---|---|
| 2006 | $1.24 | $1.27 | $8.23 | $8.73 | $11.16 | $4.89 |
| 2007 | $1.17 | $1.32 | $8.62 | $8.79 | $10.71 | $4.86 |
| 2008 | $1.13 | $1.37 | $8.00 | $8.11 | $10.43 | $4.92 |
| 2009 | $1.11 | $1.41 | $7.91 | $8.17 | $10.36 | $5.01 |
| 2010 | $1.05 | $1.45 | $5.90 | $6.19 | $9.79 | $5.14 |
| 2011 | $1.03 | $1.49 | $5.95 | $6.24 | $9.48 | $5.35 |
| 2012 | $1.06 | $1.53 | $6.04 | $6.33 | $9.18 | $5.57 |
| 2013 | $1.07 | $1.58 | $6.24 | $6.53 | $9.00 | $5.78 |
| 2014 | $1.14 | $1.75 | $6.42 | $6.71 | $8.90 | $6.05 |
| 2015 | $1.15 | $1.83 | $6.64 | $6.92 | $9.01 | $6.30 |
| 2016 | $1.19 | $1.90 | $6.92 | $7.20 | $9.20 | $6.05 |
| 2017 | $1.22 | $1.98 | $7.23 | $7.50 | $9.43 | $6.20 |
| 2018 | $1.29 | $2.09 | $7.49 | $7.75 | $9.60 | $6.40 |
| 2019 | $1.34 | $2.19 | $7.86 | $8.12 | $9.87 | $6.56 |
| 2020 | $1.40 | $2.31 | $8.16 | $8.41 | $10.16 | $6.79 |
| 2021 | $1.39 | $2.41 | $7.51 | $7.77 | $10.45 | $6.80 |
| 2022 | $1.43 | $2.52 | $7.79 | $8.04 | $10.76 | $6.96 |
| 2023 | $1.45 | $2.63 | $8.14 | $8.39 | $11.08 | $7.18 |
| 2024 | $1.52 | $2.74 | $8.38 | $8.62 | $11.40 | $7.54 |
| 2025 | $1.56 | $2.88 | $8.70 | $8.94 | $11.74 | $7.69 |

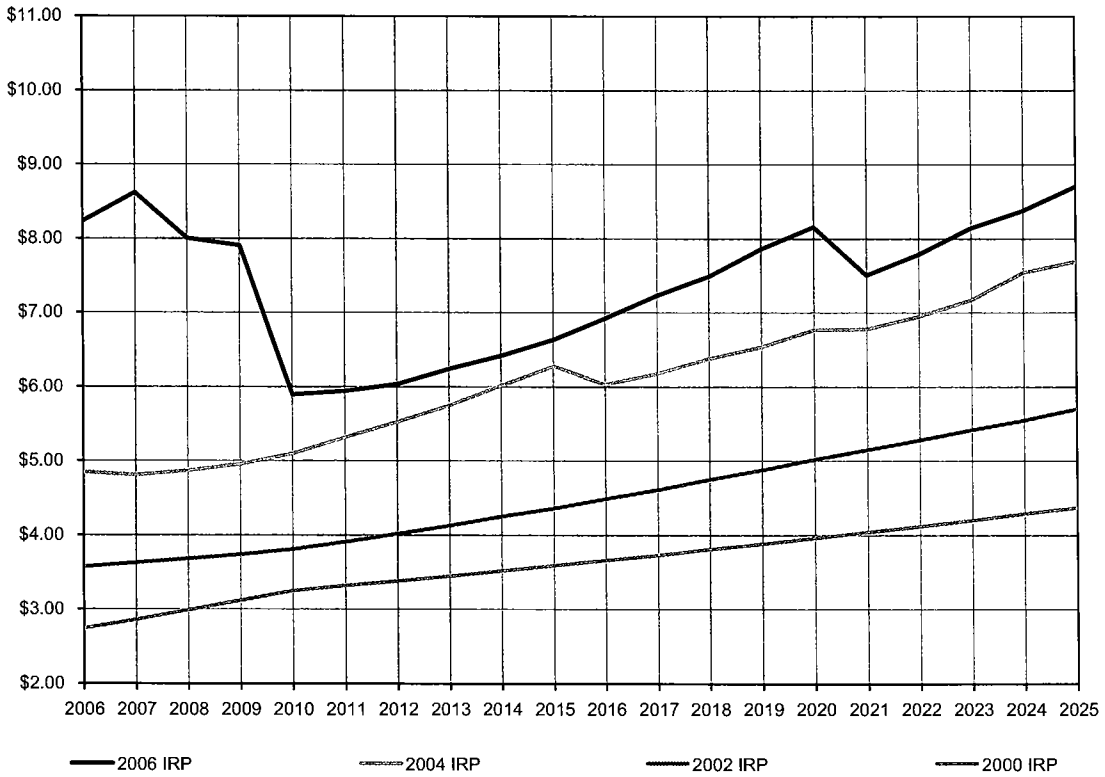
[1] Used in the Aurora analysis for a Wyoming specific coal resource.
[2] Used in the Aurora analysis for a non-location specific, regional coal resource.

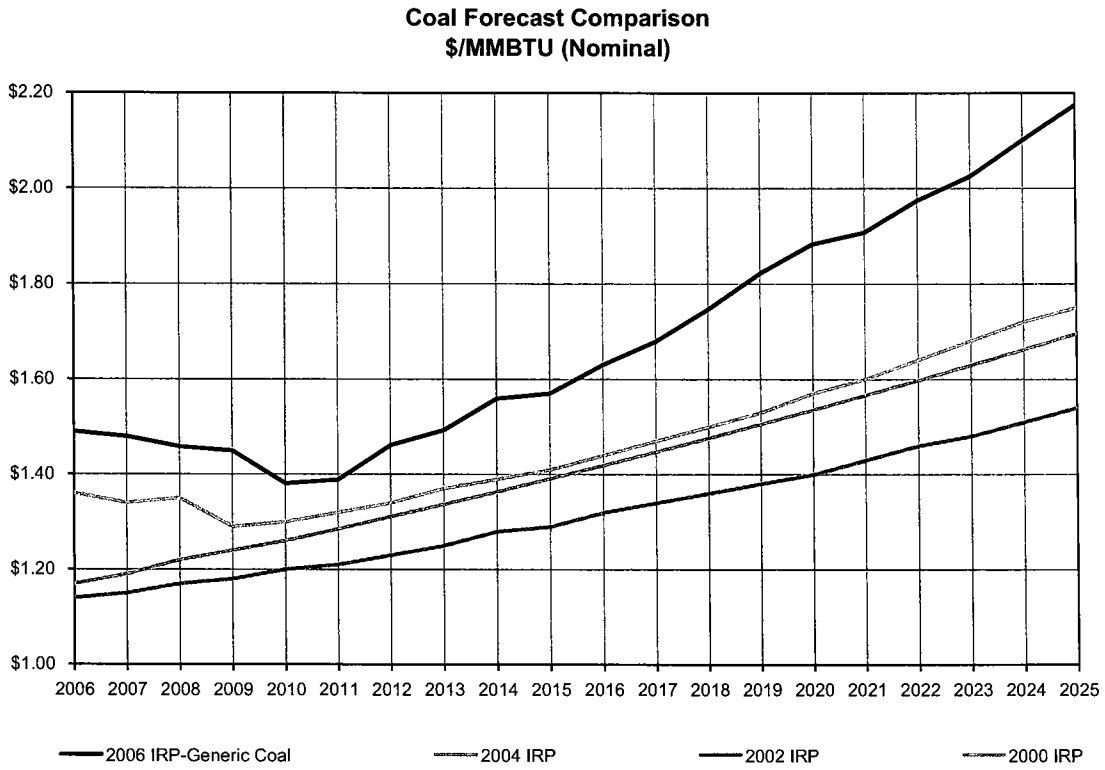


**Natural Gas Forecast Source Comparison**
**$/MMBTU (Nominal)**




**Natural Gas Forecast Comparison**
**$/MMBTU (Nominal)**




Coal Forecast Comparison
$/MMBTU (Nominal)
$2.20
$2.00
$1.80
$1.60
$1.40
$1.20
$1.00
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
2006 IRP-Generic Coal
2004 IRP
2002 IRP
2000 IRP

2006 Integrated Resource Plan

## Key Financial and Forecast Assumptions

## Resource Cost Analysis

| Financing Cap Structure and Cost | |
|---|---|
| **Composition** | |
| Debt | 50.54% |
| Preferred | 0.00% |
| Common | 49.46% |
| Total | 100.00% |
| **Cost** | |
| Debt | 5.65% |
| Preferred | 0.00% |
| Common | 10.50% |
| Average Weighted Cost | 8.05% |

| Financial Assumptions and Factors | |
|---|---|
| Plant Operating (Book) Life | 30 Years |
| Discount Rate (aka WACC) | 6.93% |
| Composite Tax Rate | 39.10% |
| Deferred Rate | 35.00% |
| General O&M Esc Rate | 3.00% |
| Emission Adder Esc Rate | 2.26% |
| Annual Prop Tax Rate (% if Invest) | 0.41% |
| Prop Tax Esc Rate | 0.00% |
| Annual Insurance Prems (% of Invest) | 0.25% |
| Insurance Esc Rate | 5.00% |
| AFUDC Rate (Annual) | 6.75% |
| Prod Tax Credits (First 10 years of operations) | $19/MWh[1] |
| Prod Tax Credits Esc Rate | 3.00% |

[1] For those wind and geothermal projects in service by 12-31-2008

| Emission Adder Costs (2006 Dollars) | |
|---|---|
| (adders are brought into the analysis beginning in 2012) | |
| CO2 | $13.62 per ton |
| NOx | $2,600 per ton during May–September |
| Mercury | $1,443/oz in years 2012–2017; $1,731/oz in year 2018 and beyond |

| Emissions Limits (pounds per MWh by technology) | | | | | | |
|---|---|---|---|---|---|---|
| | Pulv. Coal | IGCC | IGCC w/Seq. | CFB Coal | SCCT | CCCT |
| CO2 | 1,800 | 1,717 | 258 | 1,800 | 1,164 | 822 |
| NOx | 0.7 | 1.1 | 1.1 | 1.6 | 0.2 | 0.0 |
| Mercury | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0 | 0 |

| Fuel Forecast Base Case ($ per MMBTU) | | | | | | |
|---|---|---|---|---|---|---|
| Year | Gas | Generic Coal[1] | Nuclear | Biomass | Minemouth Wyoming Coal[2] | NW Railed Coal[3] |
| 2006 | $8.23 | $1.49 | $0.40 | $2.00 | $1.12 | $1.74 |
| 2007 | $8.62 | $1.48 | $0.40 | $2.00 | $1.05 | $1.79 |
| 2008 | $8.00 | $1.46 | $0.40 | $2.00 | $1.01 | $1.79 |
| 2009 | $7.91 | $1.45 | $0.40 | $2.00 | $0.99 | $1.79 |
| 2010 | $5.90 | $1.38 | $0.40 | $2.00 | $0.98 | $1.72 |
| 2011 | $5.95 | $1.39 | $0.40 | $2.00 | $0.97 | $1.74 |
| 2012 | $6.04 | $1.46 | $0.40 | $2.00 | $1.00 | $1.86 |
| 2013 | $6.24 | $1.49 | $0.40 | $2.00 | $1.00 | $1.92 |
| 2014 | $6.42 | $1.56 | $0.40 | $2.00 | $1.08 | $1.98 |
| 2015 | $6.64 | $1.57 | $0.40 | $2.00 | $1.08 | $1.99 |
| 2016 | $6.92 | $1.63 | $0.40 | $2.00 | $1.13 | $2.07 |
| 2017 | $7.23 | $1.68 | $0.40 | $2.00 | $1.15 | $2.14 |
| 2018 | $7.49 | $1.75 | $0.40 | $2.00 | $1.22 | $2.20 |
| 2019 | $7.86 | $1.82 | $0.40 | $2.00 | $1.28 | $2.30 |
| 2020 | $8.16 | $1.88 | $0.40 | $2.00 | $1.33 | $2.37 |
| 2021 | $7.51 | $1.91 | $0.40 | $2.00 | $1.33 | $2.42 |
| 2022 | $7.79 | $1.97 | $0.40 | $2.00 | $1.37 | $2.51 |
| 2023 | $8.14 | $2.03 | $0.40 | $2.00 | $1.39 | $2.60 |
| 2024 | $8.38 | $2.10 | $0.40 | $2.00 | $1.45 | $2.69 |
| 2025 | $8.70 | $2.17 | $0.40 | $2.00 | $1.50 | $2.78 |
| 2026 | $8.09 | $2.25 | $0.40 | $2.00 | $1.55 | $2.88 |
| 2027 | $8.44 | $2.67 | $0.40 | $2.00 | $1.44 | $3.78 |
| 2028 | $8.75 | $2.78 | $0.40 | $2.00 | $1.49 | $3.94 |
| 2029 | $9.08 | $2.89 | $0.40 | $2.00 | $1.53 | $4.11 |
| 2030 | $9.48 | $3.00 | $0.40 | $2.00 | $1.58 | $4.29 |
| 2031 | $9.61 | $3.21 | $0.40 | $2.00 | $1.64 | $4.65 |
| 2032 | $9.74 | $3.34 | $0.40 | $2.00 | $1.69 | $4.86 |
| 2033 | $9.88 | $3.47 | $0.40 | $2.00 | $1.74 | $5.07 |
| 2034 | $10.01 | $3.62 | $0.40 | $2.00 | $1.80 | $5.31 |
| 2035 | $10.14 | $3.77 | $0.40 | $2.00 | $1.86 | $5.54 |

[1] Used to estimate costs in the resource stack for the southern Idaho pulverized coal resource.

[2] Used to estimate costs in the resource stack for the Wyoming pulverized coal resource.

[3] Used to estimate costs in the resource stack for the regional pulverized, regional fluidized bed, regional IGCC with carbon sequestration, and regional IGCC coal projects.

## 2006 Integrated Resource Plan
## Cost Inputs and Operating Assumptions Resource Cost Analysis
## (All Costs in 2006 Dollars)

| Supply Side Resources | Plant Capital $/kW [1,3] | Interconnection Capital $/kW [4] | Total Capital $/kW | Total Investment $/kW [2] | Fixed O&M $/kW | Variable O&M $/MWh | Emissions $/MWh [7] | Heat Rate |
|---|---|---|---|---|---|---|---|---|
| Industrial Simple Cycle CT (170 MW) | $435 | $50 | $485 | $503 | $6.96 | $4.64 | $8.03 | 10,500 |
| Combined Cycle CT (225 MW) | $655 | $38 | $693 | $732 | $10.26 | $3.25 | $5.60 | 7,030 |
| Aeroderivative Simple Cycle CT (47 MW) | $696 | $69 | $765 | $793 | $9.27 | $9.27 | $8.03 | 9,960 |
| Combined Heat and Power (100 MW) | $902 | $60 | $962 | $998 | $7.24 | $4.77 | $0.00 | 5,000 |
| Wind (100 MW) | $1,500 | $110 | $1,610 | $1,675 | $23.19 | $1.16 | $0.00 | NA |
| South Idaho Pulverized Coal (600 MW) | $1,596 | $42 | $1,638 | $1,825 | $19.50 | $2.58 | $13.08 | 8,957 |
| Regional Pulverized Coal (600 MW) | $1,596 | $317 | $1,913 | $2,131 | $19.50 | $2.58 | $13.08 | 8,957 |
| Wyoming Pulverized Coal (600 MW) | $1,596 | $317 | $1,913 | $2,131 | $19.50 | $2.58 | $13.08 | 8,957 |
| Small Hydro Existing Facility (10 MW) | $1,880 | $60 | $1,940 | $2,085 | $15.21 | $3.23 | $0.00 | NA |
| Regional Fluidized Bed Coal (600 MW) | $1,734 | $317 | $2,051 | $2,285 | $21.35 | $3.08 | $13.59 | 9,208 |
| Advanced Nuclear (1,000 MW) | $2,137 | $34 | $2,171 | $2,491 | $65.58 | $0.48 | $0.00 | 10,400 |
| Geothermal Flash Steam | $2,121 | $130 | $2,251 | $2,420 | $111.29 | $0.00 | $0.00 | NA |
| Regional IGCC (600 MW) | $1,974 | $317 | $2,291 | $2,640 | $22.62 | $2.68 | $12.75 | 8,131 |
| Wood Residue Biomass (25 MW) | $2,319 | $130 | $2,449 | $2,553 | $92.74 | $10.43 | $0.00 | 14,500 |
| Regional IGCC with Carbon Sequest. (600 MW) | $2,369 | $317 | $2,686 | $2,993 | $27.14 | $3.21 | $2.53 | 8,400 |
| Small Hydro New Facility (10 MW) | $3,093 | $60 | $3,153 | $3,389 | $15.21 | $3.23 | $0.00 | NA |
| Solar Thermal (100 MW) | $3,233 | $110 | $3,343 | $3,503 | $54.85 | $0.00 | $0.00 | NA |
| Geothermal Binary Cycle (50 MW) | $3,184 | $220 | $3,404 | $3,706 | $124.00 | $1.80 | $0.00 | NA |
| Solar Photovoltaic (5 MW) | $4,878 | $60 | $4,938 | $5,130 | $11.29 | $0.00 | $0.00 | NA |

| Transmission Plus Market Purchase Alternatives | Capital $/kW [1,2] | Interconnection $/kW | Total Capital $/kW | Total Investment $/kW | Fixed O&M $/kW [6] | Market Purchase $/MWh [5] | Emissions $/MWh | Heat Rate |
|---|---|---|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | $179 | NA | $179 | $197 | $1.00 | $60.00 | NA | NA |
| Transmission–From Wyoming to IPC System (900 MW) | $313 | NA | $313 | $351 | $0.20 | $60.00 | NA | NA |
| Transmission–From NW McNary to IPC System (225 MW) | $340 | NA | $340 | $373 | $0.39 | $60.00 | NA | NA |
| Transmission–From Wyoming to IPC System (525 MW) | $362 | NA | $362 | $406 | $0.20 | $60.00 | NA | NA |
| Transmission–From Wyoming to Boise (900 MW) | $407 | NA | $407 | $457 | $0.20 | $60.00 | NA | NA |
| Transmission–From Wyoming to Boise (525 MW) | $482 | NA | $482 | $540 | $0.20 | $60.00 | NA | NA |
| Transmission–From NW McNary to Boise (225 MW) | $546 | NA | $546 | $600 | $0.39 | $60.00 | NA | NA |
| Transmission–From Montana to IPC System (225 MW) | $694 | NA | $694 | $783 | $0.31 | $60.00 | NA | NA |
| Transmission–From Montana to Boise (225 MW) | $788 | NA | $788 | $889 | $0.20 | $60.00 | NA | NA |
| Transmission–From Wyoming to IPC System (225 MW) | $844 | NA | $844 | $947 | $0.20 | $60.00 | NA | NA |
| Transmission–From Nevada South to IPC System (225 MW) | $851 | NA | $851 | $959 | $0.38 | $60.00 | NA | NA |
| Transmission–From Wyoming to Boise (225 MW) | $939 | NA | $939 | $1,053 | $0.31 | $60.00 | NA | NA |
| Transmission–From Nevada South to Boise (225 MW) | $945 | NA | $945 | $1,066 | $0.38 | $60.00 | NA | NA |
| Transmission–From NW Lolo to Boise (60 MW) | $953 | NA | $953 | $1,046 | $1.00 | $60.00 | NA | NA |

[1] Plant costs include engineering development costs, generating and ancillary equipment purchase and installation costs, as well as balance of plant construction.
[2] Total Investment includes capital costs and AFUDC.
[3] Cost inputs and operating assumptions based on estimates from the Northwest Power Planning Council's Fifth Power Plan, The Department of Energy's 2006 Energy Outlook, independent consultant data, and independent power developers.
[4] Assumes a generic transmission interconnection consisting of a substation at a power plant, radial transmission line , and termination at IPC system. Power plant substation: $4M to $10M, Radial line: $200K–550K per mile depending on rating (69kV, 138kV, 230kV, 3445kV), Termination at IPC System: $200K–$1M Assumes resources sited within 25 miles of IPC's system with the exception of regional coal and Wyoming coal resources.
[5] Transmission plus market purchase alternatives assume a transmission upgrade, with a market purchase of $60 per MWh.
[6] Fixed O&M excludes property taxes and insurance (separately calculated within the levelized resource cost analysis)
[7] Emission adders assume $CO_2$ at $13.62/ton; $NO_x$ at $2,600/ton; mercury at $1,443/oz.

# Levelized Resource Cost Tables

## Energy—Levelized Cost per MWh

## At Estimated Annual Capacity Factors (Baseload Service)

| Supply-Side Resources | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Cost per MWh | Capacity Factor |
|---|---|---|---|---|---|---|
| Geothermal Flash Steam with PTC (50 MW) | $26 | $9 | $0 | $0 | $35 | 95% |
| Geothermal Flash Steam without PTC (50 MW) | $26 | $22 | $0 | $0 | $47 | 95% |
| Advanced Nuclear (1,000 MW) | $33 | $15 | $4 | $0 | $53 | 90% |
| Small Hydro Existing Facility (10 MW) | $41 | $12 | $0 | $0 | $53 | 60% |
| Geothermal Binary Cycle with PTC (50 MW) | $40 | $15 | $0 | $0 | $55 | 95% |
| Combined Heat and Power (100 MW) | $13 | $9 | $38 | $0 | $60 | 90% |
| Wind with PTC (100 MW) | $54 | $6 | $0 | $0 | $61 | 31% |
| Wyoming Pulverized Coal (600 MW) | $29 | $10 | $11 | $12 | $61 | 88% |
| Regional Pulverized Coal (600 MW) | $29 | $10 | $17 | $12 | $67 | 88% |
| Geothermal Binary Cycle without PTC (50 MW) | $40 | $28 | $0 | $0 | $67 | 95% |
| South Idaho Pulverized Coal (600 MW) | $25 | $9 | $22 | $12 | $67 | 88% |
| Regional Fluidized Bed Coal (600 MW) | $31 | $11 | $17 | $12 | $71 | 88% |
| Wind without PTC (100 MW) | $54 | $19 | $0 | $0 | $73 | 31% |
| Regional IGCC with Carbon Sequest. (600 MW) | $45 | $14 | $16 | $2 | $76 | 80% |
| Regional IGCC (600 MW) | $39 | $12 | $15 | $11 | $78 | 80% |
| Combined Cycle CT (225 MW) | $10 | $7 | $55 | $5 | $78 | 85% |
| Small Hydro New Facility (10 MW) | $67 | $14 | $0 | $0 | $81 | 60% |
| Wood Residue Biomass (25 MW) | $32 | $37 | $30 | $0 | $99 | 80% |
| Industrial Simple Cycle CT (170 MW) | $10 | $9 | $83 | $7 | $109 | 59% |
| Aeroderivative Simple Cycle CT (47 MW) | $15 | $17 | $78 | $7 | $118 | 59% |
| Solar Thermal (100 MW) | $85 | $34 | $0 | $0 | $118 | 42% |
| Solar Photovoltaic (5 MW) | $174 | $23 | $0 | $0 | $197 | 30% |

| Transmission Plus Market Purchase Alternatives | Cost of Capital | Non-Fuel O&M | Energy | Emission Adders | Cost per MWh | Capacity Factor |
|---|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | $4 | $1 | $60 | $0 | $64 | 61% |
| Transmission–From Wyoming to IPC System (900 MW) | $7 | $1 | $60 | $0 | $67 | 61% |
| Transmission–From NW McNary to IPC System (225 MW) | $7 | $1 | $60 | $0 | $68 | 61% |
| Transmission–From Wyoming to IPC System (525 MW) | $8 | $1 | $60 | $0 | $68 | 61% |
| Transmission–From Wyoming to Boise (900 MW) | $9 | $1 | $60 | $0 | $69 | 61% |
| Transmission–From Wyoming to Boise (525 MW) | $10 | $1 | $60 | $0 | $71 | 61% |
| Transmission–From NW McNary to Boise (225 MW) | $11 | $1 | $60 | $0 | $72 | 61% |
| Transmission–From Montana to IPC System (225 MW) | $15 | $1 | $60 | $0 | $76 | 61% |
| Transmission–From Montana to Boise (225 MW) | $17 | $1 | $60 | $0 | $78 | 61% |
| Transmission–From Wyoming to IPC System (225 MW) | $18 | $2 | $60 | $0 | $79 | 61% |
| Transmission–From Nevada South to IPC System (225 MW) | $18 | $2 | $60 | $0 | $80 | 61% |
| Transmission–From Wyoming to Boise (225 MW) | $20 | $2 | $60 | $0 | $82 | 61% |
| Transmission–From NW Lolo to Boise (60 MW) | $20 | $2 | $60 | $0 | $82 | 61% |
| Transmission–From Nevada South to Boise (225 MW) | $20 | $2 | $60 | $0 | $82 | 61% |

| DSM Programs | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Cost per MWh | Capacity Factor |
|---|---|---|---|---|---|---|
| Commercial In-Place Construction (18 aMW) | $0 | $35 | $0 | $0 | $35 | NA |
| Industrial Efficiency Expansion (41 aMW) | $0 | $40 | $0 | $0 | $40 | NA |
| Residential In-Place Construction (29 aMW) | $0 | $44 | $0 | $0 | $44 | NA |

# Levelized Resource Cost Tables

## Energy—Levelized Cost per MWh

## At Peaking Service Capacity Factors **

| Supply-Side Resources | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Cost per MWh | Capacity Factor |
|---|---|---|---|---|---|---|
| Industrial Simple Cycle CT (170 MW) | $154 | $50 | $83 | $7 | $293 | 4% |
| Combined Cycle CT (225 MW) | $224 | $68 | $55 | $5 | $352 | 4% |
| Aeroderivative Simple Cycle CT (47 MW) | $242 | $74 | $78 | $7 | $402 | 4% |
| Combined Heat and Power (100 MW) | $305 | $64 | $38 | $0 | $407 | 4% |
| Wind with PTC (100 MW) | $452 | $133 | $0 | $0 | $585 | 4% |
| Wind without PTC (100 MW) | $452 | $146 | $0 | $0 | $598 | 4% |
| South Idaho Pulverized Coal (600 MW) | $579 | $136 | $22 | $12 | $748 | 4% |
| Small Hydro Existing Facility (10 MW) | $661 | $125 | $0 | $0 | $787 | 4% |
| Wyoming Pulverized Coal (600 MW) | $676 | $144 | $11 | $12 | $843 | 4% |
| Regional Pulverized Coal (600 MW) | $676 | $144 | $17 | $12 | $849 | 4% |
| Regional Fluidized Bed Coal (600 MW) | $725 | $157 | $17 | $12 | $911 | 4% |
| Regional IGCC (600 MW) | $838 | $171 | $15 | $11 | $1,035 | 4% |
| Advanced Nuclear (1,000 MW) | $790 | $349 | $4 | $0 | $1,144 | 4% |
| Regional IGCC with Carbon Sequest. (600 MW) | $949 | $201 | $16 | $2 | $1,168 | 4% |
| Geothermal Flash Steam with PTC (50 MW) | $653 | $531 | $0 | $0 | $1,183 | 4% |
| Geothermal Flash Steam without PTC (50 MW) | $653 | $543 | $0 | $0 | $1,196 | 4% |
| Wood Residue Biomass (25 MW) | $688 | $482 | $30 | $0 | $1,200 | 4% |
| Small Hydro New Facility (10 MW) | $1,075 | $160 | $0 | $0 | $1,235 | 4% |
| Solar Thermal (100 MW) | $945 | $375 | $0 | $0 | $1,320 | 4% |
| Solar Photovoltaic (5 MW) | $1,384 | $185 | $0 | $0 | $1,568 | 4% |
| Geothermal Binary Cycle with PTC (50 MW) | $1,000 | $622 | $0 | $0 | $1,622 | 4% |
| Geothermal Binary Cycle without PTC (50 MW) | $1,000 | $635 | $0 | $0 | $1,635 | 4% |

| Transmission Plus Market Purchase Alternatives | Cost of Capital | Non-Fuel O&M | Energy | Emission Adders | Cost per MWh | Capacity Factor |
|---|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | $60 | $9 | $60 | $0 | $130 | 4% |
| Transmission–From Wyoming to IPC System (900 MW) | $101 | $9 | $60 | $0 | $171 | 4% |
| Transmission–From NW McNary to IPC System (225 MW) | $115 | $11 | $60 | $0 | $186 | 4% |
| Transmission–From Wyoming to IPC System (525 MW) | $117 | $11 | $60 | $0 | $188 | 4% |
| Transmission–From Wyoming to Boise (900 MW) | $132 | $12 | $60 | $0 | $204 | 4% |
| Transmission–From Wyoming to Boise (525 MW) | $156 | $14 | $60 | $0 | $230 | 4% |
| Transmission–From NW McNary to Boise (225 MW) | $184 | $17 | $60 | $0 | $261 | 4% |
| Transmission–From Montana to IPC System (225 MW) | $240 | $21 | $60 | $0 | $322 | 4% |
| Transmission–From Montana to Boise (225 MW) | $273 | $24 | $60 | $0 | $356 | 4% |
| Transmission–From Wyoming to IPC System (225 MW) | $291 | $25 | $60 | $0 | $376 | 4% |
| Transmission–From Nevada South to IPC System (225 MW) | $294 | $26 | $60 | $0 | $381 | 4% |
| Transmission–From Wyoming to Boise (225 MW) | $323 | $28 | $60 | $0 | $411 | 4% |
| Transmission–From NW Lolo to Boise (60 MW) | $321 | $31 | $60 | $0 | $412 | 4% |
| Transmission–From Nevada South to Boise (225 MW) | $327 | $29 | $60 | $0 | $416 | 4% |

**** 330 Annual Operating Hours Assumed for Peaking Service (Approximately 4% of Total Hours)**

# Levelized Resource Cost Tables

## Capacity—Levelized Cost per kW per Month

## Cost of Capital and Fixed Operating Costs

| Supply-Side Resources | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Industrial Simple Cycle CT (170 MW) | $4 | $1 | $0 | $0 | $5 |
| Combined Cycle CT (225 MW) | $6 | $2 | $0 | $0 | $8 |
| Aeroderivative Simple Cycle CT (47 MW) | $7 | $2 | $0 | $0 | $8 |
| Combined Heat and Power (100 MW) | $8 | $2 | $0 | $0 | $10 |
| South Idaho Pulverized Coal (600 MW) | $16 | $4 | $0 | $0 | $20 |
| Small Hydro Existing Facility (10 MW) | $18 | $3 | $0 | $0 | $22 |
| Wyoming Pulverized Coal (600 MW) | $19 | $4 | $0 | $0 | $22 |
| Regional Pulverized Coal (600 MW) | $19 | $4 | $0 | $0 | $22 |
| Regional Fluidized Bed Coal (600 MW) | $20 | $4 | $0 | $0 | $24 |
| Regional IGCC (600 MW) | $23 | $5 | $0 | $0 | $28 |
| Advanced Nuclear (1,000 MW) | $22 | $10 | $0 | $0 | $31 |
| Regional IGCC with Carbon Sequest. (600 MW) | $26 | $5 | $0 | $0 | $32 |
| Wood Residue Biomass (25 MW) | $19 | $13 | $0 | $0 | $32 |
| Geothermal Flash Steam (50 MW) | $18 | $15 | $0 | $0 | $33 |
| Small Hydro New Facility (10 MW) | $30 | $4 | $0 | $0 | $34 |
| Solar Thermal (100 MW) | $26 | $10 | $0 | $0 | $36 |
| Solar Photovoltaic (5 MW) | $38 | $5 | $0 | $0 | $43 |
| Geothermal Binary Cycle (50 MW) | $28 | $17 | $0 | $0 | $45 |
| Wind (100 MW Nameplate; 5 MW On Peak) | $249 | $79 | $0 | $0 | $328 |

| Transmission Plus Market Purchase Alternatives | Cost of Capital | Non-Fuel O&M | Energy | Emission Adders | Total |
|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | $2 | $0 | $0 | $0 | $2 |
| Transmission–From Wyoming to IPC System (900 MW) | $3 | $0 | $0 | $0 | $3 |
| Transmission–From NW McNary to IPC System (225 MW) | $3 | $0 | $0 | $0 | $3 |
| Transmission–From Wyoming to IPC System (525 MW) | $3 | $0 | $0 | $0 | $4 |
| Transmission–From Wyoming to Boise (900 MW) | $4 | $0 | $0 | $0 | $4 |
| Transmission–From Wyoming to Boise (525 MW) | $5 | $0 | $0 | $0 | $5 |
| Transmission–From NW McNary to Boise (225 MW) | $5 | $0 | $0 | $0 | $6 |
| Transmission–From Montana to IPC System (225 MW) | $7 | $1 | $0 | $0 | $7 |
| Transmission–From Montana to Boise (225 MW) | $8 | $1 | $0 | $0 | $8 |
| Transmission–From Wyoming to IPC System (225 MW) | $8 | $1 | $0 | $0 | $9 |
| Transmission–From Nevada South to IPC System (225 MW) | $8 | $1 | $0 | $0 | $9 |
| Transmission–From Wyoming to Boise (225 MW) | $9 | $1 | $0 | $0 | $10 |
| Transmission–From NW Lolo to Boise (60 MW) | $9 | $1 | $0 | $0 | $10 |
| Transmission–From Nevada South to Boise (225 MW) | $9 | $1 | $0 | $0 | $10 |

| DSM Programs | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Residential In-Place Construction (111 MW Peak) | $0 | $6 | $0 | $0 | $6 |
| Industrial Efficiency Expansion (49 MW Peak) | $0 | $13 | $0 | $0 | $13 |
| Commercial In-Place Construction (27 MW Peak) | $0 | $14 | $0 | $0 | $14 |

## 2006 Integrated Resource Plan
# Cost Inputs Used for Resource Cost Analysis
### (All Costs in 2006 Dollars)

| | Plant $/kW | Interconnection $/kW | Total $/kW | Cap Factor | Fixed O&M $/kW | Variable O&M $/MWh | Emissions $/MWh | Heat Rate |
|---|---|---|---|---|---|---|---|---|
| **Supply Side Resources** | | | | | | | | |
| Industrial Simple Cycle CT (162 MW) | $435 | $94 | $529 | 59% | $6.96 | $4.64 | $8.03 | 10,500 |
| CCCT (540 MW) | $655 | $71 | $726 | 85% | $10.26 | $3.25 | $5.60 | 7,030 |
| Aero Simple Cycle CT (47 MW) | $696 | $60 | $756 | 59% | $9.27 | $9.27 | $8.03 | 9,960 |
| Combined Heat and Power (6 MW) | $902 | $60 | $962 | 90% | $7.24 | $4.77 | $0.00 | 5,000 |
| Wind (100 MW) | $1,500 | $110 | $1,610 | 31% | $23.19 | $1.16 | $0.00 | NA |
| South Idaho Pulverized Coal (600 MW) | $1,596 | $42 | $1,638 | 88% | $19.50 | $2.58 | $12.62 | 8,957 |
| Advanced Nuclear (1,100 MW) | $2,137 | $63 | $2,200 | 90% | $65.58 | $0.49 | $0.00 | 10,400 |
| Regional Pulverized Coal (600 MW) | $1,596 | $317 | $1,913 | 88% | $19.50 | $2.58 | $12.62 | 8,957 |
| Wyoming Pulverized Coal (575 MW) | $1,596 | $330 | $1,926 | 88% | $19.50 | $2.58 | $12.62 | 8,957 |
| Small Hydro Existing Facility (10 MW) | $1,880 | $60 | $1,940 | 60% | $15.21 | $3.23 | $0.00 | NA |
| Regional Fluidized Bed Coal (600 MW) | $1,734 | $317 | $2,051 | 88% | $21.35 | $3.08 | $13.12 | 9,208 |
| Regional IGCC (600 MW) | $1,974 | $317 | $2,291 | 80% | $22.62 | $2.68 | $12.29 | 8,131 |
| Geothermal Flash Steam | $2,121 | $220 | $2,341 | 95% | $111.29 | $0.00 | $0.00 | NA |
| Wood Residue Biomass (25 MW) | $2,319 | $60 | $2,379 | 80% | $92.74 | $10.43 | $0.00 | 14,500 |
| Regional IGCC with Carbon Sequest. (600 MW) | $2,369 | $317 | $2,686 | 80% | $27.14 | $3.21 | $2.07 | 8,400 |
| Geothermal Binary Cycle (50 MW) | $3,184 | $220 | $3,404 | 95% | $132.00 | $1.80 | $0.00 | NA |
| Small Hydro New Facility (10 MW) | $3,093 | $60 | $3,153 | 60% | $15.21 | $3.23 | $0.00 | NA |
| Solar Thermal (100 MW) | $3,233 | $60 | $3,293 | 42% | $54.89 | $0.00 | $0.00 | NA |
| Solar Photovoltaic (5 MW) | $4,878 | $60 | $4,938 | 30% | $11.30 | $0.00 | $0.00 | NA |
| **Transmission Plus Market Purchase Alternatives** | | | | | | | | |
| Transmission–From NW Lolo to IPC System (60 MW) | $179 | $0 | $179 | 61% | $1.00 | $60.00 | $0.00 | NA |
| Transmission–From NW McNary to IPC System (180 MW) | $424 | $0 | $424 | 61% | $0.39 | $60.00 | $0.00 | NA |
| Transmission–From Montana to IPC System (225 MW) | $694 | $0 | $694 | 61% | $0.31 | $60.00 | $0.00 | NA |
| Transmission–From NW McNary to Boise (180 MW) | $706 | $0 | $706 | 61% | $0.39 | $60.00 | $0.00 | NA |
| Transmission–From Montana to Boise (225 MW) | $788 | $0 | $788 | 61% | $0.20 | $60.00 | $0.00 | NA |
| Transmission–From Wyoming to IPC System (225 MW) | $844 | $0 | $844 | 61% | $0.20 | $60.00 | $0.00 | NA |
| Transmission–From Nevada South to IPC System (225 MW) | $851 | $0 | $851 | 61% | $0.38 | $60.00 | $0.00 | NA |
| Transmission–From Wyoming to Boise (225 MW) | $939 | $0 | $939 | 61% | $0.31 | $60.00 | $0.00 | NA |
| Transmission–From Nevada South to Boise (225 MW) | $945 | $0 | $945 | 61% | $0.38 | $60.00 | $0.00 | NA |
| Transmission–From NW Lolo to Boise (60 MW) | $953 | $0 | $953 | 61% | $1.00 | $60.00 | $0.00 | NA |

**Notes**

1. Plant costs include engineering development costs, generating and ancilary equipment purchase and installation costs, as well as balance of plant construction.
2. Cost inputs and operating assumptions based on estimates from the Northwest Power Planning Council's Fifth Power Plan, The Department of Energy's 2006 Energy Outlook, independent consultant data, and independent power developers.
3. All capital costs are shown before AFUDC and investment tax credits are applied.
4. Assumes a generic transmission interconnection consisting of a substation at a power plant, radial transmission line, and termination at IPC system.
   Power plant substation: $4M to $10M, Radial line: $200K–550K per mile depending on rating (69kV, 138kV, 230kV, 3445kV), Termination at IPC System: $200K–$1M
   Assumes resources sited within 25 miles of IPC's system with the exception of regional and Wyoming coal resources.
   Transmission plus market purchase alternatives assume a general transmission upgrade, with a market purchase of $60 per MWh at the end.

