

# Optional Calculation Spreadsheet Instructions



These optional spreadsheets are provided to assist reporters in calculating emissions and in keeping records of these calculations.

Reporters are required to keep records of these calculations under 40 CFR 98.3(g) and additional subpart-specific provisions, but are not required to use these spreadsheets or to submit any spreadsheets to EPA.

Please refer to the [Calculation Spreadsheet Archive](#) to review obsolete calculation spreadsheets.

EPA is providing OPTIONAL calculation spreadsheets that you can use to perform the calculations called for in the emission equations. These Microsoft Excel spreadsheets can be downloaded and opened on your own computer. Just click the hyperlink on the web-form to view and download the appropriate calculation spreadsheet for the equation you are working on. You can enter the data, including equation inputs, necessary to perform the calculation for the equation, and the spreadsheets will calculate the result for you. Once you have calculated the result, enter the result onto the e-GGRT web form.

E-GGRT will NOT collect the calculation spreadsheets and you do NOT need to submit them outside of e-GGRT. The use of these calculation spreadsheets is voluntary. The spreadsheets are meant to support reporters as they complete the e-GGRT online reporting process. You do not need to use EPA's spreadsheets to perform the calculations for the emissions equations, but you do need to keep records of these calculations (under 40 CFR 98.3(g) and additional subpart-specific provisions) whether or not you use the calculation spreadsheets provided by EPA. If you do use the spreadsheets, you may choose to maintain copies to help meet your record-keeping requirements.

**Calculation spreadsheets include no rounding of results. All calculations in these spreadsheets are conducted using double decimal precision, as native in MS Excel. The resultant values are presented on the spreadsheet in 7 decimals of precision. Users may copy the results from spreadsheets into e-GGRT manually or by using a copy and paste command.**

Subpart	Calculation Spreadsheets (click to download)
C - Combustion	<a href="#">Equation C-1, C-8 Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-1a, C-8a Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-1b, C-8b Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-2a, C-2b, C-9a Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-2c, C-9b Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-3, C-8 Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-4, C-8 Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-5, C-8 Calculation Spreadsheet.xls</a>
	<a href="#">Equation C-10 Calculation Spreadsheet.xls</a>
E - Adipic Acid	<a href="#">Equation E-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation E-3a Calculation Spreadsheet.xls</a>
	<a href="#">Equation E-3b Calculation Spreadsheet.xls</a>
	<a href="#">Equation E-3c Calculation Spreadsheet.xls</a>
G - Ammonia	<a href="#">Equation G-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation G-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation G-3 Calculation Spreadsheet.xls</a>
I - Electronics Manufacturing	<a href="#">Subpart I Calculation Tool for RY2014 and beyond.xlsx</a>
H - Cement Production	<a href="#">Equation H-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation H-2, H-3, H-4 Calculation Spreadsheet.xls</a>
	<a href="#">Equation H-5 Calculation Spreadsheet.xls</a>
K - Ferroalloy Production	<a href="#">Equation K-1, K-3 Calculation Spreadsheet.xls</a>
L - Flourinated Gas Production	<a href="#">Subpart L Calculation Spreadsheets - Emission Factor Equations.xls</a>
	<a href="#">Subpart L Calculation Spreadsheets - Mass Balance Equations.xls</a>
	<a href="#">Subpart L Calculation Spreadsheet - Summarize Process Level CO<sub>2</sub>e by f-GHG.xls</a>

