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March 14, 2006

MEMORANDUM

TO: Council Members

FROM: John Fazio

SUBJECT: Power Supply Outlook for 2006

The current January-through-July runoff volume forecast at The Dalles is 107 million acre-feet, which exactly matches the Northwest River Forecast Center's average. Currently, the region has an annual energy surplus of about 2,400 average megawatts (based on critical water conditions and including regional IPP¹ generation). Using the expected hydroelectric generation for 2006, the monthly resource surplus ranges from a low of just over 2,000 average megawatts in April to a high of over 8,000 average megawatts in July. But, even under the worst expected water condition for this year, the region continues to have an adequate supply.

Implementing the court-ordered bypass spill this year will reduce the expected hydroelectric generation and consequently reduce the expected resource surplus. However, the adequacy of the power supply will not be affected. Energy losses due to the additional spill hover around 200 average megawatts for spring. The expected losses are about 700 and 500 average megawatts for July and August, respectively. The expected loss of revenue is \$60 million with the bulk of the cost in July and August.

River flows at both Lower Granite and McNary are projected to be close to their 50-year averages for the spring and summer periods. At Lower Granite, there is a good chance of meeting the biological opinion flow target of 50,000 cubic feet per second in July. However, it does not appear that the target will be met in August. At McNary, the target flow of 200,000 cubic feet per second is expected to be met in July and there is a fair expectation that it will be met in August.

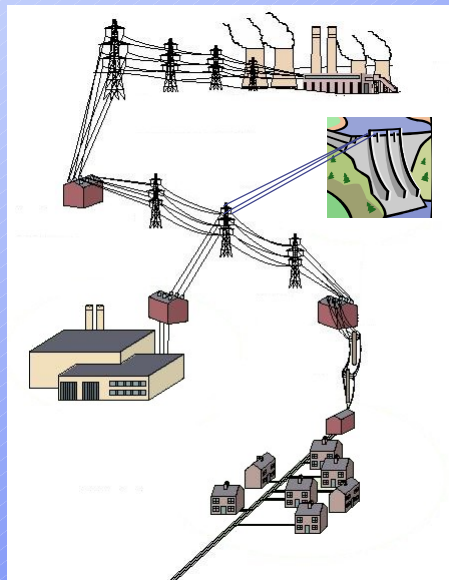
More detail is provided in the attached presentation.

c:\ww\2006\31406 council power outlook final.doc (John Fazio)

¹ IPP generation comes from resources owned by independent power producers, most of which is uncontracted.