Levelized Resource Cost Tables

## Energy–Levelized Cost per Mwh

| Supply-Side Resources | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Geothermal Flash Steam with PTC (50 MW) | 26.91 | 9.15 | 0.00 | 0.00 | 36.06 |
| Geothermal Flash Steam without PTC (50 MW) | 26.91 | 21.65 | 0.00 | 0.00 | 48.56 |
| Advanced Nuclear (1,100 MW) | 33.52 | 15.32 | 4.41 | 0.00 | 53.24 |
| Small Hydro Existing Facility (10 MW) | 41.25 | 12.12 | 0.00 | 0.00 | 53.38 |
| Geothermal Binary Cycle with PTC (50 MW) | 39.66 | 16.49 | 0.00 | 0.00 | 56.15 |
| Combined Heat and Power (6 MW) | 12.75 | 9.19 | 38.20 | 0.00 | 60.15 |
| Wind with PTC (100 MW) | 54.34 | 6.49 | 0.00 | 0.00 | 60.83 |
| Wyoming Pulverized Coal (575 MW) | 28.95 | 9.68 | 11.04 | 11.25 | 60.92 |
| Regional Pulverized Coal (600 MW) | 28.95 | 9.68 | 16.77 | 11.25 | 66.64 |
| South Idaho Pulverized Coal (600 MW) | 24.78 | 9.33 | 21.70 | 11.25 | 67.06 |
| Geothermal Binary Cycle without PTC (50 MW) | 39.66 | 28.99 | 0.00 | 0.00 | 68.65 |
| Regional Fluidized Bed Coal (600 MW) | 31.03 | 10.91 | 17.24 | 11.70 | 70.87 |
| Wind without PTC (100 MW) | 54.34 | 18.99 | 0.00 | 0.00 | 73.33 |
| Regional IGCC with Carbon Sequest. (600 MW) | 44.71 | 13.80 | 15.72 | 1.84 | 76.07 |
| CCCT (540 MW) | 10.38 | 7.47 | 53.71 | 4.99 | 76.56 |
| Regional IGCC (600 MW) | 39.44 | 11.68 | 15.22 | 10.95 | 77.29 |
| Small Hydro New Facility (10 MW) | 67.05 | 14.28 | 0.00 | 0.00 | 81.33 |
| Wood Residue Biomass (25 MW) | 31.49 | 36.72 | 29.99 | 0.00 | 98.20 |
| Industrial Simple Cycle CT (162 MW) | 10.71 | 9.43 | 80.23 | 7.16 | 107.53 |
| Aero Simple Cycle CT (47 MW) | 15.31 | 17.06 | 76.10 | 7.16 | 115.62 |
| Solar Thermal (100 MW) | 83.48 | 33.53 | 0.00 | 0.00 | 117.02 |
| Solar Photovoltaic (5 MW) | 173.73 | 23.19 | 0.00 | 0.00 | 196.93 |

| Transmission Plus Market Purchase Alternatives | Cost of Capital | Non-Fuel O&M | Energy | Emission Adders | Total |
|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | 3.73 | 0.57 | 60.00 | 0.00 | 64.30 |
| Transmission–From NW McNary to IPC System (180 MW) | 8.84 | 0.84 | 60.00 | 0.00 | 69.67 |
| Transmission–From NW McNary to Boise (180 MW) | 14.70 | 1.33 | 60.00 | 0.00 | 76.03 |
| Transmission–From Montana to IPC System (225 MW) | 14.84 | 1.32 | 60.00 | 0.00 | 76.16 |
| Transmission–From Montana to Boise (225 MW) | 16.85 | 1.46 | 60.00 | 0.00 | 78.30 |
| Transmission–From Wyoming to IPC System (225 MW) | 17.94 | 1.55 | 60.00 | 0.00 | 79.49 |
| Transmission–From Nevada South to IPC System (225 MW) | 18.19 | 1.62 | 60.00 | 0.00 | 79.80 |
| Transmission–From Wyoming to Boise (225 MW) | 19.95 | 1.75 | 60.00 | 0.00 | 81.70 |
| Transmission–From NW Lolo to Boise (60 MW) | 19.83 | 1.91 | 60.00 | 0.00 | 81.74 |
| Transmission–From Nevada South to Boise (225 MW) | 20.20 | 1.79 | 60.00 | 0.00 | 81.99 |

| DSM Programs | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Commercial In-Place Construction (18 aMW) | 0.00 | 34.90 | 0.00 | 0.00 | 34.90 |
| Industrial Efficiency Expansion (41 aMW) | 0.00 | 39.70 | 0.00 | 0.00 | 39.70 |
| Residential In-Place Construction (29 aMW) | 0.00 | 43.89 | 0.00 | 0.00 | 43.89 |

Levelized Resource Cost Tables

## Capacity– Levelized $/kW/month

| Supply-Side Resources | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Industrial Simple Cycle CT (162 MW) | 4.61 | 1.22 | 0.00 | 0.00 | 5.83 |
| CCCT (540 MW) | 6.44 | 1.77 | 0.00 | 0.00 | 8.22 |
| Aero Simple Cycle CT (47 MW) | 6.58 | 1.67 | 0.00 | 0.00 | 8.25 |
| Combined Heat and Power (6 MW) | 8.38 | 1.58 | 0.00 | 0.00 | 9.96 |
| Wind (100 MW) | 12.43 | 3.97 | 0.00 | 0.00 | 16.40 |
| South Idaho Pulverized Coal (600 MW) | 15.92 | 3.64 | 0.00 | 0.00 | 19.56 |
| Small Hydro Existing Facility (10 MW) | 18.19 | 3.32 | 0.00 | 0.00 | 21.51 |
| Regional Pulverized Coal (600 MW) | 18.59 | 3.86 | 0.00 | 0.00 | 22.46 |
| Wyoming Pulverized Coal (575 MW) | 18.60 | 3.86 | 0.00 | 0.00 | 22.46 |
| Regional Fluidized Bed Coal (600 MW) | 19.93 | 4.19 | 0.00 | 0.00 | 24.13 |
| Regional IGCC (600 MW) | 23.03 | 4.60 | 0.00 | 0.00 | 27.63 |
| Wood Residue Biomass (25 MW) | 18.39 | 12.79 | 0.00 | 0.00 | 31.18 |
| Regional IGCC with Carbon Sequest. (600 MW) | 26.11 | 5.40 | 0.00 | 0.00 | 31.51 |
| Advanced Nuclear (1,100 MW) | 22.02 | 9.61 | 0.00 | 0.00 | 31.63 |
| Geothermal Flash Steam (50 MW) | 18.67 | 15.01 | 0.00 | 0.00 | 33.68 |
| Small Hydro New Facility (10 MW) | 29.56 | 4.27 | 0.00 | 0.00 | 33.83 |
| Solar Thermal (100 MW) | 25.60 | 10.28 | 0.00 | 0.00 | 35.88 |
| Solar Photovoltaic (5 MW) | 38.05 | 5.08 | 0.00 | 0.00 | 43.13 |
| Geothermal Binary Cycle (50 MW) | 27.51 | 18.33 | 0.00 | 0.00 | 45.84 |

| Transmission Plus Market Purchase Alternatives | Cost of Capital | Non-Fuel O&M | Energy | Emission Adders | Total |
|---|---|---|---|---|---|
| Transmission–From NW Lolo to IPC System (60 MW) | 1.66 | 0.25 | 0.00 | 0.00 | 1.91 |
| Transmission–From NW McNary to IPC System (180 MW) | 3.93 | 0.37 | 0.00 | 0.00 | 4.31 |
| Transmission–From NW McNary to Boise (180 MW) | 6.54 | 0.59 | 0.00 | 0.00 | 7.14 |
| Transmission–From Montana to IPC System (225 MW) | 6.61 | 0.59 | 0.00 | 0.00 | 7.20 |
| Transmission–From Montana to Boise (225 MW) | 7.50 | 0.65 | 0.00 | 0.00 | 8.15 |
| Transmission–From Wyoming to IPC System (225 MW) | 7.99 | 0.69 | 0.00 | 0.00 | 8.68 |
| Transmission–From Nevada South to IPC System (225 MW) | 8.10 | 0.72 | 0.00 | 0.00 | 8.82 |
| Transmission–From Wyoming to Boise (225 MW) | 8.89 | 0.78 | 0.00 | 0.00 | 9.66 |
| Transmission–From NW Lolo to Boise (60 MW) | 8.83 | 0.85 | 0.00 | 0.00 | 9.68 |
| Transmission–From Nevada South to Boise (225 MW) | 9.00 | 0.80 | 0.00 | 0.00 | 9.79 |

| DSM Programs | Cost of Capital | Non-Fuel O&M | Fuel | Emission Adders | Total |
|---|---|---|---|---|---|
| Commercial In-Place Construction (34 MW Peak) | 0.00 | 13.63 | 0.00 | 0.00 | 13.63 |
| Industrial Efficiency Expansion (76 MW Peak) | 0.00 | 15.50 | 0.00 | 0.00 | 15.50 |
| Residential In-Place Construction (55 MW Peak) | 0.00 | 16.66 | 0.00 | 0.00 | 16.66 |

**Brownlee Reservoir Inflow Record (Million Acre-Feet)**
**Record Used for 2006 IRP Modeling of Idaho Power Hydropower System**

Based on (1) Idaho Department of Water Resources computed Snake River Basin record for January 1928–September 2002, and (2) observed streamflow record for October 2002–December 2004.

| CY | Brownlee April–July Inflow Volume (MAF) | Brownlee Annual Inflow Volume (MAF) |
|---|---|---|
| 1928 | 6.7 | 15.0 |
| 1929 | 3.4 | 9.3 |
| 1930 | 2.7 | 8.4 |
| 1931 | 2.2 | 7.2 |
| 1932 | 4.7 | 10.3 |
| 1933 | 4.2 | 9.6 |
| 1934 | 2.4 | 7.5 |
| 1935 | 3.1 | 8.1 |
| 1936 | 5.0 | 10.5 |
| 1937 | 3.0 | 8.6 |
| 1938 | 6.9 | 13.6 |
| 1939 | 3.8 | 10.0 |
| 1940 | 4.2 | 10.8 |
| 1941 | 3.8 | 10.2 |
| 1942 | 4.9 | 11.2 |
| 1943 | 9.1 | 18.8 |
| 1944 | 3.3 | 9.7 |
| 1945 | 4.7 | 11.7 |
| 1946 | 6.8 | 15.5 |
| 1947 | 5.2 | 12.5 |
| 1948 | 5.8 | 12.6 |
| 1949 | 5.3 | 12.5 |
| 1950 | 6.4 | 14.7 |
| 1951 | 6.5 | 16.2 |
| 1952 | 10.3 | 19.4 |
| 1953 | 5.9 | 13.6 |
| 1954 | 5.5 | 12.6 |
| 1955 | 3.5 | 9.9 |
| 1956 | 7.8 | 17.6 |
| 1957 | 7.8 | 16.1 |
| 1958 | 7.4 | 15.1 |
| 1959 | 3.8 | 10.4 |
| 1960 | 4.2 | 10.8 |
| 1961 | 3.1 | 8.8 |
| 1962 | 4.5 | 10.9 |
| 1963 | 4.6 | 11.5 |
| 1964 | 5.6 | 13.1 |
| 1965 | 8.4 | 19.9 |
| 1966 | 3.5 | 10.0 |
| 1967 | 4.7 | 11.3 |
| 1968 | 3.4 | 10.7 |
| 1969 | 6.8 | 15.3 |
| 1970 | 6.1 | 14.9 |
| 1971 | 10.3 | 22.8 |
| 1972 | 7.8 | 20.2 |
| 1973 | 3.9 | 11.4 |
| 1974 | 9.6 | 20.0 |
| 1975 | 8.1 | 17.6 |
| 1976 | 7.2 | 16.5 |
| 1977 | 2.1 | 7.8 |
| 1978 | 5.1 | 12.0 |
| 1979 | 3.9 | 10.7 |
| 1980 | 5.9 | 13.2 |
| 1981 | 4.2 | 11.5 |
| 1982 | 9.3 | 21.1 |
| 1983 | 10.0 | 23.6 |
| 1984 | 11.4 | 24.4 |
| 1985 | 5.5 | 13.8 |
| 1986 | 8.4 | 20.7 |
| 1987 | 3.0 | 9.4 |
| 1988 | 2.5 | 7.9 |
| 1989 | 4.3 | 10.6 |
| 1990 | 2.9 | 8.1 |
| 1991 | 2.7 | 7.8 |
| 1992 | 1.9 | 6.6 |
| 1993 | 6.0 | 12.9 |
| 1994 | 2.5 | 8.2 |
| 1995 | 6.6 | 14.0 |
| 1996 | 8.1 | 19.0 |
| 1997 | 10.0 | 24.0 |
| 1998 | 8.4 | 17.6 |
| 1999 | 7.7 | 17.8 |
| 2000 | 4.3 | 11.8 |
| 2001 | 2.4 | 7.6 |
| 2002 | 3.4 | 8.6 |
| 2003 | 3.6 | 9.0 |
| 2004 | 3.1 | 9.0 |

## Wind Distribution Profile (from NWPCC's Fifth Power Plan–2005)

Project Size (MW): 100
Annual Capacity Factor: 35%
Flat Monthly Output (aMW): 35

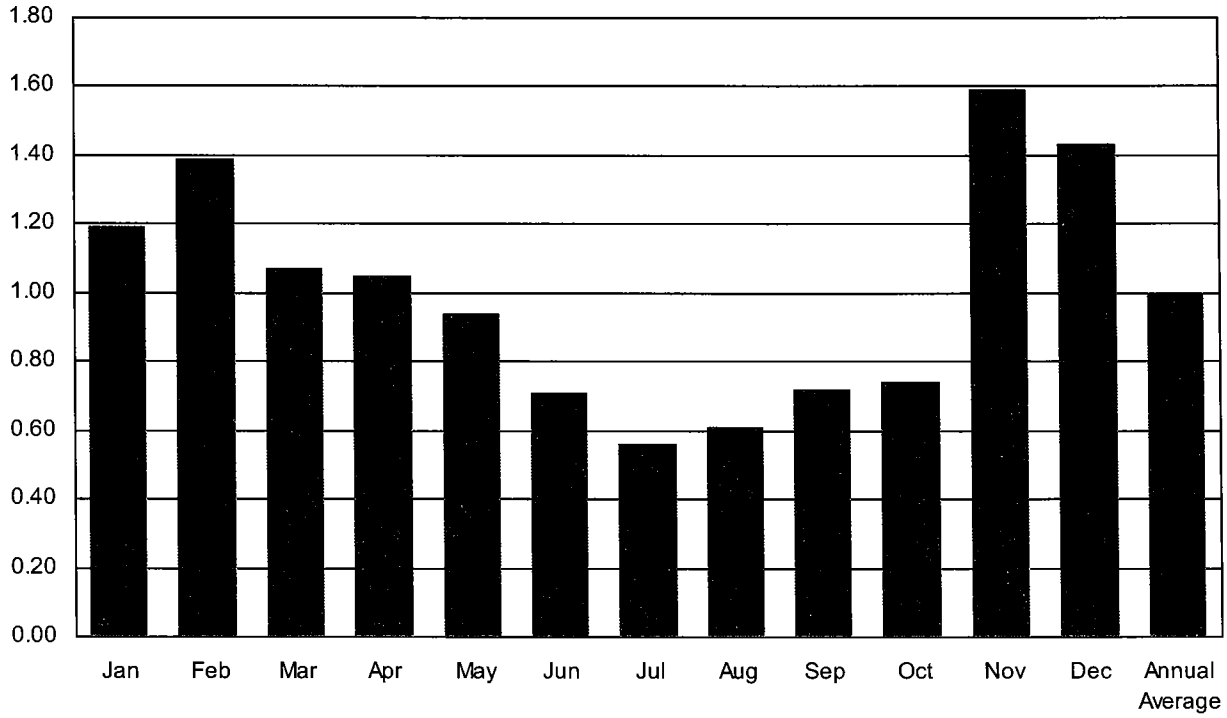
**Normalized Monthly Wind Energy Distribution (Basin and Range)**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.19 | 1.39 | 1.07 | 1.05 | 0.94 | 0.71 | 0.56 | 0.61 | 0.72 | 0.74 | 1.59 | 1.43 | 1.00 |

**Estimated Monthly Output (aMW)**

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | 49 | 37 | 37 | 33 | 25 | 20 | 21 | 25 | 26 | 56 | 50 | 35 |

**Normalized Monthly Wind Energy Distribution (Basin and Range)**



# DSM Analysis and Screening Criteria

## DSM Program Development

In November 2004, Quantum Consulting of Berkeley, California, (now Itron Inc. of Oakland, California) completed a study for Idaho Power assessing the energy savings potential within the residential and commercial sectors. The study served as the basis for the residential and commercial retrofit program options analyzed in this IRP. The Company filed the Quantum study with the IPUC in December 2004 as an addendum to the 2004 IRP. In order to meet the guidelines of the 2006 IRP, the study output was later expanded with support from Quantum for program extension from 10 to 20 years of utility operation.

The assumptions and energy estimates that support the industrial efficiency program extension were developed internally by Idaho Power's engineering staff. The industrial program expansion and the residential and commercial retrofit program options were each designed to maximize the potential energy benefits of the resource while remaining cost-effective from a total resource perspective.

All DSM program options analyzed as part of the 2006 IRP included the following cost components:

- Administrative costs
- Marketing and advertising costs
- Incentive payments
- Participant costs

Once the program design and costing phase was completed, each new program was put through a series of static screening analyses prior to being introduced into the dynamic IRP portfolio analysis in Aurora.

## Screening Criteria

DSM screening criteria are designed to assess a program's potential to maximize benefits at the lowest cost for all stakeholders. In addition to the strategic criteria listed in Chapter 5 of the 2006 IRP Plan, key screening elements are:

- Programs will be **cost-effective**. From a total resource perspective, estimated program benefits must be greater than estimated program costs.
- Programs will be **customer-focused**. From the participants' perspective, programs will offer real benefits and value to customers. The Idaho Public Utilities Commission stated in Order No. 29026, "It is our hope that the programs created by the DSM rider will empower customers to exercise control over their energy consumption and reduce their bills."
- Programs will be **equitably distributed**. From the customers' perspective, programs will be selected to benefit all groups of customers. Over time, programs will be offered to customers in all sectors and in all regions of the company's service territory.
- Programs will be as close to **earnings-neutral** as possible. From the utility's perspective, programs will be selected to minimize the negative impact on shareowners.

These criteria are used as guidelines in selecting a new program or initiative. A program that doesn't meet all of these criteria is not excluded from consideration, but would have to be further evaluated for other valued characteristics. Ultimately, all programs must be cost-effective in order to be considered as ordered by the IPUC.[1]

## Static Cost-Effectiveness Analysis

The cost-effectiveness analysis is the primary focus of the screening criteria. The static cost-effectiveness analysis of DSM programs at Idaho Power is performed using the methods described in the EPRI End-Use Technical Assessment Guide Manual as well as The California Standard Practices Manual: Economic Analysis of Demand-side Programs and Projects.[2] The proposed DSM programs considered for inclusion into the 2006 IRP are evaluated from Utility Cost Test and Total Resource Cost test perspectives.

### Total Resource Cost Test (TRC)[3]

The TRC test is a measure of the total net resource expenditures of a DSM program from the point of view of the utility and its customers as a whole. Costs include changes in supply costs, utility costs, and participant costs. (Transfer payments between customers and the utility are ignored).

The following are the calculations performed by this test:

**Net Present Value:** A net present value of zero or greater indicates that the program is cost-effective from the total resource cost perspective.

**Benefits-Cost Ratio:** A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the total resource cost perspective.

**Levelized Cost:** This measurement makes the evaluation of potential demand-side resources comparable to that of supply side resources. The cost stream of DSM resource (in this case, the stream of utility costs and participant costs) is discounted and then divided by the stream of discounted kW or kWh that is expected from the program.

### Utility Cost Test[4]

The Utility Cost test is a measure of the total costs to the utility to implement a DSM program.

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[1] IPUC Order No. 29026, May 20, 2002

[2] www.cpuc.ca.gov/static/energy/electric/energy+efficiency/rulemaking/std+practice+manual.doc

[3] EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

[4] EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

The following are the calculations performed by this test:

**Net Present Value:** A net present value of zero or greater indicates that the program is cost-effective from the Utility Cost perspective.

**Benefits-Cost Ratio:** A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the Utility Cost perspective.

**Levelized Cost:** This measurement attempts to put demand side resources on equal ground with supply-side resources. As with supply-side resources, the cost stream of DSM resource is discounted and then divided by the stream of kW and kWh that is expected from the program.

**Payback:** Number of years required for the energy benefits to equal the participants' costs for a program.

## DSM Analysis Calculation Definitions

**Net Present Value:** Calculated as the discounted stream of program benefits minus the discounted stream of program costs using the Company's weighted average cost of capital (WACC) for resource planning.

$$\sum_{T=1}^{N} \frac{\text{Program Benefits}}{(1+\text{WACC})^{t-1}} \quad \text{(minus)} \quad \sum_{T=1}^{N} \frac{\text{Program Costs}}{(1+\text{WACC})^{t-1}}$$

**Where:** N = the total number of years, t = the incremental year, and WACC = the Company's weighted average cost of capital.

**Benefits-Cost Ratio:** Calculated as the discounted stream of program benefits divided by the discounted stream of program costs.

$$\sum_{t=1}^{N} \frac{\textbf{Program Benefits}}{(1+\text{WACC})^{t-1}} \quad \div \quad \sum_{t=1}^{N} \frac{\textbf{Program Costs}}{(1+\text{WACC})^{t-1}}$$

**Levelized Costs:** The present value of total costs of the resource over the life of the program in the base year divided by the discounted stream of energy or demand savings, depending on how the resource size has been defined.

$$\sum_{T=1}^{N} \frac{\textbf{Program Costs}}{(1+\text{WACC})^{t-1}} \quad \div \quad \sum_{T=1}^{N} \frac{\textbf{Energy Savings}}{(1+\text{WACC})^{t-1}}$$

**Payback:** Number of years from the initial program participation to the point at which the cumulative benefits exceed the cumulative undiscounted costs for participants.

**Incremental Costs:** The additional cost incurred by choosing to select one option over another.

Total Installed Cost of Energy Efficient Option
– Total Installed Cost of a Non-Energy Efficient Option
= Incremental Cost

## Program Benefits Calculations

To quantify the "benefit" portion of the calculation five costing periods were created for the year that are consistent with the IPUC approved rate schedule 19 tariff rate pricing periods. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be the alternative at that time period. Each time segment has a different alternative cost associated with it depending on the expected price for that period.

Two methodologies were developed, at the request of the IRPAC, to evaluate the potential benefits associated with alternative supply costs: peak oriented (gas turbine) and baseload oriented (thermal plant) resource alternatives.

The peak alternative resource methodology employs five costing periods for each year to reflect the market dynamics impacting costs associated with different times of the day or seasonally. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be an alternative including peak plant or the market cost of energy depending upon the load profile associated with the program. Each time segment has a different alternative cost associated with it depending on the expected price for that period. The baseload alternative utilized the capacity and variable cost associated with a thermal (coal plant) alternative which applied to all hours of the year.

The results of the analyses showed all programs to be cost-effective under both the peak and the baseload alternative resource cost methodologies. All programs showed greater benefits associated using the peak resource alternative, however, the industrial efficiency program showed the showed highest benefits using the baseload analysis. This benefit differential is attributable to the unique seasonal load profiles associated with each program.

The following tables illustrate the time of day and time of year costing period definitions used in the peak static program screening analysis:

| SUMMER SEASON<br>June 1 through August 35 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Hour** | **Sunday** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Saturday** | **Holiday** |
| 1 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 2 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 3 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 4 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 5 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 6 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 7 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 8 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 9 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 10 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 11 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 12 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 13 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 14 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 15 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 16 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 17 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 18 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 19 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 20 | SMP | SONP | SONP | SONP | SONP | SONP | SMP | SMP |
| 21 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 22 | SMP | SMP | SMP | SMP | SMP | SMP | SMP | SMP |
| 23 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |
| 24 | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP | SOFP |

SOFP = Summer Off-Peak

SMP = Summer Mid-Peak

SONP = Summer On-Peak

| NON-SUMMER SEASON<br>September 01 through May 31 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hour | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Holiday |
| 1 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 2 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 3 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 4 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 5 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 6 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 7 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 8 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 9 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 10 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 11 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 12 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 13 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 14 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 15 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 16 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 17 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 18 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 19 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 20 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 21 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 22 | NSOFP | NSMP | NSMP | NSMP | NSMP | NSMP | NSMP | NSOFP |
| 23 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |
| 24 | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP | NSOFP |

NSOFP = Non-Summer Off-Peak

NSMP = Non-Summer Mid-Peak

Market prices were developed within Aurora using the Preferred Portfolio as a resource basis (May Aurora_2006IRP_P3_hrly_zone_prices_20yr So Idaho). The values beyond 20 years are extended by escalating the final year of the forward market price schedule for the additional years needed for the analysis using the Company's escalation rate of 3.0% for capital investments.

The costing period prices are calculated using the following method:

- NSMP = Average of heavy load prices in January–May and September–December.
- NSOFP = Average of light load prices in January–May and September–December.
- SOFP = Average of light load prices in June–August.
- SMP = Average of heavy load prices in June–August.
- SONP = IPC variable energy and operating cost of a 162 MW Simple-Cycle Gas Turbine
- Annual = IPC variable energy and operating cost of thermal coal plant

The following table shows the schedule of variable and market alternative costs used to calculate the benefit value of each program in the static analysis:

| | Alternative Energy Cost ($/MWh) | | | | | |
|---|---|---|---|---|---|---|
| | IPC Variable Peak Cost | Seasonal Market Price Forecast | | | | [illegible] |
| Year | SONP | SMP | SOFP | NSMP | NSOFP | [illegible] |
| 1 | $91.08 | $68.57 | $51.54 | $77.61 | $65.59 | $15.93 |
| 2 | $95.30 | $69.89 | $51.61 | $78.95 | $65.64 | $15.91 |
| 3 | $88.97 | $65.98 | $48.07 | $68.96 | $55.61 | $15.80 |
| 4 | $88.12 | $66.39 | $48.52 | $68.15 | $55.39 | $15.80 |
| 5 | $67.14 | $50.43 | $37.03 | $52.75 | $42.31 | $15.27 |
| 6 | $67.81 | $55.93 | $41.28 | $54.30 | $42.99 | $15.43 |
| 7 | $68.94 | $67.85 | $50.72 | $64.61 | $51.51 | $31.14 |
| 8 | $71.25 | $71.71 | $54.18 | $68.18 | $54.33 | $31.84 |
| 9 | $73.30 | $74.02 | $56.01 | $70.06 | $56.05 | $32.88 |
| 10 | $75.73 | $78.45 | $59.19 | $74.07 | $59.74 | $33.43 |
| 11 | $78.91 | $82.40 | $62.08 | $78.96 | $63.83 | $34.43 |
| 12 | $82.37 | $90.38 | $66.94 | $86.37 | $69.54 | $35.34 |
| 13 | $85.26 | $92.36 | $70.70 | $90.27 | $72.64 | $36.43 |
| 14 | $89.35 | $98.01 | $75.25 | $95.24 | $76.92 | $37.61 |
| 15 | $92.64 | $102.92 | $79.15 | $100.11 | $80.34 | $38.67 |
| 16 | $86.04 | $97.28 | $75.60 | $94.42 | $76.63 | $39.40 |
| 17 | $89.19 | $104.05 | $80.51 | $101.25 | $81.28 | $40.54 |
| 18 | $93.13 | $108.84 | $84.94 | $105.87 | $85.53 | $41.53 |
| 19 | $95.86 | $114.48 | $90.26 | $111.23 | $90.19 | $42.77 |
| 20 | $99.47 | $120.35 | $96.05 | $118.21 | $95.55 | $44.00 |
| 21 | $93.36 | $123.96 | $98.93 | $121.75 | $98.42 | $45.23 |
| 22 | $97.22 | $127.68 | $101.90 | $125.40 | $101.37 | $49.65 |
| 23 | $100.74 | $131.51 | $104.95 | $129.17 | $104.41 | $51.20 |
| 24 | $104.46 | $135.46 | $108.10 | $133.04 | $107.55 | $52.82 |
| 25 | $108.97 | $139.52 | $111.35 | $137.03 | $110.77 | $54.49 |
| 26 | $110.64 | $143.71 | $114.69 | $141.14 | $114.10 | $57.01 |
| 27 | $112.32 | $148.02 | $118.13 | $145.38 | $117.52 | $58.85 |
| 28 | $114.01 | $152.46 | $121.67 | $149.74 | $121.04 | $60.75 |
| 29 | $115.71 | $157.03 | $125.32 | $154.23 | $124.68 | $62.79 |
| 30 | $117.42 | $161.74 | $129.08 | $158.86 | $128.42 | $64.84 |

Fixed plant costs were combined with the variable costs for developing total alternative costs. For the peak alternative, a 162MW Simple Cycle Combustion Turbine plant was used as the cost basis, for the baseload alternative, a coal thermal plant served as the cost basis. The levelized capacity cost factors applied were $64.92/KW (peak) and $247.52(baseload).

DSM program analysis includes the assumption that the energy savings will continue beyond the measure life time period for each program participant. This assumption is based on the principle that it is reasonable to assume that once a person participates in the program, they will not revert back to a less efficient behavior after the measure life expires. As a result, the energy savings schedule for each program shows a ramp-up period followed by a sustained maximum level for the entire analysis period. In the 2004 IRP the total period for analysis was 20 years. For the 2006 IRP this period was 30 years.

## Dynamic Modeling

The results of the levelized cost analysis showed that the proposed DSM programs had sufficiently lower costs than all but the geothermal supply-side resources. This result allowed the DSM portfolio to be included in the dynamic modeling (Aurora simulation model) as a fixed resource for all supply-side alternative portfolio analyses. This approach differs from the analysis in the 2004 IRP where the programs were introduced in an equivalent manner as were the supply-side resources to determine the beneficial impacts to the overall resource portfolio.

The following tables show the annual costs and energy savings associated with the DSM programs.

**Energy Savings**
**MWh (Including Transmission Losses)**

| Year | All Programs | Residential Retro | Commercial Retro | Industrial Expansion |
|---|---|---|---|---|
| 2006 | | | | |
| 2007 | 23,280 | 6,462 | 8,817 | 8,000 |
| 2008 | 64,753 | 20,639 | 24,451 | 19,663 |
| 2009 | 158,607 | 60,980 | 58,301 | 39,327 |
| 2010 | 244,160 | 99,554 | 85,615 | 58,990 |
| 2011 | 320,054 | 134,876 | 106,525 | 78,653 |
| 2012 | 387,019 | 165,874 | 122,828 | 98,316 |
| 2013 | 446,812 | 192,391 | 136,441 | 117,980 |
| 2014 | 499,130 | 214,746 | 146,741 | 137,643 |
| 2015 | 544,700 | 233,456 | 153,938 | 157,306 |
| 2016 | 585,249 | 249,083 | 159,197 | 176,970 |
| 2017 | 604,010 | 248,180 | 159,197 | 196,633 |
| 2018 | 624,520 | 248,987 | 159,237 | 216,296 |
| 2019 | 645,510 | 249,796 | 159,754 | 235,960 |
| 2020 | 666,299 | 250,483 | 160,193 | 255,623 |
| 2021 | 686,887 | 251,047 | 160,554 | 275,286 |
| 2022 | 707,270 | 251,486 | 160,835 | 294,949 |
| 2023 | 727,346 | 251,738 | 160,996 | 314,613 |
| 2024 | 747,319 | 251,926 | 161,116 | 334,276 |
| 2025 | 767,085 | 251,989 | 161,157 | 353,939 |
| 2026 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2027 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2028 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2029 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2030 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2031 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2032 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2033 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2034 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2035 | 786,749 | 251,989 | 161,157 | 373,603 |
| 2036 | 786,749 | 251,989 | 161,157 | 373,603 |

**Average Peak Reduction**
**aMW (Including Transmission Losses)**

| Year | All Programs | Residential Retro | Commercial Retro | Industrial Expansion |
|---|---|---|---|---|
| 2006 | | | | |
| 2007 | 2.7 | 0.7 | 1.0 | 0.9 |
| 2008 | 7.4 | 2.4 | 2.8 | 2.2 |
| 2009 | 18.1 | 7.0 | 6.7 | 4.5 |
| 2010 | 27.9 | 11.4 | 9.8 | 6.7 |
| 2011 | 36.5 | 15.4 | 12.2 | 9.0 |
| 2012 | 44.2 | 18.9 | 14.0 | 11.2 |
| 2013 | 51.0 | 22.0 | 15.6 | 13.5 |
| 2014 | 57.0 | 24.5 | 16.8 | 15.7 |
| 2015 | 62.2 | 26.7 | 17.6 | 18.0 |
| 2016 | 66.8 | 28.4 | 18.2 | 20.2 |
| 2017 | 69.0 | 28.3 | 18.2 | 22.4 |
| 2018 | 71.3 | 28.4 | 18.2 | 24.7 |
| 2019 | 73.7 | 28.5 | 18.2 | 26.9 |
| 2020 | 76.1 | 28.6 | 18.3 | 29.2 |
| 2021 | 78.4 | 28.7 | 18.3 | 31.4 |
| 2022 | 80.7 | 28.7 | 18.4 | 33.7 |
| 2023 | 83.0 | 28.7 | 18.4 | 35.9 |
| 2024 | 85.3 | 28.8 | 18.4 | 38.2 |
| 2025 | 87.6 | 28.8 | 18.4 | 40.4 |
| 2026 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2027 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2028 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2029 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2030 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2031 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2032 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2033 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2034 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2035 | 89.8 | 28.8 | 18.4 | 42.6 |
| 2036 | 89.8 | 28.8 | 18.4 | 42.6 |

**July Peak Reduction**
**MW (Including Transmission Losses)**

| Year | All Programs | Residential Retro | Commercial Retro | Industrial Expansion |
|---|---|---|---|---|
| 2006 | | | | |
| 2007 | 4.4 | 1.9 | 1.5 | 1.1 |
| 2008 | 15.8 | 9.1 | 4.1 | 2.6 |
| 2009 | 44.7 | 29.7 | 9.8 | 5.2 |
| 2010 | 70.6 | 48.3 | 14.4 | 7.9 |
| 2011 | 91.8 | 63.4 | 17.9 | 10.5 |
| 2012 | 110.4 | 76.6 | 20.7 | 13.1 |
| 2013 | 126.6 | 88.0 | 22.9 | 15.7 |
| 2014 | 140.5 | 97.5 | 24.7 | 18.3 |
| 2015 | 152.3 | 105.5 | 25.9 | 20.9 |
| 2016 | 162.5 | 112.2 | 26.8 | 23.6 |
| 2017 | 165.1 | 112.2 | 26.8 | 26.2 |
| 2018 | 167.7 | 112.1 | 26.8 | 28.8 |
| 2019 | 170.7 | 112.4 | 26.9 | 31.4 |
| 2020 | 173.6 | 112.6 | 26.9 | 34.0 |
| 2021 | 176.5 | 112.8 | 27.0 | 36.7 |
| 2022 | 179.2 | 112.9 | 27.0 | 39.3 |
| 2023 | 181.9 | 113.0 | 27.1 | 41.9 |
| 2024 | 184.6 | 113.0 | 27.1 | 44.5 |
| 2025 | 187.2 | 113.0 | 27.1 | 47.1 |
| 2026 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2027 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2028 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2029 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2030 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2031 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2032 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2033 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2034 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2035 | 189.9 | 113.0 | 27.1 | 49.8 |
| 2036 | 189.9 | 113.0 | 27.1 | 49.8 |

**Utility Costs (Revised 10/12/06)**
**(000s–Present Value)**

| Year | All Programs | Residential Retro | Commercial Retro | Industrial Expansion |
|---|---|---|---|---|
| 2006 | | | | |
| 2007 | $3,558 | $1,318 | $1,361 | $878 |
| 2008 | $5,995 | $2,664 | $1,958 | $1,374 |
| 2009 | $17,299 | $9,625 | $4,238 | $3,436 |
| 2010 | $16,581 | $9,327 | $3,983 | $3,271 |
| 2011 | $15,611 | $8,755 | $3,770 | $3,086 |
| 2012 | $14,486 | $7,936 | $3,639 | $2,911 |
| 2013 | $13,789 | $7,065 | $3,595 | $3,128 |
| 2014 | $12,218 | $6,236 | $3,033 | $2,949 |
| 2015 | $10,693 | $5,491 | $2,421 | $2,780 |
| 2016 | $9,895 | $4,846 | $2,115 | $2,934 |
| 2017 | $3,599 | $499 | $336 | $2,765 |
| 2018 | $3,377 | $480 | $291 | $2,606 |
| 2019 | $3,148 | $439 | $252 | $2,456 |
| 2020 | $3,174 | $401 | $219 | $2,555 |
| 2021 | $2,983 | $386 | $190 | $2,407 |
| 2022 | $2,784 | $351 | $164 | $2,268 |
| 2023 | $2,599 | $319 | $142 | $2,138 |
| 2024 | $2,427 | $288 | $123 | $2,016 |
| 2025 | $2,437 | $259 | $107 | $2,071 |
| 2026 | $2,276 | $231 | $93 | $1,952 |
| Total | $148,928 | $66,917 | $32,030 | $49,981 |

**Total Resource Cost (Revised 10/12/06)**
**(000s–Present Value)**

| Year | All Programs | Residential Retro | Commercial Retro | Industrial Expansion |
|---|---|---|---|---|
| 2006 | | | | |
| 2007 | $7,107 | $2,893 | $2,937 | $1,276 |
| 2008 | $14,434 | $5,075 | $4,249 | $5,110 |
| 2009 | $30,427 | $14,522 | $8,974 | $6,931 |
| 2010 | $28,266 | $14,009 | $7,718 | $6,539 |
| 2011 | $25,776 | $13,063 | $6,571 | $6,142 |
| 2012 | $23,307 | $11,747 | $5,791 | $5,769 |
| 2013 | $21,503 | $10,353 | $5,349 | $5,801 |
| 2014 | $18,834 | $9,032 | $4,353 | $5,448 |
| 2015 | $16,334 | $7,855 | $3,362 | $5,118 |
| 2016 | $14,775 | $6,841 | $2,814 | $5,120 |
| 2017 | $6,321 | $1,030 | $482 | $4,809 |
| 2018 | $5,791 | $876 | $398 | $4,517 |
| 2019 | $5,312 | $736 | $332 | $4,244 |
| 2020 | $5,127 | $622 | $279 | $4,226 |
| 2021 | $4,753 | $547 | $235 | $3,970 |
| 2022 | $4,401 | $471 | $200 | $3,730 |
| 2023 | $4,083 | $408 | $171 | $3,505 |
| 2024 | $3,798 | $357 | $146 | $3,294 |
| 2025 | $3,707 | $314 | $126 | $3,267 |
| 2026 | $3,455 | $277 | $108 | $3,070 |
| Total | $247,510 | $101,028 | $54,597 | $91,885 |

