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Exhibit G.1 shows the estimated historical revenue requirements for Newington Station and wholesale product sales over the last five calendar years, 2005 through 2009, and the first six months of 2010. The revenues summarized toward the bottom of the table represent the Station's sale of energy, capacity, and ancillary services in the various wholesale product markets administered by ISO-NE. The exhibit shows an estimate of Newington Station's total historical revenue requirements as would be used in the Energy Service rate setting process. Data provided therein are approximately the same as data provided to the NHPUC in previous discovery requests.

Exhibit G.1: Recent Revenue Requirements, 2005-2010 YTD June

(thousands of dollars)	2005	2006	2007	2008	2009	1H 2010
Expenses						
Non-Fuel O&M with Indirects						
Other than Emission Allowances	$13,350	$9,136	$7,640	$7,863	$7,697	$2,900
Emission Allowances Expense	$1,497	$464	$315	($32)	$288	$49
Total Non-Fuel O&M	$14,847	$9,600	$7,955	$7,831	$7,984	$2,949
Fuel and Fuel-Related Expense (Note 1)	$68,344	$22,492	$30,476	$15,784	$16,808	$5,844
Property Tax	$925	$908	$1,034	$966	$821	$189
Depreciation Expense	$3,408	$3,447	$3,300	$8,868	$8,934	$4,464
Total Expenses	**$87,524**	**$36,447**	**$42,765**	**$33,451**	**$34,547**	**$13,445**
Plant Values						
Gross Plant Value	$139,989	$140,340	$160,000	$143,944	$144,307	$144,161
Accum. Depreciation	$71,739	$74,382	$99,000	$85,714	$94,089	$98,576
Net Plant Value	$68,250	$65,958	$61,000	$58,230	$50,218	$45,585
Working Capital	$1,830	$1,184	$981	$1,181	$1,215	$942
Year End Fuel Inventory	$23,108	$28,079	$18,477	$32,019	$26,879	$25,143
Emissions Inventory (NOx, SOx, CO2)	$5,917	$1,280	$1,408	$604	$785	$367
Accumulated Deferred Income Tax	($5,467)	($3,410)	($3,520)	($4,536)	($4,424)	($3,656)
Material & Supply Inventory	$4,899	$3,636	$4,024	$4,287	$4,571	$3,370
Total Rate Base	$98,538	$96,726	$82,370	$91,785	$79,244	$71,751
Average Return on Rate Base	10.91%	10.61%	11.13%	10.80%	10.98%	10.63%
Return on Rate Base	**$10,750**	**$10,263**	**$9,168**	**$9,913**	**$8,701**	**$3,814**
Revenue Requirements	**$98,274**	**$46,710**	**$51,933**	**$43,363**	**$43,248**	**$17,259**
Revenues						
Energy	$88,928	$21,304	$27,013	$14,654	$13,591	$5,439
Capacity	$927	$2,224	$14,023	$15,840	$18,537	$9,591
Ancillary	$381	$110	$28	$13	$99	$60
Unitil Entitlement	$3,386	$2,336	$2,610	$1,810	$0	$0
Total Revenue	**$93,621**	**$25,974**	**$43,674**	**$32,317**	**$32,228**	**$15,090**

Note: Fuel costs for 2007 total $36,384K but are shown net of $5,908K related to oil resale transactions.

Comment [ELM1]: Emission allowances expenses were originally shown as $1,713K in 2008, $2,159K in 2009 and $921K in 2010. Thus the new values are lower by $1,745K, $1,871K, and $872K, respectively. These reductions are due to the removal of the portions of the NH Renewable Portfolio Standard costs allocated to Newington Station since the RPS program started in 2008.

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D.1.2. Treatment of Expenses and Revenues for CUO Analysis

This section discusses the various expense, rate base, and revenue line items shown in Exhibit G.1 with respect to Newington Station's historical revenue requirements and revenues. While the categories of expenses, rate base elements, and revenue sources are the same in a CUO study as in a revenue-requirements study, there are certain analytic differences in what expenses and rate base elements should be included in a CUO analysis. This section describes the "bridge" to the CUO analysis, whereby certain of the expense and rate base items are necessarily treated differently. The focus here is on the distinction between total costs and the incremental or going-forward costs appropriately allocable to PSNH's customers in the broader context of the CUO analysis.

