

COMMONWEALTH OF MASSACHUSETTS

APPELLATE TAX BOARD

**FIRSTLIGHT POWER RESOURCES, INC. v. BOARD OF ASSESSORS OF
THE TOWN OF ERVING**

Docket Nos. F337746-747 (FY 2019)

**NORTHFIELD MOUNTAIN LLC v. BOARD OF ASSESSORS OF
THE TOWN OF ERVING**

Docket Nos. F339637-638 (FY 2020)
F342871-872 (FY 2021)
F345808-809 (FY 2022)

**NORTHFIELD MOUNTAIN LLC v. BOARD OF ASSESSORS OF
THE TOWN OF NORTHFIELD**

Docket Nos. F347237-238 (FY 2022)

Promulgated:
October 9, 2025

These are consolidated appeals under the formal procedure, pursuant to G.L. c. 58A, § 7, and G.L. c. 59, §§ 64 and 65, from the refusal of the Boards of Assessors of the towns of Erving ("Erving Assessors") and Northfield ("Northfield Assessors") (collectively, "assessors" or "appellees") to abate taxes on certain real and personal property associated with the Northfield Mountain Pumped Storage Hydroelectric Facility ("NMPS") located in Erving and Northfield ("subject property"). For fiscal year 2019, the portion of the subject property located in Erving was owned by and assessed to FirstLight Power Resources, Inc. by the Erving Assessors, and, for fiscal years 2020 through 2022, the portion of the subject property located in Erving was

owned by and assessed to Northfield Mountain LLC by the Erving Assessors. For fiscal year 2022, the portion of the subject property located in Northfield was owned by and assessed to Northfield Mountain LLC by the Northfield Assessors.¹ The assessors made the assessments under G.L. c. 59, §§ 11, 18, and 38. For clarity and ease of exposition, FirstLight Power Resources, Inc. and Northfield Mountain LLC will hereinafter be referred to collectively as "FirstLight" or the "appellant."

Chairman DeFrancisco heard these appeals. Commissioners Good, Elliott, Metzger, and Bernier joined him in the decision for the Erving Assessors for fiscal year 2019 and the revised decisions for FirstLight for fiscal years 2020, 2021, and 2022, promulgated simultaneously with these findings.

These findings of fact and report are promulgated pursuant to the parties' requests under G.L. c. 58A, § 13 and 831 CMR 1.34.

John A. Shope, Esq., Thaddeus A. Heuer, Esq., and Allen M. Thigpen, Esq. for the appellants.

Ellen M. Hutchinson, Esq. for the appellees.

¹ For fiscal years 2019 through 2021, the portion of the subject property located in Northfield was under a so-called PILOT agreement which contractually set the appellant's property tax obligation to Northfield. "PILOT" is an acronym for "payment in lieu of taxes" and PILOT agreements are authorized under G.L. c. 59, § 38H. Subsection (b) of the statute requires that "[a]ny such agreement shall be the result of good faith negotiations and shall be the equivalent of the property tax obligation based on full and fair cash valuation."

FINDINGS OF FACT AND REPORT

The hearing of these appeals encompassed five days and included: testimony from three witnesses, including the chief operating officer at FirstLight, Justin Trudell, and two valuation experts, Mark R. Simzyk for the appellant and Mark F. Pomykacz for the appellees; the introduction into evidence of over forty exhibits, including the requisite jurisdictional documents and pre-trial depositions and appraisal reports from the parties' valuation experts, as well as a statement of agreed facts. Following the hearing, the Appellate Tax Board ("Board") conducted an on-site view of NMPS. The parties also submitted post-hearing briefs. Based on the evidence admitted at the hearing and its view of NMPS, the Board made the following findings of fact.

Jurisdiction

On January 1, 2018, January 1, 2019, January 1, 2020, and January 1, 2021, FirstLight was the owner of the subject property in the Erving and Northfield, which, along with a small amount of additional property in the town of Gill, comprised NMPS. In accordance with G.L. c. 59, § 29, FirstLight timely submitted Forms of List for its personal property to the respective towns for the fiscal years at issue and subsequently supplemented those submissions at the assessors' request. For the fiscal years at issue, the assessors valued the subject property and assessed taxes thereon as summarized in the table below.

The Subject Property's Relevant Valuations and Tax Assessments
for FY 2019, FY 2020, FY 2021, and FY 2022

Erving Assessors

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Assessed Values				
Real Estate ("RE")	\$385,094,492	\$385,093,692	\$385,121,692	\$459,771,300
Personal Prop. ("PP")	<u>\$369,313,130</u>	<u>\$369,313,130</u>	<u>\$369,313,130</u>	<u>\$275,768,410</u>
Total Assessed Values	<u>\$754,407,622</u>	<u>\$754,406,822</u>	<u>\$754,434,822</u>	<u>\$735,539,710</u>
Tax Rates/\$1,000	\$11.93 for RE	\$12.24 for RE	\$12.37 for RE	\$12.92 for RE
	\$11.92 for PP	\$12.24 for PP	\$12.37 for PP	\$12.92 for PP
Tax Assessed				
RE	\$4,594,177.29	\$4,713,546.79	\$4,763,955.33	\$5,940,245.20
PP	<u>\$4,402,212.51</u>	<u>\$4,520,392.71</u>	<u>\$4,568,403.42</u>	<u>\$3,562,927.86</u>
Total Tax Assessed	<u>\$8,996,389.80</u>	<u>\$9,233,939.50</u>	<u>\$9,332,358.75</u>	<u>\$9,503,173.06</u>

Northfield Assessors

Assessed Values				
RE	n/a	n/a	n/a	\$ 93,601,928
PP	n/a	n/a	n/a	<u>\$ 74,748,683</u>
Total Assessed Value	n/a	n/a	n/a	\$168,350,611
Tax Rates/\$1,000	n/a	n/a	n/a	\$13.85 for RE
				\$13.85 for PP
Tax Assessed				
RE				\$1,296,386.70
CPA (@0.005% of RE Tax)				\$ 6,481.93
PP				<u>\$1,035,269.26</u>
Total Tax Assessed				<u>\$2,338,137.89</u>

In accordance with G.L. c. 59, § 57, FirstLight timely paid the taxes assessed without incurring interest. In accordance with G.L. c. 59, § 59, FirstLight timely filed abatement applications with the Erving Assessors for fiscal years 2019 through 2022, and timely filed abatement applications with the Northfield Assessors for fiscal year 2022. Following the assessors' denials of FirstLight's abatement applications, FirstLight, in accordance with G.L. c. 59, §§ 64 and 65, seasonably filed Petitions Under Formal Procedure with the Board. The following table summarizes the timing of FirstLight's abatement applications, the assessors'

denials, and FirstLight's petitions to the Board for the fiscal years at issue.

Summary of Filing Dates for Abatement Applications, Their Denial Dates, and Filing Dates for Petitions to the Board for FY 2019, FY 2020, FY 2021, and FY 2022

<u>Erving Assessors</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Actual Tax Payments Due	12/17/2018	11/07/2019	12/17/2020	01/06/2022
Abatement Applications	12/17/2018	11/05/2019	12/15/2020	12/27/2021
Denials	03/11/2019	02/03/2020	03/09/2021	03/07/2022
Petitions	05/08/2019	02/14/2020	06/03/2021	06/03/2022
<u>Northfield Assessors</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Actual Tax Payments Due				04/01/2022
Abatement Applications	n/a	n/a	n/a	03/31/2022
Denials	n/a	n/a	n/a	05/04/2022
Petitions	n/a	n/a	n/a	08/02/2022

On this basis, the Board found and ruled that it had jurisdiction to hear and decide these appeals.

Description of the NMPS and Its Operations

FirstLight is the owner and operator of the 1,167-megawatt NMPS constructed between 1967 and 1972 in Erving, Northfield, and Gill. NMPS is part of the ISO-NE system,² an independent, not-for-profit corporation responsible for maintaining competitively priced electricity flowing throughout the six New England states. NMPS is composed of an open pumped storage hydroelectric generating facility, along with supporting land and recreational lands, located on the eastern bank of the Connecticut River approximately 5.2 miles upstream of the Turners Falls Dam. NMPS cycles water between a lower reservoir on the Connecticut River to an upper

² ISO-NE is an acronym for "Independent Systems Operator-New England."

reservoir carved into the summit of Northfield Mountain. To operate economically, NMPS pumps water from the lower reservoir to the upper one when electric prices are low and then releases that water through its turbines when the electric prices are higher. NMPS functions like a battery: storing energy in the upper reservoir for release when obligated or summoned.

NMPS is not a regulated utility, is not subject to a power-purchase agreement, and, therefore, as a merchant generator, has no guaranteed return. Its income is derived primarily from what is categorized as energy revenue and capacity revenue, as well as for certain ancillary services.

