

# PSEG Institute of Sustainability Studies Green Team Intern Serving Steven Winter Associates

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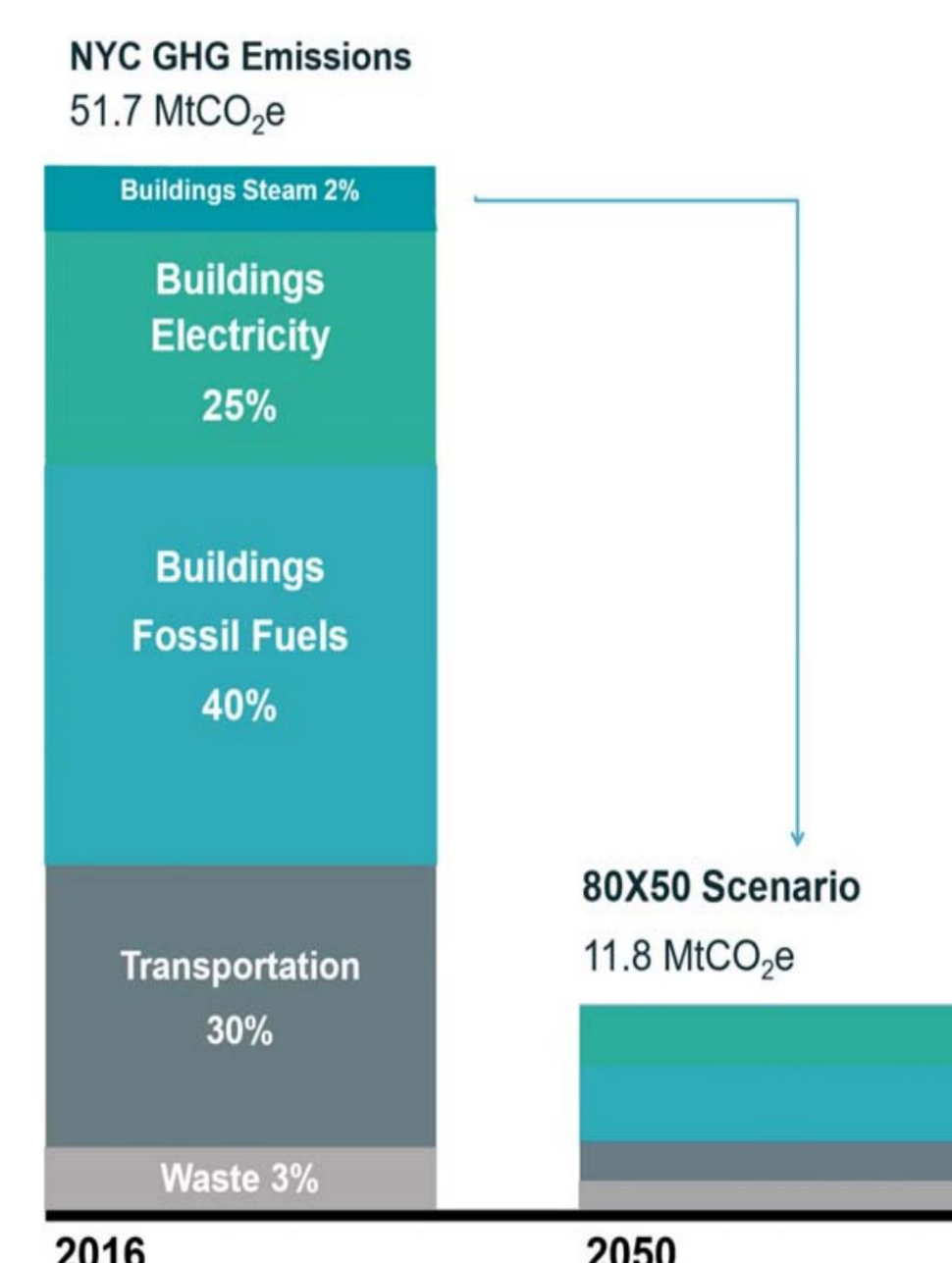
## Background

This summer I was able to intern at the PSEG Institute of Sustainability Studies at Montclair State University. I found this opportunity through Pathways to Science website and applied through the PSEG ISS website. The Green Teams program is an internship program for undergraduates from multidisciplinary background to address sustainability initiatives with partner companies. Furthermore, the program also trains students with various skills necessary to break into the sustainability space, professional development, and networks throughout the summer. During my internship experience I was partnered with Steven Winter Associates a building consultancy firm in New York City. With other 4 undergraduates I was able to collaborate and address the initiatives in New York City.








