Women in the Icelandic Energy Sector

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Five steps of economic development

1 - Farming

2 – Resource economy

3 - Industrialization

4 – Developed Industrial society

5 – Consumer society

W.W. Rostow, 1960
Five steps of economic development

1 - Farming

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Ísland um 1900

W.W. Rostow, 1960
The Icelandic electric energy mix

**Installed Capacity 2012**
- Fuel: 114 MW, 4%
- Hydropower: 1.885 MW, 71%
- Geothermal: 659 MW, 25%

**Energy Consumption**
- Primary Aluminium: 74%
- Small industries: 4%
- District Heating: 4%
- Agriculture: 1%
- Fishing: 0%
- Ferro Alloys: 6%
- Services: 6%
- Homes: 5%

Source: Orkutölur OS
Icelandic Energy sector?

- Distribution and transport utilities
  - District heating
  - Water util.
  - Electric power
  - Wastewater
- Power production
  - Hydro
  - Geothermal
- Utilization
  - Metallurgical
  - Electrochemical
  - Synthetic fuel
  - Greenhouses
  - …..
- Support functions
  - Consultants
  - Research institutes
  - Education
Power production and education

Number of students in Engineering and Science and Power Production in Iceland!

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Heimild: Hagstofan.
Uppfærð mynd frá Ágústi Valfells 2006
Graduates pr. Year over time

Heimild: Hagstofan.
Engineering and technology

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Heimild: Hagstofan.
• Large difference btw. Programs.
• Applied engineering attracts very few girls ← few girls in crafts
RU Engineering students – undergraduate

- Graduated students

- Current students

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RU Engineering students – graduate programs

- Graduated students

- Current students
Iceland School of Energy - Reykjavik University

- MSc program in sustainable energy engineering
- Emphasizes the interdisciplinary nature of energy utilization
- Number of graduates by gender

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In addition, 56 MSc graduates:
- 8 Female
- 48 Male

2 PhD students, both female
How many?
- Informal survey 2013

Total in Production, transport, distribution, consulting and utilization, the largest companies:

More than 1000, mostly Engineering and Applied Eng.
~3000 Engineers og ~1500 Appl. Eng in the workforce [Source VFÍ-the engineering association]

Around 25% of engineering Professionals work in connection to the energy industry

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Power production and transport

Source:
Konur í orkumálum
Úttekt á stöðu kvenna í íslenska orkugeiranum
Maí 2017, © 2017 Ernst & Young ehf.
Directors – years in position...

Source:
Konur í orkumálum
Úttekt á stöðu kvenna í íslenska orkugeiran
Maí 2017, © 2017 Ernst & Young ehf.

女性 vs 男性

0-3 Years 3-5 Years 5-10 Years >10 Years

女性: 4, 5, 6 男性: 4, 2, 21
Example: Reykjavik Distribution Utility


<table>
<thead>
<tr>
<th>Number of staff</th>
<th>175</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance</td>
<td>100</td>
</tr>
<tr>
<td>Operations</td>
<td>23</td>
</tr>
<tr>
<td>Technical development</td>
<td>34</td>
</tr>
<tr>
<td>Monitoring</td>
<td>16</td>
</tr>
<tr>
<td>Support</td>
<td>2</td>
</tr>
</tbody>
</table>

Gender ratio

- Male: 149 (85%)
- Female: 26 (15%)
Roles – Reykjavik Distribution Utility

- Gender distribution very different btw. Roles in company
- Craftsmen almost exclusively male
- Men around 70% of specialists
- Office workers exclusively female
- 60% of management female

Age and genders...

Source:
Veitur, 2017
To conclude

• Icelandic energy industry an important sector, proportionally larger than in most places
• Around ¼ of all engineering related jobs in Iceland!
• Female portion is growing in management and specialist roles
• Predominantly males in the jobs that require a background in crafts
• Many companies work towards more equal representation
• Legislation helps with BOD ratios
Thank you for the attention!

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