

**SBF Project Completion Note**
**Türkiye: TSKB Sustainable Energy and Infrastructure On-Lending Facility**
**1. Project Information**

|                            |  |                    |                        |
|----------------------------|--|--------------------|------------------------|
| Project ID:                | 000132   | Investment Number: | L0132A                 |
| Member:                    | Republic of Türkiye  | Region:            | Western Asia           |
| Sector:                    | Finance  | Sub-sector:        | Intermediary Financing |
| Financing Type:            | <input checked="" type="checkbox"/> Loan<br><input type="checkbox"/> Guarantee   | E&S category:      | FI                     |
| Co-financier(s):           | None   |                    |                        |
| Borrower:                  | Türkiye Sinai Kalkinma Bankasi A.S. (TSKB)   |                    |                        |
| Guarantor:                 | Republic of Türkiye  |                    |                        |
| Implementing Agency:       | Türkiye Sinai Kalkinma Bankasi A.S. (TSKB)   |                    |                        |
| Project Team Leader(s):    | Francisco-José Fortuny Carod   |                    |                        |
| Project Team Members:      | Chee Wee Tan, Senior Environmental and Social Specialist (Private Sector)<br>Rabindra Shah, Procurement Associate - Operations<br>Rui Xiang, Financial Management Specialist<br>Komron Rajabiyon, Investment Associate   |                    |                        |
| Lender's Advisor/Engineer: | None   |                    |                        |
| Site Visits by AIIB:       | <p>January 2019<br/>Monitoring visit</p> <p>February 2019<br/>Joint project appraisal mission with the E&amp;S team to a geothermal sub-project</p> <p>January 2020<br/>Joint monitoring mission with the E&amp;S team to a geothermal sub-project</p> <p>April 2021<br/>Virtual monitoring mission by Investment Operations, E&amp;S, Financial Management and Procurement Specialists</p> <p>March/April 2022<br/>E&amp;S monitoring mission and physical site visits conducted to a geothermal sub-project and a windfarm sub-project</p> |                    |                        |

## 2. Project Summary and Objectives

On September 28, 2018, the AIIB Board of Directors approved the TSKB Sustainable Energy and Infrastructure (SEI) On-Lending Facility (Facility), a USD200 million sovereign-backed financing (the Loan or the Project) to Türkiye Sinai Kalkınma Bankası (TSKB or the Borrower). The Loan was signed on September 28, 2018, and declared effective on November 6, 2018. This Project was AIIB's first financial intermediary (FI) loan to a bank.

The objective of the Project was to advance Türkiye's infrastructure primarily in the field of renewable energy and energy efficiency, but also in other sectors such as transport, power transmission, water management, and treatment and telecommunications by providing a loan to TSKB to finance the eligible sub-projects in Türkiye. Renewable energy and energy efficiency were expected to account for at least 60 percent of the Project's sub-loan allocations. Through the Project, TSKB has provided sub-loans to eight private sector sub-borrowers in several sectors: electricity generation (6 sub-loans), manufacturing (1 sub-loan) and electricity distribution (1 sub-loan); no sub-loans were made in other sectors.

The Project has directly benefited six independent power producers (4 wind farms and 2 geothermal power plants) as well as one electricity distributor and one industrial company. Through the Project, Turkish electricity consumers have indirectly benefited from a greater share of generation from renewable sources, more efficient distribution, and reduced carbon intensity in the electricity system.

The Project has thus contributed towards the attainment of Türkiye's renewable energy targets as per the Ministry of Energy and Natural Resources Strategic Plan 2015-2019, namely, to achieve 61GW of renewable energy installed capacity by 2023 (currently on track with 53.2GW installed as of Dec. 2021)<sup>1</sup>, including 20GW of wind (10.6GW installed as of Dec. 2021, with new plants coming on stream) and 1GW of geothermal energy (1.6GW installed as of Dec. 2021). The Project has also contributed to Türkiye's National Renewable Energy Action Plan (NREAP), presented under EU Directive 2009/28/EC, which aims to increase the share of renewable energy in electricity production to 30 percent by 2023 (the annual electricity output from renewable energy reached 35 percent during 2021).

