European Bank
for Reconstruction and Development

Independent Evaluation Department

PROJECT EVALUATION

Terna Rachoula Wind Farms

Greece

Op ID: 49517

IEvD ID: PE22-608

EBRD INDEPENDENT EVALUATION DEPARTMENT • December 2023

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This report was independently prepared by IEvD and is circulated under the authority of the Chief Evaluator, Véronique Salze-Lozac'h. It was prepared under the supervision of **Samer Hachem, Director of Sector, Country and Project Evaluations Division**, by **Alejandra Palma, Principal II, Evaluation Manager,** and with support from **Tom Bartos, Associate Director, Senior Evaluation Manager** and **Martin Schunk, Analyst.** It was reviewed internally by **Theo Sands, Principal II, Evaluation Manager**.

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Contents

Project Data

Operation Name	Terna Rachoula Wind Farms	**Country**	Greece
Portfolio Class	Private Sector	**Industry Classification**	Wind Electric Power Generation
Company/Borrower	Aioliki Rachoulas Dervenochorion SA	**Board Doc. Code**	SGS18-297
Project Code	49517	**Project Status**	Active
Project Type	Senior Debt	**Operation Type**	Sub-operation
Operation Leader	Theodosios Mitsiopoulos Joel Burghoff	**Original Commitment**	Up to €18 million
Environmental Cat.	B	**Investment Status**	Repaying

Post-Evaluation Responsibility	
PE Team	Alejandra Palma Tom Bartos
IEvD PE ID Number	PE22-608
PE Distribution Date	December 2023

Abbreviations

ADMIE	Independent Power Transmission Operator
AER	Annual Environmental Report
AESR	Annual Environmental & Social Report
CoO	Countries of Operation
CRM	Concept Review Memorandum
CRS	Credit Review Summary
CSD	Climate Strategy and Delivery
DAQs	Directors Advisers' Questions
DSRA	Debt Service Reserve Account
EBRD	European Bank for Reconstruction and Development
ESAP	Environmental and Social Action Plan
ESD	Environment and Sustainability Department
ESDD	Environmental and Social Due Diligence
EU	European Union
FRM	Final Review Memorandum
GET	Green Economy Transition
GREF	Greek Renewable Energy Framework
HEREMA	Hellenic Hydrocarbon Resources & Energy Resources Management Company
IEvD	Independent Evaluation Department
OECD-DAC	The Organisation for Economic Co-operation and Development's Development Assistance Committee
GW	Gigawatt
DTM	Deal Tracking Module
IFI	International Financial Institution
IPAM	Independent Project Accountability Mechanism
LTT	Legal Transition Team
MW	Megawatt
NTS	Non-Technical Summary
OCCO	Office of the Chief Compliance Officer
OL	Operation Leader
O&M	Operations and Maintenance
NECP	National Energy and Climate Plan
PE	Project Evaluation
PMM	Project Monitoring Module
PMR	Project Monitoring Report
PPA	Power Purchase Agreement
PSD	Project Summary Document
RAE	Greek Regulatory Authority for Energy
RE	Renewable Energy
RES	Renewable Energy Sources
RO	EBRD Resident Office
SEI	Sustainable Energy Initiative
SIP	Strategy Implementation Plan
SPV	Special Purpose Vehicle
TC	Technical Cooperation
TE	Terna Energy S.A.
TIMS	Transition Impact Monitoring System
TQ	Transition Quality
SBIC	Small Business Investment Committee

Project Performance Ratings

Table 1: Summary of IEvD's Project Performance Ratings

Criteria / Sub-Criteria	*IEvD Ratings* *[recommended rating]*
	De Be St Ou
1. Relevance	Standard
	[Standard]
1.1 Strategic Relevance	*Outstanding*
1.2 Specification of Design & Expected Results	*Below Standard*
1.3 Additionality	*Standard*
	De Be St Ou
2. Effectiveness	Standard
	[Standard or Outstanding]
2.1 Achievement of Outputs	*Standard*
2.2 Contribution to Expected Outcomes	*Standard*
2.3 Contribution to Expected Impacts	*Outstanding*
	De Be St Ou
3. Efficiency	Standard
	[Standard]
3.1 Financial Performance of Project/Client	*Standard*
3.2 Bank Investment Profitability	*Standard*
3.3 Bank Execution Performance	*Standard*
	Hi Un Ma Sa Go Ex
Overall Project Performance Rating	Good
	[Good]
4. Derived Ratings	
4.1 Transition Impact	*Outstanding*
4.2 Environmental & Social Performance	*Standard*
4.3 Additionality	*Standard*
4.4 Sound Banking	*Standard*

The following rating scales apply:
Criteria and sub-criteria: Outstanding – Standard – Below Standard – Deficient – No Opinion Possible, Not Applicable
Overall performance: Excellent – Good – Satisfactory – Marginal – Unsatisfactory – Highly Unsatisfactory

Executive Summary

Introduction

This evaluation is an ex-post assessment of the performance of the Terna Rachoula Wind Farms operation (OpId: 49517). The evaluation also comments on the results of policy dialogue conducted by the Bank in the wind power sector in Greece during the time this project was approved. This evaluation was completed based on analyses of project documents, interviews with client officers from different departments, the Greek Ministry of Environment and Energy and EBRD bankers, plus a site visit to the project.

Project description

Terna Rachoula Wind Farms was approved by delegated authority in 2018 under the 2017 Greek Renewable Energy Framework (GREF) (OpId: 49024).

At approval, the project proposed a senior secured bond loan to Aioliki Rachoulas Dervenochorion S.A. of up to €36 million (reduced to €33 million at signing) for refinancing an existing loan from Alpha Bank and an equity release to the project's Sponsor in respect to three fully completed and operating wind farms with a total installed capacity of 44 Megawatts (MW). The Bank's Client and the project's developer was Terna Energy (TE or the Sponsor), the leading renewable energy (RE) operator in Greece. Alpha Bank co-financed the project on a 50-50 basis (€16.5 million each).

This operation was the second sub-project under the GREF and intended to contribute to the framework's Transition Impact (TI) objectives by "supporting the development of new renewable energy capacity under the Green Transition quality" (based on the expectation that the released equity would be reinvested in new RE projects). The proposal was atypical as this installation of RE had already largely been completed at approval, financed by the Sponsor and Alpha Bank's loan. EBRD was rather enabling a leading developer of RE in Greece to recover its equity, with an expectation that it would be reinvested in new RE projects with approximately 25 MW capacity.

Expected additionality was to stem from:

- Terms: limited ability of Greek commercial banks to provide long term finance.
- Attributes: regulatory comfort for the new Renewable Energy Support Scheme in Greece.

There was no technical cooperation (TC) or policy dialogue directly associated with this project. However, at the time of its approval and implementation, EBRD had been supporting the Greek Regulatory Authority for Energy (RAE) by providing technical advice in the design and preparation of dynamic auctions for Greece's Renewable Energy Support Scheme. In addition, the Bank embarked on the implementation of a TC assisting the Ministry of Environment and Energy in developing an Offshore Wind Regulatory Framework.

Overall Performance

Based on evaluative findings, the project's overall rating is *Good*, derived from *standard* ratings for Relevance, Effectiveness and Efficiency.

The Relevance of the project is considered *standard* on the basis of sub-criteria ratings of *outstanding* for strategic relevance, *below standard* for specification of design and expected results and *standard* additionality.

At approval, the project was highly consistent with EBRD's strategies and initiatives and with Greece's own strategic

frameworks and regulatory changes. Beyond its alignment, the evidence bespeaks how the project actively helped both EBRD and the country deliver on their policy and strategic intentions. Notably, the operation remained closely aligned over time and continues to be of decisive strategic relevance at present, as it fits into the EBRD's, country's and EU's longer-term strategies. The project has been transformational in terms of contributing to the delivery of the Green Transition and pioneering RE regulatory frameworks (as discussed in the Impacts section: *page 14*) with strong potential demonstration effect. **IEvD rates the strategic relevance of the project *outstanding*.**

IEvD finds that although the design logic of the project was atypical for EBRD, it was generally sound. However, completeness and clarity of specification of expected results was only partly adequate. Importantly, the Sponsor's key commitment to use equity released under the project in an agreed way could have been much stronger and better incorporated into the legal agreements, while approval documentation could have been clearer on the pre and post refinancing structures. **Specification of design and expected results is rated *below standard*.**

The Bank's non-financial additionality in Greece's RE sector was strong, both as a supporter of the recently introduced Renewable Energy Support Scheme, as well as an institution leading the development of a regulatory framework for offshore wind. As a major player in the country's policy dialogue in this sector, it was important for the Bank to demonstrate its confidence in the system and the sector by financing selected wind power projects. From the financial perspective, there is a possibility that a leading wind power developer (such as the Sponsor) could have secured financing with one of the three remaining leading Greek banks, albeit with a shorter tenor. Nevertheless, the case for refinancing and higher leveraging (including some equity release) of this project was relatively strong.

IEvD notes that the project is an example of a "missed opportunity" for making a more robust case for the Bank's additionality. The Bank did not insist on strong conditionalities to ensure and enforce the Client's investment of the released equity in RE projects in the Bank's CoOs. A more solid commitment that the money would be used for EBRD's transition impact-related objectives would have been the strongest justification for the Bank's financing versus a commercial bank, as the latter would not have been concerned with the Sponsor's use of the released equity. **The additionality of the project is thus rated *standard*.**

Based on the project's *standard* achievement of outputs and contribution to expected outcomes, and *outstanding* contribution to expected impacts, **effectiveness is rated *standard.***

The project effectively contributed to the increase in Greece's RE generation capacity, and thus the green Transition Quality (TQ). There is evidence that after the release of the equity from this project (€13.6 million), the Sponsor invested €51 million over time into approximately 201 MW of new wind power farms in Greece. This contributed to the country's increased RE generation capacity. At approval in 2018, the installed capacity for wind power in Greece stood at 2.6 GW and increased to 4.7 GW by 2022 (approximately an 80% rise in four years). TE contributed a sizable 9.5% to this increase, part of which was financed from the equity released under this project. In 2022, TE was the top wind energy producer in Greece with 763 MW capacity, up from 562 MW in 2017 – 36% growth in just five years.

