

City of Alexandria, Virginia
FY 2024 Proposed Operating Budget & CIP
Budget Questions & Answers

May 2, 2023

Question:

Can General Services address the drop in the percentage of the City's total electricity that comes from renewable energy sources from 95% in FY20 to 90% in FY21 and when figures will be available for FY22 (P. 11.44)? What is the expected trend for FY22 (and beyond) and what factors impact the renewable energy sources percentage for the City?

Response:

The City only sources a small portion of its total electricity directly from renewable energy sources: two solar photovoltaic systems installed at City facilities¹ and by way of renewable energy sources included in Dominion Energy's total electricity-generation portfolio serving all its customers. In addition to this baseline, the City purchases renewable energy credits (RECs) to attribute energy use to renewable energy generation from regional and national renewable energy sources, including utility-scale solar and wind. The City uses these unbundled RECs to attribute its electricity use to renewable electricity generation that may not have otherwise been generated.

In general, the decrease in the amount of the City's electricity use attributed to renewable energy sources from FY20 to FY21 is a result of three factors:

- **Increase in the price of RECs:** markets for RECs are highly volatile, and RECs are increasingly popular as a method for organizations to achieve climate action goals. As a result, the amounts budgeted for a given fiscal year are not always sufficient for the City to reach 100% attribution.
- **Increase in City electricity use:** as operational needs and service delivery models change, the City's uses more or less electricity, further complicating efforts to achieve 100% attribution.
- **Reconciliation timeline:** because funding is provided for RECs on a fiscal year basis, staff must forecast energy use for the final 2 months of the fiscal year and procure RECs for those months' energy use in advance. Actual energy use for those months is only determined by August of the following fiscal year, meaning it is possible for the City to underestimate its purchasing.

When will figures be available for FY22 (p. 11.44)?

As noted, the price of RECs has increased, and additional funding was requested to purchase FY22 RECs in the Fall of 2022 through the annual carryover process. This carryover funding was approved, but procurement for additional RECs had not completed by the end of calendar year 2022. DGS anticipates that final FY22 data (including carryover-funded RECs) will be available by June 2023.

¹ Beatley Central Library and Witter Field, with systems generating approximately 3% and 6% of electricity used at the respective facilities.

What is the expected trend for FY22 (and beyond), and what factors impact the percentage of City electricity coming from renewable energy sources?

Staff anticipates that the additional carryover-funded RECs will result in 100% attribution to renewable energy sources once they have been purchased.

Given the high degree of volatility in REC prices and City energy usage, it is difficult to project a long-term trend in the City's renewable energy usage. Factors directly influencing the City's percentage of renewable energy include:

- Year-over-year changes in electricity use, either as a result of broader trends (e.g. return to office) or specific changes in service delivery models:
 - Decreases resulting from energy-saving and -efficiency initiatives, such as possible expansions of City solar, greater utilization of LED lighting, and modernization of water/heating systems.
 - Increases due to electrification of previously fossil-fueled systems, such as HVAC and hot water heating at the new Mark Center facility
 - Increases due to electrification of City fleet vehicles and DASH buses
- Electricity generation by City systems at Beatley Library and Witter Field (historically less than 1% of the City's total electricity use), as well as any future City solar generation systems.
- Pricing of RECs due to scarcity (or potential future surplus) of renewable energy sources, utility investment, and transmission capacity. Price is further driven by competition from other organizations purchasing RECs.

Additional indirect factors drive the underlying percentage of renewable energy throughout the grid, including:

- Potential changes to state policy or the City's agreement with Dominion Energy to allow access to power purchase agreements for utility-scale solar or wind generation, or other alternative sources of renewable energy.
- Continued investment in renewables by Dominion Energy, in compliance with the Virginia Clean Economy Act.