

Project Completion Note

Türkiye: TKYB Renewable Energy and Energy Efficiency On-Lending Facility

1. Project Information

Project ID:	000141	Investment Number:	L0141A; L0141C
Member:	Türkiye	Region:	Western Asia
Sector:	Energy	Sub-sector:	Multi-subsector
Financing Type:	<input checked="" type="checkbox"/> Loan <input type="checkbox"/> Guarantee	E&S category:	FI
Co-financier(s):	None		
Borrower:	Development and Investment Bank of Türkiye (Türkiye Kalkınma ve Yatırım Bankası A.Ş., TKYB)		
Guarantor:	Republic of Türkiye		
Implementing Entity:	Development and Investment Bank of Türkiye] (Türkiye Kalkınma ve Yatırım Bankası A.Ş., TKYB)		
Project Team Leader(s):	Francisco-José Fortuny Carod, Senior Investment Officer		
Project Team Members:	Komron Rajabiyon, Co-Project Team Leader; Liu Yang, Project Counsel; Rui Xiang, OSD - Financial Management Specialist; Jingrong He, OSD - Procurement Specialist; Parthapriya Ghosh, OSD - Environment Specialist; Ercan Ozbulut, OSD - Social Development Specialist;		
Site Visits by AIIB:	August 2021, March 2022, December 2022, September 2023, February 2024, March 2024, January 2025.		

2. Project Summary and Objective

The Project's objective is to advance Türkiye's renewable energy and energy efficiency infrastructure by providing long-term financing (Sub-loans) through TKYB to privately-owned companies (Sub-borrowers).

The Sub-loans will support investments in renewable energy (RE) and energy efficiency (EE) projects (Sub-projects), including wind, solar, geothermal, and biomass. The Project is expected, therefore, to increase the installed capacity of renewable energy power generation and improve the energy efficiency of existing installations in Türkiye, two key priority areas for the country's climate mitigation goals under the Paris Agreement (October 2021).

The Project's key results will be measured by the following: (i) amount of RE generation capacity installed (MW), (ii) greenhouse gas emissions reduction measured as tons of carbon dioxide (CO₂) equivalent per year, (iii) primary energy consumption as gigawatt-hours saved (GWh), (iv) amount invested in RE projects (USD million), (v) amount invested in EE projects (USD million).

The expected beneficiaries are the independent power producers, who benefit from improved access to long-term finance, and the energy consumers, who will receive clean and indigenous-sourced renewable energy with positive environmental impacts.

On October 13, 2021, the AIIB Board of Directors approved an additional loan of USD100 million, increasing the loan amount from the initial USD200 million to USD300 million. The additional loan keeps the same objectives as the original loan. The additional loan has not changed materially the parameters of the original facility, such as the closing date (March 31, 2024) and the final maturity date (February 15, 2036).

3. Key Dates

Approval:	November 12, 2019	Signing:	December 10, 2019
Effective:	January 14, 2020	Restructured (if any):	October 13, 2021
Orig. Closing:	March 31, 2024	Rev. Closing (if any):	None

4. Disbursement Summary (USD million)

a) Committed:	300.00	b) Cancelled (if any):	0.00
c) Disbursed:	300.00	d) Last disbursement: (amount /date)	September 29, 2022
e) Undisbursed (if any):	0.00	f) Disbursement Ratio (%)¹:	100.00

5. Estimated and Actual Costs of the Project (USD million)

The total estimated costs and actual costs are the same, i.e., USD300 million. This includes USD300,000,000 of on-lending proceeds. There are no counterpart funds involved in this project.