NMPS's energy revenue is gained from NMPS's participation in what is termed "day-ahead" and "real-time" energy arbitrage. By participating in the "day-ahead" market, NMPS can lock-in prices for electric energy the day before the operating day to hedge against potential "day-of" price fluctuations. By participating in the "real-time" market, NMPS contracts to dispatch power to meet ISO-NE's immediate demand for electricity. Participation in these markets allows NMPS to determine when to pump, that is replenish the upper reservoir, and when to generate, that is release water through the turbines to produce electricity.

NMPS's capacity revenue consists of payments from ISO-NE for NMPS's availability to generate in the future. The amount of the payments is contingent upon the clearing price and the amount of

capacity NMPS puts forward in the auction. NMPS's capacity payments, which constitute the largest portion of its revenue, have declined significantly since 2019.

NMPS's ancillary revenue is derived from providing, among other things, regulation and VAR or "voltage" support to the grid. NMPS provides regulation support using specially equipped generators to increase or decrease its generation output every four seconds in response to signals it receives from ISO-NE to control slight changes in the system. NMPS engages in VAR support by helping to maintain voltage on the transmission system within an acceptable range.

NMPS was originally built to exploit the low energy prices associated with nuclear power plants' nighttime operations. The retirement of many of those plants along with the addition of modern gas-fired electric plants, as well as solar and wind facilities, more efficient hydroelectric battery plants, energy imports from Canada, and energy efficiency programs have altered the opportunities and calculus for NMPS. Because of these existing and prospective changes in its market, NMPS has experienced declining frequency of operation, fewer opportunities for arbitrage, and declining or stagnant revenues. Moreover, since 2018, NMPS has been operating under automatically renewing single-year licenses while it seeks a fifty-year license renewal which is expected to be more restrictive than the license under which it

presently operates. As of the date of the hearing in these appeals, NMPS had expended over \$30 million on the relicensing process. Based on these factors, the investment risk associated with NMPS increases as its net revenues decrease or stagnate.

As reported by the appellant's valuation expert - the unpredictable nature of electricity markets, the proliferation of natural gas, the capital cost of meeting environmental requirements, the increase in competition, the uncertain political and regulatory climate, the future of the U.S. economy, and the uncertain long-term price of electricity - all contribute to the uncertainty affecting the future of the U.S. electric generation industry of which NMPS is a part.

The Appellant's Valuation Expert

Without objection and consistent with the parties' stipulation, the Board qualified the appellant's valuation expert, Mark R. Simzyk, as an expert in valuing electric energy facilities for purposes of *ad valorem* property taxes. After determining that the subject property's highest and best use was its continued use as part of NMPS, Mr. Simzyk considered several approaches to value including sales-comparison, replacement-cost-new ("RCN"), and discounted-cash-flow ("DCF") and direct-capitalization methodologies.

With respect to his sales-comparison approach, Mr. Simzyk conducted a search of recent sales - within five years of the

relevant valuation and assessment dates - of traditional hydroelectric generating plants and pumped storage hydroelectric facilities throughout the continental United States. The search identified two portfolio sales of pumped storage hydroelectric generating plants, including one in 2016 that involved NMPS. Mr. Simzyk concluded, however, that this 2016 sale was not useful in determining the value of NMPS for the fiscal years at issue because NMPS was an undifferentiated part of a portfolio sale that included twelve other conventional hydroelectric facilities, as well as renewable energy credits. Mr. Simzyk likewise concluded that the second transaction, which occurred in 2018, was not helpful because it involved the acquisition of a partial interest in a hydroelectric plant, along with five other gas-fired resources. Because of the complexity of these transactions, Mr. Simzyk was unable to extract a value for a comparable plant and make appropriate adjustments to it to develop an indication of value for NMPS for the fiscal years at issue.

With respect to his RCN approach, Mr. Simzyk considered several sources, including U.S. Energy Information Administration data and a cost comparable, but relied primarily on cost information contained in the Argonne National Laboratory's *Modeling and Analysis of Value of Advanced Pumped Storage Hydropower in the United States* (the "Argonne Study") to develop base RCN costs for the subject assets as of the relevant valuation

and assessments dates. He then adjusted the base RCN values derived from the *Argonne Study* data for time and location of construction, as well as interest, and calculated rounded values that excluded the value of the land, and reductions for physical deterioration, functional obsolescence, and economic obsolescence. These RCN amounts equaled \$1,822,644,000 for fiscal year 2019, \$1,870,250,700 for fiscal year 2020, \$1,901,094,300 for fiscal year 2021, and \$1,962,383,200 for fiscal year 2022. After deducting 50% for physical deterioration for all four fiscal years at issue; and \$119,693,000 for fiscal year 2019, \$119,107,000 for fiscal year 2020, \$158,469,000 for fiscal year 2021, and \$162,046,000 for fiscal year 2022 for functional obsolescence that he equated with excess pumping costs discounted over the subject property's remaining 40-year useful life; and then 30%, 35%, 35%, and 40% for economic obsolescence for fiscal years 2019, 2020, 2021, and 2022, respectively; and, finally, \$41,290,000 for fiscal year 2019, \$47,690,000 for fiscal year 2020, \$60,000,000 for fiscal year 2021, and \$60,580,000 for fiscal year 2022 for necessary capital expenditures ("CapEx"); Mr. Simzyk estimated values for NMPS' real and personal property improvements for fiscal years 2019, 2020, 2021, and 2022 of \$519,150,300, \$482,721,927, \$454,850,797, \$430,907,060, respectively. To these amounts, he then added land values consistent with the assessors' assessments, resulting in rounded values for NMPS' real and personal property of

\$526,900,000, \$490,700,000, \$462,900,000, and \$438,900,000, respectively.

Mr. Simzyk's cost methodology is summarized in the following two tables.

Summary of Mr. Simzyk's Cost Approach
for FY 2019 and FY 2020

	<u>FY 2019</u>	<u>FY 2020</u>
Base Replacement Cost New	\$ 1,822,644,000	\$ 1,870,250,700
Physical Deterioration @ 50%	\$ 911,322,000	\$ 935,125,350
RCN less Physical Deterioration	\$ 911,322,000	\$ 935,125,350
Functional Obsolescence	\$ 110,693,000	\$ 119,107,000
Economic Obsolescence	\$ 240,188,700	\$ 285,606,423
Necessary CapEx		
Regulatory	\$ 13,030,000	\$ 14,880,000
Deferred/Contract Obligation	\$ 28,260,000	\$ 32,810,000
Total - CapEx	\$ 41,290,000	\$ 47,690,000
Improvements Value	\$ 519,150,300	\$ 482,721,927
Plus Land Value	\$ 7,713,709	\$ 7,999,700
Cost Indicator of Value	\$ 526,864,009	\$ 490,721,627
Rounded	\$ 526,900,000	\$ 490,700,000

Summary of Mr. Simzyk's Cost Approach
for FY 2021 and FY 2022

	<u>FY 2021</u>	<u>FY 2022</u>
Base Replacement Cost New	\$ 1,901,094,300	\$ 1,962,382,200
Physical Deterioration @ 50%	\$ 950,547,150	\$ 981,191,100
RCN less Physical Deterioration	\$ 950,547,150	\$ 981,191,100
Functional Obsolescence	\$ 158,469,000	\$ 162,046,000
Economic Obsolescence	\$ 277,227,353	\$ 327,658,040
Necessary CapEx		
Regulatory	\$ 17,840,000	\$ 18,100,000
Deferred/Contract Obligation	\$ 42,160,000	\$ 42,480,000
Total - CapEx	\$ 60,000,000	\$ 60,580,000
Improvements Value	\$ 454,850,797	\$ 430,907,060
Plus Land Value	\$ 8,002,600	\$ 8,002,600
Cost Indicator of Value	\$ 462,853,397	\$ 438,909,660
Rounded	\$ 462,900,000	\$ 438,900,000

Mr. Simzyk also performed four income analyses for valuing NMPS and the subject property for the fiscal years at issue. These analyses included pre- and after-tax DCF methodologies and pre-

and after-tax direct-capitalization methods. Mr. Simzyk acknowledged that, in all these analyses, he had mistakenly double counted property taxes by including them as an operating expense and, in his words, as an "adder on [his] discount rate and cap rate." He estimated that this error resulted in value that were approximately \$80 to \$85 million too low for fiscal years 2019 and 2020, and \$120 to \$130 million too low for fiscal years 2021 and 2022.

Mr. Simzyk's DCF analyses began by projecting NMPS's yearly cash flow over a ten-year holding period. These cash flows incorporated what he considered to be all projected revenue streams and expenses. His after-tax analysis also included income taxes. In making his projections, Mr. Simzyk considered historical trends in the industry, future projections for the electric generation industry, and past operating results. He relied on several industry sources, as well as management projections. Mr. Simzyk accounted for CapEx and net-working-capital investments in his cash flow streams and, in his after-tax methodology, he adjusted for depreciation and amortization. He discounted each of his expected cash flows to its present value ("PV") as of the valuation and assessment date for the fiscal year at issue.

