

APPENDIX 44

Northern Pass Transmission Project – Estimated New Hampshire Property Tax Payments Report

Northern Pass Transmission Project - Estimated New Hampshire Property Tax Payments Report

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Executive Summary

The proposed Northern Pass Transmission project (“Northern Pass” or the “Project”) is an approximately 192-mile electric transmission line to be located in New Hampshire. This report analyzes the potential new Northern Pass property tax payments from the proposed Project. Potential reductions or increases in other property values as a result of Northern Pass are not considered in this report.

The report findings are:

1. Northern Pass will pay an estimated \$35 million to \$40 million in new New Hampshire property taxes in the first full year of operation. The overall estimate can be broken down into the following categories:
 - Approximately \$21 million to \$26 million in municipal and local education property taxes;
 - Approximately \$4 million in county taxes; and
 - Approximately \$10 million in state utility education property taxes redistributed to local communities for education.
2. The proposed Northern Pass new taxable investment is estimated to be in the aggregate approximately 11 percent of the total local taxable base across the 31 host communities in the first full year of operation. The median share is estimated to be 12.3 percent and the average is approximately 18 percent.
3. Five counties are impacted by the proposed Project. Northern Pass is estimated to be approximately 10 percent share of the total taxable base in Coos County, 3.7 percent in Grafton, 3.1 percent in Merrimack, and 0.3 percent in Belknap and in Rockingham in the first full year of operation.
4. Northern Pass would pay an estimated new \$10 million in utility state education property taxes in the first full year of operation, which is an estimated 15 to 25 percent increase in that revenue source.
5. Actual Northern Pass NH property tax payments depend on a number of factors. These factors can be organized into two groups. The first set of factors depends upon the

actual Project costs and allocation of costs across communities, and its taxable value over time. The second set of factors depends on the community, the level of government expenditures, other sources of revenue, and the taxable base.

6. Over the life of the Project, once operational, if the net book value of Northern Pass approximates the fair market value for tax purposes then the taxable value will slowly decline over the life of the Project. Northern Pass tax payments and the local tax relief it will provide could be the largest in the early years and gradually decline over the life of the Project. There may be a residual market value which could establish a floor. Actual Northern Pass tax payments will depend on the change in Project property value, all property value, and government spending over time. Total new property taxes paid to New Hampshire communities over the 20 years period are estimated to be an annual average of \$28 million to \$34 million, and a 20-year total of an estimated \$564 million to \$692 million.

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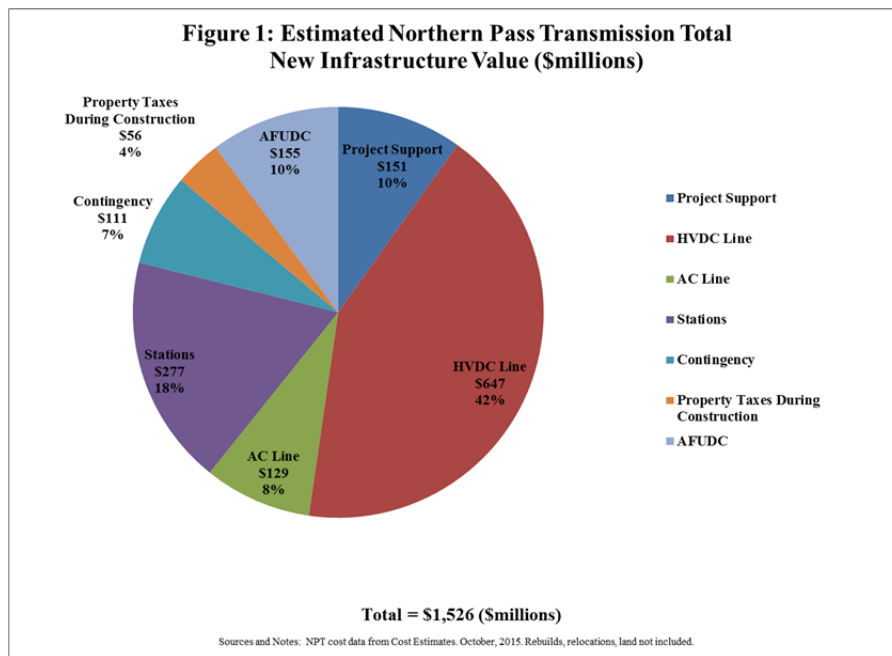
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I. Northern Pass New Property Tax Payments Simulations

The amount of property taxes that a property owner pays in New Hampshire for any particular piece of property depends on a number of different factors including the fair market value (FMV) of the property, the taxable status of the property, that value as a share of total property value in the community, amount of government spending on public services, other property values, and other sources of revenue.

For utility property, there are different approaches to estimating the FMV: 1) original cost less depreciation; 2) reproduction cost less depreciation; 3) comparable sales; 4) capitalized earnings; and 5) costs of an alternative facility capable of delivering an equivalent amount of power and energy. See *New England Power Company v. Town of Littleton*, 114 N.H. 594 (1974). Since earnings for Northern Pass are based largely on the original cost of the Project, the estimated total Project costs are used to estimate the taxable value of Northern Pass in the first year of operation.

Northern Pass provided the estimated total Project costs. These estimates are as of October 2015. See Figure 1. Each major component of the Project is estimated. Although total Project costs include upgrades and relocations of some existing distribution lines and equipment, and land purchases, in order to ensure that the estimated Northern Pass tax payments include only new tax payments, the total Northern Pass investment without rebuilds and upgrades nor land is calculated and used as the basis for the tax payment estimates in this report. The total project costs for estimating taxable value is approximately \$1.5 billion. The actual invested value will depend on the permitting, construction, and final costs. Figure 1.



The Project costs are allocated to each of the 31 proposed host communities. The allocations are based on the number of linear feet within each community for different types of investments;

station investments directly allocated to the specific community; and generalized costs allocated pro-rata. See Figure 2. These are simplifying assumptions. The actual Northern Pass taxable investment in each community in the first full year of operation would depend on the actual route, actual costs, taxable value, and allocations by community.

