Renewables Grid Initiative

Renewables Grid Initiaive e.V. - Krausenstrasse 8 - 10117 Berlin

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Commissioner for Energy Kadri Simson,
Director-General Ditte Juul Jørgensen,
ENTSO-E, ENTSOG, ITRE Committee

The Renewables Grid Initiative (RGI) promotes fair, transparent, sustainable grid development to enable the growth of renewables to achieve full decarbonisation in line with the Paris Agreement.

The Ten-Year Network Development Plans (TYNDPs) for electricity and gas are the main pan-European studies to assess energy infrastructure projects with regards to their contribution to system security, decarbonisation and social welfare. They are also an important guiding tool for realising the greenhouse gas reduction ambitions of the European Green Deal. Additionally, the scenarios of the TYNDPs act as a reference and basis for many subsequent studies, including national grid planning studies. They serve as a signal to policy makers on the potential course of the energy transition from an economical and technical perspective, as well as forming the basis by which the Projects of Common Interest (PCI projects) are chosen and supported by the European Commission.

In this context, the TYNDP has a decisive function in explaining future infrastructure needs to a public which is already concerned by the impacts of grids. It must demonstrate the value of the planned investments in a Europe which is based on very high shares of energy from renewable energy sources (RES), which is more electrified, decentralised, digitalised as well as more integrated. The TYNDP ultimately needs to contribute to achieving the commitments of a carbon neutral Europe and should be an instrument of confidence for sustainable infrastructure investments that enable the energy transition and in our achieving the 1.5°C target of the Paris Agreement.

On the 25th of November 2019, the European Network of Transmission System Operators for electricity and gas (ENTSO-E and ENTSOG respectively) launched the consultation for the TYNDP 2020 scenarios which were jointly developed. RGI congratulates the ENTSOs for this important achievement. Producing scenarios jointly implies an extensive and complex exercise, both from a content and organisational perspective, as well as entailing an enormous time commitment. We see that great progress has been made and particularly appreciate the ENTSOs commitment to engage with third parties in the formulation of the scenarios. We believe that further collaboration, such as via the ongoing Paris Agreement

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Compatible Scenarios for Energy Infrastructure (PAC) project is essential to align the scenarios with existing climate goals.

We further congratulate the ENTSOs for the quality of the Scenario Report itself, as it is well structured and accessible to the reader. For the first time, **a carbon budget has been integrated into the analytical work.** This demonstrates the willingness of the ENTSOs to bring the scenarios in line with the Paris Agreement and with the objectives of the European Green Deal. It constitutes an important first step in the further development of the carbon budget methodology. The **importance of sector coupling and sector integration are being recognised**. The inclusion of a **dedicated decentralised scenario** is also important, as it responds to the European political ambitions of bringing value at the local level and involving communities and regions in delivering the energy system of the future.

However, in the future a stronger effort is needed to shed light on a range of urgent questions. Against the background of the TYNDP 2020 scenarios and in particular future TYNDP processes, RGI recommends[1] that the ENTSOs are given a clear mandate by the competent authorities and are supported by relevant institutions to carefully asses the following questions and opportunities:

1) **A higher share of the generation mix for solar PV and wind after 2030 -** We recommend the development of a scenario with higher assumptions in the share of renewable energy sources (RES), in particular wind and solar, after 2030. Appropriately sited wind and solar PV are, as of today, the most economical, mature and sustainable generation technologies. Additional PV generation capacity can be developed comparatively easily. Moreover, it may be considered that generation of variable renewables in locations with lower full-load hours can be attractive, provided these sites show atypical weather patterns. At these sites, electricity could be generated at times of higher prices so that lower yearly generation does not contradict the commercial viability of these plants.

2) **Further electrification as the route to efficient decarbonisation -** We recommend the development of a scenario with higher assumptions in the electrification rate. Such a scenario should consider more electrification options across the energy sectors including (but not limited to) transport, heating and industrial processes. For processes and applications in which electrification is not possible, a carbon neutral solution needs to be found (e.g. renewable gas). The insights thereby gained could deliver important lesson on the infrastructure needs of such a future scenario.