In 2021, Greece ranked eighth in the world in think tank Ember's chart for the highest share of wind and solar electricity generation, also topping the Balkan's chart at 28.7%. The country also placed eighth for highest wind power share of electricity

generation, accounting for 20% of the global total.[1]

The project contributed (in combination with a related TC) to an enhanced regulatory environment in Greece's RE sector. Independently of this project (however still within the renewable energy sources (RES)/wind power sub-sector), the Bank approved and implemented a TC to assist the Greek Ministry of Environment and Energy in developing an Offshore Wind Regulatory Framework. The consultants' technical report was shared with the authorities after an extensive period of engagement led by the Bank (including the Energy Team and EBRD Resident Office (RO) bankers). The report was an outstanding success, as evidenced by the Greek Parliament's approval of the country's first Offshore Wind Law in August 2022. The TC was instrumental in this achievement, as the legislation is closely based on the technical report, as confirmed by Ministry officials interviewed by IEvD. EBRD's engagement under this TC contributed to the achievement of broader Transition objectives in the wind power sub-sector in Greece, so this TC was taken into account as part of this project's evaluation. However, it is too soon to assess the impact of the new law as no offshore farms have yet been constructed, although several sites have been selected and approved.

The project performed well. However, market changes in late 2020 meant the EBRD decreased its margin to avoid the Sponsor's refinancing of its loan. The risk adjusted profitability remained acceptable to the Bank, mostly as a result of upgrades in the project's risk rating. Based on *standard* financial performance of project/client, *standard* bank investment profitability and *standard* bank execution performance, **IEvD rates efficiency as *standard.***

EBRD has the potential to build more RE capacity in Greece, capitalising on the country's offshore wind momentum. Firstly, there is scope to continue to support institutional capacity for RES development in Greece. Secondly, there is the possibility of financing groundbreaking projects, which will likely incur substantial costs. Thirdly, the Bank could help further enhance the competitive edge of Greece's RES system by continuing to advise on the implementation of auction schemes.

Lessons and Recommendations

This evaluation identifies **two lessons** that are worth capturing for future interventions.

EBRD's role in supporting systemic change in advanced countries

In more advanced countries, EBRD can still play an important role in the Energy sector and support systemic change through policy dialogue. This includes the development of regulatory frameworks that are completely new (e.g. offshore wind) and investing within the new frameworks for demonstration effect.

EBRD's additionality in financing equity release in RE projects

Clients that break ground with their own funds understand their project better. Initially financing projects with their own equity (i.e., for construction phases) also eliminates the often time-consuming due diligence processes that are needed for loan approvals. The Bank's financing may be more competitive after construction risks have been eliminated and RE developers are looking to refinance other banks' debt and a release of equity to redirect it to the development of their pipelines. In this type of transaction, EBRD can enhance its additionality by being more demanding at the outset regarding the use of the equity

[1] Ember. Global Electricity Review. https://ember-climate.org/insights/research/global-electricity-review-2022/

release proceeds, i.e., strong conditionalities to use it in-line with the EBRD's transition impact-related objectives.

This evaluation also offers **three recommendations** that translate into direct actions and steps that may support future projects and impact.

Recommendation 1: Seek ways to enhance additionality with repeat clients in advanced countries

To maintain or increase EBRD's additionality with strong, repeat clients in advanced countries, the Bank's efforts could be two-fold. Firstly, the Bank can actively mobilise commercial financing to avoid crowding out local banks. Secondly, the Bank can complement financing activities with policy dialogue and technical assistance, targeting more ambitious transition objectives. This recommendation echoes, and is reinforced by the findings and lessons of several IEvD project validations.

Recommendation 2: Strive to replicate the successful experience with the development of offshore wind power regulation in Greece

EBRD's experience with the development of offshore wind power regulation in Greece has significant potential to be applied elsewhere. Within the current context, where energy security is being prioritised, EBRD should explore the possibility of supporting the development of offshore wind in other CoOs.

Recommendation 3: Incorporate agreements regarding the utilisation of proceeds from equity release for new RE operations into the project structure

The Bank's financing of equity release with an objective of a client reinvesting the proceeds of such a release into new RE projects, should be based on a precise and legally-binding agreement. This ensures that the funds will be used as agreed. To the maximum extent possible, while in adherence to the Bank's procedure on Material Non-Public Information (MNPI) and its impact on Banking operations, such agreements should include the total amount of commitment and timelines. It is also important that they include key technical parameters of the investments (e.g., MW capacity) and their locations (limited to EBRD's CoOs). Moreover, these should cover clauses on investment verification processes, dispute resolution and the like. A separate agreement (for bonds) or covenanting of such a commitment in the loan agreement (for loans) could be preferred ways to incorporate it into the project's legal structure.

1. Project and Context

1.1. Project Description

Terna Rachoula Wind Farms (OpId: 49517) was approved under delegated authority in 2018 under the 2017 GREF (OpId: 49024).

At approval, the project proposed a senior secured bond loan of up to €36 million for the development, construction, refinancing, financing and operation of three wind farms with a total installed capacity of 44 MW. Ultimately, the actual amount signed in the loan agreement and disbursed was €33 million. This was co-financed with Alpha Bank on a 50-50 basis, resulting in EBRD financing €16.5 million.

The borrower, Aioliki Rachoulas Dervenochorion S.A., is a Special Purpose Vehicle (SPV) fully owned by TE, which is a company incorporated in Greece. TE's core business is to develop, build and operate RE power plants. TE currently owns the largest RE portfolio in Greece with 763 MW, the majority of which is wind power. TE has been listed on the Athens Stock Exchange since 2007, with a market capitalisation of approximately €2.04 billion as of February 2023. The Sponsor's main shareholders are GEK Terna Group (38%), Terna Energy's Chairman George Peristeris (11%) and Atale Enterprises Limited (6%). GEK Terna is a Greek conglomerate whose main activities include construction and RE generation. Both TE and GEK Terna were existing clients of EBRD at approval.

The operation consisted of three wind farm phases. The first two phases were completed and in operation and the third phase was completed just before EBRD's financing. Further details of the three phases are:

- Phase 1: a 30 MW wind farm (R1) in operation since 2012, originally under a 20-year power purchase agreement (PPA). This was subsequently extended to 27 years.
- Phase 2: a 8 MW extension (R2) in operation since 2014, with a 20-year PPA.

TE's total equity investment for both phases amounted to €31.5 million, including a €12.1 million EU grant.

- Phase 3: a 6 MW extension (R3). R3 had been licenced under a new RE law, which provided for a Feed-in Premium PPA contract scheme at a total reference price of €98/MWh for 20 years. Construction of R3 had been completed.

In terms of expected TI, this operation was the second sub-project under the GREF and intended to "support the development of new renewable energy capacity under the Green Transition quality". Its contribution to the framework's TI was further described in the approval document as:

"Contribute directly [through refinancing of an equity bridge loan] to the installation of 6 MW of renewable energy, as well as more than 25 MW indirectly through [future investments to be financed by] equity released [from this project] to the Sponsor."

Based on approval documents, additionality was expected to stem from:

- Terms: limited ability from Greek commercial banks to provide long term finance (required due to the 20-year PPA).

- Attributes: comfort for the co-financer (Alpha Bank) with the new Renewable Energy Support Scheme in Greece (development to which EBRD contributed).

There was no TC or policy dialogue formally associated with this project. However, at the time of project approval, EBRD had been supporting the RAE by providing technical advice in the design and preparation of dynamic auctions for Greece's Renewable Energy Support Scheme (the Scheme). Moreover, during that time, the Bank embarked on the implementation of a TC, assisting the Ministry of Environment and Energy in developing an Offshore Wind Regulatory Framework. This project evaluation takes these complementing activities into account, acknowledging the synergies it created.

1.2. Country Context

The Greek banking sector faced several crises between the 2008 financial crisis and 2016. This period was characterised by a hefty scale of deleveraging as banks decreased lending significantly, with the credit portfolio contracting every year. The sector's proportion of loans against total assets decreased from more than 60% in 2017 to 46% in 2020.[2]

The number of domestic credit institutions in Greece more than halved between 2009-2021, falling from 35 to 15. Four banks are currently considered "systemically significant credit institutions", which control approximately 97% of banking assets (€328 billion) after consolidation. These banks are Piraeus Bank, National Bank of Greece, Alpha Bank and Eurobank. The individual shares of these banks point to a comparatively competitive market structure. Despite the presence of 19 foreign bank branches in the country, these have insignificant market shares.

EBRD's 2020 Country Strategy for Greece indicated that although the country completed its economic adjustment programme in August 2018, it continued to face significant challenges, particularly in securing much-needed foreign investment due to domestic funding constraints.

There has thus been some variability in the market regarding available finance. EBRD was quite additional in Greece in the earlier years due to the financial crisis. According to stakeholder interviews, the European Investment Bank (EIB) has not been very active in this sector because projects in Greece tend to be smaller, compared to other countries. They are often in the range of 50 MW or below; viewed as small tickets in terms of project cost and debt amount.

