AHK TÜRKİYE ENERGY WORKING GROUP POSITION PAPER

AHK
Deutsch-Türkische Industrie- und Handelskammer
Alman-Türk Ticaret ve Sanayi Odası

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AHK Türkiye

The German-Turkish Chamber of Industry and Commerce (AHK Türkiye) was established in Istanbul in 1994 through the agreements signed between the German Chamber of Industry and Commerce (DIHK) and the Union of Chambers and Commodity Exchanges of Türkiye (TOBB), as well as the Council of Ministers Decree No. 94/5592. AHK Türkiye is one of the 150 German Chambers of Commerce Abroad (AHKs) operating in 93 countries worldwide as representatives of the German economy.

With more than 1,200 members in both Germany and Türkiye, AHK Türkiye is the largest bilateral chamber in Türkiye and has made significant contributions to the promotion and continuous development of bilateral economic relations since its establishment. The members of AHK Türkiye hold an important position within the Turkish economy through their production facilities, distribution networks, and research and development activities in Türkiye.

AHK Türkiye Energy Working Group

The Energy Working Group of the German-Turkish Chamber of Industry and Commerce (AHK Türkiye), established in 2011, brings together representatives from the energy sector and related stakeholders engaged in German–Turkish cooperation. The Working Group focuses on key topics shaping the transformation of the energy sector, including renewable energy, raw materials, and energy efficiency and customer-focused solutions, while promoting exchange between the Turkish and German business communities. The Working Group is structured around the following three sub-groups:

1. Renewable Energy
2. Raw Materials
3. Customer Focus and Energy Efficiency

AHK Türkiye Energy Working Group Members

1. Akfen Yenilenebilir Enerji A.Ş
2. Amarkon-Group
3. APLUS Enerji Yatırım Danışmanlık Teknoloji ve Ticaret Ltd. Şti.
4. Arferas Mühendislik Elektrik Otomasyon Sanayi Ve Ticaret Limited Şirketi
5. BASF
6. Başkent Elektrik Dağıtım A.Ş.
7. Best Elektrik Taahhüt Ve Ticaret A.Ş.
8. BILGI Law.Consult
9. Bigah2
10. Bosch Sanayi ve Ticaret A.Ş.
11. C.F. Maier Polimer Teknik Ltd. Şti
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13. Cbc Law
14. Cms Türkiye
15. Congar Law Ltd.
16. Crowe Hortwath
17. CS Instruments
18. Cw Enerji Müh. Tic. Ve San. A.Ş.
19. DEG – Deutsche Investitions- und Entwicklungsgesellschaft
20. Dkv Euro Service Gmbh + Co. Kg
21. Durko Çevre Enerji Tekniği Ve Ticaret A.Ş.
22. DZ Bank
23. E.G.O. Elektrikli Aletler Sanayi A.Ş.
24. Eae Elektrik Aydınlatma Endüstrisi San. Ve Tic. A.Ş.
25. ECOVIS Değer Bağımsız Denetim ve Yeminli Mali Müşavirlik A.Ş.
26. EGE Avukatlık Bürosu
27. Egesim Elektrik San. Ve Tic. A.Ş.
28. EJOT Tezmak Bağlantı Ekipmanları A.Ş.
29. Eksim Enerji A.Ş.
30. Elektra Proje A.S.
31. Elkon Elektrik San. Ve Tic. A.Ş.
32. Elsi Elektrik Sist. San. Ve Tic. A.Ş.
33. EnBW Holding A.Ş.
34. Enercon Rüzgar Enerji Santrali Kurulum Hizmetleri Ltd. Şti.
35. Enerjisa Enerji A.Ş.
36. Enerjisa İstanbul Anadolu Yakası Elk. Perakende Satış A.Ş.
37. Enerjisa Müşteri Çözümleri A.Ş.
38. Enerjisa Üretim Santralleri A.Ş.
39. Enforcer Enerji Bilişim San. ve Tic.LTD.ŞTİ
40. ENKA İnşaat
41. ENKA İnşaat
42. Entegro Enerji Sistemleri
43. Envio Enerji Üretim A.Ş.
44. ER-Bakır Elektrolitik Bakır Mamülleri A.Ş.
45. Erciyas Holding A.Ş.
46. Erdem&Erdem Hukuk Bürosu
47. Erginer Elektrik San. ve Tic A. Ş
48. ERL Teknik Enerji A.Ş.
49. Ersis Enerji
50. Esin Attorney
51. Eskicioğlu Anwaltskanzlei
52. Eşarj Elektrikli Araçlar Şarj Sistemleri A.Ş.
53. Eurotray Metal Kablo, Taşıma ve Elektrik San. Tİc. A.Ş.
54. Falke law.tax | Dr. Dogan & Koyuncu
55. Fichtner GmbH & Co.KG
56. Galata Wind Enerji A.Ş.
57. Gama Enerji A.Ş.
58. Gebze Elektrik Üretim Ltd. Şti. Sakarya Şubesi
59. Germarel Elektrik Sistemleri San. Ve Tic. A.Ş.
60. Grawindy Yenilenebilir Enerji Teknolojileri Yatırım-İşletme A.Ş.
61. Green Solarex Solar Enerji Elektrik Üretim Sanayi ve Ticaret Ltd. Şti.
62. Güriş İnşaat ve Mühendislik A.Ş.
63. Hannover Fairs Türkiye Fuarcılık A.Ş.
64. Hansu Avukatlık Ortaklığı
65. Hellermann Tyton Elektrik Tic. Ltd. Şti.
66. Hensel Elektrik
67. HFS Madencilik Dış Tic. Ltd. Şti.
68. IBT Enerji Sist. Müh. İth. İhr. San. Ve Tic. Ltd. Şti.
69. Ideal Enerji Üretimi San. ve Tic. A.Ş.
70. İnojen Enerji Teknolojileri ve Yatırımları A.Ş.
71. İskenderun Enerji Üretim ve Ticaret A.Ş.
72. İsta Ölçüm ve Enerji Hizmetleri Ltd. Şti.
73. İş Enerji Yatırımları A.Ş.
74. İzmir Elektrik Üretim Ltd. Şti. Aliağa Şubesi
75. Karbontürk Enerji A. Ş
76. Kardeş Elektrik San. Ve Tic. A.Ş.
77. KEY Holding A.Ş.

