



**Transmission Services**

**2012 ATC Planning Base Case Assumptions**

This document provides the list of assumptions used to develop the base case for calculating ATC on BPA's internal paths. Base cases are from BPA cases developed for calendar year 2010 representing a 2012 system. Assumptions are broken into four (4) categories: Load, Infrastructure Projects, Interties, and Generation.

Assumptions were applied to four (4) seasonal studies as follows. Seasons definitions are based on load and generation patterns observed during those times of the year. The month in parentheses is the worst case month for each season from an overall system standpoint.

- winter (January 2012) - November through February,
- spring (May 2012) - March through May,
- early summer (June 2012) - June,
- late summer/fall (August 2012) - July through October

| <b>Loads</b>                                    |           |
|---|-----------|
| <u>DSI</u>                                      | <u>MW</u> |
| Intalco   | 438       |
| Longview  | 0         |
| Vanalco   | 0         |
| Troutdale                                       | 0         |
| Harvalum/Harvey                                 | 0/0       |
| Bell  | 0         |
| Conkelly  | 78        |
| -----   |           |
| Federal/Non-Federal 1 in 2 probability forecast |           |

| <b>Infrastructure Projects</b>                                       |
|--|
| <u>Project</u>   |
| Update includes the addition of the McNary - John Day #2 500 kv line |
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| <b>Interties</b>     |               |               |                  |                 |  |
|----------------------|---------------|---------------|------------------|-----------------|--|
| <u>Location</u>      | <u>Winter</u> | <u>Spring</u> | <u>Early Sum</u> | <u>Late Sum</u> | <u>Notes</u>                                 |
| Northern Intertie    | -1040         | 1100          | 1115             | 1125            | N-S BPA 973 + <b>PSE 150</b> . June BPA 999. |
|                      | -1327         | -1288         | -1272            | -1295           | Entitlement Return (Exports to Canada)       |
| Montana to Northwest | 1125          | 915           | 940              | 950             |  |
| Idaho to Northwest   | -690          | -460          | -480             | -495            |  |
| COI                  | 2000          | 4800          | 4800             | 4800            |  |
| PDCI                 | 220           | 1340          | 1340             | 1284            |  |

Key for intertie assumptions: 1. Positive flow either North to South or East to West.



## Transmission Services 2012 Planning Base Case Assumptions

| Project                                     | Generation |        |        |       |            |        |        |     | Notes   |
|---|------------|--------|--------|-------|------------|--------|--------|-----|---|
|   | Obligation |        |        |       | Capability |        |        |     |   |
|   | Winter     | Spring | Summer |       | Winter     | Spring | Summer |     |   |
|   |            | Early  | Late   | Early | Late       | Early  | Late   |     |   |
| <b>Major Federal Generation -- "Big 15"</b> |            |        |        |       |            |        |        |     |   |
| Albeni Falls                                | 24         | 29     | 20     | 36    |            |        |        |     |   |
| Bonneville                                  | 811        | 651    | 610    | 525   |            |        |        |     |   |
| Chief Joseph                                | 1,964      | 1,681  | 1,567  | 2,005 |            |        |        |     |   |
| Dworshak                                    | 453        | 449    | 455    | 453   |            |        |        |     |   |
| Grand Coulee                                | 4,794      | 4,084  | 4,024  | 4,850 |            |        |        |     |   |
| Hungry Horse                                | 214        | 150    | 309    | 252   |            |        |        |     |   |
| Ice Harbor                                  | 360        | 350    | 307    | 167   |            |        |        |     |   |
| John Day                                    | 1,513      | 1,395  | 1,284  | 1,156 |            |        |        |     |   |
| Libby                                       | 484        | 422    | 599    | 545   |            |        |        |     |   |
| Little Goose                                | 401        | 487    | 405    | 295   |            |        |        |     |   |
| Lower Granite                               | 401        | 441    | 405    | 266   |            |        |        |     |   |
| Lower Monumental                            | 435        | 512    | 467    | 274   |            |        |        |     |   |
| McNary                                      | 988        | 781    | 732    | 729   |            |        |        |     |   |
| The Dalles                                  | 1,036      | 820    | 755    | 663   |            |        |        |     |   |
| Columbia Generating Station                 | 1,184      | 1,184  | 1,184  | 1,184 |            |        |        |     | Includes 54 MW station service load                                 |
| <b>Major Thermal Generation</b>             |            |        |        |       |            |        |        |     |   |
| Centralia                                   | 1113       | 1113   | 1113   | 1113  |            |        |        |     | 753MW (BPA) + 280MW (PSE) + 80 MW for station service               |
| Big Hanaford                                | 0          | 0      | 0      | 0     |            |        |        |     | No Long Term Firm transmission service associated with this project |
| Chehalis                                    |            |        |        |       | 520        | 520    | 520    | 520 |   |
| Boardman                                    | 578        |        |        |       |            | 540    | 540    | 540 |   |
| Coyote 1 & 2                                | 522        |        |        |       |            | 500    | 500    | 500 |   |
| Frederickson                                | 150        | 150    | 150    | 150   |            |        |        |     |   |
| Hermiston Generating Project                | 490        | 490    | 490    | 490   |            |        |        |     |   |
| Hermiston Power Partners                    | 536        | 536    | 536    | 536   |            |        |        |     |   |
| Klamath                                     |            |        |        |       | 485        | 485    | 485    | 485 | Assumed federal obligation 280. PAC rights not known                |
| Goldendale Energy Project                   | 277        | 277    | 277    | 277   |            |        |        |     |   |
| Lancaster                                   | 250        | 250    | 250    | 250   |            |        |        |     |   |
| Mint Farm                                   | 293        | 293    | 293    | 293   |            |        |        |     |   |
| Satsop/Grays Harbor                         | 0          | 0      | 0      | 0     |            |        |        |     |   |
| Port Westward                               | 430        | 388    | 388    | 388   |            |        |        |     |   |
| Beaver                                      | 531        |        |        |       |            | 520    | 520    | 465 |   |
| BP Cherry Point                             | 200        | 200    | 200    | 200   |            |        |        |     |   |



