

State Agency GHG Emissions Reporting Instructions

Background

In 2020, the Legislature and Governor updated the State Agency Climate Leadership Act codified in RCW 70A.45.050. The Act directs state agencies, including universities, colleges, and community and technical colleges to lead by example in reducing their greenhouse gas (GHG) emissions to:

- 15% below 2005 level by 2020
- 45% below 2005 by 2030
- 75% below 2005 by 2040
- 95% below 2005 by 2050, and achieve net zero

To track state agencies' progress toward meeting these limits, each covered agency must meet the following reporting requirements by June 1st:

1. Estimate emissions using an emissions calculator provided by the Department of Ecology, and;
2. Report the following emission reduction strategy planning information to the State Efficiency and Environmental Performance Office (SEEP) at the Department of Commerce:
 - a. Actions taken over the last biennium to meet these emission reduction targets
 - b. Actions planned for the next two biennia to meet emission limits;
 - c. Long-term strategy for meeting the emission limits.

Emissions data is collected from state agencies every year. On even-numbered years emission reduction strategy documentation is required and Ecology and SEEP submit a report to the Governor and Legislature. For odd years, such as this, we are seeking a progress update on the strategies submitted last year. Past reports are posted on [Ecology's website](#).

This document includes:

- Instructions for completing Ecology's GHG emissions reporting calculator
- Link to SEEP's GHG emission reduction [strategy update form](#)
- How to submit the calculator and any additional document to Ecology's SAGE portal
- Training dates and contact information

**GHG CALCULATOR MUST BE UPLOADED TO SAGE AND
EMISSION REDUCTION FORM COMPLETED
BY MAY 26TH 2023**

Submissions will not be accepted after June 1st.

Collecting Data to Prepare for Greenhouse Gas Reporting

Before completing the GHG emissions calculator tool and the state agency GHG reduction strategy template, agencies will need to collect data on GHG emissions from facilities, fleets, and other emissions sources. The following resources may help agencies collect the necessary information:

- Access the current years' [Facility Inventory System at OFM](#) for your owned and leased square footage
- Utility bills
- Energy Star Portfolio Manager
- Asset management software
- Vehicle fuel card data
 - Data for DES permanently-assigned leased vehicles and daily trip vehicles in on [Ecology's website](#)
- Vehicle fuel data (jet fuel, propane)

Agency reporters should work with their facility and fleet managers, fiscal departments, and representatives in SEEP working groups to support data collection efforts. **Your agency's SEEP Governing Council member can assist with issues that arise as well.**

Completing the Greenhouse Gas Emissions Calculator

Begin by downloading the [GHG emissions calculator tool](#) at the Dept of Ecology website for state agency emissions reporting.

This tool includes the following four tabs:

- **Instructions** – Provides background, contact information and updates from previous versions. No data are entered on this tab.
- **Report** – All of the required data are entered on this tab. Detailed instructions are below in this document.
- **Reference** – This tab provides emissions factors, unit conversion factors and other data references. No data are entered on this tab.
- **Emissions Reduction Estimates** – This tab provides a simple tool for estimating emission reductions from projects. This information is voluntary and for your own internal information. You are not required to submit any data on this tab with your calculator. Information from this tab is not included in summary reports to the Legislature. This tab is not protected to allow flexibility for your own analysis. It is recommended to save a backup and make copies for each analysis you may run.
- **Agency historic emissions and limits** – This is the record Ecology has of each agency's emissions.

Instructions for Completing the Report

In the Report tab, data may only be entered in the yellow cells.

Section 1: Agency Information

- Select your agency name from the drop-down list. Add the date the spreadsheet was last saved. Enter your name and contact. Enter the name of your agency's executive lead.
 - o For SEEP agencies, this will be your Governing Council lead.
 - o For other agencies, this is the executive leader responsible for ensuring the GHG limits are met.

Section 2: Building Energy Use

This section is for reporting stationary fuel sources, including natural gas, fuel oil and other fuels, in addition to purchased electricity, and steam. Include electricity purchased from 'green' contracts. For most agencies, this data will align with Energy Star Portfolio Manager, but utility bills should be the definitive source of energy use data.