78. KFW IPEX-Bank
79. KfW-DEG
80. Kıvanç Enerji Üretim A.Ş.
81. Klüber Lubrication Yağlama Ürünleri San. ve Tic. A.Ş.
82. Knauf İnsulation İzolasyon San. ve Tic. A.Ş.
83. Kochendörfer Hydro Elektromekanik San. Ve Tic. A.Ş.
84. Kolcuoğlu Demirkan Koçaklı Hukuk Bürosu
85. Konvekta Klima Ve Soğutma CİH. SAN. VE TİC. A.Ş.
86. Köksal Avukatlık Ortaklığı
87. Krohne Otomasyon San. Ve Tic. Ltd. Şti.
88. KTR Turkey Güç Aktarma Sistemleri San. ve Tic. Ltd. Şti.
89. Kütahya Entegre Kağıt San. Ve Tic. A.Ş.
90. Landesbank Baden-Württemberg Türkiye İstanbul Temsilciliği
91. LAPP Kablo San. Ve Tic. Ltd. Şti.
92. Lenze Mühendislik Sanayi ve Ticaret A.Ş.
93. Limak Holding
94. Limak İnşaat Sanayi ve Ticaret A.Ş
95. Linde Gaz
96. Logitrans Logistics & Transport
97. Majoris Güneş Enerjisi Teknolojileri
98. Man Energy Solutions Servis Ve Tic. Ltd.Şti.
99. Mercedes-Benz Türk A.Ş.
100. Modern Montaj Enerji A.Ş.
101. MPT Enerji Mühendislik San. Ve Tic. Ltd. Şti.
102. Nordex Enerji A.Ş.
103. NRW.Global Business GmbH- Trade & Investment Agency
104. Opet Fuchs Madeni Yağ Sanayi ve Ticaret A.Ş.
105. Ozenergy Mühendislik Müşavirlik Bilişim A.Ş.
106. Özgün Makina San. Ve Tic. A.Ş.
107. Pamukkale Kablo San. Ve Tic. A.Ş.
108. Pelister Keki Saraç & Co. Law Office / Hukuk Bürosu - Celal Emre Keki
109. Phoenix Contact Elektronik Ticaret Ltd. Şti.
110. Pier MTTP GmbH (Ataves)
111. Plarad Tork Anaht. Ve Gerd. Sist. Dış Tic. Ltd. Şti.
112. Pomega Enerji Depolama Teknolojileri A.Ş.
113. Proofx Bağlantı Elemanları Tek. San. Tic. Ltd. Şti.
114. Prüftechnik Proaktif Bak. Tekn. Ve Hizm. San. Ve Tic. Ltd. Şti.
115. Pure Energy Elektrik Tedarik A.Ş.
116. Putzöeister Makina San. Ve Tic. A.Ş.
117. PwC Yönetim Danışmanlığı A.Ş.
118. Quad Plus Otomasyon Hizmetleri Ltd.Şti.
119. RENAİR İklimlendirme Sistemleri San. Tic. A.Ş.
120. Rolls Royce Solutions Enerji Deniz ve Savunma A.Ş.
121. Rödl & Partner
122. Rönesans Enerji Üretim ve Ticaret A.Ş.
123. RWE & Turcas Güney Elektrik Üretim A.Ş.
124. SaertexTurkey TEK. LTD.ŞTİ.
125. Sanko Holding A.Ş.
126. SAP Türkiye Yazılım Üretim ve Tic. A.Ş.
127. Searover Robotik ve Yazılım A.Ş.
128. Siemens Energy
129. Siskon Yazılım ve Otomasyon
130. Stark Teknik Metal A.Ş.
131. Staubli San. Mak. Ve Aksesuarları Tic. Ltd. Şti.
132. Still Arser İş Mak. Serv. Ve Tic. A.Ş.
133. Synflex Elektro İzolasyon Tekn. A.Ş.
134. Taner Demir Demir - Ortakları Hukuk Büro
135. Taxia Yeminli Mali Müşavirlik Ltd. Şti.
136. Tecstar Makine Güneş Enerji Sistemleri San. Tic. A.Ş.
137. Teknokon Endüstri Tesisler İnş ve Montaj A.Ş.
138. Teknokon Makina İmalat ve Montaj A.Ş.
139. Tekom-Puk Elektromekanik San. Ve Tic. A.Ş.
140. Teska Ölçüm Cihazları ve End. Sistemleri San. Tic. Ltd. Şti.
141. Testo Elk. Ve Test Ölçüm Cihazları Dış Tic. Ltd. Şti.
142. Thyssenkrupp Polysius Teknolojik Ürünler İnşaat San. ve Tic. Ltd. Şti.
143. TOGG (Türkiye'nin Otomobili Girişim Grubu Sanayi ve Ticaret A.Ş.)
144. Tomarok Mühendislik ve Danışmanlık A.Ş.
145. Turqit yazılım
146. TÜV SÜD Teknik Güvenlik ve Kalite Denetim Ticaret Ltd. Şti.
147. United Solar Enerji San. Tic. Ltd. Şti.
148. Vaillant Isı Sanayi ve Ticaret Ltd. Şti.
149. Vega Seviye ve Basınç Ölçüm Cihazları Tic. Ltd. Şti.
150. Viessmann Isi Tekn. Tic. A.Ş.
151. Vito Enerji Mühendislik. İnş. ve Taah. A.Ş.
152. Voith Turbo Güç Aktarma Tekniği Ltd. Şti.
153. Waldner
154. Wilo Pompa Sistemleri A.Ş.
155. Zeros Gaz ve Enerji A.Ş.
156. Zorlu Enerji

