ENERGY USE & GREENHOUSE GAS EMISSIONS IN LOS ALAMOS COUNTY 2000 - 2023

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Overview

- Purpose
  - Originally: Identify greatest leverage
  - Establish baseline
  - Future: Track progress in reducing carbon emissions?
- Data Sources
  - DPU Consumption Reports (NG & Elec.)
  - NM Tax & Rev. Dept. (taxable gasoline)
    - LAC (DPW) and LAPS
    - Estimates (diesel and non-taxable gasoline - small)
  - LAC ESD (solid waste)
- GHG estimate is from primary fuels (and MSW) only

Fig. 2.1A. Monthly Natural Gas Use Correlated to Heating Degree Days

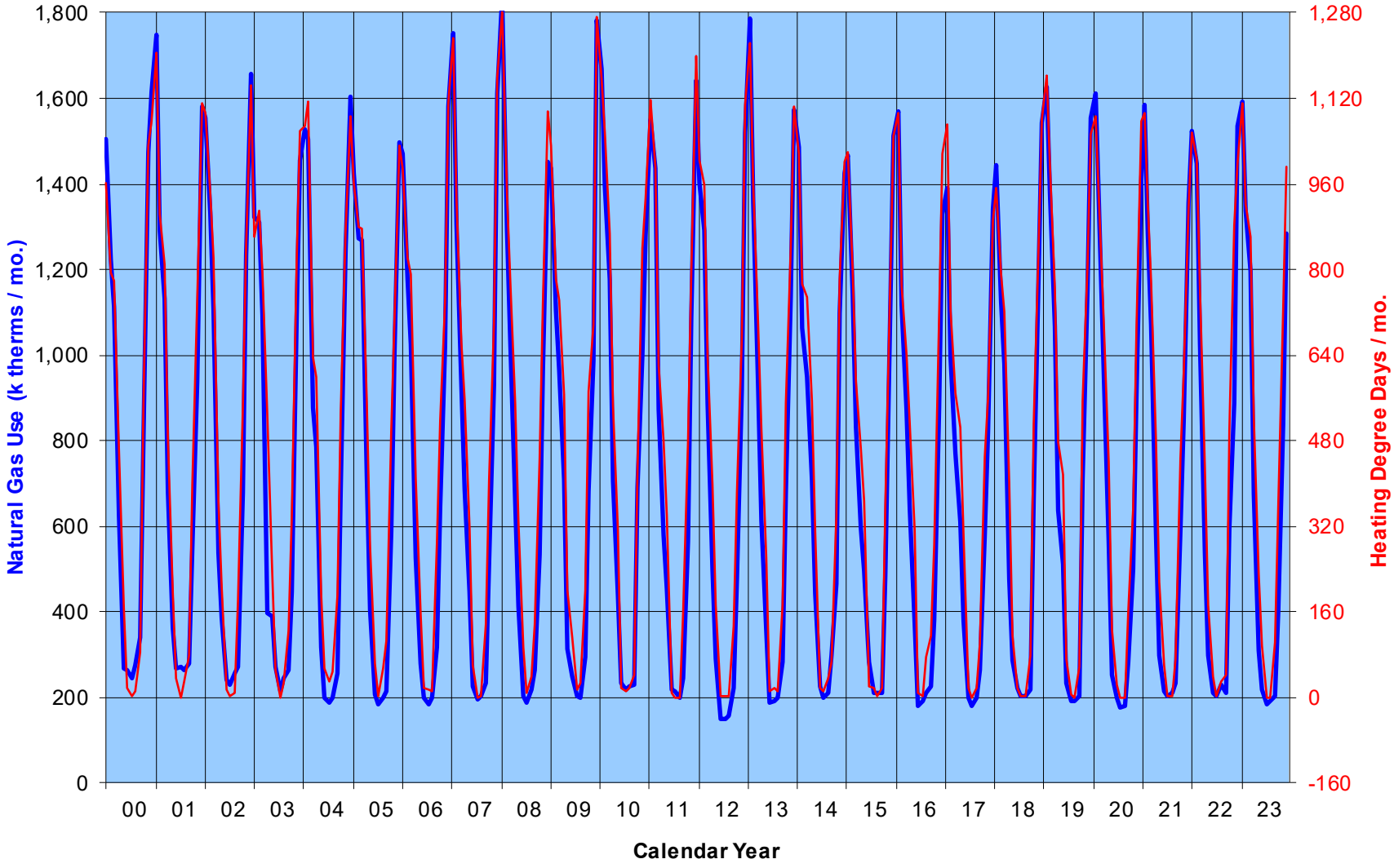


Fig. 2.1B. Annual Natural Gas Use Compared to Heating Degree Days

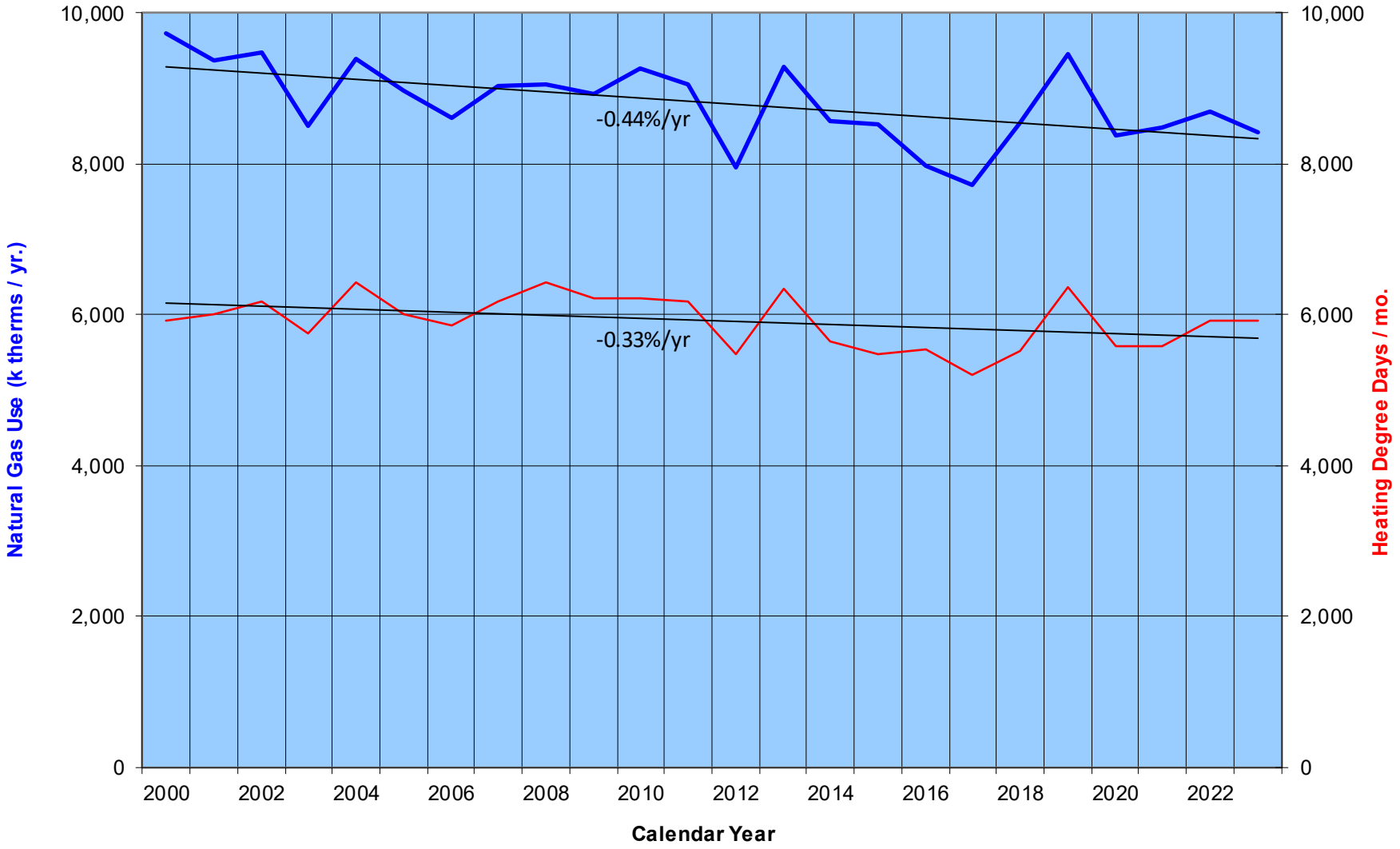


