

Fair Haven: Energy Efficiency, Tracking, and Management

Sustainable Jersey
Karen Kanan Corrêa
Climate Corps 2021



CLIMATE CORPS



Nancy Quirk

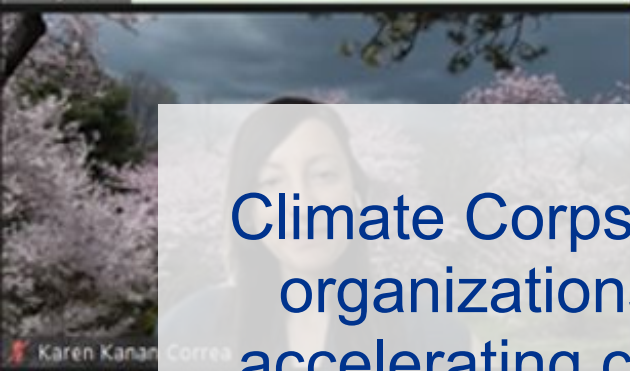


Tracey Woods

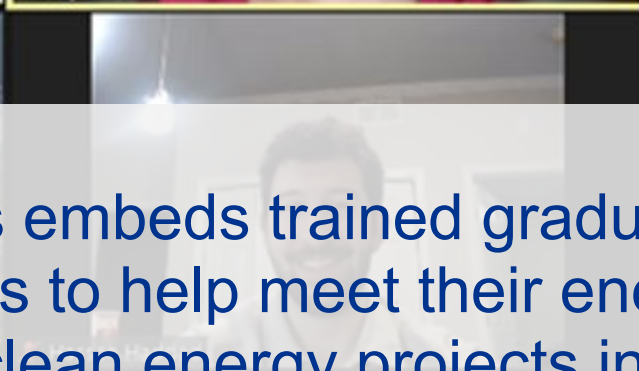


ruyter

Climate Corps embeds trained graduate students in organizations to help meet their energy goals by accelerating clean energy projects in their facilities. The following presentation is the result of a 10 week Climate Corps fellowship at Sustainable Jersey.



