

Greenhouse gas emissions 2015-2017

The greenhouse gasses accounted for are: carbon dioxide (CO₂), methane (CH₄), sulphur hexafluoride (SF₆), tetrafluoroethane (HFC-134a) and nitrous dioxide (N₂O). Greenhouse gas emissions from ON Power's geothermal power plants in Nesjavellir and Hellisheidi are based on their operations along with drilling of makeup wells in the geothermal fields. Veitur Utilities' emissions from its supply and distribution system are due to the operation of backup generators. Emissions of carbon dioxide and methane from Hellisheidi and Nesjavellir reduced in 2017 compared to 2015. Greenhouse gas emissions from the vehicle fleet were reduced from previous years. Sulphur hexafluoride (SF₆) is used as insulating gas in high-voltage electrical equipment in ON Power's power plants and Veitur Utilities' supply and distribution system. SF₆ is also used in trace flow test (TFT) measurements of high-temperature production wells.

GREENHOUSE GAS	ORIGIN	UNIT	2015	2016	2017
Carbon dioxide (CO₂)	Nesjavellir	t	14,726	14,655	14,020
	Hellisheidi and Hverahlid	t	33,077	26,102	23,555
	Low-temperature geothermal fields	t	0	0	0
	Supply and distribution system	t	5	2	3
	Vehicle fleet (CO ₂ equivalence)	t	582	551	526
	Flights, international and domestic (CO ₂ equivalence)	t	70	64	69
	Office waste for landfilling (CO ₂ equivalence)	t	14	11	18
	Worksite waste for landfilling (CO ₂ equivalence)	t	799	651	818
	Organic waste for compost (CO ₂ equivalence)	t	5	4	5
	Total CO₂		tonn	49,278	42,040
Methane (CH₄)	Nesjavellir	kg	54,000	44,000	31,000
	Hellisheidi and Hverahlid	kg	80,000	48,000	49,000
	Total CH₄	kg	134,000	92,000	80,000
Nitrous oxide (N₂O)	Supply and distribution system	kg	0	0	0
	Total N₂O	kg	0	0	0
Tetrafluoroethane (HFC-134a)	Supply and distribution system	kg	15	15	15
	Total HFC-134a	kg	15	15	15
Sulphur hexafluoride (SF₆)*	Nesjavellir	kg			
	Hellisheidi	kg		0.26	
	Tracer flow tests (TFT) in the Hengill area	kg	0.04	0.08	0.08
	Supply and distribution system	kg			
	Total SF₆	kg	0.04	0.34	0.08

* Total amount of SF₆ in electronic equipment is approx. 5.7 tonnes and approx. 1 tonne is in supplies. OR's R&D holds approx 1.2 kg of SF₆ in supplies.

Information for global warming potential (GWP) of greenhouse gasses, see: http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf