

The logo for CAES (Center for Advanced Energy Studies) features the letters 'CAES' in a bold, white, sans-serif font. A stylized sunburst or energy symbol is integrated into the letter 'A'. The logo is set against a dark blue background that transitions into a photograph of a modern building at dusk.

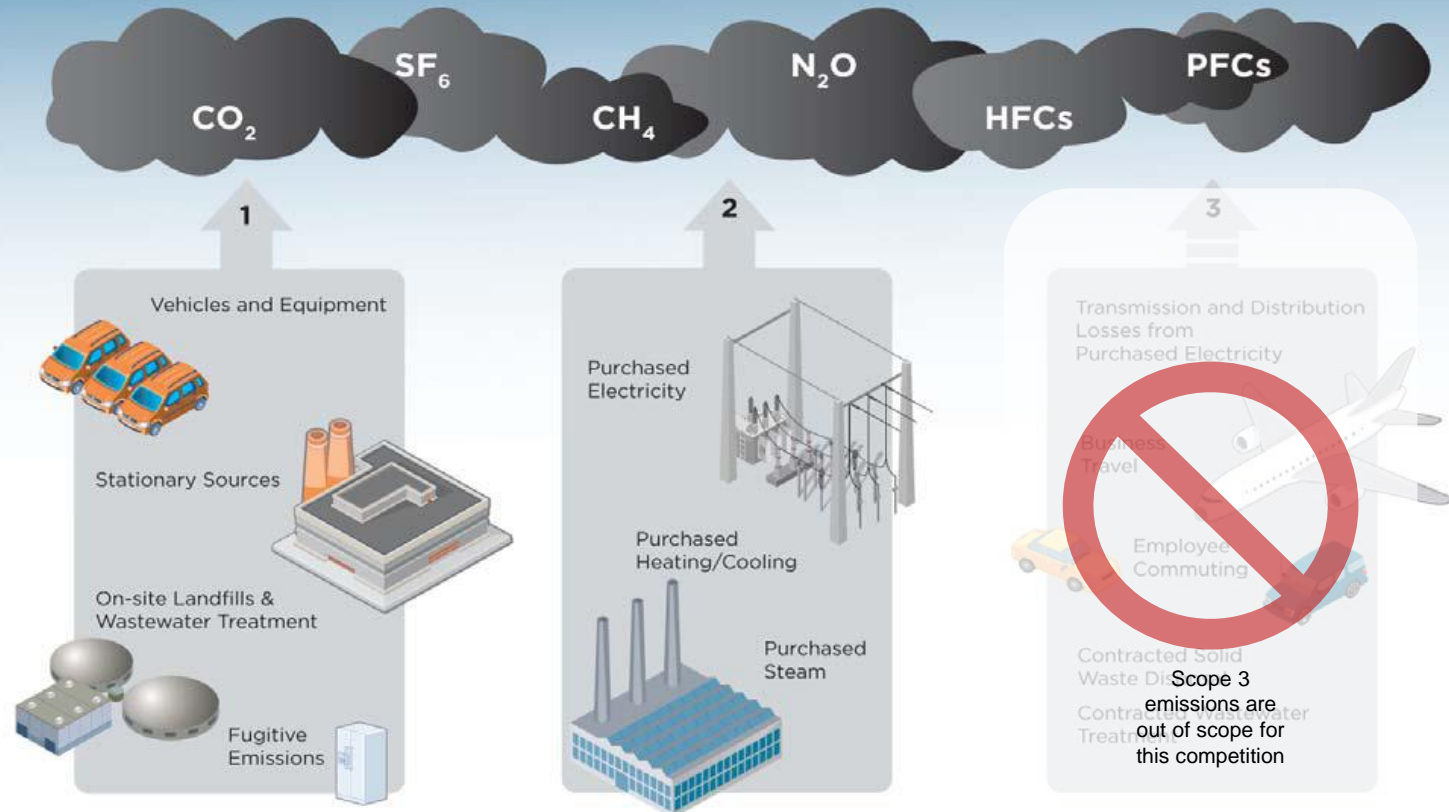
Center for Advanced
Energy Studies



CAES Annual Pitch Event 2021

INL GHG Emissions Data - FY19

Common Sources of Federal Greenhouse Gas Emissions



SCOPE 1:

Greenhouse gas emissions from sources that are owned or controlled by a Federal agency.

SCOPE 2:

Greenhouse gas emissions resulting from the generation of electricity, heat, or steam purchased by a Federal agency.

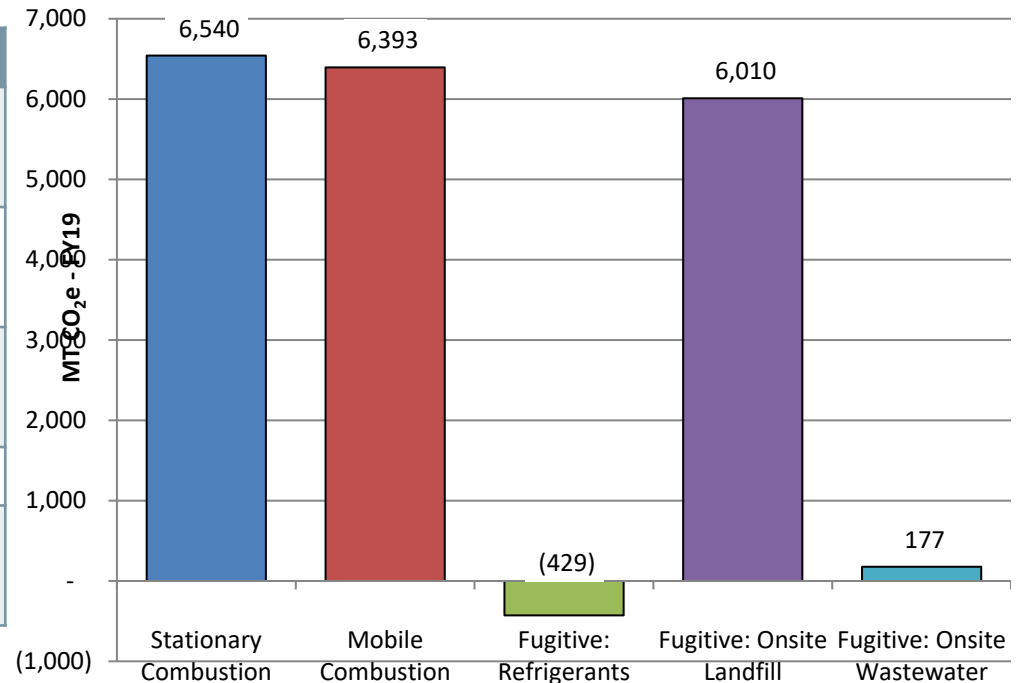
SCOPE 3:

Greenhouse gas emissions from sources not owned or directly controlled by a Federal agency but related to agency activities.

Scope 1 Direct Emissions – 18,691 MT CO₂e

Largest Scope 1 Contributors

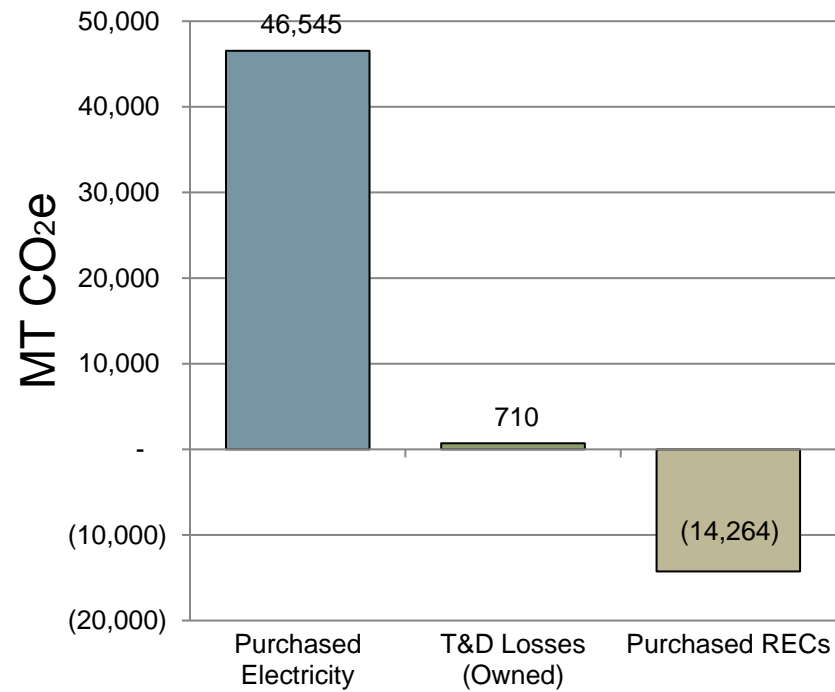
FY 2019 Scope 1 Emissions	MT CO ₂ e
Stationary Combustion	6,540
• Boilers	
• Generators	
Mobile Combustion	6,393
• INL vehicle fleet (light & heavy)	
• Buses	
Fugitive – Refrigerants	-429
• Negative due to chemical inventory return	
Fugitive – Onsite Landfill	6,010
Fugitive – Onsite Wastewater Treatment	177
• Sewage lagoons	
• Septic tanks	



Scope 2 Indirect Emissions –32,991 MT CO₂e

Largest Scope 2 Contributors

FY 2019 Scope 2 Emissions	MT CO ₂ e
Purchased Electricity	46,545
T&D Losses (Owned)*	710
* assumes the national average T&D loss factor of 6.59%	
Purchased RECs	-14,264



Scope	Emissions Category	FY 2019 GHG Emissions (MT CO ₂ e)	
1 (Direct)	Stationary Combustion	6,540.40	
	Mobile Combustion	6,393.26	
	Fugitive Emissions: Refrigerants	-429.39	
	Fugitive Emissions: Onsite Landfill	6,009.75	
	Fugitive Emissions: Onsite Wastewater Treatment	177.34	
	SCOPE 1 TOTAL	18,691.36	
2 (Indirect)	Purchased Electricity	46,544.53	
	Transmission & Distribution Losses (Owned)	709.77	
	Purchased RECs	(14,263.76)	
	SCOPE 2 TOTAL	32,990.54	
3 (Indirect)	Transmission & Distribution Losses (Shared)	3,067.28	
	Employee Commuting	10,715.91	
	Business Air Travel	6,746.14	
	Business Ground Travel: Rental Vehicle	758.12	
	Business Ground Travel: Personal Vehicle	454.52	
	Contracted MSW Disposal	275.11	
	Contracted Wastewater Treatment	12.95	
	SCOPE 3 TOTAL	22,030.03	
	TOTAL ANTHROPOGENIC EMISSIONS^a		73,711.93
	Biogenic	Mobile Combustion	2,266.39
Fugitive Emissions: Onsite Landfill		733.00	
Contracted MSW Disposal		30.26	
TOTAL BIOGENIC EMISSIONS		3,029.65	
TOTAL EMISSIONS (ANTHROPOGENIC + BIOGENIC)		76,741.57	

Collaboration Inspiring Innovation and Impact

CAES

**Center for Advanced
Energy Studies**



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