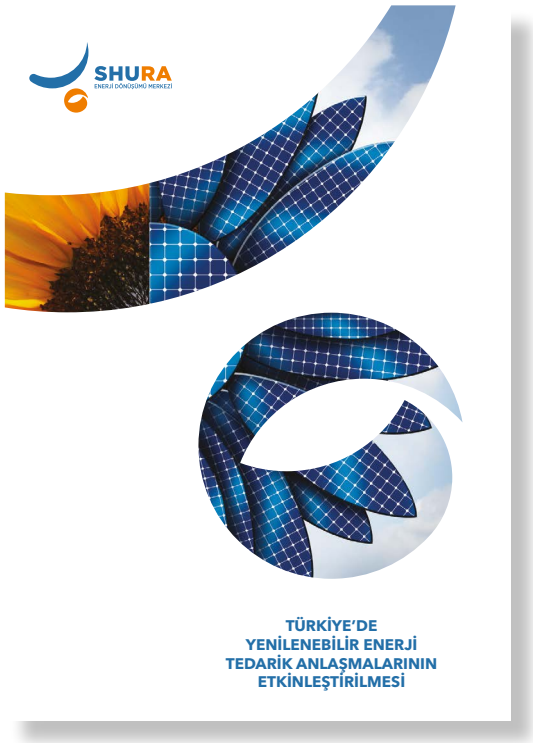
SHURA NEWSLETTER

July - September 2025 | Issue: 27

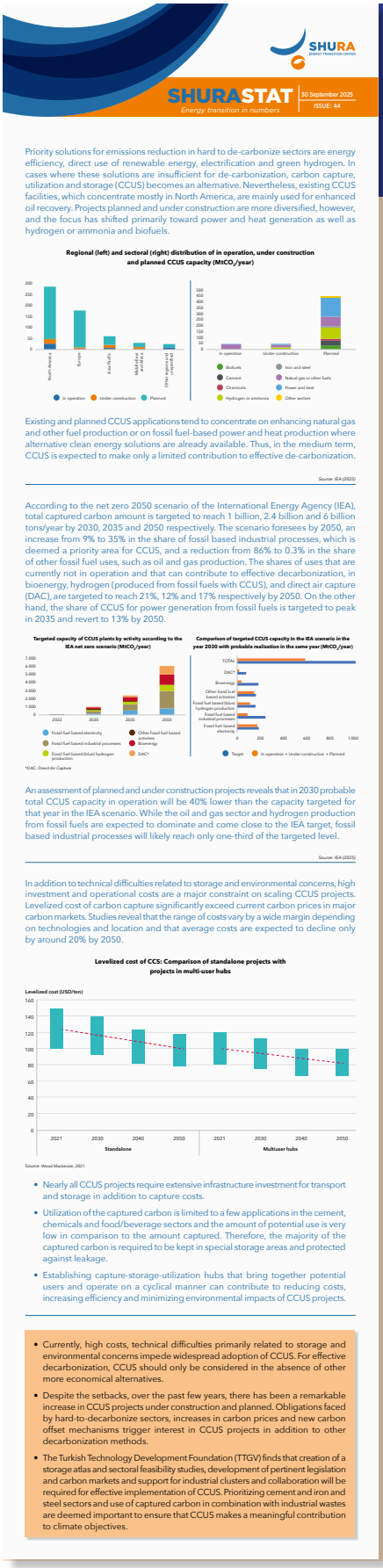


"Facilitating Renewable Power Purchase Agreements in Türkiye" Report Published
July 2025

The global climate crisis is accelerating the energy transition, which is based on shifting from fossil fuels to low-emission clean technologies. The maximum integration of renewable energy sources into the electricity system is one of the main drivers of this transition. Electricity generation from renewable energy sources, especially wind and solar power, provides a more cost-effective solution with lower environmental impacts compared to fossil fuels. Therefore, renewable energy is becoming increasingly important for all sectors, particularly industry, and enhances the economic competitiveness of countries.