## 3. Key Dates

|                |                    |                        |                    |
|----------------|--------------------|------------------------|--------------------|
| Approval:      | September 28, 2018 | Signing:               | September 28, 2018 |
| Effective:     | November 6, 2018   | Restructured (if any): | -                  |
| Orig. Closing: | April 1, 2022      | Rev. Closing (if any): | -                  |

## 4. Disbursement Summary (USD million)

|                            |                 |   |                                     |
|----------------------------|-----------------|---|-------------------------------------|
| a) Committed: <sup>2</sup> | USD 199,500,000 | b) Cancelled:                               | -                                   |
| c) Disbursed:              | USD 199,500,000 | d) Last disbursement:<br>(amount /date)     | USD 347,831.63<br>February 25, 2022 |
| e) Undisbursed:            | -               | f) Disbursement<br>Ratio (%) <sup>3</sup> : | 100%                                |

<sup>1</sup> Electricity Market Regulatory Authority (202). Electricity Market Sector Report 2021. Link: <https://www.epdk.gov.tr/Detay/Icerik/1-1271/electricityreports>.

<sup>2</sup> Net of capitalized front-end fee.

<sup>3</sup> Disbursement Ratio is defined as the volume (i.e. the dollar amount) of total disbursed amount as a percentage of the net committed volume, i.e.,  $f = c / (a - b)$

## 5. Estimated and Actual Costs

| Item   | Estimated Costs | Actual Costs    | Financing Allocation                                 |  |  |   |
|--|-----------------|-----------------|--|--|--|---|
|  |                 |                 | AIIB Original Commitment (USD million) and Share (%) | AIIB Actual Commitment (USD million) and Share (%) | Borrower's Original Budget (USD million) and Share (%) | Borrower's Actual Costs (USD million) and Share (%) |
| <b>A. Base Cost</b>  |                 |                 |  |  |  |   |
| Sustainable Energy and Infrastructure On-lending Facility                              | USD 199,500,000 | USD 199,500,000 | USD 199,500,000 (100%)                               | USD 199,500,000 (100%)                             | -  | -   |
| <b>B. Fees capitalized</b> including Front-End Fees, Interest During Construction etc. | USD 500,000     | USD 500,000     | USD 500,000 (100%)                                   | USD 500,000 (100%)                                 | -  | -   |
| <b>Total</b>   | USD 200,000,000 | USD 200,000,000 | USD 200,000,000 (100%)                               | USD 200,000,000 (100%)                             | -  | -   |

## 6. Project Implementation, including major changes to the original Objective, Project Design, and Indicators

The Facility has been fully disbursed as follows:

| Disbursement                | Amount, USD           | Disbursement date  |
|-----------------------------|-----------------------|--------------------|
| 1 <sup>st</sup> Utilization | 30,000,000            | September 25, 2019 |
| 2 <sup>nd</sup> Utilization | 25,000,000            | December 27, 2019  |
| 3 <sup>rd</sup> Utilization | 25,000,000            | September 2, 2020  |
| 4 <sup>th</sup> Utilization | 33,880,853.35         | December 17, 2020  |
| 5 <sup>th</sup> Utilization | 40,000,000            | March 29, 2021     |
| 6 <sup>th</sup> Utilization | 29,431,029.68         | June 9, 2021       |
| 7 <sup>th</sup> Utilization | 15,840,285.34         | December 20, 2021  |
| 8 <sup>th</sup> Utilization | 347,831.63            | February 25, 2022  |
| <b>Total</b>                | <b>199,500,000.00</b> |                    |

As of the date of closing, USD 199,500,000 (excluding the capitalized front-end fee of USD 500,000) have been fully allocated and disbursed to eight sub-projects representing a total Project cost of approximately USD 1.2 billion, including six renewable energy sub-projects with a total installed capacity of 479.6 MW. Specifically, the sub-project allocation includes the following sectors:

- Wind generation (58 percent of the facility allocations): 4 sub-projects, 334.0MW of installed capacity.
- Geothermal generation (24 percent): 2 sub-projects, 145.6MW of installed capacity.
- Electricity distribution (13 percent): 1 sub-project.
- Energy efficiency (5 percent): 1 sub-project.