1.3. EBRD Context

Sustainability has always been at the centre of EBRD's operations. However, since the introduction of the Sustainable Energy Initiative (SEI) in 2006, it has been formally set as the Bank's strategic priority. The 2015 Green Economy Transition (GET) Initiative committed the Bank

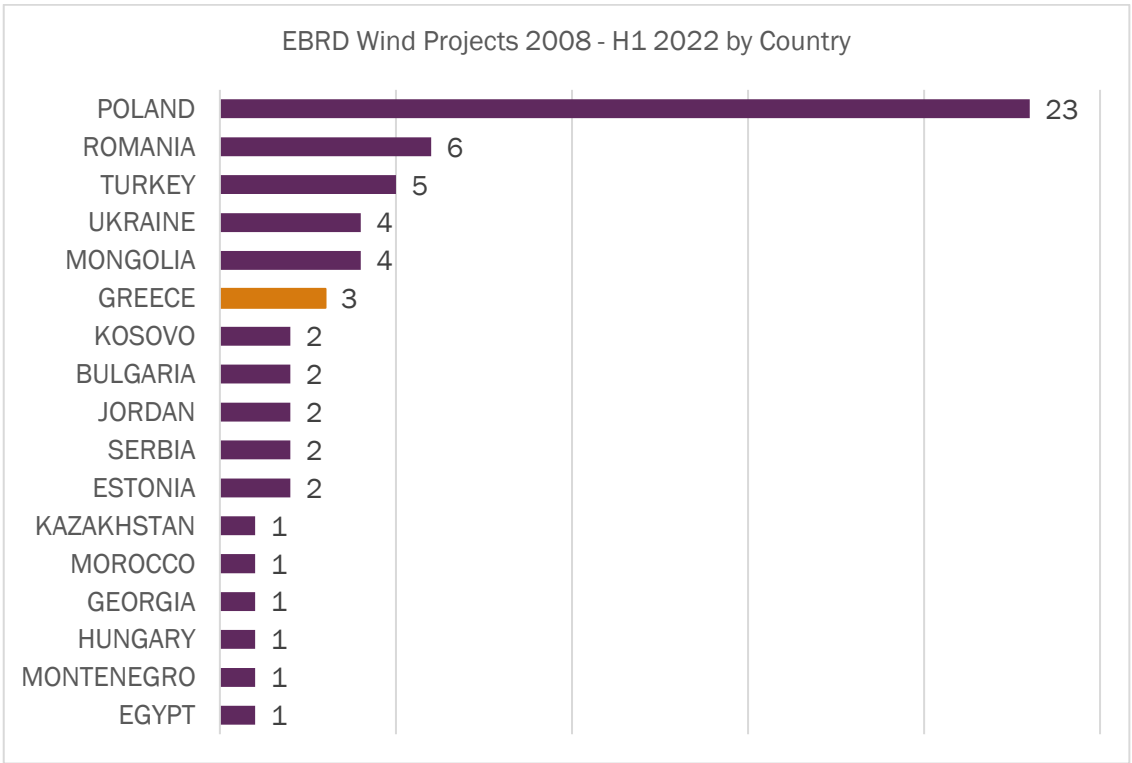
[2] Black Sea Trade and Development Bank. 2020. Overview of the financial sector in Greece.

to a sharp increase in green finance as a share of its total investments. Green was also introduced as one of six TQ in the revamped Transition Concept in 2016.[3]

The original GET was followed in 2020 by the Green Economy Transition Approach 2021-2025 (GET 2.0), which aimed to assist the Bank's CoOs in accelerating their transition to a green, low-carbon and resilient economy.

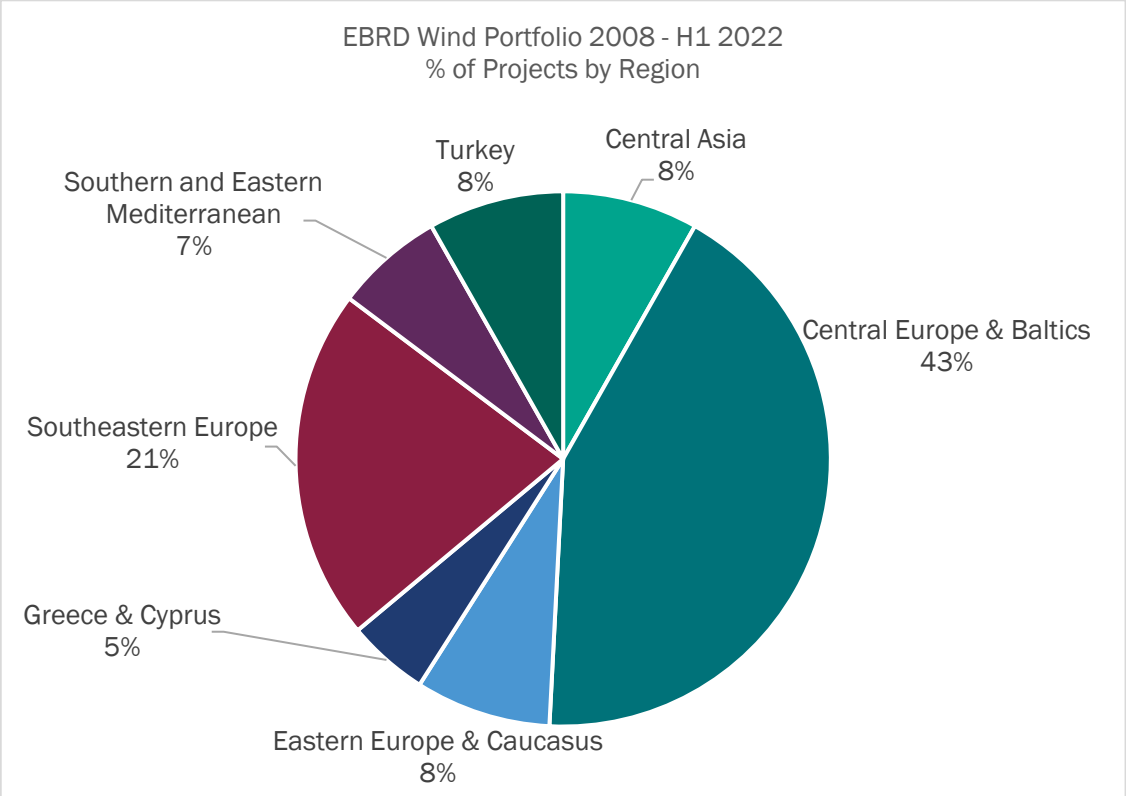
As part of its commitments under GET and GET 2.1, the Bank expanded its support to RE projects. A brief analysis of the EBRD's wind portfolio shows the positioning of the Terna Rachoula Wind Farms project in the sector and geographic context. Since 2008, EBRD has approved 61 wind operations for a total of €2.3 billion. A spike in the sector occurred in 2019, followed by a slow down during the COVID-19 pandemic. Nearly half (43%) of the projects were in the Central Europe and Baltics region. Poland had the lion's share with 23 operations, accounting for 38% of all wind projects. EBRD has approved three wind projects in Greece. The first one in 2016 for €50 million, Terna Rachoula Wind Farms in 2018 and the last one in 2019 for €18 million.

Figure 1: Number of EBRD Wind Power Projects by Country



[3] IEvD's Climate Initiatives Special Study (CS/AU/19-20)

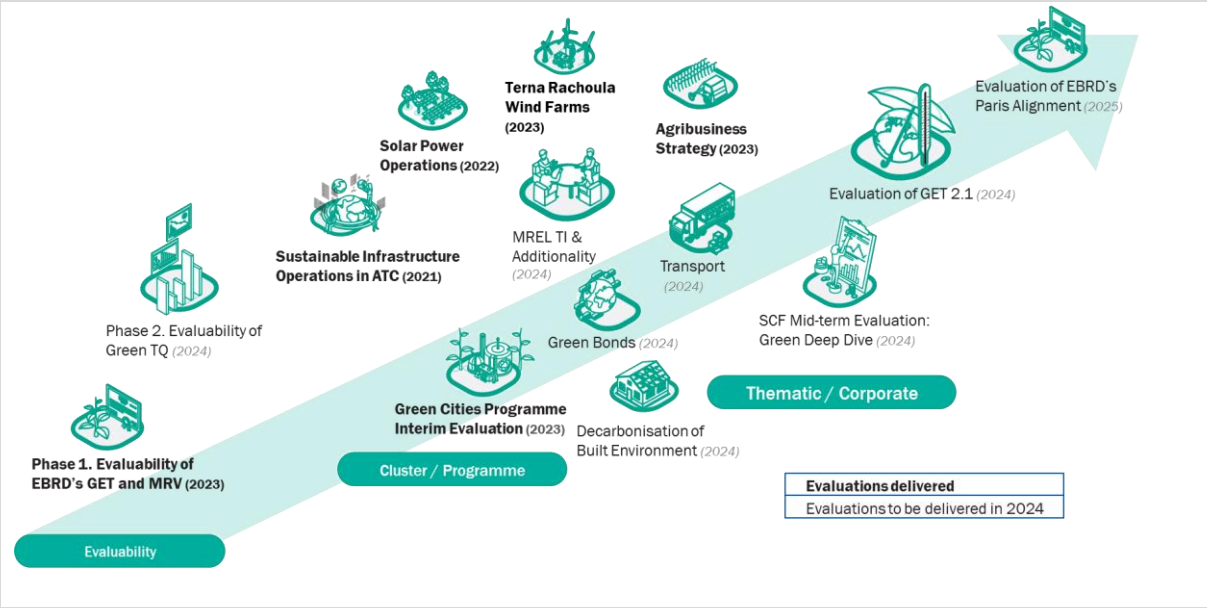
Figure 2: EBRD Wind Power Portfolio by Region



1.4. Evaluation Rationale and Methodology

The IEvD Work Programme and Budget anticipates the delivery of project-level evaluations, including coverage of EBRD's efforts on the green agenda. This project evaluation was conducted in the framework of IEvD's mid-term Strategic Plan. It is in-line with the priorities of EBRD's Strategic and Capital Framework 2021-2025. Findings, lessons, and recommendations from this evaluation are linked to other IEvD green products, completed or forthcoming. Figure 3 illustrates this green nexus.