- Facility square footage: the source for this data is OFM's Facilities Inventory System <https://ofm.wa.gov/facilities/facilities-inventory>
- Electricity Consumption: enter data for 1) standard utility electricity purchases, 2) purchases through a green power program and 3) agency-owned or on-site renewable electricity production.
 - o Definition of Renewable Resources (RCW 19.285.030) "Renewable resource" means: (a) Water; (b) wind; (c) solar energy; (d) geothermal energy; (e) landfill gas; (f) wave, ocean, or tidal power; (g) gas from sewage treatment facilities; (h) biodiesel fuel that is not derived from crops raised on land cleared from old growth or first-growth forests where the clearing occurred after December 7, 2006; or (i) biomass energy.
 - o Instructions for on-site generation of renewable electricity:
 - Generation consumed on site **with** RECs intact = Report kwhs in calculator as renewable electricity production.
 - Generation consumed on site **without** RECs = Report kwhs in calculator by adding to standard utility retail purchases. This generation will be assigned the WA state average emission factor. Selling RECs means selling the rights to claiming the renewable attributes to this electricity.
 - Surplus renewable generation sold back to the utility with the agency retaining all environmental attributes (meaning the agency is not selling RECs AND the utility is not claiming RECs) = record kwh in cell **E25**. Note, this data is for informational purposes only and not required for GHG reporting. Renewable generation sold back to the utility where the utility claims the RECS is no longer considered renewable and not recorded here.
 - o Purchasing RECs does not qualify as a green electricity purchase.

- Thermal Energy Consumption
 - o Stationary Fossil Fuel Combustion. Examples: boilers, furnaces, generators or any other on-site combustion from non-mobile sources.
 - o Stationary Renewable Thermal Energy. Examples: geothermal/ground source heat pumps, solar hot water, renewable gas such as biogas or landfill gas, or biomass. If kBtu production data is not available, report system design size and/or projected energy reductions in the comment space provided. If this is also not possible, please share what information you can. This data is not required for GHG reporting, but it will be part of cataloguing existing renewable resources in state use.
 - o Steam from fossil fuel resources. Enter the klbs of purchased steam.

Note about electricity emission factors (EF): We require all agencies to use the same three-year average emission factor for statewide electricity sold to Washington state consumers.

The reasons for this decision include:

- A statewide average EF better reflects the aggregate emissions impact of all state government operations. With operations in every corner of the state, it is impossible to determine utility-level emissions for each location of each agency.
- Incorporating utility EFs adds complexity to the reporting process which we strive to keep simple.
- Emissions associated with utility-provided electricity are Scope 3 emissions, which means they are passed through to the consuming agency and not directly under agency control.
- The use of a three-year average reduces seasonal fluctuations.
- The three-year average remains consistent with recent reports.
- Agencies are welcome to use different EFs for other publications or reports.

Section 3: Fleet Energy Use

Enter information about fleet and mobile equipment owned by the agency or leased from the state motor pool. For vehicles that refuel at WSDOT pumps, the percentage of biofuels is provided. If you use a different percentage of biofuel used, it may be enter here as well.

There is a new, voluntary option for reporting fuel used for landscape equipment, off-road vehicles, construction vehicles and equipment, agricultural or other uses not reported elsewhere. Agencies may provide fuel quantities and fuel type for each vehicle/equipment category in the comment box. This data will not be included in agency-level reports but may be aggregated for a statewide estimate.

Section 4: Fossil GHG Emissions Summary

This section shows the GHG emissions from the reported energy use. The energy use data are converted to emissions using factors listed on the Reference tab. Biogenic emissions are excluded from the total but can be viewed in the detailed emission tables below the summary.

The Reference Tab

This tab is locked but visible for your reference. It contains the emission factors and documentation used to make the calculations in this worksheet.

The Emission Reduction Estimates Tab

This tab provides a variety of simple tools for roughly estimating GHG reduction and cost savings for mitigation projects. **This tab is available for your agency's internal use and is not required for reporting.** This tab is not locked so copies can be saved and cells altered to meet your needs.

