

## GHG Inventory Verification Process

- Scope 1 Emissions
  - Stationary Combustion: Binghamton University currently uses natural gas and wood chips for stationary combustion heating equipment (boilers). We log all utility and fuel bills on a monthly basis to keep track of the gas and wood usage. This information is entered into SIMAP for GHG emissions calculations. Below is an example of our monthly tracking sheet for one of the gas accounts.

| NYSEG | DATE                           | DTh      | COST    | DTh      | COST    | \$/DTH    |        |
|-------|--------------------------------|----------|---------|----------|---------|-----------|--------|
|       | MONTH                          | MONTH    | YTD     | YTD      | YTD     |           |        |
| T & D | <i>Main Campus NYSEG Acct#</i> |          |         |          |         |           |        |
|       | 7/1/21                         | 7/31/21  | 1673.3  | \$3,751  | 1,673   | \$3,751   | \$2.24 |
|       | 8/1/21                         | 8/31/21  | 2,593   | \$4,208  | 4,266   | \$7,959   | \$1.62 |
|       | 9/1/21                         | 9/30/21  | 4737.2  | \$5,270  | 9,003   | \$13,229  | \$1.11 |
|       | 10/1/21                        | 10/31/21 | 7313.1  | \$6,280  | 16,316  | \$19,510  | \$0.86 |
|       | 11/1/21                        | 11/30/21 | 20928.0 | \$11,461 | 37,244  | \$30,971  | \$0.55 |
|       | 12/1/21                        | 12/31/21 | 21777.1 | \$11,784 | 59,021  | \$42,755  | \$0.54 |
|       | 1/1/22                         | 1/31/22  | 28135.6 | \$14,203 | 87,157  | \$56,958  | \$0.50 |
|       | 2/1/22                         | 2/28/22  | 23374.5 | \$12,392 | 110,531 | \$69,350  | \$0.53 |
|       | 3/1/22                         | 3/31/22  | 20624.1 | \$11,345 | 131,155 | \$80,695  | \$0.55 |
|       | 4/1/22                         | 4/30/22  | 16382.8 | \$9,731  | 147,538 | \$90,427  | \$0.59 |
|       | 5/1/22                         | 5/31/22  | 6727.1  | \$6,390  | 154,265 | \$96,816  | \$0.95 |
|       | 6/1/22                         | 6/30/22  | 1868.2  | \$4,112  | 156,134 | \$100,928 | \$2.20 |

- Other Sources (Mobile Combustion, Fugitive / Process Emissions): Binghamton University does not own /operate mobile combustion units. Since our natural gas is delivered through campus-wide utility meters and distributed to individual buildings, all fugitive and process emissions are all accounted for through our utility billing above.
- Scope 2 Emissions
  - Imported Electricity: Similar to the natural gas billing, we also keep track of all our electricity bills from the local utility company. The usage data from all electric accounts are summed on a monthly basis, and the annual total is entered into SIMAP for locational-based GHG emissions calculations.

| NYSEG      | DATE                           | MWH      | COST                               | MWH         | COST     | \$/MWH       |         |
|------------|--------------------------------|----------|------------------------------------|-------------|----------|--------------|---------|
|            |                                |          | MONTH                              |             | MONTH    |              | YTD     |
| T & D Main | <i>Main Campus NYSEG Acct#</i> |          |                                    |             |          |              |         |
|            |                                |          | <i>(Trans. &amp; Dist.Charges)</i> |             |          |              |         |
|            | 7/1/21                         | 7/31/21  | 2208.73                            | \$29,234.52 | 2208.73  | \$29,234.52  | \$13.24 |
|            | 8/1/21                         | 8/31/21  | 2779.75                            | \$34,547.43 | 4988.48  | \$63,781.95  | \$12.43 |
|            | 9/1/21                         | 9/30/21  | 2721.09                            | \$29,207.33 | 7709.56  | \$92,989.28  | \$10.73 |
|            | 10/1/21                        | 10/31/21 | 2632.52                            | \$28,813.27 | 10342.08 | \$121,802.55 | \$10.95 |
|            | 11/1/21                        | 11/30/21 | 2450.94                            | \$18,585.05 | 12793.02 | \$140,387.60 | \$7.58  |
|            | 12/1/21                        | 12/31/21 | 2247.07                            | \$26,430.12 | 15040.09 | \$166,817.72 | \$11.76 |
|            | 1/1/22                         | 1/31/22  | 2318.00                            | \$7,332.76  | 17358.09 | \$174,150.48 | \$3.16  |
|            | 2/1/22                         | 2/28/22  | 2447.79                            | \$11,265.59 | 19805.88 | \$185,416.07 | \$4.60  |
|            | 3/1/22                         | 3/31/22  | 2506.54                            | \$26,006.04 | 22312.42 | \$211,422.11 | \$10.38 |
|            | 4/1/22                         | 4/30/22  | 2446.29                            | \$27,822.68 | 24758.71 | \$239,244.79 | \$11.37 |
|            | 5/1/22                         | 5/31/22  | 2486.80                            | \$12,958.35 | 27245.51 | \$252,203.14 | \$5.21  |
|            | 6/1/22                         | 6/30/22  | 2018.53                            | \$15,415.69 | 29264.04 | \$267,618.83 | \$7.64  |

- Imported Thermal Energy: Binghamton University does not import any thermal energy from outside of the operational boundary.
- Scope 3 Emissions: Binghamton University accounts for the following Scope 3 GHG emissions:
  - Business Travel: Air travel is tracked through ticket purchases. The departure / destination information is used to calculate emissions using available air travel emission calculations tools online. Other business travels are not currently captured in this report.
  - Commuting: Student, faculty and staff commute modal split was estimated based on a recent survey conducted by our Transportation and Parking Services Department (see OP-16). For SIMAP data entry, estimates were used in number of days / weeks of campus commute from each population group. Some reasonable assumptions were also made on commuting distance. Information gathering for this category has been challenging due to protection of privacy concerns.
  - Waste Generated in Operations: Binghamton University tracks our water consumption through municipal water bills. It is assumed that the waste water volume would be (largely) the same as water usage. Our solid waste disposal is tracked based on weighing the municipal waste on our truck scale for every pickup. All the information is then entered into SIMAP for related emissions calculations.