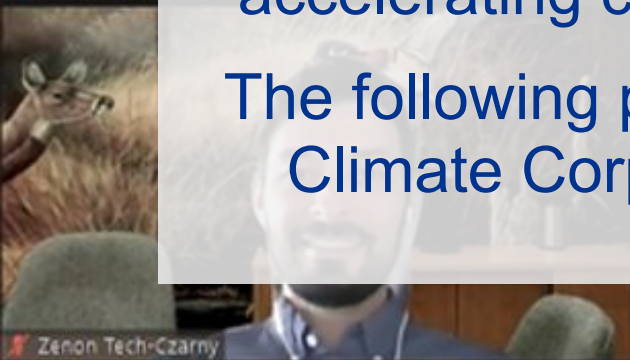
Karen Kanar Correa



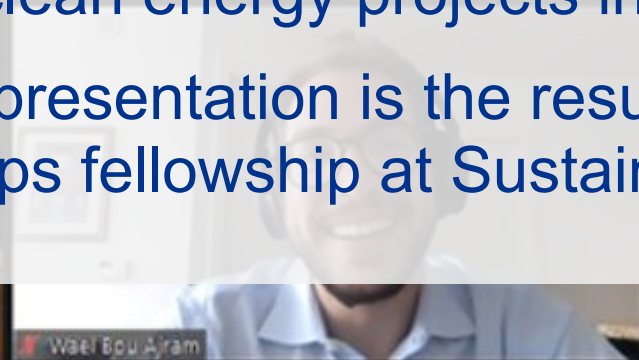
Zenon Tech-Czarny



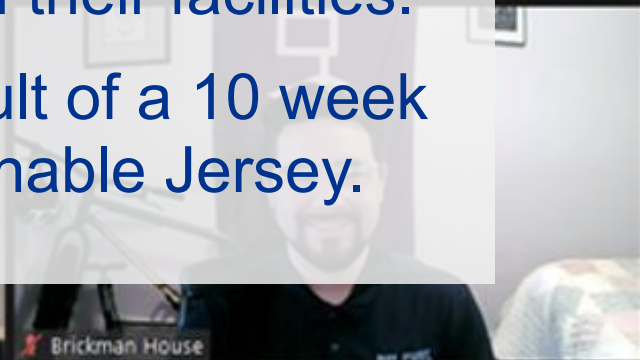
Wael Bou Ajram



Trevor Harper



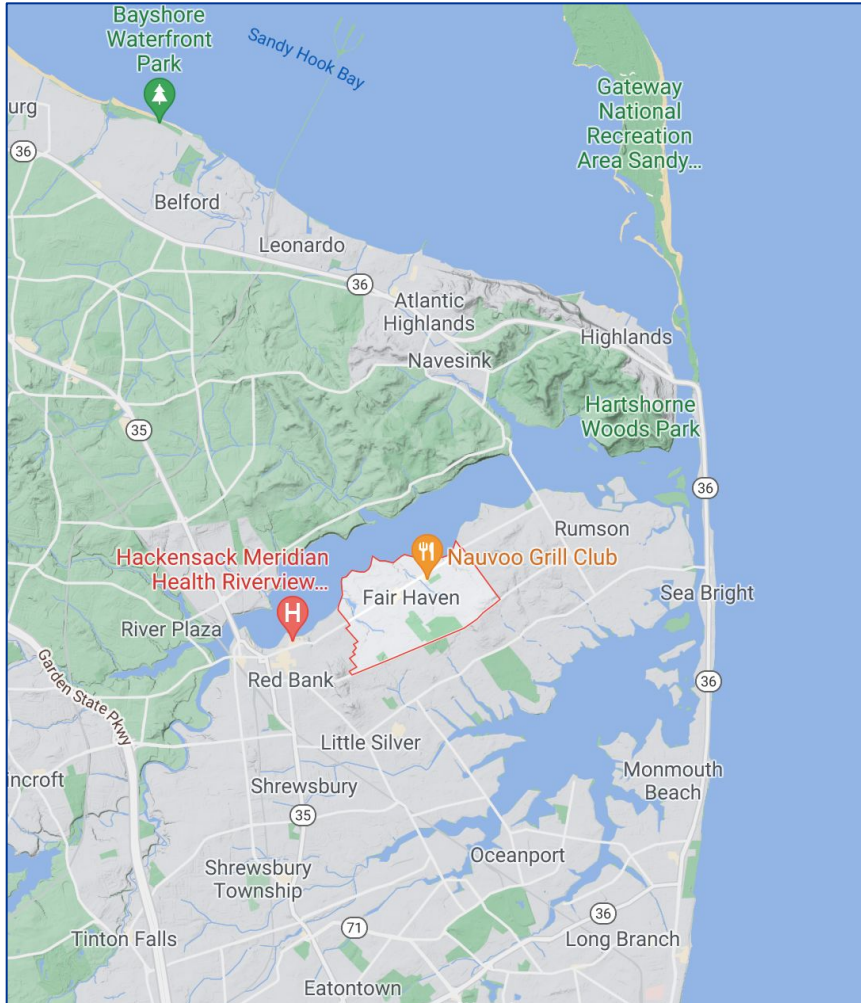
Alldrin Uriol



Hoqan Dwyer

Fair Haven Borough

Overview



Utilities

- NJNG, JCP&L, and third-party utility (Direct Energy)
- Member of NJSEM

Certification

- Bronze Certified in 2018

Past Energy Work

- LGEA in 2010
- Direct Installs in 2012

Fair Haven Borough



Energy Tracking with ENERGY STAR Portfolio Manager

View All Properties (4) <input type="button" value="v"/>		Energy Highlights <input type="button" value="v"/>		<input type="button" value="Refresh Metrics"/>	
Add/Edit/Delete Groups		Add/Edit/Delete Views			
	Name <input type="button" value="v"/>	Energy Current Date <input type="button" value="v"/>	ENERGY STAR Score <input type="button" value="v"/>	Site EUI (kBtu/ft ²) <input type="button" value="v"/>	Source EUI (kBtu/ft ²) <input type="button" value="v"/>
	Bicentennial Hall 16417984	05/31/2021	94	45.4	54.4
	Borough Hall 16417982	05/31/2021	82	46.8	83.9
	Department of Public Works 16417986	05/31/2021	67	79.9	109.5
	Police Department 16417983	05/31/2021	35	92.6	166.7

