

# **Fiscal Year 2017 Packwood Lake Hydroelectric Project Annual Operating Budget**



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### Summary

The Packwood Lake Hydroelectric Project (Packwood), the first electrical generating project undertaken by Energy Northwest, began commercial operation in June 1964. Occupying 660 acres of the Gifford Pinchot National Forest in south central Washington, Packwood consists of a dam at Packwood Lake; a five mile long system of pipeline, tunnels and Penstock; and a 27,500 kilowatt-rated, underground powerhouse located 1,800 feet below the lake elevation. The reservoir is fed by Upper Lake Creek and several small tributaries that rely exclusively on direct rainfall and snow melt for their water supply.

The total net Fiscal Year 2017 program and capital cost combined is estimated to be \$3,059,000 (Table 1), with associated net funding requirements of \$2,958,000 (Table 5). The difference between total program cost and net funding requirements is due to depreciation (Table 4).

**Key Assumptions/Qualifications**

- The Project budget has been reviewed and approved by the participants.
- Generation is estimated at 96,781 MWh, which reflects 5-year average of the plant output and further reduced by approximately 10% due to impacts of actions required under the new operating license.
- The Fiscal Year 2017 Budget includes costs for mitigation activities required under the new operating license which is expected to become effective during the year.

**Table 1**  
**Summary of Operating and Capital Costs**  
(Dollars in Thousands)

<u>Description</u>	<u>FY 2017 Budget</u>	<u>Original FY 2016 Budget</u>	<u>Variance</u>
<u>Operating Costs</u>			
Operating & Support Services	\$ 2,226	\$ 2,401	\$ (175)
Generation Taxes	24	24	-
Depreciation	101	99	2
Subtotal Operating Costs	<u>\$ 2,351</u>	<u>\$ 2,524</u>	<u>\$ (173)</u>
Interest/Financing (Net)	(1)	1	(2)
<b>Total Cost</b>	<u><b>\$ 2,350</b></u>	<u><b>\$ 2,525</b></u>	<u><b>\$ (175)</b></u>
<b>Total Net Generation (MWh)</b>	<u><b>96,781</b></u>	<u><b>108,783</b></u>	<u><b>(12,002)</b></u>
<b>Cost of Power (\$/MWh) (1)</b>	<u><b>\$ 24.28</b></u>	<u><b>\$ 23.21</b></u>	<u><b>\$ 1.07</b></u>
<b>Total Capital Cost</b>	<u><b>\$ 709</b></u>	<u><b>\$ 208</b></u>	<u><b>\$ 501</b></u>
<b>Total Operating and Capital Cost</b>	<u><b>\$ 3,059</b></u>	<u><b>\$ 2,733</b></u>	<u><b>\$ 326</b></u>

(1) Cost of Power includes Operating & Support Services, Generation Taxes, Depreciation, and Net Interest/Financing costs.

**Table 2**  
**Summary of Revenues**  
 (Dollars in Thousands)

<u>Description</u>	<u>FY 2017</u> <u>Budget</u>	<u>Original</u> <u>FY 2016</u> <u>Budget</u>	<u>Variance</u>
<u>Revenues</u>			
Participant Billings	\$ 2,600	\$ 2,500	\$ 100

**Variance - ( ) Unfavorable**

**Table 3**  
**Summary of Full Time Equivalent Positions \***

<u>Description</u>	<u>FY 2017</u> <u>Budget</u>	<u>FY 2016</u> <u>Budget</u>	<u>Variance</u>
Operations & Maintenance	4	3	1

\* Includes Allocations of Corporate Full Time Equivalent Positions

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**Table 4**  
**Cost-to-Cash Reconciliation**  
(Dollars in Thousands)