[1] Please note that some NGO Members of RGI will share further, more detailed comments on the TYNDP scenarios, both through the official consultation and through additional open letters.

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3) **Focus on flexibility options including demand side flexibility -** We recommend that all scenarios developed in the TYNDP include a dedicated focus on demand and supply ancillary services (flexibility options). It is narrow thinking to see price fluctuations in the energy-only market as the only driver for demand response. Instead, more market and regulatory options should be used to unlock flexibility from "new" resources (EV, HVAC, RES, storage, demand response etc.). The fact that many of these products do not exist today should not be a limiting factor in building future scenarios in which market driven flexibility provides the services the system needs. On the contrary, there is an urgent need to define and assess the value of flexibility provided to the system by such "new" resources.

4) **Gain a better understanding of the full costs of gas-based solutions -** The cost of the energy transition is a main concern for many. It is therefore desirable to increase transparency and clarity on the costs of the various gas-based solutions (natural gas and biofuels, blue and green gases, synthetic fuels and technologies like carbon capture storage (CCS), among others). Renewable gases and decarbonised gases may play a role in the decarbonisation and optimisation of the energy system (especially in specialised use cases). Nevertheless, open questions on gas reserves and resources, expected development and delivery costs, technical feasibilities as well as the potential environmental impacts need to be better clarified.

5) **Gain a better understating of biomass potential in light of multiple use cases and land-use constraints -** Biomass is being considered as an important fuel source. While biomass can play a role in a future decarbonised energy mix, the type of biomass and the quantities considered in the scenarios need to be carefully assessed against land use constraints and the impact on biodiversity and carbon emissions. Pressure on biomass stocks is also likely to increase with its use as a fuel for transport, construction, industrial production and as raw material for the chemical industry. There are major concerns on the environmental and land-use impacts of biomass and lessons need to be learned from the mistakes made with the biofuels policies, such as the over-estimated carbon savings, biodiversity loss and impacts on food prices and social wellbeing – all of which need to be factored in comprehensively and transparently. Such constraints, as well as the so far poorly understood impact of climate change on agricultural productivity due to water stress and soil degradation, will impact the future availability and price of biomass for energy production.

Finally, RGI recommends starting a process for the optimisation of energy sources. In view of the commitment to full decarbonisation, we know that some sectors will be more difficult to decarbonise than others. It is therefore essential to start understanding, planning and prioritising the use of renewable gases for applications which cannot be easily electrified and develop the necessary market frame for this.

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RGI is committed to contribute with expertise and resources to find answers to these important questions, via the PAC project and beyond. We look forward to discussing the above points and to collaborate with you further on this.

With kindest regards,

Antonella Battaglini
CEO, Renewables-Grid Initiative e.V.

About the Renewables Grid Initiative (RGI):
The Renewables Grid Initiative is a unique collaboration of NGOs and TSOs from across Europe engaging in an 'energy transition ecosystem-of-actors'. We promote fair, transparent, sustainable grid development to enable the growth of renewables to achieve full decarbonisation in line with the Paris Agreement.
RGI 23 Members originate from a variety of European countries, consisting of TSOs from Belgium (Elia), Croatia (HOPS), France (RTE), Germany (50Hertz, Amprion and TenneT), Ireland (EirGrid), Italy (Terna), the Netherlands (TenneT), Spain (Red Eléctrica de España) and Switzerland(Swissgrid); and the NGOs BirdLife Europe, Climate Action Network Europe (CAN), Friends of the Earth Ireland, Fundación Renovables, Germanwatch, Legambiente, NABU, Natuur&Milieu, the Royal Society for the Protection of Birds (RSPB), Transport & Environment (T&E), WWF and ZERO. RGI was launched in July 2009.

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