City of Kingston
2025 Municipal Operations Renewable Energy Report
for the 2024 Calendar Year

Mayor Steven T. Noble

This Municipal Operations Renewable Energy Report reviews the electric sources of the City of Kingston's municipal accounts for 2024.[1]

This report includes:

- An introduction to Kingston's municipal electricity demand and renewable energy goals
- Renewable energy sourcing strategies employed by the City of Kingston
- Municipal account electricity sources and renewable energy programs

Introduction:

Municipal properties in the City of Kingston use significant quantities of electricity to operate and serve the Kingston community. This report tracks the sources and procurement methods of electricity as Kingston moves to transition from fossil fuels to 100% renewable energy.

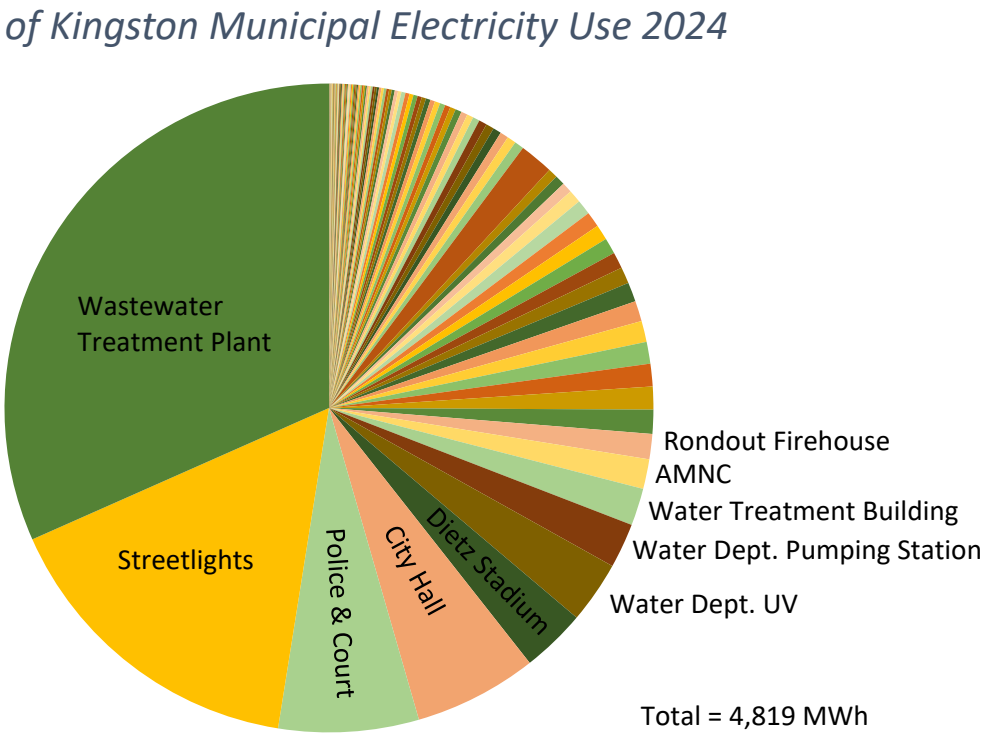

Figure 1. City of Kingston municipal electricity usage in 2024. The ten highest-demand accounts are labeled.

[1] Utility bills with a start date in 2024 were used to calculate annual electric consumption for this report.

In 2024, the City of Kingston consumed a total of 4,819 MWh of electricity across 130 Central Hudson utility accounts. This is equivalent to 3% of the electricity consumed citywide. The cost for supply and delivery of electricity to municipal accounts was $862,558.20 in 2024. More than 50% of municipal electric consumption was from three accounts: the municipal wastewater treatment plant, the city's street lighting infrastructure, and the police station and courthouse. The ten highest consuming properties account for nearly three quarters of municipal electricity demand.

Electricity in the City of Kingston is delivered by Central Hudson and they are responsible for maintaining the distribution network of utility lines and poles. New York's deregulated power market gives Kingston the opportunity to choose their electricity supplier independent of the utility that delivers the electricity. The deregulated market allows Kingston to purchase electricity from sources that better align with the City's goal to achieve 100% renewable electricity in municipal operations.

