

# Reykjavík Energy

Emissions of carbon dioxide & hydrogen sulphide and emission intensity from Hellisheidi and Nesjavellir 2024



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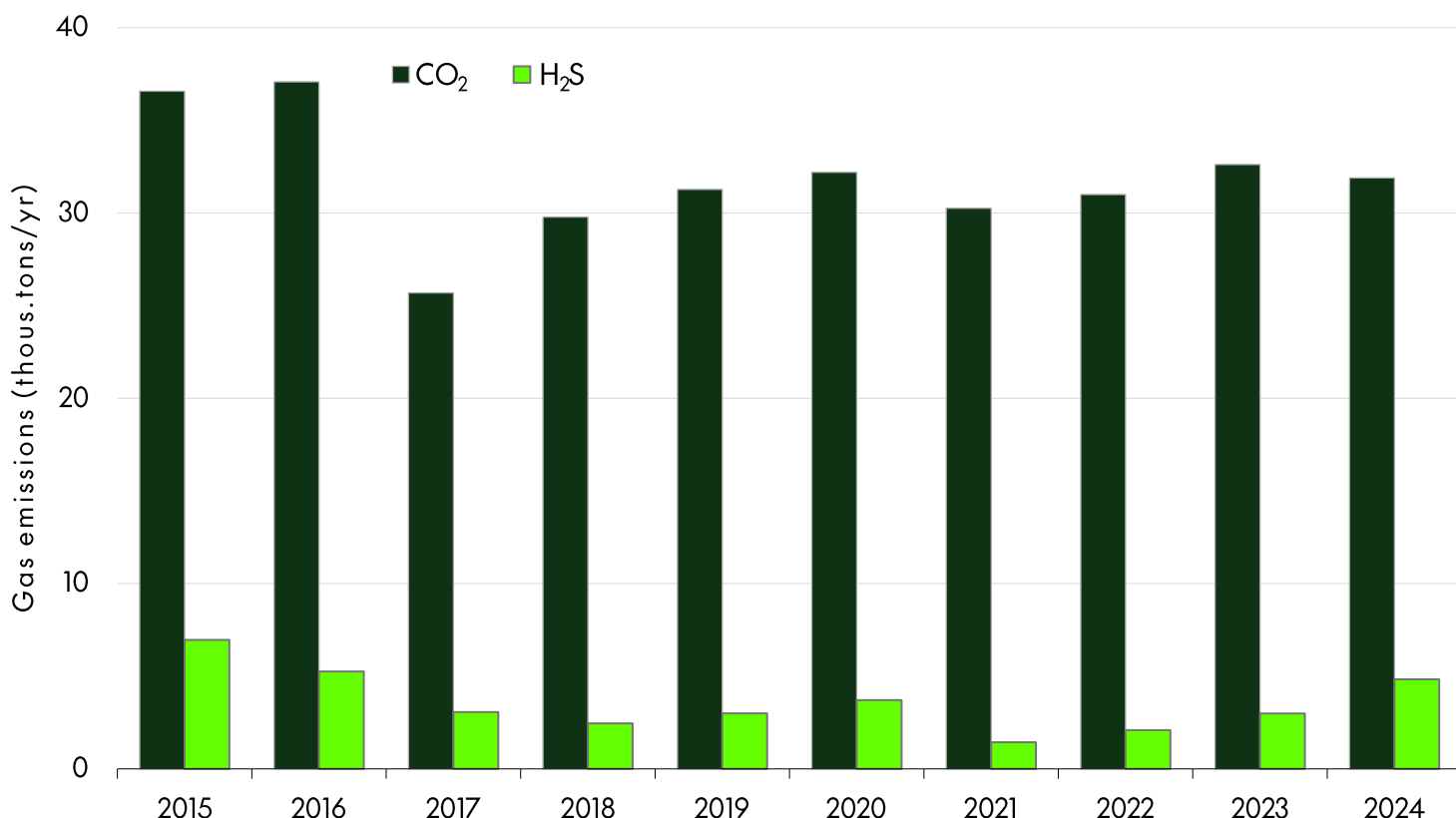
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Cover photo: Íris Eva Einarsdóttir

# Emissions of carbon dioxide (CO<sub>2</sub>), hydrogen sulphide (H<sub>2</sub>S), methane (CH<sub>4</sub>) and hydrogen (H<sub>2</sub>) from Hellisheidi & Nesjavellir 2015-2024

The emissions uncertainty is +/- 12% compared to the 95% uncertainty range.