Figure 2: Estimated New Northern Pass Utility Infrastructure Value by Community (\$millions)	
Community	NPT Investment
Pittsburg	10.61
Clarksville	26.12
Stewartstown	69.96
Dixville	35.17
Millsfield	34.33
Dummer	34.03
Stark	32.71
Northumberland	23.21
Lancaster	21.65
Dalton	8.13
Whitefield	39.71
Coos County Total	335.63
Bethlehem	47.76
Sugar Hill	16.04
Franconia	46.34
Easton	87.47
Woodstock	133.04
Thornton	62.50
Campton	56.91
Plymouth	51.08
Ashland	6.10
Bridgewater	11.38
Bristol	9.40
Grafton County Total	528.02
New Hampton	28.17
Belknap County Total	28.17
Hill	9.42
Franklin	358.13
Northfield	8.61
Canterbury	32.99
Concord	44.98
Pembroke	34.58
Allenstown	22.38
Merrimack County Total	511.09
Deerfield	122.96
Rockingham County Total	122.96
Totals	1,526
Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.	

Actual taxes paid will depend on the value of the Northern Pass property in the community, local spending, other sources of revenue, and the tax base. A number of simulations were run using

different assumptions on the taxable value and the tax rates to develop an estimated range for the new Northern Pass property tax payments.

Base case estimates were developed using the most recently available tax data published by the NH Department of Revenue Administration (“DRA”) and the full cost allocation to each community.

Base case 1 uses the actual 2014 equalized tax rates and applies that to the estimated Project costs allocated to each community.

This approach could lead to over-estimation however because it does not take into account that tax rates may be lowered as a result of Northern Pass addition to the property tax base; but can also under-estimate payments by not taking into account any growth in government spending and a potential increase in the equalized tax rates in 2019. Additionally, the actual Project Costs in each community could also be different.

Base case 2 takes into account both the tax rate suppression effects and a modest growth in spending. Specifically, base case 2 recalculates the 2014 equalized tax rate as if Northern Pass investments were in the tax base. Simulating this increase in the tax base for the 2014 tax year yields a reduced tax rate for the same level of spending. The reduced tax rate is then escalated by 5 percent to project to 2019, and then applied to the estimated full costs of Northern Pass.

This approach could lead to under-estimation because it could overstate the tax rate reduction by using 2014 data as well as under-estimate increases in government spending relative to the total tax base changes. On the other hand this estimate could over-state the payments in any one community if the actual Project Costs in that community are less.

Figure 3 summarizes the estimated Northern Pass property tax payments in the first full year of operation under the base cases.

Figure 3: Simulated New Northern Pass Property Tax Payments		
Type of Property Tax	Base Case 1	Base Case 2
Local (Muni+Local Education)	\$25,560,229	\$20,631,721
County	\$4,174,477	\$4,116,034
State (for redistribution to communities for education)	\$10,070,689	\$10,070,689
Total	\$39,805,396	\$34,818,445
Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.		

Figure 4 provides the base case 1 and 2 estimates of the first year local (municipal plus local education) property taxes for the individual communities, and Figure 5 reports first year county taxes.

County tax payments were simulated using a similar scenario analysis as for local taxes. This provides the estimated county wide payments which would be shared across all communities in the county, not just the host communities. Mechanically, county taxes are allocated based on equalized property values across the county, but then the actual county tax rate is set depending on the local tax base. Base case simulations only used equalized values and equalized tax rates.

Two of the host communities for Northern Pass are unincorporated – Dixville and Millsfield – and for most years historical data shows that there have been no taxes paid in these communities. Historically, expenditures have been low, the tax base has been low relative to the entire county, and other revenue sources were able to cover all public expenditure obligations. Thus, these communities which are unincorporated while hosting the Project may not receive any direct tax payment. More recently there have been significant changes, complications, and a new law, due to the addition of a wind farm in the taxable base, but with a tax agreement that pre-sets the tax payment each year called a Payment in Lieu of Taxes (PILOT). For purposes of estimating Northern Pass local property taxes, \$0 local taxes are assumed. This is expected to change as the unincorporated communities and their tax base change and because significant surpluses are no longer available. Northern Pass, however, is expected to pay significant county property tax payments due to the value of the Northern Pass property allocated to each of these communities and those estimates are included in the Coos county Northern Pass property tax payment estimates.

Most of the new utility property would be in existing rights of ways. It is not anticipated that the addition of Northern Pass would add demand for additional local services. In that case, the estimated Northern Pass payments/tax relief would not be offset by increased expenditures to support the project. To the extent there are any additional demands on local services, the cost of those services would need to be factored into the calculation of new tax revenue, unless Northern Pass separately provided for those services.

Figure 4. Simulated New Northern Pass Local Property Tax Payments		
NPT Host Community	Base Case 1	Base Case 2
Pittsburg	\$108,765	\$109,224
Clarksville	\$216,741	\$139,181
Stewartstown	\$1,266,587	\$718,081
Dixville	\$0	\$0
Millsfield	\$0	\$0
Dummer	\$380,407	\$263,594
Stark	\$393,200	\$274,470
Northumberland	\$686,679	\$581,055
Lancaster	\$377,204	\$372,147
Dalton	\$145,682	\$143,689
Whitefield	\$742,933	\$674,483
Bethlehem	\$1,199,192	\$1,123,410
Sugar Hill	\$291,479	\$282,922
Franconia	\$574,875	\$543,216
Easton	\$607,647	\$395,753
Woodstock	\$1,888,807	\$1,415,475
Thornton	\$988,041	\$934,596
Campton	\$1,080,187	\$1,036,948
Plymouth	\$982,989	\$955,242
Ashland	\$116,365	\$120,064
Bridgewater	\$55,197	\$56,188
Bristol	\$158,457	\$162,926
New Hampton	\$423,281	\$403,772
Hill	\$190,564	\$179,069
Franklin	\$6,755,977	\$4,253,541
Northfield	\$170,089	\$175,143
Canterbury	\$738,096	\$713,702
Concord	\$853,210	\$885,765
Pembroke	\$848,088	\$840,532
Allenstown	\$611,814	\$590,741
Deerfield	\$2,707,678	\$2,286,794
Total	\$25,560,229	\$20,631,721

Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included. Local property tax payments include both municipal and local education taxes.

Figure 5. Simulated New Northern Pass County Property Tax Payments		
	Base Case 1	Base Case 2
County	Estimated NPT County Payments	Estimated NPT County Payments
Coos	\$1,662,504	\$1,564,275
Grafton	\$860,589	\$869,001
Belknap	\$38,424	\$40,232
Merrimack	\$1,488,942	\$1,512,666
Rockingham	\$124,018	\$129,859
Total	\$4,174,477	\$4,116,034
Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.		