Renewable Energy Sourcing Strategies:

The City of Kingston currently accesses and supports renewable energy through a variety of mechanisms, including:

1. **Municipal on-site solar installation**: On-site solar panel installation on the rooftops or other suitable spaces of municipal properties directly increases renewable energy production and use by the City of Kingston. This strategy is capital intensive but results in an increase in renewable energy production and consumption within the city.
2. **Renewable Energy Certificates (RECs)**: RECs serve as proof that a certain amount of electricity has been generated from renewable sources such as wind or solar and can be bought and sold on a national or state power market. RECs can be bundled with electricity procured through a power purchase agreement (PPA) or unbundled and purchased independent of electricity. By purchasing RECs, Kingston can claim ownership of renewable energy, even if the electricity was produced thousands of miles away.
3. **Community solar**: Through community solar programs or community distributed generation (CDG) Kingston subscribes to local shared solar projects and earns credits. These credits discount electric utility bills from Central Hudson. Community solar enables the municipality to participate in renewable energy production without having to directly own or install solar panels. Unlike with RECs, community solar credits do not correlate to the purchase of renewable electricity, and they do not affect the electricity mix used by a given utility account.
4. **Passively through the grid mix**: The electricity accessible to Kingston through the New York grid was approximately 14% renewable energy and 39% zero-emissions in 2023. This remains the same for 2024 according to personal communication with Central Hudson staff. As more renewable energy projects come online and the state pursues the CLCPA goal of 70% renewable energy by 2030, the proportion of renewable energy delivered by Central Hudson will rise.

Together, these strategies allow the City of Kingston to access renewable energy and achieve its clean energy and climate goals.

2024 Municipal Electricity Sources:

Kingston's electricity sourcing strategy is focused on advancing renewable energy initiatives and fostering strategic partnerships to support sustainability goals. If the city did not pursue these strategies, it would have emitted ~662 metric tons of CO2e from electricity use in 2024. Below, we review electricity account affiliation with renewable sourcing strategies for the 2024 calendar year.

Affiliation	# of Accounts	2024 kWh consumed
Municipal Solar*	2	58,700
REC	35	2,408,626
REC & Community Solar	65	1,606,873
Community Solar (CDG)	10	490,193
Grid Electricity	18	254,928
Total	130	4,819,320

*Table 2. City of Kingston municipal account and electricity consumption program affiliations for calendar year 2024. * Municipal solar accounts were also in contract with Constellation Energy for RECs when electricity was purchased from the grid.*

Municipal solar generation continues to play a small role in the City's energy mix in 2024. Two on-site solar systems, one at the Andy Murphy Neighborhood Center (AMNC) with a 49-kW system generating 58.7 MWh of electricity in 2024, and the other at the Forsyth Nature Center Greenhouse with a 6 kW capacity[2], represent the start of a larger build-out of municipal electricity generation. The electricity produced from these projects covered ~1% of municipal electricity consumption in 2024.

The City of Kingston also had a power purchase agreement with Constellation Energy, through the NewMix® REC program for 102 accounts.[3] This program supplied electricity 100% sourced from wind power facilities in Texas. Approximately 78% of the city's accounts and 84% of its total electricity consumption were linked with REC purchases. Four contracts covered municipal accounts in 2024. These contracts ran from 02/23-02/24, 2/24-11/24, 3/24-11/24, and 11/24-11/25. Electricity pricing was fixed at 0.11412 $/kWh for the first, 0.08870 $/kWh for the second, 0.05727 $/kWh for the third, and 0.09681 $/kWh for the fourth contract.

In addition to on-site solar installation and REC purchases, 75 utility accounts were linked to community solar through contracts signed with Community Energy, SunCommon, and WKNY. Most community solar credits in 2024 came from the Medusa and New Windsor, NY solar projects. Engagement with community solar ensured that the city benefited from and promoted locally sourced renewable energy.

A smaller number of accounts were not affiliated with any renewable sourcing strategy. The 18 accounts with no affiliation comprised 5% of the total kWh consumed by the municipality in 2024. The average standard rate for electricity purchased from Central Hudson in 2024 was 0.08 $/kWh.

[2] The annual quantity of electricity generated at the Forsyth Nature Center Greenhouse is not tracked. Assuming standard generation rates for the Hudson Valley, these panels generate ~8.3 MWh per year.

[3] Contract terms for REC purchases do not coincide with the calendar year. Any account that was affiliated with a REC purchase in 2024 was counted in this report.