## DSM Portfolio Options–2006 IRP (Revised 10/12/06)

| | Savings * | | | Present Value Costs (000s) | | Levelized Costs | | B/C Ratio | | Payback ** |
|---|---|---|---|---|---|---|---|---|---|---|
| | aMW | Summer Peak MW | Annual Energy MWh | Utility Cost | TRC Cost | UC ($/kWh) | TRC ($/kWh) | UC | TRC | |
| **Residential Existing** | 28.8 | 113.0 | 251,989 | $66,917 | $101,028 | $0.029 | $0.044 | 3.7 | 2.5 | 3.0 |
| **Commercial Existing** | 18.4 | 27.1 | 161,157 | $32,030 | $54,597 | $0.020 | $0.035 | 5.2 | 3.0 | 3.4 |
| **Industrial Expansion** | 40.4 | 47.1 | 353,939 | $49,981 | $91,885 | $0.022 | $0.040 | 5.1 | 2.8 | 3.4 |
| **Total** | 87.6 | 187.2 | 767,085 | $148,928 | $247,510 | | | | | |

* Based on Cumulative Savings in 2025
** Based on December 2005 Rate Schedule

## Monthly Average Energy Surplus/Deficiency Data

### 50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 37 | 666 | 437 | 556 | 285 | 232 | 0 | 0 | 54 | 196 | 0 | 159 |
| 2007 | 30 | 668 | 505 | 650 | 263 | 119 | 0 | 0 | 34 | 180 | 0 | 152 |
| 2008 | 0 | 643 | 485 | 752 | 230 | 99 | 0 | 0 | 14 | 157 | 0 | 121 |
| 2009 | 0 | 572 | 455 | 724 | 190 | 84 | 0 | 0 | 0 | 125 | 0 | 86 |
| 2010 | 0 | 495 | 422 | 603 | 163 | 61 | 0 | 0 | 0 | 90 | 0 | 109 |
| 2011 | 0 | 535 | 413 | 597 | 134 | 24 | 0 | 0 | 0 | 66 | 0 | 87 |
| 2012 | 0 | 492 | 393 | 579 | 114 | 0 | (21) | 0 | 0 | 43 | 0 | 59 |
| 2013 | 0 | 422 | 359 | 551 | 82 | 0 | (65) | 0 | 0 | 9 | 0 | 24 |
| 2014 | 0 | 347 | 321 | 515 | 43 | 0 | (121) | 0 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 255 | 288 | 485 | 9 | 0 | (171) | (34) | 0 | 0 | 0 | 0 |
| 2016 | 0 | 180 | 255 | 455 | 0 | 0 | (225) | (83) | 0 | 0 | 0 | 0 |
| 2017 | 0 | 104 | 222 | 425 | 0 | 0 | (277) | (134) | 0 | 0 | 0 | (38) |
| 2018 | 0 | 69 | 188 | 394 | (11) | 0 | (331) | (187) | 0 | (81) | 0 | (75) |
| 2019 | 0 | 34 | 153 | 362 | (46) | 0 | (384) | (240) | (25) | (129) | (8) | (112) |
| 2020 | (65) | 1 | 118 | 331 | (81) | (1) | (440) | (296) | (69) | (167) | (44) | (150) |
| 2021 | (103) | (37) | 82 | 298 | (117) | (49) | (497) | (353) | (114) | (205) | (81) | (189) |
| 2022 | (142) | (74) | 45 | 265 | (154) | (99) | (559) | (409) | (160) | (245) | (118) | (228) |
| 2023 | (181) | (111) | 8 | 231 | (192) | (149) | (619) | (468) | (207) | (285) | (157) | (268) |
| 2024 | (221) | (147) | (29) | 197 | (230) | (201) | (678) | (528) | (255) | (325) | (195) | (308) |
| 2025 | (260) | (187) | (67) | 163 | (269) | (253) | (741) | (590) | (303) | (366) | (234) | (348) |

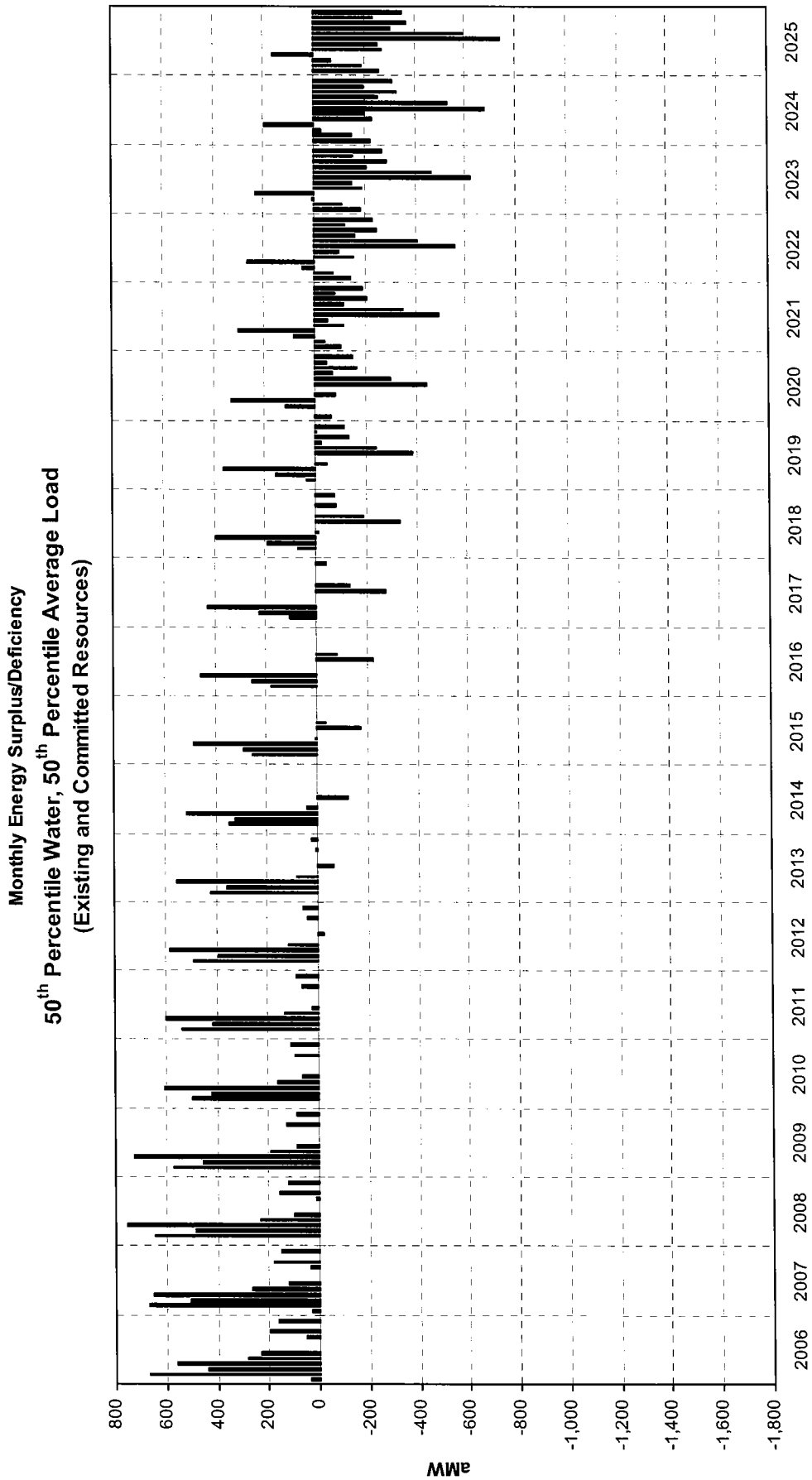
### 70th Percentile Water, 70th Percentile Load, 90th Percentile Peak-Hour Load[1]

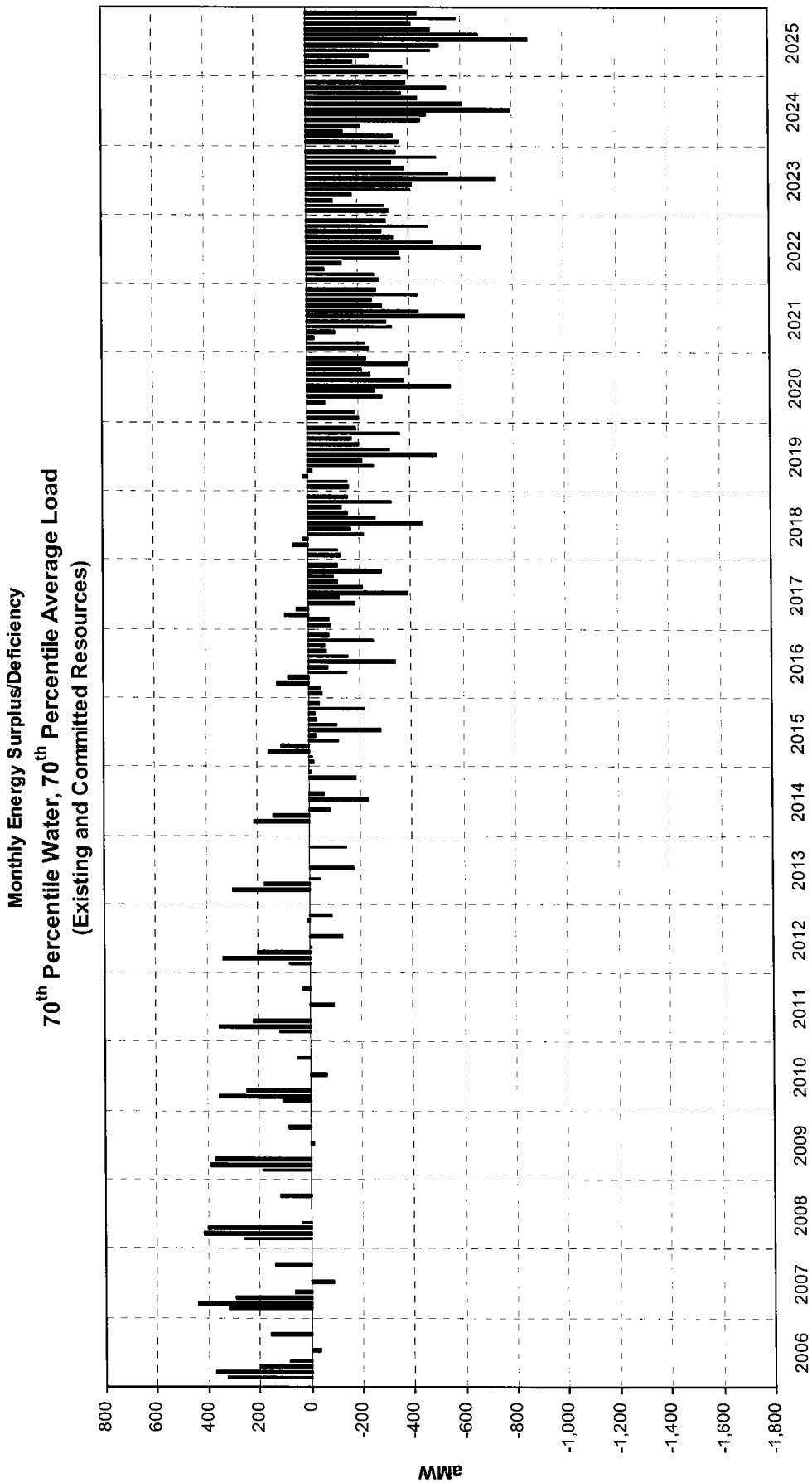
| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 0 | 326 | 370 | 201 | 83 | 0 | (35) | 0 | 0 | 154 | 0 | 0 |
| 2007 | 0 | 319 | 438 | 294 | 62 | 0 | (88) | 0 | 0 | 139 | 0 | 0 |
| 2008 | 0 | 255 | 417 | 396 | 29 | 0 | 0 | 0 | 0 | 115 | 0 | 0 |
| 2009 | 0 | 185 | 386 | 368 | 0 | 0 | (15) | 0 | 0 | 83 | 0 | 0 |
| 2010 | 0 | 107 | 354 | 247 | 0 | 0 | (67) | 0 | 0 | 48 | 0 | 0 |
| 2011 | 0 | 118 | 355 | 220 | 0 | 0 | (93) | 0 | 0 | 23 | 0 | 0 |
| 2012 | 0 | 75 | 335 | 201 | (11) | 0 | (128) | 0 | 0 | 1 | (87) | 0 |
| 2013 | 0 | 0 | 296 | 173 | (43) | 0 | (173) | (1) | 0 | 0 | (145) | 0 |
| 2014 | 0 | 0 | 213 | 137 | (82) | 0 | (229) | (57) | 0 | 0 | (185) | (7) |
| 2015 | (18) | (15) | 153 | 106 | (117) | (32) | (281) | (109) | (31) | (28) | (219) | (43) |
| 2016 | (53) | (46) | 120 | 76 | (150) | (76) | (335) | (158) | (72) | (63) | (253) | (79) |
| 2017 | (89) | (82) | 87 | 45 | (184) | (120) | (388) | (210) | (114) | (99) | (287) | (116) |
| 2018 | (126) | (117) | 52 | 14 | (219) | (166) | (443) | (264) | (157) | (135) | (322) | (153) |
| 2019 | (163) | (153) | 17 | (17) | (255) | (215) | (497) | (318) | (200) | (172) | (358) | (191) |
| 2020 | (200) | (186) | 0 | (71) | (291) | (261) | (554) | (375) | (244) | (210) | (394) | (229) |
| 2021 | (239) | (225) | (32) | (108) | (328) | (310) | (611) | (432) | (290) | (249) | (432) | (269) |
| 2022 | (278) | (262) | (70) | (141) | (365) | (360) | (675) | (489) | (337) | (289) | (470) | (308) |
| 2023 | (318) | (300) | (107) | (175) | (404) | (411) | (736) | (549) | (384) | (329) | (508) | (349) |
| 2024 | (357) | (336) | (145) | (210) | (442) | (465) | (796) | (610) | (433) | (369) | (547) | (389) |
| 2025 | (398) | (377) | (184) | (245) | (482) | (518) | (859) | (672) | (481) | (411) | (586) | (430) |

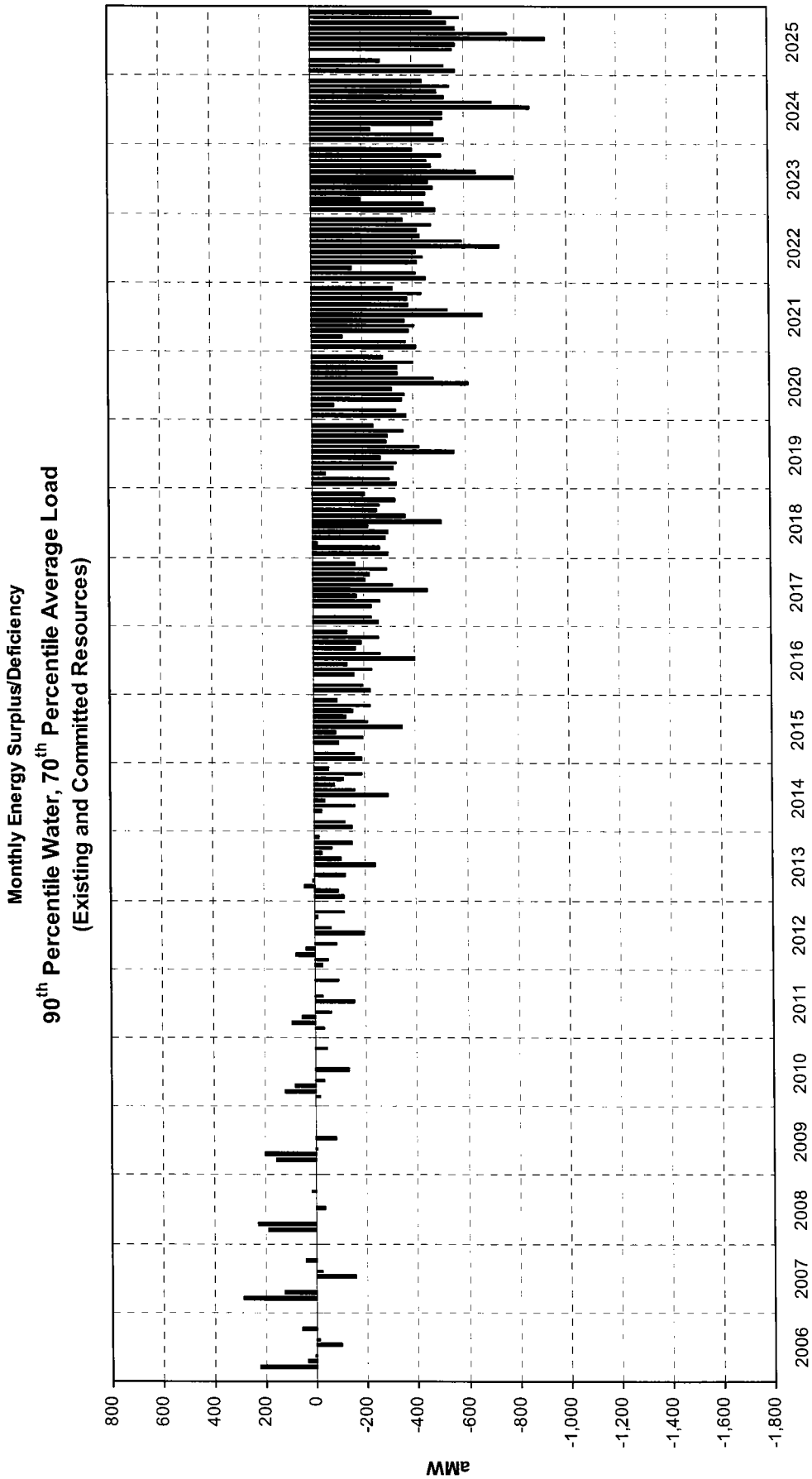
### 90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 0 | 0 | 224 | 35 | 10 | 0 | (97) | (12) | 0 | 59 | 0 | 0 |
| 2007 | 0 | 0 | 285 | 128 | 0 | 0 | (150) | (20) | 0 | 44 | 0 | 0 |
| 2008 | 0 | 0 | 192 | 230 | 0 | 0 | (32) | 0 | 0 | 20 | 0 | 0 |
| 2009 | 0 | 0 | 153 | 202 | (4) | 0 | (77) | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | (13) | 121 | 81 | (32) | 0 | (129) | (0) | 0 | 0 | (42) | 0 |
| 2011 | 0 | (33) | 94 | 53 | (63) | 0 | (155) | (25) | 0 | 0 | (90) | 0 |
| 2012 | (29) | (50) | 74 | 34 | (85) | 0 | (190) | (59) | 0 | (11) | (113) | 0 |
| 2013 | (110) | (87) | 40 | 6 | (117) | 0 | (235) | (103) | (29) | (69) | (146) | (14) |
| 2014 | (144) | (119) | 1 | (29) | (156) | (41) | (291) | (159) | (77) | (114) | (186) | (55) |
| 2015 | (186) | (160) | 0 | (97) | (191) | (83) | (343) | (211) | (121) | (151) | (220) | (91) |
| 2016 | (221) | (191) | 0 | (159) | (224) | (127) | (397) | (260) | (162) | (188) | (254) | (127) |
| 2017 | (257) | (227) | 0 | (228) | (258) | (171) | (450) | (312) | (204) | (222) | (288) | (164) |
| 2018 | (294) | (262) | (13) | (285) | (293) | (217) | (505) | (366) | (247) | (258) | (323) | (201) |
| 2019 | (331) | (298) | (48) | (317) | (329) | (266) | (559) | (420) | (290) | (295) | (359) | (239) |
| 2020 | (368) | (331) | (83) | (349) | (365) | (312) | (616) | (477) | (334) | (335) | (395) | (277) |
| 2021 | (407) | (370) | (119) | (382) | (402) | (361) | (673) | (534) | (380) | (372) | (433) | (317) |
| 2022 | (446) | (407) | (157) | (415) | (439) | (411) | (737) | (591) | (427) | (412) | (471) | (356) |
| 2023 | (486) | (445) | (194) | (449) | (478) | (462) | (798) | (651) | (474) | (452) | (509) | (397) |
| 2024 | (525) | (481) | (232) | (484) | (516) | (516) | (858) | (712) | (523) | (494) | (548) | (437) |
| 2025 | (566) | (522) | (271) | (519) | (556) | (569) | (921) | (774) | (571) | (534) | (587) | (478) |

[1] Final values after thermal peaking resources were applied.


Monthly Energy Surplus/Deficiency
50th Percentile Water, 50th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Energy Surplus/Deficiency
70th Percentile Water, 70th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Energy Surplus/Deficiency
90th Percentile Water, 70th Percentile Average Load
(Existing and Committed Resources)
aMW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

## Monthly Peak-Hour Load Surplus/Deficiency Data (Revised 10/12/06)

### 50th Percentile Water, 50th Percentile Average Load, 90th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 309 | 237 | 267 | 595 | (246) | (152) | (187) | (81) | 46 | 378 | 45 | 145 |
| 2007 | 258 | 476 | 208 | 423 | (287) | (216) | (273) | (104) | 4 | 353 | 22 | 114 |
| 2008 | 319 | 458 | 178 | 409 | (337) | (91) | (167) | 32 | 128 | 499 | 127 | 266 |
| 2009 | 470 | 611 | 592 | 358 | (223) | (148) | (223) | (31) | 43 | 472 | 92 | 218 |
| 2010 | 431 | 579 | 551 | 499 | (284) | (210) | (307) | (108) | (19) | 440 | 56 | 231 |
| 2011 | 433 | 615 | 541 | 497 | (347) | (270) | (363) | (128) | (62) | 417 | 27 | 271 |
| 2012 | 428 | 597 | 546 | 378 | (404) | (335) | (438) | (190) | (115) | 395 | 38 | 218 |
| 2013 | 388 | 578 | 507 | 351 | (463) | (411) | (524) | (264) | (169) | 361 | (39) | 159 |
| 2014 | 350 | 551 | 463 | 317 | (528) | (485) | (614) | (341) | (231) | 316 | (78) | 107 |
| 2015 | 306 | 516 | 425 | 689 | (588) | (561) | (688) | (427) | (327) | 289 | (113) | 55 |
| 2016 | 266 | 491 | 387 | 393 | (648) | (636) | (775) | (502) | (370) | 257 | (139) | 0 |
| 2017 | 230 | 458 | 349 | 801 | (708) | (713) | (863) | (580) | (424) | 223 | (161) | (57) |
| 2018 | 190 | 427 | 309 | 606 | (768) | (790) | (955) | (656) | (481) | 187 | (199) | (117) |
| 2019 | 190 | 427 | 309 | 606 | (768) | (790) | (955) | (656) | (481) | 187 | (199) | (117) |
| 2020 | 150 | 398 | 269 | 577 | (828) | (869) | (1,048) | (733) | (531) | 153 | (257) | (176) |
| 2021 | 68 | 337 | 186 | 519 | (949) | (1,024) | (1,222) | (901) | (681) | 79 | (321) | (282) |
| 2022 | 26 | 305 | 144 | 488 | (1,011) | (1,104) | (1,315) | (986) | (726) | 42 | (363) | (341) |
| 2023 | (17) | 273 | 101 | 458 | (1,071) | (1,189) | (1,410) | (1,060) | (774) | 2 | (387) | (403) |
| 2024 | (59) | 242 | 56 | 593 | (1,133) | (1,266) | (1,518) | (1,149) | (844) | (38) | (420) | (451) |
| 2025 | (103) | 208 | 13 | 397 | (1,194) | (1,352) | (1,611) | (1,224) | (885) | (80) | (490) | (521) |

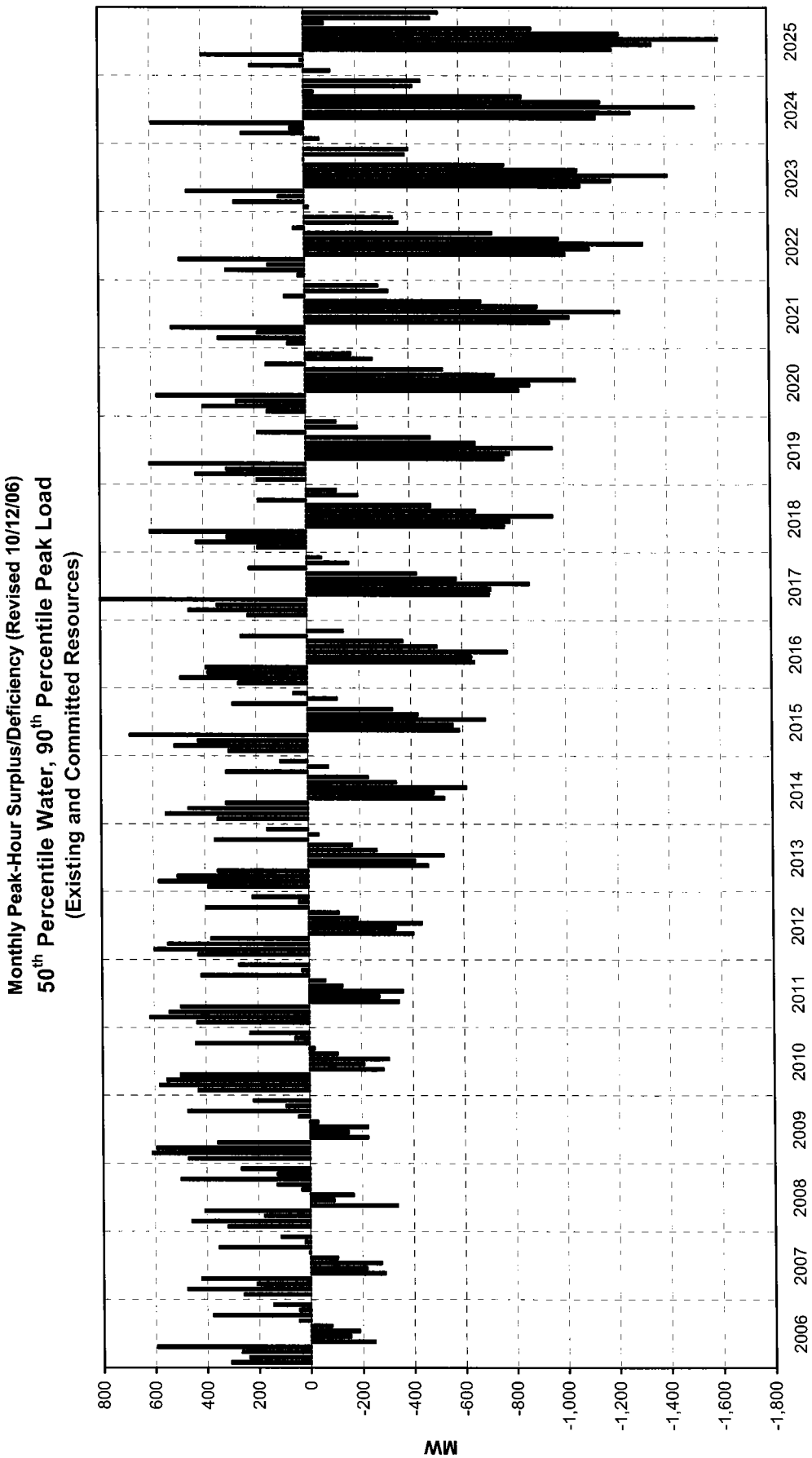
### 70th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

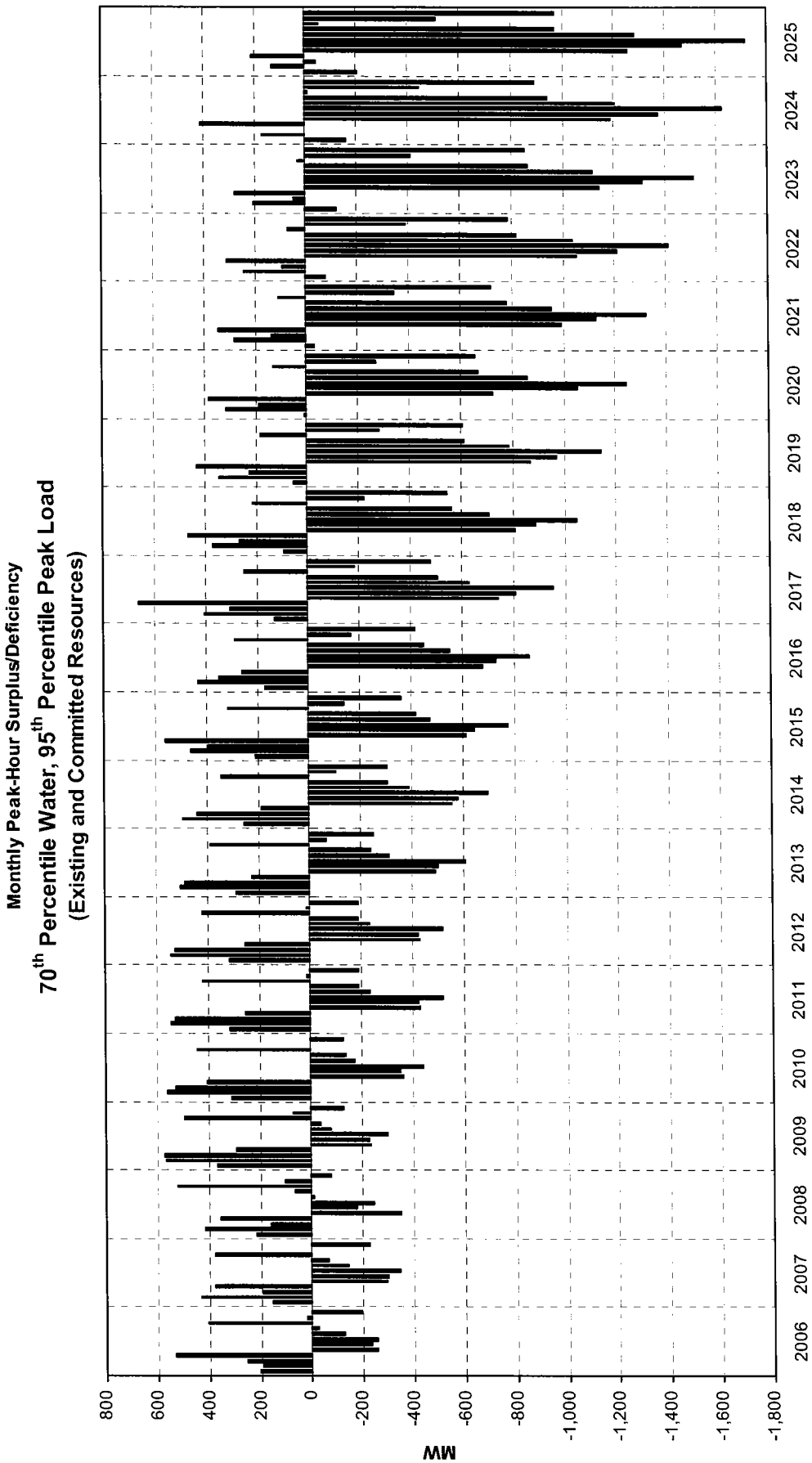
| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 203 | 191 | 252 | 532 | (252) | (231) | (257) | (126) | (24) | 402 | 21 | (191) |
| 2007 | 152 | 432 | 190 | 377 | (295) | (297) | (345) | (146) | (62) | 378 | 0 | (226) |
| 2008 | 212 | 413 | 159 | 356 | (349) | (175) | (241) | (11) | 66 | 521 | 101 | (75) |
| 2009 | 364 | 565 | 570 | 292 | (233) | (226) | (299) | (75) | (36) | 495 | 68 | (128) |
| 2010 | 311 | 559 | 525 | 403 | (361) | (351) | (440) | (174) | (135) | 444 | 0 | (127) |
| 2011 | 315 | 541 | 529 | 254 | (425) | (420) | (517) | (235) | (187) | 420 | 15 | (186) |
| 2012 | 315 | 541 | 529 | 254 | (425) | (420) | (517) | (235) | (187) | 420 | 15 | (186) |
| 2013 | 287 | 504 | 488 | 225 | (488) | (501) | (606) | (309) | (239) | 388 | (66) | (251) |
| 2014 | 251 | 495 | 439 | 188 | (556) | (579) | (697) | (387) | (304) | 341 | (104) | (304) |
| 2015 | 207 | 460 | 392 | 558 | (611) | (647) | (771) | (475) | (417) | 315 | (138) | (358) |
| 2016 | 167 | 434 | 348 | 258 | (676) | (727) | (860) | (551) | (452) | 284 | (164) | (418) |
| 2017 | 128 | 402 | 306 | 663 | (742) | (807) | (950) | (630) | (505) | 249 | (184) | (480) |
| 2018 | 90 | 372 | 265 | 466 | (806) | (887) | (1,046) | (706) | (563) | 213 | (224) | (542) |
| 2019 | 50 | 342 | 224 | 434 | (870) | (969) | (1,142) | (784) | (610) | 180 | (283) | (605) |
| 2020 | 10 | 313 | 186 | 381 | (723) | (1,052) | (1,241) | (860) | (667) | 129 | (272) | (656) |
| 2021 | (34) | 280 | 134 | 343 | (989) | (1,123) | (1,318) | (955) | (778) | 107 | (344) | (719) |
| 2022 | (76) | 243 | 89 | 310 | (1,054) | (1,207) | (1,412) | (1,038) | (817) | 70 | (387) | (783) |
| 2023 | (119) | 205 | 48 | 276 | (1,143) | (1,310) | (1,508) | (1,114) | (860) | 30 | (411) | (850) |
| 2024 | (159) | 169 | 3 | 407 | (1,184) | (1,373) | (1,622) | (1,203) | (939) | (11) | (444) | (891) |
| 2025 | (202) | 128 | (40) | 206 | (1,251) | (1,466) | (1,716) | (1,279) | (970) | (54) | (514) | (971) |

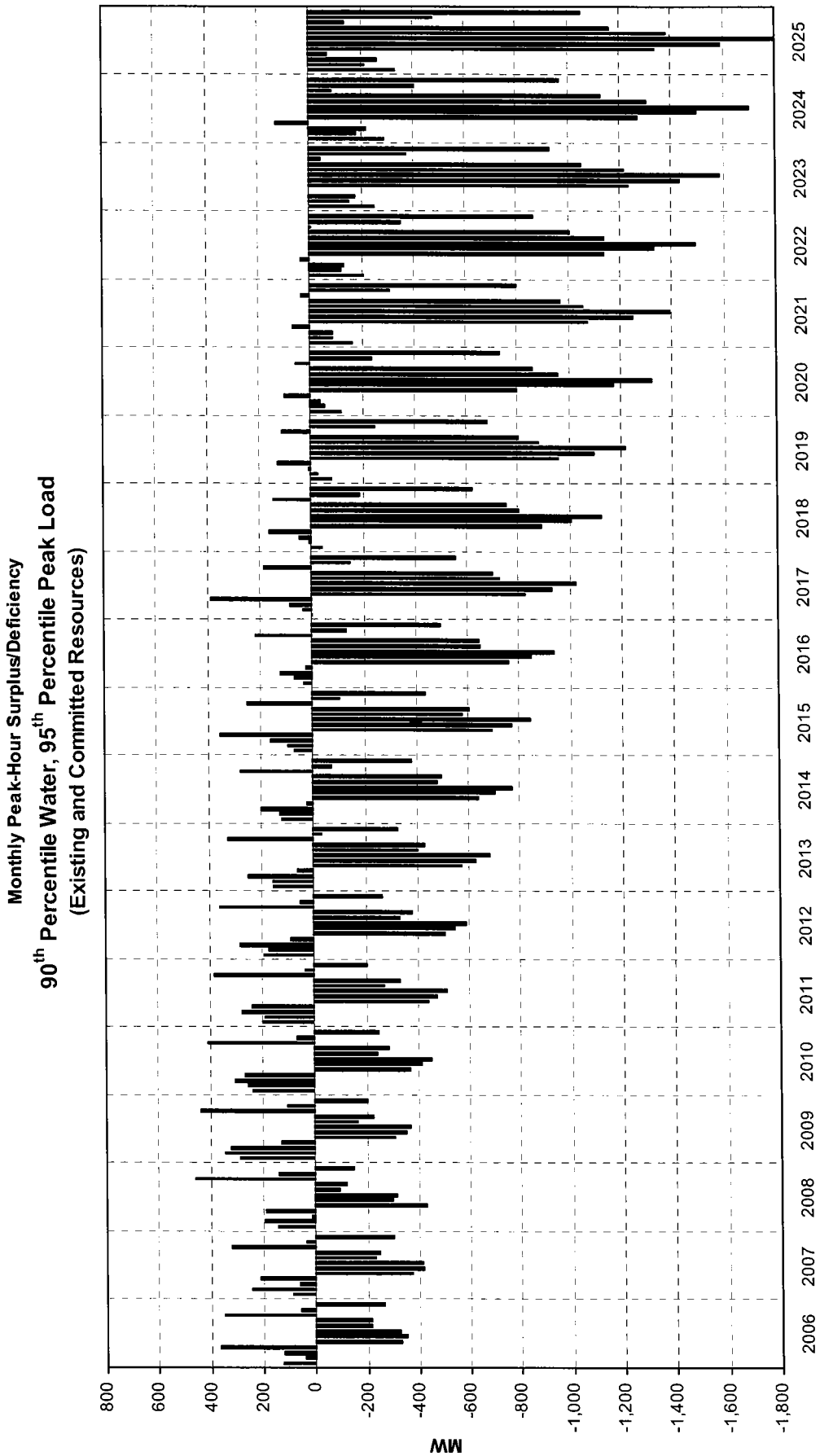
### 90th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 126 | 41 | 124 | 367 | (327) | (353) | (323) | (212) | (211) | 347 | 58 | (264) |
| 2007 | 92 | 245 | 62 | 211 | (372) | (419) | (412) | (231) | (247) | 319 | 37 | (299) |
| 2008 | 146 | 195 | 14 | 190 | (426) | (298) | (310) | (94) | (119) | 461 | 138 | (148) |
| 2009 | 288 | 344 | 323 | 126 | (307) | (349) | (365) | (165) | (223) | 435 | 105 | (203) |
| 2010 | 236 | 256 | 307 | 263 | (369) | (413) | (451) | (241) | (284) | 408 | 66 | (246) |
| 2011 | 201 | 191 | 278 | 237 | (440) | (473) | (510) | (269) | (327) | 383 | 36 | (203) |
| 2012 | 195 | 174 | 284 | 88 | (506) | (544) | (588) | (329) | (379) | 359 | 51 | (261) |
| 2013 | 156 | 155 | 246 | 60 | (569) | (624) | (681) | (403) | (430) | 328 | (32) | (326) |
| 2014 | 121 | 128 | 197 | 23 | (639) | (701) | (771) | (480) | (495) | 275 | (69) | (380) |
| 2015 | 75 | 93 | 158 | 355 | (693) | (771) | (844) | (576) | (607) | 251 | (104) | (435) |
| 2016 | 36 | 66 | 120 | 23 | (758) | (849) | (935) | (651) | (643) | 218 | (129) | (496) |
| 2017 | (3) | 35 | 84 | 388 | (824) | (930) | (1,024) | (729) | (696) | 182 | (148) | (557) |
| 2018 | (42) | 5 | 45 | 161 | (891) | (1,009) | (1,122) | (804) | (754) | 145 | (188) | (621) |
| 2019 | (82) | (25) | 4 | 129 | (955) | (1,092) | (1,219) | (883) | (802) | 112 | (248) | (684) |
| 2020 | (122) | (54) | (37) | 99 | (795) | (1,174) | (1,319) | (958) | (859) | 54 | (236) | (733) |
| 2021 | (165) | (87) | (85) | 66 | (1,072) | (1,247) | (1,395) | (1,059) | (966) | 34 | (309) | (799) |
| 2022 | (207) | (119) | (131) | 35 | (1,140) | (1,329) | (1,490) | (1,142) | (1,007) | (3) | (352) | (864) |
| 2023 | (251) | (151) | (173) | (1) | (1,234) | (1,432) | (1,587) | (1,217) | (1,050) | (41) | (376) | (929) |
| 2024 | (290) | (182) | (218) | 131 | (1,271) | (1,495) | (1,702) | (1,307) | (1,130) | (84) | (407) | (969) |
| 2025 | (333) | (215) | (262) | (70) | (1,339) | (1,588) | (1,797) | (1,380) | (1,162) | (135) | (478) | (1,050) |

[1] Final values after thermal peaking resources were applied.