NOTE REGARDING ELECTRICITY EMISSIONS FORECAST:

As agencies plan future emission reduction projects, keep in mind that the electricity grid is moving toward carbon neutrality by 2030, making all-electric buildings and vehicles zero GHG emissions. The transformation away from fossil fuels requires that all energy be used as efficiently as possible and remaining energy use come from clean electricity and renewable fuels. **This simple calculator does not include a projection of declining future emissions from electricity - it holds current emission levels steady into the future.**

The Clean Energy Transformation Act (CETA) (SB 5116, 2019) requires that electricity providers eliminate coal by 2025, be GHG neutral by 2030 and 100% clean by 2045. The intent of this law is to eliminate fossil fuels from the electricity supply.

<https://www.commerce.wa.gov/growing-the-economy/energy/ceta/>

Estimate Emission Reductions: In the orange cells, enter the annual fuel use before the project is implemented and the expected reduced fuel use after the project is implemented. The chart on the right will show the emissions baseline, the emissions after the project is implemented, and the cumulative emissions avoided. This is projected for 10 years.

Estimate Cost Savings: Average fuel costs are pre-populated in the orange cells. You may enter your own data here. The chart will show the baseline costs, the new annual costs after the project is implemented and the cumulative savings over 10 years. Note that fuel costs are held steady over this period.

Completing the Greenhouse Gas Emissions Reduction Strategy Update

Full emission reduction strategy reports are due to the legislature only for even numbered years. 2023 is an odd-numbered year, therefore the reporting requirements are simplified. The reporting includes a web-based form to record progress on successes, challenges, and changes to your agency's emission reduction strategy. The form is available on Ecology's website and [at this link](#).

If your agency has associated plans or documents (like an electrification plan or sustainability action plan), please consider uploading this document to SAGE along with your GHG calculator.

The form asks the following questions:

- Regarding your agency's priority action plans for 2023-25 and 2025-27:
 - What successes would you like to report?
 - What has changed?
 - Are there any challenges so far that your agency would like to share?
- Regarding your agency's long-term strategy for 2030, 2040, and 2050, what has changed?
- Based on the Governor's proposed budgets for 2023-2025, is there anything your agency may not be able to accomplish, or possibly accomplish sooner?
- Is there anything that the SEEP Office/Governing Council can do to support your GHG reduction strategies or priorities?

Submitting Documents to Ecology

Reporters will need to have a Secure Access Washington (SAW) account, add the Air Quality Program Portal to your SAW account, and add the State Agency Greenhouse Gas Emissions (SAGE) application to your Air Quality Program Portal.

- Instructions for creating a new Secure Access Washington (SAW) account and adding the SAGE application to your account [can be found here](#).
- If you already have a SAW account, you may access it here: [Secure Access Washington](#)

Ecology has created the State Agency Greenhouse Gas Emissions (SAGE) portal for agencies to upload their documents. This includes the emissions calculator and any supplemental documents. Note that SAGE only accepts Excel, Word and Pdf documents. **Reduce file size of PDFs prior to uploading (within PDF, go to File > Reduce File Size)**. Documents in other formats must be emailed directly to Ecology or SEEP contacts.

Before starting, save all files using the following naming conventions.

- **GHG emissions calculator spreadsheet:**
 - [year of data]_[agency acronym]_GHG.xlsx
 - Example: 2022_ECY_GHG or 2022_WWU_GHG.xlsx*
 - The emissions calculator must be saved as an Excel file.
- Optional or supporting documents name as follows:
 - [year]_[agency acronym]_[short description].doc
 - Example: 2022_ECY_FleetElect.doc or 2022_COM_FacilPlan.pdf*

Additional documents may be saved as a Word Doc or Pdf. Reduce file size of PDFs.

Your documents are ready to be uploaded.

Instructions for uploading documents

Figure 1 shows the SAGE home screen. Select your state agency from the drop-down list. Then click “Next.”

Figure 1 Initial SAGE Home Screen

WASHINGTON STATE
Department of Ecology

State Agency Greenhouse Gas Emissions (SAGE)

PRODUCTION

Home Admin ELMAH Welcome: ECY\swat461

Welcome to the Department of Ecology's Data Upload Tool

Washington State agencies that are required to report Greenhouse Gas Emissions data to the Washington State Department of Ecology must use this tool to upload their completed calculator tool in a Microsoft Excel spreadsheet format. Agencies can also upload their Mitigation Activities Report in a Word or PDF format.

