Reykjavik City Carbon Neutral by 2040

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Agenda

- COP24 and cities
- EU energy policy and Iceland
- Reykjavik City Carbon neutral 2040
- Mitigation action plan
- Adaptation action plan
COP and cities

- COP = Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)
- COP24 = 24th Conference of the Parties
- COP24 will take place from 3-14 December 2018, in Katowice Poland
- Reykjavik is a part of Global Covenant of Mayors for climate and energy
- Reykjavik is a member of ICLEI and Eurocities
- ICLEI and Eurocities have presence at COP meetings
COP and cities

• COP21 in Paris: more than 450 cities with total of 1bn people pledged to reduce emissions by more than 50% in around 15 years.

• In the Paris agreement:

• “…..Agreeing to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples”
EU energy policy

• According to the Energy Union (2015), the five main aims of the EU’s energy policy are to:
  – Ensure the functioning of the internal energy market and the interconnection of energy networks;
  – Ensure security of energy supply in the Union;
  – Promote energy efficiency and energy saving;
  – Promote the development of new and renewable forms of energy to better align and integrate climate change goals into the new market design; and
  – Promote research, innovation and competitiveness.
Iceland and EU energy and climate

- Under the Paris Agreement, Iceland aims to be part of a collective delivery by European countries to reach a target of 40% reduction of greenhouse gas emissions by 2030 compared to 1990 levels.
- Iceland is a part of the EU ETS.
- Iceland to be carbon neutral by 2040 (like Reykjavik).
- Energy: electricity and district heating NOT a part of Reykjavik´s GHG inventory 2007-2015.
GHG Emissions 2016*

- **Energy**: 40%
- **Industrial processes and product use**: 42%
- **Agriculture**: 12.9%
- **Waste**: 5.1%

- **Other (0.1%)**
- **Agricultural soils (4.0%)**
- **Manure management (2.3%)**
- **Enteric fermentation (6.6%)**
- **F-gases (4.1%)**
- **Other (0.2%)**
- **Metal production (38%)**
- **Wastewater treatment (0.3%)**
- **Incineration and compost (0.2%)**
- **Solid waste disposal (4.6%)**
- **Other (1.3%)**
- **Manufacturing industries (1.6%)**
- **Machinery (2.6%)**
- **Geothermal energy (3.3%)**
- **Fishing ships (11%)**
- **Road transport (20%)**

* Without LULUCF / international navigation/aviation
Iceland's emissions 2016*

- Energy 64%
- Agriculture 20.8%
- Industrial processes and product use 7%
- Waste 8.2%
- Other (0.2%)

* Without EU ETS / LULUCF / international navigation/aviation
Reykjavik City Carbon Neutral by 2040

Hrönn Hrafnsdóttir
Emissions in Reykjavik*

* in 1.000 tons CO2 equivalents

Bílaumferð = traffic
Atvinnustarfsemi = industry (including waste)
Flug, fiskveiðar og siglingar = aviation, fisheries and sailings
Á íbúa = per capita
Municipal plan 2010 - 2030
Action plan

• Reykjavik City action plan – mitigation:
  – Transportation and energy
  – Land use
  – Working with citizens and stakeholders
  – Waste management
• Reykjavik City Adaptation plan
• The Operations of Reykjavik City
Transport

• By 2030 the ratio of automobile traffic will have become 58%, public transport will be at 12% and walking and cycling traffic will be at 30%
• By 2040 emissions from automotive traffic and public transport will be free of greenhouse gases.
• The City of Reykjavík will put in place initiatives for strengthening public transport through the use of light railways or a bus rapid transit system – a so-called Public Transportation Corridor – in conjunction with the other municipalities within the capital region and the Department for Transport.
Public Transportation Corridor

• Regional plan in 2015
• High quality public transport
• Have been introduced in all municipalities nearby Reykjavik
• Will affect municipal plans in
  • Reykjavik
  • Garðabær
  • Hafnarfjörður
  • Kópavogur
  • Mosfellsbær
  • Seltjarnarnesbær
Transport and energy

- In co-operation with Reykjavík Energy support will be put behind energy exchanges in transport and an increased ratio of electricity-powered modes of transport. This will be achieved by, among other things:
  - Make charging stations available in the city's parking garages.
  - Introducing charging stations outside selected municipal buildings for the use of guests and staff.
  - The City of Reykjavík working with Reykjavík Energy to garner ideas for introducing charging stations within the city's districts.
  - Putting forth a plan of action detailing how city buses and the prospective Public Transportation Corridor can be entirely powered by energy sources free from greenhouse gas emissions.
  - Examining the code of conduct regulating the city and its businesses in order to dispel obstacles against electric transport and ease its implementation.
75% → 58%
4% → 12%
21% → 30%
Transport

- City of Reykjavík aims to reduce transport needs while putting an emphasis on **online services** for individuals, families and businesses. Priority will be given to either bringing the availability of leisure activities and other online services as close to users' domiciles as possible, or by making sure they are easily accessible within each city district through the use of eco-friendly modes of transport by choosing their location as well as the arrangement of public transport and by creating to a city-wide district plan.