Various global policy mechanisms are being implemented to accelerate the integration of renewable energy sources into electricity systems. In liberalized electricity markets, policies encouraging the private sector to adopt Renewable Power Purchase Agreements (PPAs) are proving effective. In Europe, particularly in Spain, the Nordic countries, and increasingly in Germany, there has been a notable rise in PPAs, driven by legislation and corporate carbon reduction targets.

SHURA's report, "Facilitating Renewable Power Purchase Agreements in Türkiye," published on July 8, analyzes market conditions and challenges in the effective use of PPAs as a new financing tool to accelerate renewable energy capacity growth in Türkiye's electricity sector. The report also provides policy recommendations to support the wider adoption of PPAs in Türkiye.



SHURASTAT
ISSUE NO. 44: CCUS / September 2025

The 44th issue of SHURASTAT addresses Carbon Capture, Utilization, and Storage (CCUS). Priority solutions for emissions reduction in hard to de-carbonize sectors are energy efficiency, direct use of renewable energy, electrification and green hydrogen. In cases where these solutions are insufficient for de-carbonization, CCUS becomes an alternative. Nevertheless, existing CCUS facilities, which concentrate mostly in North America, are mainly used for enhanced oil recovery. Projects planned and under construction are more diversified, however, and the focus has shifted primarily toward power and heat generation as well as hydrogen or ammonia and biofuels.

Key findings from the 44th issue include:

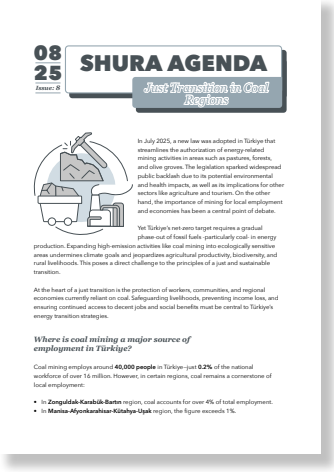
- According to the net zero 2050 scenario of the International Energy Agency (IEA), total captured carbon amount is targeted to reach 1 billion, 2.4 billion and 6 billion tons/year by 2030, 2035 and 2050 respectively.
- The scenario foresees that an increase from 9% to 35% in the share of fossil based industrial processes, which is deemed a priority area for CCUS, and a reduction from 86% to 0.3% in the share of other fossil fuel uses, such as oil and gas production, by 2050.
- An assessment of planned and under construction projects reveals that in 2030 probable total CCUS capacity in operation will be 40% lower than the capacity targeted for that year in the IEA scenario.
- Currently, high costs, technical difficulties primarily related to storage and environmental concerns impede widespread adoption of CCUS.
- The Turkish Technology Development Foundation (TTGV) finds that creation of a storage atlas and sectoral feasibility studies, development of pertinent legislation and carbon markets and support for industrial clusters and collaboration will be required for effective implementation of CCUS.

New Issues of “SHURA AGENDA” Published

Three new issues of SHURA AGENDA, covering the most up-to-date topics in energy transition, have been published.


07 25 Issue: 7
SHURA AGENDA
Iberian Peninsula Blackout
On Monday, April 28, 2025, a large-scale power outage affected the Iberian Peninsula, disrupting the electricity systems of Spain and Portugal. The incident began at 12:03 a.m., leading to a complete system failure that caused a 15 GW loss in generation capacity and disconnected the Iberian grid from the broader European network. This systemic collapse underscored the vulnerabilities of modern electricity systems, especially those with high shares of renewable energy and reignited concerns about energy security. A detailed report published by Spain's transmission system operator, Red Electrica (REE), in late June provided important technical insights into the event.
What lessons does this blackout offer for the energy transition and the future resilience of power grids?
What caused the power outage?
At the time of the blackout, approximately 70% of Spain's electricity was being generated by solar and wind energy plants. This initially led to speculation that the lack of system inertia—a common characteristic of renewable-based systems—was the main factor behind the collapse. However, the investigation by REE concluded that low inertia was not the root cause. Instead, the outage stemmed from a combination of voltage fluctuations, uncontrolled generation losses, and sudden shifts in reactive power within the transmission network. The report emphasized that even with higher system inertia, the collapse likely would not have been averted. These findings highlight the growing importance of voltage control and real-time grid observability in power systems with high shares of variable renewable energy.

