

New York Nuclear Subsidies Impact on Municipalities

The \$7.6 billion nuclear subsidy approved by the NY Public Service Commission will impact all electricity consumers in New York. This includes municipalities, which pay electricity bills for their offices, street lights and other facilities. The subsidies are scheduled to begin on April 1, 2017. While there has been analysis of the subsidy's impact on residential consumers, there has been no analysis of the cost to municipalities, despite the tight budgets on which they operate. In most cases, the cost to municipalities will not be transparent because it is unlikely that there will be a separate line item on electricity bills showing the cost of the nuclear subsidies. Rather, utility companies or energy service companies (ESCOs) may simply bundle the cost of the nuclear subsidy into the cost of electricity charged to their customers.

In an effort to anticipate the financial impact of the nuclear subsidies on municipalities in New York, Alliance for a Green Economy has constructed a formula for calculating the anticipated cost to any customer, based on the number of megawatt hours per year that the customer purchases. We then used this formula to calculate an *estimated*¹ cost to New York's six largest cities for each of the 12 years the nuclear subsidies are anticipated to be in place. We chose these cities because data on their annual electricity usage was publicly available.

Total Projected Cost of Nuclear Subsidies by Year						
	NYC	Buffalo	Yonkers	Rochester	Syracuse	Albany
Year 1	\$13,228,705	\$212,898	\$192,317	\$169,324	\$92,676	\$65,540
Year 2	\$13,183,904	\$212,177	\$191,665	\$168,750	\$92,363	\$65,318
Year 3	\$14,775,325	\$237,789	\$214,801	\$189,120	\$103,512	\$73,203
Year 4	\$14,775,325	\$237,789	\$214,801	\$189,120	\$103,512	\$73,203
Year 5	\$16,125,393	\$259,517	\$234,428	\$206,400	\$112,970	\$79,892
Year 6	\$16,125,393	\$259,517	\$234,428	\$206,400	\$112,970	\$79,892
Year 7	\$17,973,251	\$289,256	\$261,292	\$230,052	\$125,915	\$89,047
Year 8	\$17,973,251	\$289,256	\$261,292	\$230,052	\$125,915	\$89,047
Year 9	\$19,949,328	\$321,058	\$290,020	\$255,346	\$139,759	\$98,837
Year 10	\$19,949,328	\$321,058	\$290,020	\$255,346	\$139,759	\$98,837
Year 11	\$21,985,744	\$353,831	\$319,625	\$281,411	\$154,026	\$108,926
Year 12	\$21,985,744	\$353,831	\$319,625	\$281,411	\$154,026	\$108,926
Total	\$208,030,689	\$3,347,977	\$3,024,315	\$2,662,733	\$1,457,403	\$1,030,666

¹ Note that all figures in this White Paper are estimated based on best available data and projections. These are subject to change based on the actual electricity usage of any given municipality, the actual total electricity load of the state in any given year, the actual number of ZECs sold in New York in any given year, and the actual cost of the ZECs.

Methodology

The cost of the nuclear subsidy for each municipality is calculated using the following methodology:

Municipal electricity load ÷ Statewide electricity load = Percentage of state load

Number of Zero Emissions Credits (ZECs) sold statewide x Percentage of state load = Number of ZECs purchased by municipality

Number of ZECs purchased by municipality x ZEC price for that year = Annual subsidy cost to city

ZEC Cost Calculations per City for the First Year						
City	City annual electricity load (MWh)	Total state electricity load (MWh)	City Percentage of state load	Number of ZECs in state	Number of ZECs for City	First Year Subsidy Cost
NYC	4,227,438	154,799,674	2.730909%	27,618,198	754,228	13,228,705
Buffalo	68,035	154,799,674	0.043950%	27,618,198	12,138	212,898
Yonkers	61,458	154,799,674	0.039702%	27,618,198	10,965	192,317
Rochester	54,110	154,799,674	0.034955%	27,618,198	9,654	169,324
Syracuse	29,616	154,799,674	0.019132%	27,618,198	5,284	92,676
Albany	20,944	154,799,674	0.013530%	27,618,198	3,737	65,540

Annual Price per ZEC

The anticipated annual ZEC price for Year 1 is taken from a bill sent from NYSERDA to the Erie County Load Serving Entity (LSE). The Year 1 ZEC price includes a one-time administrative adder to pay for some of the administrative costs that will be borne by NYSERDA for administrating the ZEC program.

The anticipated annual ZEC price for Years 2-12 are sourced from the Department of Public Service's proposal for the ZEC program, issued July 8, 2016. These prices assume flat market rates for electricity and may change based on actual projected market prices in the future.

Source: <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={BBFA4008-FD27-4209-B8E1-AD037578101E}>

Year 1	\$17.5394
Year 2	\$17.48
Year 3	\$19.59
Year 4	\$19.59
Year 5	\$21.38
Year 6	\$21.38
Year 7	\$23.83
Year 8	\$23.83
Year 9	\$26.45
Year 10	\$26.45
Year 11	\$29.15
Year 12	\$29.15

Other Assumptions and Sources

The statewide load number used for these calculations is 154,799,674.74 MWh.

The statewide number of ZECs used for these calculations is 27,618,198.037.

Both the statewide load and total statewide ZEC numbers were calculated based on the bill for ZECs sent from NYSERDA to the Erie County LSE.

The sources for municipal electricity usage are as follows:

New York City:

<http://www.nyc.gov/html/dem/downloads/pdf/Monthly%20Reports/Energy%20Core%20Report%20November%202016.pdf>

Buffalo:

<http://www.nypa.gov/BuildSmartNY/BuffaloEnergyPlan.pdf>, Page 17

Yonkers:

<http://www.nypa.gov/BuildSmartNY/YonkersEnergyPlan.pdf>, Page 19 (Converted from mmBtu)

Rochester:

<http://www.nypa.gov/BuildSmartNY/RochesterEnergyPlan.pdf>, Page 38 (Calculated based on percentage given for street light usage. City of Rochester streetlights consume 18.4 million kWh of electricity annually, which represents 34 percent of the total electricity used in municipal operations.)

Syracuse:

<http://www.nypa.gov/BuildSmartNY/SyracuseEnergyPlan.pdf>, Page 42 (Calculated based on percentage given for street light usage. Street lighting consumed 14,215,784 kWh of electricity, representing 48 percent of the City's total electricity usage.)

Albany:

<http://www.nypa.gov/BuildSmartNY/AlbanyEnergyPlan.pdf>, Page 22