Fig. 2.2A. Monthly Electricity Use

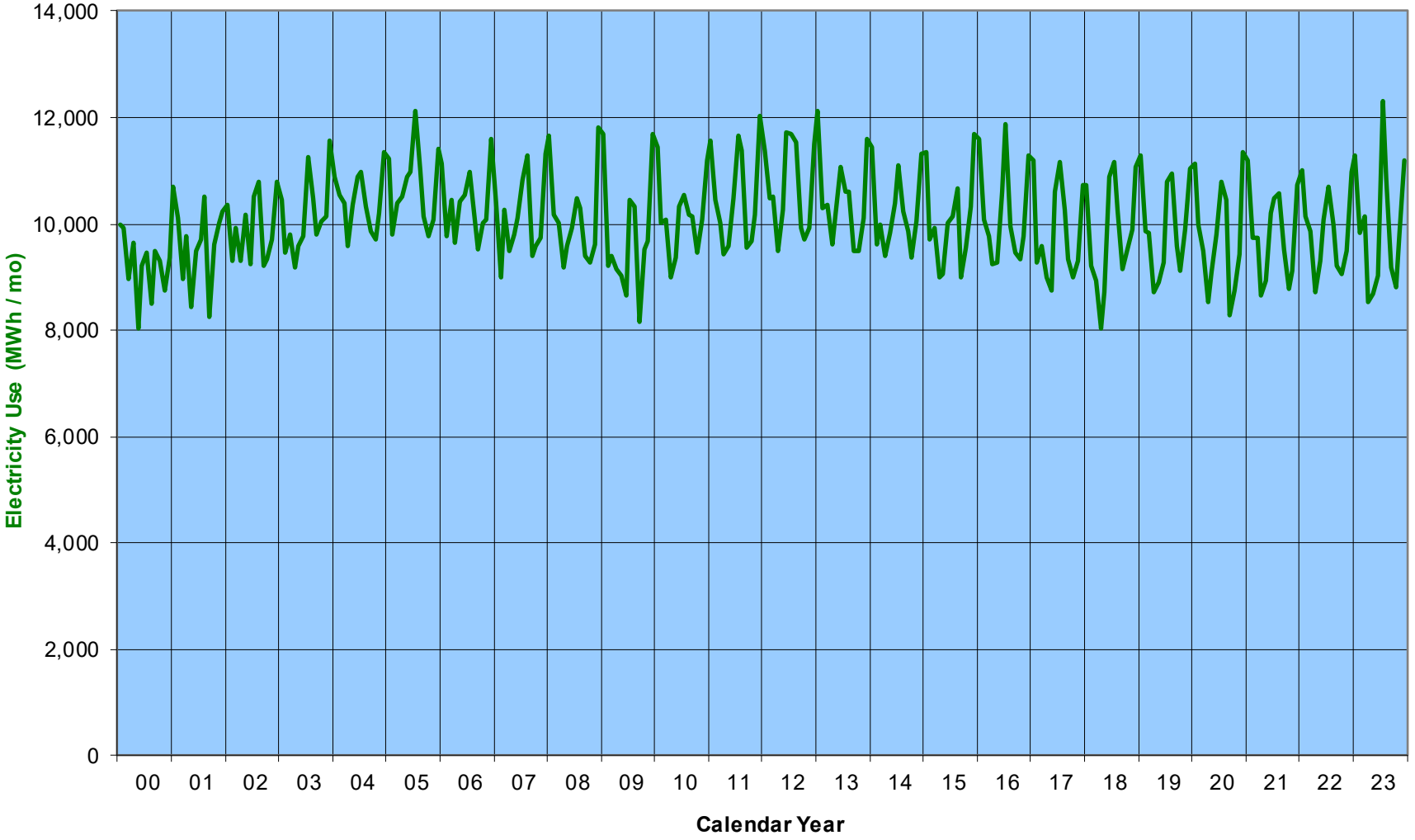


Fig. 2.2B. Annual Electricity Use & Sources

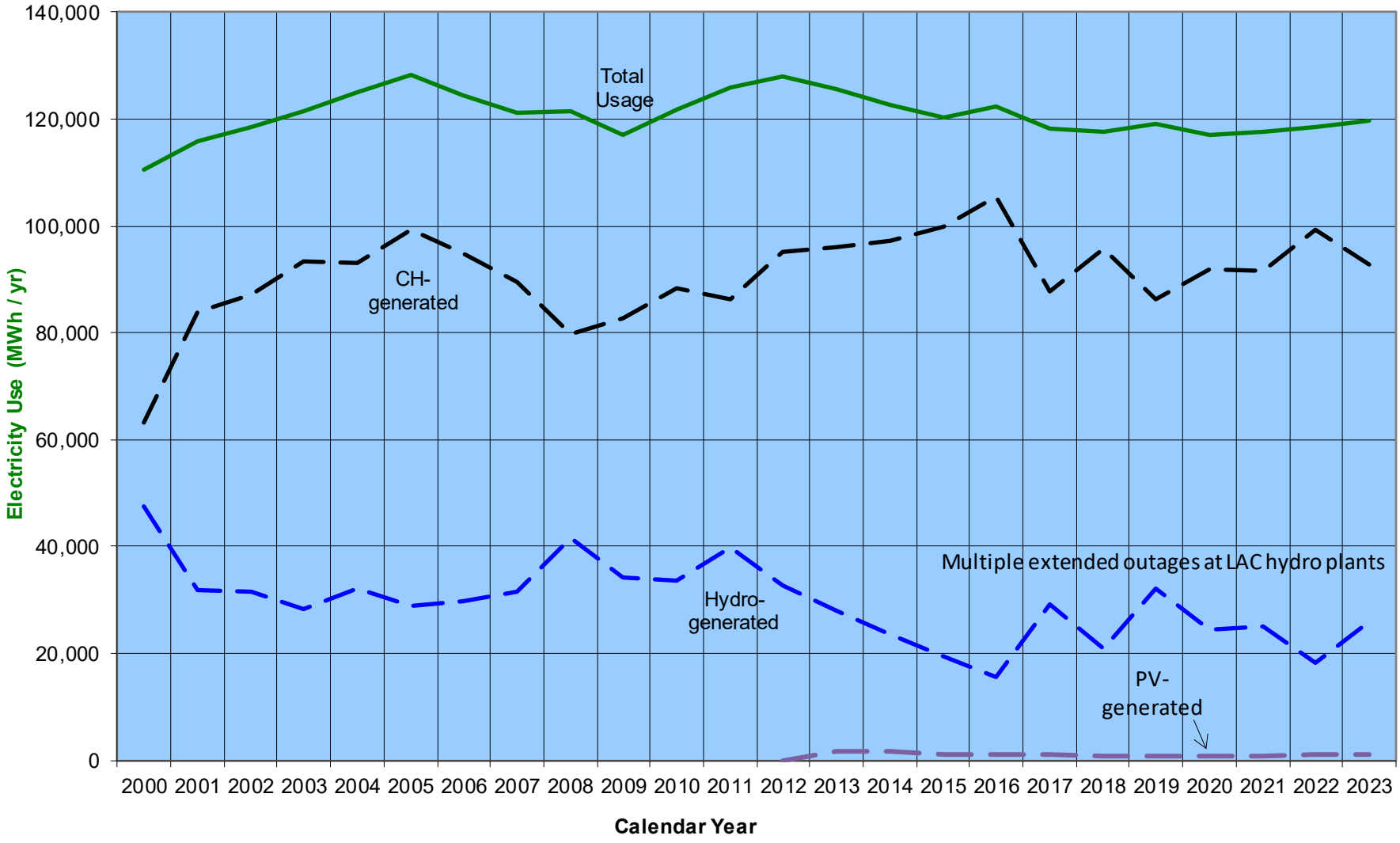


Fig. 2.3A. Total Petroleum Fuels Dispensed

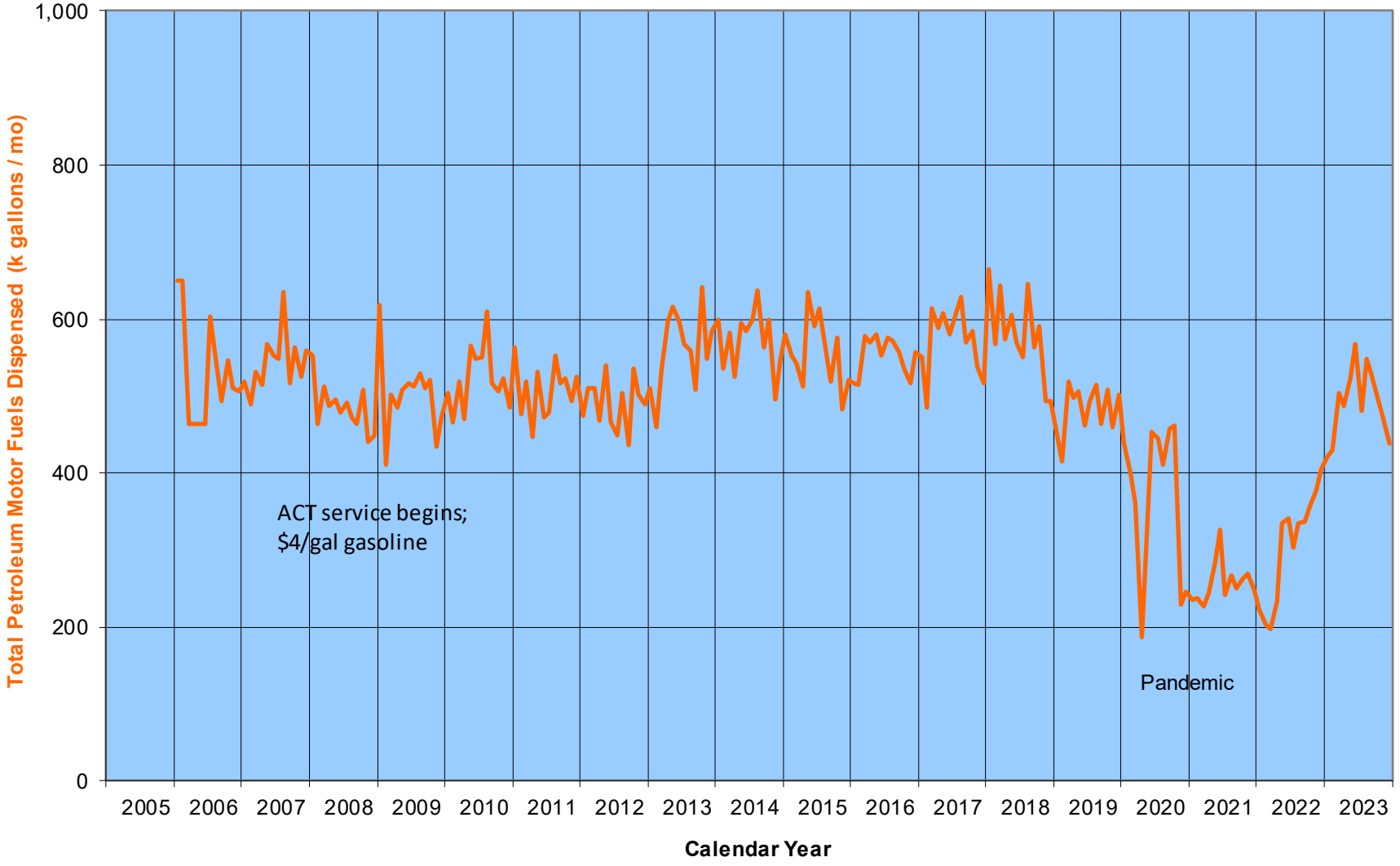


