

Supporting Equitable Healthcare Through Solar Energy Assessment Tools

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Client: Collective Energy

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Federally Qualified Health Centers provide care to **32.5 million patients** across the United States, including **30% of the population living in poverty** (HRSA, 2024). However, health centers are particularly vulnerable to **power outages interrupting their services**. This affects their patients, who are often marginalized and underserved populations. By providing these centers with tools to implement solar and battery systems, we can **increase their energy resilience** to keep serving their communities.

Project scope

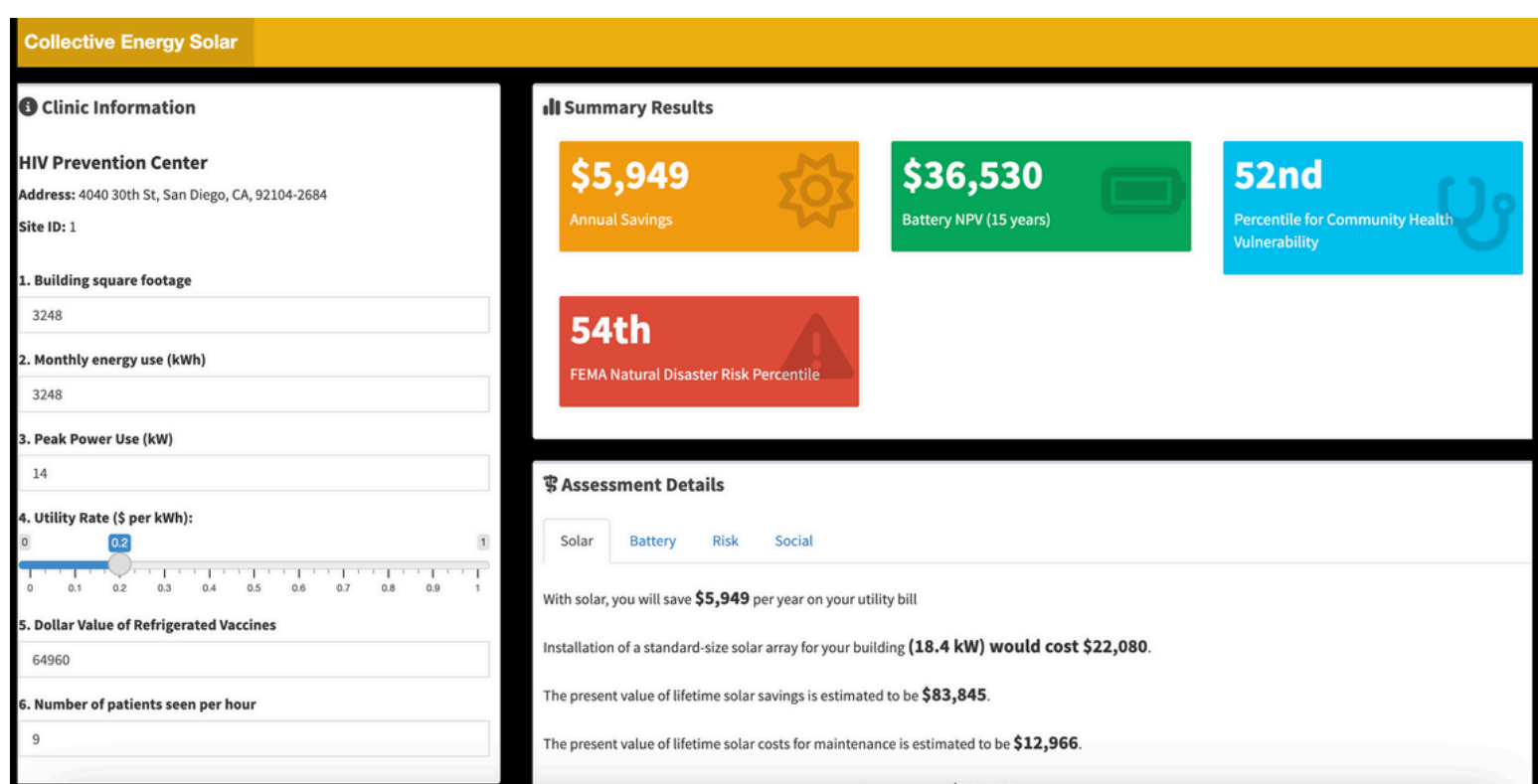
This project built models to analyze solar and battery storage system feasibility, costs, and benefits for over 11,000 sites in the U.S. by compiling and building over 14 datasets. We presented the results of these models through web applications to streamline the energy assessment process, supporting our client, Collective Energy, in its mission to provide equal and reliable health services to all.

