Energy Use from Scope 1 & 2 Sources at SEA Airport: 2005, 2015, 2019

				2005*	2015	2019	
Scope 1	**Stationary Source**	**Natural Gas**	Central Plant Boiler	2,657,740	2,555,579	2,545,547	therms
			Pumphouse	UNKNOWN	544	176	therms
			Fleet Maintenance (AC2 Bldg)	UNKNOWN	55,991	43,206	therms
			Fire Department	UNKNOWN	23,687	29,000	therms
			Learning Center Building	UNKNOWN	8,574	7,339	therms
			Bus Maintenance Facility	-	21,289	45,157	therms
			Distribution Center	-	5,856	5,854	therms
			Cargo Building 161E	-	-	7,024	therms
			Cargo Building 166B-2380 S 166th St	-	-	73,857	therms
			Airfield Security Gate	-	-	712	therms
			TOTAL NATURAL GAS	**2,657,740**	**2,671,518**	**2,757,871**	**therms**
		Generator Diesel	**TOTAL DIESEL**	**UNKNOWN**	14,784	24,130	**gallons**
	Mobile Source	**Mobile Fleet Fossil Fuel Use**	Gasoline Delivered	144,268	121,181	132,540	gallons
			Business Miles Personal Vehicles	UNKNOWN	2,227	1,409	gallons
			TOTAL GASOLINE	**144,268**	**123,408**	**133,949**	**gallons**
			TOTAL DIESEL	**16,745**	**23,734**	**12,518**	**gallons**
			TOTAL CNG	**179,710**	**257,382**	**451,633**	**GGE**
		Biogenic Fuel[a]	**TOTAL RENEWABLE NATURAL GAS**	**-**	**160,820**	**-**	**GGE**
			TOTAL RENEWABLE DIESEL (R99)	**-**	**-**	**57,034**	**gallons**
Scope 2		**Electricity**	Airport-Only Electricity (BPA)[b]	149,691,000	111,173,466	117,817,071	kWh
			eGSE electricity [c]	-	-	836,346	kWh
			Runway Lighting (Seattle City Light)	-	1,458,300	1,697,100	kWh
			Distribution Center (PSE)	-	140,257	168,096	kWh
			Bus Mnt Facility (PSE)	-	808,727	893,110	kWh
			North Employee Parking Lot (SCL)	UNKNOWN	439,435	437,179	kWh
			Misc PSE Srcs (PSE)	UNKNOWN	917,589	1,275,735	kWh
			TOTAL ELECTRICITY	**149,691,000**	**114,937,775**	**122,288,291**	**kWh**

*2005 is the baseline year for Port of Seattle's Scope 1&2 greenhouse gas reduction targets. Most baseline data is from the airport's 2006 published inventory.
Where "-" is shown, the value is zero, typically because the facility was not yet built. Where "UNKNOWN" is shown, the facility was operational but no data was collecte
(a) Emissions associated with biogenic sources of energy are not included in the total emissions as they are part of the natural carbon cycle and are excluded under UNI
(b) For 2005, this total includes tenants who are metered and billed. For all remaining years, billed tenants and billed users of electrictricity are not included in this tota
(c) Fully metered/billing eGSE system to airlines not in place until 2018. For 2015, eGSE electricity is included in Airport-Only Electricity. After 2018, eGSE billed to airlin

CO_2 Emissions from Scope 1 & 2 Sources at SEA Airport: 2005, 2015, 2019

All units in tonnes

			2005*	2015	2019
Scope 1	**Stationary Source**	Natural Gas Boilers	14,102	14,175	14,633
	Stationary Source	Diesel in Back-up Generators	UNKNOWN	151	246
	Mobile Source	Gasoline Use in Fleet	1,267	1,084	1,176
		Diesel Use in Fleet	171	242	128
		CNG Use in Fleet	1,241	1,777	3,118
Scope 2	**Indirect Energy - Location Based Approach** [d]	All Electricity Purchased	61,261	34,890	36,355
	Indirect Energy - Market Based Approach	BPA Electricity Purchased [b]	6,326	1,838	1,850
		PSE Electricity Purchased [e]	UNKNOWN	1,027	591
		SCL Electricity Purchased	UNKNOWN	45	30
		TOTAL	**23,106**	**20,338**	**21,772**

*2005 is the baseline year for Port of Seattle's Scope 1&2 greenhouse gas reduction targets. Most baseline data is from the airport's 2006 published inventory.