Issue 7 (July): Focused on the large-scale blackout in the Iberian Peninsula in April. The systemic collapse, which caused a 15 GW generation loss, was examined in light of the report published in June by Spain’s transmission system operator, Red Electra (REE). Lessons for Türkiye regarding energy transition and grid security were highlighted.


08 25 Issue: 8
SHURA AGENDA
Just Transition in Coal Regions
In July 2025, a new law was adopted in Türkiye that streamlines the authorization of energy-related mining activities in areas such as pastures, forests, and olive groves. The legislation sparked widespread public backlash due to its potential environmental and health impacts, as well as its implications for other sectors like agriculture and tourism. On the other hand, the importance of mining for local employment and economies has been a central point of debate.
Yet Türkiye's net-zero target requires a gradual phase-out of fossil fuels -particularly coal- in energy production. Expanding high-emission activities like coal mining into ecologically sensitive areas undermines climate goals and jeopardizes agricultural productivity, biodiversity, and rural livelihoods. This poses a direct challenge to the principles of a just and sustainable transition.
At the heart of a just transition is the protection of workers, communities, and regional economies currently reliant on coal. Safeguarding livelihoods, preventing income loss, and ensuring continued access to decent jobs and social benefits must be central to Türkiye's energy transition strategies.
Where is coal mining a major source of employment in Türkiye?
Coal mining employs around 40,000 people in Türkiye–just 0.2% of the national workforce of over 16 million. However, in certain regions, coal remains a cornerstone of local employment:
- In Zonguldak-Karabük-Bartın region, coal accounts for over 4% of total employment.
- In Manisa-Afyonkarahisar-Kütahya-Uşak region, the figure exceeds 1%.

Issue 8 (August): Focused on just transition in coal regions. The law passed in July permitting mining activities in pastures, forests, and olive groves sparked public backlash over environmental and health impacts. However, the importance of mining for employment and local economies in certain regions also fueled debates. This issue shared evaluations and recommendations on ensuring that the social dimension of coal phase-out is not overlooked, including transforming employment opportunities, preventing income loss, and safeguarding social rights in line with Türkiye’s net zero targets.


09 25 Issue: 9
SHURA AGENDA
CBAM and Türkiye
In a few months exporters will start paying carbon fees on certain products they export to the EU under the Carbon Border Adjustment (CBAM) mechanism. Since 2023, exporters have only been responsible for reporting the carbon content of their products, but starting from 2026, they will also be financially liable. So, what does this new period mean for Türkiye?
What is the purpose of CBAM, and what does it cover?
CBAM is a "carbon leakage" prevention mechanism introduced under the European Union's Green Deal package. Its main purpose is to ensure that the carbon tax applied to products manufactured within the EU is also imposed under the same conditions on products imported from outside the Union. In doing so, CBAM prevents carbon-intensive production from shifting abroad to avoid taxation ("carbon leakage"), while also protecting EU-based industries from unfair competition and incentivizing global decarbonization.
In its initial phase, CBAM applies to imports of iron and steel, aluminium, cement, fertilizers, hydrogen, and electricity. Free emission permits currently granted to EU producers under the EU Emissions Trading System (ETS) will be phased out and fully removed by 2034, with imported products being taxed in the same way. As a result, while the financial burden of CBAM will remain relatively limited in its early years, it is expected to rise sharply from 2029 onwards.

Issue 9 (September): Focused on the financial obligations under the Carbon Border Adjustment Mechanism (CBAM), which will apply to exports to the European Union as of 2026. Strategies for priority sectors were proposed to mitigate CBAM’s impacts and maximize economic benefits.

New “Energy Transition Agenda” Podcast Episodes

The program series “Energy Transition Agenda,” presented by SHURA and covering every aspect of the energy transition, is available on SHURA’s YouTube channel as well as Spotify Podcasts and Apple Podcasts. Moderated by Didem Eryar Ünlü, Coordinator at *Ekonomi Gazetesi*, the program features expert guests discussing key topics of energy transition, from renewable energy to efficiency, from green hydrogen to batteries, from Türkiye’s net zero goals to just transition.

