

# **Fiscal Year 2011 Packwood Annual Operating Budget**



**Table of Contents**

	<b><u>Table</u></b>	<b><u>Page</u></b>
Summary		3
Key Assumptions/Qualifications		4
Summary of Operating and Capital Costs	Table 1	5
Summary of Revenues	Table 2	6
Summary of Full Time Equivalent Positions	Table 3	6
Cost-to-Cash Reconciliation	Table 4	8
Statement of Funding Requirements	Table 5	9
Monthly Statement of Funding Requirements	Table 6	10
Statement of Funds	Table 7	11
Long Range Plan	Table 8	12

### 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.

Electrical energy from Packwood is currently sold directly to Snohomish PUD who purchases all of the project output. The sales agreement provides a pre-determined rate for all firm delivery, per the contract schedule and the Mid-Columbia based rate for any deliveries above firm, or secondary power. Any revenue in excess of net funding requirements is distributed by Energy Northwest to the 12 members in the subsequent fiscal year or by participants' decision, retained to apply towards future costs.

The total net Fiscal Year 2011 program and capital cost combined is estimated to be \$3,493,000 (Table 1), with associated net funding requirements of \$3,968,000 (Table 5). The difference between total program cost and net funding requirements is due to depreciation and loan retirement (Table 4).

**Key Assumptions/Qualifications**

- Generation is estimated at 84,640 MWh, which reflects a decrease to the 30-year average of the plant output (based on average water year) due to increased by-passed flows as a requirement for relicensing.
- This budget includes the current sale agreement with Snohomish County PUD. This contract is for a one year period ending in October 1 of Fiscal Year 2011, with an option for a one year extension.
- No refund to members is expected in Fiscal Year 2011.
- Capital costs are budgeted at \$1,355,000 (Tables 1 and 5) for Fiscal Year 2011. This is for the turbine upgrade.
- In Fiscal Year 2010, relicensing costs are shown as Capital Costs (Tables 1 and 5).
- Lewis County was declared a disaster area in November 2006 because of torrential rains and flooding (Reference Event No. FEMA-1671-DR-WA). During this event a large slide occurred adjacent to the Packwood Project underground pipeline. Energy Northwest has submitted a "Public Assistance Grant" request to the Washington State Military Department (Emergency Management Division) and Federal Emergency Management Agency (FEMA) for financial aid to stabilize and repair the slide area. FEMA denied the first and second requests for aid to cover the costs of stabilization of the slide area. Energy Northwest will take no further action on this matter. Major repairs were completed in Fiscal Year 2008 to assure stability of the pipeline through the slide area, which cost \$1,025,000. A bank line of credit for \$1,300,000 was approved. In Fiscal Year 2010, the bank line credit balance of \$809,000 was paid off with a \$650,000 draw on a loan from Energy Northwest's General Fund Performance Fee Account and \$159,000 in cash from the project. Packwood's \$650,000 draw brought the loan balance from the Performance Fee Account to \$1,000,000. This budget assumes that \$500,000 of this loan is paid off in Fiscal Year 2011.
- The Packwood project received a grant from the American Recovery & Reinvestment Act of 2009 for a turbine upgrade project in Fiscal Year 2010. The majority of this project will occur in Fiscal Year 2011.

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

<u>Description</u>	<u>FY 2011 Budget</u>	<u>Original FY 2010 Budget</u>	<u>Variance</u>
<u>Operating Costs</u>			
Operating & Support Services	\$ 1,905	\$ 1,669	\$ 236
Generation Taxes	17	19	(2)
Depreciation	25	32	(7)
Subtotal Operating Costs	<u>\$ 1,947</u>	<u>\$ 1,720</u>	<u>\$ 227</u>
Maintain License and Permits	\$ 160	\$ 89	\$ 71
Interest/Financing (Net)	31	34	(3)
<b>Total Cost</b>	<b><u>\$ 2,138</u></b>	<b><u>\$ 1,843</u></b>	<b><u>\$ 295</u></b>
<b>Total Net Generation (MWh)</b>	<b><u>84,640</u></b>	<b><u>88,720</u></b>	<b><u>(4,080)</u></b>
<b>Cost of Power (\$/MWh)</b>	<b><u>\$ 25.26</u></b>	<b><u>\$ 20.77</u></b>	<b><u>\$ 4.49</u></b>
<b>Total Capital Cost</b>	<b><u>\$ 1,355</u></b>	<b><u>\$ 637</u></b>	<b><u>\$ 718</u></b>