Figure 3: IEvD's green products



This evaluation follows IEvD's methodology to assess the project's performance against operational objectives and TI benchmarks stated in approval documents. It also assesses the achievement of targets as defined in a reconstructed results framework prepared by IEvD, which is based on the information presented in these documents (Annex 1). IEvD's methodology aligns with the Evaluation Cooperation Group's (ECG) good practice standards and applies the Organisation for Economic Co-operation and Development's Development Assistance Committee's (OECD-DAC) evaluation criteria. It covers EBRD's additionality, sound banking and environmental and social compliance. The evaluation assessed whether refinancing led to the intended equity investment and the extent to which the operation contributed to expanding RE in Greece and was in support of the Bank's overall objective of strengthening the Green Transition.

This evaluation is not an assessment of the GREF nor its other sub-operations. However, it presents the contribution of Terna Rachoula Wind Farms to the GREF's objectives, as well as a brief account of the status of the other sub-operations.

2. Relevance

IEvD's overall rating of relevance is *standard*. This synthesis rating reflects the matching respective ratings for each of the sub criteria: *outstanding* strategic relevance, *below standard* specification of design and expected results and *standard* additionality.

2.1. Strategic Relevance

The relevance of this project in terms of the Bank's strategic fit is high due to its ambition to contribute to a green, low-carbon economy, as well as reduce net annual greenhouse gas (GHG) emissions. At approval, the project was directly aligned with the following strategies:

- In-line with EBRD's objective to increase the financing of projects that advance the transition to an environmentally sustainable, low-carbon economy and help prevent economies from being locked in a carbon-intensive and polluting pathway that depletes natural assets, EBRD's 2015 GET sought to increase the volume of green financing, specifically RE development in the power sector. It also sought to broaden the range of environmental projects, mostly through private financing and policy dialogue, and to drive the growth of the green economy.

- The Bank's Energy Sector Strategy 2019-2023 (ESS) set strategic directions. The first one is to promote decarbonised economies that are highly energy efficient, powered mainly by RE sources. In addition, to support climate goals and air quality concerns, the Bank would focus on scaling up RE.

- EBRD's 2016 Strategy for Greece defined its third priority as support for private sector participation and commercialisation in the Energy and Infrastructure sectors to enhance regional integration and improve quality of utility services. The operational focus would be on the promotion of a transition to a low-carbon economy through private sector investment in RE and energy efficiency. Finally, the Bank would also engage in policy dialogue to support market reforms in the Energy sector with a view to ensuring regulatory and institutional frameworks are conducive to investment.

The operation has also remained in-line with the Bank's evolving strategies over time:

- In 2020, EBRD updated its GET approach. GET 2.1 intends to support the acceleration of the transition to a green, low-carbon and resilient economy through, among others, enhancing policy engagement for the development of long-term and low-carbon strategies. Climate change mitigation is a GET 2.1 objective, seeking to achieve net GHG emissions reduction of 25 to 40 million tonnes over the 2021-2025 period. Based on the initial momentum for RE development created with the direct support of the Bank, it would pursue this key activity, accelerating the decarbonisation of the electricity sector.

- The Bank's most recent Strategy for Greece (2020-2025) identified one of the priorities as supporting sustainable Energy and Infrastructure sectors. Its first objective is increased RE capacity and a more diversified energy mix to promote decarbonisation of the economy.

In terms of consistency of EBRD support with Greece's own strategic frameworks and regulatory changes, the project is also seamlessly aligned with, and delivers on, the country's national plan, energy and climate strategies and EU targets. By adding installed capacity, co-investing with a local bank and generating RE, the operation follows the directions for RE sector development in Greece and directly contributes to their achievement.

- The Economic and Financial Affairs Council (ECOFIN) of the EU approved the National Recovery and Resilience Plan "Greece 2.0" in July 2021. The first of its four pillars is Green Transition. Component 1, Power up, is underscored as a high priority for the country, aiming at a transition to a new, low-carbon energy model. The objective is to contribute to climate and energy targets, which Greece has ambitiously embarked upon. This includes reducing GHG emissions, increasing the share of RE sources in gross final energy consumption and improving energy efficiency. Greece aims to achieve this through investments that amplify the resilience of the electricity network, its capacity and its energy storage capabilities, thus allowing a greater penetration of RES in the energy mix.

- The Government of Greece's climate ambitions are laid out in the National Energy and Climate Plan (NECP), which was ratified in 2019. It sets out a detailed roadmap to attain specific objectives by 2030. The government has recently been reviewing its NECP to reflect the latest guidelines and goals set by REPower EU, as released in May 2022. This European Commission (EC) plan is a response to energy market disruptions from Russia's invasion of Ukraine, seeking to speedily reduce dependence on Russian fossil fuels by 2027. In January 2023, revisions to the NECP envisaged RE installations to total approximately 28 GW of capacity (up from 19 GW in the previous plan, marking a 47% increase) and the current 10 GW. More specifically, the target for onshore wind power remained at 7 GW, but with an additional 2.7 GW of offshore wind. The majority of RE capacity is expected to come from solar power, with an objective of 14.1 GW. For hydroelectric plants, the goal is set at 4 GW. The new plan was submitted for public consultation and Greece was among the first countries to submit the plan to the EC for evaluation.

EBRD's support shows high internal and external coherence and is consistent with Greece's own strategic frameworks and regulatory changes. There were strong synergies and interlinkages between the project and the Bank's policy dialogue and technical assistance efforts in the onshore and offshore wind power sector. Regarding onshore wind, EBRD supported RAE on the design, preparation and implementation of dynamic auctions for the Scheme. The Ministry of Environment and Energy signed the ministerial decision in April 2018 and under this new Scheme, Greece was shifting from administratively set Feed-in Tariffs towards a support scheme with Feed-in Premium/Reference Tariffs set through competitive auctions. The third phase of this project (R3) was licenced under this new RE law, which provided a Feed-in Premium PPA contract scheme at a total reference price of €98/MWh for 20 years.

The project is also consistent with the relevant EU guidelines and objectives and the EC's plan to produce clean energy and diversify energy supplies. Given the country's ambitious targets, there is complementarity with other actor's interventions in the sector, such as EIB's investments. At the end of 2019, EBRD welcomed the EIB's ambitious new energy lending policy, considering it well-aligned with the Bank's ESS, particularly on the primacy it placed on RE sources and market-based models to stimulate their investment.[4] TE works with both EBRD and EIB. Efforts have

[4] SGS19-453

been harmonised and co-ordinated, resulting in the achievement of projects, plus higher level objectives.

Based on all elements above, IEvD rates the strategic relevance of the project *outstanding*. At approval, the project was highly consistent with EBRD's strategies and initiatives and with Greece's own strategic frameworks and regulatory changes. Beyond being in alignment, the evidence bespeaks how the project actively helped both EBRD and Greece deliver on their policy and strategic intentions. Notably, the operation remained closely aligned over time and continues to be of decisive strategic relevance at present, as it fits into the EBRD's, country's and EU's longer-term strategies. The project has been transformational in terms of helping support the delivery of the Green Transition and pioneering RE regulatory frameworks (as discussed in the Impacts section: see *page 14*) with strong potential demonstration effect.

2.2. Specification of Design and Expected Results

The project is a sub-operation of the GREF. Monitoring benchmarks took place at the framework level and pertained to the amount of EBRD financing and carbon dioxide (CO_2) savings. The documentation did not indicate any associated TC or policy dialogue expressly linked to this project. IEvD notes that the ad-hoc assistance and relations with the Greek regulator since 2016 could have been referred to in the approval documents. The evaluation covered the following sub-criteria to assess the specification of design and expected results:

- Completeness and clarity of specification of expected results
- Plausibility of sources of expected TI
- Evidence of use of experience and lessons to shape design

The specification of expected results was broadly complete. Drawing on information in the approval documentation and framework monitoring reports, IEvD reconstructed the ex-post results framework for the project to structure the evaluation. It presents benchmarks for the project and the expected contribution to the framework. This exercise was straightforward,[5] which points to completeness of specification of the expected results.

One aspect requiring additional clarification was the use of proceeds from the Client's expected equity release, given the different references to it in the available documentation. Finally, there was no clear table showing the project financing structure before and after refinancing.

This evaluation notes that, beyond the approval documentation, the Sponsor's commitment to utilise the released equity to finance new RE projects was provided in the form of a short side letter from the Sponsor to EBRD and Alpha Bank.

In IEvD's view, such an important commitment (on which the delivery of this project's objectives and TI depended) should have been drafted to the extent possible, while in adherence to the Bank's procedure on MNPI and its impact on Banking operations. If it could not be covenanted, it should have been drafted as a separate agreement, ensuring it adhered to the MNPI procedure. Ambiguity of the side letter could have exposed the EBRD to several risks, e.g. reinvestments

[5] IEvD shared the results framework with Management in the approach paper for this evaluation, and no disagreement was expressed in the comments received by IEvD.

being insufficient, being outside of the Bank's CoOs, a dispute on how to verify that they were made and so on.

Sources of the project's expected TI are not clearly described in its approval document in terms of the Bank's direct and indirect contribution to the addition of RE capacity in Greece, as said capacity had already been added and in operation at the time of approval. These would have been there and continued to operate if the Bank's financing had not happened. The source of TI of this project was an expectation that the Sponsor reinvest the released equity into new, unspecified RE projects. There is no clarity on how the capacity of 25 MW (which was to stem from such reinvestment) was calculated. The realisation of such expectation depended on the Sponsor's goodwill, given its relatively weak commitment under a side letter.

The approval documentation does not present explicit evidence of integrating experience and lessons in project design, except for the design of the financing structure. Project finance is subject to particular requirements in Greece, as it must be structured as a bond, even though it is not listed. For this structure, bond programme documentation needs to be prepared and a bond agent employed. The EBRD's Banking Team has been versed in these modalities, having worked on this type of structure a number of times. Likewise, the Bank has financed transactions where the EBRD's investment was used to release a Sponsor's capital. The results showed that Clients did use such released equity to invest in new projects in their pipelines. Without such release, Sponsors mentioned they struggled to source seed funding. EBRD had financed such transactions in Bulgaria and Poland. Based on these lessons, the Team favours pursuing projects that combine the financing of equity release and CapEx. However, this was not possible at this time as all phases of the project were completed and preparing a new one would have taken a long time.