## Hellisheidi



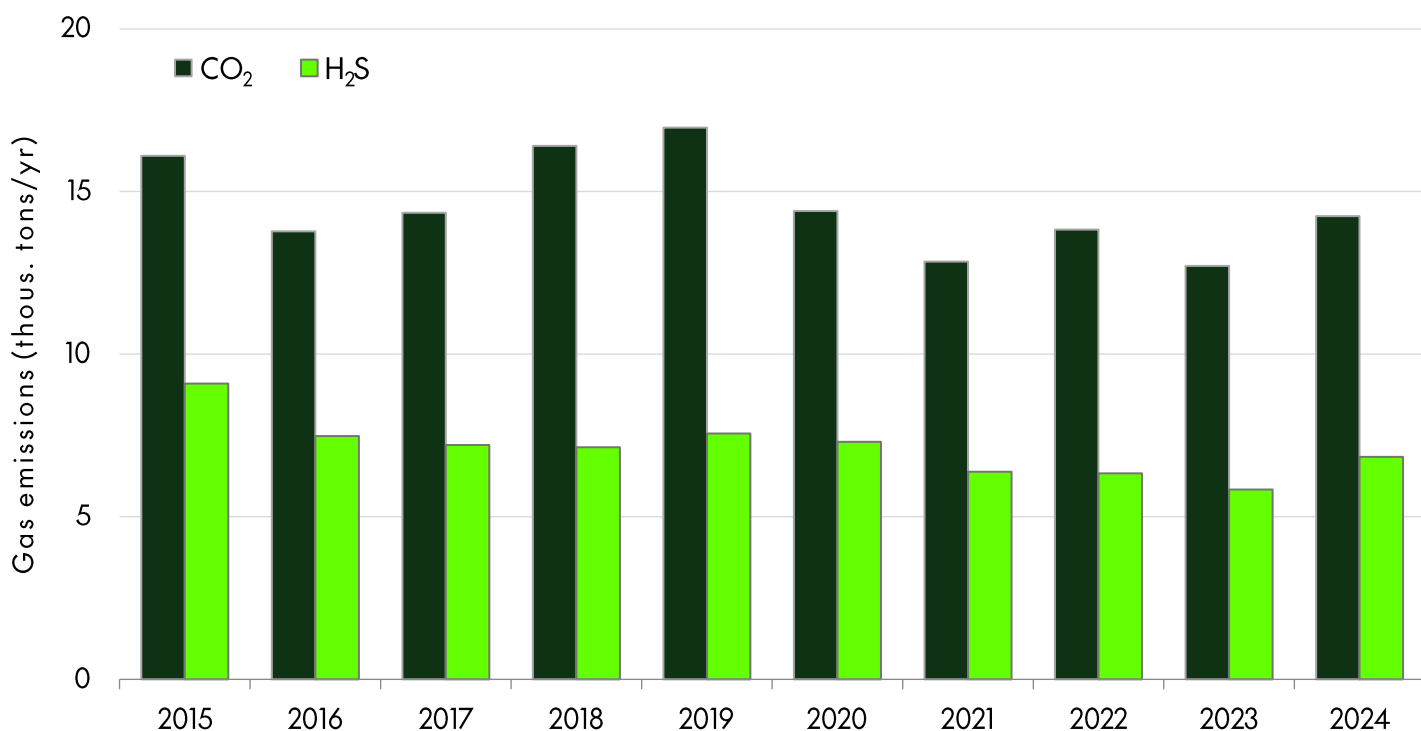
| Year | CO <sub>2</sub> tons/yr | H <sub>2</sub> S tons/yr | H <sub>2</sub> tons/yr | CH <sub>4</sub> tons/yr |
|------|-------------------------|--------------------------|------------------------|-------------------------|
| 2015 | 36,600                  | 7,000                    | 380                    | 70                      |
| 2016 | 37,100                  | 5,300                    | 380                    | 80                      |
| 2017 | 25,700                  | 3,100                    | 330                    | 50                      |
| 2018 | 29,800                  | 2,500                    | 360                    | 60                      |
| 2019 | 31,300                  | 3,000                    | 340                    | 50                      |
| 2020 | 32,200                  | 3,700                    | 340                    | 70                      |
| 2021 | 30,300                  | 1,400                    | 340                    | 70                      |
| 2022 | 31,000                  | 2,100                    | 330                    | 70                      |
| 2023 | 32,600                  | 3,000                    | 340                    | 80                      |
| 2024 | 31,900                  | 4,900                    | 350                    | 80                      |

Commentary 2024:

1) CO<sub>2</sub> and H<sub>2</sub>S dissolved and reinjected in condensate water subtracted. First done in 2015.

2) Approx. 11,800 tons of CO<sub>2</sub> and 4,800 tons of H<sub>2</sub>S were reinjected to the geothermal reservoir.

