



Our journey to Net Zero: Transition planning for 6 NZBA sectors

June 2025

Table of Contents

1	Context and Net Zero Target Setting Methodology	1
2	Greek Market context	3
3	NBG's overarching transition approach	4
3.1	<i>Products and services supporting the transition</i>	4
3.2	<i>ESG Risk Management</i>	8
3.3	<i>ESG Governance</i>	14
4	Sectoral view: Power Generation	16
4.1	<i>Context</i>	16
4.2	<i>NBG financed emissions and targets</i>	17
4.3	<i>NBG's approach to Power Generation Decarbonization</i>	17
5	Sectoral view: Oil & Gas	21
5.1	<i>Context</i>	21
5.2	<i>NBG financed emissions and targets</i>	22
5.3	<i>NBG's approach to Oil & Gas Decarbonization</i>	23
6	Sectoral view: Aluminium	25
6.1	<i>Context</i>	25
6.2	<i>NBG financed emissions and targets</i>	25
6.3	<i>NBG's approach to Aluminium</i>	26
7	Sectoral view: Cement	29
7.1	<i>Context</i>	29
7.2	<i>NBG financed emissions and targets</i>	29
7.3	<i>NBG's approach to Cement Decarbonization</i>	30
8	Sectoral view: Commercial Real Estate	32
8.1	<i>Context</i>	32
8.2	<i>NBG financed emissions and targets</i>	33
8.3	<i>NBG's approach to Commercial Real Estate</i>	33
9	Sectoral view: Residential Real Estate	36
9.1	<i>Context</i>	36
9.2	<i>NBG financed emissions and targets</i>	36
9.3	<i>NBG's approach to Residential Real Estate</i>	37

1 Context and Net Zero Target Setting Methodology

Since 2021, NBG follows a holistic approach to ESG, having defined its ESG strategy in 3 pillars, and 9 strategic themes. These themes stem from and reflect the four core values that characterize NBG (Human, Trustworthy, Responsive, Growth Catalyst), align with selected United Nations (UN) Sustainable Development Goals (SDGs), and complement NBG's overall business strategy and transformation. The environment-related strategic themes encapsulate NBG's climate change actions, including the portfolio and own operations decarbonization strategy and targets. Notably, NBG is working towards achieving Net Zero emissions by 2050, in line with the relevant EU and national plans.

In 2023, NBG joined the Partnership for Carbon Accounting Financials (PCAF) and the industry-led and UN-convened Net Zero Banking Alliance (NZBA), the leading global alliance of banks, committed to drive their lending and investment portfolios to Net Zero emissions by 2050, as defined by the Paris Climate Agreement. Upon joining the NZBA, NBG committed to a set of six interim decarbonization targets for 2030. These targets focus on high emitting sectors and on the parts of the value chain where Greenhouse Gas (GHG) emissions reductions are prioritized, as per the requirements of NZBA and market practice. Specifically, NBG has set targets for the following sectors/portfolios: Power Generation, Oil & Gas (O&G), Aluminium, Cement, Commercial Real Estate (CRE), and Residential Real Estate (RRE). NBG's 2030 Net Zero targets for the six sectors/portfolios described, are summarized below:

Sector	Unit of measurement	Reference Scenario/Pathway, Scope 1&2	Baseline Year	Baseline Value	2030 Target	2030 Delta	2024 FY Value
Power Generation	kgCO ₂ /MWh	IEA NZE 2050	2022	169	120	-29%	120 ¹
Oil & Gas	Indexed, tCO ₂ of 2022 = 100	IEA NZE 2050	2022	100	70	-30%	73
Cement	tCO ₂ /tcementitious	IEA NZE 2050	2022	0.71	0.52	-27%	0.68
Aluminium	tCO ₂ /taluminium	MPP	2022	11.2	3.9	-65%	11.3
CRE	kgCO ₂ e/m ²	CRREM Greek 1.5°C scenario (v.2.02)	2022	57	30	-47%	57
RRE	kgCO ₂ e/m ²	CRREM Greek 1.5°C scenario (v.2.02)	2022	38	16	-58%	37

Furthermore, in 2023, NBG set interim 2030 targets for its own operational carbon footprint, focusing on emissions within the Bank's immediate sphere of control, i.e., Scope 1 and Scope 2 market-based emissions. These targets were set using Science Based Targets initiative's (SBTi)

¹ Current year's intensity of Power generation sector excludes emissions related to the financing of Combined Cycle Power Plant (CCGT) in Alexandroupolis, since it is not yet operational

Absolute Contraction approach, according to which, participants need to reduce their own absolute emissions at the same rate to achieve a given climate scenario.

Scope	Unit of measurement	Baseline Year	Baseline Value	2030 Target	2030 Delta	2024 FY Value
Scope 1	Absolute Emissions, in tCO ₂ e	2021	2,381	1,381	-42%	1,562
Scope 2 – market based	Absolute Emissions, in tCO ₂ e	2021	224	0	-100%	131

Finally, in 2023, NBG also introduced a dedicated Climate-related and Environmental (C&E) credit exclusion list, containing activities considered to bear negative C&E impact, including mining and coal-related financing, as well as activities with negative impacts on nature preservation and biodiversity.

NBG's commitment to NZBA represents a major step in the effort to promote sustainable financing and contribute to the containment of climate change, assisting the real economy in transitioning to a Net Zero state. NBG has been effectively adapting its strategy and business model in the past years, to both enable the successful delivery of the aforementioned commitment, as well as meet its broader business and risk management objectives.

In 2024, NBG continued the transition journey that will lead it from its 2022 baseline to the achievement of its ambitious interim targets for 2030, and subsequently to a Net-Zero position by 2050. NBG's transition journey entails a series of initiatives and targeted interventions in key portfolios and sectors, which include support for clients' decarbonization plans and the economy's transition overall and are described in detail and submitted to the NZBA in the form of a Transition Plan, in line with NBG's commitment as a member of the alliance with disclosed targets. Key focus has been placed on promoting sustainable finance, investments, as well as green banking solutions, and the offering of products and services that mitigate climate change and contribute to environmental protection and sustainable development. In this context, NBG has developed a Sustainable Bond Framework (SBF) to be used as an overarching governance framework for any future issuance of Green, Social and other Sustainability-labelled products or financial instruments. Moreover, NBG developed a Sustainable Finance Framework (SFF) to facilitate the effective monitoring and accurate reporting of the Bank's sustainable related financings and to serve as a mechanism for the expansion of sustainable funding to its clients.