At the local level, the specific cost allocation of the Project could significantly differ from what is used for estimating the base case property tax payments. The actual tax rates could also be different as discussed above. In order to estimate a robust range for what the first year Project property tax payments are, a total of 11 different simulations were run that considered a fuller range of both the allocated Project cost to a community and a fuller range for estimating property tax rates. See Appendix A for a summary of the Project's first year property tax estimate full simulations, and the technical notes supporting those simulations.

II. Northern Pass Property Tax Payments Impacts

There are a number of different ways to measure the estimated fiscal impact of the Northern Pass property tax payments on a community or region. One way is to rank NPT as compared to existing property tax payers; however, there is not an available sortable data set of the property taxpayer amounts by community statewide to efficiently use this method.

A second way is to estimate the value of the Northern Pass investment compared with the existing property tax base in a community.

For local taxes, Figure 6 compares the estimated Northern Pass investment in that community with the existing tax base with modest growth. For county taxes, Figure 7 compares the estimated Northern Pass investment in that county with the existing tax base in the county.

Each municipality, school district, and county sets their own budgets. Other revenue sources are applied to those budgets. Of the remaining budget that needs to be covered by property taxes, for any individual property owner the price of the public services is their share of the taxable property tax base. For example, if an owner's taxable property is equivalent to 1 percent of the total taxable value in a community, than the owner's share of tax expenditures in that community is 1 percent (not taking into account collections, exemptions, and credits). With the addition of a large new taxable property value in a community, for the same amount of expenditures, each

existing owner's share of the taxes is reduced.

Figure 6 simulates the Project's addition of infrastructure to each community in 2014 with a modest growth (5 percent) as compared to historical annual growth rates in the tax base, and also Northern Pass expressed as a share of the 2014 local tax base with modest growth (5 percent). In some communities the addition of Northern Pass represents multiples of the typical average annual growth in property values. In others, the growth is close to a typical one year growth level or less.

As noted, the actual growth rate and share will depend upon permitting, construction, final costs, and the taxable base community-wide.

Figure 6. Simulated Northern Pass Share of Community Tax Base

Community	Simulated NPT Percentage Increase in the Local Property Tax Base Year 1	Historical Annual Growth Rates in the Local Property Tax Base			Simulated NPT as Share of Tax Base Year 1
		3 Year Average Annual 2014 - 2011	5 Year Average Annual 2014 - 2009	10 Year Average Annual 2014 - 2004	
Pittsburg	4.3%	-4.8%	-3.9%	0.7%	4.2%
Clarksville	60.5%	-3.4%	0.6%	0.6%	37.7%
Stewartstown	81.1%	-3.3%	-4.0%	2.1%	44.8%
Dixville	105.1%	62.2%	37.0%	18.1%	51.2%
Millsfield	35.0%	886.2%	529.4%	269.0%	25.9%
Dummer	49.1%	16.0%	8.6%	7.4%	32.9%
Stark	48.0%	0.6%	-0.5%	0.5%	32.4%
Northumberland	22.9%	-3.8%	-4.0%	-2.5%	18.7%
Lancaster	8.1%	2.4%	-0.5%	1.1%	7.5%
Dalton	9.7%	-1.0%	-3.6%	1.6%	8.8%
Whitefield	21.4%	3.1%	-2.1%	1.1%	17.6%
Bethlehem	19.5%	0.2%	-1.7%	0.5%	16.3%
Sugar Hill	10.8%	-1.9%	-0.8%	1.7%	9.8%
Franconia	15.5%	0.1%	-1.3%	2.4%	13.5%
Easton	127.2%	-0.5%	-0.2%	1.5%	56.0%
Woodstock	54.8%	-3.1%	-1.3%	0.7%	35.4%
Thornton	17.7%	-2.9%	-1.6%	1.6%	15.1%
Campton	14.1%	-1.7%	-0.7%	2.2%	12.3%
Plymouth	11.4%	2.3%	0.8%	2.8%	10.2%
Ashland	2.4%	1.5%	-0.1%	3.1%	2.3%
Bridgewater	3.0%	3.4%	0.3%	1.2%	2.9%
Bristol	2.0%	-2.0%	-1.0%	0.4%	2.0%
New Hampton	9.6%	-4.5%	-1.5%	3.0%	8.8%
Hill	11.2%	-2.9%	-5.2%	-1.6%	10.1%
Franklin	63.6%	-1.6%	-1.4%	0.1%	38.9%
Northfield	2.9%	-1.8%	-2.8%	-0.2%	2.8%
Canterbury	13.1%	-0.4%	-2.4%	-0.2%	11.5%
Concord	1.1%	2.1%	-0.4%	0.9%	1.1%
Pembroke	5.7%	2.4%	-1.6%	1.2%	5.4%
Allenstown	8.3%	3.0%	-0.4%	-0.4%	7.7%
Deerfield	23.2%	2.5%	1.4%	1.1%	18.8%

Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.

Figure 7 shows similar calculations for county taxes. Growth rates and shares vary across the five counties NPT will be located in depending on the level of Northern Pass investment as

compared to the county-wide property values. In Coos County, for example, Northern Pass is estimated to pay for about 10% of total county taxes. Northern Pass tax payment benefits are shared across the county through county taxation structure.