The discount rates that he used were geared toward the risks associated with owning and operating NMPS. Mr. Simzyk used a "weighted average cost of capital" ("WACC") model by weighting the

required return on equity capital and interest-bearing debt in proportion to their percentages in an expected industry capital structure, which he determined was 37.5% debt and 62.5% equity for fiscal years 2019, 2020, and 2021, and 38.5% debt and 61.5% equity for fiscal year 2022. He calculated his after-tax rate of return on debt capital to be 3.50% for fiscal year 2019, 4.30% for fiscal year 2020, 3.10% for fiscal year 2021, and 3.00% for fiscal year 2022. Using a variation of the "Capital Asset Pricing Model" ("CAPM"), he calculated his return on equity to be 16.70% for fiscal year 2019, 14.50% for fiscal year 2020, 9.90% for fiscal year 2021, and 11.10% for fiscal year 2022. In calculating his return on equity, he assumed a size premium equivalent to the size of NMPS. Based on these assumptions and an after-tax property tax rate of approximately 0.89% for fiscal year 2019 and 0.93% for fiscal years 2020, 2021, and 2022, he calculated an after-tax WACC of 12.60% for fiscal year 2019, 10.68% for fiscal year 2020, 8.30% for fiscal year 2021, and 8.60% for fiscal year 2022.

Mr. Symzyk then totaled the cash flow streams, added them to the terminal value, and arrived at his business enterprise value ("BEV") for NMPS. He then adjusted the BEV by deducting working capital and intangibles to achieve his values for NMPS's real and personal property. He explained that his deduction of three percent from the BEV for intangibles was justified here primarily because of the trained and assembled work force, but he also referred to

the management team, and licensing, as well as good will, synergies, and other things. He testified that based on his experience in valuing properties like NMPS, three percent was an appropriate amount to deduct from BEV. Mr. Simzyk explained that his deduction for working capital was necessary because working capital is inherent in NMPS's cash flow and is necessary to operate the business. Mr. Simzyk defined working capital as the difference between current assets and current liabilities. In his own words: "It represents the amount of cash and cash equivalents, such as inventory and supplies that must be on hand to operate a business, less short-term debt, accounts payable and accrued expenses." He further explained that the discount rates are partially based on similar companies in the industry that have working capital. As a result, he asserted that working capital is built into BEV and must be accounted for. Based on his experience, he proposed a deduction of five percent of annual revenues.

The following table summarizes Mr. Simzyk's after-tax DCF analyses:

Mr. Simzyk's After-Tax DCF Analyses
for FY 2019, FY 2020, FY 2021, and FY 2022

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
	<u>\$</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>
Sum of PV of Free Cash Flows	381,048,894	340,261,224	261,976,377	242,545,686
Terminal Value	<u>165,380,888</u>	<u>177,572,497</u>	<u>234,264,558</u>	<u>232,109,226</u>
BEV	546,429,782	517,833,721	496,240,935	474,654,912
Less Intangible Value	(16,392,893)	(15,535,012)	(14,887,228)	(14,239,647)
Less Initial Working Capital	<u>11,510,094</u>	<u>11,638,894</u>	<u>9,360,869</u>	<u>(7,759,220)</u>
Real & Personal Prop. Value	518,526,795	490,659,815	471,992,838	452,656,045
Rounded Value	518,530,000	490,660,000	471,990,000	452,700,000

Mr. Simzyk reported that his "pre-tax DCF [was] identical to his after-tax DCF except that the value indicator [was] calculated on a pre-income tax basis." Accordingly, in developing his pre-tax DCF, Mr. Simzyk did not calculate or consider depreciation and amortization, and he adjusted both his base discount rate and effective property tax rate to reflect pre-tax basis rates. The following table summarizes Mr. Simzyk's pre-tax DCF analyses:

Mr. Simzyk's Pre-Tax DCF Analyses
for FY 2019, FY 2020, FY 2021, and FY 2022

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
	<u>\$</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>
Sum of PV of Free Cash Flows	416,192,681	375,403,465	287,357,590	258,962,776
Terminal Value	<u>93,579,274</u>	<u>103,536,476</u>	<u>187,432,670</u>	<u>203,826,705</u>
BEV	509,771,955	478,939,941	474,790,260	462,789,481
Less Intangible Value	(15,293,159)	(14,368,198)	(14,243,708)	(13,883,684)
Less Initial Working Capital	<u>(11,510,094)</u>	<u>(11,638,894)</u>	<u>(9,360,869)</u>	<u>(7,759,220)</u>
Real & Personal Prop. Value	482,968,702	452,932,849	451,185,683	441,146,577
Rounded Value	482,970,000	452,930,000	451,190,000	441,100,000

Mr. Simzyk's after-tax direct capitalization methodology consisted of several steps. His first step was to calculate normalized "Earnings Before Interest, Taxes, and Depreciation and Amortization" ("EBITDA"). He did this by establishing a normalized

revenue stream and normalized operating expenses based on historical, current, and projected income and expenses. He estimated these components by weighting years one through five of NMPS's projected revenues and expenses, giving the most weight to years three through five.

Mr. Simzyk's next step was to determine normalized depreciation and amortization, "Earnings Before Interest and Taxes" ("EBIT"), and after-tax operating profit. To calculate EBIT, depreciation and amortization expenses were subtracted from EBITDA. Mr. Simzyk calculated depreciation and amortization using an estimated stepped-up basis for the subject property, as well as CapEx. He assumed taxes would be paid on EBIT at a blended rate of 27.32% and subtracted that amount from EBIT to achieve normalized after-tax operating profit.

In his third step, Mr. Simzyk computed a normalized cash flow by adjusting the normalized after-tax operating profit for normalized depreciation and amortization, normalized changes in net-working capital, and normalized CapEx. Normalized depreciation and amortization were added to after-tax operating profit while normalized changes in net-working capital and CapEx were subtracted.

Lastly, he capitalized the normalized cash flow by a rate that he deemed commensurate with the operating characteristics of the industry and NMPS. Mr. Simzyk developed the capitalization

rate by deducting estimated long-term growth rates from the after-tax WACC used in his DCF analysis.

The following two tables summarize Mr. Simzyk's derivation of his normalized cash flow using his after-tax analyses for the fiscal years at issue.

Mr. Simzyk's After-Tax Normalized Cash Flow Calculation
for FY 2019 and FY 2020

	<u>FY 2019</u>	<u>FY 2020</u>
	\$	\$
Normalized Total Revenue (And Gross Margin)	142,273,303	141,987,858
Less Normalized Operating Expenses	66,147,133	73,626,630
Equals Normalized EBITA	<u>76,126,170</u>	<u>68,361,227</u>
Less Normalized Depreciation and Amortization	33,776,700	31,529,965
Equals Normalized EBIT	<u>42,349,470</u>	<u>36,831,262</u>
Less Income Taxes	11,569,875	10,062,301
Equals After-Tax Operating Profit	<u>30,779,595</u>	<u>26,768,961</u>
Plus Normalized Depreciation and Amortization	33,776,700	31,529,965
Less CapEx	8,213,978	9,350,284
Less Changes in Working Capital	167,171	165,416
Equals Normalized Cash Flow	<u>56,175,145</u>	<u>48,783,227</u>

Mr. Simzyk's After-Tax Normalized Cash Flow Calculation
for FY 2021 and FY 2022

	<u>FY 2021</u>	<u>FY 2022</u>
	\$	\$
Normalized Total Revenue (And Gross Margin)	119,011,816	117,357,230
Less Normalized Operating Expenses	69,934,740	73,425,111
Equals Normalized EBITA	<u>49,077,076</u>	<u>43,932,118</u>
Less Normalized Depreciation and Amortization	35,291,739	28,817,580
Equals Normalized EBIT	<u>13,785,337</u>	<u>15,114,538</u>
Less Income Taxes	3,766,154	4,129,292
Equals After-Tax Operating Profit	<u>10,019,183</u>	<u>10,985,247</u>
Plus Normalized Depreciation and Amortization	35,291,739	28,817,580
Less CapEx	12,841,114	10,009,213
Less Changes in Working Capital	138,054	134,961
Equals Normalized Cash Flow	<u>32,331,755</u>	<u>29,658,652</u>

The following table summarizes Mr. Simzyk's capitalization of his normalized cash flow to arrive at an indicated BEV for the subject property. As he had done in his DCF methodologies, he then

deducted for working capital and intangibles to arrive at his estimate of fair cash values for the subject property.

Mr. Simzyk's After-Tax Direct Capitalization
for FY 2019, FY 2020, FY 2021, and FY 2022

	<u>FY 2019</u> \$	<u>FY 2020</u> \$	<u>FY 2021</u> \$	<u>FY 2022</u> \$
Normalized Cash Flow	56,175,145	48,783,227	32,331,755	29,658,652
Capitalization Rate	10.25%	9.27%	5.98%	6.30%
Indicated BEV	548,050,199	526,248,398	540,664,796	470,772,261
Less Working Capital	7,113,665	7,099,393	5,950,591	5,867,861
Less Intangible Assets	16,441,506	15,787,452	16,219,944	14,123,168
Indicated FCV	524,495,028	503,361,553	518,494,261	450,781,232
Rounded	524,000,000	503,000,000	518,000,000	450,800,000

Mr. Simzyk also performed a pre-tax direct capitalization method in which the main differences between his pre-tax direct-capitalization method and his after-tax direct-capitalization method are the capitalization of his normalized cash flow on a pre-income tax basis using a pre-tax capitalization rate and the use of a pre-tax property tax rate. These rates therefore included the assumption that NMPS would pay state and federal income taxes as well as property taxes. In addition, he reported that he gave more weight to the first three years of his projected cash flows in developing the normalized operating income for the pre-tax direct capitalization analyses. Mr. Simzyk's pre-tax direct-capitalization analyses are summarized in the following four tables.