No changes were made to the original Objective, Project Design, and Indicators have been made during the availability period of the facility.

The portfolio of financed sub-projects is presented below for reference:<sup>4</sup>

| # | Project   | Region       | Sector                      | Project Cost, USD m-equivalent | TSKB Loan                          |                                 | Other debt, USD m-equivalent | Equity, USD m-equivalent | Category | Completion Date       | Capacity, MW <sub>e</sub> | Tariff, USDc / MWh | Estimated Output or savings, GWh/year | Actual output or savings 2021, GWh/year | Cumulative output, 2018-2021, GWh/year | Estimated emissions to be avoided, tCO <sub>2</sub> eq/yr | Estimated net emissions, tCO <sub>2</sub> eq/yr | Physical progress |
|---|-----------|--------------|-----------------------------|--------------------------------|------------------------------------|---------------------------------|------------------------------|--------------------------|----------|-----------------------|---------------------------|--------------------|---------------------------------------|---|--|---|---|-------------------|
|   |           |              |                             |                                | TSKB Loan amount, USD m-equivalent | AIIB Sub-Loan, USD m-equivalent |                              |                          |          |                       |                           |                    |                                       |   |  |   |   |                   |
| 1 | Project 1 | Aydın        | Geothermal                  | 463.2                          | 46.6                               | 30.0                            | 304.8                        | 111.7                    | A        | Jun. 2017 - Dec. 2021 | 97.6                      | 10.5-11.8          | 438                                   | 223                                     | 225                                    | -   | 425,544   | Completed         |
| 2 | Project 2 | Manisa       | Geothermal                  | 146.9                          | 35.75                              | 17.2                            | 83.95                        | 29.9                     | A        | Oct. 2019             | 48.0                      | 10.5               | 400                                   | 396                                     | 742                                    |   | 296,088   | Completed         |
| 3 | Project 3 | Kırklareli   | Wind                        | 85.5                           | 35                                 | 15.6                            | 37.50                        | 13                       | B+       | Feb. 2021             | 75.0                      | 5.0-9.4            | 240                                   | 211                                     | 231                                    | 167,040   | -   | Completed         |
| 4 | Project 4 | Çanakkale    | Wind                        | 180.6                          | 79.8                               | 41.0                            | 64.65                        | 36.1                     | B+       | Jun. 2022             | 138.0                     | 7.3-8.7            | 440                                   | 372                                     | 380                                    | 306,240   | -   | Completed         |
| 5 | Project 5 | Tekirdağ     | Energy Efficiency           | 11.3                           | 9                                  | 9                               | -                            | 2.3                      | B-       | Jul. 2021             | -                         | -                  | -                                     | -                                       | -                                      | 2,079 <sup>(5)</sup>                                      | -   | Completed         |
| 6 | Project 6 | Bursa        | Wind                        | 70.8                           | 39.5                               | 30.0                            | 31.3                         | 0.07                     | B+       | Nov. 2021             | 70.0                      | 7.3                | 170                                   | 72                                      | 75                                     | 118,320   | -   | Completed         |
| 7 | Project 7 | Çanakkale    | Wind                        | 73.8                           | 40                                 | 30.0                            | 31.9                         | 1.9                      | B+       | Nov. 2021             | 51.0                      | 7.3                | 190                                   | 169                                     | 175                                    | 132,240   | -   | Completed         |
| 8 | Project 8 | West Türkiye | Transmission & Distribution | 164.0                          | 32.7                               | 26.7                            | 98.2                         | 32.7                     | B-       | Dec. 2021             | -                         | -                  | -                                     | -                                       | -                                      | Not applicable  | -   | Completed         |
|   |           |              |                             | 1196                           | 319                                | 199                             | 652                          | 228                      |          |                       | 480                       |                    |                                       | 1,443                                   | 1,827                                  | 725,919   | 721,632   |                   |

<sup>4</sup> In accordance with the Bank's Policy on Public Information, commercial third-party information has been redacted from the disclosed Project Completion Note.