2 Greek Market context

Greece's transition to a net-zero emissions economy by 2050 requires an estimated €436 billion² investment in clean technologies, between 2025 and 2050, focusing on transportation, electricity generation and storage, grid development, and household energy upgrades. This shift could create operational cost savings, boost GDP by €6bn annually, and generate 210,000 jobs by 2050².

The 2025 National Energy and Climate Plan (NECP) sets a national ambition of achieving energy independence, growing Greece into an energy exports hub, and reducing electricity costs for households and businesses. The transition is expected to take place in three steps: from 2025 to 2030 the country is expected to undergo a rapid penetration of Renewable Energy Sources (RES) in electricity generation, laying the foundations for electric vehicles and heating. From 2030 to 2040, the electrification of final consumption sectors is expected to reap the benefits of the switch to clean energy. Finally, from 2040 to 2050 the government expects to finalize the decarbonization of the most hard-to abate sectors².

This ambitious decarbonization trajectory will create opportunities for the Power Generation sector, as the pace of RES deployment will need to accelerate. The existing transmission and distribution infrastructure will need to be upgraded to accommodate the new clean technology system mix, and storage capacity in the form of batteries will be required to smooth intermittent power. Furthermore, industrial decarbonization will require further development of clean technologies and significant energy upgrades of the built environment.

Transition also poses significant challenges at a national level. Strategic investments, regulatory frameworks, and collaborative efforts across public and private sectors will be essential to navigate this complex transition successfully. These challenges will be heightened by significant cross-sector interdependencies. For instance, decarbonizing the Power Generation sector will be essential to support the electrification of transport and buildings, by reducing their dependence on fossil fuels. In turn, more efficient waste management can also support the Power Generation sector by providing alternative fuels for energy generation.

² [National Energy and Climate Plan](#), Greek Government 2025

3 NBG's overarching transition approach

3.1 NBG's products and services supporting the transition

NBG supports businesses and households in achieving sustainability through a comprehensive range of tailored financing solutions, which inter alia promote the green transition and support the development of the renewable energy sector.

Range of NBG sustainability-oriented solutions to businesses & households



Utilizing its expertise, the Bank is dedicated to assisting clients in their climate transition efforts, addressing challenges, and fostering opportunities for growth and innovation by:

- Offering sustainable solutions and products, to support clients' investments, speeding up the transition.
- Supporting clients' decarbonization plans.
- Developing internal expertise to advise clients across their decarbonization journey.

3.1.1 The key NBG products and services for Corporates and SMEs

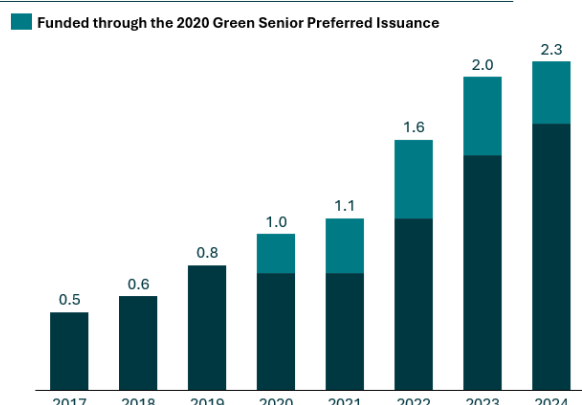
Corporate RES financing

NBG actively supports Greece's energy transition goals and constitutes a leading Greek provider of renewable energy financing. In 2024, the Bank focused on financing the energy sector, particularly RES. Activities in RES investment financing include:

- €2.3 billion RES on-balance sheet exposures as of 31 December 2024.
- €749 million RES disbursements to Corporate clients during 2024.

In the first quarter of 2022 the Bank set a target to achieve €600 million of new disbursements for RES Projects within the period 2022- 2025, a target which has already been achieved.

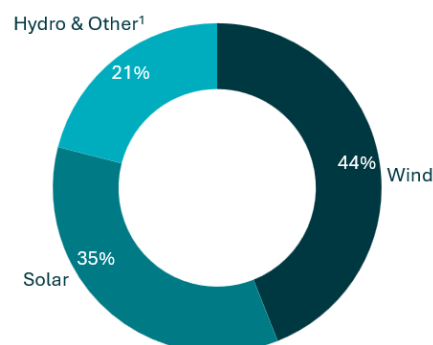
Renewable energy (RES) portfolio evolution, EUR bn



1. Other includes biomass, biogas, geothermal, and RES-cross-technology activities

Renewable energy (RES) portfolio breakdown by type, %

As of 31.12.2024



Recovery and Resilience Facility (RRF) loans

As part of supporting the sustainable economy transition, the Bank has established since 2022 the “Ethniki 2.0” Program, in alignment with the “Greece 2.0” Program, which includes funding of green transition opportunities.

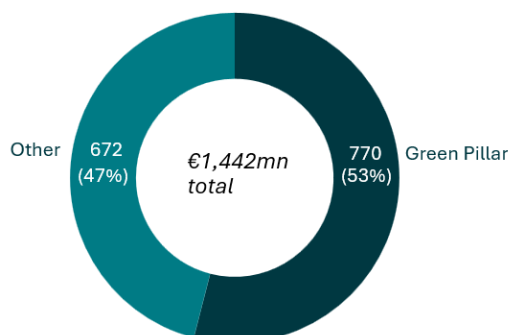
Financing under the “Greece 2.0” Program is conducted through the resources of the RRF, amounting to €35.9 billion, which will be channelled through grants or loans under favourable terms applicable to eligible investment plans. RRF’s lending program holds resources of €17.7 billion to be made available through the domestic financial system and European financial institutions. NBG actively supports the “Greece 2.0” Program and works with the RRF to allocate loans to eligible investment plans. At least 30% of the total eligible cost of the investment plan is co-financed by NBG.