A. Strategic Framework

The AHK Türkiye Energy Working Group brings together many stakeholders from across the German – Turkish energy ecosystem to address the evolving challenges and opportunities of the energy transition. At a time when global energy systems are being fundamentally reshaped by decarbonization, geopolitical uncertainty, and technological transformation, a structured, cross-border dialogue and cooperation is becoming increasingly important.

Türkiye is uniquely positioned at the intersection of Europe, Asia, and the Middle East, with growing relevance in terms of energy security, supply diversification, and regional connectivity. In parallel, the European Union and Germany are accelerating their energy transition agendas, introducing regulatory frameworks that are reshaping industrial competitiveness, investment conditions, and market access. This creates both interdependencies and opportunities for closer alignment and cooperation, particularly in areas such as infrastructure development, supply chain resilience, and access to affordable and sustainable energy. At the same time, rising geopolitical tensions and regional conflicts are further accelerating the electrification of energy systems and intensifying transformation pressures across industries and critical infrastructure in both Türkiye and Germany.

Against this backdrop, the Energy Working Group, via its diverse member base, focuses on generating tangible value through connecting practical, business-driven decision makers with a genuine interest in the materials and energy sector and by this contributing to an informed and relevant dialogue with policymakers and regulators. Especially industry perspectives and experience-based insights can substantially advance the development of balanced and forward-looking regulatory frameworks that take into account both market realities and realistic long-term transition objectives. The insights from these dialogues, in return, enable businesses to take the right long-term decisions needed to drive the energy transformation.

The European Green Deal and related mechanisms, including carbon pricing and the Carbon Border Adjustment Mechanism (CBAM), further reinforce the importance of closer cross-border alignment and cooperation. For Türkiye, adapting to this evolving framework is not only a regulatory requirement but also a strategic opportunity to strengthen competitiveness, attract sustainable investments, and accelerate its energy transition.

This position paper aims to provide concrete and actionable recommendations that reflect both regional priorities and global climate ambitions, particularly in the lead-up to COP31. In doing so, it takes a holistic and systematic perspective across the energy value chain in order to reinforce a resilient, competitive, and sustainable energy system. Furthermore, in a broader sense, the recommendations outlined in this paper are intended to serve as a practical reference point for public authorities, policymakers, regulators, industry stakeholders, NGOs, and the broader energy ecosystem, all of whom play a critical role in shaping the future of Türkiye's energy system. Beyond the publication itself, the Energy Working Group aims to further position these perspectives through continued participation in sectoral, regulatory, and international events throughout the year.

B. Executive Summary

The energy transition is no longer a single-technology or single-policy discussion; it is a system-wide transformation that requires coordinated progress across the entire energy value chain. In this context, the AHK Türkiye Energy Working Group, through the collective expertise of its members, has sought to develop a holistic set of practical and business-oriented recommendations that address the most critical regulatory, financial, and structural priorities shaping Türkiye's future energy system.

Rather than focusing on isolated market segments, this paper deliberately takes a broad and interconnected perspective. The paper covers systematically all components of the energy value chain – from raw materials and generation to renewables, trading, transmission, distribution, retail, as well as customer-focused solutions and energy efficiency – with each addressed in a dedicated section. This integrated approach reflects the view that bottlenecks in one part of the system inevitably affect the performance, investment attractiveness, and long-term resilience of the whole.

Across all sections, a number of common strategic messages emerge. First, financial and regulatory predictability remains a precondition for sustaining investment at the scale required by electrification, decarbonization, and digitalization. Second, more transparent, market-based, and data-driven frameworks are needed to improve price formation, strengthen investor confidence, and enable more efficient allocation of capital. Third, closer alignment with evolving European regulatory and industrial frameworks will be increasingly important not only from a compliance perspective, but also to safeguard Türkiye's competitiveness, market access, and role in regional value chains. Finally, enabling customer participation, technological innovation, and infrastructure flexibility will be essential to ensure that the transition is not only sustainable, but also economically viable and system-efficient.