Fig. 2.3B. Annual Petroleum Fuel Use

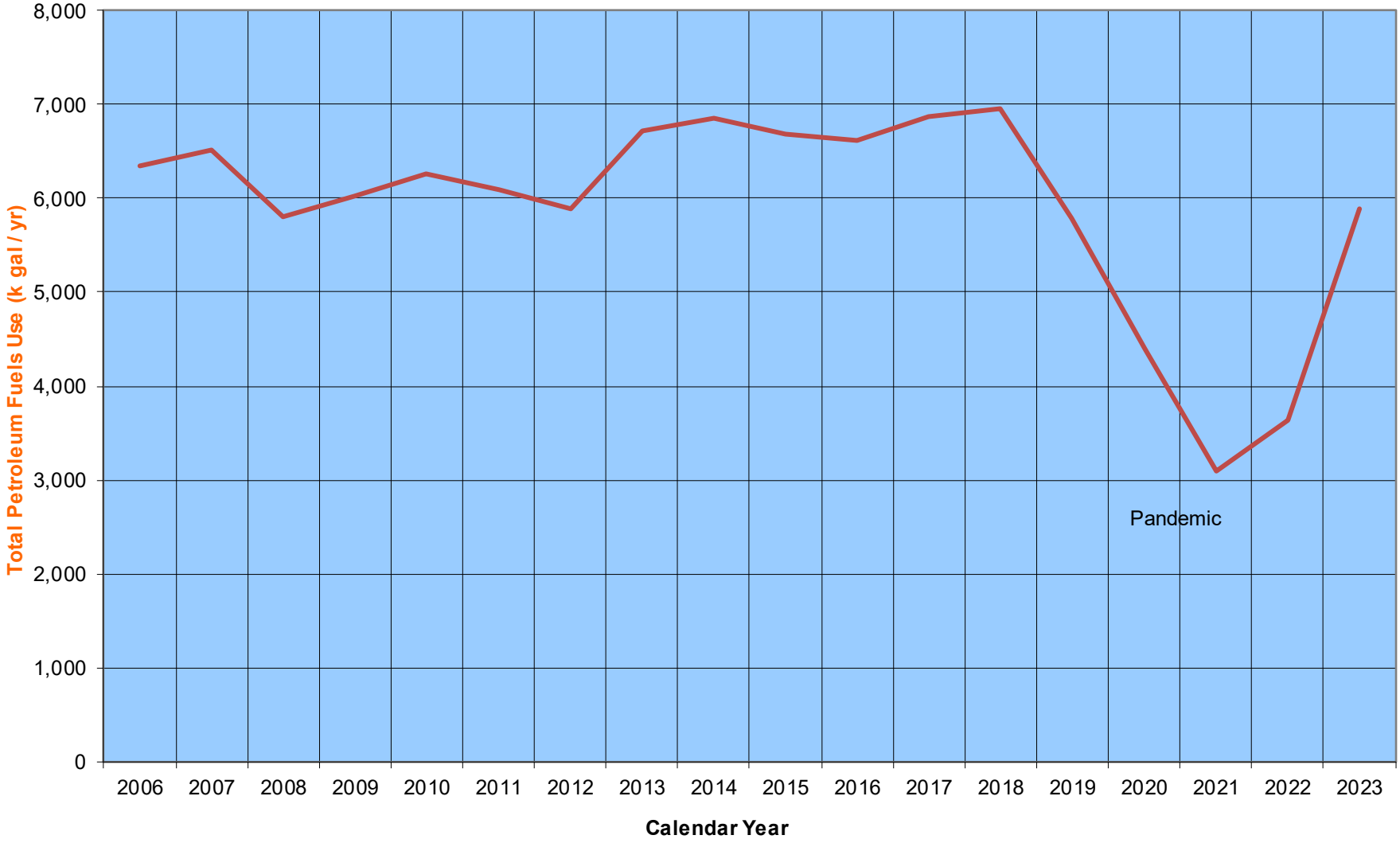


Fig. 2.4A. Monthly Energy Use

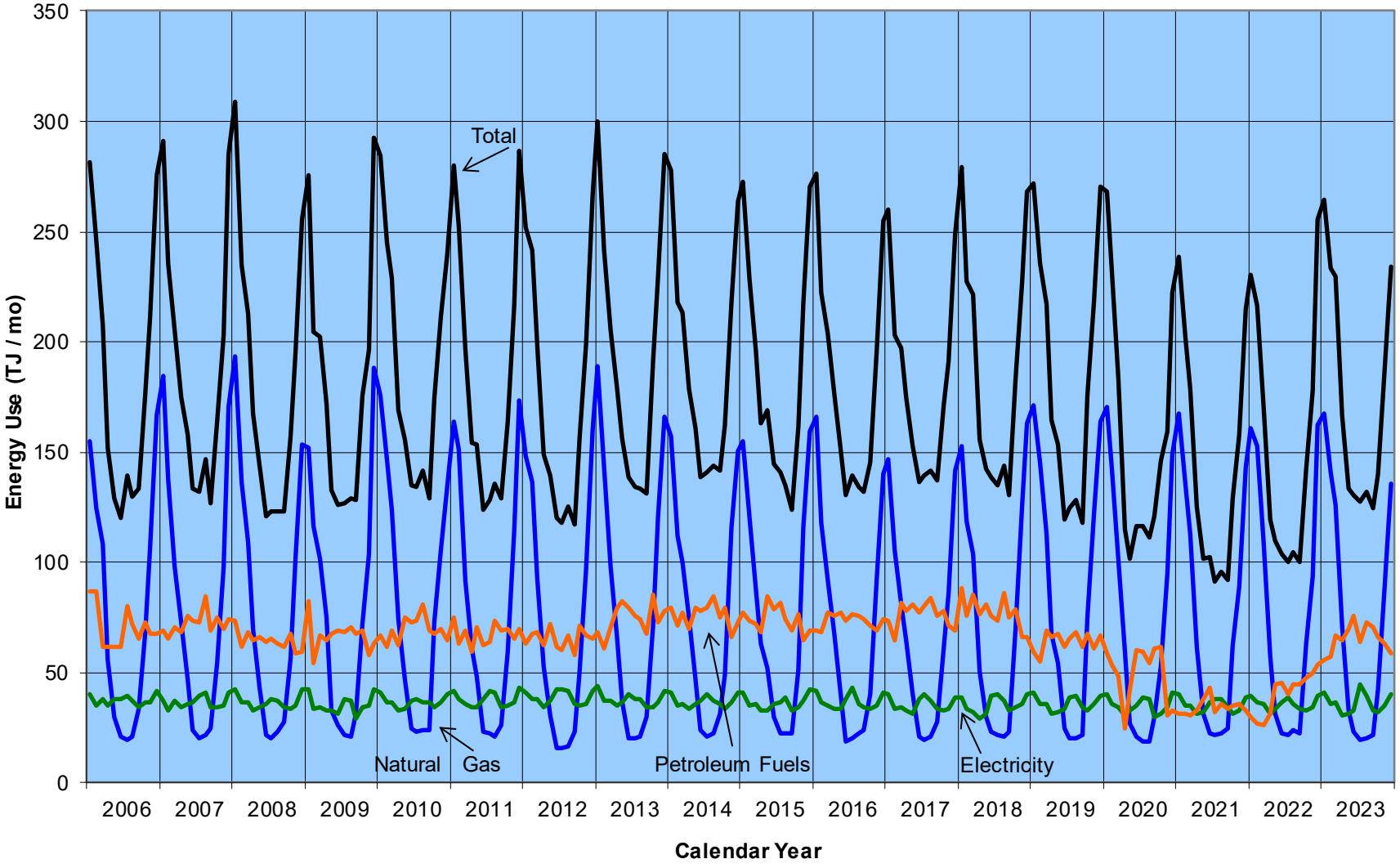


Fig. 2.4B. Annual Energy Use

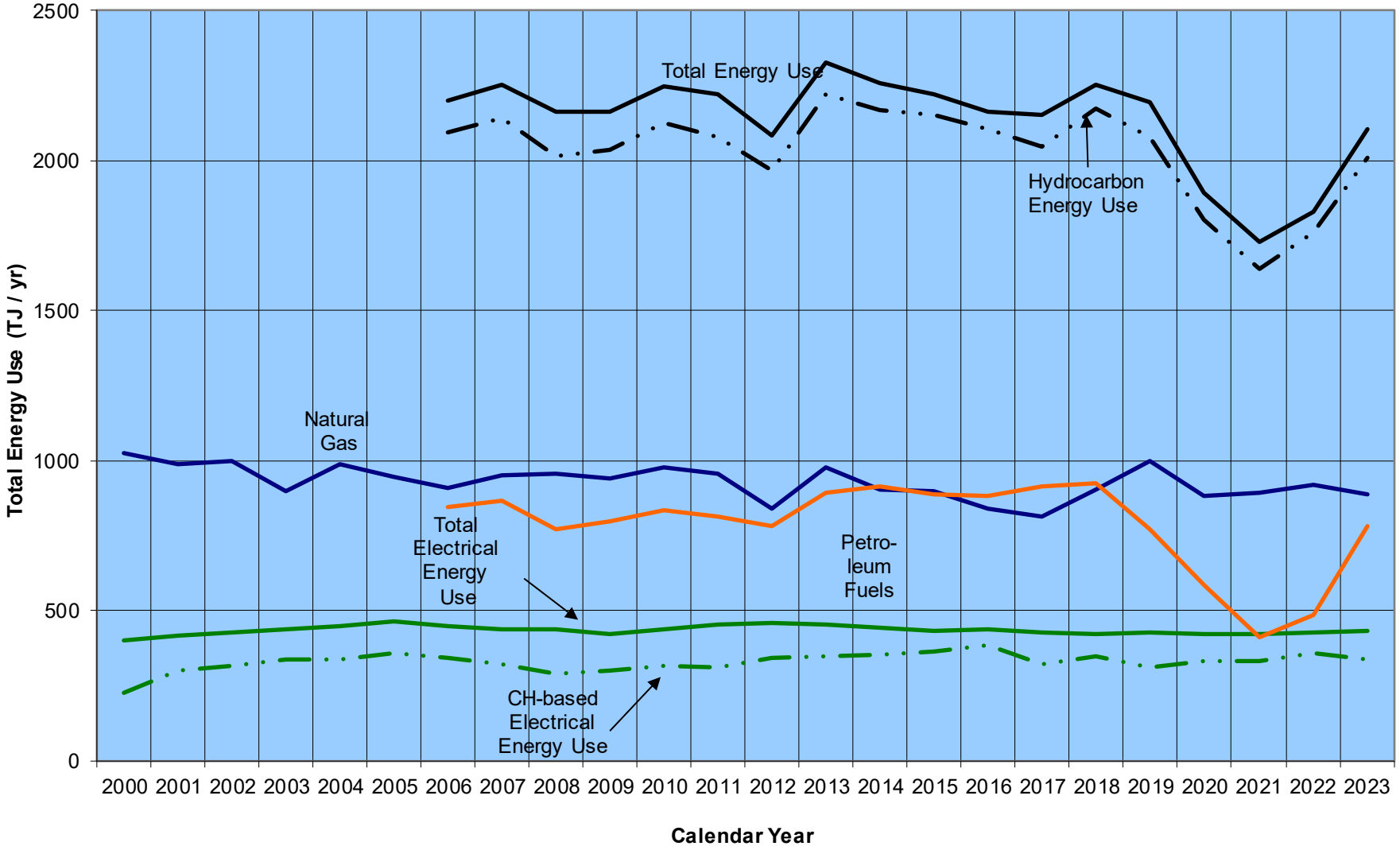
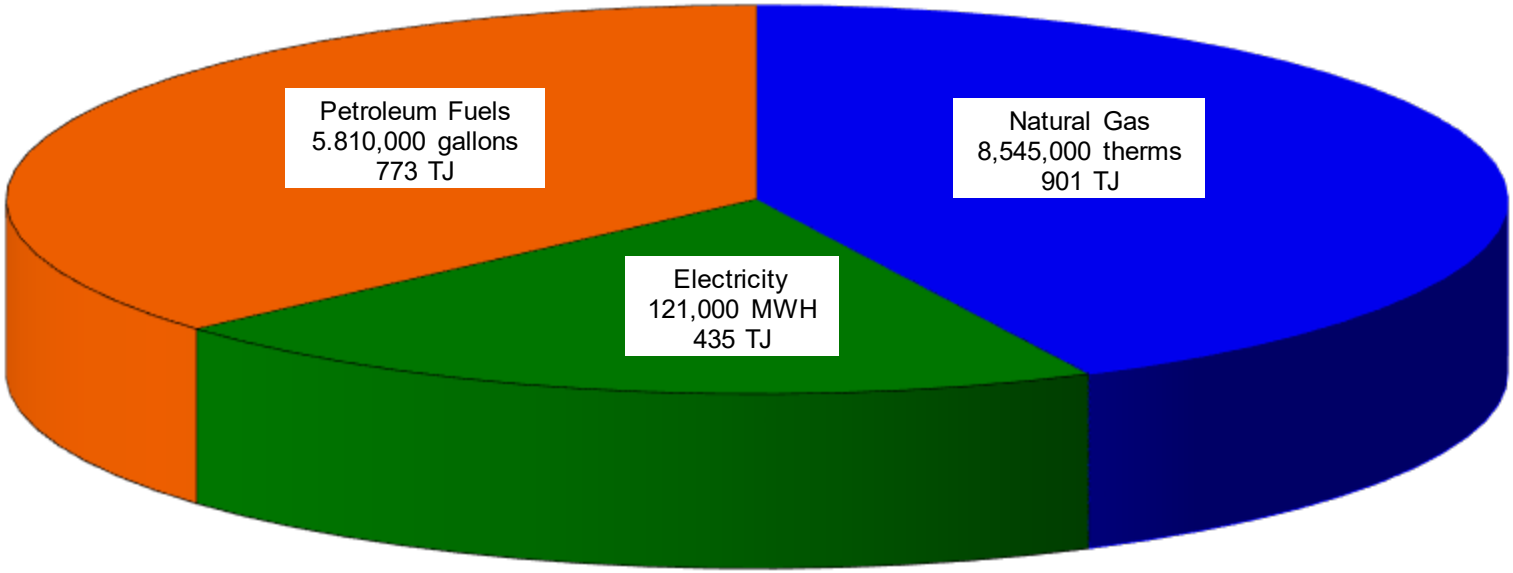


