



## STATEMENT OF ORIGIN – VEITUR UTILITIES DISTRICT HEATING IN 2025

It is hereby confirmed that in the year 2025, Veitur Utilities supplied its customers of district heating, in the municipalities listed in Table 1, hot water from 100% renewable sources. The water used in Veitur Utilities district heating networks comes from one of two sources, (a) natural geothermal water from low temperature fields or (b) heated cold groundwater from high temperature fields. A more detailed description can be found below:

- a. Natural geothermal water from low temperature geothermal fields. Low temperature fields are located outside of the volcanic zones in Iceland. The temperature in the fields is mostly between 50 and 150°C. The geothermal water is originally precipitation, forming groundwater that heats up due to contact with hot rock, usually at around 1 to 2 km depth. Then water is also slightly enriched in dissolved solids as it reacts with the surrounding hot rock. The benign chemistry of the waters allows them in most cases to be used directly for space heating, tap water, for spas and industrial uses.
- b. Heated cold groundwater from high temperature fields. High temperature fields are located within the volcanic zones in Iceland. The temperature in the high temperature fields is >200°C and can reach 380°C. The mixture of steam and water coming from high temperature fields is originally precipitation. The cold groundwater heats up at 1 to 3 km depth up to 200 – 400°C. Due to the high temperatures and high concentrations of dissolved solids the liquid cannot be used directly by the consumer. Instead, fresh cold groundwater is heated up in condensers and heat exchangers inside a power plant. The only chemical treatment is allowing the water to boil under vacuum conditions and adding a minute amount of steam to control the pH of the water and getting rid of oxygen to prevent corrosion in pipes and radiators.

### **NOx in district heating network**

Geothermal water supplied for space heating in the Reykjavík area and neighboring communities, is originally cold groundwater, which is heated by natural processes in the Earth by hot magmatic intrusion in low temperature fields or in man-made heat exchangers on the surface in high temperature fields. The concentration of NO<sub>2</sub> and NO<sub>3</sub> in fresh groundwater is below detection limits (<0,01 ppm), which is far below allowed concentrations in water for human consumption. NOx gases are usually produced from the reaction of nitrogen and oxygen during combustion of fossil fuels, such as hydrocarbons, at high temperatures in the presence of atmosphere. No such combustion is used for producing hot water for space heating in Reykjavík. The source water contains no NOx compounds, the heating process does not involve the combustion of fossil fuels nor adds any NOx compounds.



Table 1. Veitur's district heating areas and production in 2025.

Utility	Production field	No. of wells	Annual production thous. tons	l/s
<b>Capital area</b>				
	Laugarnes	10	3,944	125
	Ellidaar	8	2,093	66
	Reykir	22	7,760	246
<b>Capital area</b>				
	Reykjahlid	12	13,133	416
	Nesjavellir	21	37,685	1,195
	Hellisheidi	47	20,359	646
<b>West Iceland</b>				
HAB	Deildartunga hot spring	1	4,596	146
	Wells at Baeir	2	260	8
Skorradalur	Well in Stora Drageyri	1	311	10
Munadarnes	Well in Munadarnes	1	181	6
Norðurardalur Utility	Wells at Svartagil	3	435	14
	Well at Bifrost	1	74	2
Stykkisholmur	Wells in Stykkisholmur	2	834	26
<b>South Iceland</b>				
Hveragerdi	Wells in Hveragerdi	4	1,311	42
Olfus	Bakki II	1	366	12
Thorlakshofn	Bakki I	2	1,579	50
Austurveita	Wells in Gljufuraraholt	3	537	17
Grimsnæsveita	Wells in Ondverdarnes	3	1,946	62
Hlidarveita	Wells at Efri-Reykir	1	457	14
Rangarveita	Wells at Kaldarholt	2	2,500	79
	Wells at Laugaland	3	739	23

Respectfully,

Snorri Jökull Egilsson

Head of Climate and Environment – Reykjavik Energy, 03.03.2026