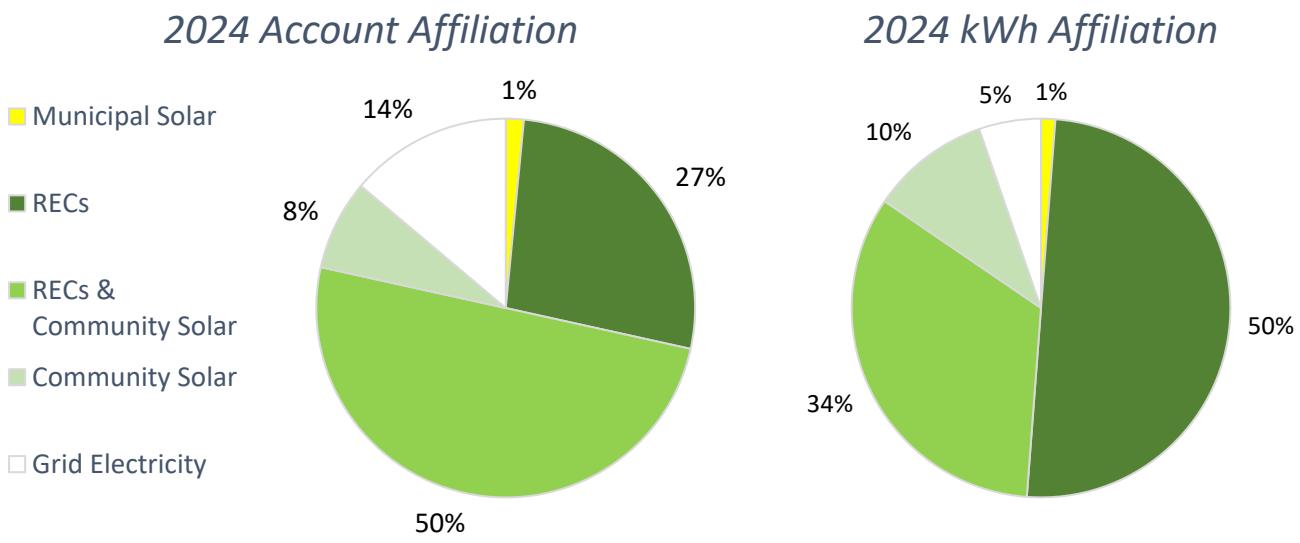

Figure 2. City of Kingston utility account and electricity affiliations.

Conclusions

As the City of Kingston takes proactive steps to transition to renewable energy sources, it plays a vital role in advancing the region and state's broader efforts to decarbonize the power sector. In 2024, 85% of the City's electricity was renewable and electric consumption only emitted ~100 tons of CO2e, equivalent to 23 cars driven for a year. By continuing to pursue renewable energy programs, such as RECs, Community Solar, and on-site solar installation, the City can not only reduce its environmental impact but also support the growth of renewable energy capacity locally and nationally.

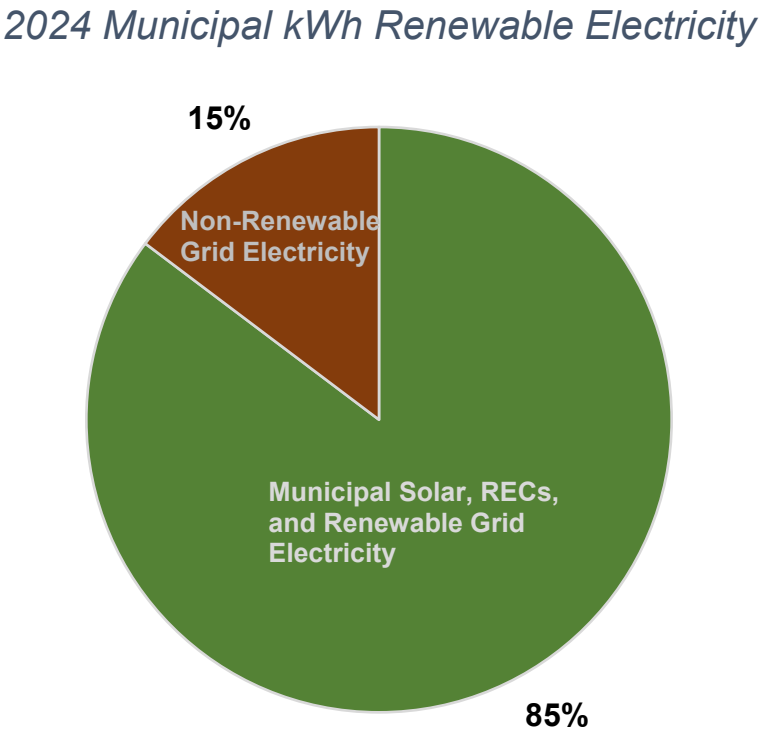

Figure 3. Portion of City of Kingston electricity sourced from renewable and non-renewable sources.