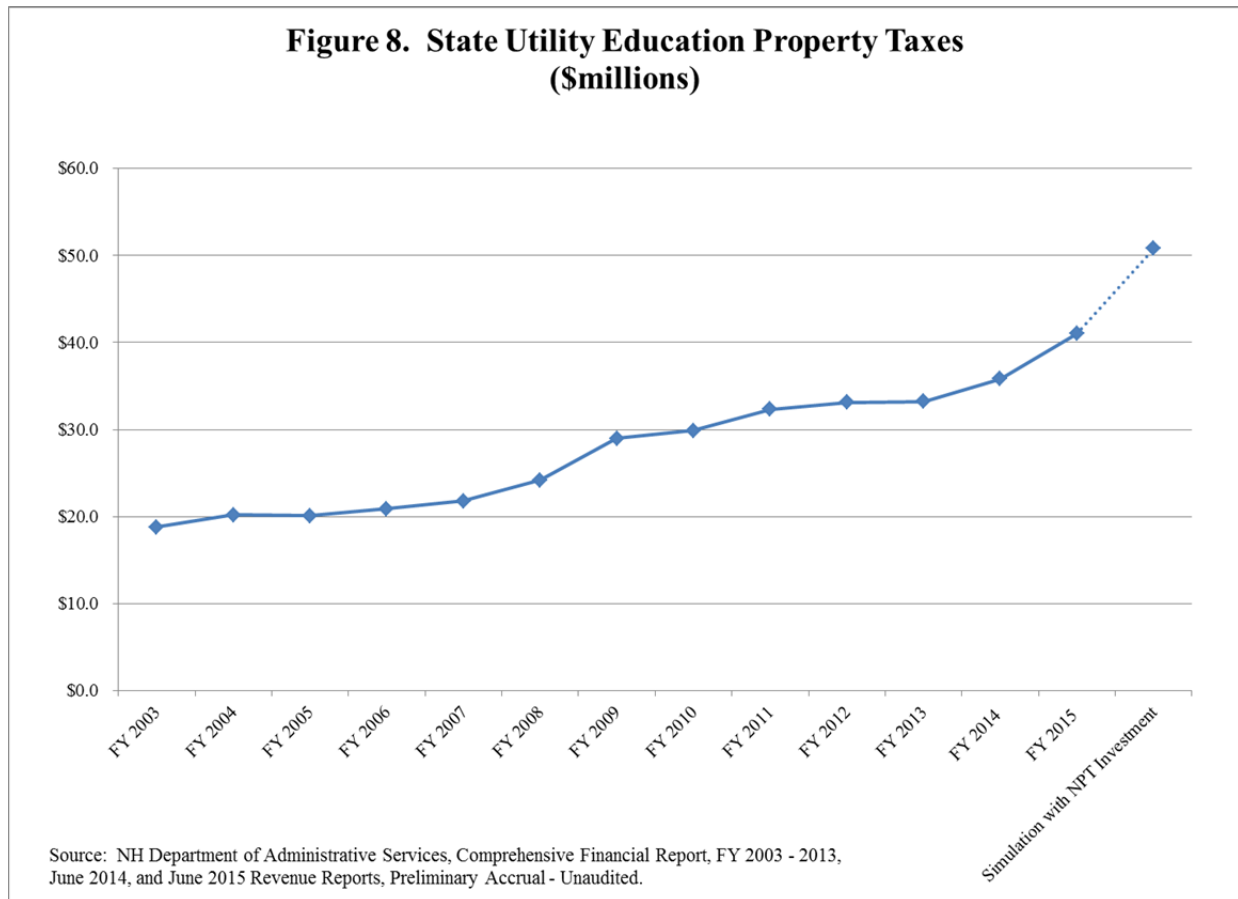
Figure 7. Simulated Northern Pass Share of County Tax Base

County	NPT as Growth in County Tax Base	3 Year Average Annual 2014 - 2011	5 Year Average Annual 2014 - 2009	10 Year Average Annual 2014 - 2004	NPT as Share of County Tax Base
Coos	11.0%	0.9%	-0.9%	1.4%	9.9%
Grafton	3.8%	0.9%	0.0%	1.9%	3.7%
Belknap	0.3%	-0.5%	-1.3%	1.0%	0.3%
Merrimack	3.2%	1.1%	-0.6%	0.9%	3.1%
Rockingham	0.3%	3.0%	1.3%	1.3%	0.3%

Source and Notes: NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.

Taxable properties, both utility and non-utility, in New Hampshire pay municipal, local education, and county taxes. The fourth tax – state education property tax – however, is different for utility property and non-utility property. For non-utility property, under existing law a set amount of money is to be raised each year toward education and DRA sets the tax rate. The rate tends to be between \$2 and \$3 per thousand dollars of value. The state tax is raised and retained locally for education but counts as a state tax. New Hampshire also raises money for state aid for local education through other sources to distribute back to communities. One of the other sources of revenue is the state utility education property tax which is set at a fixed rate of \$6.60 per thousand. Utilities pay this higher tax directly to the state which distributes it back to communities for education.

Unlike local and county property taxes, the utility education tax rate is fixed. Figure 8 below shows the history of the revenue raised from the utility education tax. Measured in current dollars, the Northern Pass state tax payment represents approximately 25 percent increase in revenue from this tax. That increased revenue could be used to offset other sources of revenue used for funding education, or to increase grants to communities. The actual percentage increase will depend upon total utility education property tax revenues and Northern Pass value at that time.



III. Northern Pass Property Tax Payments Over Time

Over time, NPT tax payments will change depending on the NPT value, government expenditures, the tax base, and other sources of revenue.

NPT will pay property taxes during construction. Each year during construction the amount of investment as of April 1 is one approach to setting the taxable value subject to local, county, and state property taxes. Total new Northern Pass New Hampshire property tax payments (municipal, county, local education, state education) paid during the construction phase are estimate to be approximately \$56 million, depending on the actual costs, timing and tax rates. Property taxes paid during the final year of construction versus the first full year of operation is sensitive to specific construction timelines.

Once fully operational, Northern Pass property tax payments will change over time. The Northern Pass annual tax payments will depend on the taxable value of Northern Pass and the tax rate. Tax rates are a function of spending, other revenue sources, and the tax base. When spending increases faster than the tax base, there tends to be upward pressure on tax rates. If spending grows slower than the growth in the tax base, the growth in tax rates is muted, or may decline.

It is very difficult to estimate the Northern Pass property tax payments over time because many different factors, and the interaction of them, will determine what the tax payments will be.

For qualifying renewable energy projects in New Hampshire, communities in some cases have negotiated a Payment in Lieu of Taxes (PILOT) agreement to provide the community with a more predictable revenue stream over the life of the project. The current PILOT law, however, does not apply to projects like NPT.

The taxable value of the Project over time depends on the fair market value of the investment over time, which is not known. Northern Pass property tax payments over time, however, are an important factor to consider for understanding local community benefits. In order to provide a lower bound estimate of Northern Pass property tax payments over time, a simplifying assumption is made that the fair market value is equal to the total new costs for the project in the first full year of operation, and then is straight-line depreciated at a rate of 2.5 percent per year for the first 20 years of operation.

Under this simplifying assumption, tax payments and the local tax relief a project provides may be largest in the early years and gradually decline over the life of the project.

Using the estimated Northern Pass net book value as fair market value for tax purposes, Northern Pass would pay an estimated \$564 million to \$692 million in total New Hampshire property taxes over the first 20 years of operation. A similar range was estimated adding up 20 year illustrative estimates for individual towns, counties and the state.