The eligible investment plans must fulfil the criteria of at least one of the five Pillars of the RRF loan program: (a) Green Transition, (b) Digital Transformation, (c) Innovation, research and development, (d) Development of economies of scale through partnerships, acquisitions and mergers, and (e) Export orientation. In addition, all RRF-financed projects undergo a “Do No Significant Harm” (DNSH) assessment, to ensure that the implementation of the projects does not adversely affect the EU environmental objectives.

RRF defines strict criteria to classify expenses included in an investment plan under one of the five Pillars of the RRF loan program. As such, investment plans may contribute to the Pillars in different percentages (% of the total investment plan). Several of the deals already signed, contribute to the Green Transition Pillar of the RRF fully, indicatively several solar and wind RES projects, of both small (less than 1 MW) and large size, or partially, indicatively the financing of the development of low energy consumption stores of a major retailer, or energy efficiency interventions, as part of hotel renovation and upgrade projects. By year-end 2024, NBG had a significant portfolio of €1,442 million in contracted RRF loans, of which €770 million are under the green transition pillar.

**Recovery and Resilience Fund Projects contracted
breakdown by type, EUR mn and %**

As of 31.12.2024



Sustainability-Linked Loans (SLL)

NBG supports the transition of Corporate clients through SLL, based on relevant principles incorporated in its Sustainable Finance Framework (SFF). At year-end 2024 exposure in SLL stood at €0.9 billion, rewarding our customers with better pricing terms for the achievement of their sustainable targets.

Sustainable investments financing in collaboration with European Investment Bank (EIB)

In collaboration with EIB, NBG offered the NBG Loan for Green Investments II, with a total budget of €300 million providing finance up to €12.5 million with favourable terms, for financing investments made towards attaining climate action objectives and generating energy from RES, with an interest rate discount. In addition, if the client meets the eligibility criteria for participation in the “Jobs for Youth Initiative”, an additional discount is applied.

3.1.2 Products supporting the transition of households and small businesses

The Bank offers green banking products, such as energy efficiency solutions and home energy upgrades to its small business customers and households.

Products for households

- **Estia Green Mortgage Loans:** Loans cater to diverse needs, including fixed-rate options, energy-efficient home loans with reduced rates, and flexible repayment plans.
- **State-driven EXOIKONOMO Programs:** Loans for home energy efficiency improvements with 100% subsidy of interest rate and zero fees, accompanying the state subsidy offered. NBG maintains a strong market position in this product, capturing one third of new disbursements in the market during 2024. The outstanding balance of all “EXOIKONOMO” programs as of 31 December 2024, amounted to €36 million.
- **Consumer Green Loans:** Loans for home energy upgrades, purchase of energy-efficient home equipment, and acquisition of new hybrid or electric vehicles under favourable terms had an outstanding balance of €42 million as of 31 December 2024.

- **European Investment Fund (EIF) Green Loan:** In May 2024, NBG was the first Greek bank to offer unsecured loans under EIF's guarantee by 80% for green upgrades on homes with a preferential interest rate, on the condition that the energy upgrade should be of at least one energy class or lead to energy savings of at least 30%, compared to the initial EPC assessment.
- **New products for individuals in 2025:** NBG expects to participate in upcoming and future initiatives supported by the State to contribute to the energy upgrade of the existing RRE stock (e.g. EXOIKONOMO 2025 and ANAVATHMIZO TO SPITI MOU, a new State-driven Programme with simpler process and an interest-rate subsidy for specific upgrade improvements).

Products for Small Businesses

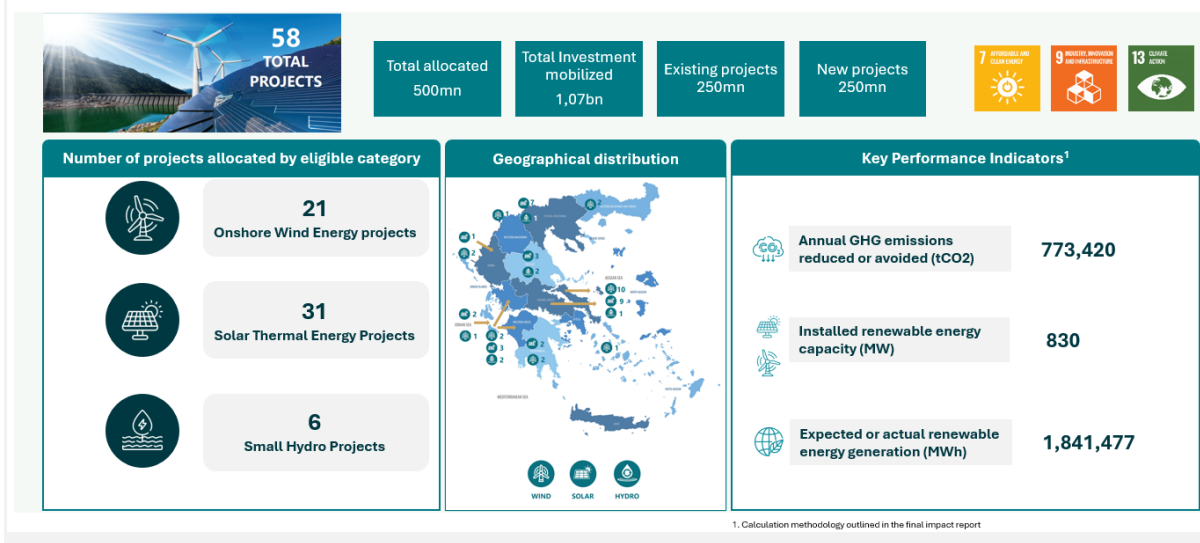
- **Funding for photovoltaic parks, photovoltaic systems and other RES:** Financing for the installation of solar panels and the construction of photovoltaic power stations, with favourable interest rate and reduced expenses especially for the implementation of smaller-scale photovoltaic parks. In 2024, NBG materially improved the terms of the offered loans, including improved interest rates, prolonged maximum tenor of the loans, and waiving of the requirements for collateral/pledge on the machinery of the investment. The outstanding balance as at 31 December 2024, amounted to €71 million.
- **Other green products in collaboration with the Hellenic Development Bank (HDB):** Co-financed green investment loans through the Business Growth Fund to support the green growth of SMEs. The fund provides financing for the implementation of an investment plan for one of the Sub-programs:
 - Sub-program 1 - Green Mobility Loans.
 - Sub-program 2 - Loans for Energy Upgrade of Buildings.
 - Sub-program 3 - Loans for Renewable Energy Sources.