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| Project                         | Generation |        |            |        |            |        |        |        | Notes |        |  |
|---------------------------------|------------|--------|------------|--------|------------|--------|--------|--------|-------|--------|--|
|                                 | Obligation |        | Capability |        | Historical |        |        |        |       |        |  |
|                                 | Winter     | Spring | Summer     | Winter | Spring     | Summer | Winter | Spring |       | Summer |  |
|                                 | Early      | Late   | Early      | Late   | Early      | Late   | Early  | Late   |       |        |  |
| <b>Major Utility Generation</b> |            |        |            |        |            |        |        |        |       |        |  |
| PSE In-system                   |            |        |            |        |            |        | 1612   | 1374   | 1374  | 1374   | Non-federal rights unknown. Numbers agreed to plan the system. |
| Seattle City Light -- Skagit    |            |        |            |        |            |        | 500    | 378    | 378   | 378    | Non-federal rights unknown. Numbers agreed to plan the system. |
| Seattle City Light -- Boundary  |            | 1035   | 1035       |        |            |        | 850    |        |       | 650    |  |
| Snohomish PUD                   |            |        |            |        |            |        | 115    | 115    | 115   | 115    | Non-federal rights unknown. Numbers agreed to plan the system. |
| <b>Mid-Columbia Generation</b>  |            |        |            |        |            |        |        |        |       |        |  |
| Wells                           |            |        |            |        |            |        | 780    | 760    | 760   | 760    | 90% of historical  |
| Rocky Reach                     |            |        |            |        |            |        | 1040   | 1060   | 1060  | 1060   | 90% of historical  |
| Rock Island                     |            |        |            |        |            |        | 460    | 440    | 440   | 440    | 90% of historical  |
| Wanapum                         |            |        |            |        |            |        | 870    | 840    | 840   | 840    | 90% of historical  |
| Priest Rapids                   |            |        |            |        |            |        | 860    | 690    | 690   | 690    | 90% of historical  |
| <b>I-5 Corridor Generation</b>  |            |        |            |        |            |        |        |        |       |        |  |
| Mayfield                        |            |        |            |        |            |        | 140    | 120    | 140   | 60     |  |
| Mossy Rock                      |            |        |            |        |            |        | 340    | 340    | 340   | 250    |  |
| River Road                      |            |        |            |        |            | 235    | 240    | 0      | 240   |        |  |
| Swift                           |            | 299    |            |        |            |        | 210    |        | 210   | 210    |  |
| Merwin                          |            |        |            |        |            |        | 135    | 75     | 75    | 30     |  |
| Yale                            |            |        |            |        |            |        | 100    | 100    | 100   | 100    |  |
| <b>Western Montana</b>          |            |        |            |        |            |        |        |        |       |        |  |
| Cab Gorge                       |            |        |            |        |            |        | 228    | 230    | 230   | 230    | Non-federal rights unknown. Numbers agreed to plan the system. |
| Noxon                           |            |        |            |        |            |        | 520    | 520    | 520   | 520    | Non-federal rights unknown. Numbers agreed to plan the system. |
| Box Canyon                      |            |        |            |        |            |        | 58     | 56     | 56    | 56     | Non-federal rights unknown. Numbers agreed to plan the system. |
| Rathdrum AVA                    |            |        |            | 182    | 136        | 136    | 136    |        |       |        | Non-federal rights unknown. Numbers agreed to plan the system. |