Monthly Peak-Hour Surplus/Deficiency (Revised 10/12/06)
50th Percentile Water, 90th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Surplus/Deficiency
70th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Surplus/Deficiency
90th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

## Monthly Northwest Transmission Constraint Deficiency Data

### 50th Percentile Water, 50th Percentile Average Load, 90th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | (12) | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | (51) | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | (108) | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | (5) | (179) | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | (78) | (262) | 0 | (43) | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | 0 | (165) | (354) | (5) | 0 | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | (46) | (237) | (443) | (290) | (58) | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | (113) | (328) | (534) | (199) | (100) | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | (180) | (412) | (627) | (247) | (110) | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | (242) | (497) | (754) | (363) | (219) | 0 | 0 | 0 |
| 2019 | 0 | 0 | 0 | 0 | (314) | (577) | (815) | (418) | (444) | 0 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | (239) | (715) | (906) | (539) | (344) | 0 | 0 | 0 |
| 2021 | 0 | 0 | 0 | 0 | (441) | (743) | (1,054) | (652) | (374) | 0 | 0 | 0 |
| 2022 | 0 | 0 | 0 | 0 | (508) | (840) | (1,106) | (741) | (495) | 0 | 0 | 0 |
| 2023 | 0 | 0 | 0 | 0 | (576) | (929) | (1,265) | (774) | (545) | 0 | 0 | 0 |
| 2024 | 0 | 0 | 0 | 0 | (640) | (1,012) | (1,384) | (891) | (621) | 0 | 0 | (43) |
| 2025 | 0 | 0 | 0 | 0 | (713) | (1,108) | (1,410) | (995) | (670) | 0 | 0 | (105) |

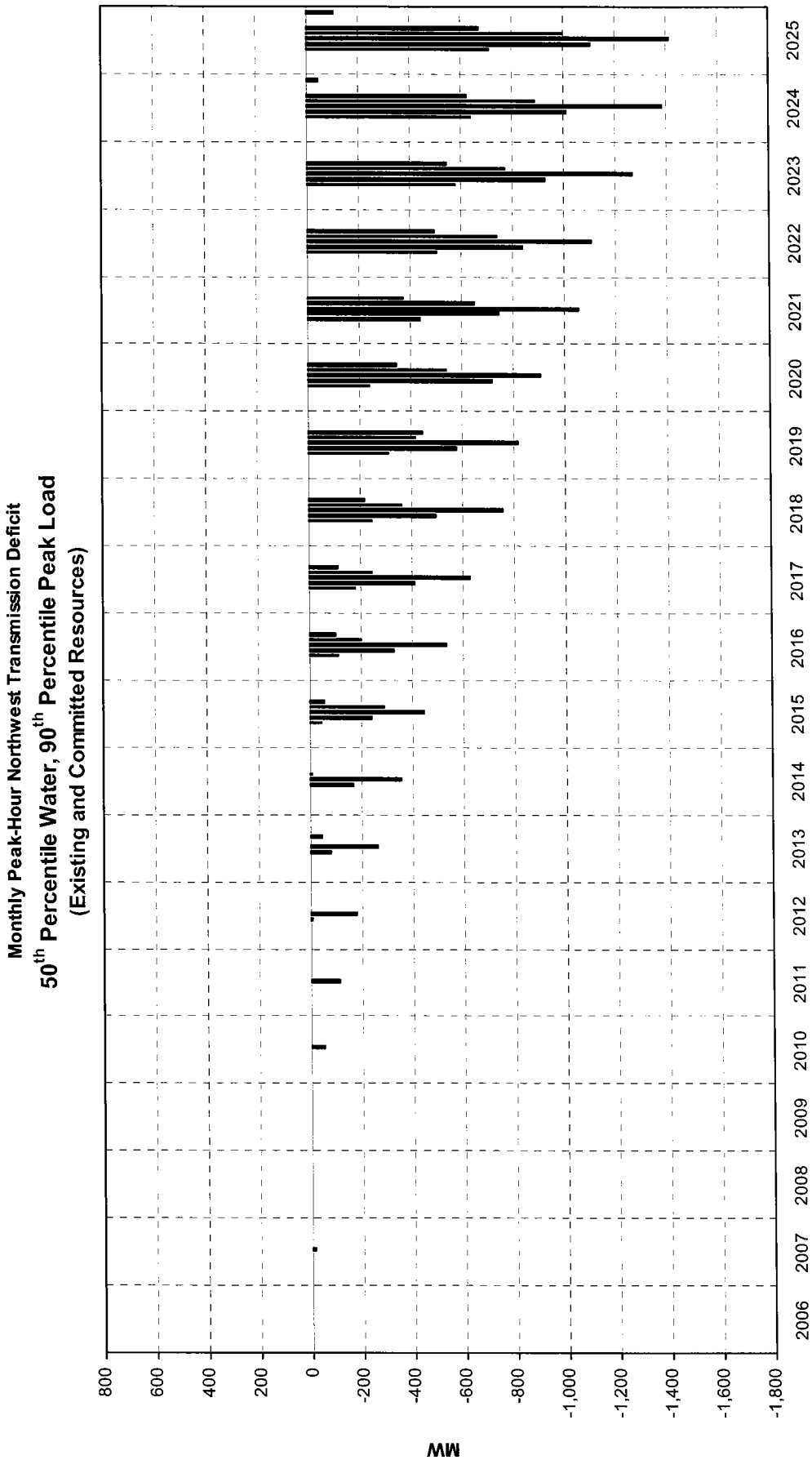
### 70th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

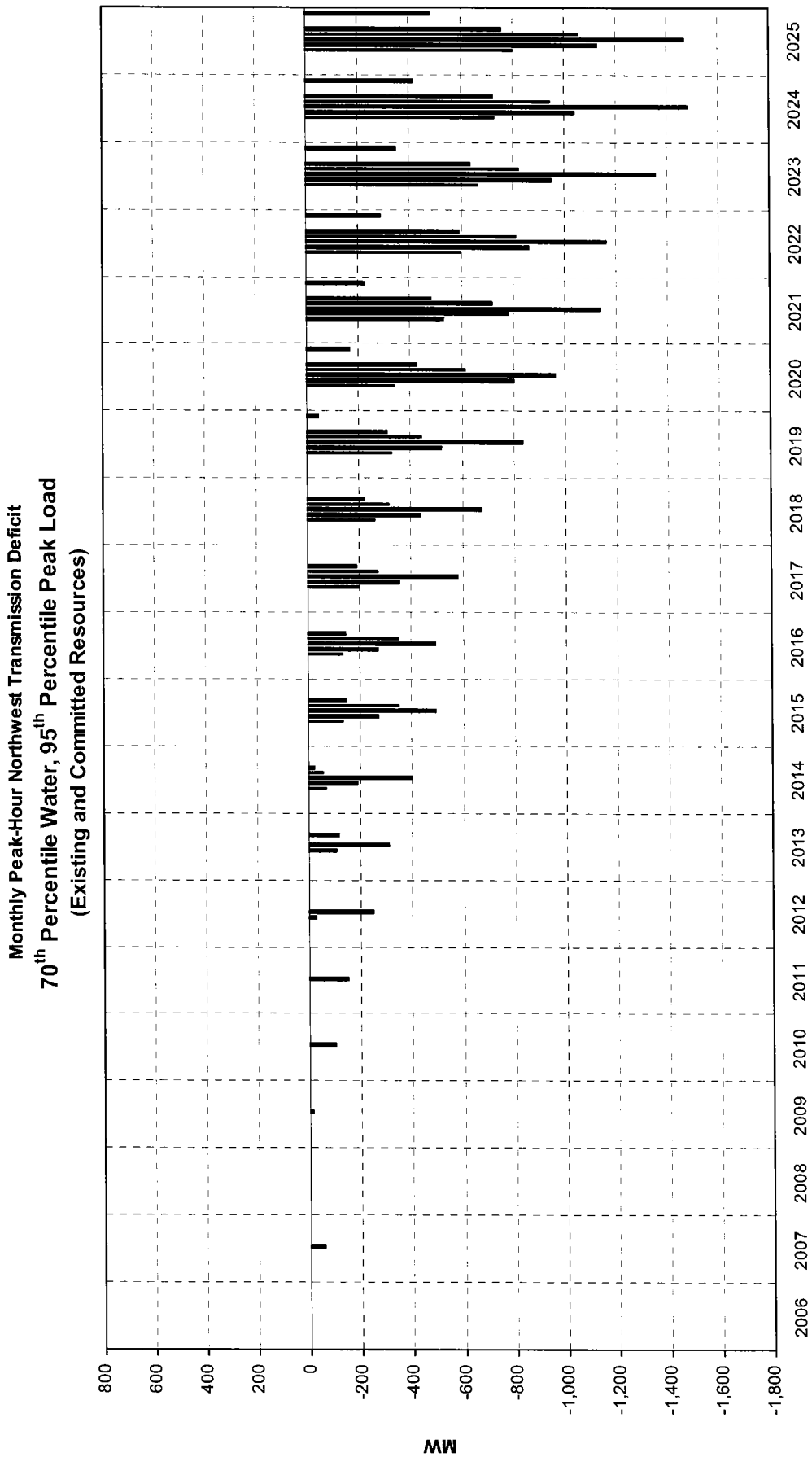
| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | (51) | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | (10) | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | (96) | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | (151) | 0 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | (29) | (247) | 0 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | 0 | (105) | (307) | 0 | (116) | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | (63) | (185) | (399) | (56) | (23) | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | (129) | (269) | (490) | (348) | (143) | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | (196) | (353) | (582) | (268) | (185) | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | (260) | (436) | (676) | (316) | (221) | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | (328) | (521) | (838) | (443) | (307) | 0 | 0 | (43) |
| 2019 | 0 | 0 | 0 | 0 | (393) | (606) | (866) | (461) | (526) | 0 | 0 | (101) |
| 2020 | 0 | 0 | 0 | 0 | (338) | (804) | (963) | (614) | (423) | 0 | 0 | (162) |
| 2021 | 0 | 0 | 0 | 0 | (529) | (778) | (1,142) | (721) | (480) | 0 | 0 | (223) |
| 2022 | 0 | 0 | 0 | 0 | (597) | (865) | (1,161) | (814) | (589) | 0 | 0 | (287) |
| 2023 | 0 | 0 | 0 | 0 | (663) | (952) | (1,356) | (824) | (637) | 0 | 0 | (350) |
| 2024 | 0 | 0 | 0 | 0 | (731) | (1,042) | (1,482) | (945) | (723) | 0 | 0 | (414) |
| 2025 | 0 | 0 | 0 | 0 | (800) | (1,130) | (1,470) | (1,056) | (758) | 0 | 0 | (478) |

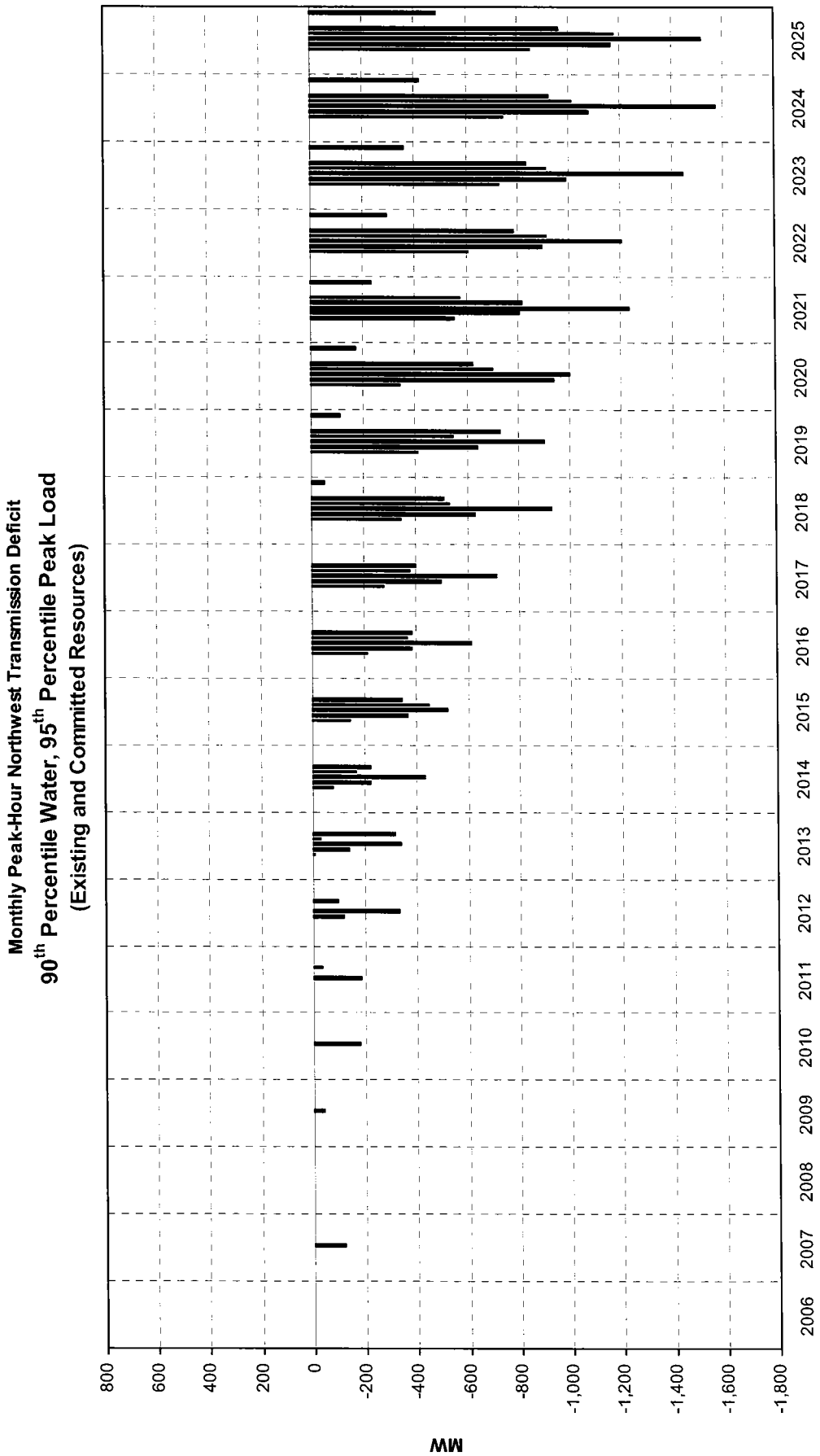
### 90th Percentile Water, 70th Percentile Average Load, 95th Percentile Peak-Hour Load[1]

| Year | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2007 | 0 | 0 | 0 | 0 | 0 | 0 | (115) | 0 | 0 | 0 | 0 | 0 |
| 2008 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2009 | 0 | 0 | 0 | 0 | 0 | 0 | (39) | 0 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 0 | 0 | 0 | 0 | 0 | (179) | 0 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 0 | 0 | 0 | 0 | 0 | (181) | 0 | (35) | 0 | 0 | 0 |
| 2012 | 0 | 0 | 0 | 0 | 0 | (115) | (331) | (1) | (93) | 0 | 0 | 0 |
| 2013 | 0 | 0 | 0 | 0 | (8) | (140) | (336) | (27) | (316) | 0 | 0 | 0 |
| 2014 | 0 | 0 | 0 | 0 | (80) | (220) | (428) | (168) | (219) | 0 | 0 | 0 |
| 2015 | 0 | 0 | 0 | 0 | (144) | (362) | (522) | (446) | (343) | 0 | 0 | 0 |
| 2016 | 0 | 0 | 0 | 0 | (209) | (382) | (615) | (362) | (383) | 0 | 0 | 0 |
| 2017 | 0 | 0 | 0 | 0 | (277) | (496) | (710) | (376) | (398) | 0 | 0 | 0 |
| 2018 | 0 | 0 | 0 | 0 | (343) | (629) | (927) | (532) | (506) | 0 | 0 | (50) |
| 2019 | 0 | 0 | 0 | 0 | (411) | (640) | (903) | (546) | (727) | 0 | 0 | (112) |
| 2020 | 0 | 0 | 0 | 0 | (344) | (941) | (1,001) | (704) | (622) | 0 | 0 | (170) |
| 2021 | 0 | 0 | 0 | 0 | (553) | (807) | (1,234) | (820) | (574) | 0 | 0 | (231) |
| 2022 | 0 | 0 | 0 | 0 | (610) | (894) | (1,204) | (912) | (787) | 0 | 0 | (294) |
| 2023 | 0 | 0 | 0 | 0 | (729) | (987) | (1,448) | (909) | (835) | 0 | 0 | (358) |
| 2024 | 0 | 0 | 0 | 0 | (747) | (1,076) | (1,575) | (1,010) | (922) | 0 | 0 | (422) |
| 2025 | 0 | 0 | 0 | 0 | (851) | (1,166) | (1,518) | (1,176) | (958) | 0 | 0 | (486) |

[1] Final values after thermal peaking resources were applied.


Monthly Peak-Hour Northwest Transmission Deficit
50th Percentile Water, 90th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Northwest Transmission Deficit
70th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Monthly Peak-Hour Northwest Transmission Deficit
90th Percentile Water, 95th Percentile Peak Load
(Existing and Committed Resources)
MW
800
600
400
200
0
-200
-400
-600
-800
-1,000
-1,200
-1,400
-1,600
-1,800
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)**
**50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load (MW)**

| 2006 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | 0 | (64) | (175) | 0 | 0 | 0 | 0 | 0 |
| Bennett Mountain | 180 | 0 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 0 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2007 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | 0 | (131) | (263) | 0 | 0 | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(12)** | **0** | **0** | **0** | **0** | **0** |

| 2008 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (42) | (177) | (319) | (13) | 0 | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2009 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (96) | (225) | (383) | (270) | (78) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2010 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (159) | (287) | (467) | (187) | (105) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(51)** | **0** | **0** | **0** | **0** | **0** |

| 2011 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (225) | (359) | (525) | (204) | (187) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(108)** | **0** | **0** | **0** | **0** | **0** |

| 2012 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (281) | (428) | (595) | (265) | (242) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(5)** | **(179)** | **0** | **0** | **0** | **0** | **0** |

| 2013 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (348) | (501) | (678) | (325) | (470) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(78)** | **(262)** | **0** | **(43)** | **0** | **0** | **0** |

| 2014 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (417) | (588) | (770) | (427) | (371) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(165)** | **(354)** | **(5)** | **0** | **0** | **0** | **0** |

| 2015 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (478) | (660) | (859) | (712) | (485) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(46)** | **(237)** | **(443)** | **(290)** | **(58)** | **0** | **0** | **0** |

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)**
**50th Percentile Water, 50th Percentile Load, 90th Percentile Peak-Hour Load (MW)**

| 2016 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (545) | (751) | (951) | (622) | (527) | 0 | 0 | (9) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(113)** | **(328)** | **(534)** | **(199)** | **(100)** | **0** | **0** | **0** |

| 2017 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (611) | (835) | (1,044) | (669) | (538) | 0 | 0 | (66) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(180)** | **(412)** | **(627)** | **(247)** | **(110)** | **0** | **0** | **0** |

| 2018 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (674) | (920) | (1,170) | (785) | (646) | 0 | 0 | (127) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(242)** | **(497)** | **(754)** | **(363)** | **(219)** | **0** | **0** | **0** |

| 2019 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (745) | (1,000) | (1,232) | (840) | (871) | 0 | (9) | (182) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(314)** | **(577)** | **(815)** | **(418)** | **(444)** | **0** | **0** | **0** |

| 2020 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (671) | (1,138) | (1,323) | (961) | (771) | 0 | (46) | (251) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(239)** | **(715)** | **(906)** | **(539)** | **(344)** | **0** | **0** | **0** |

| 2021 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (28) | 0 | 0 | 0 | (872) | (1,166) | (1,470) | (1,075) | (801) | 0 | (88) | (310) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(441)** | **(743)** | **(1,054)** | **(652)** | **(374)** | **0** | **0** | **0** |

| 2022 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (71) | 0 | 0 | 0 | (940) | (1,263) | (1,522) | (1,164) | (922) | 0 | (130) | (360) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(508)** | **(840)** | **(1,106)** | **(741)** | **(495)** | **0** | **0** | **0** |

| 2023 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (113) | 0 | 0 | 0 | (1,007) | (1,352) | (1,681) | (1,197) | (972) | 0 | (174) | (421) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(576)** | **(929)** | **(1,265)** | **(774)** | **(545)** | **0** | **0** | **0** |

| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (159) | 0 | 0 | 0 | (1,072) | (1,435) | (1,800) | (1,313) | (1,049) | 0 | (332) | (491) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(640)** | **(1,012)** | **(1,384)** | **(891)** | **(621)** | **0** | **0** | **(43)** |

| 2025 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (204) | 0 | 0 | 0 | (1,145) | (1,531) | (1,827) | (1,417) | (1,097) | 0 | (261) | (553) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(713)** | **(1,108)** | **(1,410)** | **(995)** | **(670)** | **0** | **0** | **(105)** |

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)**
**70th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)**

| 2006 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (15) | (85) | (213) | (20) | 0 | 0 | 0 | 0 |
| Bennett Mountain | 180 | 0 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 0 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2007 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (60) | (154) | (302) | (20) | (32) | 0 | 0 | (2) |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(51)** | **0** | **0** | **0** | **0** | **0** |

| 2008 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (112) | (196) | (357) | (59) | (80) | 0 | 0 | (26) |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | | | | | | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2009 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (173) | (256) | (426) | (324) | (152) | 0 | 0 | (78) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(10)** | **0** | **0** | **0** | **0** | **0** |

| 2010 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (236) | (321) | (512) | (245) | (209) | 0 | 0 | (119) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(96)** | **0** | **0** | **0** | **0** | **0** |

| 2011 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (303) | (383) | (567) | (270) | (265) | 0 | 0 | (87) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(151)** | **0** | **0** | **0** | **0** | **0** |

| 2012 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (361) | (452) | (663) | (339) | (324) | 0 | 0 | (136) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(29)** | **(247)** | **0** | **0** | **0** | **0** | **0** |

| 2013 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (422) | (528) | (723) | (364) | (543) | 0 | 0 | (195) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(105)** | **(307)** | **0** | **(116)** | **0** | **0** | **0** |

| 2014 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (494) | (608) | (815) | (478) | (450) | 0 | 0 | (254) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(63)** | **(185)** | **(399)** | **(56)** | **(23)** | **0** | **0** | **0** |

| 2015 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (561) | (692) | (907) | (771) | (570) | 0 | 0 | (312) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(129)** | **(269)** | **(490)** | **(348)** | **(143)** | **0** | **0** | **0** |

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)**
**70th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)**

| 2016 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (627) | (775) | (998) | (691) | (612) | 0 | 0 | (370) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(196)** | **(353)** | **(582)** | **(268)** | **(185)** | **0** | **0** | **0** |

| 2017 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (692) | (859) | (1,092) | (738) | (649) | 0 | 0 | (429) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(260)** | **(436)** | **(676)** | **(316)** | **(221)** | **0** | **0** | **0** |

| 2018 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (759) | (944) | (1,254) | (865) | (734) | 0 | (6) | (492) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(328)** | **(521)** | **(838)** | **(443)** | **(307)** | **0** | **0** | **(43)** |

| 2019 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (36) | 0 | 0 | 0 | (825) | (1,028) | (1,283) | (884) | (953) | 0 | (47) | (550) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(393)** | **(606)** | **(866)** | **(461)** | **(526)** | **0** | **0** | **(101)** |

| 2020 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (83) | 0 | 0 | 0 | (770) | (1,227) | (1,379) | (1,036) | (850) | 0 | (87) | (610) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(338)** | **(804)** | **(963)** | **(614)** | **(423)** | **0** | **0** | **(162)** |

| 2021 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (129) | 0 | 0 | 0 | (961) | (1,200) | (1,558) | (1,143) | (907) | 0 | (129) | (671) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(529)** | **(778)** | **(1,142)** | **(721)** | **(480)** | **0** | **0** | **(223)** |

| 2022 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (173) | 0 | 0 | 0 | (1,029) | (1,288) | (1,577) | (1,236) | (1,017) | 0 | (170) | (735) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(597)** | **(865)** | **(1,161)** | **(814)** | **(589)** | **0** | **0** | **(287)** |

| 2023 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (216) | 0 | (5) | 0 | (1,094) | (1,375) | (1,773) | (1,246) | (1,064) | 0 | (215) | (798) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(663)** | **(952)** | **(1,356)** | **(824)** | **(637)** | **0** | **0** | **(350)** |

| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (259) | 0 | (54) | 0 | (1,163) | (1,464) | (1,898) | (1,368) | (1,150) | 0 | (368) | (863) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(731)** | **(1,042)** | **(1,482)** | **(945)** | **(723)** | **0** | **0** | **(414)** |

| 2025 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (306) | 0 | (108) | 0 | (1,231) | (1,553) | (1,886) | (1,478) | (1,185) | 0 | (301) | (927) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(800)** | **(1,130)** | **(1,470)** | **(1,056)** | **(758)** | **0** | **0** | **(478)** |

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2006–2015)**
**90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)**

| 2006 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (32) | (116) | (243) | (74) | (102) | 0 | 0 | 0 |
| Bennett Mountain | 180 | 0 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 0 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2007 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (75) | (215) | (366) | (125) | (187) | 0 | 0 | (8) |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 0 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(115)** | **0** | **0** | **0** | **0** | **0** |

| 2008 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak-Hour Sup./Def. | 0 | 0 | 0 | 0 | (129) | (231) | (387) | (161) | (232) | 0 | 0 | (32) |
| Bennett Mountain | 180 | 178 | 0 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 0 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | | | | | | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| 2009 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (187) | (320) | (455) | (412) | (347) | 0 | 0 | (85) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(39)** | **0** | **0** | **0** | **0** | **0** |

| 2010 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (251) | (350) | (596) | (329) | (298) | 0 | 0 | (127) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(179)** | **0** | **0** | **0** | **0** | **0** |

| 2011 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (316) | (412) | (598) | (359) | (463) | 0 | 0 | (95) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **0** | **(181)** | **0** | **(35)** | **0** | **0** | **0** |

| 2012 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (376) | (538) | (747) | (424) | (520) | 0 | 0 | (144) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **0** | **(115)** | **(331)** | **(1)** | **(93)** | **0** | **0** | **0** |

| 2013 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (439) | (563) | (753) | (449) | (743) | 0 | 0 | (203) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(8)** | **(140)** | **(336)** | **(27)** | **(316)** | **0** | **0** | **0** |

| 2014 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (512) | (643) | (845) | (590) | (646) | 0 | 0 | (262) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(80)** | **(220)** | **(428)** | **(168)** | **(219)** | **0** | **0** | **0** |

| 2015 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (575) | (785) | (938) | (869) | (770) | 0 | 0 | (320) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(144)** | **(362)** | **(522)** | **(446)** | **(343)** | **0** | **0** | **0** |

**Monthly Northwest Transmission Constraint Deficiency Data with Peakers (2016–2025)**
**90th Percentile Water, 70th Percentile Load, 95th Percentile Peak-Hour Load (MW)**

| 2016 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | 0 | 0 | 0 | 0 | (641) | (805) | (1,032) | (785) | (810) | 0 | 0 | (377) |
| Bennett Mountain | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 0 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 0 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(209)** | **(382)** | **(615)** | **(362)** | **(383)** | **0** | **0** | **0** |

| 2017 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (13) | 0 | 0 | 0 | (708) | (919) | (1,126) | (798) | (825) | 0 | 0 | (435) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(277)** | **(496)** | **(710)** | **(376)** | **(398)** | **0** | **0** | **0** |

| 2018 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (54) | 0 | 0 | 0 | (775) | (1,052) | (1,343) | (954) | (933) | 0 | 0 | (498) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(343)** | **(629)** | **(927)** | **(532)** | **(506)** | **0** | **0** | **(50)** |

| 2019 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (96) | 0 | 0 | 0 | (842) | (1,063) | (1,319) | (969) | (1,154) | 0 | (26) | (560) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(411)** | **(640)** | **(903)** | **(546)** | **(727)** | **0** | **0** | **(112)** |

| 2020 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (140) | 0 | 0 | 0 | (776) | (1,364) | (1,417) | (1,126) | (1,050) | 0 | (63) | (618) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(344)** | **(941)** | **(1,001)** | **(704)** | **(622)** | **0** | **0** | **(170)** |

| 2021 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (190) | 0 | (35) | 0 | (985) | (1,230) | (1,650) | (1,242) | (1,001) | 0 | (105) | (679) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(553)** | **(807)** | **(1,234)** | **(820)** | **(574)** | **0** | **0** | **(231)** |

| 2022 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (234) | 0 | (82) | 0 | (1,042) | (1,317) | (1,621) | (1,334) | (1,214) | 0 | (147) | (742) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(610)** | **(894)** | **(1,204)** | **(912)** | **(787)** | **0** | **0** | **(294)** |

| 2023 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (275) | (6) | (130) | 0 | (1,161) | (1,410) | (1,864) | (1,331) | (1,262) | 0 | (191) | (806) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(729)** | **(987)** | **(1,448)** | **(909)** | **(835)** | **0** | **0** | **(358)** |

| 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (319) | (38) | (179) | 0 | (1,178) | (1,499) | (1,991) | (1,433) | (1,349) | (6) | (327) | (870) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(747)** | **(1,076)** | **(1,575)** | **(1,010)** | **(922)** | **0** | **0** | **(422)** |

| 2025 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peak Hour Sup./Def. | (367) | (74) | (232) | 0 | (1,283) | (1,589) | (1,934) | (1,598) | (1,385) | (19) | (280) | (934) |
| Bennett Mountain | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| Danskin | 93 | 92 | 90 | 88 | 88 | 87 | 86 | 87 | 88 | 89 | 91 | 92 |
| Evander | 180 | 178 | 176 | 174 | 172 | 168 | 165 | 168 | 170 | 175 | 177 | 178 |
| **Deficiency** | **0** | **0** | **0** | **0** | **(851)** | **(1,166)** | **(1,518)** | **(1,176)** | **(958)** | **0** | **0** | **(486)** |

# Portfolio Summary and Description

**Portfolio P-1 - Green**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 926 |
| Wind 2008, 2009, 2011 | 500 | MW | Transmission | 450 |
| Geothermal (Binary) 2009, 2011- 2014, 2016-18, 2020 | 490 | MW | Peak | 1099 |
| CHP 2010, 2013 | 150 | MW | Total Name Plate | 2027 |
| Transmission McNary 2014, Montana 2018 | 450 | MW | | |
| Nuclear 2022 | 250 | MW | | |
| Total Name Plate | 2027 | MW | | |

Portfolio P1 comprises a high degree of renewable energy generating resources and a large reliance on market purchases via upgraded transmission paths to meet peak capacity needs. Portfolio P1 represents the lowest carbon exposure.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $306,212 |
| Resource Total | $7,348,136 |
| Market Sales | -$2,670,626 |
| Total | $4,983,722 |

**Portfolio P2 - Transmission**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 394 |
| Wind 2008 | 100 | MW | Transmission | 1260 |
| Geothermal (Binary) 2009 | 50 | MW | Peak | 662 |
| CT 2010 | 170 | MW | Total Name Plate | 2017 |
| Transmission Lolo 2011, McNary 2013, Montana 2018, White Pine 2024 | 1260 | MW | | |
| Nuclear 2022 | 250 | MW | | |
| Total Name Plate | 2017 | MW | | |

Portfolio P2 explores the implications of extensive transmission upgrades and reliance on the market to provide the bulk of the new base load and peaking needs.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $958,789 |
| Resource Total | $5,600,116 |
| Market Sales | -$1,207,782 |
| Total | $5,351,123 |

**Portfolio P3 - 2004 IRP with diversified additions**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1139 |
| Wind 2008, 2012, | 250 | MW | Transmission | 285 |
| Geothermal (Binary) 2009, 2021, 2022 | 225 | MW | Peak | 1284 |
| CHP 2010, 2020 | 110 | MW | Total Name Plate | 1807 |
| Transmission McNary 2012, Lolo 2019 | 285 | MW | | |
| Coal 2013 | 250 | MW | | |
| IGCC 2017 | 250 | MW | | |
| Nuclear 2022 | 250 | MW | | |
| Total Name Plate | 1807 | | | |

Portfolio P3 adjusts and extends the 2004 IRP with a diversified mix of renewable, transmission, and thermal resources.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $517,744 |
| Resource Total | $6,313,858 |
| Market Sales | -$1,866,829 |
| Total | $4,964,772 |

**Portfolio P4 - Basic Thermal**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1187 |
| Wind 2008 | 100 | MW | 0 | |
| CHP 2008 | 50 | MW | Peak | 1562 |
| Geothermal (Binary) 2009 | 50 | MW | 1657 | |
| Coal 2012, 2016, 2020 | 850 | MW | | |
| CT 2018 | 170 | MW | | |
| Nuclear 2022 | 250 | MW | | |
| Total Name Plate | 1657 | MW | | |

Portfolio P4 satisfies the base load and peak growth with a heavy reliance on new pulverized coal and natural gas peaking generation. It contains no transmission upgrades. This portfolio has the greatest carbon exposure.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $270,096 |
| Resource Total | $7,227,009 |
| Market Sales | -$2,655,419 |
| Total | $4,841,685 |

**Portfolio P5 - Clean Coal Portfolio**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1104 |
| Wind 2008 | 100 | MW | Transmission | 0 |
| CHP 2008 | 50 | MW | Peak | 1537 |
| Geothermal (Binary) 2009 | 50 | MW | Total Name Plate | 1632 |
| IGCC 2012, 2016, | 600 | MW | | |
| CT 2018 | 170 | MW | | |
| CCCT 2021 | 225 | MW | | |
| Nuclear 2022 | 250 | MW | | |
| Total Name Plate | 1632 | MW | | |

Portfolio P5 examines heavy thermal portfolio with IGCC coal and a large combines cycle natural gas resources.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $297,995 |
| Resource Total | $7,431,968 |
| Market Sales | -$2,463,595 |
| Total | $5,266,369 |

**Portfolio P6 - 2004 IRP with Heavy Geothermal and Combustion Turbines (CT)**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1042 |
| Wind 2008 | 100 | MW | Transmission | 0 |
| CHP 2008 | 100 | MW | Peak | 1752 |
| Geothermal (Binary) 2010, 2013, 2018 | 150 | MW | Total Name Plate | 1847 |
| CT 2012, 2020, 2021 | 510 | MW | | |
| Coal 2013, 2017 | 500 | MW | | |
| IGCC 2022 | 300 | MW | | |
| Total Name Plate | 1847 | MW | | |

Portfolio P6 adjusts and extends the 2004 IRP with three 170 MW natural gas CT's, 220 MWs of Geothermal and a 300 MW IGCC coal plant. Idaho Power generation requirements are predominantly peak driven which requires a large capacity for a relatively few peak hours per year. CT's are one way to provide this capacity and P6, P7, P8, and P9 examines heavy CT reliance.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $289,365 |
| Resource Total | $7,156,598 |
| Market Sales | -$2,501,643 |
| Total | $4,944,319 |

| Portfolio P7 2004 IRP with Heavy Geothermal and Combustion Turbines with some Transmission | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 901 |
| Wind 2007 | 100 | MW | Transmission | 225 |
| Geothermal (Binary) 2010 | 50 | MW | Peak | 1432 |
| CHP 2010 | 50 | MW | Total Name Plate | 1752 |
| Transmission McNary 2011 | 225 | MW | | |
| Coal 2013, 2018 | 500 | MW | | |
| CT 2020, 2021 | 340 | MW | | |
| IGCC 2022 | 300 | MW | | |
| Total Name Plate | 1752 | MW | | |

Portfolio P7 adjusts and extends the 2004 IRP similarly to P6 but with increased transmission enabling greater import capacity and consequently market purchases to provide for some of the system peaking requirements and offsetting a CT and some geothermal and CHP generation.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $412,236 |
| Resource Total | $6,650,659 |
| Market Sales | -$2,065,285 |
| Total | $4,997,609 |

| Portfolio P8 2004 IRP with Outrageous CT's and some Geothermal | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 948 |
| Wind 2007, 2011 | 350 | MW | Transmission | 0 |
| CHP 2008 | 48 | MW | Peak | 1721 |
| Geothermal 2010-11, 2013, 2018 | 250 | MW | Total Name Plate | 2065 |
| Coal 2013 | 250 | MW | | |
| CT 2012, 2017, 2020, 2021 | 680 | MW | | |
| IGCC 2021 | 300 | MW | | |
| Total Name Plate | 2065 | | | |

Portfolio P8 starts with the 2004 IRP and builds the most peaking focused portfolio. CT's are relatively cheap to build and if not run a lot of hours provide a good choice to provide capacity. P8 examines the addition of 4,170 MW CTs. Additionally, some of the pulverized coal identified in the 2004 IRP was off set with Geothermal resources.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $321,042 |
| Resource Total | $7,026,768 |
| Market Sales | -$2,535,129 |
| Total | $4,812,681 |

**Portfolio P9 2004 IRP Heavy CTs and IGCC sequestration**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1042 |
| Wind 2007 | 100 | MW | Transmission | 0 |
| CHP 2008 | 100 | MW | Peak | 1752 |
| Geothermal (Binary) 2010, 2013, 2018 | 150 | MW | Total Name Plate | 1847 |
| CT 2012, 2020, 2021 | 510 | MW | | |
| Wyo IGCC w/seq 2013 | 250 | MW | | |
| Coal 2017 | 250 | MW | | |
| IGCC 2022 | 300 | MW | | |
| Total Name Plate | 1847 | | | |

Portfolio P9 begins with the 2004 IRP and focuses on peaking and geothermal resources with carbon sequestered coal generation.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $289,882 |
| Resource Total | $7,182,044 |
| Market Sales | -$2,501,215 |
| Total | $4,970,712 |

**Portfolio P10 – Heavy Pulverized Coal**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1356 |
| Wind 2008 | 100 | MW | Transmission | 225 |
| CHP 2009 | 100 | MW | Peak | 1592 |
| Geothermal (Binary) 2009 | 50 | Mw | Total Name Plate | 1912 |
| Transmission McNary 2014 | 225 | MW | | |
| Coal 2012, 2016, 2018, 2023 | 1000 | MW | | |
| Nuclear 2021 | 250 | MW | | |
| Total Name Plate | 1912 | MW | | |

Portfolio P10 focuses on pulverized coal with four 250 MW projects over the planning period. Pulverized coal is a proven and reliable technology with a plentiful fuel source. Portfolio P10 is distinguished as the portfolio that adds the most base load generation.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $265,690 |
| Resource Total | $7,503,565 |
| Market Sales | -$2,797,467 |
| Total | $4,971,787 |

**Portfolio P11 - Transmission Bridger to Boise with Wyoming Wind**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1016 |
| Wind 2009, 2016, 2018, 2020 | 1100 | MW | Transmission | 1475 |
| CHP 2009 | 100 | MW | Peak | 893 |
| Geothermal (Binary) 2009 | 50 | MW | Total Name Plate | 3412 |
| Transmission | | | | |
| Wyoming 2012, McNary 2014 | 1475 | MW | | |
| Coal 2013 | 250 | MW | | |
| Nuclear 2020 | 250 | MW | | |
| Total Name Plate | 3412 | MW | | |

Portfolio P11 explores increasing the transmission capacity between Wyoming and Boise. There was enthusiastic support for this configuration among some of the IRPAC members. The rational is to provide a means of accessing the high capacity wind area that are located in Wyoming. This portfolio has the distinction of including the most facility nameplate.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $410,636 |
| Resource Total | $7,860,774 |
| Market Sales | -$2,401,375 |
| Total | $5,870,035 |

**Portfolio P12 Nuclear**

| | | | | |
|---|---|---|---|---|
| DSM 2007-2025 | 187 | MW | Energy | 1289 |
| Wind 2008 | 100 | MW | Transmission | 225 |
| CHP 2009 | 100 | MW | Peak | 1492 |
| Geothermal (Binary) 2009 | 50 | MW | Total Name Plate | 1812 |
| Coal 2013 | 250 | MW | | |
| Transmission McNary 2014 | 225 | MW | | |
| Nuclear 2016, 2018, 2023 | 900 | MW | | |
| Total Name Plate | 1812 | MW | | |

Portfolio P12 incorporates a nuclear resource solution to Idaho Power generation growth requirements.

| Expected Case Aurora | Years 1-20 NPV ($000) |
|---|---|
| Market Purchases | $262,189 |
| Resource Total | $7,500,132 |
| Market Sales | -$2,966,285 |
| Total | $4,796,034 |

**Summary of Initial Portfolios**

| Resource | P1 | P2 | P3 | P4 | P5 | P6 | P7 | P8 | P9 | P10 | P11 | P12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCCT | – | – | – | – | 225 | – | – | – | – | – | – | – |
| CHP | 150 | – | 110 | 50 | 50 | 100 | 50 | 48 | 100 | 100 | 100 | 100 |
| Coal | – | – | 250 | 850 | – | 500 | 500 | 250 | 250 | 1,000 | 250 | 250 |
| CT | – | 170 | – | 170 | 170 | 510 | 340 | 680 | 510 | – | – | – |
| DSM | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 | 187 |
| Geothermal (Binary) | 490 | 50 | 225 | 50 | 50 | 150 | 50 | 250 | 150 | 50 | 50 | 50 |
| IGCC | – | – | – | – | 600 | 300 | 300 | 300 | 300 | – | – | – |
| Nuclear | 250 | 250 | 250 | 250 | 250 | – | – | – | – | 250 | 250 | 900 |
| Transmission | 450 | 1,260 | 285 | – | – | – | 225 | – | – | 225 | 1,475 | 225 |
| Wind | 500 | 100 | 250 | 100 | 100 | 100 | 100 | 350 | 100 | 100 | 1,100 | 100 |
| Wyo IGCC w/seq | – | – | – | – | – | – | – | – | 250 | – | – | – |
| **Total Nameplate** | **2,027** | **2,017** | **1,807** | **1,657** | **1,632** | **1,847** | **1,752** | **2,065** | **1,847** | **1,912** | **3,412** | **1,812** |
| **Energy** | **926** | **394** | **1,139** | **1,187** | **1,104** | **1,042** | **901** | **948** | **1,042** | **1,356** | **1,016** | **1,289** |
| **Transmission** | **450** | **1,260** | **285** | **–** | **–** | **–** | **–** | **–** | **–** | **225** | **1,475** | **225** |
| **Peak** | **1,099** | **662** | **1,284** | **1,562** | **1,537** | **1,752** | **1,432** | **1,721** | **1,752** | **1,592** | **893** | **1,492** |

**Coal Based Generation Technology Assessment**
**Executive Summary**
**DRAFT**

With the recent increase in natural gas prices and gas delivery restrictions, coal based power generation is regaining a stronghold in the power generation industry. When considering the many common and developing coal generation technologies available for utility application, it is important to understand the relative benefits and potential pitfalls associated with various options currently being considered for new power generation facilities.

