

Phase 2: NREL Technical Assistance for The City of Frankfort, Kentucky

Period of Performance: One year from receipt of funding, anticipated 4/1/23 – 3/31/24

Amount: \$150,000

The tasks listed below continue NREL technical support of Frankfort’s effort to reach 100% clean electricity for city operations by 2023, as well as city-wide by 2030. This scope of work (SoW) builds upon the results of the first phase of work and are only a partial representation of the options available from NREL. As such, this SoW is designed flexibly so that specific activities can be actively scoped in conversation with the city as additional needs arise and budget allows.

In the first phase, the city identified utility-scale solar as the most cost-effective renewable generation solution. To transition city operations to renewable generation sources, at least 8 MW will be required to meet current electricity demand. This power could be acquired through a Power Purchase Agreement (PPA) with a new-build, distribution-tied utility-scale solar facility.

The city recognizes that larger solar agreements realize more economic benefits including lower costs and better pricing. Therefore, additional partners may be sought to commit to offtake power. These could include other community institutions, industrial partners, neighboring cities, or the Frankfort Plant Board (FPB) on behalf of the Frankfort community. Importantly, FPB’s participation and partnership in a larger solar generation facility would help them meet the City of Frankfort’s commitment to transition city-wide electricity demand to clean generation sources by 2030 while simultaneously delivering on Frankfort’s inclusive values by keeping impacts to low-to-moderate income rate payers to a minimum.

NREL will support the city through additional technical assistance to derisk the potential for new-build solar with the intent to meet the city operational goal and as much of the city-wide generation demand as practicable in a single effort as cost effectively as possible. (Note that this activity may identify multiple viable solar sites in the community.) The primary goal will be to achieve 100% clean electricity for city operations as close to the 2023 target as feasible given the balance of city priorities.

Task 1:

NREL will conduct an analysis to derisk the potential for a new-build solar facility. The intent of this task is to provide value and economic benefits for both the city and a potential developer.

In response to FPB’s letter to the city dated December 21, 2022, it is NREL’s understanding that the Frankfort Plant Board will be responsible for elements of planning including siting to ensure transmission is through FPB; to analyze legal considerations relevant to FPB’s work; to ensure FPB has transmission capacity, interconnection, and their own system-level financial analysis.

NREL activities will support the city in evaluating the above activities and also include, in collaboration with FPB and incorporating FPB data where appropriate:

- Gathering data in partnership with the city and in discussion with FPB to review any market or siting analysis already conducted by the FPB or others as well as the potential for grid interconnection;
- Comparing deal structure for FPB build or direct city offtake agreements;
- Providing feedback and analysis on potential KYMEA RFI, RFQ, or RFP for solar development that would meet city goals;

- Assessing solar siting for an urban solar project, including consideration of interconnection and transmission capacity (dependent on FPB data), as well as generation potential and any permitting considerations;
- Conducting an analysis of how to take best advantage of the new tax credit provisions;
- Derisking aspects of development and pricing to ensure project viability for both the city and potential developers;
- Supporting city engagement in conversations with potential offtake partners;
- Evaluating equity considerations of all alternatives identified; and
- Coordinating and leading meetings with FPB and partners.

Partnership with FPB will be critical to the success of the project. NREL will coordinate and lead meetings with FPB on behalf of the City, with City representative participation to discuss those elements of the project that will require FPB collaboration to realize success; NREL will provide summaries with action items for attendees.

Deliverable: Feasibility assessment report, ten pages.

Time frame: 4-6 months, dependent on data available.

Task 2:

NREL will provide third-party technical assistance to the city in virtual meetings on an as-needed basis, to:

- Provide input and/or review forthcoming RFI, RFQ or RFPs, including example language, review of draft language, incorporate city, and/or to answer technical questions to inform the city's review and evaluation of developer responses; and
- Deliver expertise in conversations with Frankfort Plant Board and KYMEA or other partnerships that may be considered for any of the activities above.

Deliverable Presentation to the city commission at the conclusion of developer engagement.

Time frame: 6 months, dependent on issuance of any city RFPs, etc.