Fig. 2.4C. Average Annual Energy Use
2011 - 2023



Total = 2,110 TJ / yr

Fig. 3.4A. MONTHLY GREENHOUSE GAS EMISSIONS

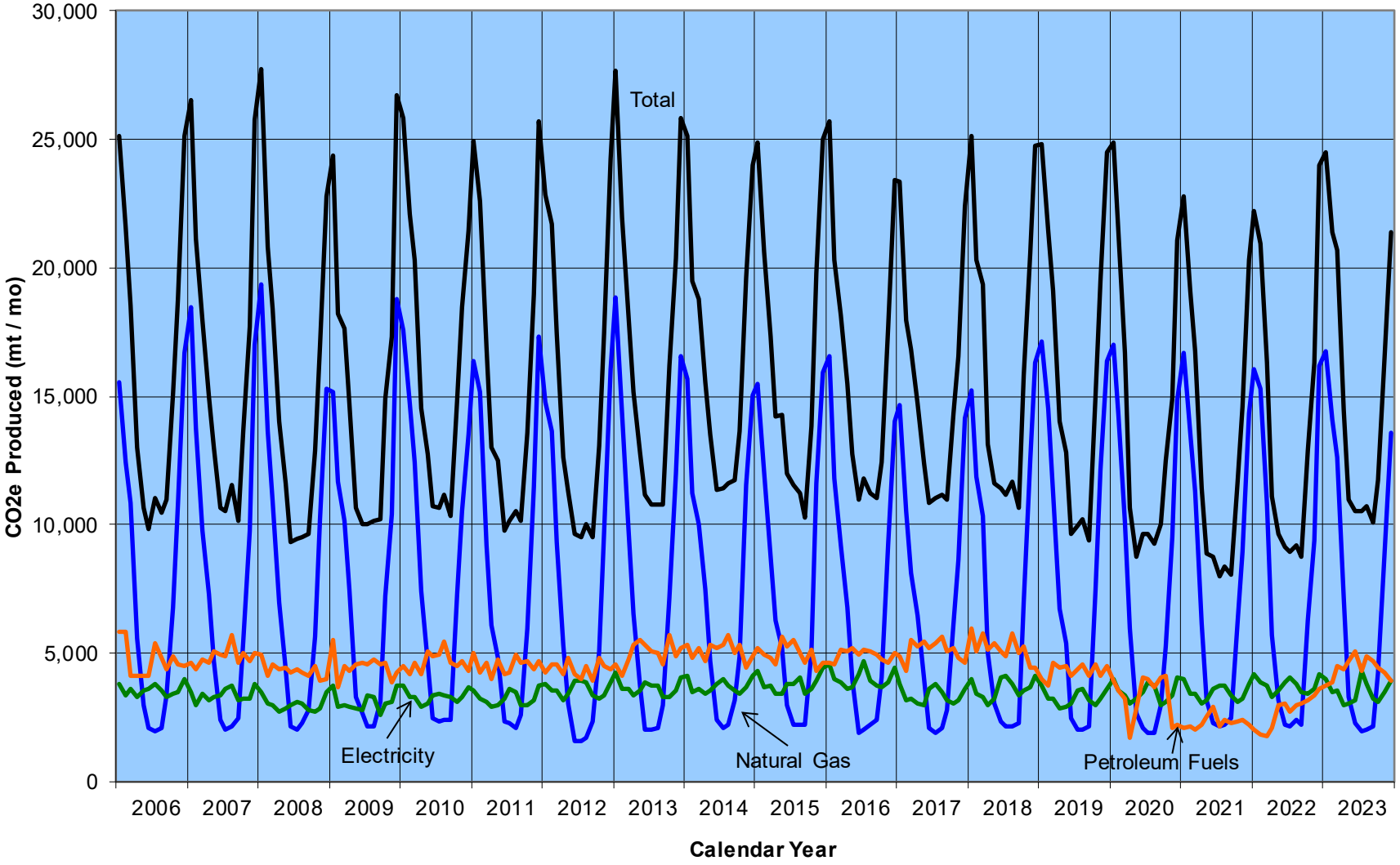


Fig. 3.4B. ANNUAL GREENHOUSE GAS EMISSIONS FROM HYDROCARBON FUELS