On this basis, specification of design and expected results is rated *below standard*. IEvD finds that although the design logic of the project was atypical for EBRD, it was generally sound. However, completeness and clarity of specification of expected results was only partly adequate. Importantly, the Sponsor's key commitment to use equity released under the project in an agreed way could have been much stronger and better incorporated into the legal agreements, while approval documentation could have been clearer on the pre and post refinancing structures.

2.3. Additionality

At approval, additionality was expected to stem from:

- Terms: limited ability from Greek commercial banks to provide long term finance.
- Attributes: regulatory comfort for the new Renewable Energy Support Scheme in Greece.

Sources of financial additionality included availability of funding and tenor. At origination, other than the four Greek banks, there was practically no other funding available. During interviews, the Client stated that availability of funding for the Greek corporate sector was insufficient for many years. Although in theory the local banks could extend credit, borrowers would have needed to overcome significant milestones and hurdles. On the country level, at the time of the project's approval, Greece had very strict deadlines and targets on the fiscal side. Liquidity conditions were a major issue. In terms of timelines, to obtain funding and start an operation, proposals and drafts had to be prepared much in advance. In the Client's case, this would have meant 2016, when the broader economic context was even more challenging. This affected Greece's corporate

world for a very long period and conditions have only recently started to normalise. For the Client, working with EBRD proved attractive due to a combination of the availability of project-level or corporate funding and the terms offered. In the absence of EBRD participation, the Client could have sought financing with other major Greek banks (Alpha Bank was unlikely to increase its financing due to exposure limits). Given the size and record of the Sponsor, its balance profile at that time and their ambition for growth, it seems likely the Client would have obtained funding, but it is uncertain whether it would have secured an equivalent tenor.

EBRD's terms also allowed greater diversification of financing sources. Besides pure access to financing, the Client explained that it sought to diversify its financing sources. The Sponsor had a significant pipeline and existing exposure among the major local banks. It needed to diversify its lending base to be able to substantially expand renewables, which would have been challenging while working with only four banks. The latter, at that stage, were also heavily supported by capitalisations from the State. The Client sought to engage with EBRD to increase its funding base for its ambitious plans.

EBRD's financial additionality eroded in the following years. It is noted that in late 2020, conditions in the Greek market substantially improved and the Sponsor considered refinancing both EBRD's and Alpha Bank's loans with other local banks. EBRD agreed to reduce its margin to align it with the prevailing market conditions. This eroded the Bank's financial additionality. Echoing IEvD's Solar Power Operations cluster evaluation (SS21-162), it has been challenging for the Bank to demonstrate additionality in countries with a more developed renewable sector. EBRD financed only two projects under GREF. The 2020 Greece Country Strategy stated that the "€300m Renewable Energy Framework has increased renewables penetration, but [the] crowded space has limited opportunities for the Bank".

The Bank's non-financial additionality in the Greek RE sector was strong, both as a supporter of the recently introduced Scheme and as an institution leading the development of a regulatory framework for offshore wind. As a major player in the Greek policy dialogue in this sector, it was important for the Bank to demonstrate its confidence in the system and the sector by financing selected wind power projects. The Scheme came into place in Greece in 2016. It was more market-based and introduced competitive auctions to replace fixed-price Feed-in Tariffs. The following year, the EBRD Board of Directors approved the GREF, committing up to €300 million to finance RE investments in Greece.

EBRD had been actively engaging in policy dialogue with the Greek authorities and the Ministry of Environment and Energy for the implementation of the Scheme through its investment in the Energy Exchange and overall reforms in Greece's electricity sector. The Banking Team supported RAE from the early days, while the Scheme was in the works. EBRD provided technical advice in the design and preparation of the dynamic auctions. Once launched, assistance was maintained through regular exchange. IEvD notes that this support was ad-hoc and not under any TC (see Section 5.1 for more details: *page 20*).

EBRD attributes proved additional by providing regulatory comfort and demonstrating effect. At the time of project approval, the Scheme was new and untested, presenting a regulatory risk for participants. EBRD took on the Terna Rachoula Wind Farms project under this risk for the operation of R3. An EBRD requirement was to work with a local bank and it is noted that the financing of this project was led by a local commercial bank (Alpha Bank), which invited EBRD to participate in this transaction to address untested regulatory risks. EBRD's participation and taking on half of the risk provided another level of comfort. Moreover, the Client affirmed during interviews that it considered EBRD an experienced institution that could accurately assess and underwrite the risk, and as such, afforded reassurance to the local bank. Ultimately, the project

has been operating well under the Scheme. EBRD's success in financing wind power in other CoOs, and its experience and record of accomplishment in the region, was also a valued feature in the existing relationship. The experience demonstrated that onshore auctions could function and be profitable. The auction project has been an example of success to the extent that EBRD organised a workshop in Albania in 2018 to showcase it and promote competitive auctions. The Greek regulator was invited to share its experience, present its platform and discuss the issues faced while launching the auctions.

However, despite its acceptable additionality, IEvD notes that the project is an example of a "missed opportunity" for making a stronger case for the Bank's additionality. The Bank did not insist on strong conditionalities to ensure and enforce the Client's investment of the released equity in RE projects in the Bank's CoOs. In IEvD's view, this would be the strongest argument for EBRD's financing of this project versus a commercial bank, as the latter would not have been concerned with the Sponsor's use of the released equity. A more solid commitment that the money would be used to help objectives that support the Bank's TI would have been the strongest justification for the Bank's financing.

In light of the evidence, additionality of the project is rated *standard*. Claims justifying important areas of additionality were plausible at the time of approval and critical aspects of claimed EBRD additionality, both on the Bank's terms and attributes, were borne out. Overall, it is possible that a leading wind power developer (such as the Sponsor) could have secured financing with one of the three remaining leading Greek banks, albeit with a shorter tenor. Nevertheless, the case for refinancing and higher leveraging (including some equity release) of this project was relatively strong. Also, the Sponsor planned to diversify its funding base and working with EBRD was part of its longer-term strategy.

3. Results

An overall rating of *standard* reflects the underlying ratings for output, outcome and impact achievement. The project delivered on its intended results that were anticipated at approval. Objectives were set out in the project's delegated approval reporting sheet and more broadly in the GREF Board documentation. The Transition Impact Monitoring System (TIMS) provides more details on the timing of target achievements. Some of the objectives purport to be impact benchmarks, but some are largely outcome level targets. The last TIMS (July 2022) indicated an Expected Transition Impact (ETI) score of 60 and a Portfolio Transition Impact (PTI) score of 65, up from 60 in the previous assessment two years earlier. The achievement of results is assessed using the OECD-DAC criteria of outputs, outcomes and impacts. The reconstructed Results Framework for the project is presented in Annex 1.

3.1. Outputs

At approval, the construction of all three phases of the Terna Rachoula Wind Farms had been completed. R1 (30 MW) and R2 (8 MW) had been in operation since November 2011 and August 2014, respectively. The extension R3 had been completed as well, financed on a short-term basis by an equity bridge loan in anticipation of securing long-term project finance.

The extension under R3 became operational in June 2018. The bond loan's full disbursement and the previous loan refinancing took place in May 2019. The 2020 Project Monitoring Module (PMM) reported that the 44 MW operating wind farm was performing successfully in 2019. The construction of R3 was completed prior to EBRD financing. No proceeds from the loan were used for brick-and-mortar outputs.

In March 2019, TE confirmed (through a side letter) its intention to invest a share of the equity released through the refinancing of this project into new RE projects. EBRD bankers interviewed by IEvD indicated that they understood (although it was not specified in the letter) that such investments would be in Greece, mainly for projects in the Client's pipeline, which were approximately 80 MW in aggregate at that time. Such a letter was a Conditions Precedent (CP) of the Bond Purchase Agreement.

Ultimately, there is evidence that the Sponsor complied with its commitment. In total, the Sponsor invested €51 million in new wind power projects in Greece, totalling approximately 201 MW.

Table 2: Outputs

Expected Project Operational Objectives (Outputs)	Results
Investment Programme • *Development* • *Construction* • *Refinancing* • *Financing* • *Operation* *of three wind farms with a total installed capacity of 44 MW.*	**Achieved** (partly even before the project's approval) • Construction of the third phase of the Project (R3), a 6 MW extension to the existing wind farms, was completed and commenced its commercial operation at the end of June 2018 (project was approved in July 2018). • The previous Alpha Bank loan was refinanced and fully repaid in May 2019. • Terna Rachoula Wind Farms, consisting of three phases with a total installed capacity of 44 MW, was operating by 2019.
TE's investment of the equity released into new RE in Greece • *To add at least 25 MW of new installed wind capacity by the end of 2019 (according to the project approval documentation).*	**Achieved** • Evidence of an intra-group loan to TE for investments in new RE projects in Greece. • Overall, TE added approximately 201 MW of wind power capacity in Greece in 2017-2022.

The achievement of project outputs is rated *standard*, based on the attainment of the investment programme and equity reinvestment benchmarks as expected.

3.2. Outcomes

The Bank's monitoring reports did not provide figures on the progress in achieving the target related to CO_2 emission savings, either direct or indirect. The project was expected to deliver CO_2 emission savings of approximately 10,550 tonnes annually from all three refinanced projects. At the framework level, the latest monitoring reports assess the benchmarks as on track but delayed. CO_2 savings figures are only presented for one operation, but they shed no light on the evaluated project's contribution.

The Client indicated that the overall CO_2 abatement for R1, R2 and R3 is 60,000 tonnes per year. Generation during 2021 would indicate 9,943 tonnes of CO_2 savings for R3. The approximation for 2021 using the initial methodology and actual higher levels of production yields savings of 12,830 tonnes of CO_2.