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

<u>Description</u>	<u>FY 2011 Budget</u>	<u>Original FY 2010 Budget</u>	<u>Variance</u>
<u>Revenues</u>			
Sales for Resale (1)	\$ 2,535	\$ 2,662	\$ (127)
Grant	\$ 600	\$ -	\$ 600
<b>Total Revenues</b>	<b>\$ 3,135</b>	<b>\$ 2,662</b>	<b>\$ 473</b>

Variance - ( ) Unfavorable

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

<u>Description</u>	<u>FY 2011 Budget</u>	<u>Original FY 2010 Budget</u>	<u>Variance</u>
Operations & Maintenance	5	4	1
Relicensing	-	1	(1)
<b>Total Positions</b>	<b>5</b>	<b>5</b>	<b>-</b>

(1) Revenues are based on an average annual generation of 84,640 MWh, at a rate that reflects market pricing, of \$29.95/MWh.

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

<b>Description</b>	<b>FY 2011 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 2011 Total Cash</b>
Operating						
O&M and Support Services	\$ 1,905	\$ -	\$ -	\$ -	\$ -	\$ 1,905
Generation Taxes	17	-	-	-	-	17
Depreciation	25	(25)	-	-	-	-
Subtotal Operating	\$ 1,947	\$ (25)	\$ -	\$ -	\$ -	\$ 1,922
Licensing						
Maintain License & Permits	\$ 160	\$ -	\$ -	\$ -	\$ -	\$ 160
Subtotal Licensing	\$ 160	\$ -	\$ -	\$ -	\$ -	\$ 160
Net Debt Service						
Interest on Loan	\$ 29	\$ -	\$ -	\$ -	\$ -	\$ 29
Interest Income	(3)	-	-	-	-	(3)
Treasury Services	5	-	-	-	-	5
Loan Repayment	-	-	500	-	-	500
Subtotal Net Debt Service	\$ 31	\$ -	\$ 500	\$ -	\$ -	\$ 531
Capital	\$ 1,355	\$ -	\$ -	\$ -	\$ -	\$ 1,355
Total Disbursements	\$ 3,493	\$ (25)	\$ 500	\$ -	\$ -	\$ 3,968
Funding Sources						
Sales for Resale	\$ 2,535	\$ -	\$ -	\$ -	\$ -	\$ 2,535
Grant	600	-	-	-	-	600
Beginning Packwood Funds	-	-	1,073	-	-	1,073
Total Funding Sources	\$ 3,135	\$ -	\$ 1,073	\$ -	\$ -	\$ 4,208
Ending Working Capital	\$ (358)	\$ (25)	\$ 573	\$ -	\$ -	\$ 240



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

<u>Description</u>	<u>FY 2011 Budget</u>	<u>Original FY 2010 Budget</u>	<u>Variance</u>
<u>Operating</u>			
Operating & Support Services	\$ 1,905	\$ 1,669	\$ 236
Generation Taxes	17	19	(2)
<b>Subtotal Operating</b>	<b>\$ 1,922</b>	<b>\$ 1,688</b>	<b>\$ 234</b>
<u>Licensing</u>			
Maintain Licenses & Permits	\$ 160	\$ 89	\$ 71
<b>Subtotal Licensing</b>	<b>\$ 160</b>	<b>\$ 89</b>	<b>\$ 71</b>
<u>Net Debt Service</u>			
Interest Expense	\$ -	\$ -	\$ -
Interest on Bank Loan	29	31	(2)
Interest Income (1)	(3)	(3)	-
Treasury Services	5	6	(1)
Debt Retirement	500	-	500
<b>Subtotal Net Debt Service</b>	<b>\$ 531</b>	<b>\$ 34</b>	<b>\$ 497</b>
Capital	\$ 1,355	\$ 637	\$ 718
<b>Total Funding Requirements</b>	<b>\$ 3,968</b>	<b>\$ 2,448</b>	<b>\$ 1,520</b>
<u>Funding Sources</u>			
Sales for Resale	\$ 2,535	\$ 2,662	\$ (127)
Grant	600	-	600
Beginning Packwood Funds	1,073	290	783
<b>Total Funding Sources</b>	<b>\$ 4,208</b>	<b>\$ 2,952</b>	<b>\$ 1,256</b>
<b>Total Packwood Funds Balance</b>	<b>\$ 240</b>	<b>\$ 504</b>	<b>\$ (264)</b>

(1) Projected investment income earning rate of 0.625%.