3.1.3 NBG's Green Bonds

NBG's inaugural Green Senior Bond amounting to €500 million, issued in October 2020, was the first Green Bond to be issued by a Greek bank. All proceeds were allocated to 58 RES projects across the country by the first quarter of 2022.

All the proceeds have been used to finance or refinance eligible assets, new or existing loans and/or investments in equipment, development, manufacturing, construction, operation, distribution, and maintenance of Renewable Energy ("Eligible Assets") from the generation sources, namely onshore wind energy, solar energy, and small hydro projects (<20 MW).

Mitigation and impact of NBG inaugural Green Bond



Following the full allocation of its first Green Bond, NBG has successfully placed in November 2024 a €650 million senior preferred green bond in the international capital markets.

This second issuance brings Green Bonds to 71.7% of NBG's total senior bonds outstanding. The proceeds will be used to finance or refinance a portfolio of Green Projects in alignment with NBG's Sustainable Bond Framework, reinforcing the commitment to sustainability and its leadership in renewable energy financing.

3.2 ESG Risk Management

Policies related to climate change mitigation and adaptation

NBG Group Sustainability Policy

In 2021, the NBG Group Sustainability Policy was approved by the Board of Directors and the Board Audit Committee, who reviewed and opined on the NBG Group Sustainability Policy as part of their Report to Shareholders.

Aware of the significance of NBG's role in fostering sustainable development, the purpose of the NBG Group Sustainability Policy is to set the framework for the development of actions that assist in the management of, among others, climate change related impacts of the Bank and the Group. Such actions aim to contribute to reducing and, where possible to, offsetting climate change impacts that arise from the financing of NBG's clients' activities, as well as from the operations of NBG itself (including energy consumption in its own buildings).

According to the NBG Group Sustainability Policy, the Group's commitments focus on its role as a financier and advisor in the transition effort to a net zero economy, which is more cyclical and depends less on natural resources. The relevant commitments of the Group address the areas described below.

Environmental impacts of NBG's financings

NBG aims to reduce environmental impacts (including on climate, water, air, land, biodiversity, use of resources) that arise from the financing of our clients' activities and the allocation of products and services to our clients. To achieve it:

- The Bank places emphasis on promoting green banking, sustainable finance and investments in line with its GHG emission reduction targets and in response to the growing interest of clients in services and products that contribute to environmental protection and sustainable development but also reduce the impact of climate change.
- The Bank conducts an assessment of ESG risks in lending procedures.

Environmental impacts of NBG's internal operation and infrastructure

NBG also aims to reduce environmental impacts (including on climate, water, air, land, biodiversity, use of resources) that arise from the Group's operation and management of its infrastructure. In this context, priority issues include:

- Improvement of the energy efficiency of NBG's buildings.
- Conservation of natural resources and energy.
- Rationalization of business-related travel and encouraging the use of public transport.
- Enhancement of the staff's environmental awareness.
- Compliance with environmental legislation.

NBG's Group Sustainability Policy is publicly available on its website³ and is also communicated to NBG's employees through various environmental awareness announcements available on NBG's intranet.

Scope

The NBG Group Sustainability Policy:

- Is binding on the Bank and the Group Companies. The Boards of Directors of the Group Companies are obliged to adopt relevant policies, using the NBG Group Sustainability Policy as a reference and guide.
- Applies to all Board members, senior executives, employees of the Bank and the Group Companies.
- Covers all activities of the Group in Greece and abroad, including all the operations carried out by any Bank Unit, by a subsidiary or an affiliated Company, agent, advisor or third party acting on behalf of or in collaboration with the Group while being adequately disclosed / notified to such parties.
- Covers all forms of Corporate Social Responsibility (CSR) actions carried out in the context of the Bank's and the Group Companies' operations, including donations, sponsorships, charity and other contributions and actions of the Bank and the Group.

The rules set out in NBG's Corporate Governance Code, the NBG Group Code of Ethics, and the relevant provisions in other Group Policies remain in force and apply alongside this Policy.

Current Regulatory Framework, best practices and international standards

The NBG Group Sustainability Policy adheres to the requirements of the applicable legislative and regulatory framework, as well as international practices included in international conventions and initiatives and aiming at sustainable development, corporate social responsibility and business ethics.

Among others, the NBG Group Sustainability Policy is based on the applicable legislation on sustainable development, the United Nations Environment Programme Finance Initiative's (UNEP FI) Principles for Responsible Banking (PRBs), the Task Force on Climate Related Financial Disclosures (TCFD) recommendations, etc.

Commitment to Stakeholders

In the context of the NBG Group Sustainability Policy, NBG recognizes the interests and expectations of its Stakeholders and seeks to foster continuous communication/interaction through various communication channels, in accordance with internationally recognized

³ [NBGs Sustainability Policy EN.pdf](#)

standards, in order to understand, evaluate and address the material issues, that they are concerned about, i.e., the issues with the greatest importance in terms of the decisions and choices of the Stakeholders and those with the greatest socio-economic importance.

The Group's response to the concerns and expectations of Stakeholders contributes in the medium- to long-term to the ongoing improvement of its business operations, products and services.

Finally, in the context of its business operations and commitment to CSR, NBG participates in national and international bodies, associations, and organizations the purpose of which is to promote sustainable development, while it interacts with other bodies and organizations that undertake coordinated action in the field of Sustainability, such as the UNEP FI, the UN Global Compact, the Hellenic Bank Association (HBA) Sustainable Development Committee, the HBA ESG Committee, the Hellenic Network for Corporate Social Responsibility (CSR Hellas), and others.

NBG's participation in such programs, actions and initiatives implies a series of commitments which are fully in line with the Group Sustainability Policy.