Item	Total Estimated Costs	Total Actual Costs	Financing Allocation					
			AIIB Original Commitment (Share %)	AIIB Actual Commitment (Share %)	Borrower's Original Commitment if any (Share %)	Borrower's Actual Commitment if any (Share %)	Borrower's Original Budget (Share %)	Borrower's Actual Cost (Share %)
A. Base Cost								
<i>Sub-loans for Sub-projects</i>	300.00	300.00	100	100	0	0	0	0
<i>Total Base Cost</i>	300.00	300.00	100	100	0	0	0	0
B. Fees capitalized incl. Front-End Fees, Interest During Construction etc	0.00	0.00	0	0	0	0	0	0
Total	300.00	300.00	100	100	0	0	0	0

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

The Facility has been fully disbursed as follows:

¹ 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., $f = c / (a - b)$

Disbursement	Amount, USD	Disbursement date
1 st Utilization	50,000,000	September 8, 2020
2 nd Utilization	50,000,000	December 23, 2020
3 rd Utilization	50,000,000	June 2, 2021
4 th Utilization	50,000,000	September 24, 2021
5 th Utilization	50,000,000	March 11, 2022
6 th Utilization	10,000,000	September 26, 2022
7 th Utilization	40,000,000	September 29, 2022
Total	300,000,000	

On November 12, 2019, the AIIB Board of Directors approved the Project TKYB Renewable Energy and Energy Efficiency On-Lending Facility (000141), a USD200 million sovereign-backed financing (the Original Loan) to Türkiye Kalkınma ve Yatırım Bankası (TKYB or the Borrower). The objective of the Original Loan was to advance Türkiye's RE and EE infrastructure. The Original Loan was 100 percent disbursed as of October 28, 2021, long before the loan closing (i.e., March 31, 2024). Given the rapid absorption of the initial USD200 million Loan and the strong pipeline of potential RE sub-projects in Türkiye, the Borrower and the Member requested the Bank to increase the facility within the same implementation period. On October 13, 2021, the AIIB Board of Directors approved an additional loan of USD 100 million (the Additional Loan), increasing the total commitment from USD200 million to USD 300 million.

The proceeds from the Original Loan and Additional Loan combined were used to support investments by privately-owned companies in RE generation. The Project financed 18 RE sub-projects representing a total project cost of approximately USD2 billion and 2.1 GW of RE installed capacity. All sub-projects have achieved physical completion. Specifically, the Original Loan (L0141A) supported 13 renewable energy sub-projects, representing total investments of USD712 million equivalent by providing loans amounting to USD200 million. These sub-projects include 11 wind farms representing approximately 538MW of installed capacity, one 6MW biomass plant, and one 18MW biogas plant. The Additional Loan (L0141C) supported 5 additional RE sub-projects, representing a total investment of USD1.3 billion-equivalent by providing loans amounting to USD100 million. These sub-projects include 4 wind farms representing approx. 180MW of installed capacity and one solar plant of 1,348MW installed capacity. The portfolio of RE sub-projects financed under both loans (L0141A+L0141C) is presented below for reference.²

No changes were made to the original Project Objective, Project Design, and Indicators during the facility's availability period. All sub-projects substantially met the selection criteria as stipulated in the Project Operations Manual. 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: Renewable Energy and Energy Efficiency On-Lending Facility	All sub-projects in the facility portfolio have been completed as of the date of this Project Completion Note.	In compliance. The last physical E&S monitoring visit (February 2024) did not identify any material implementation red flags.	In compliance, subject to individual sub-project assessments. The sample technical review did not reveal any material red flags or deviations from policy. Sub-borrowers are private entities.	In compliance. Overall, project financial reporting submissions are timely. The last annual Audited Project Financial Statements have been submitted and are considered acceptable.

² In accordance with the Bank's Policy on Public Information, commercial third-party information has been redacted from the disclosed Project Completion Note. Reference: [link](#).