IEvD approximates the direct CO_2 savings (versus coal in metric tons) from R3 to be above expectations in 2021 using a third approximation: wind energy produces around 11 grams (g) of CO_2 per kilowatt hour (g CO_2/kWh) of electricity generated, compared with approximately 50g CO_2/kWh for solar, 980g CO_2/kWh for coal and 465g CO_2/kWh for natural gas.[6]

The last of the GREF's benchmark was not achieved, as the Bank did not finance five RE power plants with PPAs awarded by auction by 2020. Nevertheless, several projects with PPAs awarded

[6] Gavin Heath. National Renewable Energy Laboratory (NREL). https://www.energy.gov/eere/wind/articles/how-wind-energy-can-help-us-breathe-easier#:~:text=In%20general%2C%20lifecycle%20greenhouse%20gas,2%2FkWh%20for%20natural%20gas.

by auction have been financed without the Bank's support. The key ones are presented in the table below.

Table 3: Outcomes

Intended Business Results (Outcomes):	Results
Green Transition Quality (originally setting standards for corporate governance) Framework Level: • *Contribute to the overall sub-operations results in CO_2 emissions savings of at least 500,000 tonnes per year by the end of 2020.* Project Level: • *Contribute directly to emissions savings of 10,500 tCO_2 per annum.*	**Not Achieved** • 300,000 tonnes (GREF TIMS 2022). **Achieved** • No data (TIMS 2022). • EvD estimates savings above 10,500 tCO_2.
Resilient Transition Quality (originally demonstration of new replicable behaviours): Framework Level: • *Contribute to the financing of five RE power plants with PPAs awarded by auction by the end of 2020.*	**Partly Achieved** • EBRD has only financed two projects via GREF (TIMS 2022). • There have been several projects financed without the Bank's support, including: ○ RWE-PPC Renewables 205 MW Solar PV, Financed by Eurobank/Alpha Bank in 2022. ○ Kafireas Wind Park 330 MW (Terna Energy), financed by Greek banks in 2021-2023. ○ Cero Energy 100 MW Solar PV in Northern Greece (Sponsor: Macquarie), financed by Greek banks. ○ PPC Renewables 230 MW solar PV park in Western Macedonia, financed by Greek banks and EIB.

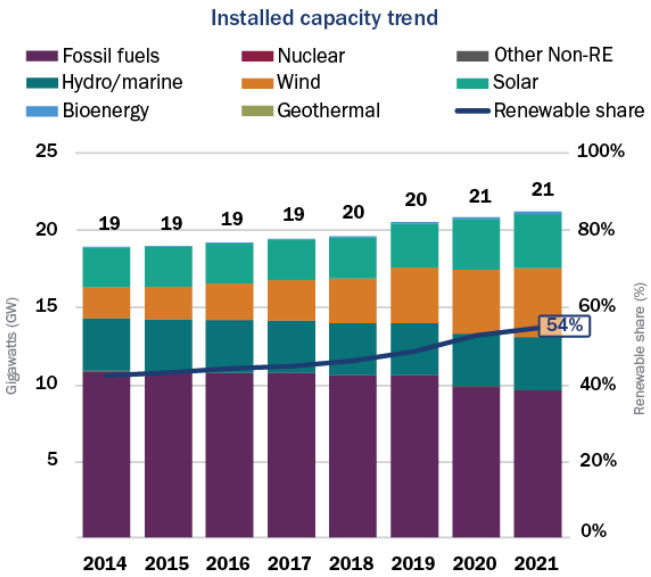
IEvD rates the contribution to expected outcomes *standard*. Despite only partly attaining the benchmarks set at the framework level, the project-level target to contribute directly to emissions savings was achieved.

3.3. Impacts

The project's contribution to the increase of RE's installed capacity in Greece exceeded expectations. The Terna Rachoula Wind Farms project was the second sub-operation under the GREF and it intended to support the development of new RE capacity under the Green Transition Quality. In 2021, Greece ranked eighth in the world in think tank Ember's chart for the highest share of wind and solar in electricity generation, also topping the Balkan's chart at 28.7%. The country also placed eighth for highest wind power share of electricity generation, accounting for

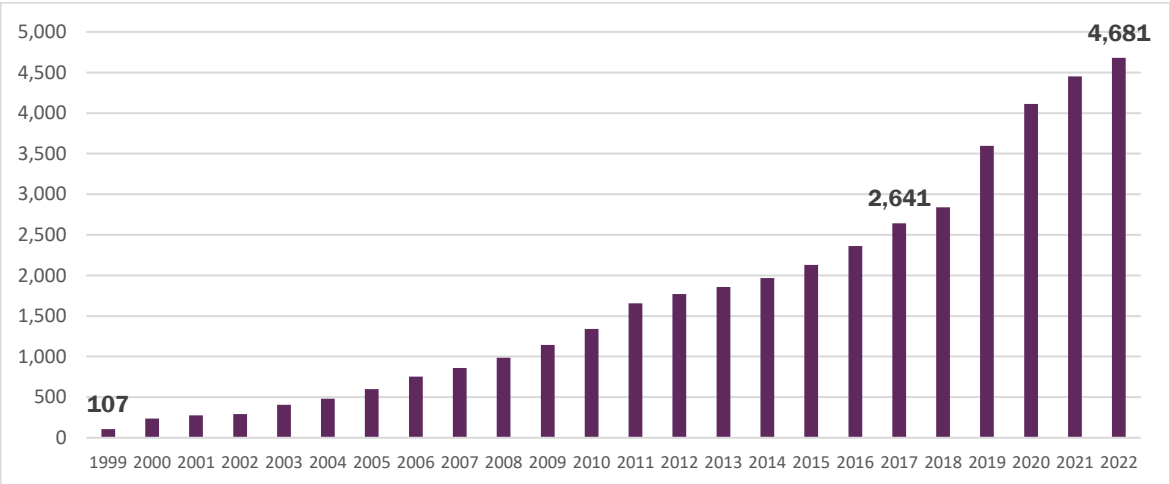
20% of the global total.[7] At approval (2018), the wind installed capacity in Greece stood at 2.6 GW and increased to 4.7 GW by 2022, with TE's contribution of approximately 201 MW. TE was the top wind energy producer in Greece in 2022, with 763 MW capacity.

Figure 4: Greece Electricity Capacity: Installed Capacity Trend



Source: Energy Profile Greece. IRENA

Figure 5: Wind Power: Total Capacity to the Grid (MW) Per Year - 2022



Source: HWEA Wind Energy Statistics – 2022. The Hellenic Wind Energy Association (HWEA or ELETAEN)

The target to contribute €200 million of EBRD financing in RE projects in Greece, leading to the development of at least 250 MW by the end of 2020, was not achieved in terms of financing.

[7] Ember. Global Electricity Review. https://ember-climate.org/insights/research/global-electricity-review-2022/

Only three projects were signed, totalling €119.8 million. Nonetheless, the Clients' operations surpassed the anticipated capacity development target of 250 MW by approximately 13%, reaching 284 MW.

According to the Sponsor, TE has co-financed the installation of approximately 201 MW capacity during 2017-2022 by reinvesting €51 million of its own equity into RE projects through PPAs. This exceeded the 25 MW target by four times.

Table 4: Impacts

Contribution to Sector/Country-Level Impacts:	Results
Green Transition Quality (originally, setting standards for corporate governance) Framework Level: • *Contribute directly to Greece's effort to increase RE installed capacity by 50% (2.4 GW) by 2020 to meet EU targets and promote energy security and sustainability.*	**Achieved** • At the end of 2022, wind installed capacity was 4.7 GW versus 2.6 GW at project approval. TE's contribution was ≈201 MW.
• *Contribute to €200 million EBRD financing of RE projects in Greece, leading to the development of at least 250 MW of new RE capacity in-country by the end of 2020.*	**Partly Achieved** • Utilisation of €119.3 million through signed projects: ○ 48970 Helpe Eurobond; 40 MW; 28.3 million ○ 49517 Terna Rachoula Wind Farms; 44 MW; 16.5 million ○ 52071 Helpe Solar; 200 MW; 75 million • A further 300 MW was in the project pipeline, but was cancelled: ○ 51690 Solar Parks of W. Macedonia ○ 51646 Sarantena Wind Farm
Project Level: • *Finance the installation 6 MW of RE directly.*	**Achieved** • EBRD refinanced the equity bridge short-term loan that allowed the construction of the extension prior to the transaction. R3 became operational in 2018.
• *Finance the installation of 25 MW indirectly, through equity release to the Sponsor.*	**Achieved** • TE reinvested €51 million of its own equity in its pipeline of RE projects through PPAs, amounting to approximately 201 MW of new installed capacity.

IEvD rates the achievement of impacts *outstanding*. Despite not meeting the GREF financing target, the Bank's objective to contribute to the increase of installed RE capacity in Greece exceeded expectations. The Sponsor ultimately contributed 9% to the increase of the country's installed wind power capacity, partially enabled and financed by equity released under this project. Moreover, the Bank's policy dialogue has been instrumental in moving the Greek RE system from one based on Feed-in Tariffs to one based on auctions, which substantially decreased RE costs for the government and consumers.

4. Efficiency

EvD rates the overall efficiency of resources deployed for the project *standard*, based on the derived synthesis of respective sub-ratings: Financial Performance of Project/Client *standard*, Bank Investment Profitability *below standard* and Bank Execution Performance *standard*.

4.1. Financial Performance of Project/Client

The latest credit analysis (July 2022) confirmed that the Client's performance was above the Board document projections in FY21 with higher than forecasted revenues, earnings before interest, taxes, depreciation and amortization (EBITDA) and net profit level. Revenues and EBITDA for FY21 were 2% above projections, while the bottom-line actual figures were 40% higher than projections. The Client showed a solid performance, recording revenues of €9.3 million, slightly diminished by 3.5% year-on-year (YoY).