Begin this process by searching for your agency name. As you type the name, a list will appear that correspond to your entry. Once you find your agency, and select it, click the "Next" button.

Use the Search Box Below to find your Agency

Please select your Agency from the list provided.

Next >

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SAGE Version: 3.3.1

Figure 2 shows the agency and user information. Review and edit this information. Make sure the box called “Reporting Year” is set to **2022**. Click “Next.”

WASHINGTON STATE
Department of Ecology

State Agency Greenhouse Gas Emissions (SAGE)

Home Admin ELMAH Welcome: ECY\swat461

Submit your Greenhouse Gas (GHG) data to the Department of Ecology by entering the required information using this online tool.

Washington agencies who are required to report GHG emissions to the Washington State Department of Ecology must use this tool to upload the GHG calculator tool in MS-Excel spreadsheet format or their Mitigation Activity Report in a Word or PDF format. Begin by entering your basic agency and user information.

Agency Information

Agency Name: Ecology, Department of (ECY)

Agency GHGRP ID: 4610

Mailing Address: 300 Desmond Dr SE

City: Lacey

State: WA

ZIP Code: 98503

Reporting Year: 2020

User Information

First Name: Stacey

Last Name: Waterman-Hoey

Email: swat461@ecy.wa.gov

Comments: New record

Next >

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Figure 3 shows the final SAGE screen. Click “Choose File” then select the file from your computer.

- Make sure your files are named using the naming convention and file size is reduced.
- The system will allow selection of only one document at a time. Upload the GHG calculator excel file, then hit “submit,” then upload, then any remaining documents.

Congratulations! You are done!

Figure 3 – SAGE Screen - Upload Documents

The screenshot shows the 'State Agency Greenhouse Gas Emissions (SAGE)' web application. The header includes the Washington State Department of Ecology logo and the title 'State Agency Greenhouse Gas Emissions (SAGE)'. Below the header, there is a navigation bar with 'Home', 'Admin', and 'ELMAH' links, and a user greeting 'Welcome: ECY\swat461'. The main content area features a heading 'Submit your Greenhouse Gas (GHG) data to the Department of Ecology by entering the required information using this online tool.' followed by a sub-heading 'Facility Information'. This section contains a table with the following data: Facility Name: Ecology, Department of (ECY); EPA CHGRP ID: 4610; Reporting Year: 2020. Below the table, there is a section titled 'Browse for the EXCEL, Word, or PDF file on your computer and submit.' with a 'Browse' button and a file selection box showing 'Choose File | No file chosen'. At the bottom right, there is a blue 'Submit' button. The footer contains links for 'Ecology Home', 'SAGE Home', 'Disclaimer', 'Privacy Notice', 'Accessibility', 'Contact Us', and 'Bug Report', along with the text 'SAGE Version: 3.3.1'.

Training Dates

Training events scheduled for the following dates:

- **Wed April 12th** 9:30am-11:00am: “Completing the Calculator,” hosted by Stacey Waterman-Hoey (ECY). Members of the SEEP Guidance Team will be present to help answer questions. If you have your data ready, we can assist in completing your agency’s calculator. This event will be held on Zoom and will be recorded. Register in advance on [Ecology’s website](#) to receive the Zoom link.

Recordings of these past trainings will remain available on Ecology’s website:

- “Gathering Data,” hosted by Hanna Waterstrat (SEEP) and SEEP Guidance Team
- “Developing Emission Reduction Strategies and Completing the Template” Hanna Waterstrat (SEEP)

Links to the live events will be shared via email to agency reporting contacts. Links to the recordings are posted on [Ecology’s website](#).

Contacts

GHG Emissions Reporting, Emissions Calculator, SAW and SAGE:

Stacey Waterman-Hoey, Greenhouse Gas Emissions Analyst, Air Quality Program,
Washington Department of Ecology, swat461@ecy.wa.gov, cell: 360-764-6178

Emission Reduction Strategy:

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