

These spreadsheets contain the estimated output of each of the “Big Ten” projects in the federal system serving NT load. The sums for each project are then added to the PTP demands at each project to give the *total demand for each project*. The method used to extrapolate this data is outlined in the following formula; per discussion between Richard Haines and John Anasis on 3-8-02 (refined on 4-5-02):

Best route to getting an accurate picture of how much federal hydro generation is being put to use to serve load for specific cut-planes. . .

- $(1130 \text{ MW} - \text{PTP demands for WNP-2}) = \text{WNP-2 capacity reserved for NT demands} = \mathbf{Z}$   
(1130 MW used here because this is WNP-2’s output.)
- $((\text{total demand for NT contracts} - \text{any non-federal resources}) - \mathbf{Z}) = \text{NT demands on Federal hydro system} = \mathbf{y}$
- $\frac{\text{project h/k} * (\mathbf{y} - 375)}{\text{total h/k}} = \text{Projected Project Output for NT demands excluding Dworshak} = \mathbf{X}_p$   
*(375 MW excluded for Dworshak because 25 MW is contracted for non-federal NT demand and this plant’s output is roughly 400 MW.)*
- load for specific federal-NT customer =  $\mathbf{W}_c$
- load for specific non-NT or non-federal-NT customer =  $\mathbf{W}_d$
- $\frac{\mathbf{W}_c * \mathbf{y}}{\mathbf{y} + \mathbf{Z}} = \mathbf{W}_{c\text{-hydro}} = \text{portion of NT-customer load served by federal hydro system}$
- $\frac{\mathbf{W}_{c\text{-hydro}} * \mathbf{X}_p}{\mathbf{X}_{p1} + \mathbf{X}_{p2} + \dots + \mathbf{X}_{p11}} = \mathbf{W}_{c\text{-hydro-p}} = \text{NT-customer load served by project } (x_p)$   
*(Except in the case of Dworshak, where  $\mathbf{W}_{c\text{-hydro-p}} = 375 \text{ MW}$ )*
- $\text{SUM} (\mathbf{W}_{c\text{-hydro-p}} + \text{PTP demand served by project}) = \text{total project output}$
- $\text{SUM} ((\mathbf{W}_{c\text{-hydro-p}} * \text{PUF}) + (\mathbf{W}_d * \text{PUF})^{**}) = \text{total project output impacting path} = \mathbf{A}$
- $\mathbf{A} + (\text{any customer load not served by FCRTS that crosses the path} * \text{PUF}) = \text{TOTAL OBLIGATIONS FOR PATH}$
- **Path rating – TOTAL OBLIGATIONS = ATC for PATH**

|          |                  |     |                           |
|----------|------------------|-----|---------------------------|
| project  |                  |     |                           |
| h/k for: | Bonneville       | 4.3 |                           |
|          | John Day         | 7.6 |                           |
|          | The Dalles       | 6.2 |                           |
|          | McNary           | 5.2 |                           |
|          | Ice Harbor       | 6.7 |                           |
|          | Lower Monumental | 7   |                           |
|          | Lower Granite    | 7   |                           |
|          | Little Goose     | 7   |                           |
|          | Dworshak         | 33  | excluded due to large h/k |
|          | Grand Coulee     | 25  |                           |
|          | Chief Joseph     | 12  |                           |

Sum of all of these equals total h/k = 121.0 – 33 = 88.0

\*\* Negative PUF values were not included in this portion of the impact on the path except in special cases of load-serving non-NT contracts as noted in Assumptions document.