IEvD rates the financial performance *standard* on the basis of the Client's overall robust performance in FY21. EBITDA and net profit margins remained steady. Performance in terms of revenues and EBITDA were slightly above the Board's approved projections, mainly due to higher than anticipated production.

4.2. Bank Investment Profitability

The project fully disbursed the €16.5 million in May 2019 with no cancellations. Repayments are currently being made from ongoing cash inflows on a semi-annual basis.

A margin reduction was approved in October 2020. The 2021 Credit Analysis explains that the margin set at approval represented the economic situation in Greece. Subsequently, the Greek climate gradually improved and the reduced margin was considered more in-line with the market in 2020.

The Team indicates that due to these market developments, pricing needed to be aligned, particularly with the co-lender's margin, which in turn reflected the improved risk profile of both the Project and the investment climate in Greece. This avoided the Client refinancing the Bank's loan.

The Client and the Sponsor are in-line with their commitments on refinancing existing debt exposure. No irregular payments have been flagged.

IEvD rates Bank investment profitability of the project *standard* on the grounds that despite the lower project contribution to the Bank following a margin reduction, the risk adjusted profitability remained acceptable to the Bank. This was mostly due to upgrades to the project's risk rating being reflected in the margin.

4.3. Bank Execution Performance

The evaluation covered the following sub-criteria to assess the Bank's execution performance:

- Effectiveness of Bank's structuring
- Timeliness of disbursement
- Completeness of monitoring reports in documenting project status and risk
- Monitoring of the Client's compliance with the terms of the investment/enforcement of conditions and covenants
- Monitoring of the Client's environmental and social performance
- Adequacy and timeliness of the Bank's response to emerging problems or opportunities (risk management and mitigation)
- Effectiveness of hand-over procedures

The Bank's structuring was effective. EBRD's appraisal of investment risk, including both financial and operational, was grounded on prevailing experience as both TE and GEK Terna were existing Clients. The Bank was familiar with the Clients' performance and risk profile. Financing and project agreements went into effect following a satisfactory due diligence process. Banking and the Office of the Chief Compliance Officer (OCCO) conducted the integrity due diligence on TE, its shareholders, its Board and senior management. The review identified several integrity issues, but concluded that these were sufficiently mitigated. In addition, an independent consultant undertook further Environmental and Social Due Diligence (ESDD) of the project.

The Banking Team was effective in structuring investment. It had relevant experience in structuring senior secured bond loans, which are particular to Greece for project finance, as well as previous refinancing operations. The Client expressed that EBRD's participation as an experienced institution provided considerable comfort as it was able to adequately assess and underwrite the risk of the transaction. EBRD also had in-depth knowledge of the new energy Scheme under which the R3 extension would operate. Approval documentation identified the project-specific and external risks as macroeconomic and sectoral.

Disbursement was delayed against original expectations, but this led to lower cost items. The bond loan disbursement of €33 million (down from €36 million, as per the Final Review Memorandum (FRM)) took place on 29 May 2019, against the initial assumption set for 30 September 2018. This eight-month delay resulted in lower revised values of cost items.

Monitoring reports documenting project status and risk were somewhat incomplete. The quality of TIMS presented some gaps. Reports did not include actual figures on emissions savings of tCO_2 per annum for R3 and the project as a whole. Expected figures were repeated instead of providing progress data. The PMMs did not follow up on this progress either. Similarly, other than confirmation of the intra-group loan, no information was provided on the Client's investments on new RE projects, capacity installed or amounts of equity invested. The latter was not defined as a TIMS benchmark.

Monitoring of the Client's compliance with the terms of the investment/enforcement of conditions and covenants presented some gaps. The PMMs show some delays in the enforcement of conditions and covenants throughout the years of implementation.

Monitoring of the Client's environmental and social performance was incomplete. This assessment is not straightforward.[8] It is not clear if only one Annual Environmental & Social Report plan (AESR) has been submitted, dated April 2022 (covering 2021) in the four years of operation. The Banking Team indicate that they are not aware of any issues and that ESD has so far been satisfied with the reporting.

The Bank's response to emerging problems or opportunities (risk management and mitigation) was adequate and timely. The Client did not express any issues with working with the Bank and expected to continue the relationship. It mentioned looking forward to cooperating in future endeavours. IEvD did not uncover any major difficulties in implementation. The Banking Team notes that they have not faced any major challenges on the project and only minor amendments have been needed. An example of one main change was the reduction in the margin. Due to changes in the market, the Team initiated the process to keep the project and avoid a refinancing request from the Client.

Hand-over procedures were effective. Throughout the life of the project, there have been changes in Bank staff monitoring and supervision responsibilities. The hand-over procedures were followed adequately from origination to implementation. The second OL confirmed continued support by the previous OL, who remained a principal team member. The final hand-over took place due to a secondment opportunity. The third OL had also been a principal team member of the project since origination, therefore the transfer was seamless, and the project institutional memory preserved.

The Bank met most of its operational standards and there were no significant shortcomings due to the Bank's appraisal or structuring. Minor issues include reporting to monitor progress on objectives and delays in the Client's reporting compliance. **Based on this, the Bank's execution performance is rated *standard*.**

[8] For example, the folder 5.10 Environmental Monitoring of the project in ProjectLink is empty.

5. Other Attributes

5.1. Policy Dialogue

The Banking Team seized the opportunity to engage in policy dialogue, even if this was not laid out at approval of this GREF project. The Banking Team had built a relationship with the Greek regulator whilst working on the 2016 Renewable Energy Support Scheme, as recognised in the Additionality section (see *page 9*). They continued to have an ad-hoc relationship with the Greek regulator, but importantly, this was no longer part of a formal engagement.

In 2020, during a Banking Team visit to the Ministry, the authorities shared their objective to develop offshore wind, due to its high potential. The Team proactively seized the opportunity to engage and offered assistance to address a number of issues. The Ministry confirmed that it sought and appreciated the Team's offer. The Team, and the Bank at large, had not worked in that sub-sector, but offered to organise a workshop on the subject.

In February 2021, EBRD ran a closed workshop, inviting experts in the field, the largest investors, and transmission system operators (TSOs) that had experience with offshore wind, from the UK, Norway and Denmark. The Team organised the workshop jointly with WindEurope. The agenda was prepared around the Ministry's specific questions to particular actors on three themes: Strategy, Policies and Financing and Policies and Investments. According to the Ministry, the workshop was successful in educating Greek officials and potential investors about specificities and the risks and opportunities of offshore wind power development.

The authorities welcomed EBRD's offer of support. The Ministry had already attempted to introduce offshore wind in the prior decade. There remained some unresolved legal issues. Some licenses were granted, but never took effect. However, they had some legal standing as the licenses had been issued. The Ministry did not have the capacity to address the complexity of the legal issues blocking offshore wind power development. The Bank approved and implemented a TC to assist the Ministry in developing an Offshore Wind Regulatory Framework. As part of the assistance, EBRD retained international and local experts, Aeolus and Grant Thornton, to carry out the assignment. It consisted of two separate yet related phases:

- To design, develop and propose a comprehensive High-Level Design Plan (HLP) to the Ministry, including a comprehensive regulatory framework for the development of offshore wind energy in Greece (including fixed-bottom, as well as floating offshore wind).
- To develop the legal and regulatory instruments, including a draft law on Offshore Wind, to draft Ministerial Decisions(s) and/or Presidential Decree(s) and to provide recommendations for the development of other legal and regulatory instruments that may be required to implement the HLP efficiently and effectively.

The TC was instrumental in the Greek Parliament's approval of Greece's first ever Offshore Wind Law in August 2022, as the legislation is closely based on its report. The assignment was led by EBRD staff from Energy Europe, with support of Climate Strategy and Delivery (CSD) and the Legal Transition Team (LTT). The engagement required a focused effort from all actors to prepare a highly technical report in a relatively short time. The Ministry praised the commitment of the Team and the consultants. The latter worked within a limited budget and performed part of the tasks on a largely pro-bono basis.

The Ministry confirmed that the work of the consultants went above and beyond what was expected and beyond the terms of reference. The authorities also confirm that the work of EBRD staff was exceptional. The Team provided ideas and examples and were in constant contact with the Ministry. They were accessible, shared experiences from other countries and mobilised the whole sector network to provide information.

The final technical report, titled "Regulatory Framework for the Development of Offshore Wind", was presented. The proposal was thorough and stakeholders were consulted during the preparation phase. Consequently, only minor changes were made when the Ministry submitted it for public consultation.

The law is a vital move on the road to launching the first offshore wind park in-line with Greece's offshore wind target of 2 GW by 2030. The first steps after its approval have already been taken. The state-owned company Hellenic Hydrocarbon & Energy Resources Management (HEREMA) was appointed to lead the investigation and designation of areas where offshore wind projects may be developed. This includes the preparation of a development programme (design, development, installation) and allocation of exploration licenses/concession developments. ADMIE, a transmission systems operator, will provide the onshore and offshore grid infrastructure.

5.2. Environmental and Social Responsibility

Neither the Banking Team nor ESD flagged any environmental issues, as discussed in previous sections, and AESRs have been assessed satisfactory. According to the FRM, the project was in an area where a number of wind farms were already established. TE has worked in the area since the year 2000. ESD included a top-level cumulative assessment, which did not identify material risks. It confirmed the project had been constructed in-line with local development plans and that it was not located in a sensitive area in terms of human receptors, birds or bats, nor was it near any Natura 2000 areas.[9] The project was not associated with resettlement.

There was no reaction from the local communities to the development of the Terna Rachoula Wind Farms and no court cases have been filed, as the Client reported during interviews. IEvD did not meet with locals as there are no residents or dwellings in the immediate vicinity of the wind turbines. Nevertheless, no cases have been registered through the EBRD Project Complaint Mechanism or the Independent Project Accountability Mechanism.