Governance and monitoring

The most senior level in the organization accountable for the implementation of the Group Sustainability Policy is NBG's Board of Directors. They are responsible for adopting, approving, revising, and supervising the implementation of the Group Sustainability Policy, with assistance from NBG's Group Social Strategy and ESG Reporting Division. Additionally, the Board of Directors of Group Companies adopt the NBG Group Sustainability Policy, adjusting it to their specific activities and regulatory frameworks. The Management of the Bank and each Group Company establishes necessary procedures for effective implementation, annually evaluates the NBG Group Sustainability Policy's adequacy and effectiveness and are responsible for its revision in collaboration with NBG Group Corporate Social Responsibility and ESG Reporting Division.

Sustainable Finance Framework (SFF)

NBG has established a Sustainable Finance Framework (SFF) to facilitate the identification, assessment and classification of its financings as sustainable, in line with the EU taxonomy requirements as well. The SFF is expected to facilitate effective monitoring and accurate reporting of the Bank's performance against its sustainable finance targets and to serve as a mechanism for the expansion of sustainable funding to its clients. The ESG Committee is responsible for introducing updates to or revisions of the SFF, as needed, and for ensuring its appropriate implementation. The SFF is subject to periodic review and may be updated to reflect evolving market conditions and best practices, as well as developments in regulatory requirements and guidelines.

Sustainable Bond Framework (SBF)

In 2023, NBG became the first Greek Bank to issue a Sustainable Bond Framework (SBF), to be used as an overarching governance framework for any future issuance of Green, Social and other Sustainability-labeled financial instruments. The SBF builds on the eligibility criteria previously used in NBG's Green Bond Framework, issued in 2020, expands its applicability to additional green and new social eligible categories, and further aligns with the latest market best practices in the fast-evolving field of sustainable financing and investing. The Sustainable Bond Framework received a Second Party Opinion (SPO) by Sustainalytics, verifying that it is credible and impactful, and aligns with the Sustainability Bond Guidelines 2021, the Green Bond Principles 2021, and the Social Bond Principles 2023. The Sustainable Bond Committee is responsible for reviewing the content of the SBF, for coordinating any future updates to reflect changes in corporate strategy or regulatory developments, as well as for ensuring the appropriate implementation of its provisions. The SBF is subject to review and may be updated, as/when

needed, to reflect market developments, emerging good practices, or forthcoming regulatory requirements and guidelines.

Other Group Policies Associated with Climate Change

Other significant NBG policies and frameworks associated with the management, monitoring and mitigation of risks related to climate change are outlined below. These policies apply at the Bank level and are cascaded to the Group's subsidiaries (where relevant, based on their activity), which endorse their principles and adapt them at entity level.

Credit Policy

NBG has incorporated in its lending policies and processes the assessment of ESG risks of its Non-Financial Corporations (NFC) clients, with climate being a prominent component of the environmental pillar. Specifically, an ESG Obligor Assessment is performed at the stage of loan origination via an obligor-level questionnaire and a respective scorecard that leads to a standardized ESG risk vulnerability scorecard outcome. Moreover, an ESG facility assessment is performed to identify and classify financings as sustainable.

A set of policy actions is applicable to obligors with certain combinations of credit rating, ESG risk vulnerability scorecard outcome, and ESG facility assessment outcome. These policy actions relate to credit risk classification, loan pricing, potential tenor restrictions, frequency of ESG Obligor Assessment, and requirement for obligors' respective action plans to mitigate ESG risks, including those related to climate. In addition, NBG has a C&E dedicated exclusion list, which covers activities bearing negative C&E impact, including with respect to climate.

Property Valuation Policy

NBG has integrated specific C&E related parameters (primarily addressing physical risk) in the property valuation policy, which applies, also, for collaterals to mitigate C&E risks.

Risk Taxonomy

NBG has incorporated ESG risks in its Risk Taxonomy by recognizing them as transversal risks and considering them as drivers of existing types of financial and non-financial risks.

C&E RIMA

The incorporation of C&E risks in the risk identification and materiality assessment (RIMA) process is conducted at least annually. This analysis addresses risk materiality both at the level of primary risk types and transversally.

Risk Appetite Framework (RAF)

NBG has introduced ESG-related aspects into its RAF (e.g., qualitative & quantitative statements). Specific targeted metrics and respective thresholds have been established aiming to set the risk appetite towards financing ESG sensitive sectors in relation to NBG's overall business strategy. Specifically, NBG has included into its RAF seven ESG-related Key Risk Indicators (KRIs), taking explicitly into consideration the following:

- NBG's commitment to specific decarbonization targets for 2030 in the context of the Net-Zero Banking Alliance (NZBA).
- NBG's Risk Identification & Materiality Assessment (RIMA) outcome.

All KRIs' breach escalation process is performed at least at Executive Committee level.

Additionally, NBG has supplemented its RAF with eight metrics for monitoring purposes of C&E risks, covering credit risk and strategy-related risk considerations. Specifically, these metrics cover climate transition risks and physical risks, as well as environmental risks. These indicators are included in the standardized combined C&E risk reporting dashboard; the latter incorporates a large number of monitoring indicators which are observed in conjunction with the RAF monitoring KRIs, to capture the complexity of the risk type and derive meaningful conclusions.

In addition, NBG has no appetite for:

- Financing specific activities involving significant C&E risks, including mining & coal-related and other activities with increased environmental impact. These activities are detailed in NBG's RAF document, which is updated annually.
- New financing to obligors that are not in compliance with the C&E related credit policy actions.

ICAAP Framework

NBG has incorporated ESG risks in its ICAAP Framework. All ESG risks evaluated as material have been assessed under normative and economic perspective in alignment with the respective regulatory guidelines.

Stress Testing Framework

C&E Risk Scenario Analysis and Stress Testing is a primary tool for the forward-looking assessment of the Group's vulnerabilities related to material climate and environmental risks; to this end, suitable climate scenarios and methodologies are employed.

The integration of C&E risks in the Bank's Stress Testing Framework enables the Bank to inform strategic decision-making and various elements of the Risk Management Framework, such as the identification and materiality assessment of C&E risks in different time horizons.