Reference: <https://www.aiib.org/en/policies-strategies/public-information/policy/index.html#:~:text=8.3%20The%20Bank%20shall%20not,consulting%20with%20that%20third%20party.>

<sup>5</sup> Türkiye's Emission factor for intermittent energy of 0.561 tCO<sub>2</sub>/MWh was used for calculation.

All sub-projects substantially meet the selection criteria as presented to the Board at the approval stage of the facility, and as stipulated in the Project operations manual. However, to facilitate the rapid deployment of the facility and the mobilization of capital to eligible renewable energy (wind) projects, the Bank has processed waivers of the sub-project eligibility conditions twice in respect of maximum sub-project amount (>USD30 million) and relaxation of the individual sub-project debt-to-equity ratio (80:20), respectively.

The Project and the sub-loans are compliant with the Bank's safeguard policies in terms of Environmental and Social, Procurement and Financial Management:

| Components  | Physical Progress  | Environmental & Social Compliance   | Procurement   | Financial Management   |
|---|--|---|---|--|
| Component 1:<br>Sustainable Energy and Infrastructure On-lending Facility | All sub-projects in the facility portfolio have been completed as of the date of this Project Completion Note. | In compliance.<br><br>The last physical monitoring visit (March 2022) did not identify any material implementation red flags. | In compliance, subject to individual sub-project assessments.<br><br>The last virtual monitoring visit (April 2021) and ongoing reporting has not revealed any material implementation red flags. | In compliance. Overall, project financial reporting submissions are timely.<br><br>The last annual Audited Project Financial Statements have been submitted and are considered acceptable. |

The last physical monitoring mission was conducted in March/April 2022 and focused on the environmental and social (E&S) aspects of the Project (see point 7 below). The Bank has also continued to monitor the procurement and financial management aspects of the Project remotely through regular reporting. The Project has been progressing adequately, and no implementation red flags have been identified. The Borrower has been consistently in compliance with the Bank's covenants at each disbursement. The Borrower has also confirmed that the sub-projects are substantially in compliance with the requirements of the sub-loan agreements.

#### **7. Implementation of Environmental and Social Policy and project-specific E&S instruments, including the project level Grievance Redress Mechanism (GRM)**

Throughout the project implementation period, TSKB provided timely semi-annual progress reports outlining the progress on investments, updates on monitoring environmental and social management plans, and grievance status of sub-projects under the Loan. The progress reports informed AIIB that the environmental and social risk management was implemented properly in sub-projects during the construction and operation phases.

The Borrower has established an External Communication Mechanism (ECM), a GRM-equivalent at FI level, and required sub-borrowers to establish a GRM at the sub-project level. The Borrower indicates that GRMs have been established and grievances received at the sub-project level are generally addressed and closed within determined timelines. Reportedly, no complaint regarding the AIIB supported sub-projects was filed via TSKB's ECM. The ECM can be found on [TSKB's website \(https://www.tskb.com.tr/en/about-us/contact-info/contact-form\)](https://www.tskb.com.tr/en/about-us/contact-info/contact-form) in both English and Turkish. For forms classified as complaint/grievance,

the related inquiry is also shared with the Internal Control Department and Board of Internal Auditors. TSKB has also a telephone number (+90 212 334 50 50) available for general contact as a supplement to the online form.

The Bank's E&S team visited TSKB headquarters on March 3, 2022 (i) to validate environmental and social standards practices of TSKB at the institutional level, and (ii) to review the E&S aspects of the facility, selected sub-projects and identify key highlights. The E&S team re-examined the Sustainability Management Systems and E&S Risk Evaluation Tool of TSKB and found them to be satisfactory.

As part of the same mission, two site visits to subprojects were conducted: (i) a geothermal power plant and (ii) a wind power plant. The visits included interviews with project-affected people (workers and village headmen). The team did not identify any material E&S issues. Some recommendations were made to enhance project-level GRM (complaint box location), operational health and safety (OHS) improvements, biodiversity monitoring and recycling of materials.