The purpose of this white paper is to present a summary level comparison of key parameters associated with each of the most prevalent commercial coal-fired generation technologies currently being considered in today's power generation market. The technologies addressed include the following:

- Sub-critical pulverized coal combustion.
- Super-critical pulverized coal combustion.
- Ultra-super-critical pulverized coal combustion.
- Circulating fluidized bed combustion.
- Integrated gasification combined cycle technologies.
- Pressurized fluidized bed combustion.

The relative performance, environmental emissions, and electrical generation costs for each of the technologies for a western coal application are compared. In addition, the sensitivity of generation cost for the most prominent technologies to unit size, capital costs, and key environmental risks for mercury control and carbon dioxide emissions are addressed.

The comparison assumes a typical 600 MW unit, located on a western US plant site, designed to utilize western bituminous and sub-bituminous coal supplies.

## 1.1 Overview of Technologies

The following is a brief description of each of the coal generation technologies considered in this assessment.

**Pulverized Coal (PC) Boilers**. PC boiler technology is a well-proven technology that is dominating the current market for large projects under development and construction. This boiler technology is characterized by firing coal which has been pulverized to a fine particle size (50 microns or smaller) and then blown into the boiler with combustion air and rapidly combusted. The combination of the fuel particle size and direct injection with combustion air results in very high combustion rates when compared to other technologies such as circulating fluidized bed boilers. Pulverized coal boilers consist of a membrane-wall furnace or combustion zone consisting of either vertical or spiral-wound water tubes. This membrane wall serves as the evaporative section of the boiler. In the furnace, fuel and combustion air are injected through wall-mounted burner assemblies with staging of combustion air to minimize the formation of NOx. Some steam superheater surface is often located in the furnace in the form of pendant heat exchange surfaces. The combustion products or flue gases flow upward through the furnace and enter a backpass, or convective section which includes steam superheaters, reheaters, economizers, selective catalytic NOx reduction systems, and air heaters. Split backpass sections,

in which the flue gas flows through two parallel gas paths, are often utilized to assist in steam temperature control and to minimize the use of water spray attemperation.

The thermodynamic steam cycle for large pulverized coal fired units have been implemented in three basic steam cycles:

- Subcritical drum type units with maximum continuous throttle pressures up to 2,400 psig and typically 1000 °F/1000 °F superheat/reheat steam temperatures. Overpressure (OP) design conditions for this cycle would typically allow for temporary operation at a throttle pressure of 2,520 psig.

- Supercritical units with throttle pressures at 3,500 psig, (3,675 psig-OP) and with 1,000 °F to 1,100 °F superheat and reheat temperatures and typically would be applicable for units greater than 400 MW class designs. Supercritical technologies operate on a once-through steam/water cycle concept with no steam drum in the steam generator flow path. Water is circulated through the boiler heat transfer surfaces, evaporated within the boiler tubes, superheated and/or reheated, and directed to the steam turbine generator. Supercritical cycles have typically been implemented with a single steam reheat system.

- Ultra-supercritical units with throttle pressures as high as 4,200 psig and 1,100 °F superheat and reheat steam temperatures that are generally applied to extremely large units (1,000 MW class). These units have been successfully implemented in Europe and Japan with little operating experience in the United States. Further development and advancement of the ultra-supercritical technologies is focusing on the development of new piping and equipment materials required to further elevate the steam cycle conditions and improve overall thermal cycle efficiency. Ultra-supercritical technologies are similar to the supercritical technologies with respect to the use of a once-through steam/water cycle. While supercritical cycles have typically been limited to single reheat systems, ultra-supercritical units may utilize double reheat steam cycles.

**Circulating Fluidized Bed (CFB) Boiler.** CFB boiler technology represents a mature technology in which crushed fuel and limestone (and/or other inert bed materials) are injected into the furnace where they are suspended in a fluidized bed by combustion air that flows vertically through the furnace. The elutriation of the fuel particles and bed material allows for long residence time for combustion as the gas stream moves from the bottom of the furnace, through a particulate separation device and exits through a standard convective heat transfer section at the backend of the boiler. Due to the low combustion temperatures and the use of limestone as a bed material, emissions of NOx and SO2 emissions from CFB boilers are inherently lower than those of PC boilers. The separator device located at the furnace gas outlet collects bed material entrained in the flue gas for recycle back into the furnace; thus, the term circulating fluidized bed is applied. The particle separator at the furnace exit can take many forms ranging from the typical cyclone design with a vortex finder and J-valve to internal U-Beam devices which form a tortuous path where particulate collects via impaction with the U-Beams. CFB boiler designs are adaptable to a wide range of fuels, allowing utilization of low rank coals, waste fuels, and opportunity fuels such as petroleum coke.

Selective non-catalytic reduction (SNCR) systems are typically employed to help further reduce $NO_x$ emissions without the need for a SCR catalyst. SO2 removal efficiencies as high as 95 percent have been achieved through injection of limestone directly into the furnace.

CFB boiler technology applications to date have utilized sub-critical thermal cycles. The first supercritical, 450 MW, once-through CFB unit is currently under construction in Poland by Foster Wheeler. There are no technical concerns for this enhancement of the technology other than the threshold criteria of about 400 MW were supercritical designs become more economically viable. However, designs are offered by other suppliers for larger, supercritical once through CFB boilers up to 600 MW in size, but to date no units have been built. The current size limit of CFB boilers is 400 MW.

**Integrated Gasification Combined Cycle (IGCC).** IGCC is a developing clean-coal technology that combines the gasification of coal to syngas and integrates this with a standard gas turbine combined cycle power plant. Gasification processes have and are operating in the chemical industry for many years with a number of proven utility-size IGCC power plants. IGCC development projects are prevalent in today's market, but are focused on a select number of utilities and independent power producers that are funding up-front front-end engineering and design (FEED) analyses to definitively establish design, performance, and cost information. Most of the development projects are funding FEED efforts for high sulfur bituminous and petroleum coke-type fuels. Presently, there appears to be limited interest in developing western bituminous or sub-bituminous fuel designs by the prominent gasification suppliers (OEMs).

For the gasification process coal is reacted in a gasifier, producing a raw fuel gas that is cleaned and combusted in a gas turbine as part of a combined-cycle power block. Coal gasification involves the partial oxidation of coal at an elevated temperature and pressure which produces the syngas that has combustible components, including hydrogen, carbon monoxide and methane. Gasification takes place in a gasifier/reactor, where coal is processed in three steps: drying (evaporating moisture), pyrolysis (decomposition / transformation of chemical compounds) and gasification (partial oxidation). The syngas from the coal gasifier is then quenched and/or cooled through a series of integrated heat exchangers and then scrubbed for removal of particulates and sulfur.

Typical syngas compositions leaving the gasification system have low heating values compared to natural gas. Clean syngas is combusted in one or more gas turbines, which exhaust to multiple pressure, sub-critical heat recovery steam generators (HRSGs). The HRSGs produce steam for a conventional steam turbine cycle as well as steam required for the gasification process. Oxygen required for the gasifier (either air-blown or oxygen-blown) is often provided via the gas turbine compressor. For oxygen-blown designs, a cryogenic air separation unit is required.

Since the volume of the syngas produced is significantly less than the flue gas produced by the combustion turbines, removal of pollutants is generally more efficient than with other coal generation technologies. This characteristic is very attractive and has good potential for economically achieving aggressive pollutant emissions standards. The key area of future benefit is associated with the capability for carbon dioxide capture for sequestration (CCS) that can be adapted through this technology.

**Pressurized Fluidized Bed Combustion (PFBC).** PFBC coal technology can be characterized as a standard combined cycle facility with an external combustor for the combustion turbine. The combustor is a pressurized combustor supplied with coal and combustion air from the combustion turbine compressor. The combustion units are fairly compact and operate at pressures consistent with the combustion turbine design, typically in the range of 145 to 220 psig, and combustion temperatures in the range of 1400 to 1600°F.

Hot pressurized flue gas from the combustor is used to directly produce steam and is also sent through hot cyclones and supplied to a gas turbine for expansion and power production. Gas turbine exhaust gas is then sent through a heat recovery steam generator for additional steam production for steam turbine power generation. Ultimately the steam turbine will create approximately 80% of the plant power with the combustion turbine providing the other 20%. The key challenge to this cycle design is having a gas turbine design that can accept a flue gas with residual solid particles.

Due to the limited commercial deployment of this technology, the complexity of the various plant systems, mixed performance results from recent applications, and the limited apparent benefits of the technology (i.e. lack of significantly improved cycle efficiencies and emissions as compared to other technologies), PFBC technology is not currently considered a realistic option for a 600 MW power generating facility.

Table 1.1-1 provides a summary level side-by-side comparison of the key differentiators between the technologies included in this evaluation.

| | Sub-Critical PC | Super Critical PC | Ultra-Super Critical PC | Sub Critical CFB | IGCC Moving Bed Reactors | IGCC Fluidized Bed Reactors | IGCC Entrained Flow |
|---|---|---|---|---|---|---|---|
| **Commercial Operating Experience** | Extensive commercial experience | Extensive commercial experience | Limited development of technology | Extensive commercial experience | Extensive commercial experience | Limited development of technology | Extensive commercial gasifier experience. |
| **Thermal Efficiency** | Lowest Thermal Efficiency | Higher Thermal Efficiency | Incrementally Higher Efficiency than SCPC | Lowest thermal efficiency | Highest IGCC Efficiency – Incrementally Higher Efficiency than USCPC | Medium IGCC Efficiency – Incrementally Higher Efficiency than USCPC | Lowest IGCC Efficiency – Incrementally Higher Efficiency than USCPC |
| **Turndown Capability** | Slow load changing response | Better load changing response. | Better load changing response. | Slow load changing response | Limited turndown capability | | |
| **Plant Size** | Boiler and Power Island is relatively compact. Large AQCS train. | Boiler and Power Island is relatively compact. Large AQCS train. | Boiler and Power Island is relatively compact. Large AQCS train. | Boiler and Power Island is relatively compact. Smaller AQCS train. | Limited gasifier capacity - many trains required | | Equipment is relatively compact |
| **Syngas Quality** | | | | | Relatively Low LHV syngas (260-270 btu/scf) | Moderate LHV syngas (270 to 280 Btu/scf) | Relatively High LHV syngas (280 to 310 Btu/scf) |
| | | | | | Produces phenols, tars and hydrocarbon liquids | Syngas relatively free of tars, high alkali contents, sticky ash particles | Syngas has low tar content |
| **Reactor Operating Temperature** | | | | | | Low operating temperature | High operating temperature |
| **Oxygen and Steam Consumption** | | | | | Low oxygen consumption | Moderate oxygen and steam consumption | High oxygen consumption |
| **Fuel Flexibility** | Limited flexibility in fuels. | Limited flexibility in fuels. | Limited flexibility in fuels. | Higher fuel flexibility | Limited flexibility in fuels and changes in quality of fuel. Special requirements for coal size (design limit of maximum 5 % of coal less than ¼ inch in size); High fines, damp coal and high temperatures cause flashing in gasifiers (high carryover of solids into flue gas) | Well-suited for low grade fuels | Can process almost any type of coal. |
| | | | | | | Large char recycle | Requires very fine coal particles |
| | | | | | | | Slag particles can be entrained into raw fuel gas |
| | | | | | Commercial experience with lignite | | |

**Table 1.1-1. Key Technology Differentiators**

## 1.2 Comparison of Performance

The relative performance of the various coal generation technologies is presented in Table 1.2-1. This includes the expected plant efficiency, water consumption, waste generation, and emissions for the various options.

| | | Pulverized Coal | | | CFB | IGCC |
|---|---|---|---|---|---|---|
| | Units | Sub-Critical | Super-Critical | Ultra-Super-Critical | Sub-Critical | |
| **Plant Performance** | | | | | | |
| Gross Output | (MW) | 649.0 | 649.0 | 649.0 | 435.0 | 730.0 |
| Auxiliary Power | (MW) | 49.0 | 49.0 | 49.0 | 35.0 | 130.0 |
| Net Output | (MW) | 600.0 | 600.0 | 600.0 | 400.0 | 600.0 |
| Net Cycle Heat Rate | (Btu/kWH)-HHV | 9,371 | 8,955 | 8,859 | 9,289 | 8,131 |
| Net Cycle Efficiency | (% HHV) | 36.42% | 38.11% | 38.53% | 36.74% | 41.98% |
| **Environmental Considerations** | | | | | | |
| NOx Emissions | (lb/MMBtu) | 0.07 to 0.45 | 0.04 to 0.07 | 0.04 to 0.07 | 0.07 to 0.18 | 0.03 to 0.09 |
| SO2 Emissions | (lb/MMBtu) | 0.1 to 0.35 | 0.06 to 0.1 | 0.06 to 0.1 | 0.1 to 0.55 | 0.015 to 0.08 |
| CO2 Emissions | (T/MWH (net)) | 0.90 | 0.86 | 0.85 | 0.89 | 0.78 |
| Hg Emissions | (lb/TBtu) | 0.6 to 0.9 | 0.6 to 0.9 | 0.6 to 0.9 | 0.9 to 1.5 | 0.7 to 1.5 |
| **Waste / Byproduct Generation** | | | | | | |
| Fly Ash | (lb/MWH) | 52.2 | 50.2 | 49.7 | 67.0 | NA |
| Bottom Ash/Slag | (lb/MWH) | 13.2 | 12.7 | 12.5 | 17.0 | 47.0 |
| Gypsum | (lb/MWH) | 20.3 | 19.7 | 19.3 | NA | NA |
| Sulfur ($H_2S$) | (lb/MWH) | NA | NA | NA | NA | 3.9 |
| **Water Consumption** | (gal/MWH) | 469.4 | 442.1 | 430.8 | 453.0 | 227.0 |

**Table 1.2-1. Technology Performance Summary**

In reviewing the relative performance of the various technologies, the combined cycle efficiencies of IGCC technologies are better relative to the other technologies. The expected thermal efficiency of a 600 MW IGCC plant is 3 to 4 percent better than the supercritical options (both super-critical and ultra-supercritical) for the PC and CFB technologies. The IGCC efficiency is also 5 to 6 percent greater than that of the sub-critical thermal cycles. As expected for PC and CFB combustion technologies, thermal cycle efficiencies improve as the steam cycle pressures and steam temperatures increase. The ultra-supercritical heat rates are only slightly better than those of the super-critical cycles.

With regard to emissions, both the PC and the CFB technologies have established Best Available Control Technology (BACT) standards for control of emissions from plants. It is assumed that IGCC and PFBC plants, if applicable, can easily attain comparable levels as part of a plant permitting process. The IGCC technologies appear to be capable of achieving emissions standards that are equivalent or possibly better than current BACT standards for PC and CFB technologies; although, further investigation of the total emissions from an IGCC (including emissions during process start-up and shut-down) is warranted relative to PC and CFB technologies. The approach for capture of mercury emissions for each of the technologies appears to be similar (i.e. adsorption with activated carbon) based on current technology indications; however, given the lower volumes of gas to be treated, the IGCC applications would have a significant cost advantage.

It should be noted that CO2 sequestration (i.e. permanent disposal of collected CO2) is a developing concept. If a CO2 control strategy is employed for any of the technologies, implementation of a sequestration strategy would involve a comparable level of equipment and costs for each of the technologies.

## 1.3 Comparative Costs

Table 1.3-1 presents a comparison of capital, fixed and variable operating and maintenance (O&M) costs, as well as estimates of the costs of electrical generation for each of the coal generation technologies. It should be noted that this analysis is based on coal firing only without any supplemental fuels. For this reason, the availability of power generated from the IGCC facility is limited to a rather aggressive value of 80 percent based upon 100 percent gasifier capacity and no spare units available. With a spare gasifier, the availability of the IGCC facility has been increased to 85 percent which is consistent with the remaining technology options.

| | | Pulverized Coal | | | CFB | IGCC | |
|---|---|---|---|---|---|---|---|
| | Units | Sub-Critical | Super-Critical | Ultra-Super-Critical | Sub-Critical | No Spare | With Spare |
| **Capital Cost** | ($/kW net) | $1,814 | $1,907 | $1,913 | $2,073 | $2,290 | $2,430 |
| **First Year Cost of Generation** | | | | | | | |
| Capital Recovery | ($/MWH) | $25.70 | $27.02 | $27.12 | $29.36 | $34.49 | $34.42 |
| Fixed O&M Costs | ($/MWH) | $6.35 | $6.54 | $6.66 | $7.01 | $8.23 | $8.03 |
| Variable O&M Costs | ($/MWH) | $0.42 | $0.42 | $0.45 | $0.43 | $1.24 | $1.17 |
| Consumable O&M Costs | ($/MWH) | $2.17 | $2.16 | $2.17 | $2.65 | $1.48 | $1.46 |
| Fuel Costs | ($/MWH) | $13.78 | $13.28 | $13.19 | $13.81 | $12.03 | $12.03 |
| Total First Year COG | ($/MWH) | $48.42 | $49.42 | $49.59 | $53.26 | $57.47 | $57.11 |
| **Levelized Cost of Generation** | | | | | | | |
| Capital Recovery | ($/MWH) | $25.70 | $27.02 | $27.12 | $29.36 | $34.49 | $34.42 |
| Fixed O&M Costs | ($/MWH) | $6.14 | $6.27 | $6.42 | $6.68 | $7.85 | $7.58 |
| Variable O&M Costs | ($/MWH) | $1.23 | $1.26 | $1.32 | $0.83 | $1.97 | $1.86 |
| Consumable O&M Costs | ($/MWH) | $1.74 | $1.77 | $1.78 | $2.05 | $0.98 | $0.96 |
| Fuel Costs | ($/MWH) | $18.37 | $17.70 | $17.58 | $18.40 | $16.04 | $16.04 |
| Total Levelized COG | ($/MWH) | $53.18 | $54.02 | $54.22 | $57.32 | $61.33 | $60.86 |

**Table 1.3-1. Technology Cost Summary**

## 1.4 Cost Sensitivity to Unit Size

As an indication of the sensitivity of generating costs to plant size, Table 1.4-1 presents estimated capital, fixed and variable O&M, and COG for 300 MW, 600 MW, and 750 MW subcritical plants and 600 MW and 750 MW supercritical PC generating facilities. As would be expected, the estimated COG decreases as unit size increases due to the economy of scale realized through the larger generating units.

| | | 300 MW Sub-Critical PC | 600 MW Sub-Critical PC | 750 MW Sub-Critical PC | 600 MW Super-Critical PC | 750 MW Super-Critical PC |
|---|---|---|---|---|---|---|
| | | 325 MW Gross | 649 MW Gross | 810 MW Gross | 649 MW Gross | 810 MW Gross |
| **Project EPC Cost** | ($ million) | **531.0** | **867.6** | **1032.0** | **912** | **1083.3** |
| **Total Project Cost** | ($ million) | **666.1** | **1088.4** | **1294.7** | **1144.1** | **1359.0** |
| Fixed O&M Costs | ($/MWH) | $8.23 | $6.35 | $5.94 | $6.54 | $6.12 |
| Variable O&M Costs | ($/MWH) | $0.47 | $0.42 | $0.41 | $0.42 | $0.41 |
| Consumable O&M Costs | ($/MWH) | $2.21 | $2.17 | $2.18 | $2.16 | $2.15 |
| Fuel Cost | ($/MWH) | $13.90 | $13.78 | $13.78 | $13.28 | $13.28 |
| Capital Recovery | ($/MWH) | $31.41 | $25.70 | $24.49 | $27.02 | $25.71 |
| **Total First Year COG** | **($/MWH)** | **$56.22** | **$48.42** | **$46.80** | **$49.42** | **$47.67** |
| Fixed O&M Costs | ($/MWH) | $8.14 | $6.14 | $5.70 | $6.27 | $5.82 |
| Variable O&M Costs | ($/MWH) | $1.64 | $1.23 | $1.13 | $1.26 | $1.15 |
| Consumable O&M Costs | ($/MWH) | $1.79 | $1.74 | $1.75 | $1.77 | $1.75 |
| Fuel Cost | ($/MWH) | $18.53 | $18.37 | $18.37 | $17.70 | $17.70 |
| Capital Recovery | ($/MWH) | $31.41 | $25.70 | $24.49 | $27.02 | $25.71 |
| **Total Levelized COG** | **($/MWH)** | **$61.50** | **$53.18** | **$51.44** | **$54.02** | **$52.15** |

**Table 1.4-1. Unit Size Cost Comparison**

## 1.5 Impact of Environmental Risks

Two key environmental risk issues associated with coal-fueled power generation are limitations on greenhouse gas emissions (namely carbon dioxide, CO2) and limitations on mercury emissions. Technologies for removal of both constituents are rapidly developing. For mercury, air quality control equipment suppliers have offered emissions guarantees for new power projects. Technologies exist for removal of CO2; however, these technologies have not reached a level of maturity where guarantees have been offered in support of a project.

Table 1.5-1 presents the estimated costs for removal and sequestration of CO2 emissions from PC and IGCC plants. Costs for capture of mercury are also presented. The lower costs for controlling CO2 and mercury emissions from an IGCC plant are directly related to the volume of syngas that needs to be treated relative to the flue gas volumes of PC and CFB units.

| | | Subcritical PC | Super-Critical PC | Ultra-Super-Critical PC | Subcritical CFB | IGCC w/o Spare | IGCC w/ Spare |
|---|---|---|---|---|---|---|---|
| **Mercury Emissions Control** | | | | | | | |
| Total First Year Cost for Mercury Removal | $/MWH | $1.13 | $1.10 | $1.09 | $0.91 | $0.23 | $0.23 |
| Total Levelized Cost for Mercury Removal | $/MWH | $1.28 | $1.25 | $1.24 | $2.72 | $0.26 | $0.26 |
| First Year Cost of Mercury Removal | $/lb | $22,559 | $22,887 | $22,739 | $18,266 | $5,358 | $5,290 |
| **CO2 Emissions Control** | | | | | | | |
| Estimated Cost for CO2 Capture | $/MWH | $19 to $23 | $19 to $23 | $19 to $23 | $19 to $23 | $10 to $15 | $10 to $15 |

**Table 1.5-1. Emissions Removal Cost Expectations**

## $CO_2$ Adder Survey Data

| Organization | Assumption/Targets/Source | $ Per Ton $CO_2$ |
|---|---|---|
| Stanford Energy Modeling Forum | $CO_2$ to 1990 levels by 2010 | $5.00–37.50 |
| | $CO_2$ to –7% 1990 levels by 2010 | $12.50–69.00 |
| EIA | Climate Stewardship Act | $15.00–45.00 |
| | $CO_2$ to –7% 1990 levels by 2012 | $34.00–41.00 |
| Interlaboratory Working Group | $CO_2$ to 1990 levels by 2010 | $12.50 |
| Springer Study Summaries | Kyoto—liberal trading | $1.00–22.00<br>$9.00 average |
| | Kyoto—Trading limited to Annex B countries | $4.00–74.00<br>$27.00 average |
| National Commission for Energy Policy (NCEP) | "Ending the Energy Stalemate" | $7.00 in 2010<br>$15.00 in 2026 |
| NWPPC | Fifth 2005 | 67% likelihood<br>$0.00–15.00 in 2008<br>$0.00–30.00 in 2016 |
| CPUC | Energy and Environmental Economics Inc. report | $5.00 near-term<br>$12.50 in 2008<br>$17.50 in 2013 |
| | Reported cost of offset emission projects | $7.50 median |
| Dutch, UK, and World Bank trading markets | | $7.50 |
| EU ETS | June 2005 for 2006 settlement | $27.00 |

EPIS, Inc AURORAxmp

# AURORA$^{xmp}$ Electric Market Model

## Overview of AURORA$^{xmp}$

AURORA$^{xmp}$ Electric Market Model is price forecasting and analysis software for the competitive electric market. AURORA$^{xmp}$ forecasts:

- Electric energy prices.
- The market value of electric generating units.
- The market value of contracts and portfolios; and,
- AURORA$^{xmp}$ analyzes the effect of market uncertainty.

AURORA$^{xmp}$ applies economic principles, dispatch simulation and bidding strategies to model the relationships of supply, transportation, and demand for electric energy.

AURORA$^{xmp}$ forecasts market prices and operation based on forecasts of key fundamental drivers such as demand, fuel prices, and hydro conditions.

AURORA$^{xmp}$ is able to forecast point estimates in seconds and minutes, and produce Monte Carlo stochastic analyses in minutes and a few hours.

In addition to market prices, AURORA$^{xmp}$ provides information on resource value, portfolio value, net power cost, risk and uncertainty analysis, and resource planning. With appropriate inputs, AURORA$^{xmp}$ can be used for near-term analysis (next day/week) to very long-term analysis (20 plus years).

Furthermore, the user can make changes to data (using spreadsheet-like grids) in the database and run scenarios and what-if cases. Users are able to add their own proprietary data to create their own databases.

### *Modeling Methodology*

AURORA$^{xmp}$ is specifically designed to model wholesale electricity prices in a deregulated generation market.

In a deregulated generation market, at any given time, prices should be based on the marginal cost of production. In a competitive electricity market, prices will rise to the point of the variable cost of the last generating unit needed to meet demand.

One of the principal functions of AURORA$^{xmp}$ is to estimate this hourly market-clearing price at various locations in the national electric market. AURORA$^{xmp}$ uses a fundamentals approach in estimating prices, reflecting the economics and physical characteristics of demand and supply.

AURORA$^{xmp}$ estimates prices by using hourly demands and individual resource-operating characteristics in a transmission-constrained, chronological dispatch algorithm.

The operation of resources within the electric market is modeled to determine which resources are on the margin for each area in any given hour. The database includes all the NERC reliability areas in the North American national electric market.

The AURORA$^{xmp}$ database includes long-term average demand and hourly demand shapes

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for all the areas in the database. These demand areas are connected by transmission links with specified transfer capabilities, losses, and wheeling costs.

Existing supply-side generating units are defined and modeled individually with specification of a number of cost components and physical characteristics and operating constraints. Hydro generation for each area, with instantaneous maximums, off-peak minimums, and sustained peaking constraints are also input. Demand-side resources and price-induced curtailment functions are defined, allowing the model to balance use of generation against alternatives to reducing customer demand.

AURORA$^{xmp}$ uses this information to build an economic dispatch for the markets. Units are dispatched according to variable cost, subject to non-cycling and minimum run constraints until hourly demand is met in each area. Transmission constraints, losses, wheeling costs and unit start-up costs are reflected in the dispatch. The market-clearing price is then determined by observing the cost of meeting an incremental increase in demand in each area. All operating units in an area receive the hourly market-clearing price for the power they generate.

AURORA$^{xmp}$ also has the capability to simulate the addition of new-generation resources and the economic retirement of existing units. New units are chosen from a set of available supply alternatives with technology and cost characteristics that can be specified through time. New resources are built only when the combination of hourly prices and frequency of operation for a resource generate enough revenue to make construction profitable; that is, when investors can recover fixed and variable costs with an acceptable return on investment.

AURORA$^{xmp}$ uses an iterative technique in these long-term planning studies to solve the interdependencies between prices and changes in resource schedules.

Existing units that cannot generate enough revenue to cover their variable and fixed operating costs over time are identified and become candidates for economic retirement. To reflect the timing of transition to competition across all areas, the rate at which existing units can be retired for economic reasons is constrained in these studies for a number of years.

In summary, AURORA$^{xmp}$ simulates the economic dispatch of resources to meet demand requirements. AURORA$^{xmp}$:

- Solves the whole system dispatch simultaneously.
- Dispatches hourly (with sampling capabilities, where appropriate).
- Determines the market-clearing prices from marginal costs.
- Values all the resources in the system.
- Provides price and value forecasts for each time period being studied.

### *Drivers and Inputs*

AURORA$^{xmp}$ uses the fundamental economic drivers of the electric market to make its forecast. That information includes:

- Electricity demand by geographic area; annually and monthly including hourly shapes.
- Supply-side resources (all major generating units) in the system. Resource heat rates, fuel types, resource-commitment data and other resource information. Future resource alternatives are used in long-term optimization studies.
- Demand-side resources including an interruptible price curve.

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- Fuel prices by fuel type and location.
- Hydro information for AURORA$^{xmp}$'s hydro-optimization logic.
- Transmission costs and constraints.
- For uncertainty analysis, Monte Carlo sampling from statistical distributions for demand, fuel prices, hydro conditions and other drivers is used to forecast price distributions.

Users manage the cases and analyze the drivers to electricity-market forecasts by selecting the underlying assumptions of the analysis. The projections are created using assumptions for the chosen inputs, such as electricity demand growth, fuel prices, and gas-fired combined-cycle generation efficiency and cost. For example, the low electricity market scenario could include low-demand growth, low fuel prices, and optimistic assumptions about combined-cycle combustion turbines. The combination of assumptions may consist of outcomes that the user believes are plausible. A user can model the conditions, cases and options a decision-maker wants to evaluate. Without any programming, you determine the assumptions used in each forecast or study.