Mr. Simzyk's Pre-Tax Direct Capitalization
for FY 2019

Normalized Annual Revenues	\$ 157,152,986
Total Normalized Operating Expenses	(\$ 65,292,159)
Normalized Operating Income	\$ 91,858,827
Adjustments:	
Less: CapEx @ 4.7% of Annual Revenues	(\$ 7,384,724)
Less: Change in Working Capital	(\$ 184,655)
Total Annual Normalized Free Cash Flow	\$ 84,289,447
Capitalization Rate	15.15%
Indicated BEV	\$ 556,365,989
Adjustments:	
Less: Working Capital @5.00% of Annual Revenues	(\$ 7,857,649)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 16,690,980)
Tangible Asset Value - Real and Personal Property	\$ 531,817,359
Tangible Asset Value - Rounded	\$ 532,000,000

Simzyk's Pre-Tax Direct Capitalization
for FY 2020

Normalized Annual Revenues	\$ 152,301,065
Total Normalized Operating Expenses	(\$ 70,940,140)
Normalized Operating Income	\$ 81,360,925
Adjustments:	
Less: CapEx @ 6.1% of Annual Revenues	(\$ 9,318,168)
Less: Change in Working Capital	(\$ 177,431)
Total Annual Normalized Free Cash Flow	\$ 71,865,327
Capitalization Rate	13.67%
Indicated BEV	\$ 525,715,630
Adjustments:	
Less: Working Capital @5.00% of Annual Revenues	(\$ 7,615,053)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 15,771,469)
Tangible Asset Value - Real and Personal Property	\$ 502,329,108
Tangible Asset Value - Rounded	\$ 502,000,000

Mr. Simzyk's Pre-Tax Direct Capitalization
for FY 2021

Normalized Annual Revenues	\$ 123,723,786
Total Normalized Operating Expenses	(\$ 69,203,548)
Normalized Operating Income	\$ 54,525,238
Adjustments:	
Less: CapEx @ 7.2% of Annual Revenues	(\$ 8,854,426)
Less: Change in Working Capital	(\$ 143,525)
Total Annual Normalized Free Cash Flow	\$ 45,527,287
Capitalization Rate	9.08%
Indicated BEV	\$ 501,401,842
Adjustments:	
Less: Working Capital @5.00% of Annual Revenues	(\$ 6,186,189)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 15,042,055)
Tangible Asset Value - Real and Personal Property	\$ 480,173,348
Tangible Asset Value - Rounded	\$ 480,200,000

Mr. Simzyk's Pre-Tax Direct Capitalization
for FY 2022

Normalized Annual Revenues	\$ 120,890,394
Total Normalized Operating Expenses	(\$ 67,512,158)
Normalized Operating Income	\$ 53,378,236
Adjustments:	
Less: CapEx @ 6.4% of Annual Revenues	(\$ 7,754,300)
Less: Change in Working Capital	(\$ 139,024)
Total Annual Normalized Free Cash Flow	\$ 45,484,912
Capitalization Rate	9.60%
Indicated BEV	\$ 473,801,166
Adjustments:	
Less: Working Capital @5.00% of Annual Revenues	(\$ 6,044,520)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 14,214,035)
Tangible Asset Value - Real and Personal Property	\$ 453,542,611
Tangible Asset Value - Rounded	\$ 453,500,000

Mr. Simzyk's reconciled the values that he derived from his various analyses and estimated the value of NMPS's real and personal property for the fiscal years at issue as summarized in the following two tables.

**Mr. Simzyk's Values for NMPS's Real & Personal Property
for FY 2019 and FY 2020**

	<u>FY 2019</u>	<u>FY 2020</u>
Sales-Comparison Approach	N/A	N/A
Income Approaches	512,600,000	489,900,000
10-Yr. DCF After-Tax	518,530,000	490,660,000
10-Yr. DCF Pre-Tax	482,970,000	452,930,000
Direct Capitalization After-Tax	524,000,000	503,000,000
Direct Capitalization Pre-Tax	532,000,000	502,000,000
Cost Approach	526,900,000	490,700,000
NMPS's Real & Personal Property	520,000,000	490,000,000

**Mr. Simzyk's Values for NMPS's Real & Personal Property
for FY 2021 and FY 2022**

	<u>FY 2021</u>	<u>FY 2022</u>
	<u>\$</u>	<u>\$</u>
Sales-Comparison Approach	N/A	N/A
Income Approaches	472,800,000	450,200,000
10-Yr. DCF After-Tax	471,990,000	452,700,000
10-Yr. DCF Pre-Tax	451,190,000	441,100,000
Direct Capitalization After-Tax	518,000,000	450,800,000
Direct Capitalization Pre-Tax	480,200,000	453,500,000
Cost Approach	462,900,000	438,900,000
NMPS's Real & Personal Property	470,000,000	445,000,000

In his testimony, Mr. Simzyk recommended adjusting his values for the subject property for fiscal years 2019 and 2020 by adding \$80 million to \$85 million to account for his double counting of property taxes. For fiscal years 2021 and 2022, he recommended adjusting his values by \$120 million to \$130 million. Applying the higher adjustment figures result in approximate values for NMPS's real and personal property of \$600,000,000 for fiscal year 2019,

575,000,000 for fiscal year 2020, \$600,000,000 for fiscal year 2021, and \$575,000,000 for fiscal year 2022.³

Lastly, Mr. Simzyk did not allocate his values for NMPS's real and personal property to the towns in which NMPS was located, but he did testify that he accepted the allocation percentages presented by Mr. Pomykacz.

The Assessors' Valuation Expert

Without objection and consistent with the parties' stipulation, the Board qualified the assessors' valuation expert, Mark F. Pomykacz, as an expert in commercial real estate appraising and the appraisal of electric power generating facilities. After determining that the subject property's highest and best use was its continued use as part of NMPS, Mr. Pomykacz considered several approaches to value including sales-comparison, cost, pre- and after-tax DCF, and pre-tax direct-capitalization methodologies.

With respect to a sales-comparison approach, Mr. Pomykacz reported that he attempted to find data on sales of other similar pumped storage hydroelectric plants. The sales that he found included values from fuel contracts, electricity power purchase agreements, and numerous other factors that could not be readily separated from the value of the plant itself. Moreover, he observed

³ In their post-hearing submissions, FirstLight's attorneys submitted full and fair cash values of \$617,000,000, \$587,000,000, \$601,200,000, and \$583,500,000 for fiscal years 2019 through 2022, respectively, based on Mr. Simzyk's pre-tax direct capitalization approach.

that many of the sales were part of larger portfolio sales and any attempts to allocate a sale price for a pumped storage hydroelectric plant alone would result in an inaccurate value. Mr. Pomykacz noted that historically, the sales-comparison approach has not been used to value hydroelectric generating plants because of the difficulty in obtaining useful sales data. Despite his attempts, Mr. Pomykacz was unable to complete a meaningful and reliable sales-comparison approach.

For his cost approach, Mr. Pomykacz used what he termed "a trended original cost reproduction approach" ("RCNLD"). He relied on original cost data that he trended and then adjusted for physical depreciation but not for functional obsolescence or for external or economic obsolescence. He did not identify any significant functional obsolescence, which he confirmed with NMPS's representatives at the time of his inspection, and he reasoned that economic obsolescence was not an appropriate adjustment here because the values that he derived for NMPS' real and personal property using his income approaches far exceeded his RCNLD values, indicating that there was no economic obsolescence. Mr. Pomykacz then added estimated values for the land associated with the subject property which he bases on sales analyses. The values that Mr. Pomykacz derived from his RCNLD methodologies are summarized in the following table.

Mr. Pomykacz's Cost Analyses
for FY 2019, FY 2020, FY 2021, and FY 2022⁴

<u>Overall Plant</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
	<u>(\$)</u>	<u>(\$)</u>	<u>(\$)</u>	<u>(\$)</u>
Trended Original Cost	725,329,177	744,294,146	750,052,715	759,471,883
Single Family Home	275,000	275,000	275,000	275,000
Land	8,321,900	7,783,800	7,193,100	7,991,274
Total Cost Analysis Conclusion	<u>733,026,077</u>	<u>752,352,946</u>	<u>757,520,815</u>	<u>767,471,883</u>

Ultimately, however, Mr. Pomykacz did not rely on his cost approach for valuing NMPS' personal and real property because he did not have sufficient information regarding repair and replacement equipment added to the facility over the years.