O&M Expenses. Non-fuel O&M expenses associated with Newington Station include labor and benefits, scheduled and major maintenance, emission allowances, and an allocation of PSNH's and NU's administrative and general expenses. Primarily due to prior capital investments in Newington Station being depreciated and the decreased capacity factor experienced in the last few years, the current costs of operating Newington Station are low. Staffing reductions implemented over the past few years have resulted in additional savings. Direct, loaded, fixed O&M costs going forward are currently estimated to be less than $7.5 million per year. This compares favorably to $8.0 million in 2009, adjusted for inflation. Assuming continued operation, O&M expenses continue to be incurred over the forecast period. Emissions allowance expense includes the cost of any federal or state allowances for emissions from Newington Station. These typically include NO_x, SO_x, and CO_2 expenses associated with the annual tons of Newington Station's emissions. In the going forward CUO analysis, emission expenses have been simulated over the forecast period for multiple scenarios and are included with the fuel-related expenses.

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Fuel and Fuel-Related Expenses. Fuel and fuel-related O&M expenses are variable costs associated with Newington Station operations and include fuel purchases, shipping, handling, and fuel additives needed to generate electricity by operating the plant and manage emissions. In the CUO analysis, fuel and fuel-related O&M expenses have been simulated over the forecast period for multiple scenarios.

Property Tax Expense. The property tax expense listed in Exhibit G.1 is Newington Station's property tax based on the combined property tax assessments by the Town of Newington and the State of New Hampshire. PSNH has had frequent negotiations with the Town of Newington to keep tax bills reasonably in check. This is done to ensure that Newington's assessors remain informed regarding the issues that impact the market value of Newington Station. In the CUO analysis, property taxes continue to be paid for Newington Station if the unit continues to operate.

Depreciation Expense. The depreciation expense listed in Exhibit G.1 is the amount of depreciation that customers pay for plant capital costs and capital addition investments in Newington Station. The remaining book life for depreciation purposes is currently set at 2014 and therefore the undepreciated plant balance is spread over that remaining time period. PSNH periodically looks at the expected life as defined on the books and adjusts the end date defined for depreciation purposes. For purposes of this CUO analysis, when the

Historical records show that Newington had expenses of $34.5 million in 2009. Expenses ranged from $33.5 million to $87.5 million in the prior four years. These expenses include depreciation expense, which was about $8.9 million in 2008 and 2009, but much lower in the prior years. Revenue requirements also include return on rate base, which totaled $8.7 million in 2009, down from as much as $10.8 million in the four preceding years. Hence, the total revenue requirement for Newington Station was $43.2 million in 2009. In 2009, the market value of the wholesale products sold through ISO-NE's capacity and energy markets totaled $32.2 million. The difference between the revenue requirement and the value of the wholesale products in 2009 was $11.0 million. The net revenue requirement was about the same in 2008 and has fluctuated in the prior years over the five-year historical period. While this calculation is appropriate as part of the rate-setting procedure for PSNH, it does *not* signify a negative net benefit borne by PSNH's customers of continued operation of Newington Station.

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A positive net revenue requirement does not mean that PSNH's customers would be better off if Newington Station had been retired prior to the beginning of 2010. The net plant book value was $50.2 million at the end of 2009. Consistent with public utility law, if PSNH were to accelerate the retirement of Newington Station, this value net of salvage, would be recovered from PSNH's customers over some number of years as a stranded cost. A return on the remaining book value of Newington Station would be included in PSNH's rates. If we assume that salvage value is negligible, then the present value of the stranded cost recovery would be approximately the same as the present value of the future depreciation and return on net plant value revenue requirements for Newington Station.

To further illustrate the distinction between a rate-setting analysis and a CUO analysis, LAI has "backcast" Newington Station's "going-forward" costs over the historic period, 2005 through 2009, shown in Exhibit G.2. From a CUO study perspective, the meaningful measure of the annual "going-forward" net costs of the station would be its expected expenses, including depreciation of only *incremental* capitalized expenditures made from 2005 through 2009, plus return on incremental plant value, working capital, and inventory rate base, less market revenues, adjusted for any hedge or insurance value. In this simplified illustrative analysis, incremental capitalized expenditures are assumed to be zero. In actuality, PSNH incurred some capital expenditures during this period in order to maintain plant efficiency.[13] The purpose of this example is only to reinforce the explanation that depreciation and return on rate base for past investments are properly omitted from consideration in a CUO study.

For 2009, inventories and working capital was $29.0 million ($79.2 million total rate base less $50.2 million net plant value). Therefore, when we apply the return on rate base of about 11%, the return requirement is $3.2 million. Gross going forward costs are the sum of expenses, excluding depreciation, of $25.6 million, plus the $3.2 million inventories plus working capital return charge, or $28.8 million. With 2009 market revenues of $32.2 million – again, assuming no incremental capital expenditures – it would have provided a net benefit (reduction in net going forward costs) to customers of $3.4 million. Applying the same assumption of no capital expenditures from 2005 through 2009, the largest net benefit

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[13] Also, we are using a single known historical outcome of operating expenses and revenues rather than considering the economic impacts of uncertainty on expected market valuation and additional insurance premium value.

would have been $6.2 million in 2005. In four of five years Newington Station would have provided a net economic benefit to its customers. In one of the five years, 2006, Newington Station would have provided a net cost (disbenefit) when the annual net going-forward cost was $10.3 million. Over the past five years, the average net benefit would have been positive.