- A plan will be put into action for reducing traffic and shortening distances when it comes to the **transport of construction materials**. An increase in sea transport is one possibility. For these purposes an environmental evaluation will be put together on the possibility of further quarrying and extracting of minerals in Geldinganes.

- The aim is to make **electrical charging for ships and vessels** available at Faxaflóahafnir (Associated Icelandic Ports). For this the co-operation of other governments, energy sale companies and other harbours will be sought after...
Land use

- 90% of all new residential units will be inside the current urban area borders to increase the close-proximity of public services and to reduce travel needs.
- A plan will be put into action and incentives found for the **reducing of petrol stations**. The goal will be that fossilised fuel pumps will be reduced by 50% within city limits by 2030 and will be all but extinct by 2040.
- A survey will be conducted in co-operation with Reykjavík Energy (Orkuveita Reykjavíkur) to explore the possibility of introducing a **wind turbine farm** within city limits.
- Before the end of 2016 the mapping of possible **carbon capturing** through forestry and reclaimed wetlands will be completed.
- **A forestry plan** will be developed for Geldinganes and Kjalarnes in order to, among other things, increase wind shielding and work towards a future vision for organising and utilising the area. There, schools, government institutes and city businesses will be designated areas to reforest in order to offset the carbon emission of their operations.
Public Awareness

- Key emphasis will be put upon diminishing emissions and reducing waste by the continued co-operation of City of Reykjavík with businesses and economic life. Participants in the City of Reykjavík and Festa’s Declaration for Climate Change should be at least 200 by the year 2020 and should include the majority of economic life within the city.
Public Awareness

- A project to **reduce food waste** will be put into action in relation to The European Week for Waste Reduction in 2016.
- A website will be created to **increase general knowledge** of how the release of greenhouse gases can be reduced and how homes can be made carbon-neutral.
- In constructing an overall food policy a chaptered plan will be put forth before the end of 2017 to **boost local food culture, food production** and the growing of edibles.
Waste

• Waste categories at local recycling centres will multiply during the time span allocated in accordance with the action plan on waste matters.
• Citizens will receive information on domestic compost and be encouraged to start their own compost.
• The construction of an anerobic concestion plant will be finished in 2018.
• In 2019, once the anerobic concestion plant has risen, the collection of biological waste will commence.
Adaptation to climate change

- Major risk factors, including areas prone to flooding, will be introduced into the district plan and a plan formed for necessary counter measures.
- Introduce blue-green solutions and prepare for the use of nature based solutions and technical solutions in flood prevention.
Operations of Reykjavik City
Operations

- A green emphasis will be not optional but mandated in all of the city’s operations. All of City of Reykjavík’s businesses and departments will take part in the city’s Green Steps project no later than the end of 2016.
- By 2025 a 100% of City of Reykjavík’s vehicles will be powered by energies free of greenhouse gas emissions.
- A process will be implemented to support carbon-neutral purchasing.
- The documenting of travel allowances will be amended in such a way as to include the registration of airplane emissions.
- A new project will be introduced as a subsidiary of Green Steps making instructions on how workplaces can become carbon-neutral and/or reduce their waste production.
- A specific climate policy will be put into action for primary schools and kindergartens that includes children and teens actively participating in operations, calculations and follow ups.
- The way Reykjavik’s employees commutes to and from work will be researched through an annual commute survey, in the first time in 2017.
- Before 2018 all full-time employees of City of Reykjavik will have the chance of signing a transport contract and receiving payment for commuting to work using eco-friendly and cost-efficient means of transport.
- From 2017 and onwards Green Accounting will document and calculate the use of fossil fuels and the release of greenhouse gases as well as energy use and waste production in the running of Reykjavik City, with the results being published annually on the Green Steps website.
Further information

- Websites:
  - https://www.globalcovenantofmayors.org/