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**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2006 | HCC | 243.4 | 439.0 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 289.6 |
| OXBOW | 2006 | HCC | 101.1 | 182.1 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2006 | HCC | 201.1 | 362.2 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.7 |
| 1000 SPRINGS | 2006 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2006 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2006 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2006 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2006 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2006 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2006 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2006 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2006 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2006 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.6 |
| SWAN FALLS | 2006 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2006 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2006 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2006 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2006 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **545.6** | **983.3** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.8** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **235.6** | **219.0** | **368.9** | **303.5** |
| **TOTAL** | | | **848.8** | **1369.8** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **689.7** | **577.4** | **977.8** | **969.3** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2007 | HCC | 243.4 | 439.0 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 289.6 |
| OXBOW | 2007 | HCC | 101.1 | 182.1 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2007 | HCC | 201.1 | 362.2 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.7 |
| 1000 SPRINGS | 2007 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2007 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2007 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2007 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2007 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2007 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2007 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2007 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2007 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2007 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.6 |
| SWAN FALLS | 2007 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2007 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2007 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2007 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2007 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **545.6** | **983.3** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.8** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **235.6** | **219.0** | **368.9** | **303.5** |
| **TOTAL** | | | **848.8** | **1369.8** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **689.7** | **577.4** | **977.8** | **969.3** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2008 | HCC | 243.7 | 438.5 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 289.6 |
| OXBOW | 2008 | HCC | 101.2 | 181.9 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2008 | HCC | 201.4 | 361.8 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.7 |
| 1000 SPRINGS | 2008 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2008 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2008 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2008 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2008 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2008 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2008 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2008 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2008 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2008 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.6 |
| SWAN FALLS | 2008 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2008 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2008 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2008 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2008 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **546.3** | **982.2** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.7** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **235.6** | **219.0** | **368.9** | **303.5** |
| **TOTAL** | | | **849.5** | **1368.7** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **689.7** | **577.4** | **977.8** | **969.3** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2009 | HCC | 256.3 | 419.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 289.2 |
| OXBOW | 2009 | HCC | 107.1 | 175.6 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2009 | HCC | 212.9 | 349.4 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.7 |
| 1000 SPRINGS | 2009 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2009 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2009 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2009 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2009 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2009 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2009 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2009 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2009 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2009 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.6 |
| SWAN FALLS | 2009 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2009 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2009 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2009 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2009 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **576.3** | **944.7** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.4** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **235.6** | **219.0** | **368.9** | **303.5** |
| **TOTAL** | | | **879.5** | **1331.2** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **689.7** | **577.4** | **977.8** | **968.9** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2010 | HCC | 270.9 | 397.8 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.7 |
| OXBOW | 2010 | HCC | 114.1 | 168.1 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2010 | HCC | 226.4 | 334.8 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.8 |
| 1000 SPRINGS | 2010 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2010 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2010 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2010 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2010 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2010 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2010 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2010 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2010 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2010 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 12.1 | 13.8 | 66.9 | 16.5 |
| SWAN FALLS | 2010 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2010 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2010 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2010 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2010 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **611.4** | **900.7** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.0** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **236.5** | **220.8** | **423.8** | **308.4** |
| **TOTAL** | | | **914.6** | **1287.2** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **690.6** | **579.2** | **1032.7** | **973.4** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2011 | HCC | 268.8 | 400.9 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.8 |
| OXBOW | 2011 | HCC | 113.1 | 169.2 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2011 | HCC | 224.5 | 336.9 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.8 |
| 1000 SPRINGS | 2011 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2011 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2011 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2011 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2011 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2011 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2011 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2011 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2011 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2011 | ROR | 12.0 | 12.0 | 12.0 | 12.0 | 9.7 | 10.1 | 12.0 | 12.0 | 12.0 | 12.1 | 13.8 | 66.9 | 16.5 |
| SWAN FALLS | 2011 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2011 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2011 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2011 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2011 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **606.4** | **907.0** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.1** |
| **ROR TOTAL** | | | **303.2** | **386.5** | **282.2** | **313.8** | **287.6** | **295.2** | **331.2** | **336.8** | **287.3** | **236.5** | **220.8** | **423.8** | **308.4** |
| **TOTAL** | | | **909.6** | **1293.5** | **1074.0** | **1293.9** | **1127.1** | **1097.6** | **935.5** | **925.8** | **747.8** | **690.6** | **579.2** | **1032.7** | **973.5** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2012 | HCC | 277.0 | 388.4 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.5 |
| OXBOW | 2012 | HCC | 117.1 | 164.9 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2012 | HCC | 232.2 | 328.4 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.8 |
| 1000 SPRINGS | 2012 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2012 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2012 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2012 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2012 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2012 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2012 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2012 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2012 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2012 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2012 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2012 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2012 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2012 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2012 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **626.3** | **881.7** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **664.8** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **961.5** | **1328.1** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **986.6** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2013 | HCC | 296.8 | 371.2 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.9 |
| OXBOW | 2013 | HCC | 122.5 | 158.9 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2013 | HCC | 241.1 | 316.8 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2013 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2013 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2013 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2013 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2013 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2013 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2013 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2013 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2013 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2013 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2013 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2013 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2013 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2013 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2013 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **660.4** | **846.9** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **665.0** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **995.6** | **1293.3** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **986.8** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2014 | HCC | 311.0 | 350.4 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.5 |
| OXBOW | 2014 | HCC | 129.3 | 151.6 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2014 | HCC | 254.1 | 302.5 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2014 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2014 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2014 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2014 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2014 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2014 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2014 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2014 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2014 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2014 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2014 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2014 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2014 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2014 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2014 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **694.4** | **804.5** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **664.7** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1029.6** | **1250.9** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **986.5** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2015 | HCC | 327.9 | 325.2 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 288.0 |
| OXBOW | 2015 | HCC | 137.4 | 142.6 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2015 | HCC | 270.1 | 284.9 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2015 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2015 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2015 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2015 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2015 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2015 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2015 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2015 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2015 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2015 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2015 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2015 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2015 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2015 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2015 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **735.4** | **752.7** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **664.2** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1070.6** | **1199.1** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **986.0** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2016 | HCC | 342.0 | 303.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.6 |
| OXBOW | 2016 | HCC | 144.5 | 134.8 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2016 | HCC | 283.8 | 269.6 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2016 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2016 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2016 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2016 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2016 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2016 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2016 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2016 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2016 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2016 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2016 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2016 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2016 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2016 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2016 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **770.3** | **708.1** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.7** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1105.5** | **1154.5** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.5** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2017 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2017 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2017 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2017 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2017 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2017 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2017 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2017 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2017 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2017 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2017 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2017 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2017 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2017 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2017 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2017 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2017 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2017 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2018 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2018 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2018 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2018 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2018 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2018 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2018 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2018 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2018 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2018 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2018 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2018 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2018 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2018 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2018 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2018 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2018 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2018 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2019 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2019 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2019 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2019 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2019 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2019 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2019 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2019 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2019 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2019 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2019 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2019 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2019 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2019 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2019 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2019 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2019 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2019 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2020 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2020 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2020 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2020 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2020 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2020 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2020 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2020 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2020 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2020 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2020 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2020 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2020 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2020 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2020 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2020 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2020 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2020 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2021 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2021 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2021 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2021 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2021 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2021 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2021 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2021 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2021 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2021 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2021 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2021 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2021 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2021 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2021 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2021 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2021 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2021 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2022 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2022 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2022 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2022 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2022 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2022 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2022 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2022 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2022 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2022 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2022 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2022 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2022 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2022 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2022 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2022 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2022 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2022 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2023 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2023 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2023 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2023 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2023 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2023 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2023 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2023 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2023 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2023 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2023 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2023 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2023 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2023 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2023 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2023 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2023 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2023 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 50th Percentile Water, 50th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2024 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2024 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2024 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2024 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2024 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2024 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2024 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2024 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2024 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2024 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2024 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2024 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2024 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2024 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2024 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2024 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2024 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2024 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2025 | HCC | 354.3 | 284.7 | 338.5 | 418.6 | 367.9 | 359.3 | 266.7 | 251.4 | 192.2 | 190.5 | 151.0 | 269.7 | 287.2 |
| OXBOW | 2025 | HCC | 150.8 | 127.7 | 150.7 | 186.3 | 154.7 | 146.5 | 113.2 | 114.0 | 90.5 | 88.7 | 69.2 | 114.0 | 125.5 |
| HELLS CANYON | 2025 | HCC | 296.1 | 256.0 | 302.6 | 375.2 | 317.0 | 296.6 | 224.4 | 223.6 | 177.9 | 174.9 | 138.2 | 225.2 | 250.6 |
| 1000 SPRINGS | 2025 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2025 | ROR | 15.0 | 29.4 | 18.3 | 42.0 | 71.6 | 81.5 | 91.1 | 76.2 | 47.1 | 15.8 | 0.0 | 25.3 | 42.9 |
| BLISS | 2025 | ROR | 45.9 | 52.8 | 43.6 | 44.0 | 39.7 | 36.4 | 40.1 | 42.4 | 42.2 | 40.9 | 39.2 | 52.2 | 43.2 |
| C.J. STRIKE | 2025 | ROR | 58.7 | 70.1 | 60.4 | 56.0 | 51.3 | 48.3 | 44.3 | 48.2 | 50.8 | 52.5 | 52.3 | 67.0 | 54.9 |
| CASCADE | 2025 | ROR | 1.5 | 2.5 | 3.9 | 5.5 | 9.9 | 14.8 | 6.9 | 12.2 | 9.0 | 3.0 | 1.9 | 1.5 | 6.1 |
| CLEAR LAKE | 2025 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2025 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2025 | ROR | 30.7 | 37.6 | 27.2 | 29.5 | 24.1 | 24.0 | 27.0 | 28.6 | 27.9 | 26.7 | 25.1 | 37.2 | 28.8 |
| MILNER | 2025 | ROR | 26.3 | 47.5 | 15.5 | 18.7 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 43.2 | 15.8 |
| SHOSHONE FALLS | 2025 | ROR | 44.0 | 71.9 | 29.3 | 31.3 | 8.2 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 66.9 | 29.8 |
| SWAN FALLS | 2025 | ROR | 19.0 | 22.4 | 20.0 | 18.6 | 16.9 | 15.9 | 15.0 | 15.7 | 16.4 | 17.0 | 17.3 | 21.5 | 17.9 |
| TWIN FALLS | 2025 | ROR | 28.0 | 46.2 | 18.5 | 21.4 | 6.0 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 43.0 | 19.6 |
| UPPER MALAD | 2025 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2025 | ROR | 19.2 | 19.1 | 17.5 | 19.2 | 15.1 | 14.8 | 17.1 | 18.6 | 17.8 | 16.6 | 15.4 | 19.1 | 17.5 |
| UPPERSALMON 3&4 | 2025 | ROR | 17.7 | 17.7 | 16.1 | 17.7 | 14.1 | 13.9 | 15.9 | 17.1 | 16.4 | 15.4 | 14.4 | 17.7 | 16.2 |
| **HCC TOTAL** | | | **801.2** | **668.4** | **791.8** | **980.1** | **839.5** | **802.4** | **604.3** | **589.0** | **460.5** | **454.1** | **358.4** | **608.9** | **663.3** |
| **ROR TOTAL** | | | **335.2** | **446.4** | **299.5** | **333.1** | **286.1** | **293.8** | **346.4** | **355.1** | **292.0** | **236.5** | **220.8** | **423.8** | **321.8** |
| **TOTAL** | | | **1136.4** | **1114.8** | **1091.3** | **1313.2** | **1125.6** | **1096.2** | **950.7** | **944.1** | **752.5** | **690.6** | **579.2** | **1032.7** | **985.1** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2006 | HCC | 259.2 | 314.6 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 251.6 |
| OXBOW | 2006 | HCC | 109.5 | 131.2 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2006 | HCC | 216.5 | 257.4 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2006 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2006 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2006 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2006 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2006 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2006 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2006 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2006 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2006 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2006 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.5 |
| SWAN FALLS | 2006 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2006 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2006 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2006 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2006 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **585.2** | **703.2** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **572.2** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **230.3** | **213.7** | **216.9** | **274.3** |
| **TOTAL** | | | **845.4** | **1055.8** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **671.8** | **577.0** | **710.5** | **846.5** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2007 | HCC | 262.1 | 310.3 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 251.6 |
| OXBOW | 2007 | HCC | 110.9 | 129.7 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2007 | HCC | 219.2 | 254.4 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2007 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2007 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2007 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2007 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2007 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2007 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2007 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2007 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2007 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2007 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.5 |
| SWAN FALLS | 2007 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2007 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2007 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2007 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2007 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **592.2** | **694.4** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **572.2** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **230.3** | **213.7** | **216.9** | **274.3** |
| **TOTAL** | | | **852.4** | **1047.0** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **671.8** | **577.0** | **710.5** | **846.5** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2008 | HCC | 274.8 | 291.3 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 251.2 |
| OXBOW | 2008 | HCC | 117.1 | 122.8 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2008 | HCC | 231.3 | 241.1 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2008 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2008 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2008 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2008 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2008 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2008 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2008 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2008 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2008 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2008 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.5 |
| SWAN FALLS | 2008 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2008 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2008 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2008 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2008 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **623.2** | **655.2** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **571.8** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **230.3** | **213.7** | **216.9** | **274.3** |
| **TOTAL** | | | **883.4** | **1007.8** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **671.8** | **577.0** | **710.5** | **846.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2009 | HCC | 293.2 | 268.5 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 251.0 |
| OXBOW | 2009 | HCC | 122.0 | 117.4 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2009 | HCC | 239.0 | 232.4 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2009 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2009 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2009 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2009 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2009 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2009 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2009 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2009 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2009 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2009 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 11.2 | 12.0 | 12.0 | 11.5 |
| SWAN FALLS | 2009 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2009 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2009 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2009 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2009 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **654.2** | **618.3** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **571.6** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **230.3** | **213.7** | **216.9** | **274.3** |
| **TOTAL** | | | **914.4** | **970.9** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **671.8** | **577.0** | **710.5** | **845.9** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2010 | HCC | 308.1 | 247.8 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 250.7 |
| OXBOW | 2010 | HCC | 129.1 | 109.4 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2010 | HCC | 252.9 | 216.8 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2010 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2010 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2010 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2010 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2010 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2010 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2010 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2010 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2010 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2010 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 12.1 | 13.8 | 15.9 | 12.0 |
| SWAN FALLS | 2010 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2010 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2010 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2010 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2010 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **690.1** | **574.0** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **571.2** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **231.2** | **215.5** | **220.8** | **274.8** |
| **TOTAL** | | | **950.3** | **926.6** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **672.7** | **578.8** | **714.4** | **846.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2011 | HCC | 311.8 | 242.6 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 250.6 |
| OXBOW | 2011 | HCC | 130.9 | 107.4 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2011 | HCC | 256.4 | 212.9 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2011 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2011 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2011 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2011 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2011 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2011 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2011 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2011 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2011 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2011 | ROR | 12.0 | 12.0 | 12.0 | 11.9 | 8.4 | 10.1 | 12.0 | 12.0 | 12.0 | 12.1 | 13.8 | 15.9 | 12.0 |
| SWAN FALLS | 2011 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2011 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2011 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2011 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2011 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **699.1** | **562.9** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **571.2** |
| **ROR TOTAL** | | | **260.2** | **352.6** | **305.8** | **250.5** | **260.6** | **273.7** | **326.0** | **329.0** | **277.2** | **231.2** | **215.5** | **220.8** | **274.8** |
| **TOTAL** | | | **959.3** | **915.5** | **1027.8** | **985.8** | **997.0** | **893.0** | **888.8** | **899.4** | **616.3** | **672.7** | **578.8** | **714.4** | **846.0** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2012 | HCC | 320.4 | 230.5 | 317.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 250.4 |
| OXBOW | 2012 | HCC | 135.2 | 102.7 | 133.4 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2012 | HCC | 264.6 | 203.7 | 271.2 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2012 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2012 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2012 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2012 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2012 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2012 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2012 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2012 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2012 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2012 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2012 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2012 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2012 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2012 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2012 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **720.2** | **536.9** | **722.0** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **571.0** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **998.4** | **938.5** | **1056.1** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **856.3** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2013 | HCC | 334.1 | 212.6 | 315.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 250.0 |
| OXBOW | 2013 | HCC | 142.0 | 95.8 | 132.7 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2013 | HCC | 278.1 | 190.3 | 269.7 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2013 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2013 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2013 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2013 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2013 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2013 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2013 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2013 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2013 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2013 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2013 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2013 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2013 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2013 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2013 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **754.2** | **498.7** | **717.6** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **570.5** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1032.4** | **900.3** | **1051.7** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **855.9** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2014 | HCC | 337.4 | 224.6 | 293.4 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.3 |
| OXBOW | 2014 | HCC | 143.7 | 102.6 | 124.9 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2014 | HCC | 281.4 | 203.5 | 254.6 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2014 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2014 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2014 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2014 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2014 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2014 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2014 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2014 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2014 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2014 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2014 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2014 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2014 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2014 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2014 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **530.7** | **672.9** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.9** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **932.3** | **1007.0** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **855.3** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2015 | HCC | 337.4 | 234.6 | 280.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.0 |
| OXBOW | 2015 | HCC | 143.7 | 107.9 | 120.2 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2015 | HCC | 281.4 | 213.8 | 245.4 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2015 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2015 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2015 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2015 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2015 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2015 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2015 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2015 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2015 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2015 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2015 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2015 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2015 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2015 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2015 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **645.8** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.6** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **979.9** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.9** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2016 | HCC | 337.4 | 234.6 | 280.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.0 |
| OXBOW | 2016 | HCC | 143.7 | 107.9 | 120.2 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2016 | HCC | 281.4 | 213.8 | 245.4 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2016 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2016 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2016 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2016 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2016 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2016 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2016 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2016 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2016 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2016 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2016 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2016 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2016 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2016 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2016 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **645.8** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.6** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **979.9** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.9** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2017 | HCC | 337.4 | 234.6 | 280.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.0 |
| OXBOW | 2017 | HCC | 143.7 | 107.9 | 120.2 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2017 | HCC | 281.4 | 213.8 | 245.4 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2017 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2017 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2017 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2017 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2017 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2017 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2017 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2017 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2017 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2017 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2017 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2017 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2017 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2017 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2017 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **645.8** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.6** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **979.9** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.9** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2018 | HCC | 337.4 | 234.6 | 280.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.0 |
| OXBOW | 2018 | HCC | 143.7 | 107.9 | 120.2 | 135.0 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2018 | HCC | 281.4 | 213.8 | 245.4 | 273.9 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2018 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2018 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2018 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2018 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2018 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2018 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2018 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2018 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2018 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2018 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2018 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2018 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2018 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2018 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2018 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **645.8** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.6** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **979.9** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.9** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2019 | HCC | 337.4 | 234.6 | 280.2 | 326.4 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 249.0 |
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| 1000 SPRINGS | 2019 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2019 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2019 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2019 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2019 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2019 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2019 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2019 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2019 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2019 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2019 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2019 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2019 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2019 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2019 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **645.8** | **735.3** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.6** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **979.9** | **984.3** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.9** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
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| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2020 | HCC | 337.4 | 234.6 | 287.5 | 315.9 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2020 | HCC | 143.7 | 107.9 | 123.7 | 131.3 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2020 | HCC | 281.4 | 213.8 | 252.4 | 266.8 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2020 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2020 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2020 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2020 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2020 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2020 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2020 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2020 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2020 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2020 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2020 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2020 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2020 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2020 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2020 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **663.6** | **714.0** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **997.7** | **963.0** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.7** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2021 | HCC | 337.4 | 234.6 | 289.1 | 313.6 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2021 | HCC | 143.7 | 107.9 | 124.6 | 130.5 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2021 | HCC | 281.4 | 213.8 | 253.9 | 265.1 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2021 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2021 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2021 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2021 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2021 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2021 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2021 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2021 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2021 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2021 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2021 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2021 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2021 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2021 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2021 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **667.6** | **709.2** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **1001.7** | **958.2** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.6** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2022 | HCC | 337.4 | 234.6 | 289.1 | 313.6 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2022 | HCC | 143.7 | 107.9 | 124.6 | 130.5 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2022 | HCC | 281.4 | 213.8 | 253.9 | 265.1 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2022 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2022 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2022 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2022 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2022 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2022 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2022 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2022 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2022 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2022 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2022 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2022 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2022 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2022 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2022 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **667.6** | **709.2** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **1001.7** | **958.2** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.6** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2023 | HCC | 337.4 | 234.6 | 289.1 | 313.6 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2023 | HCC | 143.7 | 107.9 | 124.6 | 130.5 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2023 | HCC | 281.4 | 213.8 | 253.9 | 265.1 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2023 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2023 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2023 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2023 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2023 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2023 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2023 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2023 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2023 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2023 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2023 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2023 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2023 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2023 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2023 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **667.6** | **709.2** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **1001.7** | **958.2** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.6** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 70th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2024 | HCC | 337.4 | 234.6 | 289.1 | 313.6 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2024 | HCC | 143.7 | 107.9 | 124.6 | 130.5 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2024 | HCC | 281.4 | 213.8 | 253.9 | 265.1 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2024 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2024 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2024 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2024 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2024 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2024 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2024 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2024 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2024 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2024 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2024 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2024 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2024 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2024 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2024 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **667.6** | **709.2** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **1001.7** | **958.2** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.6** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2025 | HCC | 337.4 | 234.6 | 289.1 | 313.6 | 329.8 | 274.3 | 249.2 | 243.6 | 143.5 | 189.9 | 155.5 | 219.1 | 248.7 |
| OXBOW | 2025 | HCC | 143.7 | 107.9 | 124.6 | 130.5 | 133.2 | 113.4 | 105.5 | 110.4 | 65.8 | 84.7 | 69.5 | 92.0 | 106.9 |
| HELLS CANYON | 2025 | HCC | 281.4 | 213.8 | 253.9 | 265.1 | 273.5 | 231.6 | 208.1 | 216.4 | 130.0 | 166.9 | 138.3 | 182.5 | 213.7 |
| 1000 SPRINGS | 2025 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2025 | ROR | 8.8 | 24.3 | 23.5 | 34.4 | 65.5 | 78.9 | 86.1 | 70.2 | 40.0 | 15.1 | 0.0 | 0.0 | 37.3 |
| BLISS | 2025 | ROR | 41.7 | 49.6 | 44.8 | 37.3 | 36.0 | 35.4 | 39.7 | 41.8 | 41.8 | 40.0 | 38.4 | 38.3 | 40.3 |
| C.J. STRIKE | 2025 | ROR | 54.7 | 64.3 | 59.8 | 54.6 | 44.8 | 40.0 | 43.3 | 47.8 | 50.0 | 51.3 | 50.2 | 50.3 | 50.8 |
| CASCADE | 2025 | ROR | 1.5 | 2.0 | 1.4 | 1.3 | 5.9 | 8.7 | 9.4 | 12.6 | 8.8 | 2.8 | 1.3 | 1.4 | 4.8 |
| CLEAR LAKE | 2025 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2025 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2025 | ROR | 27.0 | 34.7 | 29.5 | 23.7 | 23.2 | 23.5 | 26.6 | 28.1 | 27.4 | 25.9 | 24.7 | 24.5 | 26.5 |
| MILNER | 2025 | ROR | 15.6 | 39.5 | 23.9 | 3.5 | 0.0 | 0.0 | 13.9 | 15.8 | 6.7 | 0.0 | 3.5 | 6.1 | 10.6 |
| SHOSHONE FALLS | 2025 | ROR | 30.0 | 61.0 | 40.3 | 10.4 | 6.5 | 8.7 | 27.2 | 30.3 | 16.7 | 12.1 | 13.8 | 15.9 | 22.5 |
| SWAN FALLS | 2025 | ROR | 17.9 | 20.9 | 19.3 | 18.0 | 15.2 | 13.7 | 14.7 | 15.6 | 16.0 | 16.4 | 16.3 | 16.1 | 16.6 |
| TWIN FALLS | 2025 | ROR | 18.9 | 39.3 | 25.5 | 7.9 | 4.6 | 6.3 | 18.7 | 20.8 | 11.8 | 7.3 | 8.7 | 9.8 | 14.8 |
| UPPER MALAD | 2025 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2025 | ROR | 17.1 | 19.1 | 19.2 | 14.8 | 14.3 | 14.4 | 16.8 | 18.3 | 17.4 | 16.1 | 15.2 | 15.1 | 16.5 |
| UPPERSALMON 3&4 | 2025 | ROR | 15.8 | 17.7 | 17.7 | 13.9 | 13.5 | 13.5 | 15.6 | 16.8 | 16.1 | 15.0 | 14.2 | 14.1 | 15.3 |
| **HCC TOTAL** | | | **762.5** | **556.3** | **667.6** | **709.2** | **736.4** | **619.3** | **562.8** | **570.4** | **339.2** | **441.5** | **363.3** | **493.6** | **569.3** |
| **ROR TOTAL** | | | **278.2** | **401.6** | **334.1** | **249.0** | **258.7** | **272.3** | **341.2** | **347.3** | **281.8** | **231.2** | **215.5** | **220.8** | **285.4** |
| **TOTAL** | | | **1040.7** | **957.9** | **1001.7** | **958.2** | **995.1** | **891.6** | **904.0** | **917.7** | **621.0** | **672.7** | **578.8** | **714.4** | **854.6** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2006 | HCC | 282.0 | 221.7 | 300.2 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 227.9 |
| OXBOW | 2006 | HCC | 118.1 | 97.5 | 123.1 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2006 | HCC | 231.1 | 194.5 | 246.3 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2006 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2006 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2006 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2006 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2006 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2006 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2006 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2006 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2006 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2006 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 9.7 | 12.0 | 12.0 | 10.6 |
| SWAN FALLS | 2006 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2006 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2006 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2006 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2006 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **631.2** | **513.7** | **669.6** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **518.1** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **215.6** | **207.1** | **207.7** | **234.7** |
| **TOTAL** | | | **845.7** | **729.6** | **881.5** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **577.0** | **578.5** | **663.7** | **752.8** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2007 | HCC | 284.9 | 220.3 | 297.0 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 227.8 |
| OXBOW | 2007 | HCC | 119.4 | 97.2 | 121.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2007 | HCC | 233.8 | 194.0 | 244.1 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2007 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2007 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2007 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2007 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2007 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2007 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2007 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2007 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2007 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2007 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 9.7 | 12.0 | 12.0 | 10.6 |
| SWAN FALLS | 2007 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2007 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2007 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2007 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2007 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **638.1** | **511.5** | **663.0** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **518.0** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **215.6** | **207.1** | **207.7** | **234.7** |
| **TOTAL** | | | **852.6** | **727.4** | **874.9** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **577.0** | **578.5** | **663.7** | **752.7** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2008 | HCC | 297.6 | 227.9 | 257.6 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 226.1 |
| OXBOW | 2008 | HCC | 125.7 | 103.1 | 110.4 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2008 | HCC | 245.9 | 205.5 | 223.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2008 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2008 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2008 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2008 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2008 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2008 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2008 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2008 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2008 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2008 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 9.7 | 12.0 | 12.0 | 10.6 |
| SWAN FALLS | 2008 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2008 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2008 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2008 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2008 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **669.2** | **536.5** | **591.5** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.4** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **215.6** | **207.1** | **207.7** | **234.7** |
| **TOTAL** | | | **883.7** | **752.4** | **803.4** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **577.0** | **578.5** | **663.7** | **751.2** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2009 | HCC | 310.2 | 213.7 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.8 |
| OXBOW | 2009 | HCC | 131.9 | 97.8 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2009 | HCC | 258.1 | 195.2 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2009 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2009 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2009 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2009 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2009 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2009 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2009 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2009 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2009 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2009 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 9.7 | 12.0 | 12.0 | 10.6 |
| SWAN FALLS | 2009 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2009 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2009 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2009 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2009 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **700.2** | **506.7** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.1** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **215.6** | **207.1** | **207.7** | **234.7** |
| **TOTAL** | | | **914.7** | **722.6** | **794.7** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **577.0** | **578.5** | **663.7** | **750.8** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2010 | HCC | 310.7 | 213.0 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.7 |
| OXBOW | 2010 | HCC | 132.2 | 97.6 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2010 | HCC | 258.6 | 194.6 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2010 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2010 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2010 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2010 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2010 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2010 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2010 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2010 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2010 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2010 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 10.9 | 12.5 | 14.4 | 11.0 |
| SWAN FALLS | 2010 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2010 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2010 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2010 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2010 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.0** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **216.8** | **207.6** | **210.1** | **235.1** |
| **TOTAL** | | | **916.0** | **721.1** | **794.7** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **578.2** | **579.0** | **666.1** | **751.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2011 | HCC | 310.7 | 213.0 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.7 |
| OXBOW | 2011 | HCC | 132.2 | 97.6 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2011 | HCC | 258.6 | 194.6 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2011 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2011 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2011 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2011 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2011 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2011 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2011 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2011 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2011 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2011 | ROR | 12.0 | 12.0 | 12.0 | 8.1 | 8.4 | 9.8 | 12.0 | 12.0 | 7.4 | 10.9 | 12.5 | 14.4 | 11.0 |
| SWAN FALLS | 2011 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2011 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2011 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2011 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2011 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.0** |
| **ROR TOTAL** | | | **214.5** | **215.9** | **211.9** | **217.5** | **245.3** | **256.6** | **309.9** | **290.5** | **221.4** | **216.8** | **207.6** | **210.1** | **235.1** |
| **TOTAL** | | | **916.0** | **721.1** | **794.7** | **820.2** | **922.9** | **843.5** | **827.3** | **802.7** | **531.6** | **578.2** | **579.0** | **666.1** | **751.1** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2012 | HCC | 310.7 | 213.0 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.7 |
| OXBOW | 2012 | HCC | 132.2 | 97.6 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2012 | HCC | 258.6 | 194.6 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2012 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2012 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2012 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2012 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2012 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2012 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2012 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2012 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2012 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2012 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2012 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2012 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2012 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2012 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2012 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.0** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **795.2** | **818.4** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.9** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2013 | HCC | 310.7 | 213.0 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.7 |
| OXBOW | 2013 | HCC | 132.2 | 97.6 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2013 | HCC | 258.6 | 194.6 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2013 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2013 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2013 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2013 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2013 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2013 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2013 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2013 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2013 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2013 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2013 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2013 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2013 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2013 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2013 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.0** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **795.2** | **818.4** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.9** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2014 | HCC | 310.7 | 213.0 | 253.4 | 267.2 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.7 |
| OXBOW | 2014 | HCC | 132.2 | 97.6 | 108.9 | 110.3 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2014 | HCC | 258.6 | 194.6 | 220.5 | 225.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2014 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2014 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2014 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2014 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2014 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2014 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2014 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2014 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2014 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2014 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2014 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2014 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2014 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2014 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2014 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **582.8** | **602.7** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **516.0** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **795.2** | **818.4** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.9** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2015 | HCC | 310.7 | 213.0 | 266.3 | 249.3 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.4 |
| OXBOW | 2015 | HCC | 132.2 | 97.6 | 115.3 | 103.7 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2015 | HCC | 258.6 | 194.6 | 233.0 | 212.2 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.4 |
| 1000 SPRINGS | 2015 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2015 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2015 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2015 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2015 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2015 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2015 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2015 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2015 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2015 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2015 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2015 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2015 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2015 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2015 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **614.6** | **565.2** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.7** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **827.0** | **780.9** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.5** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2016 | HCC | 310.7 | 213.0 | 285.3 | 234.4 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.8 |
| OXBOW | 2016 | HCC | 132.2 | 97.6 | 120.7 | 98.1 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2016 | HCC | 258.6 | 194.6 | 241.6 | 201.3 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2016 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2016 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2016 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2016 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2016 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2016 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2016 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2016 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2016 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2016 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2016 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2016 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2016 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2016 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2016 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **647.6** | **533.8** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.9** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **860.0** | **749.5** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.8** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2017 | HCC | 310.7 | 213.0 | 298.8 | 216.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.4 |
| OXBOW | 2017 | HCC | 132.2 | 97.6 | 127.3 | 91.2 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2017 | HCC | 258.6 | 194.6 | 254.5 | 187.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2017 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2017 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2017 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2017 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2017 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2017 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2017 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2017 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2017 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2017 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2017 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2017 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2017 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2017 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2017 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **680.6** | **495.2** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.5** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **893.0** | **710.9** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.4** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2018 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2018 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2018 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2018 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2018 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2018 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2018 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2018 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2018 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2018 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2018 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2018 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2018 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2018 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2018 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2018 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2018 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2018 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2019 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2019 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2019 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2019 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2019 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2019 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2019 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2019 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2019 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2019 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2019 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2019 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2019 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2019 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2019 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2019 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2019 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2019 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

## 2006 Integrated Resource Plan

## Average Megawatt Hydro Output from PDR580

## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2020 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2020 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2020 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2020 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2020 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2020 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2020 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2020 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2020 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2020 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2020 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2020 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2020 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2020 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2020 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2020 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2020 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2020 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2021 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2021 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2021 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2021 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2021 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2021 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2021 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2021 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2021 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2021 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2021 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2021 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2021 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2021 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2021 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2021 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2021 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2021 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2022 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2022 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2022 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2022 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2022 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2022 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2022 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2022 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2022 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2022 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2022 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2022 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2022 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2022 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2022 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2022 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2022 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2022 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2023 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2023 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2023 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2023 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2023 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2023 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2023 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2023 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2023 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2023 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2023 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2023 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2023 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2023 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2023 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2023 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2023 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2023 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

**2006 Integrated Resource Plan**

## Average Megawatt Hydro Output from PDR580
## 90th Percentile Water, 70th Percentile Load

**Abbreviations:**
HCC – Hells Canyon Complex
ROR – Run of River

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2024 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2024 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2024 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2024 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2024 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2024 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2024 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2024 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2024 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2024 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2024 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2024 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2024 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2024 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2024 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2024 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2024 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2024 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

| Resource | YEAR | TYPE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | AVE. MW |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BROWNLEE | 2025 | HCC | 310.7 | 213.0 | 307.5 | 204.1 | 305.3 | 261.7 | 229.6 | 219.0 | 129.2 | 153.0 | 160.3 | 202.6 | 225.2 |
| OXBOW | 2025 | HCC | 132.2 | 97.6 | 131.7 | 86.6 | 122.7 | 108.0 | 97.0 | 99.1 | 60.9 | 70.0 | 70.7 | 84.8 | 96.9 |
| HELLS CANYON | 2025 | HCC | 258.6 | 194.6 | 263.0 | 178.9 | 249.7 | 217.2 | 190.8 | 194.1 | 120.2 | 138.4 | 140.4 | 168.6 | 193.2 |
| 1000 SPRINGS | 2025 | ROR | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 | 6.6 |
| AMERICAN FALLS | 2025 | ROR | 0.0 | 0.0 | 8.8 | 32.4 | 63.3 | 74.3 | 77.4 | 54.7 | 25.6 | 9.6 | 0.0 | 0.0 | 29.0 |
| BLISS | 2025 | ROR | 37.9 | 37.7 | 36.8 | 35.8 | 34.9 | 34.2 | 38.6 | 39.3 | 37.0 | 39.1 | 37.4 | 36.7 | 37.1 |
| C.J. STRIKE | 2025 | ROR | 48.1 | 47.6 | 46.8 | 43.0 | 40.2 | 36.1 | 39.2 | 42.0 | 43.9 | 49.1 | 47.9 | 47.1 | 44.2 |
| CASCADE | 2025 | ROR | 1.4 | 1.4 | 1.3 | 1.2 | 1.4 | 4.3 | 9.7 | 11.5 | 7.7 | 1.9 | 1.3 | 1.4 | 3.7 |
| CLEAR LAKE | 2025 | ROR | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| LOWER MALAD | 2025 | ROR | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| LOWER SALMON | 2025 | ROR | 23.8 | 23.8 | 22.1 | 22.2 | 22.4 | 22.9 | 26.1 | 26.5 | 23.9 | 25.3 | 24.0 | 23.7 | 23.9 |
| MILNER | 2025 | ROR | 7.4 | 8.4 | 4.6 | 0.0 | 0.0 | 0.0 | 13.9 | 11.7 | 0.0 | 0.0 | 3.0 | 5.1 | 4.5 |
| SHOSHONE FALLS | 2025 | ROR | 17.7 | 18.7 | 12.5 | 6.3 | 6.5 | 8.3 | 26.5 | 23.8 | 6.6 | 10.9 | 12.5 | 14.4 | 13.8 |
| SWAN FALLS | 2025 | ROR | 15.6 | 15.8 | 15.6 | 14.8 | 14.1 | 12.8 | 13.8 | 14.5 | 14.5 | 15.6 | 15.6 | 15.5 | 14.8 |
| TWIN FALLS | 2025 | ROR | 10.8 | 11.4 | 8.4 | 4.4 | 4.6 | 6.0 | 18.3 | 16.5 | 3.8 | 6.0 | 8.4 | 9.1 | 9.0 |
| UPPER MALAD | 2025 | ROR | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| UPPERSALMON 1&2 | 2025 | ROR | 14.6 | 14.8 | 13.5 | 13.6 | 13.8 | 13.9 | 16.4 | 16.9 | 14.7 | 15.6 | 14.6 | 14.4 | 14.7 |
| UPPERSALMON 3&4 | 2025 | ROR | 13.7 | 13.8 | 12.8 | 12.8 | 13.0 | 13.1 | 15.3 | 15.7 | 13.8 | 14.5 | 13.7 | 13.5 | 13.8 |
| **HCC TOTAL** | | | **701.5** | **505.2** | **702.2** | **469.6** | **677.6** | **586.9** | **517.4** | **512.2** | **310.2** | **361.4** | **371.4** | **456.0** | **515.2** |
| **ROR TOTAL** | | | **220.2** | **222.6** | **212.4** | **215.7** | **243.4** | **255.1** | **324.4** | **302.3** | **220.6** | **216.8** | **207.6** | **210.1** | **237.9** |
| **TOTAL** | | | **921.7** | **727.8** | **914.6** | **685.3** | **921.0** | **842.0** | **841.8** | **814.5** | **530.8** | **578.2** | **579.0** | **666.1** | **753.1** |

**Initial Portfolios Scenario Sensitivity Ranking**
**Total Cost–Expected, GHG $50, GHG $0, High Gas (PV 20 Years 2006–2025)**

**Total Cost**

| Portfolio | Years 1–20 Expected | GHG50 | GHGZero | HighGas | Average | Average Rank |
|---|---|---|---|---|---|---|
| **P1 Green Portfolio (F1)** | **$4,983,722** | **$6,552,013** | **$4,337,781** | **$4,305,141** | **$5,044,664** | **3** |
| P2 Transmission Trans, CT, Nuc | $5,351,123 | $7,520,496 | $4,497,314 | $5,297,094 | $5,666,507 | 12 |
| **P3 2004 Preferred Portfolio (F2)** | **$4,964,772** | **$7,190,763** | **$4,056,509** | **$4,511,564** | **$5,180,902** | **8** |
| **P4 Thermal Portfolio (F3)** | **$4,841,685** | **$7,455,705** | **$3,774,511** | **$4,124,336** | **$5,049,059** | **4** |
| P5 Thermal Clean Coal, NG, Nuc | $5,266,369 | $7,609,253 | $4,295,187 | $4,603,822 | $5,443,658 | 11 |
| P6 2004 Preferred Coal, NG, Geo | $4,944,319 | $7,384,550 | $3,945,024 | $4,416,225 | $5,172,530 | 7 |
| P7 2004 Preferred Coal, NG, Trans | $4,997,609 | $7,525,667 | $3,975,240 | $4,477,690 | $5,244,052 | 9 |
| P8 2004 Preferredd NG, Coal, Wind | $4,812,681 | $6,934,922 | $3,930,606 | $4,421,864 | $5,025,018 | 2 |
| P9 = P6 – IGCC w CS | $4,970,712 | $6,993,532 | $4,132,351 | $4,442,368 | $5,134,741 | 5 |
| P10 All Coal, Nuc, Trans | $4,971,787 | $7,580,152 | $3,895,904 | $4,242,195 | $5,172,510 | 6 |
| **P11 Transmission Portfolio (F4)** | **$5,870,035** | **$4,999,247** | **$4,999,247** | **$5,295,614** | **$5,291,036** | **10** |
| P12 Nuclear | $4,796,034 | $6,696,660 | $3,989,497 | $4,008,331 | $4,872,631 | 1 |

| Ranking | Expected | GHG50 | GHGZero | HighGas | Total Pts | Rank by Total Pts |
|---|---|---|---|---|---|---|
| **P1 Green Portfolio (F1)** | **8** | **2** | **10** | **4** | **24** | **6** |
| P2 Transmission Trans, CT, Nuc | 11 | 9 | 11 | 12 | 43 | 12 |
| **P3 2004 Preferred Portfolio (F2)** | **5** | **6** | **7** | **9** | **27** | **8** |
| **P4 Thermal Portfolio (F3)** | **3** | **8** | **1** | **2** | **14** | **2** |
| P5 Thermal Clean Coal, NG, Nuc | 10 | 12 | 9 | 10 | 41 | 11 |
| P6 2004 Preferred Coal, NG, Geo | 4 | 7 | 4 | 5 | 20 | 4 |
| P7 2004 Preferred Coal, NG, Trans | 9 | 10 | 5 | 8 | 32 | 9 |
| P8 2004 Preferredd NG, Coal, Wind | 2 | 4 | 3 | 6 | 15 | 3 |
| P9 = P6 – IGCC w CS | 6 | 5 | 8 | 7 | 26 | 7 |
| P10 All Coal, Nuc, Trans | 7 | 11 | 2 | 3 | 23 | 5 |
| **P11 Transmission Portfolio (F4)** | **12** | **1** | **12** | **11** | **36** | **10** |
| P12 Nuclear | 1 | 3 | 6 | 1 | 11 | 1 |

**Resource Cost (Excludes Market Purchases and Sales)**

| Portfolio | Years 1–20 Expected | GHG50 | GHGZero | HighGas | Average | Average Rank |
|---|---|---|---|---|---|---|
| **P1 Green Portfolio (F1)** | **$7,348,136** | **$8,164,025** | **$6,509,463** | **$7,505,962** | **$7,381,896** | **8** |
| P2 Transmission Trans, CT, Nuc | $5,600,116 | $6,368,985 | $4,796,771 | $5,596,582 | $5,590,614 | 1 |
| **P3 2004 Preferred Portfolio (F2)** | **$6,313,858** | **$7,531,485** | **$5,331,752** | **$6,408,199** | **$6,396,324** | **2** |
| **P4 Thermal Portfolio (F3)** | **$7,227,009** | **$8,920,298** | **$5,999,133** | **$7,330,232** | **$7,369,168** | **7** |
| P5 Thermal Clean Coal, NG, Nuc | $7,431,968 | $8,936,119 | $6,315,641 | $7,531,453 | $7,553,795 | 10 |
| P6 2004 Preferred Coal, NG, Geo | $7,156,598 | $8,723,322 | $6,022,322 | $7,411,142 | $7,328,346 | 6 |
| P7 2004 Preferred Coal, NG, Trans | $6,650,659 | $8,138,429 | $5,534,508 | $6,742,242 | $6,766,460 | 3 |
| P8 2004 Preferredd NG, Coal, Wind | $7,026,768 | $8,301,288 | $6,015,482 | $7,418,093 | $7,190,408 | 4 |
| P9 = P6 – IGCC w CS | $7,182,044 | $8,328,189 | $6,212,225 | $7,438,398 | $7,290,214 | 5 |
| P10 All Coal, Nuc, Trans | $7,503,565 | $9,299,812 | $6,241,472 | $7,658,642 | $7,675,873 | 12 |
| **P11 Transmission Portfolio (F4)** | **$7,860,774** | **$6,863,462** | **$6,863,462** | **$8,003,789** | **$7,397,872** | **9** |
| P12 Nuclear | $7,500,132 | $8,748,451 | $6,484,438 | $7,650,356 | $7,595,844 | 11 |

| Ranking | Expected | GHG50 | GHGZero | HighGas | Total Pts | Rank by Total Pts |
|---|---|---|---|---|---|---|
| **P1 Green Portfolio (F1)** | **8** | **5** | **11** | **8** | **32** | **8** |
| P2 Transmission Trans, CT, Nuc | 1 | 1 | 1 | 1 | 4 | 1 |
| **P3 2004 Preferred Portfolio (F2)** | **2** | **3** | **2** | **2** | **9** | **2** |
| **P4 Thermal Portfolio (F3)** | **7** | **10** | **4** | **4** | **25** | **6** |
| P5 Thermal Clean Coal, NG, Nuc | 9 | 11 | 9 | 9 | 38 | 9 |
| P6 2004 Preferred Coal, NG, Geo | 5 | 8 | 6 | 5 | 24 | 5 |
| P7 2004 Preferred Coal, NG, Trans | 3 | 4 | 3 | 3 | 13 | 3 |
| P8 2004 Preferredd NG, Coal, Wind | 4 | 6 | 5 | 6 | 21 | 4 |
| P9 = P6 – IGCC w CS | 6 | 7 | 7 | 7 | 27 | 7 |
| P10 All Coal, Nuc, Trans | 11 | 12 | 8 | 11 | 42 | 12 |
| **P11 Transmission Portfolio (F4)** | **12** | **2** | **12** | **12** | **38** | **9** |
| P12 Nuclear | 10 | 9 | 10 | 10 | 39 | 11 |