For income approaches, Mr. Pomykacz employed both pre- and after-tax DCF, separate equity and debt after-tax DCF, and pre-tax direct capitalization methodologies. In his income methods, he reported that he relied on historical operating and financial data and industry data such as market data from ISO-NE. In his DCF approaches, he projected cash flows forward for ten years with a reversion. He included in his cash flows all revenue sources, including energy revenues, capacity revenues, ancillary/VAR revenue, and other revenue. He adjusted his revenue for long-term growth rates, depending on the type of income, of 2.25% to 2.50%, annually. For expenses, Mr. Pomykacz reported that he analyzed historical expense data along with statistical expense information on hydroelectric facilities and forecasted a stabilized amount. He applied an inflation rate of 2.5%, annually. His expense categories

⁴ The Board noted some small discrepancies in Mr. Pomykacz's figures.

included operations and maintenance ("O&M") expenses and general and administrative ("G&A") expenses. He reported that his O&M expenses incorporated most major expenses except income taxes, depreciation and amortization, and CapEx. He reported that he based his CapEx on historical expenditures and a "standard market rate" of 7.5% for fiscal years 2019 to 2021 and 5.0% for fiscal year 2022 of the total revenue stream, which he reduced in the year of the reversion. Mr. Pomykacz forecasted interest expense by applying industry-specific interest rates to the portion of NMPS's value estimated to be financed with debt and created a loan amortization schedule. He also forecasted a stable market-rate effective tax rate for the NMPS of 21.0% over the holding period.

Mr. Pomykacz determined NMPS's value by discounting each of the projected cash flows and adding them to the net proceeds from a reversion. Similar to Mr. Simzyk, he utilized a WACC analysis for discounting, which combines a weighted debt yield and equity yield into an overall investment yield. In determining the equity rate for his WACC, Mr. Pomykacz, like Mr. Simzyk, used CAPM as well as the Cost of Equity Capital Build-Up Analysis. In calculating his return on equity, he used a size premium geared toward a multi-billion-dollar owner as opposed to the size of NMPS itself.

In determining the debt rates, Mr. Pomykacz analyzed Moody's twenty-year government bond rates and Moody's Aaa and Baa bond

ratings to which he added an additional risk premium of 1.50%. He then added a property tax adjustment to his WACC calculations. The following table summarizes his discount rate calculations for the fiscal years at issue.

Mr. Pomykacz's Discount Rates

For FY 2019

<u>Financing Source</u>	<u>Weight</u>	<u>Rate</u>	<u>Effect. Tax Rate</u>	<u>Weighted Rate</u>
Debt	45%	5.76%	27.32%	1.89%
Equity	55%	10.12%	n/a	4.19%
WACC Calculation				7.45%
Property Tax-Adj. Rate				8.37%

For FY 2020

<u>Financing Source</u>	<u>Weight</u>	<u>Rate</u>	<u>Effect. Tax Rate</u>	<u>Weighted Rate</u>
Debt	45%	5.37%	27.32%	1.76%
Equity	55%	9.56%	n/a	5.26%
WACC Calculation				7.01%
Property Tax-Adj. Rate				7.94%

For FY 2021

<u>Financing Source</u>	<u>Weight</u>	<u>Rate</u>	<u>Effect. Tax Rate</u>	<u>Weighted Rate</u>
Debt	40%	5.37%	27.32%	1.56%
Equity	60%	7.97%	n/a	4.78%
WACC Calculation				6.34%
Property Tax-Adj. Rate				7.27%

For FY 2022

<u>Financing Source</u>	<u>Weight</u>	<u>Rate</u>	<u>Effect. Tax Rate</u>	<u>Weighted Rate</u>
Debt	48%	4.61%	26.53%	1.63%
Equity	52%	8.79%	n/a	4.57%
WACC Calculation				6.20%
Property Tax-Adj. Rate				7.15%

The following table summarizes the market values that Mr. Pomykacz developed using his DCF approaches.

**Mr. Pomykacz's Market Value Conclusions Using His DCF Approaches
for FY 2019, FY 2020, FY 2021, and FY 2022**

<u>DCF Market Values</u>	<u>FY 2019 (\$)</u>	<u>FY 2020 (\$)</u>	<u>FY 2021 (\$)</u>	<u>FY 2022 (\$)</u>
After Income Taxes	997,000,000	1,040,000,000	1,060,000,000	902,000,000
Before Income Taxes	1,040,000,000	1,080,000,000	1,100,000,000	934,000,000
Separate Equity & Debt	997,000,000	1,040,000,000	1,060,000,000	902,000,000

These values do not include reductions for working capital or intangibles. With respect to working capital, Mr. Pomykacz testified that he did not need to make such a deduction because he "never put it in." With respect to intangibles, he stated that "there were no intangibles to be deducted." Mr. Pomykacz essentially equated his BEV values with the values of NMPS's real and personal property alone.

In his pre-tax direct-capitalization methodology, Mr. Pomykacz forecasted stabilized revenues and expenses for NMPS based on a review of the net-operating incomes in his DCF analyses. For capitalization rates, he lowered his discount rates "by an amount that equals the expected compound rate of growth rate in the cash flows." He further adjusted those rates for the lack of a reversion and for an effective property tax rate. His adjustment for state and federal taxes was minimal. As in his DCF methodologies, Mr. Pomykacz did not deduct working capital or intangibles from his BEVs.

Mr. Pomykacz's pre-tax direct-capitalization methodologies for fiscal years 2019 through 2022 are summarized in the following two tables.

Mr. Pomykacz's Pre-Tax Direct-Capitalization Methodology
for FY 2019 and FY 2020

	<u>FY 2019 (\$)</u>	<u>FY 2020 (\$)</u>
Total Revenues (Tot. Rev.)	117,035,720	117,941,623
Total O&M and G&A Expenses	(49,191,150)	(48,691,150)
Cap Ex (7.5% of Tot. Rev.)	(8,777,679)	(8,845,622)
Net Operating Income	59,066,891	60,404,852
Cap Rate	6.45%	6.02%
Capitalized Value	915,765,748	1,003,402,849
Rounded Market Value	916,000,000	1,000,000,000

Mr. Pomykacz's Pre-Tax Direct-Capitalization Methodology
for FY 2021 and FY 2022

	<u>FY 2021 (\$)</u>	<u>FY 2022 (\$)</u>
Total Revenues (Tot. Rev.)	113,435,908	103,017,149
Total O&M and G&A Expenses	(49,128,660)	(50,385,858)
Cap Ex (7.5%/5.0% of Tot. Rev.)	(8,507,693)	(5,150,857)
Net Operating Income	55,799,555	47,480,434
Cap Rate	5.35%	5.23%
Capitalized Value	1,042,982,341	907,847,681
Rounded Market Value	1,040,000,000	908,000,000

Based on his trended original cost analyses from his cost approaches and on his land sales-comparison analyses, Mr. Pomykacz allocated the values that he derived for NMPS' real and personal property to Erving, Northfield, and Gill as summarized in the following table.

Mr. Pomykacz's Value Allocation Percentages
for FY 2019, FY 2020, FY 2021, and FY 2022

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Erving	81.91%	81.89%	81.65%	81.76%
Northfield	18.65%	18.49%	18.79%	18.85%
Gill	0.36%	0.40%	0.25%	0.27%

The Board's Ultimate Findings

The Board agreed with the parties' valuation experts that the highest and best use of the subject property was its continued use as part of NMPS, a pumped storage hydroelectric generating facility. The Board's view of NMPS further supported this determination.

The Board also agreed with the valuation experts' opinions that a comparable-sales approach did not generate reliable data for valuing the subject property for the fiscal years at issue. The sales, including one involving NMPS, were either part of portfolio transactions or involved numerous other factors, such as fuel contracts and electricity power purchase agreements that could not be differentiated from the value of the plants themselves or the real and personal property associated with them. Moreover, as Mr. Pomykacz observed, historically, the sales-comparison approach has not been used to value hydroelectric generating plants.

With respect to the valuation experts' RCN and RCNLD approaches, the Board found that they were not the best approaches for valuing NMPS where a viable income approach existed. The Board found that cost approaches are most useful when the improvements are new or suffer only minor depreciation and when other valuation methodologies are either unavailable or inadequate for valuing a special purpose property. Such is not the case here.

With respect to the valuation experts' DCF approaches, the Board, as in past appeals, found that the use of the methodology is inappropriate for *ad valorem* property tax purposes, which necessitate value determinations as of a specified date, that being January first of a given year. In addition, the Board found that the DCF methodologies used here contain numerous assumptions and projections spread over ten years that render them and the value determinations that rely on them more susceptible to error than a direct-capitalization approach; even one that relies on normalized or stabilized data. Moreover, the rapidly changing landscape in energy production sources, conservation, technology, competition, and regulation, as well as political and long-term price uncertainty further complicate and compromise DCF valuations for *ad valorem* property tax purposes compared to ones achieved through a direct-capitalization method. The Board also found that the uncertainty surrounding final terms in NMPS's pending license renewal added additional uncertainty into longer-term cash flow estimates.

