From 2020 to 2030 to 2050: Reversing business-as-usual

Josche Muth
Acting Secretary General of EREC
Global Footprint Network tracks human demand on nature – from filtering CO₂ to producing the raw materials for food – against nature’s capacity to regenerate those resources and absorb the waste.
Consumption Assumptions (2005-2050)

<table>
<thead>
<tr>
<th>Year</th>
<th>2050 Scenario</th>
<th>2050 AEff</th>
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<tbody>
<tr>
<td>2005</td>
<td>1,167</td>
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<td>2010</td>
<td>1,232</td>
<td>1,229</td>
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<tr>
<td>2015</td>
<td>1,203</td>
<td>1,177</td>
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<td>2020</td>
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<td>2040</td>
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<td>2050</td>
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Source: EREC
**Contribution of Renewable Energy Technologies to Final Energy Consumption (Mtoe)**

- **2020**: 24%
- **2030**: 45%
- **2050**: 96%

Source: EREC
Economic Benefit

- €3,800 billion (CO₂ costs avoided 2050)
- + €1,090 billion (fossil fuels avoided 2050)

- €4,090 billion
- - €2,800 billion (cumulative investments 2050)

= €2,090 billion (Economic Benefit 2050)
Social Benefit

Gross Employment in the Renewable Energy Sector (2020-2030-2050)

Source: EREC
Enabling Policy Measures

- Supporting the transition towards a 100% renewable energy economy with all EU policy areas
- Effective and full implementation of the RES Directive
- Less is more – an ambitious energy savings Directive
- Moving beyond 20% GHG reduction by 2020
- Binding 45% by 2030 renewable energy target
Current policy leads to -40% GHG

- RES significantly contribute to CO₂ reductions
- EU first mover advantage on RES
- Stable policy frameworks
Decarbonising the Energy Supply (2010)
880 Mt of energy related CO₂ emissions avoided
-22% of energy related CO₂ emissions

Investing in Renewable Energy
Financial transactions/investments were €55 billion (2008) and €62 billion (2009)
20.7% RES in 2020
34.3% RES-E in 2020
21% RES-H in 2020
10% RES-T in 2020

Decarbonising the Energy Supply (2020)
1,690 Mt of energy related CO₂ emissions avoided
-40% of energy related CO₂ emissions

Investing in Renewable Energy
Investment needs are estimated at €60 to €70 billion annually (2010-2020)
Development of different renewable energy technologies until 2030 (Mtoe)

Decarbonising the Energy Supply (2030)
3,750-4,328 Mt of energy related CO₂ emissions avoided
-93-100% of energy related CO₂ emissions

Investing in Renewable Energy
Additional cumulative investments are estimated at €660 billion in 2030
€66 billion additional average annual investments
Commissioners Statements on 2030

Hedegaard on 2nd May 2011 (Guardian):

“We should be discussing a renewable energy target for 2030. We need to have ambitious targets. It would be one way to send a long-term price signal for renewable energy – that renewable energy is not just going to stop growing after 2020.”

Barroso on 16th June 2011 (IPCC Special Report):

“But 2020 is already around the corner and we need to think of intermediate steps up to 2050. (…) We need to provide businesses with a long-term stable policy framework to support their investment decisions. Businesses are already taking their strategic decisions for the next decades. We have to avoid locking in carbon intensive investments.”

Oettinger on 16th June 2011 (IPCC Special Report):

“We must start to consider a 2030 renewables target. The EU renewable energy industry has already called for a 45% 2030 target.”
Commission: Work in Progress

- Ad-hoc Advisory Group
  - The role of the Ad Hoc Advisory Group is to discuss different scenarios and policy challenges and provide advice for the preparation of the Energy Roadmap.

- Impact Assessment (IA)
  - Objective of achieving 85% reduction of energy related CO₂ emissions by 2050 (following the overall 80% GHG reduction target)
  - Uses PRIMES modelling
# 2050 Impact Assessment

<table>
<thead>
<tr>
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<th>Options</th>
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<tbody>
<tr>
<td>1</td>
<td>Business-as-usual (Reference scenario)</td>
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<td>Current Policy Initiatives (CPI)</td>
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Towards a truly sustainable energy system in the EU

45% by 2030
Be part of a sustainable energy future – support 100% renewable energy!