The following sections are therefore structured to provide both a clear diagnosis and a practical implementation path. Each section begins with a brief overview of the respective context and key challenges, followed by concrete policy recommendations and implementation priorities. In order to move beyond high-level ambition and support actionable policymaking, implementation time horizons are indicated directly alongside the recommendations wherever relevant.

Taken together, the recommendations outlined in this paper are intended to drive the energy transition in a financially sustainable, investment-friendly, technologically adaptive, and internationally competitive way. The objective is not only to respond to current sectoral challenges, but to enable a more resilient and future-ready energy ecosystem for Türkiye in the years ahead.

C. Strategic Priorities

C.1. Raw Materials

C.1.a. Context and Key Challenges

Raw materials are a critical enabler of the energy transition, directly impacting the cost, scalability, and security especially of renewable energy, storage, and grid infrastructure. Technologies such as wind turbines, solar panels, batteries, and electricity networks rely heavily on a range of critical materials, including rare earth elements, lithium, cobalt, nickel, copper, and aluminum.

The global supply of many of these materials is highly concentrated, creating increasing exposure to geopolitical risks, trade disruptions, and price volatility. As demand accelerates in line with electrification and decarbonization targets, ensuring secure, affordable, and sustainable access to raw materials is becoming a key challenge for both energy system planning and industrial competitiveness.

In parallel, regulatory frameworks such as REACH[1] in the European Union and KKDIK[2] in Türkiye play an important role in ensuring environmental and health standards, but may also introduce additional cost and complexity if not sufficiently aligned. Differences in implementation timelines, data requirements, and compliance expectations can create uncertainty for raw materials-intensive industries and affect investment decisions across the energy value chain.

At the same time, evolving European policy frameworks – including CBAM and initiatives under the European Green Deal – are reshaping trade conditions and industrial positioning. For Türkiye, this creates both a need for alignment and a strategic opportunity to strengthen its role in regional value chains, particularly in the context of renewable energy technologies and related manufacturing. In parallel, progress on broader trade-related frameworks, most notably the modernization of the EU–Türkiye Customs Union, will be increasingly important to mitigate competitiveness risks and to ensure that regulatory convergence can translate into tangible industrial and commercial benefits.

Overall, the key challenge lies in ensuring that raw material supply, regulatory frameworks, and industrial policies are aligned in a way that accelerates both the energy transition and long-term industrial competitiveness.

C.1.b. Policy Recommendations and Implementation Priorities

1. Strengthening Supply Security and Resilience

- Strengthen access to critical raw materials, including rare earth elements and battery-related materials, through diversified sourcing strategies and international partnerships
  Medium- to long-term[3]
- Promote supply chain resilience by reducing dependency on highly concentrated import sources
  Medium-term / structural
- Drive the development of monitoring frameworks to track supply risks, price developments, and demand outlooks for critical materials
  Short-term

1. Registration, Evaluation, Authorization and Restriction of Chemicals
2. Kimyasalların Kaydı, Değerlendirmesi, İzni ve Kısıtlanması (Registration, Evaluation, Permit and Restriction of Chemicals)
3. Time horizons are indicative and reflect expected sequencing under current market and regulatory conditions: short-term (0–2 years), medium-term (3–5 years), and structural/ongoing measures refer to longer-term or continuous actions. Timelines are subject to adjustment depending on policy developments and market dynamics.

2. Managing Cost Impact and Investment Risks

- Enhance transparency on raw material cost developments and their impact on renewable energy, storage, and grid investments
  Short-term
- Integrate raw material considerations into energy system planning and investment decision-making to improve cost predictability of the energy transformation
  Medium-term
- Implement mechanisms that mitigate the impact of raw material price volatility on large-scale energy infrastructure projects
  Medium-term / structural

3. Ensuring Regulatory Alignment and Predictability

- Ensure that REACH–KKDIK implementation is predictable, coordinated, and impact-assessed to reduce uncertainty for raw materials-intensive industries
  Short- to medium-term / ongoing
- Provide early visibility on potential future regulatory requirements, including possible transitions toward more comprehensive compliance obligations
  Medium-term
- Maintain structured and continuous dialogue between regulators and industry stakeholders to enhance pragmatic and efficient implementation
  Ongoing

4. Strengthening Industrial Competitiveness and EU Alignment

- Align raw materials and industrial policies with evolving EU frameworks, including CBAM and related sustainability regulations, to ensure continued market access
  Medium-term
- Drive the development of local manufacturing capabilities and value chains linked to storage and renewable energy technologies
  Medium- to long-term
- Complement regulatory alignment with progress on trade frameworks, including the modernization of the EU–Türkiye Customs Union, to mitigate competitiveness risks
  Medium-term

C.2. Generation

C.2.a. Context and Key Challenges

Türkiye's power generation sector has experienced significant growth over the past decade, particularly driven by renewable energy investments. While this expansion has ensured capacity adequacy and diversification, the current market framework includes structural elements that limit the ability of price signals to fully reflect supply-demand dynamics and marginal cost conditions.

Price cap mechanisms constrain scarcity pricing during periods of tight system conditions, while the share of generation operating under support schemes such as Renewable Energy Resources Support Mechanism (YEKDEM), notwithstanding its important role in supporting renewable energy investments, reduces the depth and representativeness of market-based price formation. In addition, capacity mechanism payments may weaken incentives for marginal cost-based bidding behavior in the spot market, thereby affecting the overall efficiency of price formation.