Our Solution

We designed and built two web applications translating the data into energy assessments tailored for each site:

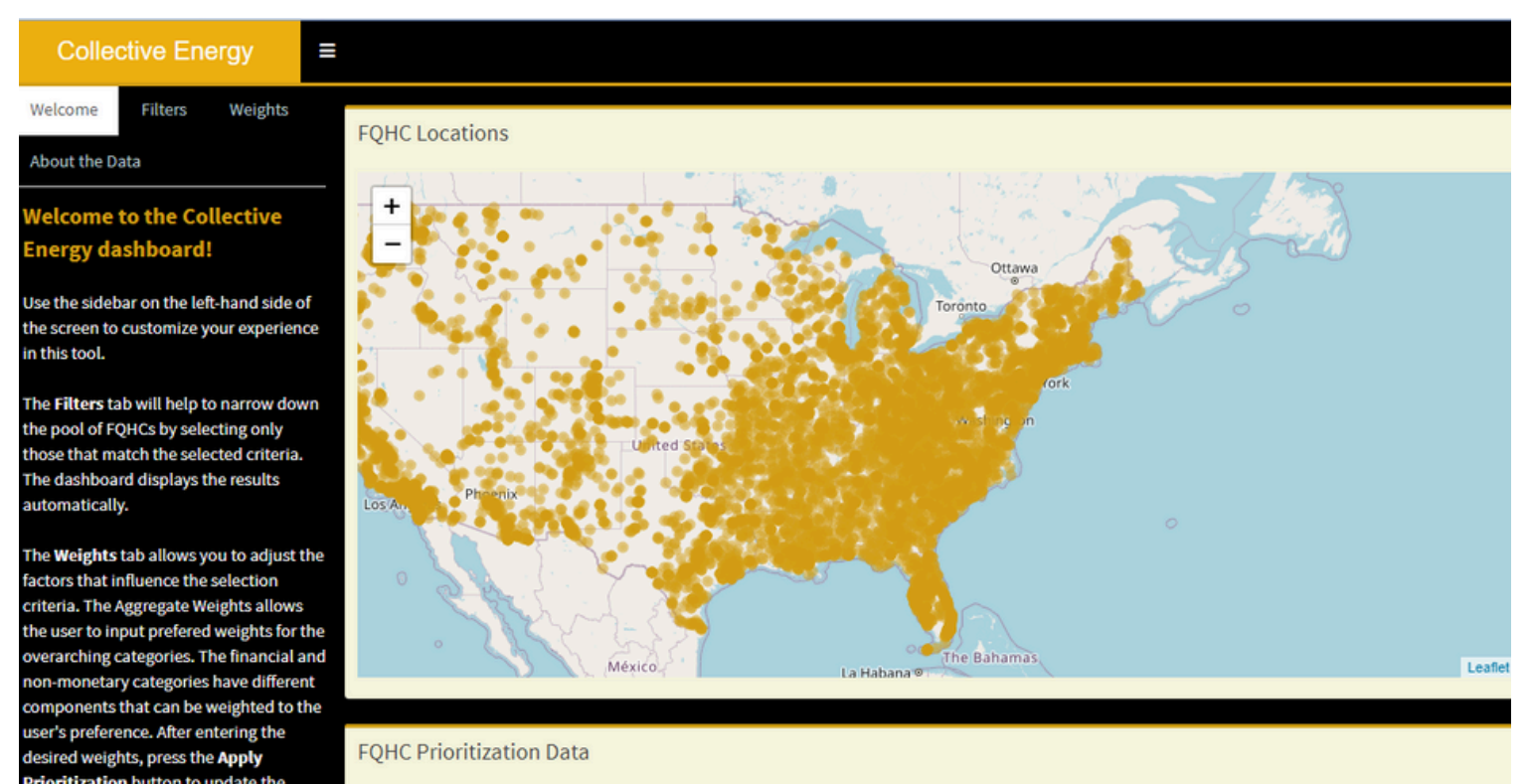
Clinic Solar & Battery Assessment Tool

The preliminary screening tool assesses the costs and benefits of installing solar and battery systems for clinics, including information on investment costs, solar production capacity, power outage risk, and health equity demographic data.



Collective Energy Prioritization Tool

The prioritization tool ranks clinics based on user-defined weighting of financial, environmental, and social equity factors. It assists our client in identifying and prioritizing health centers for consultancy based on the selected criteria.



Impact

We are supporting healthcare equity by enabling health centers to adopt solar energy systems that will allow them to keep providing services to millions. Each of these sites is crucial for their communities' well-being. Through tools like these, they can enhance their energy resilience.

Next steps

There are potential applications for this project beyond its current scope. Assessment tools like ours can help guide effective investment in modernizing the US electrical grid by deploying on-site renewables and battery systems.

