FPP Change Form

Change Request Number: 11OVE001_Addition of Project's Minimum Generation
Date: April 19, 2010

Proposed by: Laura Hamilton – NWD RCC– Water Quality
(FPP Change form, adds the minimum generation ranges for the Lower Columbia Projects (BON – MCN)

Proposed Change (underlined):

1.5. Minimum Generation Ranges.
During low flows, there may not be enough river flow to meet this generation requirement flow and required minimum spill. Under these circumstances the power generation requirement flow will take precedence over the minimum spill requirement. The Corps has identified minimum generation flow values derived from actual generation records when turbines were operating within ±1% of best efficiency (Table 1). Values stated in Table 1 are approximations and do not account for varying head or other small adjustments in turbine unit operation that may result in variations from the reported minimum generation flow and spill amount. Minimum generation flow ranges at McNary, John Day, and The Dalles are 50-60 kcfs; and 30-40 kcfs at Bonneville as shown in Table 1.

Table 1.— Minimum generation ranges for turbine units at the four lower Snake and four lower Columbia River dams.

Minimum Generation Table

Project	Units	Minimum Generation Requirement flows kcfs *
Lower Granite	units 1-3	11.3 - 13.1
	units 4 - 6	13.5 - 14.5
Little Goose	units 1-3	11.3 - 13.1
	units 4 - 6	13.5 - 14.5
Lower Monumental	unit 1	16.5 - 19.5
	units 2-3	11.3 - 13.1
	units 4 - 6	13.5 - 14.5
Ice Harbor	units 1 & 3	8.5 - 10.3
	units 2	11.3 - 13.1
	units 4 - 6	8.5 - 10.3
McNary	N/A	50 - 60
John Day	N/A	50 - 60
The Dalles	N/A	50 - 60
Bonneville	N/A	30 - 40

*these minimum generation flows are based on actual data from the projects. Throughout the FPP there are 1% efficiency range tables for all the projects identified above that provide the theoretical operational ranges. The theoretical tables and the actual tables are slightly different because of operational variables such as head, .

Reason for Change:
Currently, there is no minimum generation ranges provided in the Bonneville, The Dalles; John Day and McNary individual sections like we do with the lower Snake River projects. We need to make sure that the minimum generation ranges in the FOP are the same as the FPP individual sections.

Comments from others:
Ice Harbor Unit 2 has blades welded in 2008, therefore the minimum generation requirement flow changed.

NOAA Fisheries- *This table is unnecessary and could lead* to confusion. The lower turbine operating limits are provided in the turbine operating tables in each project section of the FPP. These tables are not theoretical but are actual measured limits based on index testing at each project. Also, any reference to a lower minimum generation limit should reference the BiOp if that minimum is different than was stated in that document. We suggest adding a paragraph to explain the way the units are operated but dump the table which is at best redundant to other parts of the FPP and at worst, incorrect since the actual flow depends on the project head.

Record of Final Action: withdrawn