

NATIONAL GRID: GAS CUSTOMER CONNECTION COSTS & ELECTRIFICATION INCENTIVES REPORT

May 12, 2022

Pursuant to Section 7.5.7 of the Joint Proposal adopted by the Public Service Commission (“Commission”) in Case 19-G-0309 and 19-G-0310,¹ The Brooklyn Union Gas Company d/b/a National Grid NY (“KEDNY”) and KeySpan Gas East Corporation d/b/a National Grid (“KEDLI”) (collectively, “National Grid” or the “Companies”) offer the following report on the Companies’ cost of new gas customer connections, as well as a proposal for potential financial incentives for residential customers to encourage the expansion of electric heating in New York.

BACKGROUND

New York State’s climate goals and policies are targeted at reducing carbon emissions and reliance on fossil fuel energy sources over the next several decades. To further these policy goals, electric and gas utilities are rethinking traditional approaches to serving customers, while at the same time being mindful of the need to preserve the reliability and affordability of essential energy services. For our part, National Grid recently issued our *Clean Energy Vision: A fossil-free future for cleanly heating homes and businesses*, which outlines specific actions to achieve fossil-free heat for all our customers and communities, including support for enhanced energy efficiency and cost-effective, targeted electrification of current heating load on our gas network.² When paired with 100 percent renewable electricity, electrification (e.g., air-source heat pumps) can play an important role in achieving net zero in the heating sector. Although

¹ Case 19-G-0309 and 19-G-0310, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of The Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid for Gas Service, *Order Approving Joint Proposal, as Modified, and Imposing Additional Requirements* (issued and effective August 12, 2021).

² <https://www.nationalgrid.com/us/fossilfree>.

converting to electric heating may be cost-effective for some customers today (including customers currently heating with oil and propane), others may have challenges due to the upfront equipment cost of making this switch and/or difficulty of retrofitting their properties. Solving this economic hurdle is key to achieving widespread adoption of electrification.

National Grid currently provides prospective gas customers with information on electric heating equipment and available financial incentives and refers such applicants to electric utilities in our territories (Consolidated Edison and PSEG-LI) to advance discussions on electrification options. However, the Companies' experience with the referral programs thus far suggests that most applicants are not pursuing electrification options, primarily due to the upfront cost differential between natural gas and electric heating equipment. According to the inputs utilized by the Climate Action Council in its Draft Scoping Plan, fully electrifying a typical home in New York costs roughly \$20,000-60,000.³ Reducing those costs with financial incentives has the potential to make electrification more affordable and facilitate increased adoption.

The Commission's regulations (and the Companies' tariffs) provide that prospective gas customers are entitled to a minimum length of main and service line to connect to the gas network at no cost to the applicant at the time of connection. This facilities allowance is commonly referred to as the "100-foot rule" because applicants within 100 feet of the existing gas network can connect for free in most cases. In the Companies' last rate filing, several stakeholders challenged National Grid to think of ways to encourage heat electrification by providing a similar facilities allowance for electric heating equipment. In response, the Companies committed to filing a report analyzing "the cost of facilities (*e.g.*, main and service

³ Upfront air-source heat pump and building retrofit costs estimated as \$21,087 (Residential Single Family Basic Shell + Air Source Heat Pump) - \$59,814 (Residential Single Family Deep Shell + Air Source Heat Pump) from Climate Action Council Draft Scoping Plan, "Appendix G: Annex 1: Inputs and Assumptions [XLSX]" at Bldg_Res Device Cost tab, February 2022, available at <https://climate.ny.gov/Our-Climate-Act/Draft-Scoping-Plan>

lines for connecting customers) provided to new customers pursuant to the Commission’s regulations and Companies’ tariffs and how some or all of those costs could be used to provide applicants with an incentive to select electric thermal options (e.g., heat pumps) rather than gas service.” This report provides cost information for gas connection facilities, an explanation of the subsidies and revenue offset associated with the 100-foot facilities allowance, and proposes potential financial incentives to improve the affordability of electric heating options for residential customers.

Allowance for Gas Facilities Under the Commission’s Regulations

For new gas service requests, Public Service Law § 31(4),⁴ 16 NYCRR § 230.2, and the Companies’ tariffs⁵ provide an allowance of up to 100 feet of certain main and service facilities to residential and non-residential applicants.⁶ Applicants may also be entitled to an allowance to cover the length of additional main and service lines beyond the first 100 feet depending on the Companies’ analysis and projection of adjusted gas revenues (“AGR”) for the requested service.⁷ The associated material and construction costs are borne by the utility and recovered from all customers through each company’s delivery rates.⁸

⁴ New York State Public Service Law § 31(4) provides that for “a building which is not supplied with electricity or gas, a utility corporation or municipality shall be obligated to provide service to such a building, provided however, that the commission may require applicants for service to buildings located in excess of one hundred feet from gas or electric transmission lines to pay or agree in writing to pay material and installation costs relating to the applicant's proportion of the pipe, conduit, duct or wire, or other facilities to be installed.”