The scope of the C&E Risk Stress Test covers material risk drivers/factors relevant to both physical and transition risks. The C&E Risk Stress Test perimeter includes, as a minimum, all material geographies/ regions, business units/portfolios. The Stress Test time horizon examined is typically prolonged due to the medium/long-term nature of most of the associated risk factors. NBG employs both static and dynamic balance sheet approaches for C&E Stress Test purposes.

C&E Reputational & Litigation Risk Assessment Framework

NBG has developed a comprehensive Framework for the identification, assessment, measurement and monitoring of C&E reputational and litigation risks. Concerning the implementation of the Framework, dedicated assessment methodologies, including scoring tools at counterparty level are employed and customized by type of business relationship (financing activities/ obligors, procurement/ vendors). Furthermore, the Framework addresses C&E reputational and litigation risks stemming from NBG's own operations, in alignment with the Operational Risk Management Framework.

Suppliers & Service Providers Evaluation

NBG conducts an evaluation of its service providers on ESG issues as part of its relevant policies (e.g., Suppliers & Procurement Policy, Outsourcing Policy). These principles and criteria apply to any kind of employment relationship, as well as to any third party collaborating with the Bank or a Group company, either within the context of providing on-going services or specific project work.

Business Continuity Policy

NBG incorporates C&E scenarios in its business continuity and operational resilience assessments, together with the identification of mitigating measures and processes to respond to disruptions and restore activities.

Group Remuneration Policy

The Group Remuneration Policy is designed with particular attention to avoiding incentive elements (especially in terms of variable compensation) that may induce behaviors not aligned with the NBG's aim for achieving sustainable business results or inconsistent with its risk appetite. Specifically, variable remuneration is supported by the annual Performance Management System (PMS) process, including ESG objectives. Specific ESG-related targets and Key Performance Indicators (KPIs) have been established for the Top Management, including the CEO and Senior Executives.

Current actions and resources in relation to climate change policies

ESG Transaction Assessment Tool

In line with its Sustainable Finance Framework (SFF), NBG has enhanced its ESG Transaction Assessment Tool to reflect the assessment of the additional sustainable finance categories (e.g., EU Taxonomy aligned financing, transition financing etc.).

KRI Setting

As mentioned above, NBG has incorporated into its Risk Appetite Framework (RAF) 7 (seven) ESG-related KRIs, which are illustrated in the table below:

Metric Type	Indicator name	Remarks
Risk appetite limit	ESG rating	NBG is monitored and assessed by several rating agencies with respect to its ESG performance; the metric (a composite index from 8 important rating agencies) addresses the perception of market regarding the ambition and pace of implementation of NBG's ESG strategy.
Risk appetite limit	Corporate - Oil & Gas sector financed emissions (FE)	NBG has announced targets for 2030 for reduction of financed emissions to Oil & Gas sector (absolute FEs); the metric addresses the execution risk around reaching the target, using relevant projections.
Risk appetite limit	Corporate – Power Generation sector financed emissions intensity	NBG has announced targets for 2030 for reduction of financed emissions (intensity) for the Power Generation sector; the metric addresses the execution risk around reaching the target, using relevant projections.
Risk appetite limit	GAR (based on Turnover)	The Green Asset Ratio (GAR) measures the proportion of Banks' assets that finance and are invested in EU Taxonomy-aligned economic activities in relation to total assets considered, i.e. those assets –over the total covered- that meet the Taxonomy criteria for being classified as environmentally sustainable. The metric addresses the execution risk around improving the ratio of lending & investment towards sustainable activities over the total eligible for assessment.
Risk appetite limit	Financed Emissions Intensity (Scope 1, 2)	The metric is defined as Financed emissions (in tCO ₂) / Outstanding amount (€ million); the metric addresses the execution risk around improving NBG's portfolio mix in terms of Scope 1, 2 GHG financed emissions profile.
Risk appetite limit	Climate Physical Risk - Flood: share of uninsured RRE collaterals in high-risk locations	The metric's perimeter is defined by the material climate hazards, as identified in the latest C&E RIMA (floods and wildfires) and the assets (properties) located in areas where, each of these hazards (in this metric, Flood), is assessed to potentially cause material impact; the metric addresses the insurance coverage against the climate physical risk of Flood, as a key mitigating factor with regards to the secured portfolio.
Risk appetite limit	Climate Physical Risk - Wildfires: share of uninsured RRE collaterals in high-risk locations	The metric's perimeter is defined by the material climate hazards, as identified in the latest C&E RIMA (floods and wildfires) and the assets (properties) located in areas where, each of these hazards (in this metric, Wildfires), is assessed to potentially cause material impact; the metric addresses the insurance coverage against the climate physical risk of Wildfires, as a key mitigating factor with regards to the secured portfolio.

Tools for Stress Testing/ICAAP Purposes & Scenario Analysis

In 2024, NBG further enhanced its internal C&E risk scenario analysis, stress testing and forward-looking quantification capabilities. In accordance with market leading practices, NBG has implemented an advanced climate stress testing methodology in order to assess transition and physical risks in different horizons. This entailed the upgrading of its integrated stress testing platform with dedicated models and further data and parameters used for physical risk assessment (e.g., use of geolocations, hazard maps). Going forward, NBG will continue to enhance its Scenario Analysis and Stress Testing capabilities.

ESG Data Enhancement

NBG acknowledges the necessity of data enhancements and invests in the expansion of data sources, development of IT infrastructure, and enhancements of modelling and analytics, thus enabling qualitative and timely risk analysis, monitoring and reporting. Emphasis has been placed on ESG data management and availability, using internal and external sources.

NBG has incorporated in its Transformation Program specific initiatives to enhance ESG data and IT infrastructure. In that regard, NBG is currently implementing a centralized ESG Reporting architecture aiming at ramping up NBG's ESG reporting capabilities and data collection and governance process.

NBG also actively participates in a number of market-wide initiatives to improve data availability and consistency. Most importantly, NBG is part of the interbank initiative of the Greek Credit Bureau (Tiresias) for the implementation of a common ESG Obligor Assessment Questionnaire and a platform for the retrieval of relevant data.