Figure 9 below illustrates the estimated aggregate NPT tax payments over the first 20 years using these simplifying assumptions on declining taxable value. Actual payments will depend not only on the determined FMV of Northern Pass at the local, county and state levels, but the trends in expenditures, revenues, and property values in each community and county.

Figure 9. Simulated New Northern Pass Total Annual Property Tax Payments Over 20 Years

Year	NPT Book Value	NPT Annual Property Tax Payments (Tax rate grows at 2%)	NPT Annual Property Tax Payments (Tax rate grows at 1%)
2019	\$1,525,862	\$39,805,396	\$34,818,445
2020	\$1,487,715	\$39,390,087	\$34,189,274
2021	\$1,449,569	\$38,956,344	\$33,550,081
2022	\$1,411,422	\$38,503,493	\$32,900,702
2023	\$1,373,276	\$38,030,842	\$32,240,972
2024	\$1,335,129	\$37,537,682	\$31,570,725
2025	\$1,296,983	\$37,023,278	\$30,889,791
2026	\$1,258,836	\$36,486,879	\$30,197,997
2027	\$1,220,690	\$35,927,709	\$29,495,170
2028	\$1,182,543	\$35,344,972	\$28,781,132
2029	\$1,144,397	\$34,737,848	\$28,055,705
2030	\$1,106,250	\$34,105,493	\$27,318,708
2031	\$1,068,103	\$33,447,041	\$26,569,956
2032	\$1,029,957	\$32,761,599	\$25,809,262
2033	\$991,810	\$32,048,252	\$25,036,437
2034	\$953,664	\$31,306,056	\$24,251,291
2035	\$915,517	\$30,534,041	\$23,453,627
2036	\$877,371	\$29,731,213	\$22,643,250
2037	\$839,224	\$28,896,545	\$21,819,960
2038	\$801,078	\$28,028,984	\$20,983,554
Total 20 year		\$692,603,753	\$564,576,037
Average		\$34,630,188	\$28,228,802

Sources and Notes/Key Assumptions:

NPT cost data from Cost Estimates, October, 2015. Rebuilds, relocations, land not included.

Fair Market Value for tax purposes equals simplified Net Book Value.

Annual Depreciation 2.5 percent, straight line.

First year NPT property tax payment Base Case 1, then grow local tax rate at 2 percent per year for high range estimate and for low range estimate, first year tax payment Base Case 2, then grow low tax rate at 1 percent per year.