Both valuation experts relied on, at least in part, a pre-tax direct-capitalization methodology for valuing NMPS. The Board found that a direct-capitalization methodology best captured the value of the real and personal property associated with NMPS for the fiscal years at issue.

For normalized revenue or income amounts, the Board adopted the amounts proposed by Mr. Simzyk. He based these amounts on historical and current data, information gleaned from ISO-NE's website, as well as forecasts from management and market sources. By giving more weight to the first three years of his projected cash flows in developing the normalized operating income for his pre-tax direct-capitalization analyses, he did not project too far into the future. The Board found that the revenue figures employed by Mr. Pomykacz were more speculative than those proposed by Mr. Simzyk. For normalized operating expenses, the Board also adopted the amounts proposed by Mr. Simzyk after adjusting them for property taxes which Mr. Simzyk had improperly included in his figures. The operating expense amounts proposed by Mr. Simzyk were well grounded in historical information as well as management and industry forecasts that, like his revenue or income amounts, did not project too far into the future. The Board found that Mr. Pomykacz's expense figures were more speculative than those proposed by Mr. Simzyk.

For CapEx, the Board adopted amounts in between those proposed by the parties' valuation experts. The amounts or percentages proposed by Mr. Simzyk were based on historical data and management projections while Mr. Pomykacz relied on historical information and industry standards. The Board found value in both valuation experts' research and proposed percentages.

Mr. Pomykacz did not deduct from his operating incomes changes in net working capital mainly because he did not later adjust the BEVs that he derived for NMPS for working capital. The Board found that small deductions for changes in working capital, as proposed by Mr. Simzyk, were proper where the Board also found, as discussed below, that BEV should be adjusted for the value attributable to working capital. Changes in working capital here represent the year-to-year differences.

For capitalization rates, which the valuation experts agreed are determined by subtracting the growth component from the WACC used in their DCF approaches, the Board found that the primary differences between the valuation experts' determinations were their treatments of income taxes and the size premium for ascertaining the additional risk factor in the equity component in their discount and capitalization rates.

With respect to income taxes, the Board agreed with the valuation experts that income taxes had to be reflected in the pre-tax capitalization rate. The Board, however, disagreed with Mr. Pomykacz's approach, which effectively minimized income tax effects on his pre-tax capitalization rates. He argued that because of depreciation and combined tax filings, FirstLight likely paid little if any income taxes and, therefore, his treatment of income taxes on his capitalization rate was nominal. Mr. Simzyk, on the other hand, explained that the whole point of using a pre-tax

direct-capitalization methodology is to avoid having to make depreciation and income tax assumptions other than the assumption that FirstLight had a positive income flow for the fiscal years at issue, which FirstLight's operation statements verified. Accordingly, Mr. Simzyk's capitalizations rates reflected that approach by including actual combined federal and state income tax weighted rates of 27.32%, as opposed to Mr. Pomykacz's rate of 1.25%. The Board found that Mr. Simzyk's approach was the correct one.

With respect to the size premium for the additional risk factor variable in their CAPM, which is used for the equity component of the WACC, Mr. Simzyk selected a size premium consistent with smaller companies like NMPS, while Mr. Pomykacz selected one associated with larger companies that might own NMPS. The Board found that the appropriate size premium was one that better reflected the size of NMPS itself, which fell between those selected by the valuation experts but certainly closer to the one used by Mr. Simzyk.

Mr. Simzyk further deducted values attributable to intangibles and working capital from his BEVs to obtain values for only the real and personal property associated with NMPS. He explained that his deduction of three percent from the BEV for intangibles was justified here primarily because of the trained and assembled work force, but also because of the management team,

licensing, as well as goodwill, synergies, and other things. He testified that based on his experience in valuing these types of properties "on average [three percent is] about what you would expect for a company that's worth somewhere in that 500 million to billion-dollar range." Mr. Pomykacz did not deduct values for these categories essentially equating his BEVs with values for only the real and personal property associated with NMPS.

The Board found that an adjustment for intangibles was appropriate not only for the reasons espoused by Mr. Simzyk but also because the Board found that NMPS was a going concern and, as cited in the Opinion below, Board and Court precedent and authoritative appraisal literature support such an adjustment. Moreover, the Board found that the evidence, including the Board's view of NMPS, clearly established the unique nature and specialized operation of NMPS, necessitating a well-trained and assembled work force and an experienced management team. In further confirming the need for an adjustment for intangibles, the Board also considered the substantial and necessary costs incurred for the relicensing process as of the relevant valuation dates. The Board noted that without an operating license in some form, which the Board considered intangible, NMPS would be without authority to operate. The Board found Mr. Simzyk's recommended deduction of three percent of annual revenues credible and reasonable, and therefore adopted it.

Similarly, the Board found that the adjustment to BEV suggested by Mr. Simzyk for working capital was proper. As he explained, working capital is inherent in NMPS's cash flow and is necessary to operate the business. Furthermore, the discount rates, from which the capitalization rates used here are derived, are partially based on similar companies in the industry that have working capital. Consequently, as Mr. Simzyk testified, working capital is built into the BEV and must be accounted for. The Board found that the suggested adjustment proposed by Mr. Simzyk of five percent of annual revenues was credible and reasonable and adopted it.

Summaries of the Board's pre-tax direct-capitalization methodologies are contained in the following four tables.

The Board's Pre-Tax Direct-Capitalization Methodologies

FY 2019 - as of January 1, 2018

Income or Revenue	\$ 157,152,986
Expenses	(\$ 54,756,210)
Operating Income	\$ 102,396,776
Adjustments:	
Less: CapEx (@5.50% of Revenue)	(\$ 8,643,414)
Less: Change in Working Capital	(\$ 184,655)
Total Adjustments	(\$ 8,828,069)
Free Cash Flow	\$ 93,568,707
Capitalization Rate	10.0%
Indicated BEV	\$ 935,687,068
Deductions:	
Less: Working Capital @5.00% of Revenue	(\$ 7,857,649)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 28,070,612)
Total Deductions to BEV	(\$ 35,928,261)
Real & Personal Property Fair Cash Value ("FCV")	\$ 899,758,807
Rounded Real & Personal Property FCV	\$ 900,000,000

FY 2020 - as of January 1, 2019

Income or Revenue	\$ 152,301,065
Expenses	(\$ 60,233,779)
Operating Income	\$ 92,067,286
Adjustments to Operating Income:	
Less: CapEx (@6.50% of Revenue)	(\$ 9,899,569)
Less: Change in Working Capital	(\$ <u>177,431</u>)
Total Adjustments	(\$ 10,077,000)
Free Cash Flow	\$ 81,990,286
Capitalization Rate	9.5%
Indicated BEV	\$ 863,055,642
Deductions:	
Less: Working Capital @5.00% of Annual Revenues	(\$ 7,615,053)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ <u>25,891,669</u>)
Total Deductions to BEV	(\$ <u>33,506,722</u>)
Real & Personal Property FCV	\$ 829,548,920
Rounded Real & Personal Property FCV	\$ 830,000,000

FY 2021 - as of January 1, 2020

Income or Revenue	\$ 123,723,786
Expenses	(\$ 58,452,179)
Operating Income	\$ 65,271,607
Adjustments to Operating Income:	
Less: CapEx (@7.0% of Revenue)	(\$ 8,660,665)
Less: Change in Working Capital	(\$ <u>143,525</u>)
Total Adjustments	(\$ <u>8,804,190</u>)
Free Cash Flow	\$ 56,467,417
Capitalization Rate	7.0%
Indicated BEV	\$ 806,677,386
Deductions:	
Less: Working Capital @5.00% of Revenue	(\$ 6,186,189)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ <u>24,200,322</u>)
Total Deductions to BEV	(\$ <u>30,386,511</u>)
Real & Personal Property FCV	\$ 776,290,875
Rounded Real & Personal Property FCV	\$ 780,000,000

FY 2022 - as of January 1, 2021

Income or Revenue	\$ 120,890,394
Expenses	(\$ 55,667,904)
Operating Income	\$ 65,222,490
Adjustments to Operating Income:	
Less: CapEx (@5.75% of Revenue)	(\$ 6,951,198)
Less: Change in Working Capital	(\$ 139,024)
Total Adjustments	(\$ 7,090,222)
Free Cash Flow	\$ 58,132,268
Capitalization Rate	7.5%
Indicated BEV	\$ 775,096,902
Deductions:	
Less: Working Capital @5.00% of Revenue	(\$ 6,044,520)
Less: Intangibles @ 3.00% of Indicated BEV	(\$ 23,252,907)
Total Deductions from BEV	(\$ 29,297,427)
Real & Personal Property FCV	\$ 745,799,480
Rounded Real & Personal Property FCV	\$ 750,000,000

With respect to allocating real and personal property values for the fiscal years at issue to the towns in which NMPS is located, Mr. Pomykacz reported that his allocation percentages were based on his trended original cost analyses from his cost approach and his land sales-comparison analyses. The Board found and Mr. Pomykacz recognized that his cost analyses were not the most viable methodologies for valuing the real and personal property associated with NMPS, primarily because of a lack of important cost information. Based on this acknowledged infirmity associated with his cost analyses, the Board further found that Mr. Pomykacz's use of them to establish allocation percentages was flawed. As in past appeals involving similar allocations, the Board compared the assessed values of NMPS's real and personal property in each town in which they are located to the total assessed values of NMPS's

real and personal property and used those rounded percentages. The allocated fair cash values are summarized in the following table.

