

West Windsor Township Draft Climate Action Plan Executive Summary July 2015

The West Windsor Climate Action Plan:

- Summarizes the science of climate change and the risks climate change imposes on us.
- Provides an estimate of the quantity of greenhouse gas emissions (our carbon footprint) within the Township, due to both municipal government operations and the community sources at large.
- Establishes a greenhouse gas emission reduction goal equal to the State of New Jersey's Global Warming Response Act.
- Proposes a plan of action to achieve greenhouse reduction goals.
- Initiates a discussion on how we should plan for and adapt to climate change.

Climate Science

West Windsor is already beginning to experience a changing climate. The climate is changing principally due to an increasing concentration of GHGs in the atmosphere, particularly carbon dioxide (CO₂). GHGs trap heat in the atmosphere, causing global warming. Combustion of fossil fuels for transportation, electricity generation, building heating and industrial processes is the principal sources of anthropogenic CO₂. The CO₂ concentration in the atmosphere has recently reached the 400 part per million (PPM) level, and is rising at a rate of two parts per million per year.

West Windsor can expect that heat waves, intense precipitation and flooding will pose a growing challenge. This will increase the vulnerability of the region's residents, especially its most disadvantaged populations. Infrastructure will be increasingly compromised.

Scientists agree that climate change is here, we're causing it, it's bad, and it's getting worse.

Our "Carbon Footprint" - Green House Gas (GHG) Emission Estimate

West Windsor Township emitted 340,000 metric ton of CO₂ equivalents of greenhouse gas (GHG) emissions in 2012. Ninety nine percent (340,000 metric tons) of the Township's emissions were from the community at large. Only one percent (3,500 metric tons) results from municipal operations. Overall transportation represents the single largest category: 54% of total GHG emissions. Electricity use represents an additional 18.5% of emissions. Heating fuels account for 24.5% of emissions, and decomposition of waste represents the balance at 3%.

GHG Reduction Goal

The West Windsor GHG reduction goal is aligned with the State goal:

- Stabilization of greenhouse gas emissions at 1990 levels by 2020
- A further reduction of emissions to 80 percent below 2006 levels by 2050

GHG reductions by the Township are voluntary, not mandated. Overall, the Township would need to reduce GHG emissions by 96,000 metric ton between the present and 2020 to meet the state goal. Business as usual emissions reductions over this time period should total 50,000 metric ton. This leaves an additional 46,000 metric ton for which the Township must implement actions in order to achieve its 2020 goals.

Plan of Action

GHG reduction targets for municipal operations are more readily achievable due to the scale of effort and the ability of the Township to directly influence energy usage in building and fleet operations. Community emissions reductions require broader concerted effort by the Township. Direct actions by the municipal government to reduce GHG emissions are those which the municipality has the ability to implement in ways that control the outcome of such actions. For example, energy conservation measures yield direct quantifiable reductions in emissions. The Township recently commissioned an energy audit of municipal building which identified 17 energy conservation measures, including LED lighting, and HVAC equipment. The cost, payback and savings over time were estimated. Other proposed actions include: building retro-commissioning, improvements to building operations through education and purchasing, vehicle fleet replacement and waste reduction, establishing policies that promotes emissions reduction such as building energy efficiency standards and building benchmarking requirements, creating transportation policy and programs that promote reduction in transportation emissions and promote alternatives to single vehicle use, purchasing green electricity and implementing community education programs. GHG mitigation options should be considered based on cost effectiveness, implimentability and the ability to realize significant GHG reductions. Financing mechanisms are proposed, including an Energy Savings Improvement Plan (ESIP). The municipality's ability to influence indirect actions by the community at large is difficult to predict. Implementing a community education program will be a key component. Examples include community education is geared towards appliance efficiency and minimizing vehicle miles driven.

The CAP proposes a system to track progress over time.

Adaption

The CAP initiates a discussion on how we can become more resilient and adapt to a changing climate.

Next Steps

The West Windsor Environmental Commission seeks public input on this draft CAP, after which the CAP will be presented to the Township for official adoption and implementation. Adoption will constitute Township support for the overall intent and direction of the CAP. However, when specific actions are considered for implementation, the action would be subject to normal Township administration/council review processes. Adoption of the CAP is not intended to represent a financially binding commitment by the Township.

The full report, slide presentation and portal to provide comments on the report are available on the Township's website, www.westwindsornj.org