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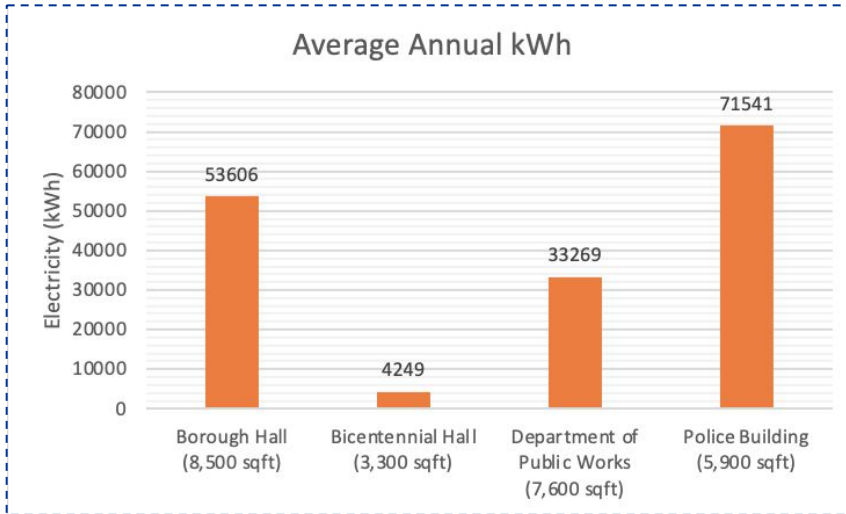
Fair Haven Borough

ENERGY STAR Portfolio Manager: Statement of Energy Performance

 LEARN MORE AT energystar.gov	ENERGY STAR® Statement of Energy Performance	
81 ENERGY STAR® Score ¹	Borough Hall Primary Property Type: Office Gross Floor Area (ft ²): 8,500 Built: 1968 For Year Ending: May 31, 2021 Date Generated: July 21, 2021	
<small>1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.</small>		
Property & Contact Information		
Property Address Borough Hall 748 River Rd Borough of Fair Haven, New Jersey 07704	Property Owner Borough of Fair Haven 748 River Road Borough of Fair Haven, NJ 07704 (____)____-____	Primary Contact DJ Breckenridge 748 River Road Borough of Fair Haven, NJ 07704 7327470241 recreation@fthboro.net
Property ID: 16417982		
Energy Consumption and Energy Use Intensity (EUI)		
Site EUI 47.2 kBtu/ft ²	Annual Energy by Fuel Electric - Grid (kBtu) 172,777 (43%) Natural Gas (kBtu) 228,244 (67%)	National Median Comparison National Median Site EUI (kBtu/ft ²) 77.6 National Median Source EUI (kBtu/ft ²) 140 % Diff from National Median Source EUI -39%
Source EUI 85.1 kBtu/ft ²	Annual Emissions Greenhouse Gas Emissions (Metric Tons CO ₂ e/year) 29	
Signature & Stamp of Verifying Professional		
I, _____ (Name) verify that the above information is true and correct to the best of my knowledge.		
LP Signature: _____ Date: _____		
Licensed Professional		
DJ Breckenridge 748 River Road Borough of Fair Haven, NJ 07704 7327470241 recreation@fthboro.net		
Professional Engineer or Registered Architect Stamp (if applicable)		