Northwest Power Supply Outlook 2006

March 14, 2006
Council Meeting
Portland, Oregon



Outline



2006 Runoff Forecast



Hydro Generation and L/R Balance



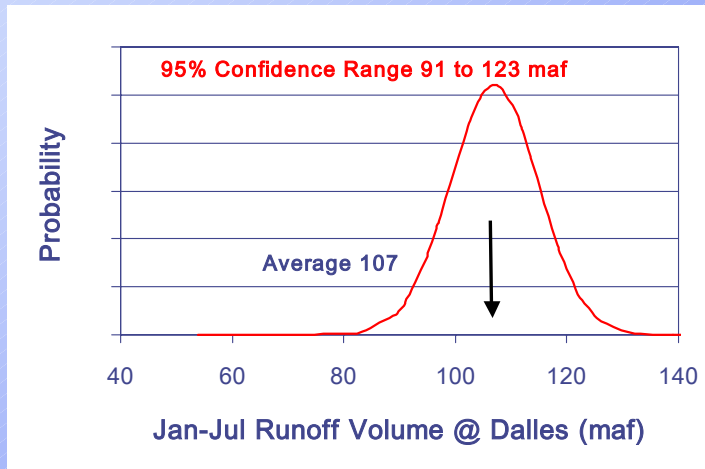
Range of River Flows



Cost of Court-ordered Bypass Spill



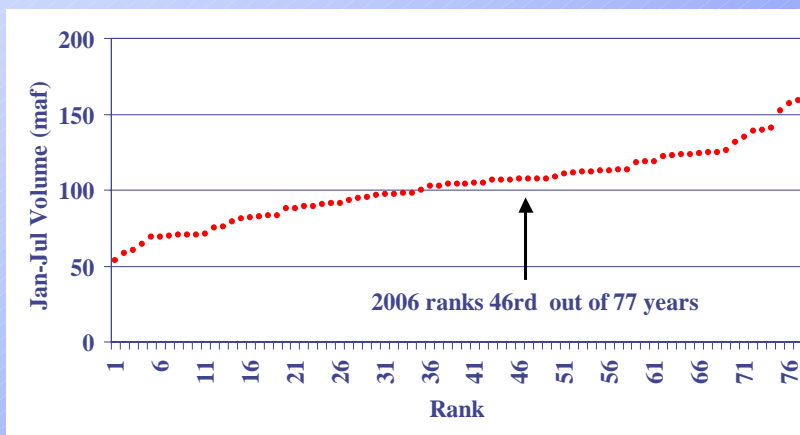
2006 Runoff Forecast Distribution March Forecast **107** maf (100% of Avg)



Runoff Forecast 3



Historical Runoff Volumes 1929-2005



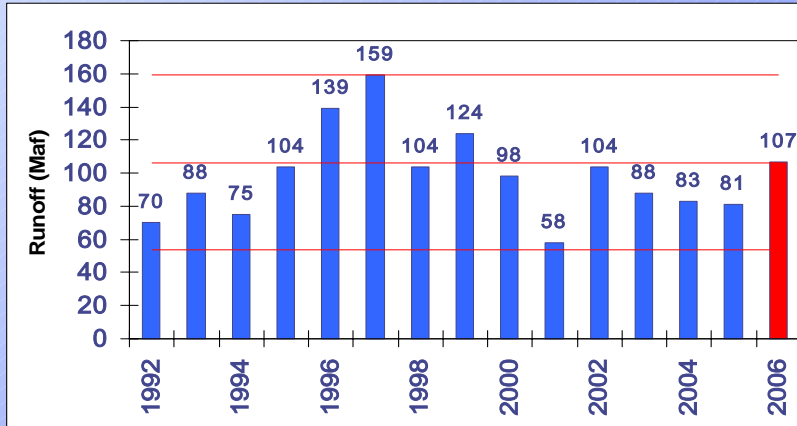
Runoff Forecast 4





Recent Runoff Volumes

(January-July Volume at The Dalles)

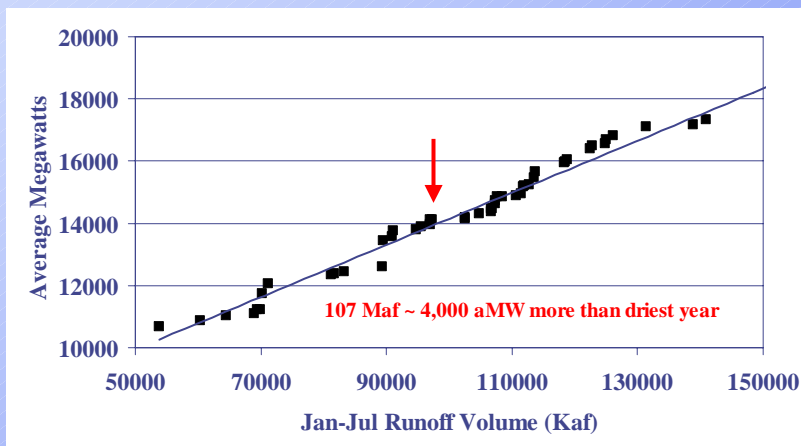


Runoff Forecast 5



Annual Hydro Generation

(Regulated Projects Only, 1929-78 Historical Conditions)