Appendix A: Summary of Northern Pass First Year Property Tax Estimates Simulations															
A. Local Property Taxes															
Total Local	NPT Estimated Local Property Tax Payments First Full Year														
	Total Range		Midpoint	s1	s2	s3	s4	s5	s6	s7	s7A	s8	s9	s9A	
Pittsburg	\$ 76,959	\$ 124,669	\$ 102,612	\$ 102,612	\$ 108,765	\$ 104,023	\$ 76,959	\$ 81,574	\$ 109,224	\$ 114,425	\$ 124,669	\$ 81,918	\$ 85,819	\$ 93,502	
Clarksville	\$ 104,386	\$ 216,741	\$ 139,181	\$ 208,674	\$ 216,741	\$ 132,553	\$ 156,506	\$ 162,556	\$ 139,181	\$ 145,809	\$ -	\$ 104,386	\$ 109,356	\$ -	
Stewartstown	\$ 538,561	\$ 1,266,587	\$ 752,275	\$ 1,145,906	\$ 1,266,587	\$ 683,887	\$ 859,430	\$ 949,940	\$ 718,081	\$ 752,275	\$ 858,361	\$ 538,561	\$ 564,207	\$ 643,771	
Dixville	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Millsfield	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Dummer	\$ 197,695	\$ 380,407	\$ 252,432	\$ 336,576	\$ 380,407	\$ 251,042	\$ 252,432	\$ 285,305	\$ 263,594	\$ 276,146	\$ -	\$ 197,695	\$ 207,109	\$ -	
Stark	\$ 205,852	\$ 417,910	\$ 287,540	\$ 364,429	\$ 393,200	\$ 261,400	\$ 273,322	\$ 294,900	\$ 274,470	\$ 287,540	\$ 417,910	\$ 205,852	\$ 215,655	\$ 313,433	
Northumberland	\$ 435,791	\$ 793,113	\$ 581,055	\$ 598,870	\$ 686,679	\$ 553,386	\$ 449,152	\$ 515,009	\$ 581,055	\$ 608,725	\$ 793,113	\$ 435,791	\$ 456,543	\$ 594,835	
Lancaster	\$ 269,977	\$ 400,805	\$ 354,426	\$ 359,970	\$ 377,204	\$ 354,426	\$ 269,977	\$ 282,903	\$ 372,147	\$ 389,868	\$ 400,805	\$ 279,110	\$ 292,401	\$ 300,604	
Dalton	\$ 103,444	\$ 177,935	\$ 136,847	\$ 137,925	\$ 145,682	\$ 136,847	\$ 103,444	\$ 109,262	\$ 143,689	\$ 150,532	\$ 177,935	\$ 107,767	\$ 112,899	\$ 133,451	
Whitefield	\$ 501,240	\$ 745,538	\$ 642,364	\$ 668,320	\$ 742,933	\$ 642,364	\$ 501,240	\$ 557,200	\$ 674,483	\$ 706,601	\$ 745,538	\$ 505,862	\$ 529,951	\$ 559,154	
Bethlehem	\$ 842,557	\$ 1,548,169	\$ 1,123,410	\$ 1,263,286	\$ 1,199,192	\$ 1,069,914	\$ 947,465	\$ 899,394	\$ 1,123,410	\$ 1,176,905	\$ 1,548,169	\$ 842,557	\$ 882,679	\$ 1,161,127	
Sugar Hill	\$ 212,191	\$ 356,192	\$ 269,449	\$ 284,155	\$ 291,479	\$ 269,449	\$ 213,117	\$ 218,609	\$ 282,922	\$ 296,394	\$ 356,192	\$ 212,191	\$ 222,296	\$ 267,144	
Franconia	\$ 407,412	\$ 574,875	\$ 517,348	\$ 569,536	\$ 574,875	\$ 517,348	\$ 427,152	\$ 431,157	\$ 543,216	\$ 569,083	\$ 572,222	\$ 407,412	\$ 426,812	\$ 429,166	
Easton	\$ 296,815	\$ 607,647	\$ 414,598	\$ 589,547	\$ 607,647	\$ 376,907	\$ 442,160	\$ 455,735	\$ 395,753	\$ 414,598	\$ 499,742	\$ 296,815	\$ 310,949	\$ 374,806	
Woodstock	\$ 1,061,606	\$ 1,943,722	\$ 1,416,605	\$ 1,943,722	\$ 1,888,807	\$ 1,348,071	\$ 1,457,791	\$ 1,416,605	\$ 1,415,475	\$ 1,482,878	\$ 1,641,318	\$ 1,061,606	\$ 1,112,159	\$ 1,230,988	
Thornton	\$ 687,144	\$ 1,194,365	\$ 895,774	\$ 916,193	\$ 988,041	\$ 890,092	\$ 687,144	\$ 741,031	\$ 934,596	\$ 979,101	\$ 1,194,365	\$ 700,947	\$ 734,326	\$ 895,774	
Campton	\$ 777,711	\$ 1,344,425	\$ 1,008,319	\$ 1,102,987	\$ 1,080,187	\$ 987,569	\$ 827,240	\$ 810,140	\$ 1,036,948	\$ 1,086,326	\$ 1,344,425	\$ 777,711	\$ 814,745	\$ 1,008,319	
Plymouth	\$ 716,431	\$ 1,012,360	\$ 909,754	\$ 1,012,360	\$ 982,989	\$ 909,754	\$ 759,270	\$ 737,242	\$ 955,242	\$ 1,000,730	\$ 957,786	\$ 716,431	\$ 750,547	\$ 718,339	
Ashland	\$ 87,273	\$ 125,781	\$ 114,347	\$ 121,412	\$ 116,365	\$ 114,347	\$ 91,059	\$ 87,273	\$ 120,064	\$ 125,781	\$ 122,313	\$ 90,048	\$ 94,336	\$ 91,735	
Bridgewater	\$ 41,398	\$ 64,586	\$ 53,512	\$ 58,838	\$ 55,197	\$ 53,512	\$ 44,129	\$ 41,398	\$ 56,188	\$ 58,863	\$ 64,586	\$ 42,141	\$ 44,148	\$ 48,439	
Bristol	\$ 112,678	\$ 215,075	\$ 155,167	\$ 150,237	\$ 158,457	\$ 155,167	\$ 112,678	\$ 118,843	\$ 162,926	\$ 170,684	\$ 215,075	\$ 122,194	\$ 128,013	\$ 161,306	
New Hampton	\$ 292,193	\$ 450,615	\$ 384,545	\$ 389,591	\$ 423,281	\$ 384,545	\$ 292,193	\$ 317,460	\$ 403,772	\$ 423,000	\$ 450,615	\$ 302,829	\$ 317,250	\$ 337,962	
Hill	\$ 128,196	\$ 280,443	\$ 170,928	\$ 170,928	\$ 190,564	\$ 170,542	\$ 128,196	\$ 142,923	\$ 179,069	\$ 187,596	\$ 280,443	\$ 134,302	\$ 140,697	\$ 210,332	
Franklin	\$ 3,190,156	\$ 6,994,293	\$ 4,456,091	\$ 6,994,293	\$ 6,755,977	\$ 4,050,991	\$ 5,245,720	\$ 5,066,983	\$ 4,253,541	\$ 4,456,091	\$ 5,168,096	\$ 3,190,156	\$ 3,342,068	\$ 3,876,072	
Northfield	\$ 127,566	\$ 231,171	\$ 170,089	\$ 172,699	\$ 170,089	\$ 166,803	\$ 129,524	\$ 127,566	\$ 175,143	\$ 183,483	\$ 231,171	\$ 131,357	\$ 137,613	\$ 173,378	
Canterbury	\$ 535,276	\$ 991,082	\$ 713,702	\$ 717,240	\$ 738,096	\$ 679,716	\$ 537,930	\$ 553,572	\$ 713,702	\$ 747,688	\$ 991,082	\$ 535,276	\$ 560,766	\$ 743,312	
Concord	\$ 639,908	\$ 982,958	\$ 843,586	\$ 943,579	\$ 853,210	\$ 843,586	\$ 707,684	\$ 639,908	\$ 885,765	\$ 927,945	\$ 982,958	\$ 664,324	\$ 695,958	\$ 737,219	
Pembroke	\$ 630,399	\$ 974,585	\$ 800,507	\$ 841,048	\$ 848,088	\$ 800,507	\$ 630,786	\$ 636,066	\$ 840,532	\$ 880,557	\$ 974,585	\$ 630,399	\$ 660,418	\$ 730,939	
Allenstown	\$ 443,056	\$ 848,069	\$ 590,741	\$ 637,045	\$ 611,814	\$ 562,610	\$ 477,784	\$ 458,861	\$ 590,741	\$ 618,871	\$ 848,069	\$ 443,056	\$ 464,154	\$ 636,052	
Deerfield	\$ 1,715,095	\$ 2,707,678	\$ 2,177,899	\$ 2,436,970	\$ 2,707,678	\$ 2,177,899	\$ 1,827,727	\$ 2,030,758	\$ 2,286,794	\$ 2,395,689	\$ 2,678,020	\$ 1,715,095	\$ 1,796,766	\$ 2,008,515	
Totals	\$ 15,378,967	\$ 27,971,797	\$ 19,649,258	\$ 25,238,947	\$ 25,560,229	\$ 19,649,258	\$ 18,929,210	\$ 19,170,172	\$ 20,631,721	\$ 21,614,184	\$ 24,639,563	\$ 15,473,791	\$ 16,210,638	\$ 18,479,673	
Simulation Assumptions															
s1	Project cost allocation with 2014 local tax rates														
s2	Project cost allocation with 2014 equalized tax rates														
s3	Project cost allocation with 2014 equalized tax rates partially adjusted lower for same level of spending														
s4	Seventy-five percent of project cost allocation with 2014 local tax rates (.75*s1)														
s5	Seventy-five percent of project cost allocation with 2014 equalized tax rates (.75*s2)														
s6	Projected cost allocation with 2014 adjusted equalized tax rates grow at about 1 percent per year (5 percent total)														
s7	Projected cost allocation with 2014 adjusted equalized tax rates grow at about 2 percent per year (10 percent total)														
s7A	Projected cost allocation with 2014 adjusted equalized tax rates growing at annual average (5*10 year annual average)														
s8	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at about 1 percent per year (5 percent total)(.75*s6)														
s9	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at about 2 percent per year (10 percent total)(.75*s7)														
s9A	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at 10 year annual average per year (.75*s7A)														

