

ICELANDIC TRANSPORT AUTHORITY

SUSTAINABLE AVIATION FUEL (SAF)

Icelandic Views Regarding SAF Possibilities

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Icelandic Government 2018

- **Climate Strategy 2018-2030**
 - Energy Exchange in the Transport Sector
 - Electric Land Connection
 - Emissions Regulations
 - ETS and CORSIA
- **Icelandic Transport Authority**
 - Eco Friendly Fuels in all Transport Applications
 - Maritime Transport
 - Road Traffic
 - Aviation



Policy Initiatives

- **Parliamentary Committee 2011**
 - Lower VAT for environmentally products (sustainable fuels)
 - Production of sustainable jet fuel
 - Research of fuel from biomass
- **National Renewable Energy Plan 2013**
 - Sustainable fuel as a key driver in transportation
 - Large-scale development rather unrealistic (OECD)



Renewable Energy for Aviation

- **Carbon Recycling International (CRI)**
 - Emission to Liquid (EtL)
 - Methanol
- **Icelandic Transport Authority**
 - Rapeseed Oil and Biodiesel (RME)
 - Biomass to Liquid (BtL)
- **Others**
 - Jatropha
 - Camelina
 - Waste and residues



Carbon Recycling

- **Producing Methanol**

- Capture Carbon Dioxide from Geothermal Plant „Svartsengi“ Southwest of Iceland.
- $\text{CO}_2 + 3 \text{H}_2 \Rightarrow \text{CH}_3\text{OH} + \text{H}_2\text{O}$
- Production now is about 4,000 tons/year
- Future Production 40,000 tons/year

- **Methanol as a jet-fuel**

- Difficult because of low energy density
- Possible through electrolysis – hydrogen H_2



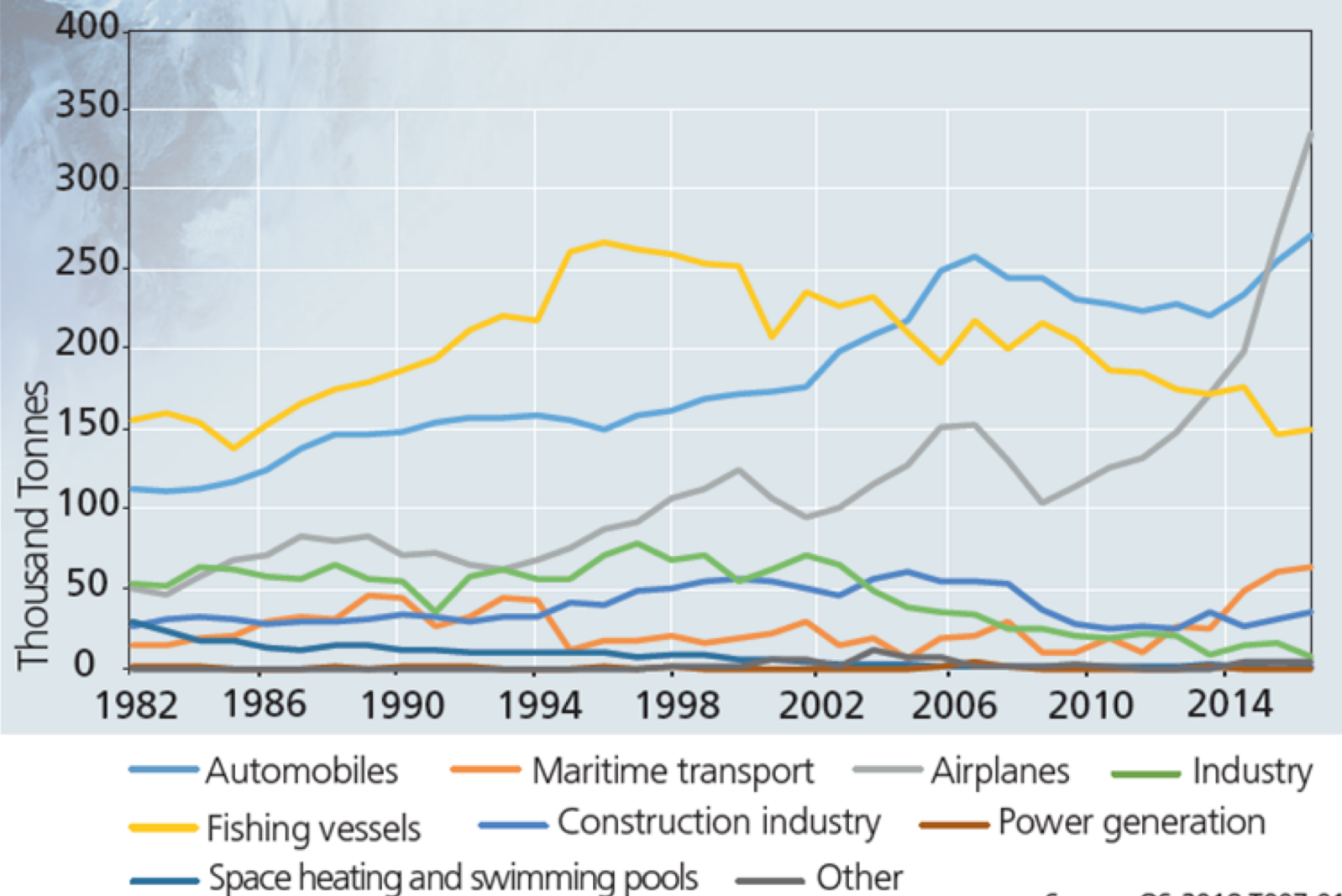
Domestic Oil Consumption

(10³ tons/year)