<b>Description</b>	<b>FY 2017 Total Cost</b>	<b>Non-Cash Items</b>	<b>Non-Cost Items</b>	<b>Deferred Cash Requirements</b>	<b>Prior Year Commitments</b>	<b>FY 2017 Total Cash</b>
Operating						
O&M and Support Services	\$ 2,226	\$ -	\$ -	\$ -	\$ -	\$ 2,226
Generation Taxes	24	-	-	-	-	24
Depreciation	101	(101)	-	-	-	-
Subtotal Operating	\$ 2,351	\$ (101)	\$ -	\$ -	\$ -	\$ 2,250
Interest/Financing						
Interest Income	\$ (6)	\$ -	\$ -	\$ -	\$ -	\$ (6)
Treasury Services	5	-	-	-	-	5
Subtotal Net Interest/Financing	\$ (1)	\$ -	\$ -	\$ -	\$ -	\$ (1)
Capital	\$ 709	\$ -	\$ -	\$ -	\$ -	\$ 709
Total Disbursements	\$ 3,059	\$ (101)	\$ -	\$ -	\$ -	\$ 2,958
Funding Sources						
Participants Billings	\$ 2,600	\$ -	\$ -	\$ -	\$ -	\$ 2,600
Beginning Packwood Funds	-	-	1,536	-	-	1,536
Total Funding Sources	\$ 2,600	\$ -	\$ 1,536	\$ -	\$ -	\$ 4,136
Ending Working Capital	\$ (459)	\$ (101)	\$ 1,536	\$ -	\$ -	\$ 1,178



**Table 5**  
**Statement of Funding Requirements**  
(Dollars in Thousands)

<u>Description</u>	<u>FY 2017 Budget</u>	<u>Original FY 2016 Budget</u>	<u>Variance</u>
<b>Beginning Packwood Funds Balance</b>	<b>\$ 1,536</b>	<b>\$ 1,581</b>	<b>\$ (45)</b>
<b><u>Funding Requirements</u></b>			
<u>Operating</u>			
Operating & Support Services	\$ 2,226	\$ 2,401	\$ (175)
Generation Taxes	24	24	-
<b>Subtotal Operating</b>	<b>\$ 2,250</b>	<b>\$ 2,425</b>	<b>\$ (175)</b>
<u>Interest/Financing</u>			
Interest Income	\$ (6)	\$ (4)	\$ (2)
Treasury Services	5	5	-
<b>Subtotal Net Interest/Financing</b>	<b>\$ (1)</b>	<b>\$ 1</b>	<b>\$ (2)</b>
Capital	\$ 709	\$ 208	\$ 501
<b>Total Funding Requirements</b>	<b>\$ 2,958</b>	<b>\$ 2,634</b>	<b>\$ 324</b>
<b><u>Funding Sources</u></b>			
Participants Billings	2,600	2,500	100
<b>Total Funding Sources</b>	<b>\$ 2,600</b>	<b>\$ 2,500</b>	<b>\$ 100</b>
<b>Ending Packwood Funds Balance</b>	<b>\$ 1,178</b>	<b>\$ 1,447</b>	<b>\$ (269)</b>

**Table 6**  
**Monthly Statement of Funding Requirements**  
(Dollars in Thousands)

Description	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FY 2017 Total
<b>Beginning Balance</b>	\$ 1,536	\$ 1,568	\$ 1,598	\$ 1,631	\$ 1,312	\$ 1,344	\$ 1,375	\$ 1,406	\$ 1,077	\$ 1,110	\$ 1,140	\$ 1,147	\$ 1,536
Receipts													
Participants Billings	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 2,600
<b>Total Receipts</b>	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 217	\$ 2,600
Disbursements													
Operations Disbursements													
O&M and Support Services	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 2,226
Generation Taxes	-	-	-	-	-	-	-	-	-	-	24	-	24
<b>Subtotal Operations</b>	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 186	\$ 210	\$ 186	\$ 2,250
Interest/Financing													
Investment Income	(1)	-	(1)	-	(1)	(1)	-	-	(1)	-	-	(1)	(6)
Treasury Services	-	1	-	-	-	1	-	1	-	1	-	1	5
<b>Subtotal Interest/Financing Related</b>	\$ (1)	\$ 1	\$ (1)	\$ -	\$ (1)	\$ -	\$ -	\$ 1	\$ (1)	\$ 1	\$ -	\$ -	\$ (1)
Capital	\$ -	\$ -	\$ -	\$ 350	\$ -	\$ -	\$ -	\$ 359	\$ -	\$ -	\$ -	\$ -	\$ 709
<b>Total Disbursements</b>	\$ 185	\$ 187	\$ 185	\$ 536	\$ 185	\$ 186	\$ 186	\$ 546	\$ 185	\$ 187	\$ 210	\$ 186	\$ 2,958
<b>Ending Balance</b>	\$ 1,568	\$ 1,598	\$ 1,631	\$ 1,312	\$ 1,344	\$ 1,375	\$ 1,406	\$ 1,077	\$ 1,110	\$ 1,140	\$ 1,147	\$ 1,178	\$ 1,178