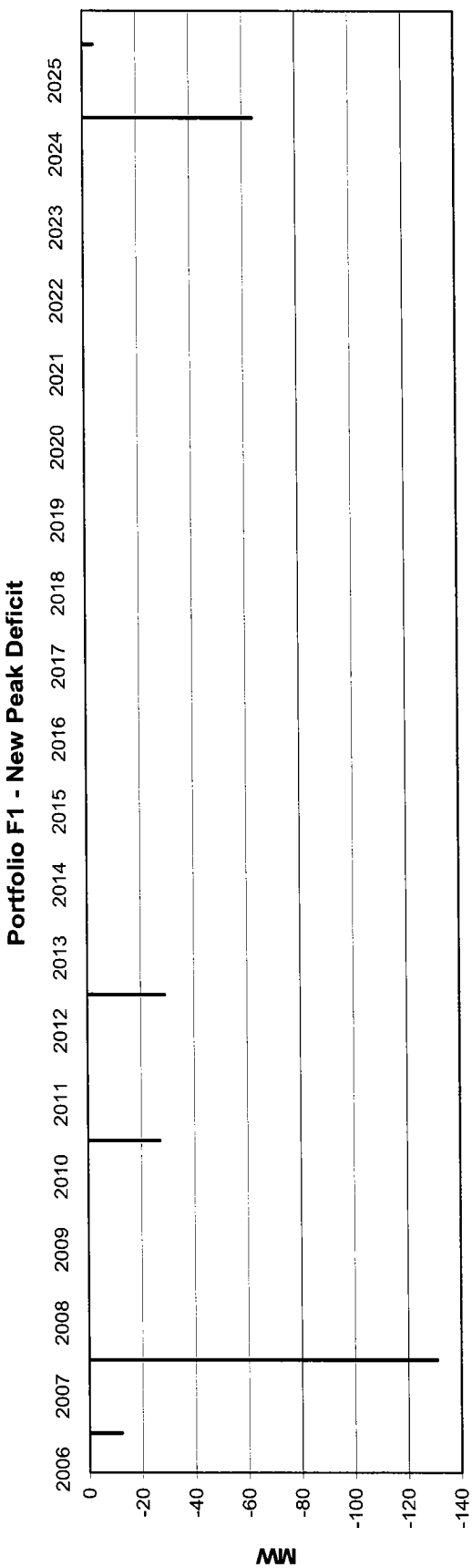
(Revised 10/12/06)

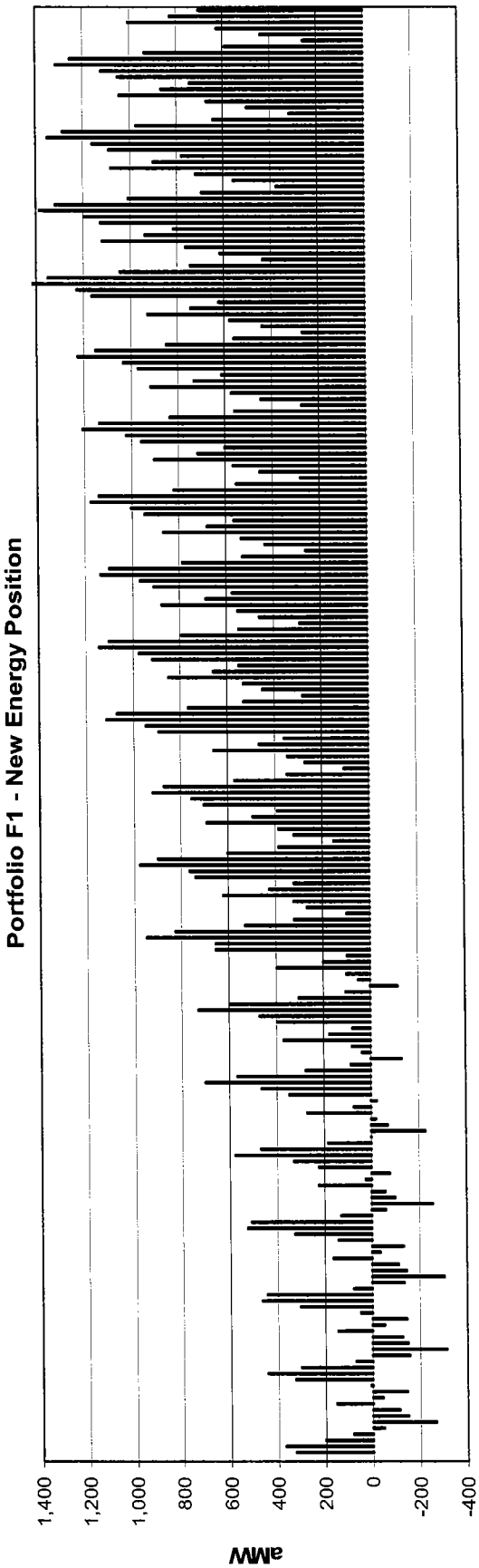
## F1 Green Portfolio (originally P1)

| On-Line Date | Resource | Nameplate | Peak | Average Energy | Peak DSM | Trans | Total Peak | Total Average Energy | Total Energy DSM | Total Trans |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | | | | | | | | | | |
| 2007 | | | | | 4 | | 4 | 3 | 3 | 0 |
| 2008 | Wind | 100 | 5 | 31 | 11 | | 21 | 37 | 6 | 0 |
| 2009 | Geothermal (Binary) | 50 | 50 | 48 | 29 | | 100 | 94 | 15 | 0 |
| 2009 | Wind | 200 | 10 | 62 | | | 110 | 156 | 15 | 0 |
| 2010 | CHP | 50 | 50 | 45 | 26 | | 186 | 211 | 25 | 0 |
| 2011 | Wind | 200 | 10 | 62 | 21 | | 217 | 283 | 35 | 0 |
| 2011 | Geothermal (Binary) | 50 | 50 | 48 | | | 267 | 331 | 35 | 0 |
| 2012 | Geothermal (Binary) | 50 | 50 | 48 | 19 | | 335 | 387 | 43 | 0 |
| 2013 | CHP | 100 | 100 | 90 | 16 | | 451 | 484 | 50 | 0 |
| 2013 | Wyoming Pulv. Coal | 250 | 250 | 220 | | | 701 | 704 | 50 | 0 |
| 2014 | Geothermal (Binary) | 50 | 50 | 48 | 14 | | 765 | 757 | 56 | 0 |
| 2015 | | | | | 12 | | 777 | 763 | 61 | 0 |
| 2016 | McNary-Boise | 225 | | | 10 | 225 | 787 | 768 | 66 | 225 |
| 2017 | LoLo to IPCo | 60 | | | 3 | 60 | 790 | 771 | 69 | 285 |
| 2018 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 843 | 821 | 71 | 285 |
| 2019 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 896 | 871 | 74 | 285 |
| 2020 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 949 | 922 | 76 | 285 |
| 2021 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 1,002 | 972 | 78 | 285 |
| 2022 | INL Nuclear | 250 | 250 | 230 | 3 | | 1,254 | 1,204 | 81 | 285 |
| 2023 | | | | | 3 | | 1,257 | 1,207 | 83 | 285 |
| 2024 | | | | | 3 | | 1,259 | 1,209 | 85 | 285 |
| 2025 | | | | | 3 | | 1,262 | 1,211 | 88 | 285 |
| | | 1,835 | 1,075 | 1,124 | 187 | 285 | | | | |

| Resource Summary | MW |
|---|---|
| Wind | 500 |
| Geothermal (Binary) | 400 |
| Coal | 250 |
| CHP | 150 |
| Transmission | 285 |
| CT | 0 |
| Nuclear | 250 |
| Total Nameplate | 1,835 |

| | MW |
|---|---|
| Peak | 1,262 |
| Average Energy | 1,211 |
| Transmission | 285 |
| DSM Peak | 187 |
| DSM aMW | 88 |
| Max Energy Deficit | (312) |


Portfolio F1 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Portfolio F1 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

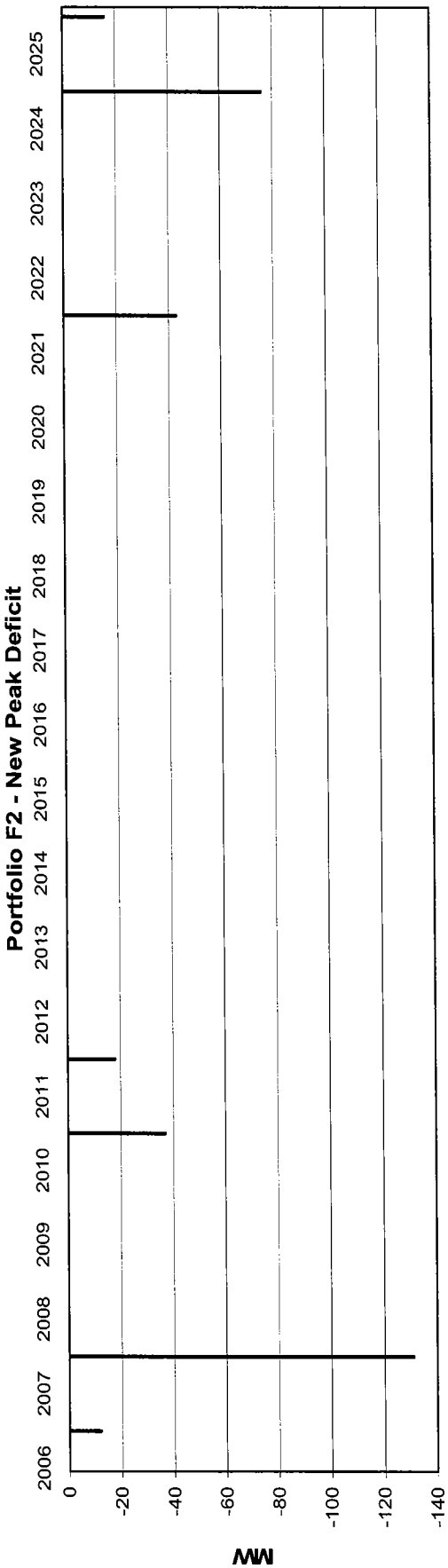
(Revised 10/12/06)

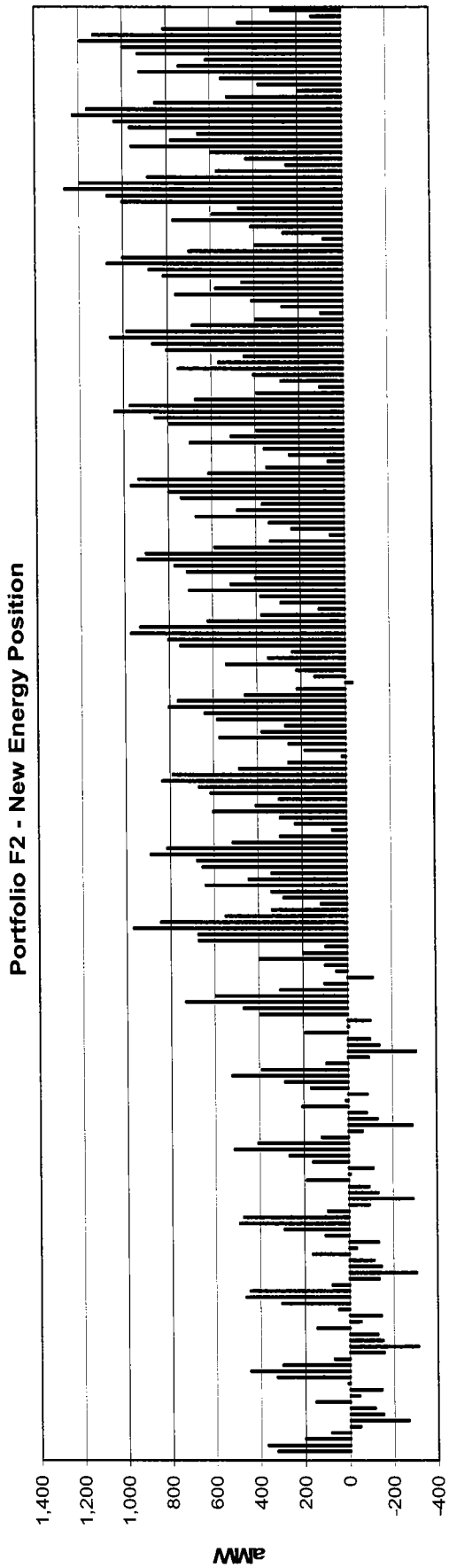
## F2 2004 IRP Preferred Portfolio (originally P3)

| On-Line Date | Resource | Nameplate | Peak | Average Energy | Peak DSM | Trans | Total Peak | Total Average Energy | Total Energy DSM | Total Trans |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | | | | | | | | | | |
| 2007 | | | | | 4 | | 4 | 3 | 3 | 0 |
| 2008 | Wind | 100 | 5 | 31 | 11 | | 21 | 37 | 6 | 0 |
| 2009 | Geothermal (Binary) | 50 | 50 | 48 | 29 | | 100 | 94 | 15 | 0 |
| 2010 | CHP | 50 | 50 | 45 | 26 | | 176 | 149 | 25 | 0 |
| 2011 | | | | | 21 | | 197 | 159 | 35 | 0 |
| 2012 | Wind | 150 | 8 | 47 | 19 | | 223 | 213 | 43 | 0 |
| 2012 | McNary-Boise | 225 | | | | 225 | 223 | 213 | 43 | 225 |
| 2013 | Wyoming Pulv. Coal | 250 | 250 | 220 | 16 | | 489 | 440 | 50 | 225 |
| 2014 | | | | | 14 | | 503 | 446 | 56 | 225 |
| 2015 | | | | | 12 | | 515 | 452 | 61 | 225 |
| 2016 | | | | | 10 | | 525 | 457 | 66 | 225 |
| 2017 | Regional IGCC Coal | 250 | 250 | 200 | 3 | | 778 | 660 | 69 | 225 |
| 2018 | | | | | 3 | | 780 | 662 | 71 | 225 |
| 2019 | LoLo to IPCo | 60 | 0 | | 3 | 60 | 783 | 664 | 74 | 285 |
| 2020 | CHP | 100 | 100 | 90 | 3 | | 886 | 757 | 76 | 285 |
| 2021 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 939 | 806 | 78 | 285 |
| 2022 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 992 | 857 | 81 | 285 |
| 2023 | INL Nuclear | 250 | 250 | 225 | 3 | | 1,244 | 1,084 | 83 | 285 |
| 2024 | | | | | 3 | | 1,247 | 1,086 | 85 | 285 |
| 2025 | | | | | 3 | | 1,250 | 1,089 | 88 | 285 |
| | | 1,585 | 1,063 | 1,001 | 187 | 285 | | | | |

| Resource Summary | MW |
|---|---|
| Wind | 250 |
| Geothermal (Binary) | 150 |
| Coal | 500 |
| CHP | 150 |
| Transmission | 285 |
| CT | 0 |
| Nuclear | 250 |
| Total Nameplate | 1,585 |

| | MW |
|---|---|
| Peak | 1,250 |
| Average Energy | 1,089 |
| Transmission | 285 |
| DSM Peak | 187 |
| DSM aMW | 88 |
| Max Energy Deficit | (312) |


Portfolio F2 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Portfolio F2 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

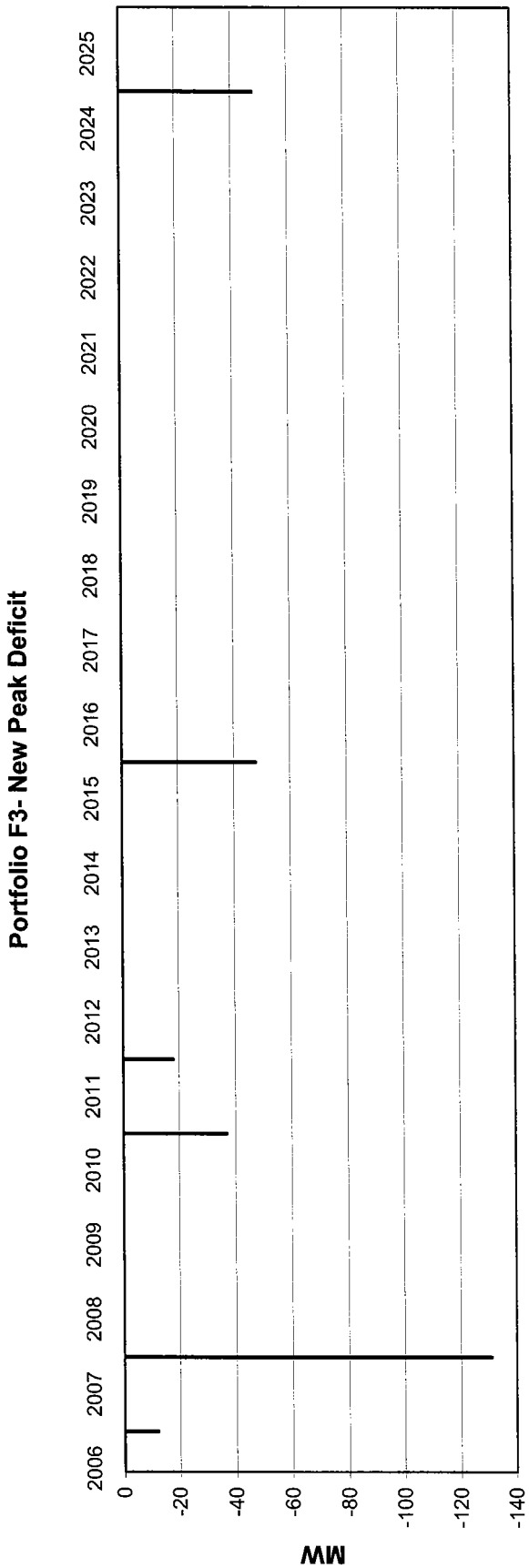
(Revised 10/12/06)

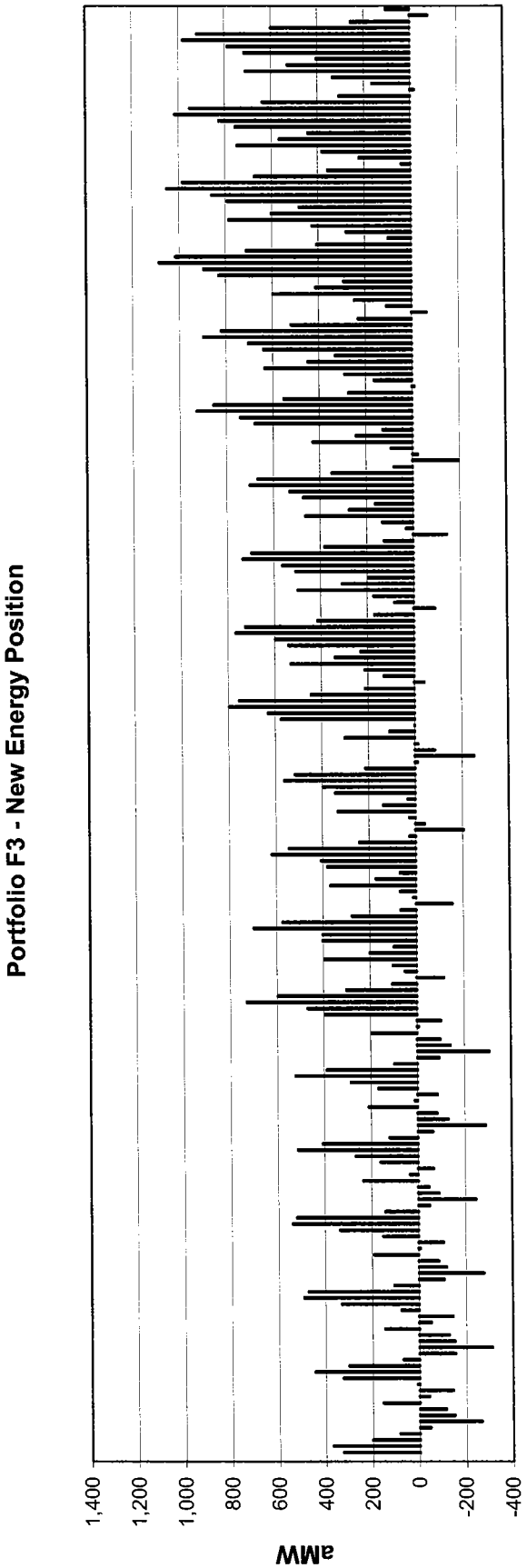
## F3 Basic Thermal Portfolio (originally P4)

| On-Line Date | Resource | Nameplate | Peak | Average Energy | Peak DSM | Trans | Total Peak | Total Average Energy | Total Energy DSM | Total Trans |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | | | | | | | | | | |
| 2007 | | | | | 4 | | 4 | 3 | 3 | 0 |
| 2008 | Wind | 100 | 5 | 31 | 11 | | 21 | 37 | 6 | 0 |
| 2008 | CHP | 50 | 50 | 45 | | | 71 | 82 | 6 | 0 |
| 2009 | Geothermal (Binary) | 50 | 50 | 48 | 29 | | 150 | 139 | 15 | 0 |
| 2010 | | | | | 26 | | 176 | 149 | 25 | 0 |
| 2011 | | | | | 21 | | 197 | 159 | 35 | 0 |
| 2012 | Wyoming Pulv. Coal | 250 | 250 | 220 | 19 | | 465 | 387 | 43 | 0 |
| 2013 | | | | | 16 | | 482 | 394 | 50 | 0 |
| 2014 | | | | | 14 | | 496 | 400 | 56 | 0 |
| 2015 | | | | | 12 | | 507 | 405 | 61 | 0 |
| 2016 | Regional Pulv Coal | 300 | 300 | 264 | 10 | | 818 | 674 | 66 | 0 |
| 2017 | | | | | 3 | | 820 | 677 | 69 | 0 |
| 2018 | CT | 170 | 170 | | 3 | | 993 | 679 | 71 | 0 |
| 2019 | | | | | 3 | | 996 | 682 | 74 | 0 |
| 2020 | IGCC | 300 | 300 | 240 | 3 | | 1,299 | 924 | 76 | 0 |
| 2021 | | | | | 3 | | 1,301 | 926 | 78 | 0 |
| 2022 | INL Nuclear | 250 | 250 | 225 | 3 | | 1,554 | 1,154 | 81 | 0 |
| 2023 | | | | | 3 | | 1,557 | 1,156 | 83 | 0 |
| 2024 | | | | | 3 | | 1,560 | 1,158 | 85 | 0 |
| 2025 | | | | | 3 | | 1,562 | 1,161 | 88 | 0 |
| | | 1,470 | 1,375 | 1,073 | 187 | 0 | | | | |

| Resource Summary | MW |
|---|---|
| Wind | 100 |
| Geothermal (Binary) | 50 |
| Coal | 850 |
| CHP | 50 |
| Transmission | 0 |
| CT | 170 |
| Nuclear | 250 |
| Total Nameplate | 1,470 |

| | MW |
|---|---|
| Peak | 1,562 |
| Average Energy | 1,161 |
| Transmission | 0 |
| DSM Peak | 187 |
| DSM aMW | 88 |
| Max Energy Deficit | (312) |


Portfolio F3- New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Portfolio F3 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

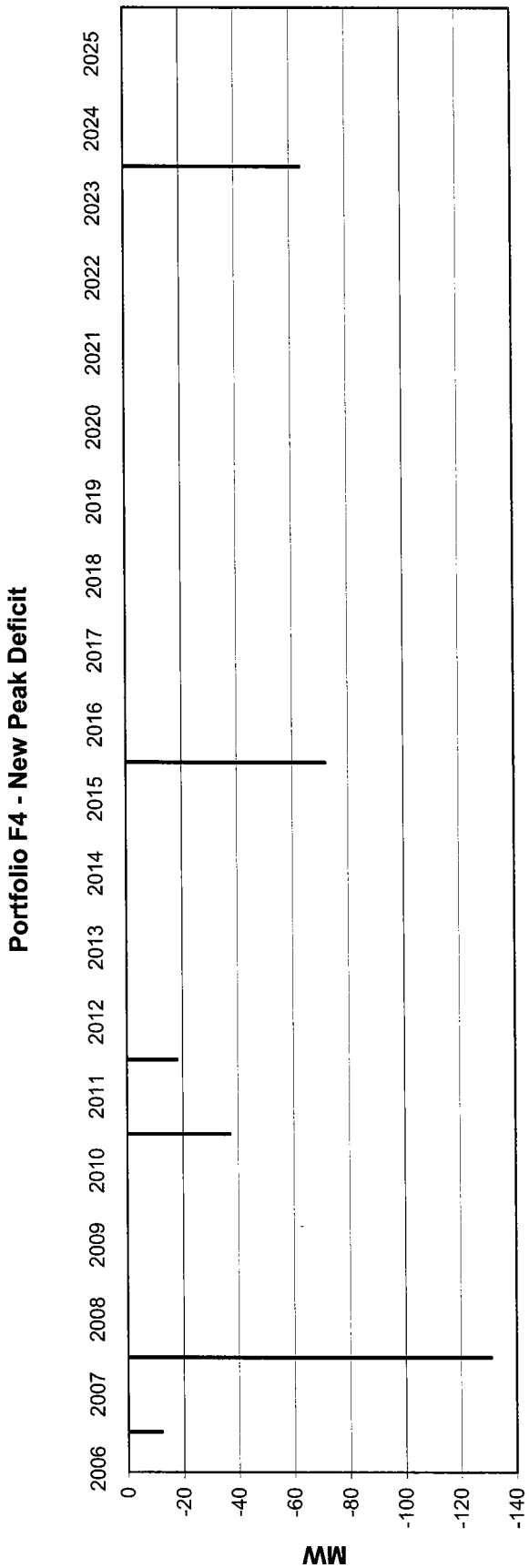
(Revised 10/12/06)

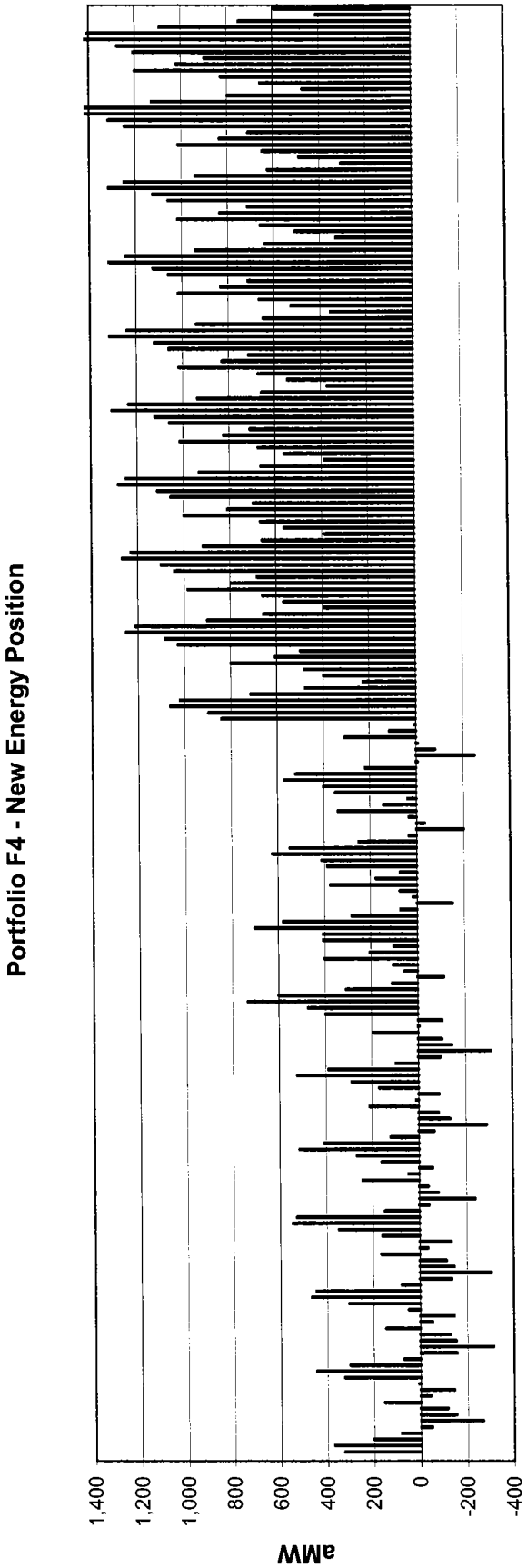
## F4 Bridger to Boise Transmission Portfolio (originally P11)

| On-Line Date | Resource | Nameplate | Peak | Average Energy | Peak DSM | Trans | Total Peak | Total Average Energy | Total Energy DSM | Total Trans |
|---|---|---|---|---|---|---|---|---|---|---|
| 2006 | | | | | | | | | | |
| 2007 | | | | | 4 | | 4 | 3 | 3 | 0 |
| 2008 | Wind | 100 | 5 | 31 | 11 | | 21 | 37 | 6 | 0 |
| 2009 | CHP | 50 | 50 | 45 | 29 | | 100 | 91 | 15 | 0 |
| 2009 | Geothermal (Binary) | 50 | 50 | 48 | | | 150 | 139 | 15 | 0 |
| 2010 | | | | | 26 | | 176 | 149 | 25 | 0 |
| 2011 | | | | | 21 | | 197 | 159 | 35 | 0 |
| 2012 | McNary-Boise | 225 | | | 19 | 225 | 215 | 167 | 43 | 225 |
| 2013 | | | | | 16 | | 232 | 174 | 50 | 225 |
| 2014 | | | | | 14 | | 246 | 180 | 56 | 225 |
| 2015 | | | | | 12 | | 257 | 185 | 61 | 225 |
| 2016 | Bridger- Boise | 900 | | | 10 | 525 | 268 | 190 | 66 | 750 |
| 2017 | Wyoming Pulv. Coal | 250 | 250 | 220 | 3 | | 520 | 413 | 69 | 750 |
| 2018 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 573 | 463 | 71 | 750 |
| 2019 | Geothermal (Binary) | 50 | 50 | 48 | 3 | | 626 | 514 | 74 | 750 |
| 2020 | Wind | 100 | 8 | 39 | 3 | | 636 | 555 | 76 | 750 |
| 2021 | Wind | 100 | 8 | 38 | 3 | | 646 | 595 | 78 | 750 |
| 2022 | Wind | 100 | 8 | 37 | 3 | | 657 | 635 | 81 | 750 |
| 2023 | Wind | 100 | 8 | 35 | 3 | | 667 | 672 | 83 | 750 |
| 2024 | INL Nuclear | 250 | 250 | 225 | 3 | | 920 | 899 | 85 | 750 |
| 2025 | | | | | 3 | | 923 | 902 | 88 | 750 |
| | | 2,325 | 736 | 814 | 187 | 750 | | | | |

| Resource Summary | MW |
|---|---|
| Wind | 500 |
| Geothermal (Binary) | 150 |
| Coal | 250 |
| CHP | 50 |
| Transmission | 1,125 |
| CT | 0 |
| Nuclear | 250 |
| Total Nameplate | 2,325 |

| | MW |
|---|---|
| Peak | 923 |
| Average Energy | 902 |
| Transmission | 750 |
| DSM Peak | 187 |
| DSM aMW | 88 |
| Max Energy Deficit | (312) |


Portfolio F4 - New Peak Deficit
MW
0
-20
-40
-60
-80
-100
-120
-140
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025


Portfolio F4 - New Energy Position
aMW
1,400
1,200
1,000
800
600
400
200
0
-200
-400

## Capacity Planning Reserve–Portfolio F1

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Obligations** | | | | | | | | | | | | | | | | | | | | |
| Forecast System Peak (50% Load) | 2,987 | 3,071 | 3,127 | 3,182 | 3,248 | 3,308 | 3,367 | 3,439 | 3,511 | 3,589 | 3,667 | 3,747 | 3,828 | 3,910 | 3,993 | 4,078 | 4,164 | 4,251 | 4,339 | 4,428 |
| **Existing Resources (50% Water)** | | | | | | | | | | | | | | | | | | | | |
| Hells Canyon Complex | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 |
| Upper Snake/Cascade Hydro and Spring Plants | 350 | 350 | 350 | 350 | 350 | 350 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| Montana PP&L (Renew Indefinitely 2010 - ) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Bridger | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 |
| Boardman | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| Valmy | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| Danskin CT | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Bennett Mountain CT | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| Danskin 1 CT | | | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| C&SPP | 144 | 150 | 160 | 159 | 153 | 150 | 150 | 150 | 142 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 |
| Salmon Diesel | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Transmission Resources** | | | | | | | | | | | | | | | | | | | | |
| Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase) | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase) | 223 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| **Total Existing Supply-Side Resource Capacity (50% Water)** | 3,305 | 3,013 | 3,188 | 3,187 | 3,181 | 3,178 | 3,193 | 3,193 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 |
| **Net Position w/ Existing and Committed Resources** | 318 | **-58** | 61 | 5 | **-67** | **-130** | **-174** | **-246** | **-326** | **-404** | **-483** | **-562** | **-643** | **-725** | **-808** | **-893** | **-979** | **-1,066** | **-1,154** | **-1,244** |
| **Planning Margin w/ Existing and Committed Resources** | 10.6% | **-1.9%** | 2.0% | 0.2% | **-2.1%** | **-3.9%** | **-5.2%** | **-7.1%** | **-9.3%** | **-11.3%** | **-13.2%** | **-15.0%** | **-16.8%** | **-18.6%** | **-20.2%** | **-21.9%** | **-23.5%** | **-25.1%** | **-26.6%** | **-28.1%** |
| **Portfolio F1–New Resource Capacity** | | | | | | | | | | | | | | | | | | | | |
| Peak DSM | | 4 | 15 | 44 | 70 | 91 | 110 | 126 | 140 | 152 | 162 | 165 | 168 | 170 | 173 | 176 | 179 | 182 | 185 | 187 |
| Idaho Wind (100 MW) | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Geothermal–Binary (50 MW) | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Idaho Wind (200 MW) | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| CHP (50 MW) | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Idaho Wind (200 MW) | | | | | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Geothermal–Binary (50 MW) | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| CHP (100 MW) | | | | | | | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Wyoming Pulverized Coal (250 MW) | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Geothermal–Binary (50 MW) | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| McNary to Boise Transmission | | | | | | | | | | | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| Lolo to IPC Transmission | | | | | | | | | | | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 |
| INL Nuclear (250 MW) | | | | | | | | | | | | | | | | | 250 | 250 | 250 | 250 |
| **Total New Resource Capacity** | | 4 | 20 | 109 | 185 | 266 | 335 | 701 | 765 | 777 | 1,012 | 1,075 | 1,128 | 1,180 | 1,233 | 1,286 | 1,539 | 1,542 | 1,545 | 1,547 |
| **Net Position w/ New Resource Capacity** | 318 | **-54** | 81 | 114 | 118 | 136 | 161 | 455 | 439 | 373 | 529 | 512 | 484 | 455 | 425 | 393 | 560 | 476 | 390 | 304 |
| **Planning Margin w/ New Resource Capacity** | 10.6% | **-1.8%** | 2.6% | 3.6% | 3.6% | 4.1% | 4.8% | 13.2% | 12.5% | 10.4% | 14.4% | 13.7% | 12.6% | 11.6% | 10.6% | 9.6% | 13.4% | 11.2% | 9.0% | 6.9% |

## Capacity Planning Reserve–Portfolio F2

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Obligations** | | | | | | | | | | | | | | | | | | | | |
| Forecast System Peak (50% Load) | 2,987 | 3,071 | 3,127 | 3,182 | 3,248 | 3,308 | 3,367 | 3,439 | 3,511 | 3,589 | 3,667 | 3,747 | 3,828 | 3,910 | 3,993 | 4,078 | 4,164 | 4,251 | 4,339 | 4,428 |
| **Existing Resources (50% Water)** | | | | | | | | | | | | | | | | | | | | |
| Hells Canyon Complex | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 |
| Upper Snake/Cascade Hydro and Spring Plants | 350 | 350 | 350 | 350 | 350 | 350 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| Montana PP&L (Renew Indefinitely 2010 - ) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Bridger | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 |
| Boardman | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| Valmy | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| Danskin CT | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Bennett Mountain CT | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| Danskin 1 CT | | | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| C&SPP | 144 | 150 | 160 | 159 | 153 | 150 | 150 | 150 | 142 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 |
| Salmon Diesel | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Transmission Resources** | | | | | | | | | | | | | | | | | | | | |
| Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase) | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase) | 223 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| **Total Existing Supply-Side Resource Capacity (50% Water)** | 3,305 | 3,013 | 3,188 | 3,187 | 3,181 | 3,178 | 3,193 | 3,193 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 |
| **Net Position w/ Existing and Committed Resources** | 318 | **-58** | 61 | 5 | **-67** | **-130** | **-174** | **-246** | **-326** | **-404** | **-483** | **-562** | **-643** | **-725** | **-808** | **-893** | **-979** | **-1,066** | **-1,154** | **-1,244** |
| **Planning Margin w/ Existing and Committed Resources** | 10.6% | **-1.9%** | 2.0% | 0.2% | **-2.1%** | **-3.9%** | **-5.2%** | **-7.1%** | **-9.3%** | **-11.3%** | **-13.2%** | **-15.0%** | **-16.8%** | **-18.6%** | **-20.2%** | **-21.9%** | **-23.5%** | **-25.1%** | **-26.6%** | **-28.1%** |
| **Portfolio F2–New Resource Capacity** | | | | | | | | | | | | | | | | | | | | |
| Peak DSM | | 4 | 15 | 44 | 70 | 91 | 110 | 126 | 140 | 152 | 162 | 165 | 168 | 170 | 173 | 176 | 179 | 182 | 185 | 187 |
| Idaho Wind (100 MW) | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Geothermal–Binary (50 MW) | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| CHP (50 MW) | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Idaho Wind (150 MW) | | | | | | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| McNary to Boise Transmission | | | | | | | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| Wyoming Pulverized Coal (250 MW) | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Regional IGCC Coal (250 MW) | | | | | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Lolo to IPC Transmission | | | | | | | | | | | | | | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| CHP (100 MW) | | | | | | | | | | | | | | | 100 | 100 | 100 | 100 | 100 | 100 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | | | | 50 | 50 | 50 | 50 |
| INL Nuclear (250 MW) | | | | | | | | | | | | | | | | | | 250 | 250 | 250 |
| **Total New Resource Capacity** | | 4 | 20 | 99 | 175 | 196 | 448 | 714 | 728 | 740 | 750 | 1,003 | 1,006 | 1,068 | 1,171 | 1,224 | 1,277 | 1,530 | 1,533 | 1,535 |
| **Net Position w/ New Resource Capacity** | 318 | **-54** | 81 | 104 | 108 | 66 | 274 | 468 | 402 | 336 | 267 | 440 | 362 | 343 | 363 | 331 | 298 | 464 | 378 | 292 |
| **Planning Margin w/ New Resource Capacity** | 10.6% | **-1.8%** | 2.6% | 3.3% | 3.3% | 2.0% | 8.1% | 13.6% | 11.4% | 9.4% | 7.3% | 11.8% | 9.5% | 8.8% | 9.1% | 8.1% | 7.2% | 10.9% | 8.7% | 6.6% |