⁵ The KEDNY tariff is PSC No. 1 – Schedule for Gas Service and the KEDLI tariff is PSC No. 12. The tariffs are publicly available on the Commission’s website.

⁶ Residential heating applicants are entitled to an allowance of up to 100 feet of main and up to 100 feet of service facilities. Non-residential applicants are entitled to an allowance of up to 100 feet of main. See KEDNY Tariff Rule II(2A)(B) and KEDLI Tariff Rule (II)(2B.1.1.4.1).

⁷ See KEDNY Tariff Rule II(2A)(B.1.1.4.1) and KEDLI Tariff Rule (II)(2-4).

⁸ The cost of the 100-foot allowance is included in the Companies’ capital forecast of rate base for customer connections and recovered from all customers over the life of the assets through a return on and of the investment. The customer connections capital forecast included in rates is net of any anticipated CIACs that would offset costs beyond the 100-foot allowance.

The prospective gas customer is responsible for any main/service line extension costs that exceed the regulatory allowance.⁹ The amount owed by an applicant or customer for gas extension work, known as the contribution in aid construction or “CIAC”, is dictated by the project scope of work, applicable tariff rules, and estimated AGR.

Cost of Gas Connection Facilities

Attachment 1 provides a breakdown of the costs for gas connection facilities during the Companies’ fiscal years¹⁰ 2020-2022. This data was extracted from the Companies’ capital reports, which are publicly filed in Cases 19-G-0309 and 19-G-0310 on a quarterly and annual basis.¹¹ The costs presented in the attachment include all of the categories outlined in the Joint Proposal such as labor, materials, transportation, and overheads. These costs are inclusive of, but do not separately identify, line items for landscaping, paving, and other costs required to provide gas service because the Companies do not separately track or report on those items. The costs are net of any costs associated with CIACs, which are represented in the capital reports as “Base Growth – Customer Contributions.”

Between fiscal years 2020-2022, the Companies’ average service cost to connect a typical new residential customer, inclusive of both the meter and service, was \$13,859 for KEDNY residential customers, \$6,288 for KEDLI residential customers, and \$1,447 for KEDLI residential underground development (“RUD”) customers.¹² The average main connection cost per residential customer was \$567 for KEDNY. The average main connection cost for KEDLI was \$2,895 per residential customer and \$3,902 per RUD customer.¹³ The average costs are

⁹ See 16 NYCRR § 230.3.

¹⁰ The Companies’ fiscal years begin on April 1st and end the following March 31st.

¹¹ The most recent capital report was filed in Cases 19-G-0309 and 19-G-0310 on March 30, 2022.

¹² See Attachment 1. Residential Underground Development involves new service extensions by utilities co-located in a common trench to serve a designated residential subdivision or development.

¹³ *Id.* Main extension costs are less than service extension costs, on average, because many applicants already have main extended in the public right of way near their properties and therefore do not require additional main extension to fulfill their service requests.

based on the cost to provide the regulatory 100-foot allowance. The Attachment 1 figures are net of any CIAC payments provided by customers.¹⁴

POTENTIAL FINANCIAL INCENTIVE TO PROMOTE ELECTRIFICATION

Electrification will play a significant role in achieving decarbonization of the heating sector. To that end, the Companies are interested in exploring opportunities to re-purpose the financial benefits of 100-foot facilities allowance for purposes of enabling electrifications as a non-pipe alternative (“NPA”). The Companies are proposing two residential electrification incentives – one for individual customers (“Customer Incentive”) and another that would apply to multiple customers when an entire area electrifies (“Neighborhood Incentive”).¹⁵

The Customer Incentive and Neighborhood Incentive would be available to fund “eligible electrification costs” for customers who adopt either air-source or ground-source heat pumps that meet the performance standards of the energy efficiency programs offered by the electric utilities serving the customer. The air-source and ground-source heat pump systems must be sized to meet the *entire* need of the property – the system cannot be supplemented by additional fuel sources such as gas, oil, or propane outside of emergency situations. “Eligible electrification costs” for purposes of these incentives include the full equipment and installation cost of the heat pump system, inclusive of the cost of boreholes for ground-source systems, electric resistance back-up units, and service or main panel upgrades, if required. The incentives would not be available for, or applied to, fuel oil or propane solutions. Incentive payments would be approved after the Companies confirm that the system has been installed and meets the criteria for the corresponding energy efficiency programs. Properties that receive either the Customer Incentive

¹⁴ The Attachment 1 figures are not net of any allowances for AGR that might be provided to residential customers as the Companies’ analysis determined that the AGR had a *de minimis* effect on the Attachment 1 figures.

