

Research and development projects on climate issues

The Reykjavik Energy Group has been at the forefront of innovation and development on climate issues over the past decade

Examples of projects developed in cooperation with the academia and have been implemented at the Reykjavik Energy Group:

- Geothermal utilization without footprint. OR, and partners, recently received over ISK 2 billion from the Horizon 2020 EU Research and Innovation Program for the GECO (Geothermal Energy and Climate Outlook) project. GECO's goal is to develop geothermal power plants with as little carbon dioxide (CO₂) and hydrogen sulfide (H₂S) emissions as possible. It is largely based on the CarbFix reinjection method developed at Hellisheidi Geothermal Power Plant in the past decade in collaboration with ON Power and national and foreign research institutes. With the GECO project, the CarbFix method will be further developed and applied. In addition to Iceland, it will be tested in Italy, Turkey and Germany. Geothermal gasses will be injected into four types of bedrock to test whether the method can be applied outside Iceland. More information about the project can be found on its website: <https://geco-h2020.eu/>
- Continued development of carbon dioxide mineralization in rock. The CarbFix2 project, which is also funded by the Horizon 2020 program, is 1) technology development of CO₂ re-injection with other water-soluble materials, 2) technology development that supports the method of carbon dioxide in the seabed and 3) integration of the CarbFix method with the so-called CarbFix method DAC (Direct Air Capture) technology to permanently reduce CO₂ concentrations in the atmosphere. More information about the project can be found on the CarbFix website, <https://www.carbfix.com/>
- Energy change in transport in Iceland. The project is a collaboration between OR and its subsidiaries ON Power, Veitur and Reykjavik Fibre Network. The development of infrastructure in Reykjavik for electric car owners is a part of the project, advice and encouragement to the community. The City of Reykjavik and the OR Group received funding from the European Union to work towards this goal within the SPARCS project. Details of the project can be found here: <https://www.sparcs.info/>
- Hydrogen production at Hellisheidi Geothermal Power Plant as a source of energy for heavy vehicles, aircraft, ships and aircraft. This is a European Union development project; Hydrogen Mobility Europe (H2ME).
- Stimulation of a geothermal well in Geldinganes was carried out in the fall of 2019 in collaboration with the DESTRESS project supported by the Horizon 2020 EU Research and Innovation Program. The goal was to increase the production capacity of hot water and minimize the earthquake activity associated with the stimulation. At the same time, neighbouring elementary schools were working on education about the project. <http://www.destress-h2020.eu/en/home/>
- Impact of forestry on carbon reserves in Icelandic forest soil on OR's land in Heidmörk and at Lake Thingvallavatn. The project was carried out in collaboration with the Agricultural University of Iceland and funded by Reykjavik Energy and the United Nations University Land Restoration Training Programme. Details of the project can be found here: <https://skemman.is/handle/1946/34470>