Appendix A: Summary of Northern Pass First Year Property Tax Estimates Simulations															
A. Local Property Taxes															
Total Local	NPT Estimated Local Property Tax Payments First Full Year														
	Total Range		Midpoint	s1	s2	s3	s4	s5	s6	s7	s7A	s8	s9	s9A	
Pittsburg	\$ 76,959	\$ 124,669	\$ 102,612	\$ 102,612	\$ 108,765	\$ 104,023	\$ 76,959	\$ 81,574	\$ 109,224	\$ 114,425	\$ 124,669	\$ 81,918	\$ 85,819	\$ 93,502	
Clarksville	\$ 104,386	\$ 216,741	\$ 139,181	\$ 208,674	\$ 216,741	\$ 132,553	\$ 156,506	\$ 162,556	\$ 139,181	\$ 145,809	\$ -	\$ 104,386	\$ 109,356	\$ -	
Stewartstown	\$ 538,561	\$ 1,266,587	\$ 752,275	\$ 1,145,906	\$ 1,266,587	\$ 683,887	\$ 859,430	\$ 949,940	\$ 718,081	\$ 752,275	\$ 858,361	\$ 538,561	\$ 564,207	\$ 643,771	
Dixville	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Millsfield	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Dummer	\$ 197,695	\$ 380,407	\$ 252,432	\$ 336,576	\$ 380,407	\$ 251,042	\$ 252,432	\$ 285,305	\$ 263,594	\$ 276,146	\$ -	\$ 197,695	\$ 207,109	\$ -	
Stark	\$ 205,852	\$ 417,910	\$ 287,540	\$ 364,429	\$ 393,200	\$ 261,400	\$ 273,322	\$ 294,900	\$ 274,470	\$ 287,540	\$ 417,910	\$ 205,852	\$ 215,655	\$ 313,433	
Northumberland	\$ 435,791	\$ 793,113	\$ 581,055	\$ 598,870	\$ 686,679	\$ 553,386	\$ 449,152	\$ 515,009	\$ 581,055	\$ 608,725	\$ 793,113	\$ 435,791	\$ 456,543	\$ 594,835	
Lancaster	\$ 269,977	\$ 400,805	\$ 354,426	\$ 359,970	\$ 377,204	\$ 354,426	\$ 269,977	\$ 282,903	\$ 372,147	\$ 389,868	\$ 400,805	\$ 279,110	\$ 292,401	\$ 300,604	
Dalton	\$ 103,444	\$ 177,935	\$ 136,847	\$ 137,925	\$ 145,682	\$ 136,847	\$ 103,444	\$ 109,262	\$ 143,689	\$ 150,532	\$ 177,935	\$ 107,767	\$ 112,899	\$ 133,451	
Whitefield	\$ 501,240	\$ 745,538	\$ 642,364	\$ 668,320	\$ 742,933	\$ 642,364	\$ 501,240	\$ 557,200	\$ 674,483	\$ 706,601	\$ 745,538	\$ 505,862	\$ 529,951	\$ 559,154	
Bethlehem	\$ 842,557	\$ 1,548,169	\$ 1,123,410	\$ 1,263,286	\$ 1,199,192	\$ 1,069,914	\$ 947,465	\$ 899,394	\$ 1,123,410	\$ 1,176,905	\$ 1,548,169	\$ 842,557	\$ 882,679	\$ 1,161,127	
Sugar Hill	\$ 212,191	\$ 356,192	\$ 269,449	\$ 284,155	\$ 291,479	\$ 269,449	\$ 213,117	\$ 218,609	\$ 282,922	\$ 296,394	\$ 356,192	\$ 212,191	\$ 222,296	\$ 267,144	
Franconia	\$ 407,412	\$ 574,875	\$ 517,348	\$ 569,536	\$ 574,875	\$ 517,348	\$ 427,152	\$ 431,157	\$ 543,216	\$ 569,083	\$ 572,222	\$ 407,412	\$ 426,812	\$ 429,166	
Easton	\$ 296,815	\$ 607,647	\$ 414,598	\$ 589,547	\$ 607,647	\$ 376,907	\$ 442,160	\$ 455,735	\$ 395,753	\$ 414,598	\$ 499,742	\$ 296,815	\$ 310,949	\$ 374,806	
Woodstock	\$ 1,061,606	\$ 1,943,722	\$ 1,416,605	\$ 1,943,722	\$ 1,888,807	\$ 1,348,071	\$ 1,457,791	\$ 1,416,605	\$ 1,415,475	\$ 1,482,878	\$ 1,641,318	\$ 1,061,606	\$ 1,112,159	\$ 1,230,988	
Thornton	\$ 687,144	\$ 1,194,365	\$ 895,774	\$ 916,193	\$ 988,041	\$ 890,092	\$ 687,144	\$ 741,031	\$ 934,596	\$ 979,101	\$ 1,194,365	\$ 700,947	\$ 734,326	\$ 895,774	
Campton	\$ 777,711	\$ 1,344,425	\$ 1,008,319	\$ 1,102,987	\$ 1,080,187	\$ 987,569	\$ 827,240	\$ 810,140	\$ 1,036,948	\$ 1,086,326	\$ 1,344,425	\$ 777,711	\$ 814,745	\$ 1,008,319	
Plymouth	\$ 716,431	\$ 1,012,360	\$ 909,754	\$ 1,012,360	\$ 982,989	\$ 909,754	\$ 759,270	\$ 737,242	\$ 955,242	\$ 1,000,730	\$ 957,786	\$ 716,431	\$ 750,547	\$ 718,339	
Ashland	\$ 87,273	\$ 125,781	\$ 114,347	\$ 121,412	\$ 116,365	\$ 114,347	\$ 91,059	\$ 87,273	\$ 120,064	\$ 125,781	\$ 122,313	\$ 90,048	\$ 94,336	\$ 91,735	
Bridgewater	\$ 41,398	\$ 64,586	\$ 53,512	\$ 58,838	\$ 55,197	\$ 53,512	\$ 44,129	\$ 41,398	\$ 56,188	\$ 58,863	\$ 64,586	\$ 42,141	\$ 44,148	\$ 48,439	
Bristol	\$ 112,678	\$ 215,075	\$ 155,167	\$ 150,237	\$ 158,457	\$ 155,167	\$ 112,678	\$ 118,843	\$ 162,926	\$ 170,684	\$ 215,075	\$ 122,194	\$ 128,013	\$ 161,306	
New Hampton	\$ 292,193	\$ 450,615	\$ 384,545	\$ 389,591	\$ 423,281	\$ 384,545	\$ 292,193	\$ 317,460	\$ 403,772	\$ 423,000	\$ 450,615	\$ 302,829	\$ 317,250	\$ 337,962	
Hill	\$ 128,196	\$ 280,443	\$ 170,928	\$ 170,928	\$ 190,564	\$ 170,542	\$ 128,196	\$ 142,923	\$ 179,069	\$ 187,596	\$ 280,443	\$ 134,302	\$ 140,697	\$ 210,332	
Franklin	\$ 3,190,156	\$ 6,994,293	\$ 4,456,091	\$ 6,994,293	\$ 6,755,977	\$ 4,050,991	\$ 5,245,720	\$ 5,066,983	\$ 4,253,541	\$ 4,456,091	\$ 5,168,096	\$ 3,190,156	\$ 3,342,068	\$ 3,876,072	
Northfield	\$ 127,566	\$ 231,171	\$ 170,089	\$ 172,699	\$ 170,089	\$ 166,803	\$ 129,524	\$ 127,566	\$ 175,143	\$ 183,483	\$ 231,171	\$ 131,357	\$ 137,613	\$ 173,378	
Canterbury	\$ 535,276	\$ 991,082	\$ 713,702	\$ 717,240	\$ 738,096	\$ 679,716	\$ 537,930	\$ 553,572	\$ 713,702	\$ 747,688	\$ 991,082	\$ 535,276	\$ 560,766	\$ 743,312	
Concord	\$ 639,908	\$ 982,958	\$ 843,586	\$ 943,579	\$ 853,210	\$ 843,586	\$ 707,684	\$ 639,908	\$ 885,765	\$ 927,945	\$ 982,958	\$ 664,324	\$ 695,958	\$ 737,219	
Pembroke	\$ 630,399	\$ 974,585	\$ 800,507	\$ 841,048	\$ 848,088	\$ 800,507	\$ 630,786	\$ 636,066	\$ 840,532	\$ 880,557	\$ 974,585	\$ 630,399	\$ 660,418	\$ 730,939	
Allenstown	\$ 443,056	\$ 848,069	\$ 590,741	\$ 637,045	\$ 611,814	\$ 562,610	\$ 477,784	\$ 458,861	\$ 590,741	\$ 618,871	\$ 848,069	\$ 443,056	\$ 464,154	\$ 636,052	
Deerfield	\$ 1,715,095	\$ 2,707,678	\$ 2,177,899	\$ 2,436,970	\$ 2,707,678	\$ 2,177,899	\$ 1,827,727	\$ 2,030,758	\$ 2,286,794	\$ 2,395,689	\$ 2,678,020	\$ 1,715,095	\$ 1,796,766	\$ 2,008,515	
Totals	\$ 15,378,967	\$ 27,971,797	\$ 19,649,258	\$ 25,238,947	\$ 25,560,229	\$ 19,649,258	\$ 18,929,210	\$ 19,170,172	\$ 20,631,721	\$ 21,614,184	\$ 24,639,563	\$ 15,473,791	\$ 16,210,638	\$ 18,479,673	
Simulation Assumptions															
s1	Project cost allocation with 2014 local tax rates														
s2	Project cost allocation with 2014 equalized tax rates														
s3	Project cost allocation with 2014 equalized tax rates partially adjusted lower for same level of spending														
s4	Seventy-five percent of project cost allocation with 2014 local tax rates (.75*s1)														
s5	Seventy-five percent of project cost allocation with 2014 equalized tax rates (.75*s2)														
s6	Projected cost allocation with 2014 adjusted equalized tax rates grow at about 1 percent per year (5 percent total)														
s7	Projected cost allocation with 2014 adjusted equalized tax rates grow at about 2 percent per year (10 percent total)														
s7A	Projected cost allocation with 2014 adjusted equalized tax rates growing at annual average (5*10 year annual average)														
s8	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at about 1 percent per year (5 percent total)(.75*s6)														
s9	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at about 2 percent per year (10 percent total)(.75*s7)														
s9A	Seventy-five percent of projected cost allocation with 2014 adjusted equalized tax rates grow at 10 year annual average per year (.75*s7A)														