Another key challenge relates to limited visibility on long-term system planning. The absence of a structured and periodic communication of public sector targets – such as installed capacity projections, generation mix evolution, and technology priorities – reduces the ability of investors to make informed long-term decisions and align investment strategies with system needs.

Furthermore, transmission constraints and the lack of locational price signals limit the efficient allocation of new capacity. As a result, market signals do not fully reflect system requirements in terms of scarcity, cost, and location, reducing investment efficiency, predictability, and overall system optimization.

C.2.b. Policy Recommendations and Implementation Priorities

1. Strengthening Market-Based Price Formation

- Gradually review price cap mechanisms, while safeguarding system security, to allow prices to better reflect scarcity conditions
  Medium-term[4]
- Align price cap levels with economically grounded methodologies, such as the Value of Lost Load (VoLL), to enhance efficient price formation
  Medium-term / structural
- Strengthen market-based pricing signals to improve investment efficiency and demand-side response incentives
  Medium-term / structural

2. Enhancing Investment Framework and Market Design

- Ensure that the overall pricing framework balances producer and consumer welfare over the medium to long term to improve system sustainability
  Structural / ongoing
- Maintain the role of thermal generation through alternative, market-compatible revenue mechanisms to ensure system reliability and security of supply
  Medium-term
- Develop complementary and more market-integrated investment models alongside Renewable Energy Resource Area (YEKA) mechanisms – including alternative allocation structures, merchant models, and capacity leasing approaches – in order to increase market depth, diversify investor participation, and improve risk management flexibility
  Medium-term

4. Time horizons are indicative and reflect expected sequencing under current market and regulatory conditions: short-term (0–2 years), medium-term (3–5 years), and structural/ ongoing measures refer to longer-term or continuous actions. Timelines are subject to adjustment depending on policy developments and market dynamics.

3. Improving System Planning and Transparency

- Establish a structured and periodic public communication framework outlining long-term system targets, generation mix evolution, and technology priorities
  Short-term
- Institutionalize more frequent and granular disclosure of system planning and capacity outlooks, complemented by implementation-oriented roadmaps for areas such as electrification and smart grids, to improve investment predictability and long-term planning visibility
  Medium-term / structural
- Strengthen alignment between public planning and private sector investment decisions through transparent data sharing
  Structural / ongoing

4. Strengthening Infrastructure and System Integration

- Accelerate transmission investments and optimize capacity allocation processes to enable renewable integration
  Medium-term
- Identify and prioritize critical transmission bottlenecks to enable efficient capacity expansion
  Short-term
- Incorporate locational considerations into investment and planning frameworks to improve system efficiency
  Medium-term / structural

C.3. Renewables

C.3.a. Context and Key Challenges

Türkiye is entering a decisive phase of its energy transition, driven by rapidly increasing electricity demand, a growing share of variable renewable energy (VRE), and the need to align with evolving European frameworks such as the Green Deal, CBAM, and the Industry Acceleration Act (IAA). While renewable deployment – particularly in wind and solar – has accelerated significantly, the next phase of the transition requires a stronger focus on system integration, investment diversification, and industrial alignment.

Current support mechanisms, including YEKA and other regulatory frameworks for licensed and unlicensed generation, have been effective in scaling renewable capacity. However, the existing model remains relatively concentrated and does not fully support a diverse and fully competitive investment landscape. In particular, the limited integration of renewables into market-based pricing mechanisms, combined with evolving storage requirements (e.g., BESS[5]), creates uncertainty around long-term investment signals and project bankability. A gradual transition toward more market-integrated renewable deployment models will therefore be essential to ensure consistency with broader market design objectives.

At the same time, increasing renewable penetration introduces new system-level challenges, including intermittency, balancing requirements, and grid integration constraints. These challenges require closer alignment between generation expansion, storage deployment, and infrastructure planning, as well as more flexible and adaptive regulatory approaches.

In addition, the evolving European regulatory environment is introducing new industrial and trade dimensions. Initiatives such as CBAM and "Made in EU / Union Origin" requirements are expected to reshape supply chains, investment decisions, and industrial policy. For Türkiye, this creates both a risk of misalignment and a strategic opportunity to strengthen its role as a regional manufacturing and investment hub through closer cooperation with Germany and the EU.

C.3.b. Policy Recommendations and Implementation Priorities

1. Strengthening Regulatory Framework and Market Integration

- Further develop and streamline renewable energy regulatory frameworks across licensed, unlicensed, and hybrid (including BESS-integrated) models to improve clarity and investment predictability

  Short- to medium-term[6]

- Strengthen the integration of renewable generation into market-based pricing mechanisms to improve efficient price formation and long-term investment signals

  Medium-term / structural

- Introduce more flexible regulatory approaches for emerging areas such as repowering and storage integration

  Medium-term

2. Enhancing Investment Models and Market Depth

- Gradually complement existing mechanisms such as Renewable Energy Resource Area (YEKA) with more market-integrated investment models to increase investor diversity and market depth

  Medium-term

- Improve visibility on capacity allocation mechanisms, project development processes, and long-term infrastructure planning to support investment decisions

  Short-term

- Promote transparent and predictable frameworks for renewable project pipelines and capacity expansion

  Medium-term / structural

5. Battery Energy Storage System
6. Time horizons are indicative and reflect expected sequencing under current market and regulatory conditions: short-term (0–2 years), medium-term (3–5 years), and structural/ ongoing measures refer to longer-term or continuous actions. Timelines are subject to adjustment depending on policy developments and market dynamics.

