

Sena Wazer

5/3/2021

At the beginning of the semester, Brandon Hermoza-Ricci and I were assigned to work with the municipality of Stonington to find pathways for the town to reach their goal of carbon neutrality. We started by meeting with a group of representatives from Stonington, including the town planner, first selectwoman, and a member of their climate action task force. They laid out what they wanted us to research: actionable steps, which have worked in other municipalities, that the town can take to move towards carbon neutrality. With this task in front of us, we began to brainstorm and research ideas.

We started by identifying our scope of work. We decided that we wanted to focus on renewable energy alternatives that the municipality could invest in that would not require state or federal government approval. We also wanted to provide suggestions for how Stonington could engage community members in the transition to renewable energy. And finally, we wanted to give ideas on how Stonington could pay for the renewable energy suggestions we wanted to provide.

After identifying the scope of work and laying out a timeline, we began to do the actual research, beginning with solar and geothermal energy. I researched ground mounted solar as an alternative to fossil fuels and rooftop solar, since not all structures are able to support rooftop solar, and Brandon started on geothermal. I came to this research with very little prior knowledge about ground mounted solar, and so learned a lot about its benefits and drawbacks, and how it is different from rooftop solar. With that said, I struggled to find sources that were not companies trying to sell me solar. However, after reading many different articles about the benefits and drawbacks of ground mounted solar, I was able to draw conclusions about why it makes sense for Stonington, and where it should be installed.

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From there, we did research on grant programs that Stonington could pursue and began to brainstorm what kind of community engagement we wanted to suggest to Stonington. Brandon ended up finding some grant opportunities, and together we decided that we wanted to suggest two community engagement programs. First, an event about renewable energy and the transition to 100% clean energy; and second, a school program that consists of students doing interactive learning with solar panels, pollinator pathways, and composting, all of which could be implemented on the school grounds.

As we were writing our final report, we realized that we also wanted to include information about how the municipality could reduce its carbon footprint through strategies other than expanding renewable energy and community engagement. So we decided to include two more sections: one on transportation, and one on energy efficiency. These sections were relatively easy to write, since they were mostly based on prior knowledge, and required much less research than the solar and geothermal sections.

Through doing this project, and working on different sections of our report, I was able to learn more about what it takes for a municipality to move towards carbon neutrality. One of the big takeaways was that it is very hard, if not impossible, for a municipality to reach carbon neutrality without the state government working in tandem. However, I also find it very exciting that municipalities like Stonington want to pursue these options and are taking the lead on climate action. After partaking in this independent study, I feel empowered to help other municipalities also work towards carbon neutrality, and to further my advocacy with the state government, because of how important their contributions to climate action are at the municipal level.

Brandon Hermoza-Ricci

The opportunity to participate in an independent study through the UConn Climate Corps provided an encouraging environment for my first research experience. I originally found out about the program through the Climate Resilience and Adaptation: Municipal Policy and Planning and Municipal Policy class.

With the guidance of the faculty involved in the program, I, along with my student partner Sena Wazner, was able to conduct a study for the Town of Stonington which analyzed potential pathways they could pursue to achieve carbon neutrality. The first part of the project mostly centered on coordinating meetings with municipality representatives where we would engage them on their expected outcome for our report. After a few meetings early in the semester, my partner and I decided that our objective would be to use information from the leading and peer-accepted science to gauge an initial scope of work. Stonington told us they wanted real, accessible, and proven options they could consider achieving a carbon neutral municipality.

After reviewing information from the International Panel on Climate Change, our group determined the largest portion of greenhouse gas emissions driving global warming resulted from carbon burning emissions related to fossil fuels. For this reason, Sena and I made it a focus for our report to directly address pathways that transferred away from carbon burning infrastructure towards renewable energy generation technology for Stonington. Since the ask of the municipality was to prioritize proven technologies, Sena and I began investigating what neighboring communities in the New England area had achieved success in their aspirations for sustainability.

Halfway through our study we were challenged by the relatively little options Stonington had in pursuing renewables since, although there were many, most did not meet their

Brandon Hermoza-Ricci

requirement that they be accessible, with some even being unproven. After researching information on current renewable trends, Sena and I realized that we were putting all our focus on infrastructure since it aligned with proven technologies such as solar and geothermal, but in doing so we had omitted an entirely overlapping section that wasn't directly carbon emission based. This challenge though did induce a shift in our logic, up to that point where we began to investigate alternatives that wouldn't directly reduce carbon emission ton per ton but were options that still were sustainable. These alternatives could lead the Town towards some semblance of carbon neutrality. For this reason, we began compiling research on successful community programs in other municipalities which promoted sustainable practices that indirectly, through the chain of logistics, would reduce impacts on carbon emissions through increased environmentally conscious decisions.

The biggest realization that we had though was that no matter what options we considered, it was almost nearly impossible for the municipality itself to achieve carbon neutrality. For a neutral carbon emitting grid, the community, municipality, business owners, state, and federal agencies would all need to contribute to convert the entire town to renewable energy.

The best part of the project was being able to collaborate with a real governmental entity that was open to letting students into their community to tackle the joint challenge of climate change. As a student, this existential crisis has been a defining moment in my life and now career as I pursue a future profession in urban sustainability. Having the opportunity to have an impact on real world decisions by advocating for carbon reductions, however small they may be from Stonington, through this program has given me real-world research experience that has contributed to my growth in environmental literacy.

Brandon Hermoza-Ricci

*Attached above is the blog post from Brandon Hermoza-Ricci. It is sent in PDF format as the bare bone wording. The actual blog post is being sent separately.*