Appendix A: Summary of NPT First Year Property Tax Estimates Simulations Continued								
<u>B. County Property Taxes</u>								
NPT Estimated County Property Tax Payments First Full Year								
	Range		Midpoint	s2	s3	s6	s7	S7A
Coos County	\$1,489,786	\$1,638,764	\$1,638,764	\$1,662,504	\$1,489,786	\$1,564,275	\$1,638,764	\$1,781,634
Grafton County	\$827,620	\$910,382	\$869,001	\$860,589	\$827,620	\$869,001	\$910,382	\$954,252
Belknap County	\$38,316	\$42,148	\$40,232	\$38,424	\$38,316	\$40,232	\$42,148	\$40,640
Merrimack County	\$1,440,635	\$1,584,698	\$1,512,666	\$1,488,942	\$1,440,635	\$1,512,666	\$1,584,698	\$1,782,068
Rockingham County	\$123,676	\$136,043	\$129,859	\$124,018	\$123,676	\$129,859	\$136,043	\$131,768
County Total	\$3,920,033	\$4,312,036	\$4,174,477	\$4,174,477	\$3,920,033	\$4,116,034	\$4,312,036	\$4,690,361
	s2 Project cost allocation with 2014 equalized tax rates							
	s3 Project cost allocation with 2014 equalized tax rates partially adjusted lower for same level of spending							
	s6 Projected cost allocation with 2014 adjusted equalized tax rates grow at about 1 percent per year (5 percent total)							
	s7 Projected cost allocation with 2014 adjusted equalized tax rates grow at about 2 percent per year (10 percent total)							
	s7A Projected cost allocation with 2014 adjusted equalized tax rates growing at annual average (5*10 year annual average)							
<u>C. State Education Property Taxes</u>								
NPT Estimated State Property Tax Payments First Full Year								
	Range							
Range	\$9,500,000	\$10,500,000						
<u>D. All NPT Property Taxes</u>								
	Range							
Total	\$28,799,000	\$42,783,833						