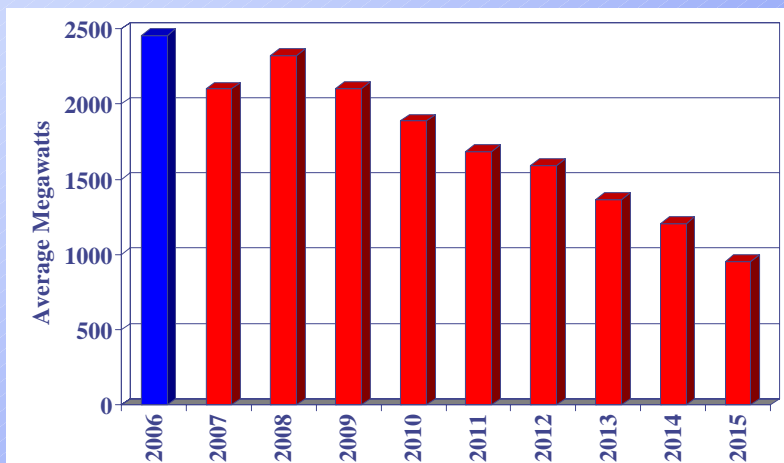
Hydro Generation 6





Forecast Load/Resource Balance

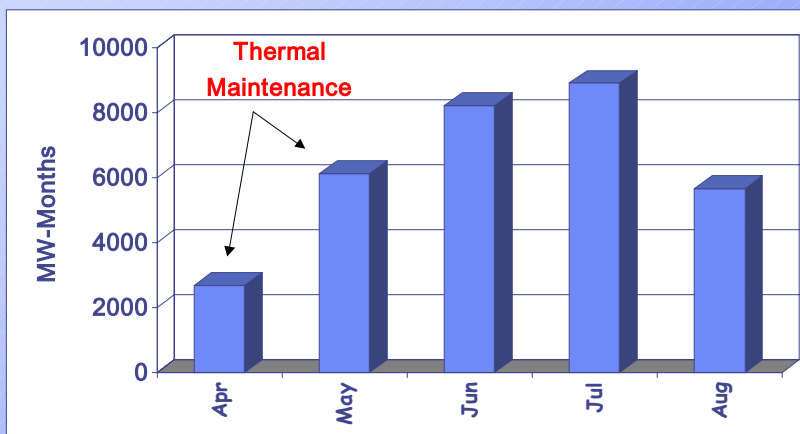
Critical Water, Medium Load Forecast, Existing Resources Only
Firm contracts only, no spot market imports assumed



Load/Resource Balance 7



Approximate Monthly L/R Balance 2006 (Using Expected Hydro Generation for 2006)



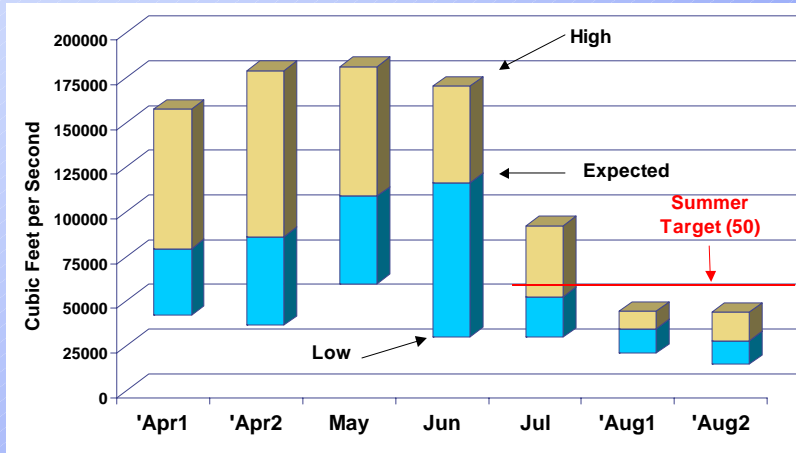
IPP generation is included in the surplus.

