

DRAFT

MEMORANDUM

To: Pennington Borough Council

From: Pennington Environmental Commission

Subject: Estimated GHG emission baseline for calendar year 2018

Date: October 3, 2022

In response to Pennington Borough Resolution 2021-3.4, the Pennington Environmental Commission (PEC) reviewed the Greenhouse Gas (GHG) emissions associated with Pennington Borough operations. The Borough operations in this estimate include buildings and facilities, street lights and traffic signals, operation of Borough-owned water and wastewater infrastructure, and mobile vehicle fuel combustion. This estimate does *not* include emissions out of the Borough's direct control such as purchased services (e.g. wastewater treatment, recycling services, or materials used for infrastructure improvements).

Resolution 2021-3.4 requires a baseline emission rate. Accordingly the EC chose calendar year 2018 to establish a baseline. The spreadsheet used to calculate the emission was sourced from *Sustainable Jersey*. A description of the analytical approach to inferring emissions associated with Borough activities can be found on the Sustainable Jersey website¹. As indicated in the table below the aforementioned Borough activities resulted in the emission of 305 metric tons CO₂e in 2018. (CO₂e is a measure used to compare the emissions of various greenhouse gases on the basis of their global-warming potential.)

Activity	Consumption		CO ₂ e (metric tons)
	Natural gas (MBTU)	Electricity (MWh)	
Building & Facilities	1272	135	100
Street Lights & Traffic Signals		123	29
Water & Wastewater		246	59
	Gasoline (gal)	Diesel (gal)	
Mobile Fuel Combustion ²	9260	3475	117
Total			305

In 2015 the Delaware Valley Regional Planning Commission (DVRPC) issued a report that contained GHG emission estimates for the municipalities that make up the nine counties in the DVRPC region. At that time the DVRPC indicated that Pennington Borough was responsible for 31,832 metric tons of CO₂e emissions annually³. The Mobile-Highway, Residential, and Industrial & Commercial sectors of the Borough accounted for 48%, 28%, and 24% of these emissions, respectively. This analysis illustrates that, while it is important to set a net-zero emission target for Borough operations, a much greater impact may be achieved by encouraging residents and businesses to also reduce their GHG footprint, as the PEC is directed in Resolution 2021-3.4.

The environmental commission will report to the Council on an annual basis the amount of carbon released by Borough operations and the amount of carbon offset. In addition, the PEC will assist the Borough in developing strategies to migrate away from carbon energy sources.

The committee appreciates the opportunity to assist the Borough in addressing the goals outlined in Resolution 2021-3.4.

¹ - <https://www.sustainablejersey.com/actions/#open/action/24>

² - corresponding to 72,800 miles driven. Includes police and waste transportation.

³ - <https://www.dvrpc.org/webmaps/MunicipalEnergy/mcdDetail.aspx?mcdcode=3402157600>