#	Region	Sector	Project Cost, USD m-eq	TKYB Loan amount, USD m-eq	AIIB Sub-Loan amount, USD m-eq	Other debt, USD m-eq	Equity, USD m-eq	E&S Category	Capacity, MW	Tariff, USDc/MWh	Estimated Output, MWh/year	Actual Output in 2023, MWh/year	Estimated net emission avoided, ³ tCO ₂ eq/year (2023)
#1	Istanbul	Wind	58	20.4	20.4	24.8	13.3	B+	50	7.30-9.40	132,000	143,356	50,318
#2	Yalova	Wind	52	21.2	21.2	19.3	11.7	B+	50	7.30-9.40	126,500	141,030	49,502
#3	Canakkale	Wind	51	17.6	17.6	22.9	10.9	B+	44	7.30-9.41	134,000	155,476	54,572
#4	Mugla	Wind	33	24.8	16.4	-	8.4	B-	25	7.30-9.42	69,500	83,249	29,220
#5	Mersin	Wind	50	42.2	42.2	-	7.5	B-	40	7.30-9.43	130,450	162,272	56,957
#6	Mersin	Wind	12	8.8	8.8	-	3.1	B-	10	7.30-9.44	33,200	50,219	17,627
#7	Konya	Biomass	30	21.8	10.9	-	8.4	B+	6	13.3	31,500	26,191	8,093
#8	Bilecik	Wind	105	37.6	25.0	48.2	19.4	B+	90	7.30-9.44	196,000	207,604	72,869
#9	Kocaeli	Wind	71	27.5	16.7	27.0	16.2	B-	49	7.30-9.44	121,000	117,819	41,354
#10	Istanbul	Biogas	31	24.8	9.1	-	6.0	B+	18	13.3	105,000	30,031	9,280
#11	Yalova	Wind	137	68.5	10.0	41.3	26.9	B+	110	7.3	286,500	350,429	123,001
#12	Bayburt	Wind	39	1.3	1.3	31.7	6.6	B-	30	8,6-7,3	80,000	111,829	39,252
#13	Kirikkale	Wind	42	5.5	5.2	29.2	6.8	B-	40	6,29-4,19	101,400	118,865	41,722
#14	Edirne	Wind	16	6.4	2.7	6.9	2.5	B-	10	7.30-9.40	36,500	38,652	13,567
#15	Bursa	Wind	139	115.0	30.0	-	24.0	B+	120	7.3	270,000	329,945	115,811
#16	Konya	Solar	1,093	50.0	30.0	750.0	295.0	B+	1,348	6.99	2,055,000	1,700,098	596,734
#17	Bayburt	Wind	14	12.1	12.1	-	2.1	B-	10	8.6	30,000	42,933	15,069
#18	Mersin	Solar	29	23.1	20.3	-	5.5	B-	40	7.30-9.44	42,608	4,558	1,600
TOTALS			2,003	528.6	300.0	1,001.2	474.4		2,090		3,981,158	3,814,556	1,336,548

³ A representative estimate based on 2023 output data and the Harmonized IFI Default Grid Emission Factors 2021, v.3.2 (for intermittent (351 gCO₂/kWh) and baseload (309 CO₂/kWh) energy):
Emissions Displaced (tons CO₂/year) = Annual Output (MWh) × 1,000(kWh/MWh) × Grid Emission Factor (gCO₂/kWh) ÷ 1,000,000.

7. Results Achieved

The Project has been implemented successfully to date, with most objectives being realized as provided in the table below. Objective indicators 3 and 5 are kept blank as no EE investments were financed through the facility, given the strong demand for RE and the absence of a minimum EE quota. This is being addressed in subsequent facilities to incentivize EE investments.