N - Glass Production	<a href="#">Equation N-1 Calculation Spreadsheet.xls</a>
P - Hydrogen Production	<a href="#">Equation P-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation P-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation P-3 Calculation Spreadsheet.xls</a>
	<a href="#">Sum of Equation P-1, P-2, P-3 Calculation Spreadsheet.xls</a>
Q - Iron and Steel	<a href="#">Equation Q-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-3 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-4 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-5 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-6 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-7 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Q-8 EF Approach Calculation Spreadsheet.xls</a>
S - Lime Manufacturing	<a href="#">Equation S-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation S-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation S-3 Calculation Spreadsheet.xls</a>
	<a href="#">Equation S-4 Calculation Spreadsheet.xls</a>
T - Magnesium Production	<a href="#">Equation T-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation T-2 ,T-3 Calculation Spreadsheet.xls</a>
U - Carbonate	<a href="#">Equation U-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation U-2 Calculation Spreadsheet.xls</a>
V - Nitric Acid	<a href="#">Equation V-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation V-3a Calculation Spreadsheet.xls</a>
	<a href="#">Equation V-3b Calculation Spreadsheet.xls</a>
	<a href="#">Equation V-3c Calculation Spreadsheet.xls</a>
W - Petroleum and Nat. Gas	<a href="#">Subpart W All Onshore Equations Calculation Spreadsheet for RY11 and RY12</a>
	<a href="#">Subpart W All Onshore Equations Calculation Spreadsheet for RY13 and RY14</a>
	<a href="#">Subpart W All Onshore Equations Calculation Spreadsheet for RY15</a>
	<a href="#">Subpart W All Onshore Equations Calculation Spreadsheet for RY16</a>
	<a href="#">Subpart W All Onshore Equations Calculation Spreadsheet for RY17 and Later (Updated February 2023)</a>
	<a href="#">Subpart W Offshore Equations Calculation Spreadsheet for RY11 and RY12</a>
	<a href="#">Subpart W Offshore Equations Calculation Spreadsheet for RY13 and RY14</a>
	<a href="#">Subpart W Offshore Equations Calculation Spreadsheet for RY15 and Later</a>
X - Petrochemical Production	<a href="#">Equation X-1 Calculation Spreadsheet.xls</a>
	<a href="#">Equation X-2 Calculation Spreadsheet.xls</a>
	<a href="#">Equation X-3 Calculation Spreadsee.xls</a>
	<a href="#">Equation X-4 Calculation Spreadsheet.xls</a>
	<a href="#">Equation Y-1a Calculation Spreadsheet.xls</a>
	<a href="#">Equation Y-1b Calculation Spreadsheet.xls</a>
	<a href="#">Equation Y-2 Calculation Spreadsheet.xls</a>

Y - Petroleum Refineries	Equation Y-3 Calculation Spreadsheet.xls
	Equation Y-4, Y-5 Calculation Spreadsheet3.xls
	Equation Y-6, Y-7a, Y-7b Calculation Spreadsheet.xls
	Equation Y-8 Calculation Spreadsheet.xls
	Equation Y-9, Y-10 Calculation Spreadsheet.xls
	Equation Y-11 Calculation Spreadsheet.xls
	Equation Y-12 Calculation Spreadsheet.xls
	Equation Y-13 Calculation Spreadsheet.xls
	Equation Y-14, Y-15 Calculation Spreadsheet.xls
	Equation Y-16a, Y-16b, Y-17 Calculation Spreadsheet.xls
	Equation Y-18 Calculation Spreadsheet.xls (applicable to RY2017 and prior years)
	Equation Y-19 Calculation Spreadsheet.xls
	Equation Y-20 Calculation Spreadsheet.xls
	Equation Y-21 Calculation Spreadsheet.xls
	Equation Y-22 Calculation Spreadsheet.xls
	Equation Y-23 Calculation Spreadsheet.xls
Z - Phosphoric Acid	Equation Z-1a, Z-1b Calculation Spreadsheet.xls
AA - Pulp and Paper	Equation AA-1 Calculation Spreadsheet.xls
	Equation AA-2 Calculation Spreadsheet.xls
	Equation AA-3 Calculation Spreadsheet.xls
BB - Silicon Carbide	Equation BB-1, BB-2 Calculation Spreadsheet.xls
CC - Soda Ash	Equation CC-3, CC-4, CC-5 Calculation Spreadsheet.xls
EE - Titanium Dioxide	Equation EE-2 Calculation Spreadsheet.xls
	Equation EE-3 Calculation Spreadsheet.xls
HH - Landfills	Equation HH-1 Calculation Spreadsheet.xls
	Equation HH-4 Calculation Spreadsheet.xls
	Equation HH-5 Calculation Spreadsheet.xls
	Equation HH-6 HH-7 HH-8 Calculation Spreadsheet Revised 2021.xls
	Methane Flux Calculation Spreadsheet.xls
II - Industrial Wastewater Treatment	Equation II-4 Calculation Spreadsheet.xls
NN - Suppliers of Natural Gas and Natural Gas Liquids	EIA 176 and Subpart NN Crosswalk.xlsx
SS - Electrical Equipment Manufacturer or Refurbishment	Equation SS-2 Calculation Spreadsheet.xls
	Equation SS-3 SS-4 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-1 Calculation Spreadsheet.xls
	Equation TT- 6 Calculation Spreadsheet.xls
	Equation HH-4 Calculation Spreadsheet.xls
	Equation HH-6 HH-7 HH-8 Calculation Spreadsheet.xls
	Methane Flux Calculation Spreadsheet.xls