## Transmission Services 2012 Planning Base Case Assumptions

| Project                    | Generation |        |        |     |            |        |        |     |            |        | Notes |                            |
|----------------------------|------------|--------|--------|-----|------------|--------|--------|-----|------------|--------|-------|----------------------------|
|                            | Obligation |        |        |     | Capability |        |        |     | Historical |        |       |                            |
|                            | Winter     | Spring | Summer |     | Winter     | Spring | Summer |     | Winter     | Spring |       | Summer                     |
|                            |            | Early  | Late   |     |            | Early  | Late   |     | Early      | Late   |       |                            |
| <b>Wind Generation</b>     |            |        |        |     |            |        |        |     |            |        |       |                            |
| Big Eddy DeMoss            | 106        | 106    | 106    | 106 |            |        |        |     |            |        |       | 80% of contract obligation |
| Big Horn Spring Creek Gen  | 160        | 160    | 160    | 160 |            |        |        |     |            |        |       | 80% of contract obligation |
| Combine Hills (BPA)        | 50         | 50     | 50     | 50  |            |        |        |     |            |        |       | 80% of contract obligation |
| Combine Hills (PacifiCorp) |            |        |        |     |            |        |        | 33  | 33         | 33     | 33    | 80% of plant capability    |
| Marengo (PacifiCorp)       |            |        |        |     |            |        |        | 112 | 112        | 112    | 112   | 80% of plant capability    |
| Hopkins Ridge              | 120        | 120    | 120    | 120 |            |        |        |     |            |        |       | 80% of contract obligation |
| Jones Canyon               | 280        | 280    | 280    | 280 |            |        |        |     |            |        |       | 80% of contract obligation |
| Klondike Schoolhouse       | 309        | 309    | 309    | 309 |            |        |        |     |            |        |       | 80% of contract obligation |
| Nine Canyon                | 68         | 68     | 68     | 68  |            |        |        |     |            |        |       | 80% of contract obligation |
| Biglow Canyon              | 360        | 360    | 360    | 360 |            |        |        |     |            |        |       | 80% of contract obligation |
| PSE Wild Horse             | 184        | 184    | 184    | 184 |            |        |        |     |            |        |       | 80% of contract obligation |
| Rock Creek                 | 464        | 505    | 505    | 505 |            |        |        |     |            |        |       | 80% of contract obligation |
| Shepherd's Flat            | 660        | 660    | 660    | 660 |            |        |        |     |            |        |       | 80% of contract obligation |
| Stateline (PAC)            |            |        |        |     |            |        |        | 168 | 168        | 168    | 168   | 80% of plant capability    |
| Stateline (BPA)            | 92         | 92     | 92     | 92  |            |        |        |     |            |        |       | 80% of contract obligation |

**Key for generation assumptions:**

1. Numbers are in Megawatts (MW)
  2. Assumed Obligation - the total contracted demand
  3. Maximum Capability - maximum transmission amount
  4. Historical - numbers based on historical levels
  5. Allocations based on both H/K and Modified 90% methodologies for federal NT.
  6. Methodology used for generation assumptions:
    - a) for thermal projects if obligation < capability use obligation, otherwise use capability.
    - b) for hydro projects if obligation < historical use obligation, otherwise use historical.
  7. Willamette Valley generation modeled at same levels as reflected in the original ATC methodology.
  8. ATC Basecases remove Non-Firm network flows.
- The Canadian Entitlement return is assessed in two ways: Option 1 with CER modeled and Option 2 with CER removed. Lowest ATC from the two options across is each flowgate is considered for LT transmission sales.