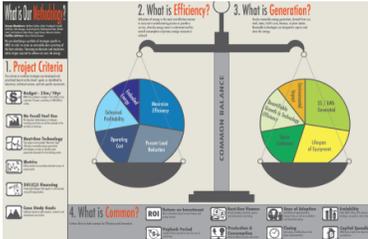




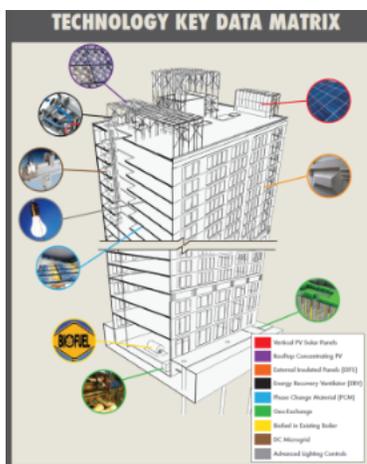
# NRDC Needed Roadmap to Transform its New York Headquarters to a Net Zero Energy Building



Custom infographics convey project criteria, methodology and sustainability metrics to stakeholders



On-site renewable energy system design, calculations and financing



3D model to visualize technology implementation

NRDC, a leading environmental action group, was interested in how it could retrofit its headquarters building in New York City into a Net Zero Site Energy building. For it to qualify, it would need to produce as much energy as it consumes. NRDC needed a proof-of-concept and roadmap to assess whether it should pursue the project.

## Background

NRDC's mission is "To safeguard the Earth: its people, its plants and animals and the natural systems on which all life depends." A major environmental impact area is the production and consumption of energy for use in buildings: according to the [US EPA](#), buildings account for "36 percent of total energy use and 65 percent of electricity consumption."

NRDC owns over half of a building in midtown Manhattan, where its operations are headquartered. NRDC sought a feasibility study assessing whether its building could become "Net Zero Site Energy," a challenging goal that would require its building produce on-site as much energy as its occupants consume on an annual basis. Additionally, NRDC was interested in accomplishing the goal of Net Zero without the use of on-site fossil fuel consumption for heating or electricity. This proved challenging for a building situated in Manhattan, densely packed next to its neighbors with little room for energy production measures like wind and solar.

## Third Partners advisory services for the NRDC included:

- Managed a team of 10 student consultants to complete the project on-time
- Conducted interviews with stakeholders, vendors and scientists
- Identified customized energy efficiency and financing measures
- Designed a comprehensive data model assessing energy performance of the building, based on electricity consumption, heating usage, weather, & occupancy
- Predictive modeling on the energy effects of Net Zero energy conservation measures (e.g. façade improvements, air sealing, etc.) and energy production measures (e.g. concentrated photovoltaic, geo-exchange pumps, etc.)
- Presented to NRDC C-suite decision makers, consulting team, and academic community

## Results

The final plan proposed 25 energy production and conservation measures tailored to the NRDC headquarters building, including concentrated photovoltaic on the roof, lighting controls, and energy recovery ventilators for the HVAC system.