¹⁵ The Companies are focusing the proposed incentives on residential customers at this time given the variability in non-residential allowances, service sizes, and connection costs. The Companies will continue to explore how a similar financial benefit could be offered to non-residential customers to incentivize electrification in that customer segment.

or Neighborhood Incentive would not be eligible for an additional 100-foot facilities allowance if gas is subsequently extended to the subject property, and would be held responsible for all future main and service extension costs under applicable regulations and tariff rules.

The Customer Incentive would be equal to the lesser of the cost to electrify the customer's entire property or \$13,859 for KEDNY residential customers, \$6,288 for KEDLI residential customers, and \$1,447 for KEDLI RUD customers. The incentive amounts represent the average avoided cost of the meter and service installation, and would be provided to cover eligible electrification costs after other rebates or incentives have been applied.

The Neighborhood Incentive would provide an incentive to each customer who electrifies in new residential subdivisions or developments currently not served with gas facilities if all potential gas customers in the subject subdivision or development electrify their entire property. In those situations, eligible electrification costs would be equal to the lesser of the cost to electrify the customer's property or \$14,426 for KEDNY residential customers, \$9,183 for KEDLI residential customers, and \$5,349 for KEDLI RUD customers. The incentive amounts represent the Companies' avoided cost of the meter, service, and main installations, and would be provided to cover eligible electrification costs after other rebates or incentives have been applied. The average cost of main is included in the Neighborhood Incentive because, in situations where multiple customers in a residential subdivision or development electrify, gas main is assumed to be an avoided cost for the area, whereas in the case of an individual customer, depending on the customer's location, gas main may not be avoidable. If the entire subdivision or development does not electrify, customers would not be eligible for the Neighborhood Incentive, but would receive the Customer Incentive.

The avoided cost of the meter, service, and main installations, if applicable, would be based on the Companies' fiscal years 2020-2022 three-year average of the actual cost incurred

for each company. The three-year average would be updated periodically during the life of the incentive, at intervals not to exceed three years. The incentives paid would be recorded as a regulatory asset accruing carrying charges until fully amortized through a surcharge to all gas customers. The proposed amortization period is fifteen years, which is the approximate life expectancy of a heat pump alternative; however, the Companies would be open to discussing shorter intervals that would provide recovery that is more concurrent with incentive payments. Given the societal benefit to all customers, the surcharge would be allocated to all gas service classes based on the service investment allocator. Further, because the avoided cost of the meters, services, and main installations would be recovered through a surcharge, neither the gas Net Utility Plant and Depreciation or the Customer Connections tracker mechanisms' targets would need to be adjusted if the incentives were adopted.

The Companies appreciate that customer adoption is a hurdle that could impact the success of any potential incentive. The Companies are testing customer receptivity to electrification options through the electrification referral program. The Companies are also pursuing various market solicitations for electrification NPAs, which should give additional data regarding customer sentiment to switch to electrification, including in situations where an incremental incentive may be available. The Companies will continue to assess this data and move towards electrification, where possible, and believe that a larger conversation between utilities and stakeholders would be beneficial to ensure that current or future incentives are appropriately structured to maximize the efficacy of these programs.

CONCLUSION

As described above, repurposing the financial benefits of the 100-foot facilities allowance could incent and encourage future electrification among prospective gas customers as an NPA solution. The Companies are cognizant, however, that further discussion is required with

regulators and affected stakeholders to ensure that the incentives are appropriately structured. The Companies propose to convene a meeting with Department of Public Service Staff and interested stakeholders in early June 2022 to discuss the incentives proposed herein. The Companies would file notice of the meeting in the docket for Case 19-G-0309 and 19-G-0310 to extend the invitation to interested parties. Based on the results of that discussion, the Companies may petition the Commission for adoption of the incentive in connection with the current rate cases or include the proposal in their next major rate filings. The Companies would also be interested in pursuing discussions with Department of Public Service Staff, other utilities, and affected stakeholders to continue progress in this area.