## 8. Results Achieved (against the original indicators and/or revised indicators)

The facility has been implemented successfully to date, with most objectives being realized as provided in the table below. The share of renewable energy (including geothermal) and energy efficiency projects has been exceeded by 26 percentage points. The renewable energy installed capacity (including geothermal) has reached 6.9 times the target set at the approval stage, driven by the sizeable wind capacity financed. The expected annual emissions to be displaced by the renewable energy (excluding geothermal) and energy efficiency sub-projects is approximately 725,919 tCO<sub>2</sub>eq. However, the portfolio has two baseload geothermal operations that, due to the impact of non-condensable gases (NCGs) released to the atmosphere, are expected to emit up to 721,632 tCO<sub>2</sub>eq per annum. The emissions of geothermal operations are expected to decrease over time<sup>6</sup> and the gap between direct emissions from geothermal and displaced emissions from wind energy and energy efficiency investments (4,287 tCO<sub>2</sub>eq) will widen.

| Project Objective Indicators  | Details   | Unit | Target <sup>7</sup> |      |      |                 |  |
|---|---|------|---------------------|------|------|-----------------|--|
|   |   |      | 2019                | 2020 | 2021 | 2022 and onward |  |
|   |   |      |                     |      |      | Target          | Actual   |
| Indicator #1:<br>Share of renewable energy and energy efficiency projects | Share of renewable energy, energy efficiency in the sub-loan portfolio generated by AIIB's loan | %    | N/A                 | N/A  | N/A  | ≥ 60%           | 86.6%  |
| Indicator #2:<br>Installed capacity                                       | Installed capacity of renewable energy sub-projects   | MW   | N/A                 | N/A  | N/A  | > 70            | Wind: 334.0MW<br>Geothermal: 145.6MW<br>Total: 479.6MW |

<sup>6</sup> World Bank (2021). Live Wire. Understanding CO2 Emissions from Geothermal Power Generation in Türkiye. Link: <https://openknowledge.worldbank.org/bitstream/handle/10986/36083/Understanding-CO2-Emissions-from-Geothermal-Power-Generation-in-Türkiye.pdf>

<sup>7</sup> The first, second and third anniversary of signing.

|                              |  |                   |     |     |     |     |  |
|------------------------------|--|-------------------|-----|-----|-----|-----|--|
| Indicator #3:<br>Reduced CO2 | Amount of reduced CO2 per unit energy produced due to the sub-projects | MtCO <sub>2</sub> | N/A | N/A | N/A | N/A | Emissions avoided by Renewable Energy & Energy Efficiency sub-loans:<br>+725,919 tCO <sub>2</sub> eq |
|------------------------------|--|-------------------|-----|-----|-----|-----|--|

#### 9. Investment Sustainability (operational, financial/commercial, institutional)

The project is AIIB's first FI loan to a bank, and it was considered at the time of approval an opportunity to learn through experience and develop a new FI on-lending business line. The investment's sustainability was considered in the design of the facility and was based on the following considerations:

- 1) Institutional sustainability:
  - a) TSKB is well positioned in Türkiye, having a long and successful track record of cooperation with various development finance institutions.
  - b) As an exchange-listed company also controlled by Türkiye's largest bank (Türkiye İş Bankası), TSKB has adopted strong underwriting and risk management standards, and market practices.
  - c) The Borrower, a listed entity, has an experienced and competent management team and one of the highest corporate governance ratings in Türkiye.
  - d) TSKB strategically focuses on infrastructure (mainly renewable energy) and energy efficiency investments which make up approximately half of its loan book.
- 2) Financial and operational sustainability:
  - a) TSKB has strong financials, usually outperforming both the industry average and the local development and investment banks average profitability and operational efficiency.
  - b) In the Operational Manual, AIIB has set several eligibility criteria about commercial and financial requirements for the sub-borrowers, in addition to the characteristics of the sub-projects. The Borrower conducted the necessary financial and technical evaluation of each sub-project and sub-borrower and presented the findings to AIIB for its non-objection. All sub-projects have been reviewed by the Project team for their environmental, social, financial, and commercial aspects. This ensured the eligibility of the sub-loan portfolio during its first implementation and secured its long-term sustainability.
  - c) In the Sub-loan Agreements, the Borrower included standard E&S covenants, E&S monitoring, and reporting requirements, and where necessary, the sub-project specific Environmental and Social Action Plan (ESAP). AIIB's E&S requirements were annexed to the sub-loan agreements, as the Project Team could confirm when sampling specific sub-project documentation.
  - d) For all sub-projects, the Borrower required the sub-borrowers to provide an Environmental and Social Impact Assessment, environmental, health and safety clearance certificates, an Environmental and Social Management Plan, and specialist studies where applicable.