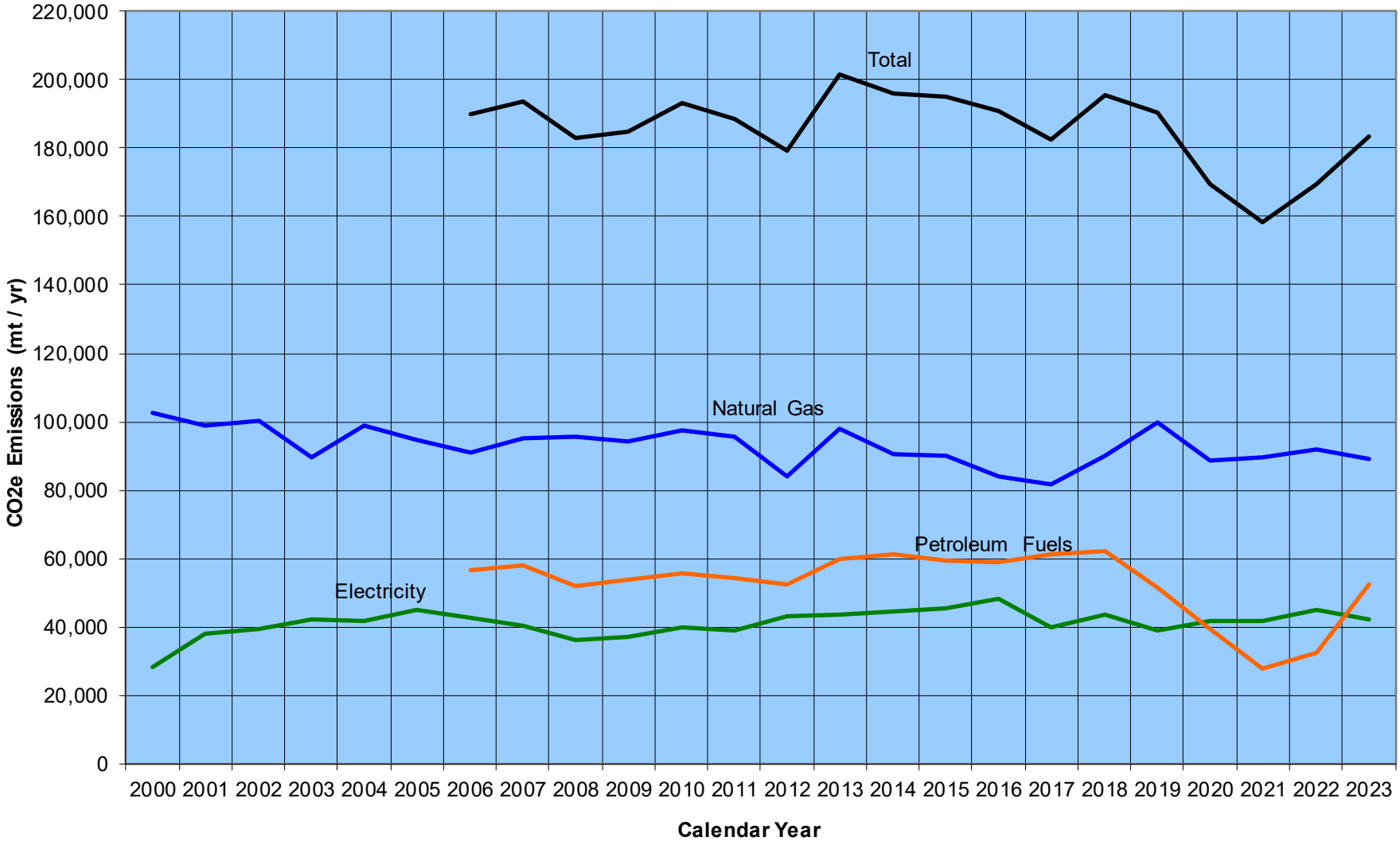
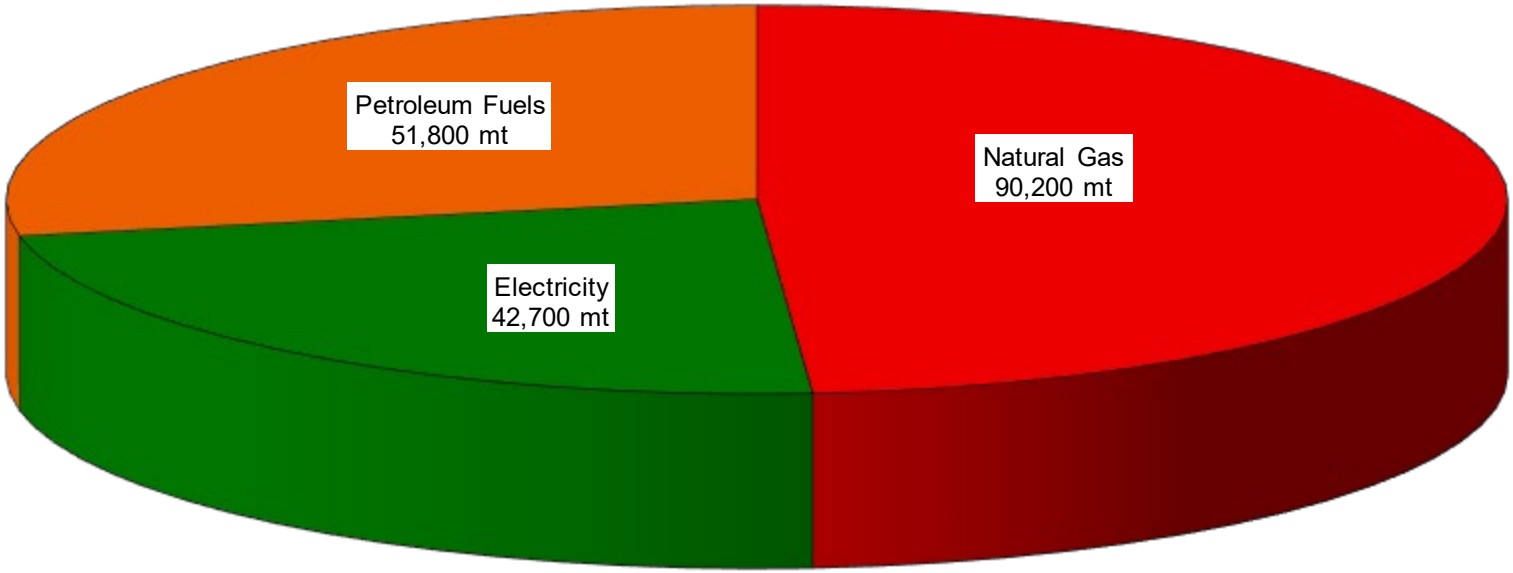


Fig. 3.4C. Average Annual Greenhouse Gas Emissions from Combustion of Hydrocarbon Fuels 2011 - 2023