<i>Icelandic Oil Consumption</i>	2011	2012	2013
Aviation	140	147	164
Domestic Fishing Vessels	159	154	151
Automobiles and Equipment	277	276	280
Others	48	39	54
TOTAL	624	616	649



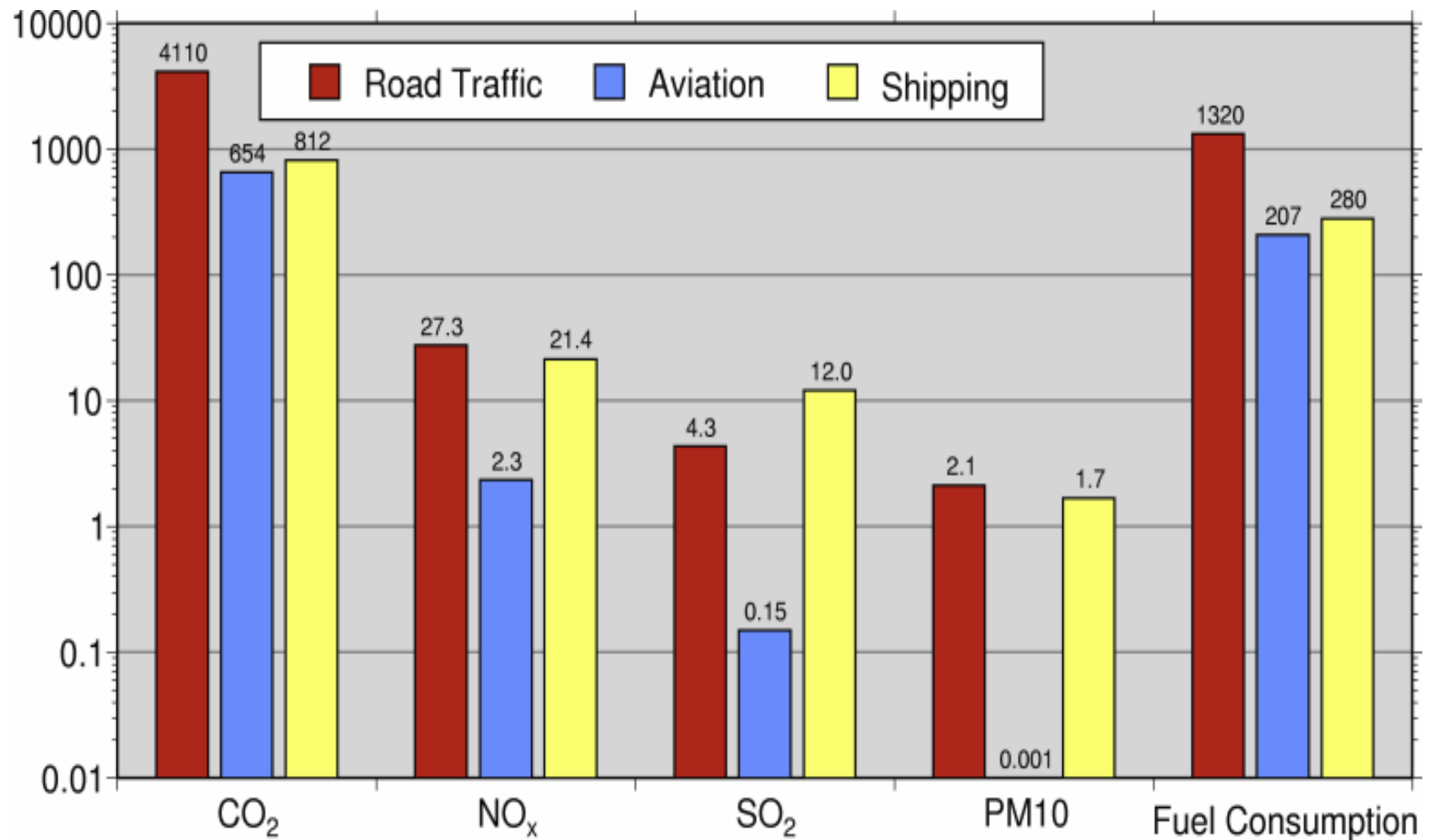
Oil consumption in Iceland 1982-2017



Source: OS-2018-T007-01

Global Annual Emissions

(10^6 tons/year)





23 5 2017

Thank you for your attention

