

Turkey's transmission grid can accommodate up to 60 GW wind and solar

SHURA Energy Transition Center's recently released study provides answers to how higher shares of renewables can be integrated to the transmission grid. According to the study findings, Turkey's electricity transmission grid can accommodate up to 60 GW wind and solar capacity by 2026, equivalent to 6 times more capacity compared to today's levels. The electricity output from this capacity can supply more than 30% of all generation in Turkey.

The study titled "Increasing the share of renewables in Turkey's power system" provides answers to how higher shares of renewables can be integrated to the transmission grid. The study opens a new chapter in Turkey's energy transition by providing an assessment of the potential to integrate wind and solar to the grid through several scenarios in light of the transmission system operator's Ten-Year Network Development Plan.

The most ambitious scenario that comes from the report shows that there are no barriers to integrating 60 GW wind and solar capacity to Turkey's grid by 2026. According to the study findings, Turkey's electricity grid can accommodate 6 times more wind and solar by introducing technologies that provide flexibility to the system and by better management and planning of the grid. Solar and wind would provide 31% of the total electricity output and combined with the output from other renewables, total share of renewable energy would reach 53%.

"The findings of this study are striking; with its rapidly growing economy and its markets becoming more competitive, Turkey has the potential to supply more than half of its electricity output from renewables, mainly solar and wind in eight years from now. The study showcases that this potential of six times growth in total installed solar and wind

capacity can be enabled by grid management and planning through the introduction of battery storage systems, demand side response and system-driven approach and with slight additions in transmission grid investments” said the Director of SHURA Energy Transition Center Dr Değer Saygın who has also highlighted that the findings of the report fill an important gap.

The Chair of SHURA’s Steering Committee Selahattin Hakman has added “Turkey has become one of the fastest growing wind and solar markets in Europe. Our country has the capacity to play a global role in energy transition through its solution-oriented industry, investors who are flexible and open to new business models and innovative entrepreneurs. This study from SHURA facilitates an understanding that puts energy efficiency and renewable energy at the center of energy transition and it shows renewable energy’s role in transitioning Turkey’s energy system. The study provides ground-breaking findings for the system operator, government offices, energy planners and investors and serves as a lighthouse for a large-scale transition in Turkey’s energy transition”.

About SHURA Energy Transition Center

SHURA Energy Transition Center founded by the European Climate Foundation (ECF), Agora Energiewende and Istanbul Policy Centre (IPC) at Sabancı University (SU) contributes to decarbonization of the energy sector via an innovative energy transition platform. It caters the need for a sustainable and broadly recognized platform for discussions on policy, technological, and economic aspects of the Turkish energy sector. SHURA supports the debate on a low-carbon Turkish energy system through energy efficiency and renewable energy by fact-based analysis and best available data. Taking into account all relevant perspectives by a multitude of stakeholders, it contributes to an enhanced understanding of the economic potential, technical feasibility, and the relevant policy tools for this transition.

About European Climate Foundation

The European Climate Foundation (ECF) was established as a major philanthropic initiative to help Europe foster the development of a low-carbon society and play an even stronger international leadership role to mitigate climate change. The ECF seeks to address the “how” of the low-carbon transition in a non-ideological manner. In collaboration with its partners, the ECF contributes to the debate by highlighting key path dependencies and the implications of different options in this transition.

About Agora Energiewende

Agora Energiewende develops evidence-based and politically viable strategies for ensuring the success of the clean energy transition in Germany, Europe and the rest of the world. As a think tank and policy laboratory, Agora aims to share knowledge with stakeholders in the worlds of politics, business and academia while enabling a productive exchange of ideas. As a non-profit foundation primarily financed through philanthropic donations, Agora is not beholden to narrow corporate or political interests, but rather to its commitment to confronting climate change.

About Istanbul Policy Center at the Sabancı University

Istanbul Policy Center (IPC) is a global policy research institution that specializes in key social and political issues ranging from democratization to climate change, transatlantic relations to conflict resolution and mediation. IPC organizes and conducts its research under three main clusters: The Istanbul Policy Center–Sabancı University–Stiftung Mercator Initiative, Democratization and Institutional Reform, and Conflict Resolution and Mediation. Since 2001, IPC has provided decision makers, opinion leaders, and other major stakeholders with objective analyses and innovative policy recommendations.