Total = 184,700 mt / yr

Fig. 4.1. Municipal Solid Waste

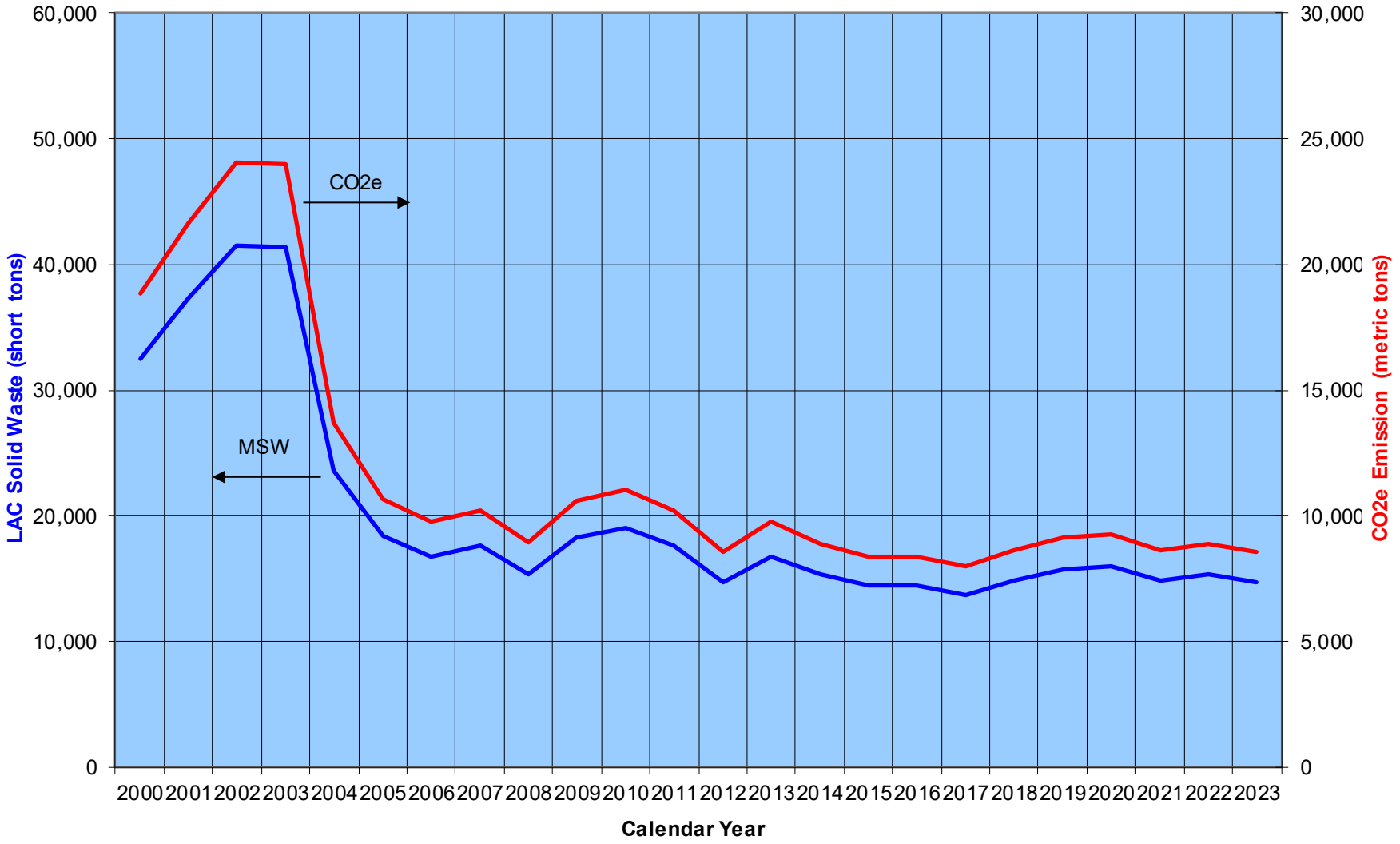
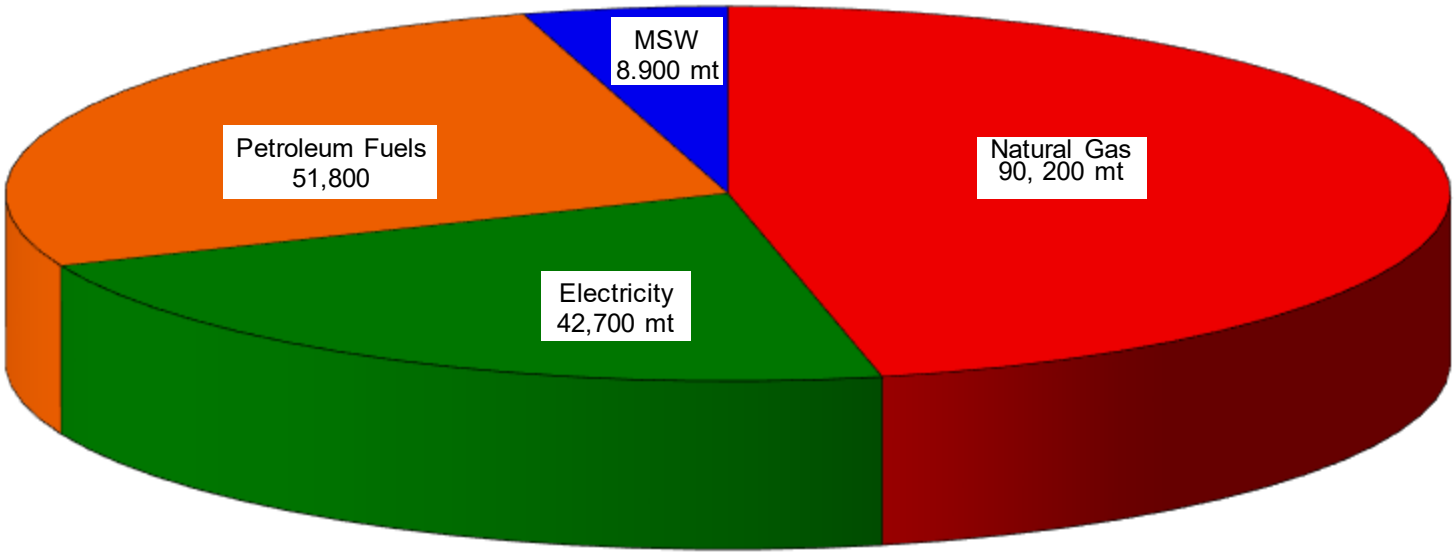


Fig. 4.2.
Average Total Annual Greenhouse Gas Emissions
from Hydrocarbon Fuels and Municipal Solid Waste
2011-2023



Total = 193,500 mt / yr

Principal Observations

- Natural Gas
  - Use declining slowly, mostly due to warming climate
  - Use roughly tracks heating demand (degree days)
  - ≥25% of usage is secondary, not space heating
  - ≥75% of usage is residential (~60% in summer)
  - CH_4 emission factor is a major uncertainty
- Electricity
  - Annual use basically flat since 2005
  - Demand peaks summer and winter
  - ~50% of usage is residential
- Petroleum
  - Usage dropped ~50% during pandemic
  - Confidence less than others, but should be consistent
- Solid Waste
  - Declining very slowly