

Discussion and Conclusions of the High-Level Forum
7 September 2023, Brussels

Session 2: How can regulation best incentivize the efficient deployment of grid capacity? Key Themes as follows:

1. Enabling a solution-neutral system development: Specific Measures to Promote Innovative and Cost-Efficient Solutions.
2. Lowering barriers to speed up conventional solutions and Anticipatory Investments
3. Measuring and incentivising TSO/DSO performance to address future System Needs

Opening remarks

The power system has proven to be robust and resilient, yet the EU needs new anticipatory investments and respective incentives for projects of lower certainty, to develop incentives for investment projects of higher risk. It requires a better utilisation of the existing system and, to improve on cost sharing between the Member States.

Regulatory tools are available today which are fit for purpose also in the new environment. However, regulatory frameworks must be predictable and applied in a balanced way to avoid unfairly benefitting one type of investment.

The entire system is growing, grids need to grow, and the associated investment and operational costs are growing. Smartifying the system is a must, but additional grid is needed, especially in some geographies where RES feed-in into the grids is far greater than the expected demand. Regulatory approaches must be therefore adapted and tailor-made to the new challenges for capital and operational costs, as well as ensure returns that are in line with the financial environment. Policy targets and regulatory framework must be aligned under a strong European political project.

There is a need to codevelop the full range of innovative and conventional solutions, and to take an anticipatory development approach. Fast deployment innovative solutions already exist that can deliver immediate benefit and continue to support and maximize conventional solutions in the long term. Many innovative technologies have been piloted, are commercially available (TRL 9), but are failing to be deployed at scale, which requires a new regulatory approach.

Discussion

The risk of underinvestment cannot be underestimated. No matter how intelligent and digitalised a system may be, investments in new network elements at all voltage levels are still necessary.

Several participants commented that the regulatory framework needs to be reviewed in light of the need for accelerated grid and investments needed for carbon-neutrality.

Predictability in the remuneration is of highest importance, regulatory framework should help de-risk investments. The regulatory rate of return needs to be aligned with capital market evolutions in order to maintain or restore sufficient attractiveness to investors and ensure financing of grid investments;

Frameworks for anticipatory investments should allow for the higher uncertainty and be more comprehensive and better coordinated, not only for TSOs and DSOs but also for the entire industry;

The use of existing grids should be maximised including smart solutions, which should not only be limited to the electricity sector.

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Achieving 2030 and 2050 targets will require large amounts of capital investments in power lines, cables and substations, smaller investments into smart, digital and flexible solutions will also be needed to bridge the gap.

Particular attention should be given to investment into innovative solutions. Technologies moving from first deployment Technology Readiness Level (TRL) 9 to large scale deployment presents is a major issue and loss to network capacity and at lower readiness levels (TRL5 or lower) struggle to reach commercial readiness (TRL9).

Several measures could be applied to de-risking investments such as accelerating permitting processes, extending measures from the emergency regulation and ramping up innovation.

Conclusions

Incremental approach is no longer the way to address European grid investment needs; the scale and urgency of developments requires a new approach to ensure predictable and competitive returns.

A comprehensive, clear, and certain framework for investment is needed which would be open for, among others, anticipatory investments. A clear understanding of what is meant by anticipatory investments was called upon. The importance of the right regulatory environment was highlighted.

Whilst the implementation of existing legislation remains key, the focus also be on identifying new needs which are not addressed in the current framework.

The challenges ahead of the European Union when it comes to the energy grid build out, especially the competition for scarce resources along with the supply chain, are global.

Europe needs to make the most of the existing infrastructure. This includes, but not limited to, maximizing the use of the existing grid, applying smart and flexible solutions, unlocking demand side response, and enhancing the visibility on grid capacity overview for RES connection and integration.

A better optimisation of existing capacity is a must to future proof the European grid. Investments will be needed for building new capacity to accommodate significant RES capacity and load as well market and system integration whilst facilitating solidarity and exchanges between regions and countries.

Many of the dilemmas that European Grids are facing are of political nature, for example cross-border cost sharing, which should be clearly recognized by the Member States at a political level and addressed. Cross-border cost sharing is dealt with in the 2022 TEN-E Regulation.

The next Copenhagen Forum may look at whether there is a need for further considerations e.g., regarding interconnections to be built at scale.

In addition to the above, the participants recognised the need for improvement on the permitting procedures, holistic long-term planning (beyond 10 years ahead), sector integration and to facilitate the scaling up, industrialization and replication of smart, innovative, and digital solutions.