## Capacity Planning Reserve–Portfolio F3

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Obligations** | | | | | | | | | | | | | | | | | | | | |
| Forecast System Peak (50% Load) | 2,987 | 3,071 | 3,127 | 3,182 | 3,248 | 3,308 | 3,367 | 3,439 | 3,511 | 3,589 | 3,667 | 3,747 | 3,828 | 3,910 | 3,993 | 4,078 | 4,164 | 4,251 | 4,339 | 4,428 |
| **Existing Resources (50% Water)** | | | | | | | | | | | | | | | | | | | | |
| Hells Canyon Complex | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 |
| Upper Snake/Cascade Hydro and Spring Plants | 350 | 350 | 350 | 350 | 350 | 350 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| Montana PP&L (Renew Indefinitely 2010 - ) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Bridger | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 |
| Boardman | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| Valmy | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| Danskin CT | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Bennett Mountain CT | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| Danskin 1 CT | | | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| C&SPP | 144 | 150 | 160 | 159 | 153 | 150 | 150 | 150 | 142 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 |
| Salmon Diesel | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Transmission Resources** | | | | | | | | | | | | | | | | | | | | |
| Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase) | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| From PAC NW–Native Load Set Asides (w/Assumed Firm Market Purchase) | 223 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| **Total Existing Supply-Side Resource Capacity (50% Water)** | 3,305 | 3,013 | 3,188 | 3,187 | 3,181 | 3,178 | 3,193 | 3,193 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 |
| **Net Position w/ Existing and Committed Resources** | 318 | **-58** | 61 | 5 | **-67** | **-130** | **-174** | **-246** | **-326** | **-404** | **-483** | **-562** | **-643** | **-725** | **-808** | **-893** | **-979** | **-1,066** | **-1,154** | **-1,244** |
| **Planning Margin w/ Existing and Committed Resources** | 10.6% | **-1.9%** | 2.0% | 0.2% | **-2.1%** | **-3.9%** | **-5.2%** | **-7.1%** | **-9.3%** | **-11.3%** | **-13.2%** | **-15.0%** | **-16.8%** | **-18.6%** | **-20.2%** | **-21.9%** | **-23.5%** | **-25.1%** | **-26.6%** | **-28.1%** |
| **Portfolio F3–New Resource Capacity** | | | | | | | | | | | | | | | | | | | | |
| Peak DSM | | 4 | 15 | 44 | 70 | 91 | 110 | 126 | 140 | 152 | 162 | 165 | 168 | 170 | 173 | 176 | 179 | 182 | 185 | 187 |
| Idaho Wind (100 MW) | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| CHP (50 MW) | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Wyoming Pulverized Coal (250 MW) | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Regional Pulverized Coal (300 MW) | | | | | | | | | | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Simple-Cycle Combustion Turbine (170 | | | | | | | | | | | | | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 |
| Regional IGCC Coal (300 MW) | | | | | | | | | | | | | | | 300 | 300 | 300 | 300 | 300 | 300 |
| INL Nuclear (250 MW) | | | | | | | | | | | | | | | | | 250 | 250 | 250 | 250 |
| **Total New Resource Capacity** | | 4 | 70 | 149 | 175 | 196 | 465 | 481 | 495 | 507 | 817 | 820 | 993 | 995 | 1,298 | 1,301 | 1,554 | 1,557 | 1,560 | 1,562 |
| **Net Position w/ New Resource Capacity** | 318 | **-54** | 131 | 154 | 108 | 66 | 291 | 235 | 169 | 103 | 334 | 257 | 349 | 270 | 490 | 408 | 575 | 491 | 405 | 319 |
| **Planning Margin w/ New Resource Capacity** | 10.6% | **-1.8%** | 4.2% | 4.8% | 3.3% | 2.0% | 8.7% | 6.8% | 4.8% | 2.9% | 9.1% | 6.9% | 9.1% | 6.9% | 12.3% | 10.0% | 13.8% | 11.5% | 9.3% | 7.2% |

## Capacity Planning Reserve– Portfolio F4

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Obligations** | | | | | | | | | | | | | | | | | | | | |
| Forecast System Peak (50% Load) | 2,987 | 3,071 | 3,127 | 3,182 | 3,248 | 3,308 | 3,367 | 3,439 | 3,511 | 3,589 | 3,667 | 3,747 | 3,828 | 3,910 | 3,993 | 4,078 | 4,164 | 4,251 | 4,339 | 4,428 |
| **Existing Resources (50% Water)** | | | | | | | | | | | | | | | | | | | | |
| Hells Canyon Complex | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 | 1,153 |
| Upper Snake/Cascade Hydro and Spring Plants | 350 | 350 | 350 | 350 | 350 | 350 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 | 365 |
| Montana PP&L (Renew Indefinitely 2010 - ) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Bridger | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 | 707 |
| Boardman | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| Valmy | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| Danskin CT | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Bennett Mountain CT | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| Danskin 1 CT | | | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 |
| C&SPP | 144 | 150 | 160 | 159 | 153 | 150 | 150 | 150 | 142 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 | 141 |
| Salmon Diesel | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| **Transmission Resources** | | | | | | | | | | | | | | | | | | | | |
| Red Butte–Borah/ Brady (w/Assumed Firm Market Purchase) | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| From PAC NW– Native Load Set Asides (w/Assumed Firm Market Purchase) | 223 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| **Total Existing Supply-Side Resource Capacity (50% Water)** | 3,305 | 3,013 | 3,188 | 3,187 | 3,181 | 3,178 | 3,193 | 3,193 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 | 3,185 |
| **Net Position w/ Existing and Committed Resources** | 318 | **-58** | 61 | 5 | **-67** | **-130** | **-174** | **-246** | **-326** | **-404** | **-483** | **-562** | **-643** | **-725** | **-808** | **-893** | **-979** | **-1,066** | **-1,154** | **-1,244** |
| **Planning Margin w/ Existing and Committed Resources** | 10.6% | **-1.9%** | 2.0% | 0.2% | **-2.1%** | **-3.9%** | **-5.2%** | **-7.1%** | **-9.3%** | **-11.3%** | **-13.2%** | **-15.0%** | **-16.8%** | **-18.6%** | **-20.2%** | **-21.9%** | **-23.5%** | **-25.1%** | **-26.6%** | **-28.1%** |
| **Portfolio F4–New Resource Capacity** | | | | | | | | | | | | | | | | | | | | |
| Peak DSM | | 4 | 15 | 44 | 70 | 91 | 110 | 126 | 140 | 152 | 162 | 165 | 168 | 170 | 173 | 176 | 179 | 182 | 185 | 187 |
| Idaho Wind (100 MW) | | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| CHP (50 MW) | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| McNary to Boise Transmission | | | | | | | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 |
| Bridger to Boise Transmission | | | | | | | | | | | 525 | 525 | 525 | 525 | 525 | 525 | 525 | 525 | 525 | 525 |
| Wyoming Pulverized Coal (250 MW) | | | | | | | | | | | | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Geothermal–Binary (50 MW) | | | | | | | | | | | | | | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Wind (100 MW) | | | | | | | | | | | | | | | 8 | 8 | 8 | 8 | 8 | 8 |
| Wind (100 MW) | | | | | | | | | | | | | | | | 8 | 8 | 8 | 8 | 8 |
| Wind (100 MW) | | | | | | | | | | | | | | | | | 8 | 8 | 8 | 8 |
| Wind (100 MW) | | | | | | | | | | | | | | | | | | 8 | 8 | 8 |
| INL Nuclear (250 MW) | | | | | | | | | | | | | | | | | | | 250 | 250 |
| **Total New Resource Capacity** | | 4 | 20 | 149 | 175 | 196 | 440 | 456 | 470 | 482 | 1,017 | 1,270 | 1,323 | 1,375 | 1,386 | 1,397 | 1,408 | 1,419 | 1,672 | 1,674 |
| **Net Position w/ New Resource Capacity** | 318 | **-54** | 81 | 154 | 108 | 66 | 266 | 210 | 144 | 78 | 534 | 707 | 679 | 650 | 578 | 504 | 429 | 353 | 517 | 431 |
| **Planning Margin w/ New Resource Capacity** | 10.6% | **-1.8%** | 2.6% | 4.8% | 3.3% | 2.0% | 7.9% | 6.1% | 4.1% | 2.2% | 14.6% | 18.9% | 17.7% | 16.6% | 14.5% | 12.4% | 10.3% | 8.3% | 11.9% | 9.7% |

**Portfolio F1**
**Estimated Total Resource Investment (Including AFUDC)—By In-Service Year**
**(In $000s)**

| Resource | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | 177,691 | | | | | | | |
| Geothermal (50 MW) | | | | 202,502 | | | | | | |
| Wind (200 MW) | | | | 366,043 | | | | | | |
| CHP (50 MW) | | | | | 56,150 | | | | | |
| Wind (200 MW) | | | | | | 388,335 | | | | |
| Geothermal (50 MW) | | | | | | 214,834 | | | | |
| Geothermal (50 MW) | | | | | | | 221,280 | | | |
| CHP (100 MW) | | | | | | | | 122,714 | | |
| Wyoming Coal (250 MW) | | | | | | | | 655,366 | | |
| Geothermal (50 MW) | | | | | | | | | 234,755 | |
| McNary to IPC Transmission (225 MW) | | | | | | | | | | |
| Lolo to IPC Transmission (60 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| INL Nuclear (250 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Backbone Transmission | 5,231 | 9,710 | 21,005 | 49,315 | 119,731 | 135,218 | 262,510 | 153,869 | 1,773 | 0 |
| Real Dollars | 5,231 | 9,710 | 198,696 | 617,860 | 175,882 | 738,387 | 483,790 | 931,949 | 236,529 | 0 |
| Present Value | 5,231 | 9,080 | 173,749 | 505,232 | 134,490 | 527,982 | 323,488 | 582,722 | 138,299 | 0 |
| Cumulative MWs | 0 | 0 | 100 | 350 | 400 | 650 | 700 | 1,050 | 1,100 | 1,100 |
| Cumulative Real Dollars | 5,231 | 14,941 | 213,636 | 831,496 | 1,007,378 | 1,745,765 | 2,229,555 | 3,161,504 | 3,398,033 | 3,398,033 |
| Cumulative PV | 5,231 | 14,311 | 188,060 | 693,292 | 827,781 | 1,355,763 | 1,679,252 | 2,261,973 | 2,400,273 | 2,400,273 |
| PPA Real Dollars | 0 | 0 | 177,691 | 568,545 | 56,150 | 603,169 | 221,280 | 122,714 | 234,755 | 0 |
| Cumulative PPA Real Dollars | 0 | 0 | 177,691 | 746,235 | 802,386 | 1,405,555 | 1,626,834 | 1,749,549 | 1,984,304 | 1,984,304 |
| PV PPA Real Dollars | 0 | 0 | 155,381 | 464,906 | 42,936 | 431,295 | 147,960 | 76,730 | 137,262 | 0 |
| Cumulative PV PPA Real Dollars | 0 | 0 | 155,381 | 620,288 | 663,224 | 1,094,518 | 1,242,478 | 1,319,208 | 1,456,470 | 1,456,470 |
| Ownership Real Dollars | 5,231 | 9,710 | 21,005 | 49,315 | 119,731 | 135,218 | 262,510 | 809,235 | 1,773 | 0 |
| Cumulative Ownership Real Dollars | 5,231 | 14,941 | 35,946 | 85,261 | 204,992 | 340,210 | 602,720 | 1,411,955 | 1,413,729 | 1,413,729 |
| PV Ownership Real Dollars | 5,231 | 9,080 | 18,368 | 40,326 | 91,554 | 96,687 | 175,529 | 505,992 | 1,037 | 0 |
| Cumulative PV Ownership Real Dollars | 5,231 | 14,311 | 32,679 | 73,004 | 164,558 | 261,245 | 436,774 | 942,766 | 943,803 | 943,803 |

| Resource | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Wind (200 MW) | | | | | | | | | | |
| CHP (50 MW) | | | | | | | | | | |
| Wind (200 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| CHP (100 MW) | | | | | | | | | | |
| Wyoming Coal (250 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| McNary to IPC Transmission (225 MW) | 112,904 | | | | | | | | | |
| Lolo to IPC Transmission (60 MW) | | 16,332 | | | | | | | | |
| Geothermal (50 MW) | | | 264,219 | | | | | | | |
| Geothermal (50 MW) | | | | 272,146 | | | | | | |
| Geothermal (50 MW) | | | | | 280,310 | | | | | |
| Geothermal (50 MW) | | | | | | 288,720 | | | | |
| INL Nuclear (250 MW) | | | | | | | 999,272 | | | |
| Geothermal (50 MW) | | | | | | | | | 315,492 | |
| Backbone Transmission | 0 | 0 | 3,232 | 3,329 | 4,220 | 34,613 | 45,343 | 0 | 2,383 | 0 |
| Real Dollars | 112,904 | 16,332 | 267,451 | 275,475 | 284,530 | 323,333 | 1,044,614 | 0 | 317,875 | 0 |
| Present Value | 57,727 | 7,809 | 119,577 | 115,173 | 111,241 | 118,210 | 357,131 | 0 | 95,030 | 0 |
| Cumulative MWs | 1,325 | 1,385 | 1,435 | 1,485 | 1,535 | 1,585 | 1,835 | 1,835 | 1,885 | 1,885 |
| Cumulative Real Dollars | 3,510,936 | 3,527,269 | 3,794,720 | 4,070,194 | 4,354,725 | 4,678,057 | 5,722,672 | 5,722,672 | 6,040,547 | 6,040,547 |
| Cumulative PV | 2,458,000 | 2,465,808 | 2,585,386 | 2,700,559 | 2,811,800 | 2,930,011 | 3,287,142 | 3,287,142 | 3,382,172 | 3,382,172 |
| PPA Real Dollars | 0 | 0 | 264,219 | 272,146 | 280,310 | 288,720 | 999,272 | 0 | 315,492 | 0 |
| Cumulative PPA Real Dollars | 1,984,304 | 1,984,304 | 2,248,523 | 2,520,669 | 2,800,979 | 3,089,699 | 4,088,971 | 4,088,971 | 4,404,463 | 4,404,463 |
| PV PPA Real Dollars | 0 | 0 | 118,132 | 113,782 | 109,592 | 105,556 | 341,630 | 0 | 94,318 | 0 |
| Cumulative PV PPA Real Dollars | 1,456,470 | 1,456,470 | 1,574,602 | 1,688,384 | 1,797,976 | 1,903,531 | 2,245,161 | 2,245,161 | 2,339,479 | 2,339,479 |
| Ownership Real Dollars | 112,904 | 16,332 | 3,232 | 3,329 | 4,220 | 34,613 | 45,343 | 0 | 2,383 | 0 |
| Cumulative Ownership Real Dollars | 1,526,632 | 1,542,965 | 1,546,196 | 1,549,525 | 1,553,745 | 1,588,358 | 1,633,701 | 1,633,701 | 1,636,084 | 1,636,084 |
| PV Ownership Real Dollars | 57,727 | 7,809 | 1,445 | 1,392 | 1,650 | 12,655 | 15,502 | 0 | 713 | 0 |
| Cumulative PV Ownership Real Dollars | 1,001,530 | 1,009,338 | 1,010,783 | 1,012,175 | 1,013,825 | 1,026,479 | 1,041,981 | 1,041,981 | 1,042,694 | 1,042,694 |

**Portfolio F2**
**Estimated Total Resource Investment (Including AFUDC)—By In-Service Year**
**In $000s**

| Resource | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | 177,691 | | | | | | | |
| Geothermal (50 MW) | | | | 202,502 | | | | | | |
| CHP (50 MW) | | | | | 56,150 | | | | | |
| Wind (150 MW) | | | | | | | 299,988 | | | |
| McNary to IPC Transmission (225 MW) | | | | | | | 100,313 | | | |
| Wyoming Coal (250 MW) | | | | | | | | 655,366 | | |
| Regional IGCC Coal (250 MW) | | | | | | | | | | |
| Lolo to IPC System (60 MW) | | | | | | | | | | |
| CHP (100 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| INL Nuclear (250 MW) | | | | | | | | | | |
| Backbone Transmission | 7,237 | 14,074 | 12,003 | 25,278 | 55,583 | 70,023 | 299,931 | 198,893 | 6,433 | 13,859 |
| Real Dollars | 7,237 | 14,074 | 189,694 | 227,780 | 111,733 | 70,023 | 700,233 | 854,259 | 6,433 | 13,859 |
| Present Value | 7,237 | 13,161 | 165,878 | 186,258 | 85,438 | 50,069 | 468,214 | 534,144 | 3,761 | 7,578 |
| Cumulative MWs | 0 | 0 | 100 | 150 | 200 | 200 | 575 | 825 | 825 | 825 |
| Cumulative Real Dollars | 7,237 | 21,311 | 211,005 | 438,785 | 550,518 | 620,541 | 1,320,773 | 2,175,032 | 2,181,465 | 2,195,324 |
| Cumulative PV | 7,237 | 20,398 | 186,275 | 372,534 | 457,972 | 508,041 | 976,255 | 1,510,399 | 1,514,161 | 1,521,738 |
| PPA Real Dollars | 0 | 0 | 177,691 | 202,502 | 56,150 | 0 | 299,988 | 0 | 0 | 0 |
| Cumulative PPA Real Dollars | 0 | 0 | 177,691 | 380,193 | 436,343 | 436,343 | 736,332 | 736,332 | 736,332 | 736,332 |
| PV PPA Real Dollars | 0 | 0 | 155,381 | 165,589 | 42,936 | 0 | 200,589 | 0 | 0 | 0 |
| Cumulative PV PPA Real Dollars | 0 | 0 | 155,381 | 320,970 | 363,906 | 363,906 | 564,495 | 564,495 | 564,495 | 564,495 |
| Ownership Real Dollars | 7,237 | 14,074 | 12,003 | 25,278 | 55,583 | 70,023 | 400,244 | 854,259 | 6,433 | 13,859 |
| Cumulative Ownership Real Dollars | 7,237 | 21,311 | 33,314 | 58,592 | 114,175 | 184,198 | 584,442 | 1,438,701 | 1,445,133 | 1,458,992 |
| PV Ownership Real Dollars | 7,237 | 13,161 | 10,496 | 20,670 | 42,502 | 50,069 | 267,625 | 534,144 | 3,761 | 7,578 |
| Cumulative PV Ownership Real Dollars | 7,237 | 20,398 | 30,894 | 51,564 | 94,066 | 144,136 | 411,761 | 945,905 | 949,666 | 957,244 |

| Resource | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| CHP (50 MW) | | | | | | | | | | |
| Wind (150 MW) | | | | | | | | | | |
| McNary to IPC Transmission (225 MW) | | | | | | | | | | |
| Wyoming Coal (250 MW) | | | | | | | | | | |
| Regional IGCC Coal (250 MW) | | 913,616 | | | | | | | | |
| Lolo to IPC System (60 MW) | | | | 17,327 | | | | | | |
| CHP (100 MW) | | | | | 150,923 | | | | | |
| Geothermal (50 MW) | | | | | | 288,720 | | | | |
| Geothermal (50 MW) | | | | | | | 297,381 | | | |
| INL Nuclear (250 MW) | | | | | | | | 1,029,250 | | |
| Backbone Transmission | 57,723 | (46,503) | 267 | 2,649 | (3,756) | 31,657 | 176,299 | 162,596 | 0 | 0 |
| Real Dollars | 57,723 | 867,112 | 267 | 19,976 | 147,167 | 320,376 | 473,680 | 1,191,846 | 0 | 0 |
| Present Value | 29,514 | 414,584 | 120 | 8,352 | 57,537 | 117,129 | 161,941 | 381,030 | 0 | 0 |
| Cumulative MWs | 825 | 1,075 | 1,075 | 1,135 | 1,235 | 1,285 | 1,355 | 1,585 | 1,585 | 1,585 |
| Cumulative Real Dollars | 2,253,047 | 3,120,159 | 3,120,427 | 3,140,403 | 3,287,570 | 3,607,947 | 4,081,626 | 5,273,473 | 5,273,473 | 5,273,473 |
| Cumulative PV | 1,551,252 | 1,965,836 | 1,965,955 | 1,974,307 | 2,031,844 | 2,148,973 | 2,310,914 | 2,691,944 | 2,691,944 | 2,691,944 |
| PPA Real Dollars | 0 | 0 | 0 | 0 | 150,923 | 288,720 | 297,381 | 1,029,250 | 0 | 0 |
| Cumulative PPA Real Dollars | 736,332 | 736,332 | 736,332 | 736,332 | 887,255 | 1,175,974 | 1,473,355 | 2,502,606 | 2,502,606 | 2,502,606 |
| PV PPA Real Dollars | 0 | 0 | 0 | 0 | 59,006 | 105,556 | 101,668 | 329,048 | 0 | 0 |
| Cumulative PV PPA Real Dollars | 564,495 | 564,495 | 564,495 | 564,495 | 623,500 | 729,056 | 830,724 | 1,159,772 | 1,159,772 | 1,159,772 |
| Ownership Real Dollars | 57,723 | 867,112 | 267 | 19,976 | (3,756) | 31,657 | 176,299 | 162,596 | 0 | 0 |
| Cumulative Ownership Real Dollars | 1,516,716 | 2,383,828 | 2,384,095 | 2,404,072 | 2,400,315 | 2,431,972 | 2,608,271 | 2,770,867 | 2,770,867 | 2,770,867 |
| PV Ownership Real Dollars | 29,514 | 414,584 | 120 | 8,352 | (1,469) | 11,574 | 60,273 | 51,982 | 0 | 0 |
| Cumulative PV Ownership Real Dollars | 986,757 | 1,401,341 | 1,401,461 | 1,409,813 | 1,408,344 | 1,419,918 | 1,480,190 | 1,532,172 | 1,532,172 | 1,532,172 |

**Portfolio F3**
**Estimated Total Resource Investment (Including AFUDC)—By In-Service Year**
**In $000s**

| Resource | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | 177,691 | | | | | | | |
| CHP (50 MW) | | | 52,927 | | | | | | | |
| Geothermal (50 MW) | | | | 202,502 | | | | | | |
| Wyoming Coal (250 MW) | | | | | | | 636,277 | | | |
| Regional Coal (300 MW) | | | | | | | | | | |
| Industrial CT (170 MW) | | | | | | | | | | |
| Regional IGCC Coal (300 MW) | | | | | | | | | | |
| INL Nuclear (250 MW) | | | | | | | | | | |
| Backbone Transmission | 423 | 2,116 | (5,260) | 2,697 | 6,356 | 6,356 | (88,273) | 6,356 | 25,423 | 67,240 |
| Real Dollars | 423 | 2,116 | 225,358 | 205,199 | 6,356 | 6,356 | 548,004 | 6,356 | 25,423 | 67,240 |
| Present Value | 423 | 1,979 | 197,064 | 167,794 | 4,860 | 4,545 | 366,426 | 3,974 | 14,865 | 36,765 |
| Cumulative MWs | 0 | 0 | 150 | 200 | 200 | 200 | 450 | 450 | 450 | 450 |
| Cumulative Real Dollars | 423 | 2,540 | 227,898 | 433,097 | 439,453 | 445,809 | 993,813 | 1,000,169 | 1,025,592 | 1,092,833 |
| Cumulative PV | 423 | 2,402 | 199,466 | 367,261 | 372,121 | 376,665 | 743,091 | 747,065 | 761,930 | 798,695 |
| PPA Real Dollars | 0 | 0 | 230,618 | 202,502 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative PPA Real Dollars | 0 | 0 | 230,618 | 433,120 | 433,120 | 433,120 | 433,120 | 433,120 | 433,120 | 433,120 |
| PV PPA Real Dollars | 0 | 0 | 201,663 | 165,589 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative PV PPA Real Dollars | 0 | 0 | 201,663 | 367,252 | 367,252 | 367,252 | 367,252 | 367,252 | 367,252 | 367,252 |
| Ownership Real Dollars | 423 | 2,116 | (5,260) | 2,697 | 6,356 | 6,356 | 548,004 | 6,356 | 25,423 | 67,240 |
| Cumulative Ownership Real Dollars | 423 | 2,540 | (2,720) | (23) | 6,333 | 12,689 | 560,693 | 567,049 | 592,472 | 659,713 |
| PV Ownership Real Dollars | 423 | 1,979 | (4,599) | 2,206 | 4,860 | 4,545 | 366,426 | 3,974 | 14,865 | 36,765 |
| Cumulative PV Ownership Real Dollars | 423 | 2,402 | (2,197) | 9 | 4,869 | 9,413 | 375,839 | 379,813 | 394,678 | 431,443 |

| Resource | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | | | | | | | | |
| CHP (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Wyoming Coal (250 MW) | | | | | | | | | | |
| Regional Coal (300 MW) | 735,814 | | | | | | | | | |
| Industrial CT (170 MW) | | | 121,858 | | | | | | | |
| Regional IGCC Coal (300 MW) | | | | | 1,197,999 | | | | | |
| INL Nuclear (250 MW) | | | | | | | 999,272 | | | |
| Backbone Transmission | 158,156 | 272,737 | (3,288) | 22,261 | (111,944) | 8,767 | 5,106 | 132,465 | 133,566 | 0 |
| Real Dollars | 893,970 | 272,737 | 118,570 | 22,261 | 1,086,055 | 8,767 | 1,004,378 | 132,465 | 133,566 | 0 |
| Present Value | 457,081 | 130,401 | 53,012 | 9,307 | 424,610 | 3,205 | 343,375 | 42,349 | 39,930 | 0 |
| Cumulative MWs | 750 | 750 | 920 | 920 | 1,220 | 1,220 | 1,470 | 1,470 | 1,470 | 1,470 |
| Cumulative Real Dollars | 1,986,803 | 2,259,540 | 2,378,109 | 2,400,370 | 3,486,425 | 3,495,192 | 4,499,570 | 4,632,035 | 4,765,601 | 4,765,601 |
| Cumulative PV | 1,255,776 | 1,386,177 | 1,439,189 | 1,448,496 | 1,873,106 | 1,876,311 | 2,219,686 | 2,262,035 | 2,301,965 | 2,301,965 |
| PPA Real Dollars | 0 | 0 | 0 | 0 | 0 | 0 | 999,272 | 0 | 0 | 0 |
| Cumulative PPA Real Dollars | 433,120 | 433,120 | 433,120 | 433,120 | 433,120 | 433,120 | 1,432,392 | 1,432,392 | 1,432,392 | 1,432,392 |
| PV PPA Real Dollars | 0 | 0 | 0 | 0 | 0 | 0 | 341,630 | 0 | 0 | 0 |
| Cumulative PV PPA Real Dollars | 367,252 | 367,252 | 367,252 | 367,252 | 367,252 | 367,252 | 708,882 | 708,882 | 708,882 | 708,882 |
| Ownership Real Dollars | 893,970 | 272,737 | 118,570 | 22,261 | 1,086,055 | 8,767 | 5,106 | 132,465 | 133,566 | 0 |
| Cumulative Ownership Real Dollars | 1,553,683 | 1,826,420 | 1,944,989 | 1,967,250 | 3,053,305 | 3,062,072 | 3,067,178 | 3,199,643 | 3,333,210 | 3,333,210 |
| PV Ownership Real Dollars | 457,081 | 130,401 | 53,012 | 9,307 | 424,610 | 3,205 | 1,746 | 42,349 | 39,930 | 0 |
| Cumulative PV Ownership Real Dollars | 888,524 | 1,018,925 | 1,071,937 | 1,081,244 | 1,505,854 | 1,509,059 | 1,510,805 | 1,553,154 | 1,593,084 | 1,593,084 |

**Portfolio F4**
**Estimated Total Resource Investment (Including AFUDC)—By In-Service Year**
**In $000s**

| Resource | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | 177,691 | | | | | | | |
| Geothermal (50 MW) | | | | 202,502 | | | | | | |
| CHP (50 MW) | | | | 54,515 | | | | | | |
| McNary to IPC System (225 MW) | | | | | | | 100,313 | | | |
| Bridger to IPC Transmission (900 MW) | | | | | | | | | | |
| Wyoming Coal (250 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| Wind (100 MW) | | | | | | | | | | |
| Wind (100 MW) | | | | | | | | | | |
| Wind (100 MW) | | | | | | | | | | |
| Wind (100 MW) | | | | | | | | | | |
| INL Nuclear (250 MW) | | | | | | | | | | |
| Backbone Transmission | 10,515 | 25,953 | 34,251 | 21,994 | 61,781 | 257,419 | 246,485 | 8,225 | 13,893 | 46,723 |
| Real Dollars | 10,515 | 25,953 | 211,941 | 279,011 | 61,781 | 257,419 | 346,799 | 8,225 | 13,893 | 46,723 |
| Present Value | 10,515 | 24,269 | 185,332 | 228,151 | 47,242 | 184,067 | 231,889 | 5,143 | 8,123 | 25,547 |
| Cumulative MWs | 0 | 0 | 100 | 200 | 200 | 200 | 425 | 425 | 425 | 425 |
| Cumulative Real Dollars | 10,515 | 36,469 | 248,410 | 527,421 | 589,202 | 846,621 | 1,193,420 | 1,201,644 | 1,215,537 | 1,262,260 |
| Cumulative PV | 10,515 | 34,785 | 220,117 | 448,267 | 495,509 | 679,576 | 911,464 | 916,607 | 924,730 | 950,277 |
| PPA Real Dollars | 0 | 0 | 177,691 | 257,017 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative PPA Real Dollars | 0 | 0 | 177,691 | 434,708 | 434,708 | 434,708 | 434,708 | 434,708 | 434,708 | 434,708 |
| PV PPA Real Dollars | 0 | 0 | 155,381 | 210,166 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cumulative PV PPA Real Dollars | 0 | 0 | 155,381 | 365,547 | 365,547 | 365,547 | 365,547 | 365,547 | 365,547 | 365,547 |
| Ownership Real Dollars | 10,515 | 25,953 | 34,251 | 21,994 | 61,781 | 257,419 | 346,799 | 8,225 | 13,893 | 46,723 |
| Cumulative Ownership Real Dollars | 10,515 | 36,469 | 70,720 | 92,713 | 154,495 | 411,913 | 758,712 | 766,936 | 780,829 | 827,552 |
| PV Ownership Real Dollars | 10,515 | 24,269 | 29,951 | 17,984 | 47,242 | 184,067 | 231,889 | 5,143 | 8,123 | 25,547 |
| Cumulative PV Ownership Real Dollars | 10,515 | 34,785 | 64,735 | 82,720 | 129,962 | 314,028 | 545,917 | 551,059 | 559,183 | 584,729 |

| Resource | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wind (100 MW) | | | | | | | | | | |
| Geothermal (50 MW) | | | | | | | | | | |
| CHP (50 MW) | | | | | | | | | | |
| McNary to IPC System (225 MW) | | | | | | | | | | |
| Bridger to IPC Transmission (900 MW) | 1,144,931 | | | | | | | | | |
| Wyoming Coal (250 MW) | | 615,377 | | | | | | | | |
| Geothermal (50 MW) | | | 264,219 | | | | | | | |
| Geothermal (50 MW) | | | | 272,146 | | | | | | |
| Wind (100 MW) | | | | | 253,344 | | | | | |
| Wind (100 MW) | | | | | | 260,945 | | | | |
| Wind (100 MW) | | | | | | | 268,773 | | | |
| Wind (100 MW) | | | | | | | | 276,836 | | |
| INL Nuclear (250 MW) | | | | | | | | | 1,060,128 | |
| Backbone Transmission | 49,301 | 12,586 | 28,108 | 116,642 | 125,844 | 91,326 | 89,222 | (18,181) | (14,471) | 0 |
| Real Dollars | 1,194,233 | 627,963 | 292,327 | 388,788 | 379,188 | 352,271 | 357,995 | 258,655 | 1,045,657 | 0 |
| Present Value | 610,603 | 300,242 | 130,699 | 162,549 | 148,249 | 128,790 | 122,391 | 82,691 | 312,604 | 0 |
| Cumulative MWs | 1,325 | 1,575 | 1,625 | 1,675 | 1,775 | 1,875 | 1,975 | 2,075 | 2,325 | 2,325 |
| Cumulative Real Dollars | 2,456,493 | 3,084,456 | 3,376,783 | 3,765,571 | 4,144,759 | 4,497,029 | 4,855,024 | 5,113,679 | 6,159,336 | 6,159,336 |
| Cumulative PV | 1,560,880 | 1,861,121 | 1,991,821 | 2,154,369 | 2,302,619 | 2,431,408 | 2,553,799 | 2,636,490 | 2,949,095 | 2,949,095 |
| PPA Real Dollars | 0 | 0 | 264,219 | 272,146 | 253,344 | 260,945 | 268,773 | 276,836 | 1,060,128 | 0 |
| Cumulative PPA Real Dollars | 434,708 | 434,708 | 698,927 | 971,073 | 1,224,417 | 1,485,362 | 1,754,135 | 2,030,971 | 3,091,099 | 3,091,099 |
| PV PPA Real Dollars | 0 | 0 | 118,132 | 113,782 | 99,049 | 95,401 | 91,888 | 88,504 | 316,931 | 0 |
| Cumulative PV PPA Real Dollars | 365,547 | 365,547 | 483,680 | 597,461 | 696,510 | 791,911 | 883,799 | 972,303 | 1,289,233 | 1,289,233 |
| Ownership Real Dollars | 1,194,233 | 627,963 | 28,108 | 116,642 | 125,844 | 91,326 | 89,222 | (18,181) | (14,471) | 0 |
| Cumulative Ownership Real Dollars | 2,021,785 | 2,649,748 | 2,677,856 | 2,794,498 | 2,920,342 | 3,011,668 | 3,100,889 | 3,082,708 | 3,068,237 | 3,068,237 |
| PV Ownership Real Dollars | 610,603 | 300,242 | 12,567 | 48,767 | 49,200 | 33,389 | 30,503 | (5,813) | (4,326) | 0 |
| Cumulative PV Ownership Real Dollars | 1,195,332 | 1,495,574 | 1,508,141 | 1,556,908 | 1,606,108 | 1,639,497 | 1,670,000 | 1,664,187 | 1,659,861 | 1,659,861 |

## SUMMARY OF NORTHWEST UTILITY PLANNING CRITERIA

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|---|---|
| **Avista Corporation** | **Peak Load:** The maximum one-hour load obligation on the expected average coldest day in January.[5]<br><br>**Peak Resource Capability:** The maximum one-hour generation capability of company resources, plus the net contract contribution.[1]<br><br>**Planning Reserve:** Ten percent (10%) of the one-hour system peak load, plus 90 MW.[1]<br><br>**Confidence Interval:** Eighty percent (80%) confidence interval based on the monthly variability of load and hydroelectric generation. "This means that for each month there is only a 10% chance that the combination of load and hydro variability would exceed the planning criteria."[1] |
| **Bonneville Power Administration** | **Load and Resource Balances:** System firm energy loads are compared with Federal system energy resources for each month of Operating Year 2002–2007 (August 2001–July 2007) under 1937 water conditions. Firm capacity surpluses or deficits are determined in the same period under 1937 water conditions.[6]<br><br>**Energy:** Based on current generation capability under critical stream flow conditions. The critical period is defined as historical stream flows that occurred from September 1, 1936 through April 30, 1937.[2]<br><br>**Surplus Energy Analysis:** Defined as the amount of generation that can be produced in excess of firm loads under critical water conditions.[2]<br><br>**Regional Firm Monthly Peak Load Projections:** The peak loads are estimated based on normal weather conditions using a 50-percent probability that the forecasted peak load will be exceeded. Total Federal peaking capacity reduced by reserves for forced outages that are calculated as fifteen percent (15%) of large thermal project output plus five percent (5%) of the output of other resources.[7]<br><br>**Hydroelectric Energy Capability:** Uses OY 1937-water conditions (the 12-month period from August 1936 through July 1937) to estimate the firm hydro energy capability in low water conditions.[3]<br><br>**Hydroelectric Capacity:** The monthly instantaneous capacity of hydroelectric projects is defined as the full-gate-flow maximum generation available at each project, based on the average monthly elevation resulting from 1937-water reservoir levels. BPA assumes 1937-water levels to estimate the regional hydroelectric capacity because that year approximates a peaking capability that is consistent with the reliability criteria set forth in the PNCA.[3] |

[5] *2005 Integrated Resource Plan*, Avista Utilities, Chapter 2.

[6] *2002 Final Power Rate Proposal Loads and Resources Study*, Bonneville Power Administration, WP-02-FS-BPA-01, May 2000, Sections 2.3.3.2, 2.3.3.3, 2.3.3.4.

[7] *2002 Pacific Northwest Loads and Resources Study*, Bonneville Power Administration, December 2002, Section 2, Pages 4 and 38.

| | |
|---|---|
| **Idaho Power Company** | **Hydro Conditions:** 70th percentile hydro conditions based upon historical data from 1928–2003.[8]<br>**Load Forecast:** Based upon 50th percentile weather conditions.[4]<br>**Monthly Average Energy:** Based on 70th percentile water and 70th percentile average load conditions.[4]<br>**Capacity:** Based on monthly peak-hour Northwest transmission deficit assuming 90th percentile water, 70th percentile average load and 95th percentile peak-hour load conditions.[4] |
| **Northwest Power and Conservation Council** | **Utilizes a fully probabilistic model:** Prospective plans are tested against 20 years of future conditions defined by probabilistic simulations of principal uncertainties including hydro conditions, loads, fuel prices, $CO_2$ control requirements, import and export markets and resource availability. Each case is compared to the previous and ranked according to risk and cost.[9] |
| **PacifiCorp** | **Hydro Conditions:** Median water conditions.[10]<br>**Loads:** Average energy requirements based upon normal weather conditions.[6]<br>**Capacity:** Normal weather peak-hour loading plus a 15% planning margin.[6] |
| **Portland General Electric Company** | **Hydro Conditions:** Normal/median water conditions based upon 59 years of hydro history.[11]<br>**Loads:** Normal/Median load conditions.[7]<br>**Capacity:** Normal weather peak-hour loading plus 12% (6% operating margin, 6% planning margin). Then subtract 500 MW (to be filled in with short-term market purchases).[7] |
| **Puget Sound Energy** | PSE uses the expected peak load for long-term capacity planning. The expected peak load is the maximum hourly load expected to occur when the hourly temperature during the winter months (November–February) is 23 degrees at SeaTac Airport.[12]<br>PSE uses an hourly regression equation to obtain monthly peak load forecasts. The equation provides both normal and extreme peak loads for residential and non-residential customers. The regression equation is based on data collected from January 1991 through February 2004.[8]<br>**Design Temperatures:** 23° F for normal peak and 13° F for extreme peak, both occurring in January.[8] |

[8] *2006 Integrated Resource Plan*, Idaho Power Company, September 2006.

[9] *The Fifth Northwest Electric Power and Conservation Plan*, Northwest Power and Conservation Council, 2005.

[10] *2006 Integrated Resource Plan*, PacifiCorp, due to be filed in December 2006.

[11] *Final Action Plan, 2002 IRP*, Portland General Electric, March 2004, Appendix 2.

[12] *Least Cost Plan*, Puget Sound Energy, April 2005, Appendix K.

# Idaho Power Company
# 2006 Integrated Resource Plan Advisory Council Members

## Customer Participants

Micron – Dale Eldridge
Simplot – David Hawk
INL – Tom Moriarty
Heinz Frozen Foods – Steve Munn
AARP – Joe Gallegos
Idaho Retailers – Pam Eaton
Agricultural Representative – Sid Erwin
Meridian Joint School District #2 – Wayne Hanners

## Commission Participants

Idaho PUC – Rick Sterling
Oregon PUC – Bill McNamee

## Environmental Participants

Natural Resource Defense Council – Devra Wang, Audrey Chang or Ralph Cavanagh
Advocates for the West – Bill Eddie

## Other Participants

IDEQ – Larry Koenig
Governor's Office – Jim Yost
Idaho State Legislature – Representative Steve Smylie
Northwest Power and Conservation Council – Jim Kempton or Shirley Lindstrom
Consultant – Dan Violette – Summit Blue Consulting, LLC