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

Description	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	FY 2011 Total
<b>Beginning Balance</b>	\$ 1,073	\$ 1,226	\$ 1,176	\$ 902	\$ 867	\$ 1,027	\$ 1,213	\$ 1,316	\$ 1,235	\$ 1,029	\$ 967	\$ 1,047	\$ 1,073
Receipts													
Grant	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 600	\$ 600
Sales for Resale	325	148	100	190	265	433	383	24	45	138	222	262	2,535
<b>Total Receipts</b>	\$ 325	\$ 148	\$ 100	\$ 190	\$ 265	\$ 433	\$ 383	\$ 24	\$ 45	\$ 138	\$ 222	\$ 862	\$ 3,135
Disbursements													
Operations Disbursements													
O&M and Support Services	\$ 124	\$ 190	\$ 244	\$ 219	\$ 100	\$ 112	\$ 274	\$ 100	\$ 119	\$ 120	\$ 120	\$ 183	\$ 1,905
Maintain License & Permits	45	3	3	3	2	6	3	2	3	76	2	12	160
Generation Taxes	-	-	-	-	-	-	-	-	-	-	17	-	17
<b>Subtotal Operations</b>	\$ 169	\$ 193	\$ 247	\$ 222	\$ 102	\$ 118	\$ 277	\$ 102	\$ 122	\$ 196	\$ 139	\$ 195	\$ 2,082
Debt Service													
Interest Expense	\$ 2	\$ 3	\$ 2	\$ 3	\$ 2	\$ 3	\$ 2	\$ 2	\$ 3	\$ 2	\$ 2	\$ 3	\$ 29
Principal Payment on Loan	-	-	125	-	-	125	-	-	125	-	-	125	500
Investment Income	-	-	-	(1)	-	-	-	(1)	-	-	-	(1)	(3)
Treasury Services	-	1	-	-	-	1	-	1	-	1	-	1	5
<b>Subtotal Debt Service</b>	\$ 2	\$ 4	\$ 127	\$ 2	\$ 2	\$ 129	\$ 2	\$ 2	\$ 128	\$ 3	\$ 2	\$ 128	\$ 531
Capital	\$ 1	\$ 1	\$ -	\$ 1	\$ 1	\$ -	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1,346	\$ 1,355
<b>Total Disbursements</b>	\$ 172	\$ 198	\$ 374	\$ 225	\$ 105	\$ 247	\$ 280	\$ 105	\$ 251	\$ 200	\$ 142	\$ 1,669	\$ 3,968
<b>Ending Balance</b>	\$ 1,226	\$ 1,176	\$ 902	\$ 867	\$ 1,027	\$ 1,213	\$ 1,316	\$ 1,235	\$ 1,029	\$ 967	\$ 1,047	\$ 240	\$ 240

**Table 7**  
**Statement of Funds**  
(Dollars in Thousands)

<u>Description</u>	<u>FY 2011 Budget Beginning Balance</u>	<u>FY 2011 Budget Ending Balance</u>	<u>Variance</u>
Working Capital Balance	<u>\$ 1,073</u>	<u>\$ 240</u>	<u>\$ (833)</u>