## Introduction

New York City has passed proactive carbon reduction legislation to meet Climate Goals by 2030. In order to meet these goals New York City must target building emissions since 67% of emissions come directly from buildings. The most important local laws now implement are local law 97 and 94. Local Law 94 indicates that new must either install solar panels on their roof or implement a green roof. Local Law 97 indicates that all buildings must reduce their carbon emissions 40% by 2030 and 80% by 2050. Furthermore, to target the majority of buildings in New York City retrofit efforts must be directed towards older buildings since they make up the majority of the landscape This has overwhelmed SWA with clients looking to retrofit their buildings and tasked us with finding innovative technologies to reduce carbon emissions as cost effectively as possible



## On the Job

What I enjoyed the most was how open and creative the internship was. The first two weeks we were trained on sustainability topics, networking opportunities, and essential skills such as ArcGIS pro, life cycle assessment, and coding. We were then introduced to our company and produced deliverables for the summer our deliverables. We focused on helping Steven Winter jumpstart their solar implementation effort and conduct energy analysis. Our Deliverables consisted of:

-  **Manual solar screening**
-  **Automated solar screening**
-  **Helioscope array design**
-  **Marketing material**
-  **Energy efficiency analysis**

## Deliverables

The main projects that we worked over the summer consisted of familiarizing ourselves with the process of solar screening for building owners since usually this is the first step towards carbon neutrality and complies with Local Law 94. We met with a couple environmental justice groups such as Kinetic Communities to discuss the importance of climate transition for affordable housing. We also met with a lot of building managers to understand the misconception about solar implementation and energy efficiency upgrades. This really helped us develop a sell sheet for the clients with the misconceptions and urgency for building owners to become carbon neutral. Furthermore, we learned how to create solar array designs in Helioscope for building owners to create.

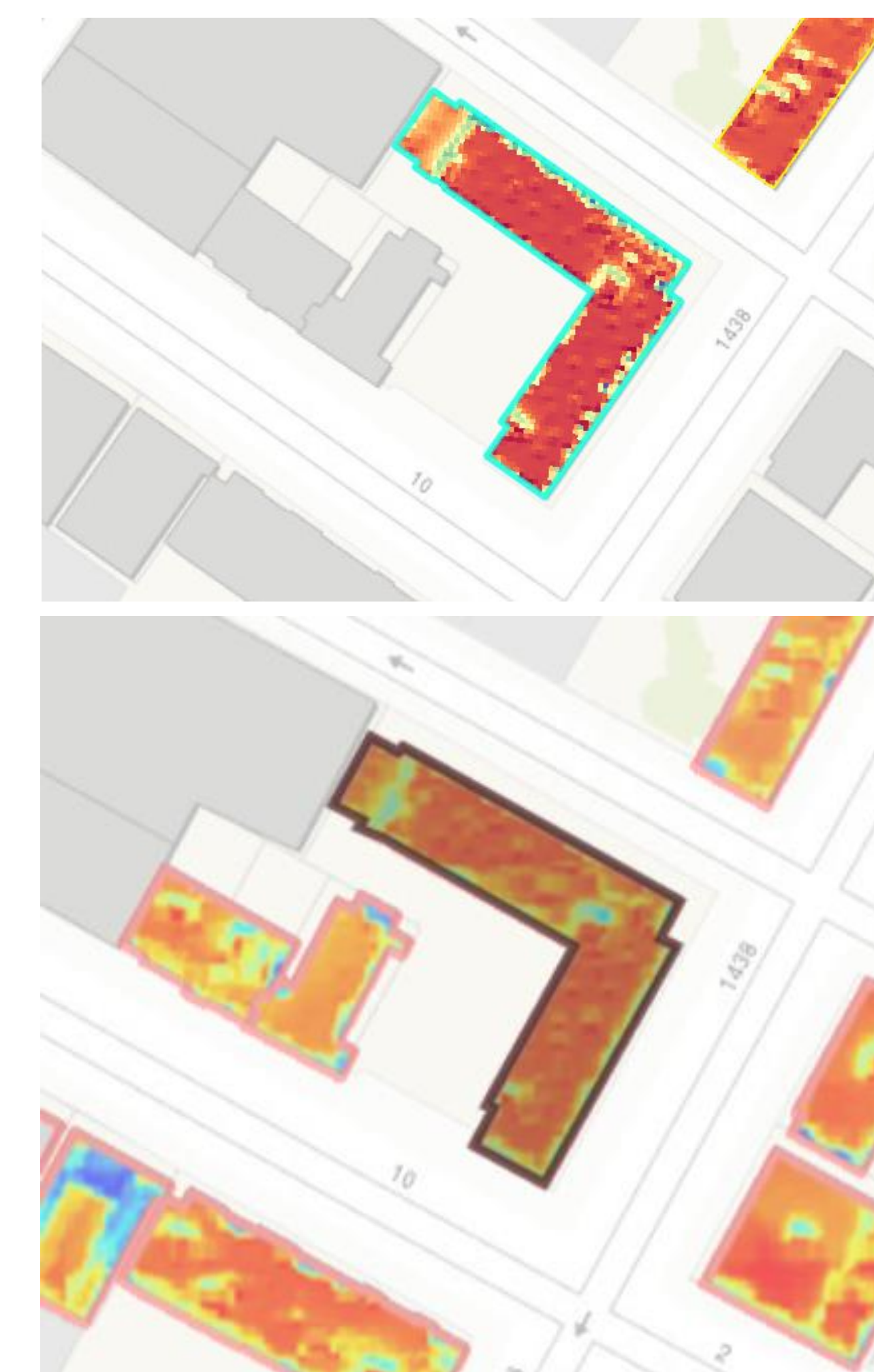


## Accomplishments

In our group we had two major projects that we were able to offer Steven Winter Associates. These two projects helped my employer decide to hire me throughout the school year and expand our project