3. Strengthening Financing Ecosystem

- Increase awareness and utilization of existing financing instruments, including export credit agencies and green finance facilities
  Short-term
- Advance the development of more competitive and diversified financing solutions through enhanced cooperation between Turkish and international financial institutions (IFIs) or direct funding of companies or projects via IFIs
  Medium-term
- Encourage the development of renewable-specific local financing instruments to improve accessibility and reduce funding constraints
  Medium-term / structural

4. Advancing Industrial Development and EU Alignment

- Align renewable energy policies with evolving EU frameworks, including CBAM and Industry Acceleration Act requirements, to ensure continued market access and competitiveness
  Medium-term / ongoing
- Accelerate the development of local manufacturing capacity and supply chains, including component production and new technology deployment
  Medium- to long-term
- Strengthen coordination between relevant public authorities (e.g., energy, industry, and trade) to ensure a coherent and integrated approach to renewable energy development
  Short-term / structural
- Leverage German–Turkish cooperation to facilitate knowledge transfer, industrial partnerships, and joint investment opportunities
  Ongoing

C.4. Trading

C.4.a. Context and Key Challenges

The Turkish electricity trading market is characterized by limited free-market trading volumes, constraining liquidity and weakening price signals. The current Last Resort Tariff (LRT) structure, largely linked to spot market prices (e.g., MCP[7]-based formulas), reduces incentives for long-term contracting and limits the availability of forward price signals.

This structure increases exposure to short-term price volatility for both suppliers and consumers, while slowing the development of deeper forward and bilateral markets. In parallel, regulatory mechanisms affecting price formation further limit the emergence of long-term price signals and reduce the effectiveness of risk management practices among market participants.

Low liquidity also restricts market depth and trading activity, hindering the development of both organized exchanges and over-the-counter (OTC) markets. As a result, the market remains relatively shallow, with limited product diversity and constrained opportunities for hedging and portfolio optimization.

At the same time, increasing integration with European electricity markets presents a structural opportunity to deepen market liquidity and enhance price formation through higher cross-border trading volumes, broader market participation, and stronger integration of regional supply-demand dynamics. In this context, regulatory developments such as CBAM further reinforce the need for a more transparent, market-based, and integrated trading framework.

C.4.b. Policy Recommendations and Implementation Priorities

1. Strengthening Market Liquidity and Price Formation

- Increase the share of electricity traded under forward markets to strengthen liquidity and improve price discovery
  Medium-term[8]
- Gradually recalibrate regulatory mechanisms affecting price formation to enable more efficient market-based pricing
  Medium-term / structural
- Strengthen price signal formation to enable more effective risk management and investment decisions
  Structural / ongoing

2. Enhancing Market Depth and Product Development

- Further strengthen transparency and data accessibility across both organized and OTC markets, building on the recently introduced Regulation on Market Integrity and Transparency in the Electricity Market[9] (effective as of 1 January 2027), aimed at enhancing market integrity and preventing market distortions
  Short-term / ongoing
- Expand product diversity, including forward and hedging instruments, to deepen market liquidity
  Medium-term
- Drive the development of long-term contract structures to enhance forward price visibility
  Medium- to long-term

7. MCP: Market Clearing Price / PTF: Piyasa Takas Fiyatı
8. Time horizons are indicative and reflect expected sequencing under current market and regulatory conditions: short-term (0–2 years), medium-term (3–5 years), and structural/ ongoing measures refer to longer-term or continuous actions. Timelines are subject to adjustment depending on policy developments and market dynamics.
9. https://www.resmigazete.gov.tr/eskiler/2026/05/20260523-1.htm

3. Improving Market Design and Retail Linkages

- Adjust the Last Resort Tariff (LRT – SKTT) structure to reduce exclusive reliance on spot market indexation, while maintaining a transparent and cost-reflective link between wholesale and retail price signals

  Short- to medium-term

- Strengthen the integration between wholesale and retail markets through procurement and pricing structures that enable healthier long-term price signal formation and reduce excessive reliance on spot market indexation

  Medium-term / structural

4. Expanding Cross-Border Integration

- Increase cross-border trading capacity to enable higher levels of market integration

  Medium-term

- Ensure alignment with European market frameworks, including CBAM-related developments

  Medium-term / structural

- Strengthen integration with European electricity markets through enhanced cross-border trading, and closer alignment with European market frameworks to enhance competition, liquidity, and market efficiency

  Structural / ongoing

C.5. Transmission, Distribution, and Retail

C.5.a. Context and Key Challenges

Türkiye's electricity transmission, distribution and retail sectors are facing increasingly complex macroeconomic and regulatory conditions. High inflation, elevated interest rates, and volatile global commodity prices are significantly weighing on cost structures, while electrification, decarbonization, and digital transformation demand ever-increasing investments.

Across network infrastructure (transmission and distribution), the recently introduced regulatory framework for the electricity sector provides a structured and predictable foundation that supports operational continuity and long-term planning, while the existing framework continues to guide the natural gas sector. In both cases, ensuring the continued credibility and financial viability of these frameworks remains critical, particularly in light of rising financing costs and increasing infrastructure needs. The adequacy of the Weighted Average Cost of Capital (WACC) and the full recovery of investment costs through tariffs are key determinants for sustaining and increasing investment levels.

