Harmony – the future of electricity
Growing global demand for nuclear energy

Agneta Rising
Director General

EU Strategy for Long-term Emissions Reduction
High level event
10-11 July 2018, Brussels
Decarbonising electricity generation – need for low life cycle emissions: Nuclear energy is among the best

Source: World Nuclear Association meta study, incl. IPCC 2014
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Many scenarios used to envisage the future. The IEA 2 Degree Scenario is a common benchmark.
New build and new countries

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Harmony goal: ready to deliver more nuclear to ensure 2 degree scenario

- Level playing field
- Harmonised regulatory processes
- Effective safety paradigm

25% of electricity supply 2050

1000 gigawatt new nuclear capacity by 2050

Nuclear energy to deliver reliable, affordable and clean electricity
Nuclear energy is cost competitive
Levelised cost of electricity ranges (LCOE) at 7% discount rate

Nuclear industry brings jobs

The average US nuclear plant generates:

- **$470 million** in economic output per year
- **$35 million** labour income
- **$16 million** in taxes

Source: Nuclear Energy Institute

*Jobs per 1,000-megawatts of capacity*

<table>
<thead>
<tr>
<th>Energy Type</th>
<th>Jobs (per 1,000 MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>500</td>
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<tr>
<td>Coal</td>
<td>220</td>
</tr>
<tr>
<td>Wind</td>
<td>90</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>60</td>
</tr>
</tbody>
</table>

Sources: Ventyx and U.S. Department of Energy
An effective safety paradigm

Create an effective safety paradigm focusing on genuine public wellbeing, where the health, environmental and safety benefits of nuclear are valued when compared with other energy sources.

Energy accident fatalities for OECD countries

- Coal: 120 fatalities per TW_e year
- Oil: 99.5 fatalities per TW_e year
- Natural gas: 71.9 fatalities per TW_e year
- Offshore wind (UK): 8.5 fatalities per TW_e year
- Onshore wind (Germany): 1.78 fatalities per TW_e year
- PV: 0.245 fatalities per TW_e year
- Nuclear*: <0.01 fatalities per TW_e year

* Gen II PWR, Swiss

Source: Paul Scherrer Institut. Data for nuclear accidents modified to reflect UNSCEAR findings/recommendations 2012 and NRC SOARCA study 2015.
Potential of Electricity

Traditional use

Transport

Desalination

Industrial Processes

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