#### 10. Compliance and Alignment with AIIB's Policies and Strategic Priorities

The Project is well aligned with AIIB's Thematic Priorities on (i) advancing green and sustainable infrastructure and (ii) mobilizing private capital into sustainable infrastructure. AIIB's loan (over 60 percent of sub-loan allocations) was primarily directed into renewable energy and energy efficiency sectors. Once

fully commissioned, the financed sub-projects portfolio is expected to produce up to 1,442.7GWh per annum of baseload and variable electricity from renewable resources. In particular, the Project's sub-loans to wind power and energy efficiency (ca. 62.6 percent of the facility allocations) are expected to directly displace an estimated 725,919 tCO<sub>2</sub>eq of emissions annually. This is consistent with AIIB's Energy Strategy and the Bank's efforts to align with the Paris Agreement by 2023.

To ensure private capital mobilization, all sub-projects required that the sub-borrowers inject a minimum of 15 percent equity into renewable energy sub-projects and 20 percent equity into the sub-projects in other sectors, unless otherwise agreed with AIIB. This indirectly contributed to the mobilization of USD227.6 million of equity financing into eight projects with total cost of USD1,196 million.

#### 11. Any outstanding issues not yet resolved, if applicable

No material issues. The Bank will continue to monitor, through TSKB, the performance of the geothermal sub-projects, in particular the emissions monitoring systems for the non-condensate gas stack including hydrogen sulfide (H<sub>2</sub>S).

#### 12. Lessons Learned and can be considered for the future investments

The Project has provided AIIB with valuable lessons that are being incorporated into the preparation, design, and supervision of subsequent similar FI facilities. The Project was subject to an early learning assessment (ELA) in Q2 2021, with the following key conclusions:

- a) **Partner selection.** The success of FI facilities is heavily dependent on the selection of good partners. In this Project, AIIB has benefited from working with an experienced FI that puts sustainable infrastructure and green transformation at the core of its investment mandate and corporate focus.
- b) **Focus on renewable energies.** The existing facility was designed to focus primarily on renewable energy and energy efficiency financing, which can be recognized as Climate Finance under the relevant joint-Multilateral Development Banks methodology. Facilities like the Project, with a clearly defined and narrow scope, help AIIB quickly rollout climate mitigation financing to projects in its members.
- c) **Sub-project pipeline projection and retroactive financing.** The development of a solid investable sub-project pipeline requires substantial work and calls for flexibility regarding the timing of sub-project funding. Building on the experience of the facility, the Bank should consider using the full retroactive finance window (12 months), in line with the limits of the Bank's Directives for sovereign-backed financings.
- d) **Selective prior review of FI sub-projects.** Based on its due diligence, AIIB may consider a more selective prior review process of subprojects from FIs which have been assessed as strong. Such an approach would allow AIIB to recognize the strengths of capable FIs and realize operational efficiencies.
- e) **Enhancing institutional capacity.** Through AIIB's prior review and approval of these same subprojects, the Project Team has provided feedback to improve the scope, depth, and evaluation of the E&S due diligence. Over time, the Project Team observed a gradual improvement on TSKB's E&S capacity, due diligence, and documentation. As most of the sub-projects were renewable energy related in Türkiye and they have common E&S risks, TSKB has gained familiarity and confidence with common implementation issues. AIIB has thus been able to recognize the strength and capability of TSKB as a client and can now realize the operational efficiency that FI operations afford.
- f) **Understanding of the local market.** Along the way, TSKB provided AIIB with the opportunity to understand its deal pipeline, its lending processes, its local organizational network, and the



infrastructure and financial markets. This was a good opportunity for AIIB to learn and build its knowledge about Türkiye's financial and renewable energy sectors.