The evaluation found that the Client dedicates revenues from their operations towards social benefits. It does so directly in the form of contributions and indirectly in the form of offsets. The following elements are highlighted:

The Client made contributions to locals. The Company explained during an interview with IEvD, and as confirmed on its official environmental, social and corporate governance (ESG) webpage, that it has made some auxiliary investments in the area as part of its social contribution. TE's approach is to work with the communities, ensuring that participation is higher than required by the State. This includes trying to impart knowledge and understanding of the operations. The company staff, including the Chief Executive Officer (CEO), engage with the locals and local authorities. In addition, TE aims to employ locals and notes that most of their O&M personnel are

[9] Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. https://ec.europa.eu/environment/nature/natura2000/index_en.htm

hired locally. Nine out the 12 employees currently working at the Terna Rachoula Wind Farms are locals. During the construction stage, local contractors were prioritised. TE also contributes to the local communities beyond the construction stage, such as responding to infrastructure needs and public works. TE has a system where it takes requests every year to support the locals, such as the construction of small roads.

TE reports that their total social contribution as a group for 2021 amounted to €1.9 million. This figure nearly doubled to €3.7 million during 2022 through sponsorships, donations and infrastructure projects.

The Client provided offset benefits. There is a special fee of three percent of TE's gross revenues which is paid into local communities and to residents. This percentage is split in two. The first 1.7% is retained by the Electricity Market Operator SA and the Hellenic Electricity Distribution Network Operator (LAGIE). This initial amount is then given to the municipalities that host each project. The remaining 1.3% goes to the local households as a discount to their electricity bills and the construction of infrastructure projects to meet community needs. In certain areas, there are no electricity costs at all through this social benefit.

TE also performed restoration, reforestation and regeneration works. In 2021, for the installation of the Terna Rachoula Wind Farms, the reforestation in the Trepia region included 1,434 plants and covered 17.24 acres. The completion of the restoration works is assessed and approved by Greece's Directorate of Forests and Forest Environment through the Certificate of Works Completion.

5.3. Sustainability

The expectation that the project's results will be sustained and extended beyond the EBRD's intervention in the medium to long-term is high. This is rooted in the current conditions, policies and legal regulations in Greece, which support wind power development. The project has been successful overall and is a well-performing operation in EBRD's wind portfolio. It demonstrated resilience throughout the COVID-19 pandemic, as evidenced by its operational and financial performance. The estimated capacity factors of the region where the wind park is located are significant, oscillating between 30%-40% against the continent's current average of 34.2%.[10] The year 2022 marked the Client's 25th year in business, coinciding with it being the top wind energy producer in Greece in terms of capacity (MW). [11]

Improvements in the legislative landscape have enhanced the achievement of results. With the recent approval of the Offshore Wind Law, as well as the updated NECP and the expected resumption of the economy, this potential is likely to substantially increase.

The new NECP proposal presents a substantial advancement in Greece's energy transition, targeting 28 GW of renewables by 2030, compared to 19 GW in its previous version (+47%). It also adds 8 GW of energy storage, more than doubling from the previous 3 GW. The onshore wind power target remains at 7 GW, with an added 2.7 GW of offshore wind power generation. The ambitious RE targets for 2030 point to strong political support for this sub-sector. This is reinforced by Greece's first climate law, which was approved in June 2022 and calls for the decommissioning of all lignite plants by 2028. The International Renewable Energy Agency

[10] WindEurope 2023
[11] HWEA Wind Energy Statistics –2022

(IRENA) suggests that onshore and offshore wind could generate more than one-third of Greece's total electricity needs and become the country's prominent generation source by 2050.

Substantial further opportunities also could arise for offshore wind. Greece has the longest coastline in the Mediterranean region, potentially helping underpin the country's new RE mix targets. With the recent approval of Greece's first Offshore Wind Law, the objective is to build at least 2 GW of offshore wind. The legislation is a fundamental milestone to kick-start the development of projects.

EBRD has an opportunity to capitalise on this offshore wind momentum. Firstly, there is scope to continue supporting institutional capacities. Secondly, there is the possibility of financing groundbreaking projects, which will likely incur substantial costs. Thirdly, contribute non-financial additionality, work with existing clients leading on wind renewables and enhance competitiveness in the private sector through auction schemes.

6. Lessons and Recommendations

This evaluation identifies **two lessons** that are worth capturing for future interventions.

EBRD's role in supporting systemic change in advanced countries

In more advanced countries, EBRD can still play an important role in the Energy sector and support systemic change through policy dialogue. This includes the development of regulatory frameworks that are completely new (e.g. offshore wind) and investing within the new frameworks for demonstration effect.

EBRD's additionality in financing equity release in RE projects

Clients that break ground with their own funds understand their project better. Initially financing projects with their own equity (i.e., for construction phases) also eliminates the often time-consuming due diligence processes that are needed for loan approvals. The Bank's financing may be more competitive after construction risks have been eliminated and RE developers are looking to refinance other banks' debt and a release of equity to redirect it to the development of their pipelines. In this type of transaction, EBRD can enhance its additionality by being more demanding at the outset regarding the use of the equity release proceeds, i.e., strong conditionalities to use it in-line with the EBRD's transition impact-related objectives.

This evaluation also offers **three recommendations** that translate into direct actions and steps that may support future projects and impact.

Recommendation 1: Seek ways to enhance additionality with repeat clients in advanced countries

To maintain or increase EBRD's additionality with strong, repeat clients in advanced countries, the Bank's efforts could be two-fold. Firstly, the Bank can actively mobilise commercial financing to avoid crowding out local banks. Secondly, the Bank can complement financing activities with policy dialogue and technical assistance, targeting more ambitious transition objectives. This recommendation echoes, and is reinforced by the findings and lessons of several IEvD project validations.

Recommendation 2: Strive to replicate the successful experience with the development of offshore wind power regulation in Greece

EBRD's experience with the development of offshore wind power regulation in Greece has significant potential to be applied elsewhere. Within the current context, where energy security is being prioritised, EBRD should explore the possibility of supporting the development of offshore wind in other CoOs.

Recommendation 3: Incorporate agreements regarding the utilisation of proceeds from equity release for new RE operations into the project structure

The Bank's financing of equity release with an objective of a client reinvesting the proceeds of such a release into new RE projects, should be based on a precise and legally-binding agreement. This ensures that the funds will be used as agreed. To the maximum extent possible, while in adherence to the Bank's procedure on Material Non-Public Information (MNPI) and its impact on Banking operations, such agreements should include the total amount of commitment and timelines. It is also important that they include key technical parameters of the investments (e.g., MW capacity) and their locations (limited to EBRD's CoOs). Moreover, these should cover clauses on investment verification processes, dispute resolution and the like. A separate agreement (for bonds) or covenanting of such a commitment in the loan agreement (for loans) could be preferred ways to incorporate it into the project's legal structure.

Annexes

Annex 1. Project Reconstructed Results Framework: 49517 Terna Rachoula Wind Farms

Project Inputs:	Project Operational Objectives (Outputs):	Intended Business Results (Outcomes):	Contribution to Sector/Country-Level Impacts:
Financial inputs: A senior secured bond loan co-financed with Alpha Bank on a 50-50 basis. (**Actual**) Senior secured bond loan of €33 million. • EBRD finance: **€16.5 million** • Co-financier finance: Alpha Bank on a 50-50 basis: **€16.5 million** • Equity contribution: Terna Energy SA: **€22.6 million**	**Investment Programme** • *Development* • *construction* • *refinancing* • *financing* • *operation* *of three wind parks with a total installed capacity of 44 MW.* **TE's investment of the equity released into new RE in Greece** • *Add at least 25 MW of new installed wind capacity by the end of 2019 (according to the project's approval documentation).*	**Green Transition Quality (originally, setting standards for corporate governance)** Framework Level: • *Contribute to the overall sub-operations, resulting in CO_2 emissions savings of at least 500,000 tonnes per year by the end of 2020.* Project Level: • *Contribute directly to emissions savings of 10,500 tCO_2 per annum.* **Resilient Transition Quality (originally, demonstration of new replicable behaviours)**: Framework Level: • *Contribute to the financing of five RE power plants with PPAs awarded by auction by the end of 2020.*	**Green Transition Quality (originally, setting standards for corporate governance)** Framework Level: • *Contribute directly to Greece's effort to increase installed RE capacity by 50% (2.4 GW) by 2020 to meet EU targets and promote energy security and sustainability.* • *Contribute €200 million of EBRD financing to RE projects in Greece, leading to the development of at least 250 MW of new RE capacity in-country by the end of 2020.* Project Level: • *Finance the installation of 6 MW of RE directly.* • *Finance the installation of 25 MW of RE indirectly, through equity release to the Sponsor.*

	Risks to Achievement of Outputs:	Risks to Achievement of Outcomes:	Risks to Achievement of Impacts:
	Client/Sponsor commitment and capacity.	Guaranteed offtake prices above the prevalent wholesale prices can become unaffordable and subject to retroactive changes.	At approval, the Greek economy was recovering slowly from a severe economic depression.

Annex 2. Sources

Board Report	https://pegasus.ebrd.com/viewdocument/13402
Concept Review Comments	http://ldn1llw1/livelinkprod/llisapi.dll?func=ll&objId=44426659&objAction=viewheader
Credit Analysis	http://ldn1llw1/livelinkprod/llisapi.dll?func=ll&objId=104740818&objAction=viewheader
TIMS Review	http://ldn1llw1/livelinkprod/llisapi.dll?func=ll&objId=109107563&objAction=viewheader
PMM Report	http://ldn1llw1/livelinkprod/llisapi.dll?func=ll&objId=104741263&objAction=viewheader
Project Link	http://ldn1llw1/livelinkprod/llisapi.dll?func=ll&objAction=browse&sort=name&viewType=1&objId=44210116