Risk Control, Monitoring and Reporting

NBG has taken actions in relation to C&E risk data aggregation, analytics and a robust monitoring setup, for internal C&E risk monitoring and reporting purposes, across risk types. An extensive set of C&E metrics is being employed for monitoring and reporting to the principal overseeing bodies, RAF monitoring and operational needs.

3.3 ESG Governance

Strong governance structure and processes provide an essential foundation for long-term value creation and protection of our investors' interests. In this context, NBG has further strengthened its ESG governance at the Board and management level:

- The Board Innovation and Sustainability Committee which was established in February 2022 with the aim to support the Board of Directors in ensuring there is continuous monitoring and tracking of important developments and long-term trends related to, among others, ESG and Innovation. Other Board Committees are also involved in overseeing the management of ESG-related themes, including the Board Risk Committee (e.g., on ESG risk management), the Board Strategy & Transformation Committee (e.g., on ESG-related initiatives), the Board Audit Committee (e.g., on ESG-related reporting), the Board Compliance, Ethics and Culture Committee (e.g., on formulation of ESG-related policies), the Board Corporate Governance and Nominations Committee (e.g., on representation of the underrepresented gender in the Board) and the Board Human Resources and Remuneration Committee (e.g., on inclusion of ESG objectives in the Group Remuneration Policy).
- The ESG Management Committee, chaired by the CEO, sets the direction in terms of ESG strategy and targets, and provides oversight for key business initiatives and risks related to ESG.

- The Bank has established a robust organizational structure aiming to further strengthen the governance of its ESG strategy and to address the constantly growing regulatory requirements more effectively. In this context, competent distinct Units operate within the 1st and 2nd line of defense with clearly defined roles and responsibilities. In particular, within the 1st line of defense:
 - the Group C&E Strategy Division defines, coordinates and monitors the implementation of C&E Strategy across the front-line.
 - the Group Social Strategy & ESG Reporting Division's main responsibilities include sustainability reporting, ESG raters' assessments, formulation and execution of social strategy as well as coordination across the first line business units and functions pertaining to these issues.

Within the 2nd line of defense:

- The Group Strategic Risk Management Division, monitors and manages C&E factors across all risk types, through a dedicated team.
- The Group Data Privacy, Technology & ESG Compliance Advisory Division advises and trains relevant Units on the ESG regulatory framework, with an emphasis on anti-greenwashing compliance and vendors' ESG due diligence.

4 Sectoral view: Power Generation

4.1 Context

The power generation sector is rapidly evolving in the face of the increasing electrification of transport, heating, and the growth of datacentres. The cost of renewables has significantly decreased: solar levelized costs have fallen by 80% and wind costs have fallen by 40% from 2010 to 2020⁴, making them competitive with conventional technologies such as coal and natural gas in most markets.

In the EU, power demand is expected to grow at about 2% annually until 2050, driven by the electrification of transport, industry, and green hydrogen production. Meanwhile, renewable generation is expected to increase 85% by 2030 from 2023 levels, growing 9% annually to 2030 and continuing to grow 5% annually to 2050 supported by EU regulations like the EU Green Deal and Fit for 55. Coal production, on the other hand, is being gradually phased out and is expected to decrease 67% on 2023 levels by 2030 and 94% by 2050⁵.

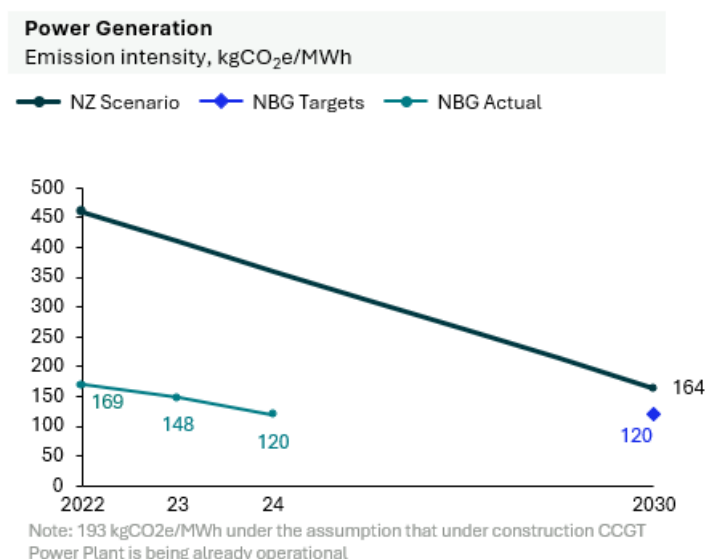
In line with the EU's climate ambition, Greece's power generation sector is undergoing a transformative shift to achieve climate neutrality by 2050. The 2025 National Energy and Climate Plan (NECP) outlines a three-phase strategy. From 2025 to 2030, the focus is on rapidly integrating RES such as solar and wind, supported by modern electricity infrastructure, while phasing out lignite coal by 2028, introducing smart metering, and producing biomethane to partially replace natural gas. This period also prioritizes the electrification of light road transport and the development of electric vehicle charging infrastructure. Renewable energy capacity is expected to grow by 47%, from 19 GW to 28 GW in 2030 vs 2025⁵. In line with this, there is a strong focus on offshore wind farms, with the aim for the first projects to be operational by 2030; The installed capacity of offshore wind farms is expected to reach 19.5 GW by 2050⁶. Energy storage, including batteries and pumped hydro, will be required to facilitate RES integration into the system. Storage capacity is projected to increase from 0.7 GW in 2025 to 6 GW in 2030⁵. Between 2030 and 2040, the strategy shifts towards accelerating electrification across all sectors of power consumption. From 2040 to 2050, the emphasis will be on scaling up green hydrogen and synthetic fuels, particularly for heavy transport and industrial applications.

⁴ [How to Decarbonize Global Power Generation Systems](#), McKinsey 2020

⁵ [World Economic Outlook](#) – Stated Policies Scenario, International Energy Agency 2024

⁶ [National Energy and Climate Plan](#), Greek Government 2025

4.2 NBG financed emissions and targets



NBG has set an interim 2030 emission intensity target at 120 kgCO₂e/MWh by 2030, reflecting a 29% reduction vis-à-vis the 2022 baseline and well below the sectoral decarbonization target of 164 kgCO₂e/MWh provided by IEA (NZE 2021 scenario). The set target reflects NBG's strategy and strong commitment to support national energy transition plans, by actively financing the shift of power generation capacity away from fossil fuels and towards RES and lower-emitting solutions (i.e., natural gas), exploiting also the country's geopolitical advantage.