**Table 8**  
**Long Range Plan**  
(Dollars in Thousands)

Description	Budget FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>Operating Costs</b>											
Operating & Support Services	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742	\$ 1,742
Relicensing O&M	163	103	75	117	50	50	45	50	45	50	45
<b>Subtotal Operating Costs</b>	<b>\$ 1,905</b>	<b>\$ 1,845</b>	<b>\$ 1,817</b>	<b>\$ 1,859</b>	<b>\$ 1,792</b>	<b>\$ 1,792</b>	<b>\$ 1,787</b>	<b>\$ 1,792</b>	<b>\$ 1,787</b>	<b>\$ 1,792</b>	<b>\$ 1,787</b>
Generation Taxes	\$ 17	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19	\$ 19
Depreciation	25	134	134	134	134	134	134	134	134	134	134
<b>Subtotal Other Costs</b>	<b>\$ 1,947</b>	<b>\$ 1,998</b>	<b>\$ 1,970</b>	<b>\$ 2,012</b>	<b>\$ 1,945</b>	<b>\$ 1,945</b>	<b>\$ 1,940</b>	<b>\$ 1,945</b>	<b>\$ 1,940</b>	<b>\$ 1,945</b>	<b>\$ 1,940</b>
Maintain License and Permits	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160	\$ 160
Interest/Financing (Net)	31	31	31	31	31	(5)	(5)	(5)	(5)	(5)	(5)
<b>Subtotal Program Cost</b>	<b>\$ 2,138</b>	<b>\$ 2,189</b>	<b>\$ 2,161</b>	<b>\$ 2,203</b>	<b>\$ 2,136</b>	<b>\$ 2,100</b>	<b>\$ 2,095</b>	<b>\$ 2,100</b>	<b>\$ 2,095</b>	<b>\$ 2,100</b>	<b>\$ 2,095</b>
Escalation on Select Program Costs	\$ -	\$ 57	\$ 116	\$ 176	\$ 239	\$ 303	\$ 369	\$ 437	\$ 507	\$ 580	\$ 654
<b>Total Escalated Program Costs</b>	<b>\$ 2,138</b>	<b>\$ 2,246</b>	<b>\$ 2,277</b>	<b>\$ 2,379</b>	<b>\$ 2,375</b>	<b>\$ 2,403</b>	<b>\$ 2,464</b>	<b>\$ 2,537</b>	<b>\$ 2,602</b>	<b>\$ 2,680</b>	<b>\$ 2,749</b>
<b>Capital Costs</b>											
Total Capital Costs	\$ 1,355	\$ 84	\$ 493	\$ 486	\$ 35	\$ 32	\$ 32	\$ 32	\$ 32	\$ 32	\$ 32
<b>Subtotal Capital Costs</b>	<b>\$ 1,355</b>	<b>\$ 84</b>	<b>\$ 493</b>	<b>\$ 486</b>	<b>\$ 35</b>	<b>\$ 32</b>	<b>\$ 32</b>	<b>\$ 32</b>	<b>\$ 32</b>	<b>\$ 32</b>	<b>\$ 32</b>
Escalation on Capital Costs	\$ -	\$ 3	\$ 30	\$ 45	\$ 4	\$ 5	\$ 6	\$ 7	\$ 9	\$ 10	\$ 11
<b>Total Escalated Capital Costs</b>	<b>\$ 1,355</b>	<b>\$ 87</b>	<b>\$ 523</b>	<b>\$ 531</b>	<b>\$ 39</b>	<b>\$ 37</b>	<b>\$ 38</b>	<b>\$ 39</b>	<b>\$ 41</b>	<b>\$ 42</b>	<b>\$ 43</b>
<b>Total Un-escalated Costs</b>	<b>\$ 3,493</b>	<b>\$ 2,273</b>	<b>\$ 2,654</b>	<b>\$ 2,689</b>	<b>\$ 2,171</b>	<b>\$ 2,132</b>	<b>\$ 2,127</b>	<b>\$ 2,132</b>	<b>\$ 2,127</b>	<b>\$ 2,132</b>	<b>\$ 2,127</b>
<b>Total Escalation on all Costs</b>	<b>\$ -</b>	<b>\$ 60</b>	<b>\$ 146</b>	<b>\$ 221</b>	<b>\$ 243</b>	<b>\$ 308</b>	<b>\$ 375</b>	<b>\$ 445</b>	<b>\$ 516</b>	<b>\$ 589</b>	<b>\$ 665</b>
<b>Total Escalated Costs</b>	<b>\$ 3,493</b>	<b>\$ 2,333</b>	<b>\$ 2,800</b>	<b>\$ 2,910</b>	<b>\$ 2,414</b>	<b>\$ 2,440</b>	<b>\$ 2,502</b>	<b>\$ 2,577</b>	<b>\$ 2,643</b>	<b>\$ 2,721</b>	<b>\$ 2,792</b>
<b>Sales for Resale</b>	<b>\$ 2,535</b>	<b>\$2,688</b>	<b>\$2,739</b>	<b>\$ 2,821</b>	<b>\$ 2,906</b>	<b>\$ 2,993</b>	<b>\$ 3,083</b>	<b>\$ 3,175</b>	<b>\$ 3,271</b>	<b>\$ 3,369</b>	<b>\$ 3,470</b>
<b>Grant</b>	<b>600</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Total Net Generation (MWh)	84,640	87,814	88,872	88,872	88,872	88,872	88,872	88,872	88,872	88,872	88,872
Cost of Power (\$/MWh)	\$ 25.26	\$ 25.58	\$ 25.62	\$ 26.77	\$ 26.72	\$ 27.04	\$ 27.73	\$ 28.55	\$ 29.28	\$ 30.15	\$ 30.93

**Key Assumptions/Qualifications:**

Escalation Rate = 1.03 starting FY 2012 for costs and FY 2014 for sales for resale. Cost of power excludes capital costs. At the beginning of FY11 there is an outstanding \$1mm loan.

The project anticipates a reduction of 7,360 MWh as a result of an increase of by-pass flows required by the new Operating License, beginning in 2011.

The increased by-pass flows are expected to reduce revenue by approximately \$225,000 annually, based on a five year average "secondary" market power price of \$48.1/MWh.

Turbine upgrade expected to be completed by Qtr 2 of FY12 increasing generation by 5%.

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