

Corrigenda and Data Caveats in using the Inventory of U.S. Greenhouse Gas Emissions and Sinks by State: 1990-2020

State-level GHG Data Corrigenda

1. Consistent with international reporting conventions, EPA presents both gross and net GHG total estimates in the data tables below the charts in the GHG Data Explorer for the national and state-level GHG data. Per convention and consistent with the national GHG Inventory, state-level gross total estimates should exclude the LULUCF sector and include only estimates from the Energy, IPPU, Agriculture, and Waste sectors. State-level net total GHG estimates include the net emissions and removals from all sectors, including the LULUCF sector. In the recently published state data, for states where the LULUCF sector resulted in net emissions in any given year, the net and gross GHG estimate totals were the same in the GHG Data Explorer but should have differed by the net contribution from LULUCF sector (gross estimates were not excluding the LULUCF sector). This error impacted the presentation of annual state-level gross GHG total estimates for AK, AZ, CO, HI, ID, MT, NM, NV, SD, UT, and WV in years where the LULUCF sector resulted in net emissions. This error has now been corrected so gross total GHG estimates for these states (when gross total GHG estimates are presented) no longer include emissions and removals from the LULUCF sector. This correction has also been reflected in the standalone excel tables posted on these pages [as of November 1, 2022] <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals> and <https://www.epa.gov/ghgemissions/methodology-report-inventory-us-greenhouse-gas-emissions-and-sinks-state-1990-2020>.
2. The state estimates in GHG Data Explorer included N₂O emissions from nitrogen additions to forest soils. These estimates should have been excluded from the estimates as they were preliminary data, and not final data. These preliminary data have been excluded from the state-level estimates in the GHG Data Explorer and we hope to include this data the next version of the data, noting the next version of the data covering 1990-2021. This correction only applies to the following states: AL, AK, FL, GA, LA, MS, NC, OR, SC, TN, TX, VA, WA. This correction has also been reflected in the standalone excel tables posted on these pages [as of November 1, 2022] <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals> and <https://www.epa.gov/ghgemissions/methodology-report-inventory-us-greenhouse-gas-emissions-and-sinks-state-1990-2020>.
3. The state estimates in GHG Data explorer and the standalone excel tables excluded methane estimates from rice cultivation which occurs in AR, CA, FL, IL, KY, LA, MN, MS, MO, NY, SC, TN, and TX. The data explorer and standalone excel tables have been corrected to include methane from rice cultivation estimates for these states [as of February 2, 2023]. This correction has also been reflected in the standalone excel tables posted on these pages <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals> and <https://www.epa.gov/ghgemissions/methodology-report-inventory-us-greenhouse-gas-emissions-and-sinks-state-1990-2020>.
4. The state estimates in GHG Data explorer and the standalone excel tables included some aggregation errors for some fluorinated gases, i.e., double counting of one PFC (CF₄) missing a very small volume gas (HFC). The aggregation rules have been corrected. The standalone excel table by IPCC sector included an error in the formula for aggregating waste sector emissions and this has been corrected. This correction has also been reflected in the standalone excel tables posted on these pages [as of February 2, 2023]. <https://www.epa.gov/ghgemissions/state-ghg-emissions-and-removals> and <https://www.epa.gov/ghgemissions/methodology-report-inventory-us-greenhouse-gas-emissions-and-sinks-state-1990-2020>.

State-level GHG Data Caveats

The state-level estimates were developed to be consistent with the national *Inventory*, meaning they were compiled to avoid double counting or gaps in emissions coverage between States. This was done to ensure that State totals, when summed, would equal totals in the national *Inventory*.

However, there were some instances where either lack of data or updates in data sources used resulted in state-level totals that did not add up to the national totals for the categories listed. This was true for the following source and/or sink categories:

Sector/Emission and/or Sink Category	Years where Different	% Difference State totals vs. national Total	Reason
Energy- FFC CO ₂	2020	0.002% (% differences within a sector are higher)	The state-level estimates are based on updated energy use data that will be incorporated into the next version of the National <i>Inventory</i> .
Energy – NEU CO ₂	All	Max 0.001%	Rounding, adjustments made to match up state-level and national-level NEU values.
IPPU – Electrical Transmission and Distribution	All years	For 2019, the difference was 1.5%. For all other years, the difference was 0.2% or less.	There are two errors affecting the national totals. For 2019, there was an error in the estimation methodology for non-reporters. For all years, there was a unit conversion error. These errors were corrected in the state-level estimates.
LULUCF – <ul style="list-style-type: none"> • Forest land (harvested wood pools) • Forest land (N₂O from Forest Soils) • Coastal Wetlands (N₂O from aquaculture) 	All years	~3% reduction in the net LULUCF sector total in 2020 but will vary across time series. Note: While a percentage is provided, it is a percentage of net emissions and sinks in the LULUCF sector, so may not accurately reflect relative sectoral contribution in a year, including 2020.	State-level estimates do not include emission and removals from carbon stock changes associated with harvested wood products (HWP), emissions from N additions (N ₂ O) to Forest Soils, and they also do not include N ₂ O emissions from aquaculture as disaggregation of these sources to the state level will require further assessment of potential methods and/or appropriate surrogate data to allocate national estimates to states.