Exhibit G.2: Recent Incremental Revenue Requirements, 2005-2009 (No CapEx)

			2005	2006	2007	2008	2009
a		Net Plant Value	$68,250	$65,958	$61,000	$58,230	$50,218
b		Average Rate of Return	10.91%	10.61%	11.13%	10.80%	10.98%
c		Total Expenses	$87,524	$36,447	$42,765	$33,450	$34,548
d		Less Depreciation Expense	$3,408	$3,447	$3,300	$8,868	$8,934
e	e = c - d	Incremental Expenses	$84,116	$33,000	$39,465	$24,582	$25,614
f		Total Return on Rate Base	$10,750	$10,263	$9,168	$9,913	$8,701
g	g = a * b	Less Return on Rate Base Net Plant Value	$7,446	$6,998	$6,789	$6,289	$5,514
h	h = f - g	Return on Wkg Capital & Inventories	$3,304	$3,265	$2,378	$3,624	$3,187
i		Market Revenues	$93,621	$25,974	$43,674	$32,317	$32,228
j	j = e + h - i	Incremental Revenue Requirements	($6,201)	$10,291	($1,831)	($4,112)	($3,427)

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D.2. Recent Operational Performance

The request for this CUO study was triggered by the observation that the capacity factor of Newington Station has declined in recent years. A lower capacity factor reduces the economic attractiveness of the Station, all else equal, by increasing the average fixed cost per MWh. A key question is whether the recent downward trend in capacity factor represents a new, less utilized permanent state, or whether the lower recent capacity factors are transitory.

Importantly, capacity factor – defined as net energy generation divided by potential energy generation over all hours in the period – is not the only key physical operational indicator of Newington Station's value to customers. Other key physical operating performance indicators include service factor, availability, and number of starts. Service factor – defined as service hours divided by all hours in the period – is closely related to capacity factor but has the advantage of indicating, in relation to capacity factor, the amount of time the unit operates at less than full load. Operation at less than full load provides customer benefits by being able to quickly increase loading whenever the economic opportunity or reliability need arises in the real time market. The number of starts is also a useful indicator of the unit's value by showing the ability to take advantage of positive spark spreads.

Exhibit G.3 shows Newington Station's annual operating performance from 2000 through 2009, and monthly reporting for 2010 through July. Prior to 2003, Newington Station also had lower annual capacity factors than in the 2003 to 2005 period, when the Station operated as an intermediate unit. The changes in annual capacity factor from year to year are explained by several market and operational reasons. Market forces include volatile

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(thousands of dollars)	2005	2006	2007	2008	2009	1H 2010
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d		Less Depreciation Expense	$3,408	$3,447	$3,300	$8,868	$8,934
e	e = c - d	Incremental Expenses	$84,116	$33,000	$39,465	$24,582	$25,613
f		Total Return on Rate Base	$10,750	$10,263	$9,168	$9,913	$8,701
g	g = a * b	Less Return on Rate Base Net Plant Value	$7,446	$6,998	$6,789	$6,289	$5,514
h	h = f - g	Return on Wkg Capital & Inventories	$3,304	$3,265	$2,378	$3,624	$3,187
i		Market Revenues	$93,621	$25,974	$43,674	$32,317	$32,228
j	j = e + h - i	Incremental Revenue Requirements	($6,201)	$10,291	($1,831)	($4,111)	($3,428)

D.2. Recent Operational Performance

The request for this CUO study was triggered by the observation that the capacity factor of Newington Station has declined in recent years. A lower capacity factor reduces the economic attractiveness of the Station, all else equal, by increasing the average fixed cost per MWh. A key question is whether the recent downward trend in capacity factor represents a new, less utilized permanent state, or whether the lower recent capacity factors are transitory.

Importantly, capacity factor – defined as net energy generation divided by potential energy generation over all hours in the period – is not the only key physical operational indicator of Newington Station's value to customers. Other key physical operating performance indicators include service factor, availability, and number of starts. Service factor – defined as service hours divided by all hours in the period – is closely related to capacity factor but has the advantage of indicating, in relation to capacity factor, the amount of time the unit operates at less than full load. Operation at less than full load provides customer benefits by being able to quickly increase loading whenever the economic opportunity or reliability need arises in the real time market. The number of starts is also a useful indicator of the unit's value by showing the ability to take advantage of positive spark spreads.

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