Summary of the Board's FCV Allocations for Erving and Northfield for FY 2019, FY 2020, FY 2021, and FY 2022

<u>ERVING</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Fair Cash Value	\$900,000,000	\$830,000,000	\$780,000,000	\$750,000,000
Allocation Percentage	90%	90%	90%	81.5%
Allocated Value	\$810,000,000	\$747,000,000	\$702,000,000	\$611,250,000
 <u>NORTHFIELD</u>				
Fair Cash Value				\$750,000,000
Allocation Percentage				18.5%
Allocated Value				\$138,750,000

Because Northfield's CPA addition is 0.5% of the real estate tax, the Board further broke down the allocated value attributable to NMPS's real and personal property located in Northfield into amounts attributable to the real and personal property, separately, using their individual assessed values compared to their total assessed value in Northfield. The rounded allocations and abatements for fiscal years 2019 through 2022 are summarized in the following tables.

The Board's FCV Allocations and Tax Abatements for Erving for FY 2019 and FY 2020

<u>ERVING</u>	<u>FY 2019</u>	<u>FY 2020</u>
Assessed Value	\$754,407,622	\$754,406,822
FCV Allocation	\$810,000,000	\$747,000,000
Overvaluation	NONE	\$ 7,406,822
Tax Rate/\$1,000	\$12.24	\$12.37
Tax Abatement	NONE	\$91,622.39

The Board's FCV Allocations and Tax Abatements
for Erving for FY 2021 and FY 2022 and
for Northfield for FY 2022

<u>ERVING</u>	<u>FY 2021</u>	<u>FY 2022</u>
Assessed Value	\$754,434,822	\$735,539,710
FCV Allocation	<u>\$702,000,000</u>	<u>\$611,250,000</u>
Overvaluation	\$ 52,434,822	\$124,289,710
Tax Rate/\$1,000	\$12.37	\$12.92
Tax Abatement	\$648,618.75	\$1,605,823.05
 <u>NORTHFIELD</u> 		
RE Assessed Value		\$93,601,928
RE FCV @56%		<u>\$77,700,000</u>
Overvaluation		\$15,901,928
Tax Rate/\$1,000		\$13.85
Tax Abatement Before CPA		\$220,241.70
Tax Abatement After CPA @0.5%		\$221,342.91
PP Assessed Value		\$74,748,683
PP FCV @44%		<u>\$61,050,000</u>
Overvaluation		\$13,698,683
Tax Rate/\$1,000		\$13.85
Tax Abatement		\$189,726.76
Total Tax Abatement		\$411,069.67

On this basis, the Board promulgated a decision for the Erving assessors in fiscal year 2019 and revised decisions for FirstLight in fiscal years 2020, 2021, and 2022.

OPINION

Assessors are required to assess real and personal property at its fair cash value. G.L. c. 59, § 38. Fair cash value is defined as the price on which a willing seller and a willing buyer will agree if both are fully informed and under no compulsion. *Boston Gas Co. v. Assessors of Boston*, 334 Mass. 549, 566 (1956). In determining fair cash value, all uses to which the property was or could reasonably be adapted on the relevant assessment dates should be considered. *Newton Girl Scout Council, Inc. v.*

Massachusetts Turnpike Authy., 335 Mass. 189, 193 (1956); **Irving Saunders Trust v. Assessors of Boston**, 26 Mass. App. Ct. 838, 843 (1989). The idea is to ascertain the maximum value of the property for any legitimate and reasonable use - in other words, its highest and best use. *Id.* If the property is particularly well-suited for a certain use that is not prohibited, then that use may be reflected in an estimate of its fair market value. **Colonial Acres, Inc. v. North Reading**, 3 Mass. App. Ct. 384, 386 (1975). In determining the property's highest and best use, consideration should be given to the purpose for which the property is adapted. See **Leen v. Board of Assessors of Boston**, 345 Mass. 494, 504 (1963); **Boston Gas Co.**, 334 Mass. at 566. The Board found and ruled here that the highest and best use of subject property during the fiscal years at issue was its continued use as the real and personal property associated with NMPS, a pumped storage hydroelectric generating facility. Both the assessors' and the appellant's valuation experts valued the subject property on this premise. The Board's view of NMPS further supported this highest and best use finding and ruling.

Generally, real and personal property valuation experts, the Massachusetts courts, and the Board rely upon three approaches to determine the fair cash value of property: income capitalization, sales comparison, and cost analyses. **Correia v. New Bedford Redevelopment Authority**, 375 Mass. 360, 362 (1978). "The board is

not required to adopt any particular method of valuation." *Pepsi-Cola Bottling Co. v. Assessors of Boston*, 397 Mass. 447, 449 (1986).

In these appeals, the Board agreed with the valuation experts' opinions that a sales approach was simply not a viable methodology for valuing the subject property. The sales examined, including one involving NMPS, were either part of portfolio transactions or involved numerous other factors, such as fuel contracts and electricity power purchase agreements that cannot be differentiated from the value of the plants themselves or the real and personal property associated with them. Moreover, as Mr. Pomykacz observed, historically, the sales-comparison approach has not been used to value hydroelectric generating plants.

With respect to the valuation experts' RCN and RCNLD approaches, the Board found and ruled that they were not the best approaches for valuing the real and personal property associated with NMPS because a viable income approach existed. "The cost approach is particularly important when a lack of market activity limits the usefulness of the sales-comparison approach and when the property . . . is not amenable to valuation by the income capitalization approach." APPRAISAL INSTITUTE, THE APPRAISAL OF REAL ESTATE 530 (15th ed., 2020). The cost approach may be "persuasive when . . . the improvements are new or suffer only minor depreciation." *Id.* "[V]alue based on [cost] computations has been limited to

special situations in which data cannot be reliably computed under the other two methods." **Correia**, 375 Mass. at 362. None of these situations apply here.

With respect to the valuation experts' DCF approaches, the Board, as in past appeals, found that the use of the methodology was inappropriate for *ad valorem* property tax purposes, which necessitate value determinations as of a specified date, that being January first of a given year. G.L. c. 59, § 2A(2). See, e.g., **GLW Kids LLC v. Assessors of Carlisle**, Mass. ATB Findings of Fact and Reports 2016-53, 73, *aff'd*, Mass. App. Ct. No. 16-P-729, Memorandum and Order under Rule 1:28 (July 12, 2017); **Digital 55 Middlesex, LLC v. Assessors of Billerica**, Mass. ATB Findings of Fact and Reports 2017-415, 441; **FirstLight Hydro Generating Company v. Assessors of Montague and Gill**, Mass. ATB Findings of Fact and Reports 2018-674, 689-691, **Western Massachusetts Electric Company v. Assessors of Springfield**, Mass. ATB Findings of Fact and Reports 2020-235, 248-249. In addition, the Board found that the DCF methodologies used here required numerous assumptions and projections spread over ten years that rendered them and the value determinations derived from them more susceptible to error than a direct-capitalization approach, even one that relies on normalized or stabilized data. Moreover, the changing landscape in energy production and supply sources, technology, imports, and politics and regulation further complicates and compromises DCF valuations

for *ad valorem* property tax purposes compared to ones achieved through a direct-capitalization method. The Board also found that the uncertainty surrounding final terms in NMPS's pending operating license renewal added additional uncertainty into longer-term cash-flow estimates.

Both valuation experts relied on, at least in part, a pre-tax direct-capitalization methodology for valuing NMPS. The Board found and ruled that a direct-capitalization methodology best captured the value associated with the subject property for each of the fiscal years at issue. The direct-capitalization method "is frequently applied with respect to income-producing property." ***Taunton Redev. Assocs. v. Assessors of Taunton***, 393 Mass. 293, 295 (1984). See, e.g., ***Zuckerman v. Assessors of Cambridge***, Mass. ATB Findings of Fact and Reports 2008-567, 602. Under the direct-capitalization approach, valuation is determined by dividing net-operating income by a capitalization rate. See ***Assessors of Brookline v. Buehler***, 396 Mass. 520, 522-23 (1986). Net-operating income is obtained by subtracting expenses from gross income. ***Id.*** at 523.

For revenue or income amounts, the Board adopted the amounts proposed by Mr. Simzyk. The Board found that he based these amounts on historical data, information gleaned from ISO-NE's website, as well as forecasts from management and market sources. By giving more weight to the first three years of his projected cash flows

in developing the normalized operating income for his pre-tax direct-capitalization analyses, he did not project too far into the future. See, e.g., **Zuckerman**, Mass. ATB Findings of Fact and Reports at 2008-603. The Board found that the revenue figures employed by Mr. Pomykacz were more speculative than those proposed by Mr. Simzyk.