### Automating the Solar Screening Process

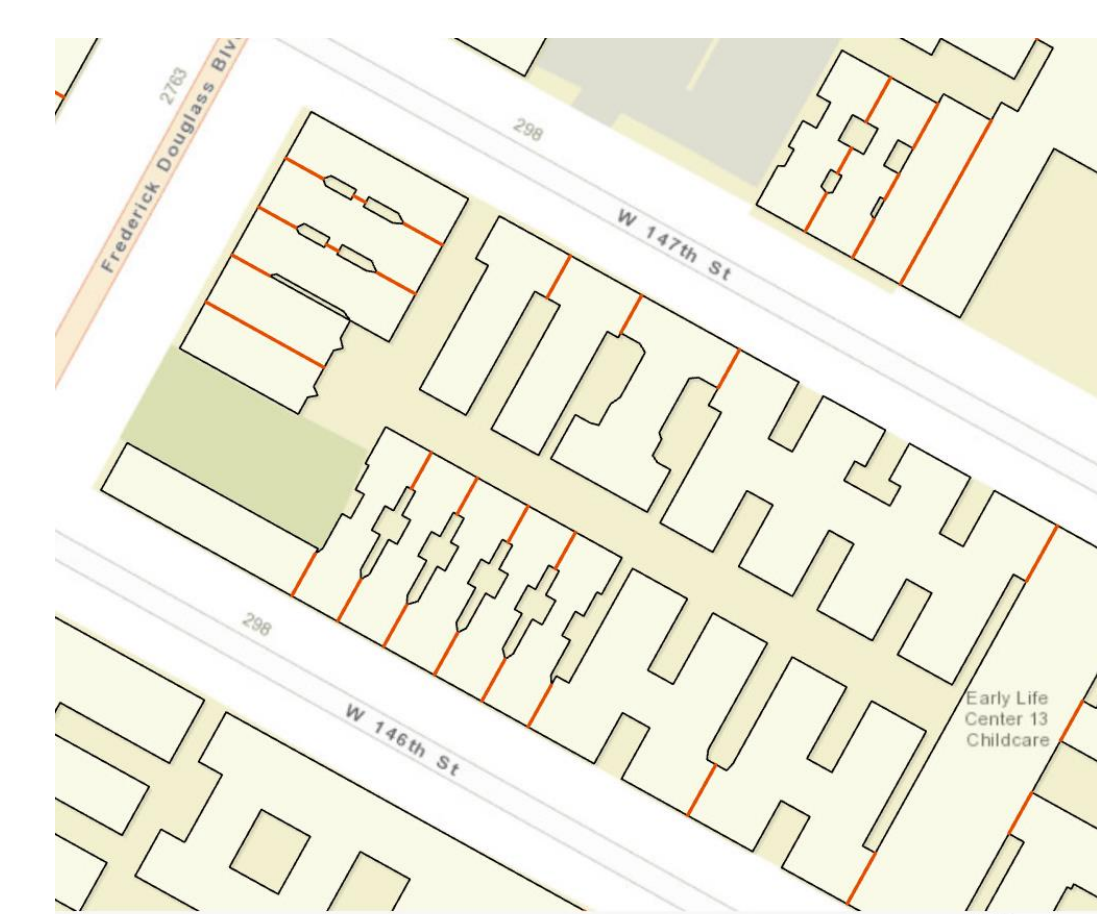
Through GIS we were able to recreate the solar potential analysis like the one created through the CUNY solar map. We were able to replicate the solar imagery and acquire similar results



Comparison of the solar map in GIS (top picture) with the CUNY solar map potential (bottom picture)

### Energy Use Intensity (EUI) Analysis

Another accomplishment we were able to perform was a city-wide EUI Analysis through GIS. By measuring the building envelope and calculating the shared wall between buildings we were able to calculate some energy correlation instead of using Gross Floor Area. The



## Reflection

Overall, I was happy with my internship opportunity this summer. The experience connected me with so many professionals working in the Sustainability space and gave me more confidence to break into the space. SWA gave us a site visit to StuyTown which has the **largest residential solar implementation in the US and doubled the solar capacity of NYC**. This site visit inspired me to continue to work in this space since it has such an impact in climate adaptation, affordable housing and environmental justice.



il would highly recommend EEDS student to participate in a program like the PSEG ISS Green Team internship or anyone that would like to work in the sustainability space. Although its not a typical internship, I was able to meet some many students with the same passions and from all areas of the country. No one in my team had the same major and none of us were specifically related to the field our company was in. However, our work landed me to continue the internship through the school year and collaborate with top executives in the company to help them expand into other cities



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