**Table 7**  
**Long Range Plan**  
**(Dollars in Thousands)**

Description	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
<b>Operating Costs</b>										
Operating & Support Services	\$ 2,114	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246	\$ 2,246
Mitigation	112	173	176	562	374	68	63	63	68	46
Escalation on Select Program Costs	-	60	123	216	272	304	369	436	505	570
<b>Subtotal Operating Costs</b>	<b>\$ 2,226</b>	<b>\$ 2,479</b>	<b>\$ 2,545</b>	<b>\$ 3,024</b>	<b>\$ 2,892</b>	<b>\$ 2,618</b>	<b>\$ 2,678</b>	<b>\$ 2,745</b>	<b>\$ 2,819</b>	<b>\$ 2,862</b>
<b>Capital &amp; Other Costs</b>										
Capital Costs	\$ 709	\$ 290	\$ 400	\$ 1,200	\$ -	\$ 100	\$ 100	\$ 700	\$ -	\$ -
Generation Taxes	24	20	20	20	20	20	20	20	20	20
Interest/Financing (Net)	(1)	1	-	-	(2)	(2)	(3)	(3)	(4)	(4)
Escalation on Capital Costs	-	7	20	92	-	13	16	132	-	-
<b>Subtotal Capital &amp; Other Costs</b>	<b>\$ 732</b>	<b>\$ 318</b>	<b>\$ 440</b>	<b>\$ 1,312</b>	<b>\$ 18</b>	<b>\$ 131</b>	<b>\$ 133</b>	<b>\$ 849</b>	<b>\$ 16</b>	<b>\$ 16</b>
<b>Total Escalated Program Costs</b>	<b>\$ 2,958</b>	<b>\$ 2,797</b>	<b>\$ 2,985</b>	<b>\$ 4,336</b>	<b>\$ 2,910</b>	<b>\$ 2,749</b>	<b>\$ 2,811</b>	<b>\$ 3,594</b>	<b>\$ 2,835</b>	<b>\$ 2,878</b>
<b>Total Un-escalated Costs</b>	<b>\$ 2,958</b>	<b>\$ 2,730</b>	<b>\$ 2,842</b>	<b>\$ 4,028</b>	<b>\$ 2,638</b>	<b>\$ 2,432</b>	<b>\$ 2,426</b>	<b>\$ 3,026</b>	<b>\$ 2,330</b>	<b>\$ 2,308</b>
<b>Total Escalation</b>	<b>\$ -</b>	<b>\$ 67</b>	<b>\$ 143</b>	<b>\$ 308</b>	<b>\$ 272</b>	<b>\$ 317</b>	<b>\$ 385</b>	<b>\$ 568</b>	<b>\$ 505</b>	<b>\$ 570</b>
<b>Total Escalated Costs</b>	<b>\$ 2,958</b>	<b>\$ 2,797</b>	<b>\$ 2,985</b>	<b>\$ 4,336</b>	<b>\$ 2,910</b>	<b>\$ 2,749</b>	<b>\$ 2,811</b>	<b>\$ 3,594</b>	<b>\$ 2,835</b>	<b>\$ 2,878</b>
<b>Participants Billings</b>	<b>\$ 2,600</b>	<b>\$ 2,850</b>	<b>\$ 2,850</b>	<b>\$ 4,250</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>	<b>\$ 3,000</b>
Total Net Generation (MWh)	96,781	96,781	96,781	96,781	96,781	96,781	96,781	96,781	96,781	96,781
Participant Billing Cost (\$/MWh) (1)	\$ 26.86	\$ 29.45	\$ 29.45	\$ 43.91	\$ 31.00	\$ 31.00	\$ 31.00	\$ 31.00	\$ 31.00	\$ 31.00

**Key Assumptions/Qualifications:**

Escalation Rate = 2.50%; FY 2017= Base Year.

(1) Participant Billing Cost reflects actual funding from participants to meet expected cash requirements.

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