Fair Haven Borough

Energy Trends



Annual kWh

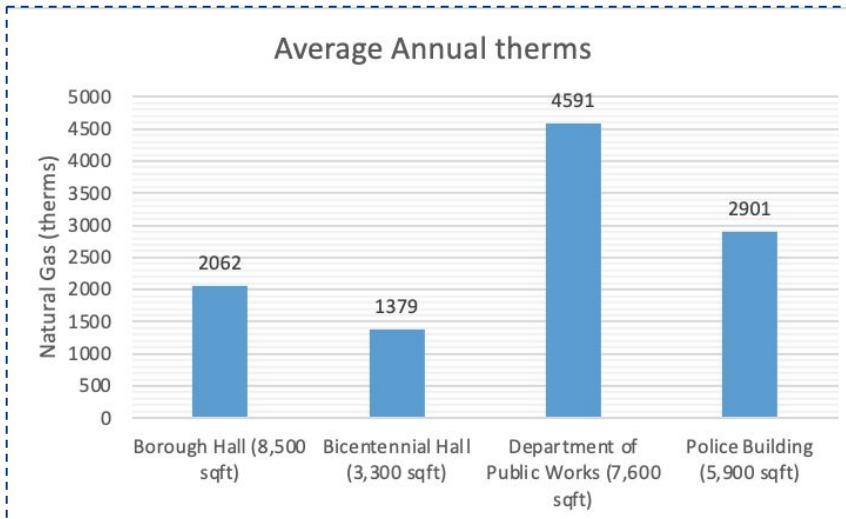
162,665

Annual Electric Cost

\$19,713.61

Average Cost/kWh

\$0.12



Annual Therms

10,933

Annual Natural Gas Cost

\$9,687.74

Average Cost/therm

\$0.89

Fair Haven Borough

Energy Solutions

Equipment Replacement

- No municipal account >200KW
- Direct Install at Borough Hall

Direct Install Savings

- Assuming 20% projected savings
 - **10,721 kWh** saved annually
 - **412 therms** saved annually
 - **\$1,362** saved annually



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Energy Solutions

Additional Initiatives

- Possibilities for upgrades to historic Bicentennial Hall
 - Gardinier grant
- New construction initiatives
 - SmartStart Building Rebates
 - “It Pay\$ to Plug In” electric vehicle charging grants
 - Solar thermal energy
 - On-site solar



Fair Haven Borough

Sustainable Jersey Actions

*Energy Tracking &
Management*

*Buy Electricity
from a Renewable
Source*

*Energy Efficiency for
Municipalities*

Fleet Inventory

*Municipal Carbon
Footprint*

*Municipal On-site
Solar System*

*Commercial Energy
Efficiency Outreach*

*Residential Energy
Efficiency Outreach*

*Renewable
Government Energy
Aggregation*

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Sustainable Jersey Actions

*Energy Tracking &
Management*

Priority (20 points)

Required Documentation:

- *Building Portfolio*
- *Meter information*
- *Meter data*
- *SEP reports*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Buy Electricity
from a Renewable
Source*

(10 points)

*Fair Haven qualifies as member
of NJSEM*

Required Documentation:

- *NJSEM membership documentation from Gable Associates showing percentage of renewables*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Energy Efficiency for
Municipalities*

Priority (5-50 points)

Required Documentation:

- *Direct Install contract or scope of work showing projected savings*
- *Summary write-up*
- *(In one year, submit again to show actual savings for more points)*

Fair Haven Borough

Sustainable Jersey Actions

Fleet Inventory

Priority (10 points)

Required Documentation:

- *Sustainable Jersey Fleet Inventory Spreadsheet*
- *Narrative report*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Municipal Carbon
Footprint*

Priority (10 points)

Required Documentation:

- *Energy Tracking & Management (including street lighting if possible)*
- *Fleet Inventory*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Municipal On-site
Solar System*

(10 points)

Partner with Fair Haven Schools

Required Documentation:

- *Letter of Certification with on-site solar information*
- *Documentation showing system output and electricity offset*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Commercial Energy
Efficiency Outreach*

*Residential Energy
Efficiency Outreach*

(10-20 points)

Partner with NJNG

Required Documentation:

- *Outreach letter on municipal letterhead*
- *Additional documentation*
- *Summary write-up*

Fair Haven Borough

Sustainable Jersey Actions

*Renewable
Government Energy
Aggregation*

(5-50 points)

Partner with local municipalities

Required Documentation:

- *Copy of R-GEA ordinance*
- *Letter of Certification*
- *Summary write-up*

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Next Steps

Short-Term (3-6 months) implementation

- Direct Install Project
- SmartStart Buildings rebates for new construction (NJCEP)
- Gardinier grant

Medium-Term (6 months-1 year) implementation

- Energy Efficiency Outreach campaigns
- Fleet Inventory & Carbon Footprint
- New Construction projects (EV chargers, on-site solar, etc)

Long-Term (1-5 years) implementation

- Renewable Government Energy Aggregation
 - On-site Solar
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Thank you!

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