# Nesjavellir



| Year | CO <sub>2</sub> tons/yr | H <sub>2</sub> S tons/yr | H <sub>2</sub> tons/yr | CH <sub>4</sub> tons/yr |
|------|-------------------------|--------------------------|------------------------|-------------------------|
| 2015 | 16,100                  | 9,100                    | 490                    | 50                      |
| 2016 | 13,800                  | 7,500                    | 380                    | 40                      |
| 2017 | 14,300                  | 7,200                    | 370                    | 30                      |
| 2018 | 16,400                  | 7,100                    | 380                    | 40                      |
| 2019 | 17,000                  | 7,600                    | 390                    | 40                      |
| 2020 | 14,400                  | 7,300                    | 390                    | 40                      |
| 2021 | 12,800                  | 6,400                    | 360                    | 40                      |
| 2022 | 13,800                  | 6,300                    | 360                    | 50                      |
| 2023 | 12,700                  | 5,800                    | 380                    | 50                      |
| 2024 | 14,300                  | 6,900                    | 365                    | 50                      |

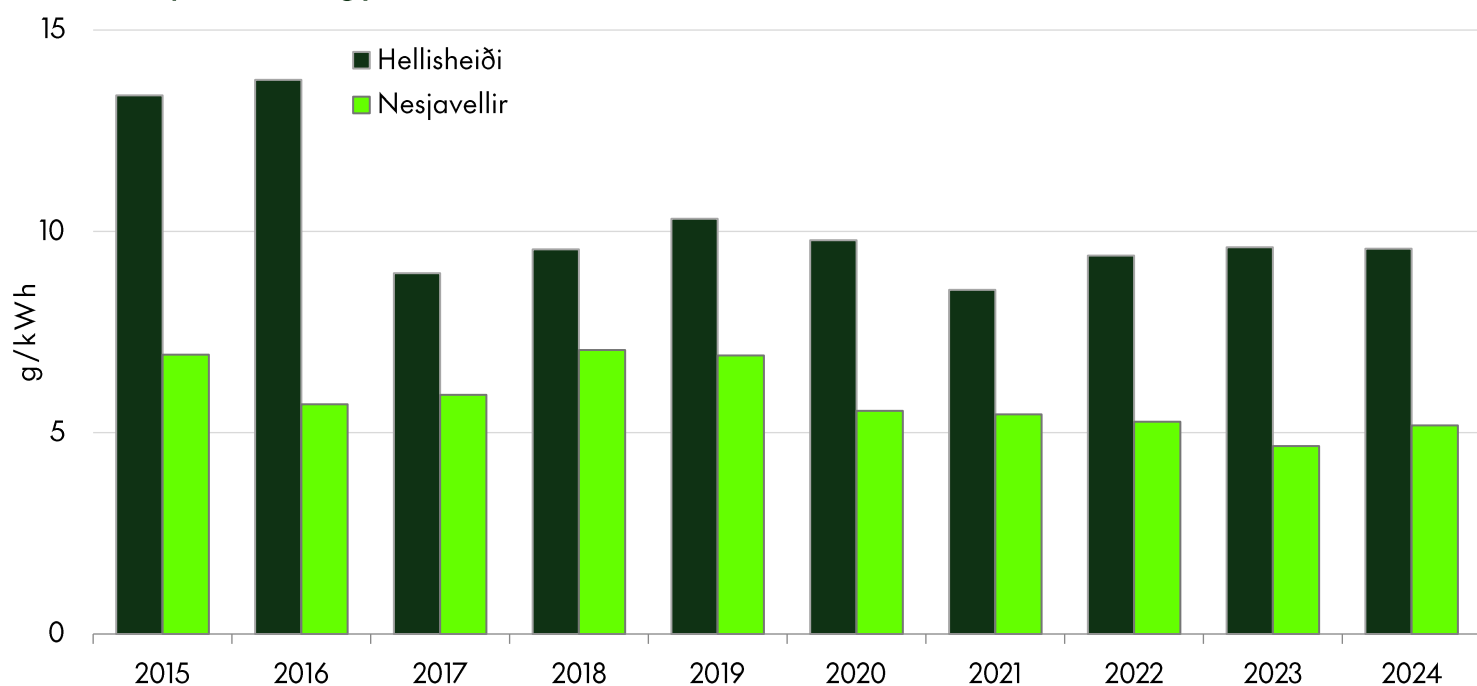
Commentary 2024:

- 1) CO<sub>2</sub> and H<sub>2</sub>S dissolved and reinjected in condensate water subtracted. First done in 2023.
- 2) Approx. 300 tons of CO<sub>2</sub> and 100 tons of H<sub>2</sub>S were reinjected to the geothermal reservoir.

# Emissions of hydrogen sulphide and carbon dioxide per unit of energy from Hellisheiði and Nesjavellir power plants 2015-2024

There are substantial differences in emissions from the power plants, which can be attributed to, among other things, variable gas quantities and concentrations between fields and years.

## CO<sub>2</sub> per energy unit



## H<sub>2</sub>S per energy unit