Project Objective Indicators	2019	2019		2020		2021		2022		2023		End Target	
	Baseline	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1. Total renewable energy generation capacity installed, MW	N/A	N/A	N/A	56	56	130	130	470	470	N/A	1,528	>500	2,090
2. Reduction of greenhouse gas emissions, in tons of carbon dioxide equivalent per year, tons	N/A	N/A	N/A	N/A	N/A	82,529	N/A	244,034	N/A	728,573	1,336, 548	>1,000,000	1,336, 548
3. Primary energy consumption saved, GWh	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4. Amount invested in renewable energy projects, USD million	N/A	N/A	N/A	82.7	N/A	317.6	185	615.8	778	N/A	1,304	750	2,003
5. Amount invested in energy efficiency projects, USD million	N/A	N/A	N/A	N/A	N/A	N/A	0	N/A	0	N/A	0	N/A	0

8. Investment Sustainability (operational, financial/commercial, institutional)

The project is one of AIIB's first FI loans, and it was considered at the time of approval as 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:

(i) Institutional sustainability:

- TKYB has rapidly gained a strong position among Türkiye's development banks, having achieved a successful track record of cooperation with various development finance institutions.
- TKYB has adopted strong underwriting and risk management standards and market practices.
- The Borrower has an experienced and competent management team and one of the high corporate governance ratings in Türkiye.
- TKYB strategically focuses on infrastructure and renewable energy investments, which make up approximately half of its loan book.

(ii) Financial and operational sustainability:

- TKYB has strong financials, usually outperforming both the industry average and the local development and investment banks' average profitability and operational efficiency.
- In the Project 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.

9. Compliance and Alignment with AIIB's Policies and Strategic Priorities

The Project is aligned with AIIB's Thematic Priorities on (i) advancing green and sustainable infrastructure and (ii) mobilizing private capital into sustainable infrastructure. AIIB's loans (100 percent of sub-loan allocations) were directed to the RE sector. The financed sub-projects portfolio is expected to produce close to 4 TWh per annum of primarily variable electricity from renewable resources. In particular, the Project's sub-loans are expected to directly displace an estimated 1,336,548 tCO₂eq of emissions annually.⁴ This is consistent with AIIB's Energy Strategy and the Bank's efforts to align its operations with the Paris Agreement.

To ensure private capital mobilization, all eligible sub-projects require that the sub-borrowers inject a minimum of 15 percent of the sub-project costs in the form of equity unless otherwise agreed with AIIB. This indirectly contributed to the mobilization of USD474 million of equity financing into the eligible 18 sub-projects in support of USD2 billion of total investment.

10. Implementation of project-specific Environmental and Social instruments

Throughout the project implementation period, TKYB provided its semi-annual progress report timely; outlining the progress on investments, updates on monitoring environmental and social (E&S) management plans, and grievance status of sub-projects that are already under the Loan. The progress reports inform AIIB that the E&S risk management is 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 TKYB's ECM. The ECM can be found on TKYB's website (Complaint Mechanism [Link](#) and Complaint Form [Link](#) 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. TKYB has also a telephone

⁴ Total emissions avoided are based on actual sub-projects' outputs provided by TKYB for 2023 and Türkiye's grid emission factors for intermittent (351gCO₂/kWh) and firm generation (309gCO₂/kWh), as per IFC standards.

number (+90 216 636 87 00) available for general contact as a supplement to the online form.

Further to earlier visits to the client and several sub-projects, the Bank's E&S team visited TKYB headquarters on March 7, 2024 (i) to validate environmental and social standards practices of TKYB at the institutional level, and (ii) to review the E&S aspects of the facility, selected sub-projects and identify key highlights. E&S team re-examined the Sustainability Management Systems and E&S Risk Evaluation Tool of TKYB and found them to be satisfactory. 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.

11. Lessons Learned

The Bank has extracted valuable lessons from the implementation of the Project. Some of the key lessons include:

- a. Partner selection. The success of FI facilities is heavily dependent on the selection of good partners. In the Phase 1 Facility, AIIB benefited from working with an experienced FI that puts sustainable infrastructure and green transformation at the core of its investment mandate and corporate focus. AIIB should consider working with experienced FIs that have been thoroughly assessed for their implementation capacity, like TKYB.
- b. Focus on climate finance. The Project was designed to focus primarily on RES and EE financing, which can be recognized as climate finance under the relevant joint MDB methodology.
- c. Sub-project pipeline projection and retroactive financing. The development of a solid investable Sub-project pipeline requires considerable work and calls for flexibility regarding the timing of Sub-project funding. The Bank allowed a full retroactive finance window (12 months), in line with the limits of the Bank's Directives on Sovereign-backed Financings, and provided flexibility to resource allocation within the facility's broad objectives.
- d. Selective prior review of FI sub-projects. Monitoring FI's due diligence and site visits can help ensure that the Bank's Environmental and Social Framework (ESF) requirements are met and that sub-projects are not miscategorized. Under the additional facility, AIIB applied a more selective prior review process and certain limits to high-risk sub-projects. Such an approach helps AIIB recognize the strengths of the FI partner and realize operational efficiencies.
- e. Enhancing institutional capacity. Through AIIB's prior review and approval of sub-projects under the original facility, the Bank has been able to steer and improve the scope, depth, and evaluation of the Borrower's E&S screening capabilities, due diligence, and documentation. As most of the sub-projects are RES-related and have common E&S risks. TKYB has built confidence in the identification and assessment of common implementation issues. The Bank has been able to recognize the strengths and capabilities of the Borrower and can now realize the operational efficiencies.
- f. Understanding of the local market. TKYB has given AIIB visibility over its deal pipeline, lending process, and local network. This helped AIIB learn and build its knowledge of Türkiye's RES sector. This knowledge can now be applied to non-sovereign direct and FI on-lending facilities.

12. Borrower's Feedback

See the Annex below.

13. Any Pending issues and Follow-up actions, if applicable

No material issues identified.

14. Achievement of Project Results

The facility has been implemented successfully to date, with most objectives being realized. The renewable energy installed capacity has reached four times the target set at the approval stage.

Annex: Feedback Questionnaire

- 1. Are the services and support provided by the Project Team professional, sufficient, and in time, during project preparation and project implementation? Please provide some specifics or examples as an illustration.**

We found the support and the services provided by the Project Team very professional. The team made themselves available for any of our questions or inquiries by email or telephone and acted very constructively in solving any issues during the implementation.

- 2. Is it convenient to access the Project Team's services and support? Please provide some specifics or examples as an illustration.**

It was very convenient to access the Project Team's services and support. Team members could be accessed by email, phone, or even through messaging. We didn't at all feel the time difference between China and Türkiye during the implementation.

- 3. Does the Project Team demonstrate flexibility and efficiency during project preparation and project implementation? Please provide some specifics or examples as an illustration.**

Yes, the Project Team demonstrates flexibility and efficiency throughout the implementation period. During the negotiations and project preparation, AIIB's acceptance of 12 months retroactive period was welcomed as a valuable flexibility. Upon the full disbursement of the initial facility, responding to the demand in the market and TKYB's request for increasing the amount of the facility, the Team was able to clear from AIIB's internal committees the approval for an additional facility, and that came at the very right time.

- 4. What is the value addition of AIIB's financing in the Project?**

AIIB's approach from the very beginning was to not only lend to TKYB, but also contribute to its transformation as an E&S focused development bank. In this respect, AIIB has made a significant contribution in the preparation of TKYB's E&S policies. This first project with AIIB was a good test of the effectiveness of TKYB's E&S policies.

- 5. Will you consider working with the AIIB again in infrastructure development? Please provide a few specific reasons.**

Yes, definitely, we would consider and hope to continue working with AIIB again in infrastructure development. Already TKYB has been in touch with relevant colleagues at AIIB to discuss the potential and opportunities in the areas like infrastructure, climate, and renewable energy.

- 6. Do you have any suggestion to the Project Team and/or the AIIB for them to improve their operations in the future?**

It is very difficult to make any suggestions to the Project Team for success. The Team was perfectly professional yet friendly and understanding.

- 7. Other comments, such as comments on the reporting requirements, approval of project changes, etc.**

We would suggest not to have any size restriction for the projects as all of the projects will be evaluated and will need to be approved by AIIB anyways.