Load/Resource Balance 8





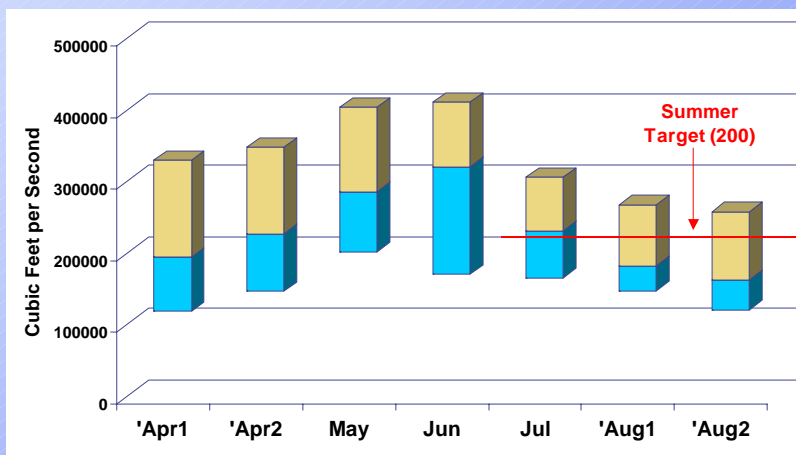
Projected Flow Range @Lower Granite (Based on Simulated Operations)



River Flows 9



Projected Flow Range @McNary (Based on Simulated Operations)

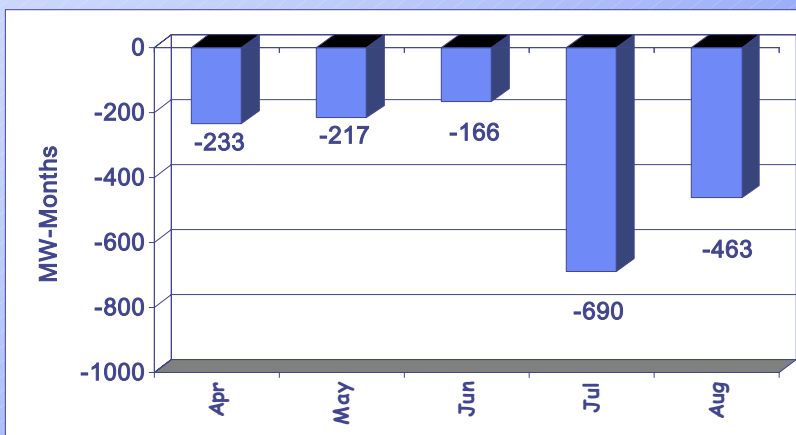


River Flows 10





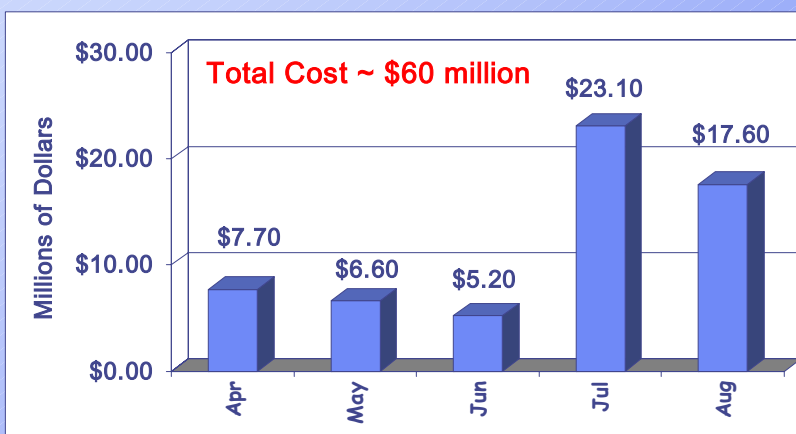
Expected Energy Loss in 2006 (Under the Court-ordered Spill Operation)



Court-ordered Spill 11



Expected Cost of Court-ordered Spill



Court-ordered Spill 12