Episode 19
(25 July) With Dr. Barış Doğru, Editor-in-Chief of *İklim Haber* and *EkoIQ*, discussing the responsibility and challenges of journalists informing the public about climate crisis and energy transition, key principles in this area, the media’s contribution to Türkiye’s transition, and future developments.

Episode 20
(22 August) With SHURA Senior Energy Analyst Yael Taranto, covering industrial decarbonization, the industrial transformation needed in Türkiye, its links to Türkiye’s development priorities, and SHURA’s recommended strategies.

Episode 21

(26 September) Moderated by SHURA Research Coordinator Hasan Aksoy, featuring Assoc. Prof. Dr. Osman Bülent Tör of Hacettepe University Electrical and Electronics Engineering Department, discussing the April blackout in the Iberian Peninsula, technical findings from reports, system security debates, and lessons for Türkiye.

SHURA at Events & Programs

23 July

SHURA Director Alkım Bağ Güllü appeared on ST Endüstri Radyo as a guest of Çetin Ünsalan, discussing SHURA's assessment of the blackout in the Iberian Peninsula.

28 July

SHURA Director Alkım Bağ Güllü appeared on Radyo Sputnik's "Yeni Şeyler Rehberi" hosted by Serhat Ayan, sharing SHURA's evaluation of the Iberian blackout.

3 September

SHURA Director Alkım Bağ Güllü and Research Coordinator Hasan Aksoy presented SHURA's work on grid stability at the Grid Flexibility and Modernization session at the annual meeting of the International Network of Energy Transition Think Tanks (INETTT) held in Mexico.

4 September
SHURA Director Alkım Bağ Güllü gave a presentation on "CBAM's Impact on Developing Countries' Industries" in the "Climate Policy and Regional / National Impacts" session at INETTT's annual meeting.

UPCOMING SHURA PUBLICATIONS

- **Distribution Grid Transformation**
  A study focusing on the modernization and transformation of Türkiye's distribution network to support renewable energy integration and grid flexibility.

- **The Impact of Locational Marginal Pricing on Power System for Accelerating Renewable Energy Integration**
  A mid and long-term roadmap for Türkiye concerning the need for moving towards the locational electricity pricing concept.

- **Combating Energy Poverty Through Clean Energy and Efficiency**
  A study aiming to contribute to the fight against energy poverty in Türkiye by conducting a comparative analysis of recommendation packages focused on energy accessibility and carbon reduction, and by developing these packages with input from stakeholders.

- **Unlocking Renewable Energy Integration through Power Market Reform: Insights from an International Think Tank Collaboration**
  This joint project aims to evaluate and strengthen power market structures in Türkiye, South Korea, Thailand, and Pakistan in order to unlock the full potential of renewable energy integration by identifying and promoting tailored market design, while fostering regional learning and collaboration.

SHURA IN THE MEDIA

1.7.2025
Türkiye on the path to transformation with green financing and climate bonds

7.7.2025
SHURA reveals Türkiye's climate bond potential

8.7.2025
Renewable Power Purchase Agreements could play a critical role in Türkiye's energy transition

8.7.2025
Renewable Power Purchase Agreements Play a Key Role in Türkiye's Energy Transition

8.7.2025
Renewable Power Purchase Agreements Could Support Türkiye's Achievement of Climate Targets

8.7.2025
Renewable Power Purchase Agreements could play a critical role in Türkiye's energy transition

10.7.2025
Renewable PPAs could accelerate energy transition in Türkiye

14.7.2025
Renewable PPAs play a critical role in zero-emission goals

15.7.2025
Renewable PPAs' importance in energy transition

1.8.2025
Where is Türkiye heading in the energy transition?

11.8.2025
Roadmap for just transition in coal regions

11.8.2025
SHURA AGENDA: Just Transition for Coal Regions

18.8.2025
Renewable PPAs enhance competitiveness

30.9.2025
Climate dictionary: Green bonds

Please find all the information on current activities and publications of SHURA Energy Transition Center on shura.org.tr. By registering on the website, you can subscribe to SHURA's e-newsletter.

Additionally, you can follow SHURA on social media platforms.

For more information:
shura@shura.org.tr