Where "-" is shown, the value is zero, typically because the facility was not yet built. Where "UNKNOWN" is shown, the facility was operational but no data was collected in that year's inventory

(a) Emissions associated with biogenic sources of energy are not included in the total emissions as they are part of the natural carbon cycle and are excluded under UNFCCC guidelines

(b) For 2005, this total includes tenants who are metered and billed. For all remaining years, billed tenants and billed users of electrictricity are not included in this total.

(c) Fully metered/billing eGSE system to airlines not in place until 2018. For 2015, eGSE electricity is included in Airport-Only Electricity

(d) The Port follows the GHG Protocol by including both Location- and Market-based electricity, but uses Market-based to track its goals due to our contractual ability to influence GHG intensity

(e) In 2019, the Port purchased PSE's Green Direct electricity for half of the year, which is why the emissions in the total only reflect half of the year's expected GHG emissions

SEA Seattle-Tacoma International Airport

Emission Factors Used for Scope 1 & 2 Sources at SEA Airport: 2005, 2015, 2019

Scope	Year	Fuel	Emission Factor	Original Units	Converted Emission Factor	Converted Units	Citation
1	All	Natural Gas in Boilers	53.0600	kg CO2/MMBTU	0.00530600	tonnes CO2/therm	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
	All	Diesel in Generators	10.2100	kg CO2/gallon	0.01021000	tonnes CO2/gallon	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
	All	Gasoline in Vehicles	8.7800	kg CO2/gallon	0.00878000	tonnes CO2/gallon	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
	All	Diesel in Vehicles	10.2100	kg CO2/gallon	0.01021000	tonnes CO2/gallon	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
	All	Natural Gas in Vehicles	0.0545	kg CO2/scf	0.00690352	tonnes CO2/GGE	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf
2	2015	PSE Electricity	n/a	n/a	0.00055010	tonnes CO2/kWh	https://pse.com/aboutpse/Environment/Documents/GHG_Inventory_2015.pdf
	2019	PSE Electricity	n/a	n/a	0.00047277	tonnes CO2/kWh	https://www.pse.com/-/media/PDFs/GHG_Inventory_2018.pdf
	2005	BPA Electricity	0.04226	n/a	0.00004226	tonnes CO2/kWh	BPA correspondence using eGRID/TCR methodology
	2015	BPA Electricity	0.0165	tonnes CO2/MWh	0.00001653	tonnes CO2/kWh	BPA correspondence using eGRID/TCR methodology
	2019	BPA Electricity	0.0157	tonnes CO2/MWh	0.0000157	tonnes CO2/kWh	BPA correspondence using eGRID/TCR methodology
	2015	SCL Retail Electricity	52.44	lbs CO2/MWh	0.00002379	tonnes CO2/kWh	https://www.theclimateregistry.org/our-members/cris-public-reports/
	2019	SCL Retail Electricity	31.12	lbs CO2/MWh	0.00001412	tonnes CO2/kWh	https://www.theclimateregistry.org/our-members/cris-public-reports/
2	2005	eGRID NWPP Electricity	902.24	lbs CO2e/MWh	0.00040925	tonnes CO2/kWh	https://www.epa.gov/energy/egrid
	2012-15	eGRID NWPP Electricity	669.23	lbs CO2e/MWh	0.00030356	tonnes CO2/kWh	https://www.epa.gov/energy/egrid
	2016-19	eGRID NWPP Electricity	655.41	lbs CO2e/MWh	0.00029729	tonnes CO2/kWh	https://www.epa.gov/energy/egrid

Note: The emission factor for Renewable Natural Gas (RNG) and Renewable Diesel is 0 because combustion of the fuel is considered to produce biogenic CO2 emissions.
These emissions and are not included in the total emissions estimate, because they are considered to be part of the natural carbon cycle and so are excluded under UNFCCC guidelines.