For operating expenses, the Board also adopted the amounts proposed by Mr. Simzyk after adjusting them for property taxes which Mr. Simzyk had improperly included in his figures. The Board found that the operating expense amounts proposed by Mr. Simzyk were well grounded in historical information as well as management and industry forecasts. By giving more weight to the first three years of his projected cash flows in developing the normalized operating income for his pre-tax direct-capitalization analyses, he did not project too far into the future. The Board found that Mr. Pomykacz's expense figures were more speculative than those proposed by Mr. Simzyk.

For CapEx, the Board adopted amounts in between those proposed by the parties' valuation experts. The Board found and ruled that there was value in both valuation experts' research and proposed percentages and therefore adopted percentages in between those used by the valuation experts.

Mr. Pomykacz did not deduct from his operating incomes changes in NWC mainly because he did not later adjust the BEVs that he

derived for NMPS for working capital. The Board found and ruled that small deductions for changes in NWC, as proposed by Mr. Simzyk, were proper particularly where the Board also found and ruled that BEV should be adjusted for the value attributable to working capital. "The issue of what expenses may be considered in any particular piece of property is for the board." ***Alstores Realty Corp. v. Assessors of Peabody***, 391 Mass. 60, 65 (1984).

For capitalization rates, which the valuation experts agreed are determined by subtracting the growth component from the WACC used in their DCF approaches, the Board found that the primary differences between the valuation experts' determinations were their treatments of income taxes and the size premium for ascertaining the additional risk factor in the equity component in their discount and capitalization rates.

With respect to income taxes, the Board agreed with the valuation experts that income taxes had to be reflected in the pre-tax capitalization rate. The Board, however, disagreed with Mr. Pomykacz's approach, which effectively minimized income tax effects on his pre-tax capitalization rates, finding and ruling that Mr. Simzyk's method better reflected reality.

With respect to the size premium for the additional risk factor variable in their CAPM, the Board found and ruled that the appropriate size premium was one that better reflected the size of NMPS itself, which fell between those selected by the valuation

experts but closer to the one used by Mr. Simzyk. See **New Boston Garden Corp. v. Assessors of Boston**, 383 Mass. 456, 467 (1981) (sanctioning the Board's findings regarding overall value and its underlying components despite differing from the expert's recommendations because the findings were supported by the record and a sufficient explanation).

Mr. Simzyk further deducted values attributable to intangibles and working capital from his BEVs to obtain values for only the real and personal property associated with NMPS. Mr. Pomykacz did not deduct values for these categories, essentially equating his BEVs with values for only the real and personal property associated with NMPS.

The Board found and ruled that an adjustment for intangibles was appropriate not only for the reasons expressed by Mr. Simzyk but also because of findings resulting from the Board's view of NMPS, authoritative appraisal literature, and Board and Court precedent supporting such an adjustment. See, e.g., **General Dynamics Corp. v. Assessors of Quincy**, 388 Mass. 24, 35 (1983) ("[T]he value of the intangible assets must be deducted from the value of the [facility] as a going concern. These are factors of a business's value other than land, plant, and equipment, such as working capital, going-concern value, and the condition of the work force"). The Board found and ruled that Mr. Simzyk's recommended deduction of three percent of annual revenues was

credible and reasonable, and comported with the marketplace. See **General Dynamics Corp.**, 388 Mass. at 36 (affirming the trial court's adoption of a valuation expert's method of valuation where the valuation expert expressed his view that it "was an accepted method in the marketplace.").

Similarly, the Board found and ruled that the adjustment to BEV suggested by Mr. Simzyk for working capital was proper. See **Id.** When valuing complex generation facilities like NMPS, appraisal literature directs appraisers to "subtract the value" of working capital. AMERICAN SOCIETY OF APPRAISERS, VALUING MACHINERY AND EQUIPMENT, THE FUNDAMENTALS OF APPRAISING MACHINERY AND TECHNICAL ASSETS 129 (4th ed., 2020). The Board recognized that Mr. Simzyk's proposed amounts for this adjustment necessarily involved judgment. See **Assessors of Quincy v. Boston Consolidated Gas Co.**, 309 Mass. 60, 72 (1941).

In reaching its opinion of fair cash value in these appeals, the Board was not required to believe the testimony of any witness or to adopt any method of valuation that an expert witness suggested. The mere qualification of a person as an expert does not endow his testimony with any magic qualities. **Boston Gas Co.**, 334 Mass. at 579. Rather, the Board could accept those portions of the evidence that the Board determined had more convincing weight. **Foxboro Associates v. Assessors of Foxborough**, 385 Mass. 679, 683 (1982); **New Boston Garden Corp.**, 383 Mass. 456, 473 (1981);

Assessors of Lynnfield v. New England Oyster House, Inc., 362 Mass. 696, 702 (1972). In considering whether, and to what extent, the subject property was overvalued, the Board could and did take its view of NMPS into account. **Westport v. Bristol County Commissioners**, 246 Mass. 556, 563 (1923); **Avco Manufacturing Corp. v. Assessors of Wilmington**, Mass. ATB Findings of Fact and Reports 1990-142, 165-66; **Arthur D. Little, Inc. v. Assessors of Cambridge**, Mass. ATB Findings of Fact and Reports, 1982-363, 374.

In evaluating the evidence before it, the Board selected among the various elements of value and formed its judgment of the subject property's fair cash value. **General Electric Co. v. Assessors of Lynn**, 393 Mass. 591, 605 (1984); **North American Philips Lighting Corp. v. Assessors of Lynn**, 392 Mass 296, 300 (1984). The Board need not specify the exact way it arrived at its valuation. **Jordan Marsh v. Assessors of Malden**, 359 Mass. 106, 110 (1971). The fair cash value of property cannot be proven with "mathematical certainty and must ultimately rest in the realm of opinion, estimate and judgment." **Boston Consol. Gas Co.**, 309 Mass. at 72. "The credibility of witnesses, the weight of the evidence, and inferences to be drawn from the evidence are matters for the board." **Cumington School of Arts, Inc. v. Assessors of Cumington**, 373 Mass. 597, 605 (1977).

"The burden of proof is upon the [appellant] to make out its right as a matter of law to abatement of the tax.'" **Schlaiker v.**

Assessors of Great Barrington, 365 Mass. 243, 245 (1974) (quoting **Judson Freight Forwarding Co. v. Commonwealth**, 242 Mass. 47, 55 (1922)). The appellant must show that it has complied with the statutory prerequisites to its appeal, **Cohen v. Assessors of Boston**, 344 Mass. 268, 271 (1962), and that the assessed valuation of its property was improper. See **Foxboro Associates**, 385 Mass. at 691. The assessment is presumed valid until the taxpayer sustains its burden of proving otherwise. **Schlaiker**, 365 Mass. at 245. The taxpayer “‘may present persuasive evidence of overvaluation either by exposing flaws or errors in the assessors’ method of valuation or by introducing affirmative evidence of value which undermines the assessors’ valuation.’” **General Electric Co.**, 393 Mass. at 600 (quoting **Donlon v. Assessors of Holliston**, 389 Mass. 848, 855 (1983)). The Board found and ruled here that the appellant complied with the statutory prerequisites to its appeals and met its burden of proving that the subject property was overvalued for three of the four fiscal years at issue.

On this basis, the Board found and ruled that the fair cash value of the subject property located in Erving was \$810,000,000 for fiscal year 2019, \$747,000,000 for fiscal year 2020, \$702,000,000 for fiscal year 2021, and \$611,250,000 for fiscal year 2022. The Board also found and ruled that the fair cash value of the subject property located in Northfield was \$138,750,000 for fiscal year 2022. In allocating the subject property’s FCV to

Erving and Northfield, the Board compared the assessed values of NMPS's real and personal property in each town to the total assessed value of NMPS's real and personal property and used those percentages. See, e.g., *Shaw's Supermarkets v. Assessors of Brookline*, Mass. ATB Findings of Fact and Reports, 2021-95, 119; *Rosenthal and Ruderman v. Assessors of Chelsea*, Mass. ATB Findings of Fact and Reports 2001-531, 546.

Accordingly, the Board found and ruled that the assessments for the subject property exceeded its fair cash values for fiscal years 2020, 2021, and 2022 and promulgated simultaneously with these findings revised decisions for FirstLight for those fiscal years. The Board decided the fiscal year 2019 appeals for the Erving assessors. The Board granted tax abatements as summarized in the following table.

Tax Abatements for FY 2020, FY 2021, and FY 2022

	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
Erving	\$91,622.39	\$648,618.75	\$1,605,823.05
Northfield	N/A	N/A	\$ 411,069.67

THE APPELLATE TAX BOARD

By: 
 Mark J. DeFrancisco, Chairman

A true copy,

Attest: 
 Clerk of the Board