At the same time, renewable generation integration and electrification are placing additional pressure on grid capacity and flexibility, making timely network investments and stronger coordination across transmission, generation, and distribution essential to avoid system bottlenecks. Structural barriers are slowing down the adoption of digital and data-driven solutions across the network. While such technologies offer significant potential to improve efficiency, enhance service quality, and reduce long-term system costs, current regulatory structures tend to favor traditional infrastructure investments. As a result, incentives for digitalization and innovation remain limited, despite their clear system-wide benefits.

In retail, the sector operates under a regulated public service model with limited margins and strong dependency on tariff structures. Recent subsidy mechanisms designed to protect end-user prices have helped stabilize the market in the short term; however, they have also weakened cost-reflectivity and eroded real profitability. In parallel, increasing financing and working capital burdens – driven by value-added tax (VAT) mismatches, delayed collections, and banking constraints – are putting additional pressure on financial sustainability.

Overall, the segments face a common challenge: ensuring financial sustainability while maintaining investment levels, service quality, and market efficiency in a rapidly evolving economic and regulatory environment.

C.5.b. Policy Recommendations and Implementation Priorities

1. Ensuring Financial Sustainability and Investment Continuity

- Maintain a stable and predictable regulatory framework, with particular focus on WACC adequacy under high nominal and real interest rate environments
  Short-term / ongoing[10]
- Ensure full and timely recovery of investment and operational costs through tariff mechanisms facing continuous significant nominal cost increases due to high inflation
  Short-term
- Introduce mechanisms to address internationally exposed cost components (e.g., commodity-linked inputs)
  Short-term

10. Time horizons are indicative and reflect expected sequencing under current market and regulatory conditions: short-term (0–2 years), medium-term (3–5 years), and structural/ongoing measures refer to longer-term or continuous actions. Timelines are subject to adjustment depending on policy developments and market dynamics.

2. Enabling Digitalization, Innovation and HSE[11]

- Ensure that digital and hybrid investment solutions are appropriately recognized within the regulatory framework, including treatment within the regulatory asset base where relevant
  Medium-term / structural
- Introduce targeted incentive schemes for digitalization, AI, and smart grid solutions
  Short- to medium-term
- Enable controlled pilot environments for emerging technologies under regulatory supervision
  Short-term
- Remove barriers to scaling and commercialization of R&D outputs across the sector
  Short- to medium-term
- Introduce incentives for adherence to the highest HSE standards and remove regulatory or commercial barriers that conflict with HSE priorities, including overly narrow tender criteria that do not adequately recognize or remunerate strong HSE performance
  Short- to Medium-term

3. Strengthening Retail Market Sustainability

- Ensure a more realistic reflection of electricity supply costs within tariff structures
  Short-term
- Adjust profitability margin or cost bases to reflect actual market conditions, including through automatic inflation indexation mechanisms within tariff components, in order to mitigate the continuous erosion of real value caused by inflation
  Short-term / structural
- Recognize all financing and working capital costs within the regulatory structure in order to allow fair compensation of financing needs
  Short-term

4. Enhancing Market Functioning and Liberalization

- Gradually reduce distortionary subsidy mechanisms to restore cost-reflective pricing
  Medium-term
- Accelerate market liberalization, particularly in the residential segment
  Medium- to long-term
- Strengthen price signals to improve consumption behavior and system efficiency
  Medium-term

5. Strengthening Transmission and System Integration

- Ensure timely approval and execution of transmission investments aligned with the transformation of the energy system, including the rapid integration of additional renewable generation capacities
  Medium-term / structural
- Strengthen integrated system planning across transmission, generation, and distribution to proactively address grid bottlenecks
  Medium-term / structural

11. Health, Safety, and Environment

C.6. Customer Focus and Energy Efficiency

C.6.a. Context and Key Challenges

Türkiye's energy system is undergoing a structural transformation driven by increasing demand, electrification, and decarbonization objectives. In this evolving landscape, the role of the customer is shifting from a passive energy consumer to an active participant in the energy system. Enabling this transition will be critical to improving system efficiency, strengthening energy security, and supporting long-term sustainability goals.

Energy efficiency remains one of the most cost-effective levers to address rising energy demand and reduce import dependency. While existing regulatory frameworks and national action plans have delivered measurable progress, Türkiye's energy intensity remains above OECD averages, indicating significant untapped potential across buildings, industry, and SMEs.

At the same time, structural barriers continue to limit the realization of this potential. Access to financing remains constrained, particularly for smaller-scale actors, while fragmented data availability and limited monitoring capabilities reduce visibility on consumption patterns and efficiency opportunities. This challenge is further amplified in decentralized structures, where group-level consumption is not always adequately captured.

In parallel, the decarbonization of customer-side energy use is becoming increasingly important. Reducing Scope 1 emissions through electrification, alternative fuels, and distributed energy solutions requires a more flexible and forward-looking regulatory and market framework.

Furthermore, accelerating electrification – particularly in areas such as e-mobility – is creating new demand patterns and localized capacity constraints. High-demand regions are already facing infrastructure limitations at the distribution level, highlighting the need for coordinated planning, smart charging solutions, and the integration of storage technologies to manage peak loads effectively.

Against this backdrop, the key challenge lies in enabling customers to actively participate in the energy system through improved access to data, financing, and flexible consumption models, while ensuring alignment with overall system efficiency and investment needs.

