Our Low Carbon Future

Kynningarfundur um skýrslu Alþjóða orkumálaráðsins, föstudaginn 10. júní

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Director General

Ljósmynd GAJ 2015
Orkustofnun - The Icelandic National Energy Authority

A body directly under the Ministry of Industries and Innovation
Advising the government and the public on energy issues
Public administration of energy and mineral resources utilisation
Licencing research, exploration and operation of hydro-, and geothermal power
Regulator for the electrical grid
Licencing exploration and extraction of oil and gas
Licencing exploration and mining of mineral resources
Host organisation for the UNU geothermal training program in Iceland
Global Primary Energy Use 2006

Originally by Cullen & Allwood 2010
Energy Quality Management
Global EQM Potential

- Total Primary energy use: 475 TWh
- Heating: 233 TWh
- Saving potential by Energy Quality Management: 150 TWh?
- Total coal burning: 127 TWh

2006 values
Figure 1. Estimated Renewable Energy Share of Global Final Energy Consumption, 2012

- Fossil fuels: 78.4%
- All Renewables: 19%
- Modern Renewables: 10%
  - Biomass/geothermal/solar heat: 4.2%
- Traditional Biomass: 9%
- Nuclear power: 2.6%
- Hydropower: 3.8%
- Wind/solar/biomass/geothermal power: 1.2%
- Biofuels: 0.8%

Heat pump – highest theoretical COP

\[ \frac{T_r}{T_r - T_0} \]

Source temperature °C

- Nohitastig 35 C
- Nohitastig 55 C
Energy Quality Management
Community Level
Energy and Economic Growth
Iceland 1945-2005

http://www2.stjr.is/frr/thst/rit/sogulegt/english.htm
The Icelandic Renewable Energy System – Accumulated CO2 Savings 1914 - 2014

Accumulative CO2 Savings using Renewables instead of oil in Iceland 1914-2014

- Geothermal Power Plants
- Geothermal District Heating
- Hydropower

Orkustofnun Data Repository: OS-2015-T008-01

National Energy Authority
Endurnýjanleg orka og loftlagsmál

Endurnýjanleg orka á Íslandi sparaði 18 milljónir tonna koltvisýringi (CO$_2$) 2014, sem jafngildir skógi sem þekur 41 % af Íslandi.
Thank you