ATTACHMENT 1

Customer Connections - Install Main/ Install Service/ Install Meter/Regulator

Company	Work Type	Segment	UOM	FY20	FY21	FY22	3 Year Average	Avoided Costs	Average # of	Average Main	Total Avoided Cost
								Service & Meters	Feet Per Service	Cost Per Service	Service/ Meters /Mains
KEDNY	Services	Residential	Dollars	\$ 16,040,083	\$ 22,169,459	\$ 26,145,520	\$ 21,451,687				
		Residential	# of Services	1,141	1,542	2,002	1,562				
		Residential	Unit Cost	\$ 14,058	\$ 14,377	\$ 13,060	\$ 13,736	\$ 13,859	1.24	\$ 567	\$ 14,426
		Commercial & Growth Reinforcement	Dollars	\$ 14,462,163	\$ 17,384,944	\$ 15,068,651	\$ 15,638,586				
			# of Services	585	611	627	608				
			Unit Cost	\$ 24,722	\$ 28,453	\$ 24,033	\$ 25,735				
	Main	Residential	Dollars	\$ 1,284,707	\$ 1,262,362	\$ 110,214	\$ 885,761				
		Residential	# of Feet	1,289	3,956	556	1,934				
		Residential	Unit Cost	\$ 997	\$ 319	\$ 198	\$ 458				
		Commercial & Growth Reinforcement	Dollars	\$ 18,549,882	\$ 12,451,851	\$ 9,937,886	\$ 13,646,540				
			# of Feet	23,449	13,471	11,735	16,218				
			Unit Cost	\$ 791	\$ 924	\$ 847	\$ 841				
	Install Meter / Regulator	Residential	Dollars	\$ 628,262.58	\$ 697,712	\$ 968,600	\$ 764,858				
		Residential	# of Units	6,073	5,751	6,863	6,229				
		Residential	Unit Cost	\$ 103	\$ 121	\$ 141	\$ 123				
	Commercial & Growth Reinforcement	Dollars	322,115	276,460	303,353	300,643					
		# of Units	3,114	2,279	2,149	2,514					
		Unit Cost	\$ 103	\$ 121	\$ 141	\$ 120					
KEDLI	Services	Residential	Dollars	\$ 17,437,395	\$ 23,914,243	\$ 29,791,431	\$ 23,714,356				
		Residential	# of Services	3,137	4,024	4,760	3,974	\$ 6,288	21.61	\$ 2,895	\$ 9,183
		Residential	Unit Cost	\$ 5,559	\$ 5,943	\$ 6,259	\$ 5,968				
		RUD	Dollars	\$ 411,126	\$ 401,709	\$ 463,234	\$ 425,356				
			# of Services	416	355	345	372	\$ 1,447	70.43	\$ 3,902	\$ 5,349
			Unit Cost	\$ 988	\$ 1,132	\$ 1,343	\$ 1,143				
		Commercial & Growth Reinforcement	Dollars	\$ 3,757,252	\$ 2,602,367	\$ 4,874,396	\$ 3,744,672				
			# of Services	334	335	343	337				
			Unit Cost	\$ 11,249	\$ 7,768	\$ 14,211	\$ 11,101				
	Main	Residential	Dollars	\$ 6,711,471	\$ 10,488,213	\$ 17,316,146	\$ 11,505,277				
		Residential	# of Feet	52,644	85,846	119,147	85,879				
		Residential	Unit Cost	\$ 127	\$ 122	\$ 145	\$ 134				
		RUD	Dollars	\$ 1,374,319	\$ 1,900,136	\$ 1,080,377	\$ 1,451,611				
			# of Feet	33,394	23,645	21,564	26,201				
			Unit Cost	\$ 41	\$ 80	\$ 50	\$ 55				
	Commercial & Growth Reinforcement	Dollars	\$ 4,202,763	\$ 1,384,216	\$ 7,063,745	\$ 4,216,908					
		# of Feet	17,821	13,620	28,576	20,006					
		Unit Cost	\$ 236	\$ 102	\$ 247	\$ 211					
Install Meter / Regulator	Residential	Dollars	\$ 1,356,266	\$ 1,599,198	\$ 2,172,080	\$ 1,709,181					
	Residential	# of Units	5,561	5,054	5,410	5,342					
	Residential	Unit Cost	\$ 244	\$ 316	\$ 401	\$ 320					
	RUD	Dollars	\$ 179,855	\$ 141,082	\$ 157,430	\$ 159,456					
		# of Units	737	446	392	525					
		Unit Cost	\$ 244	\$ 316	\$ 401	\$ 304					
	Commercial & Growth Reinforcement	Dollars	144,403	133,134	156,518	144,685					
		# of Units	592	421	390	468					
		Unit Cost	\$ 244	\$ 316	\$ 401	\$ 309					