C.6.b. Policy Recommendations and Implementation Priorities

1. Enabling Active Customer Participation and Demand-Side Flexibility

- Strengthen price signal mechanisms to incentivize more efficient consumption patterns and demand-side participation
  Medium-term
- Enable regulatory frameworks that support demand response and flexible consumption models across industrial, commercial, and residential users
  Medium-term / structural
- Promote customer-centric market designs that facilitate active participation in energy markets
  Medium-term

2. Unlocking Energy Efficiency as an Economic Lever

- Improve access to financing for energy efficiency investments, particularly for SMEs and building retrofits, through simplified processes and standardized financing models
  Short- to medium-term
- Promote scalable financing structures such as energy performance contracting (ESCO models) to mobilize private capital
  Medium-term
- Strengthen the economic attractiveness of energy efficiency investments by aligning incentives with long-term cost savings and system benefits
  Structural / ongoing

3. Advancing Electrification and Flexible Demand (incl. E-Mobility)

- Establish regulatory frameworks that support the electrification of end-use sectors, contributing to the reduction of Scope 1 emissions
  Medium-term / structural
- Address infrastructure and capacity constraints in high-demand areas, particularly related to e-mobility, through coordinated planning and targeted regulatory adjustments
  Short- to medium-term
- Enable the deployment of smart charging and storage solutions (e.g., battery systems) to manage peak demand and improve system flexibility
  Medium-term
- Strengthen the integration of distributed energy solutions, including renewable and storage combinations, at the customer level
  Medium-term / structural

4. Strengthening Data, Transparency, and Energy Management Systems

- Enhance data collection, monitoring, and transparency frameworks (e.g., ENVER[12]) to improve visibility on energy consumption and efficiency potential, including more consistent and high-quality data input across sectors
  Short-term
- Expand the scope and effectiveness of tools enabling group-level reporting structures and facilitating anonymized data sharing to identify system-wide efficiency opportunities
  Medium-term
- Promote the adoption of energy management systems such as ISO 50001 as strategic tools for continuous efficiency improvement, including a review of current consumption thresholds triggering implementation and reporting obligations (e.g., currently 1,000 tonnes of oil equivalent (TOE) / ~12 GWh in Türkiye), as well as the development of simplified implementation models particularly for SMEs
  Medium-term
- Strengthen the link between ISO 50001 implementation and national monitoring systems (e.g., ENVER) by integrating performance indicators and ensuring more consistent tracking of efficiency outcomes
  Medium-term / structural
- Encourage the use of smart metering and digital solutions to enable real-time data access and informed decision-making
  Medium-term
- Establish clear data governance, privacy, and cybersecurity standards to ensure secure and effective energy data utilization
  Medium-term / structural

12. Enerji Verimliliği Portalı / The Turkish Energy Efficiency Portal

D. Synthesis and Strategic Added Value

The strategic priorities outlined in this position paper demonstrate that Türkiye's energy transition cannot be addressed through isolated measures alone. Progress across raw materials, generation, renewables, trading, transmission, distribution, retail, customer focus, and energy efficiency must be considered holistically as part of one interconnected system. Bottlenecks in one part of the value chain can directly affect the overall investment feasibility, market efficiency, infrastructure resilience, customer participation, and long-term competitiveness. Across all sections, several common learnings emerge:

1. Regulatory predictability and financial sustainability are essential to mobilize the scale of investment required for decarbonization, electrification, and digitalization.
2. Market-based and transparent price signals are critical for efficient decision-making, whether in generation, trading, retail, or demand-side participation.
3. Infrastructure planning must become more integrated, particularly as renewable generation, storage, electrification, and e-mobility create new system requirements.
4. Data transparency, digitalization, and clear governance frameworks including the promotion of innovation and HSE-management are becoming strategic enablers of system efficiency, rather than merely operational tools.

The paper also underlines the increasing importance of alignment with European regulatory, industrial, and trade frameworks. CBAM, the European Green Deal, market integrity rules, sustainability requirements, and evolving industrial policy priorities are reshaping the conditions under which energy investments and supply chains are developed. For Türkiye, alignment with these frameworks represents not only a compliance requirement, but also an opportunity to strengthen market access, investor confidence, and industrial competitiveness. In parallel, progress on broader trade-related frameworks, including the modernization of the EU–Türkiye Customs Union, will further strengthen the translation of regulatory convergence into tangible industrial competitiveness.

In this context, German–Turkish cooperation can create tangible added value. Germany's experience in energy transition implementation, industrial transformation, market design, energy efficiency, digitalization, and technology deployment can complement Türkiye's dynamic energy market, strategic geographic position, growing industrial base, and significant renewable energy potential. Cooperation areas may include knowledge exchange, joint pilot projects, technology partnerships, financing solutions, regulatory dialogue, and supply chain development.

The AHK Türkiye Energy Working Group, via its diverse member base, aims to continue advancing this dialogue, sharing practical industry insights, and actively participating in improvement efforts. The recommendations in this paper should therefore be understood not as a one-time output, but as a basis for continued public-private engagement. Through structured dialogue and cross-border cooperation, the Working Group seeks to foster a resilient, competitive, investment-friendly, and sustainable energy ecosystem for Türkiye.

Deutsch-Türkische
Industrie- und Handelskammer
Alman-Türk
Ticaret ve Sanayi Odası

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