Renewables in the Draft National Energy and Climate Plan for Hungary

State Secretary for Energy and Climate Policy
Ministry for Innovation and Technology
THE HUNGARIAN GOVERNMENT IS FULLY COMMITTED TO THE PARIS AGREEMENT

GHG mitigation scenarios for Hungary

- 2nd National Climate Change Strategy (2018): two GHG scenarios examined
- Critical role of RES utilization in meeting climate objectives
- Future RES scenarios defined in draft NECP
2020 TARGETS AND HISTORIC RES DEVELOPMENT: DOMINANCE OF BIOMASS

**Share of renewable energy in gross final energy consumption**

- **NREAP planned**
- **NREAP actual**

**Renewable energy use by sources 2016**

- **Geothermal**
- **Water**
- **Solar**
- **Solid biomass**
- **Biogas**
- **Heat pump**
- **Wind**
- **Biofuel**
- **Biomass part of waste**

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## Key Energy and Climate Objectives and Targets in Hungary’s Draft NECP

<table>
<thead>
<tr>
<th>National targets in comparison with EU objectives</th>
<th>2020</th>
<th>2030</th>
<th>National policies and measures to support Hungarian targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewables</strong> Share of renewable energy</td>
<td>20%</td>
<td>14.65%</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Energy efficiency</strong></td>
<td>20% indicative</td>
<td>1009 PJ primer energy</td>
<td>32.5% indicative</td>
</tr>
<tr>
<td><strong>GHG emissions</strong> Total vs 1990</td>
<td>-20%</td>
<td>-</td>
<td>-40%</td>
</tr>
<tr>
<td><strong>ESD/ESR vs 2005</strong></td>
<td>-10%</td>
<td>+10%</td>
<td>-30%</td>
</tr>
</tbody>
</table>

*Note: The table lists the national targets for 2020 and 2030 in comparison to EU objectives. National policies and measures to support Hungarian targets are also listed.*
WITHOUT NEW POLICY MEASURES HUNGARY’S RES SHARE IS LIKELY TO DECREASE

Objective: Renewable share in gross final energy consumption in 2030: 20%
### RENEWABLE ENERGY OBJECTIVES BY SECTOR, 2030

<table>
<thead>
<tr>
<th>Planned share of energy from renewable sources in gross final consumption of energy in 2030</th>
<th>2016 *</th>
<th>2030</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14,2</td>
<td>20</td>
<td>%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimated share of renewable sources in the heating and cooling sector (end point of estimated trajectory for RES-H/C)</th>
<th>20,8</th>
<th>26,9</th>
<th>%</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>Estimated share of renewable sources in the electricity sector (end point of estimated trajectory for RES-E)</th>
<th>7,2</th>
<th>19,1</th>
<th>%</th>
</tr>
</thead>
</table>

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<thead>
<tr>
<th>Estimated share of renewable sources in the transport sector (end point of estimated trajectory for RES-T)</th>
<th>7,4</th>
<th>15</th>
<th>%</th>
</tr>
</thead>
</table>

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<tr>
<th>(Other national GHG objectives and targets consistent with the Paris Agreement and the existing long-term strategies)</th>
<th>-34,5 vs 1990</th>
<th>-40% vs 1990</th>
<th>%</th>
</tr>
</thead>
</table>
2030 RES OBJECTIVE ON 2004 AND 2020 BASIS: RIGHT AHEAD AMONG CEE MEMBER STATES

Source: REKK
STRIVE FOR COST EFFICIENCY IN PLANNING FUTURE RES POLICIES

Source: REKK
NUCLEAR AND RES PROVIDES 60% OF POWER GENERATION AND KEY FOR A FUTURE DIVERSIFIED, LOW CARBON POWER MIX

- Diversified mix with high interconnectivity and net imports share
- 279g/kWh carbon intensity
- Demand growth overcompensates efficiency
- Lignite: future is uncertain
- Gas: important flexibility provider but moderate profitability, SOS concerns
- RES: weak hydro, moderate wind potential; priority for solar PV
VISION FOR THE ELECTRICITY SECTOR

DECARBONIZATION

DECENTRALIZED PRODUCTION

DIGITALIZATION
PV POTENTIAL UP TO 6 GW BY 2030 – NETWORK AND MARKET INTEGRATION CHALLENGES TO MEET

• Cost-efficiency: minimising the burden on industrial consumers
• Taking into account the reduction of installation costs
• Creating incentives for network companies: network integration
• Cost-efficient, flexible regulatory capacities: market integration
• Economic development aspects: small and large investors, domestic industry
HEATING AND COOLING

District heat generation - WEM

District heat generation - WAM

• **Focus**: biomass, geothermal, waste utilization
• Large scale (ESCO) program for public buildings and individual dwellings

Source: Századvég
Energy use by transportation

CO2 emission by transportation

• **Focus:** electro-mobility, biofuel mix increase, energy efficiency improvement, public transportation greening

Source: Századvég
ADDITIONAL TASKS

Public Consultation

Regional Consultation

Update GHG forecast in non-energy sectors and improve planning methodology

Environmental impact assessment

Detailed elaboration of planned measures
Thank you for your attention.