NBG incorporates on-balance sheet loan exposures and debt securities for large clients operating in power generation activities including their Scope 1 and 2 emissions. In accordance with NZBA guidelines, NBG has selected a physical intensity metric for its Power Generation target, allowing the Group to increase its exposure to the sector supporting regional decarbonization efforts and the increase in energy demand required by the electrification of the economy. Our target is consistent with a global 1.5°C-aligned pathway, as defined by the IEA NZE 2021 scenario. As new 1.5°C-aligned scenarios with regional breakdown become available, we expect to consider embedding regional implications into target-setting approach to better reflect the operations of our clients.

Based on 31.12.2024, NBG's latest portfolio intensity in the Power Generation sector stands at 120⁷ kgCO₂e/MWh, marking a drop from 2022's level of 169 kgCO₂e/MWh baseline and standing well below the IEA NZE power generation sector decarbonization pathway.

4.3 NBG's approach to Power Generation Decarbonization

4.3.1 Key supporting products and services

NBG has historically been regarded as the leading financial institution for the energy sector in Greece. At the forefront of this effort, NBG's highly skilled and specialised Project Finance team offers extensive expertise on energy project financing and renewable technologies. This includes

⁷ Current year's intensity of Power generation sector excludes emissions related to the financing of CCGT in Alexandroupolis, since it is not yet operational.

the “Ethniki 2.0” Program that provides specialised advisors to link clients to Greece 2.0 Program funding through EU RRF Program. NBG’s project finance expertise allows NBG to have a leading position in RES financing, but also to actively collaborate and innovate with clients to seize emerging market opportunities. Overall, NBG targets an increase in Corporate RES financing balances from €2.3 billion in 2024 to €3.3 billion in 2027.

Historically, the energy market has been driven by subsidies provided through predetermined tariffs. The gradual transition from the tariff regime to bilateral contracts (PPAs) or prices determined by the free market makes any investment more complex, requiring greater know-how from those involved. To address this challenge, in 2024 NBG launched a new and innovative product, the “Energy Baseload Swap” (EBS), which allows businesses to stabilize their energy costs (in the case of consumers) or their income (in the case of RES producers) for a period of up to 10 years without necessarily concluding a bilateral agreement (PPA).

In the coming years, energy storage is anticipated to play a crucial role in the expansion of RES by mitigating the high dependence of RES production on weather conditions. Additionally, investment in offshore wind farms is expected to rise, targeting areas designated for offshore wind development under the National Offshore Wind Farms Development Program.

4.3.2 Client engagement

As part of its client engagement approach, NBG carefully tracks the transition plans of its key clients in the Power Generation sector, to better understand their needs and support their decarbonization efforts. NBG’s approach to assessing transition plans plays a key role in evaluating clients’ progress, identifying further decarbonization opportunities, and comparing their emission trajectories to NBG’s 2030 target. However, it is understood that each client’s decarbonization journey is unique, and that the pace and extent of their transitions will vary.

To further engage clients, NBG is a continuous sponsor of the annual Greek Energy Market Report published by the Hellenic Association for Energy Economics (HAEE) which focuses on all aspects of the Greek energy sector and related investments, including decarbonization.

4.3.3 Challenges and Enablers

The main challenges for the sector to reach Net Zero targets are:

- **Market volatility:** Geopolitical events may lead to significant macroeconomic shifts and hinder decarbonization efforts in the Power Generation sector. For example, the energy crisis of 2022 led to increased inflation and increased interest rates, making it harder for energy producers to finance RES projects. Nevertheless, the crisis shifted priorities in the EU towards independence away from fossil fuels, creating an extra imperative for renewable energy adoption going forward. This has resulted in increased renewable energy adoption, with Greece achieving currently close to 50% of energy generation from renewables, ranking highly at global level in renewable solar and wind electricity generation.⁸
- **Shortfall in infrastructure:** As fossil-fuel electricity generation declines, renewables are expected to meet all electricity demand growth in 2023 and 2024. The NECP has set a target of over 80% of electricity from renewable sources by the year 2030. To integrate renewables

⁸ [IEA Wind TCP | Greece](#)

successfully, accelerated investments in the grid and in energy storage, especially battery storage, are crucial. Energy storage systems are increasingly needed to guarantee energy stability as renewable energy sources are inherently variable in their output. The investment needed in grid infrastructure and energy storage is substantial. NECP estimates €10 billion investments in electricity networks between 2025-2030 and an additional €12 billion investments until 2050. Energy storage is expected to require an investment of €4 billion between 2025-30, and an additional €14 billion until 2050⁹.

- **Technological immaturity:** Energy storage projects present low IRRs and long funding maturities while the technologies are expected to become obsolete relatively quickly. This represents a significant challenge when deciding to finance such types of projects that on the other hand are crucial for the future expansion of the transmission network.

The main enablers for the transition of the sector are:

- **Favourable geographic location:** Greece's strategic geographical location provides it with a significant advantage in renewable energy production. The country experiences a high number of daily sunlight hours, resulting in solar power generation that is nearly double that of many northern European countries. Additionally, Greece's extensive sea surface and areas with strong wind conditions make it an ideal location for the development of onshore and offshore wind farms.
- **Financing and co-financing programs:** The Recovery and Resilience Facility (RRF) allocates to Greece €17.7 billion in Loans, with 38.2% supporting climate-related objectives. Moreover, EIB financing programs include Green Investment programs and Climate Action programs that support the financing of RES projects.
- **Policy and regulatory support:** The National Offshore Wind Farms Development Program clearly defines criteria and organizes the developmental areas for offshore wind developments with a minimum estimated capacity of 7.7 GW by 2040 and 19.5 GW by 2050⁹. Its continuation and maturity are critical to offshore wind power generation in Greece.

4.3.4 CASE Study 1: Financing Framework Agreement with HELLENiQ ENERGY

HELLENiQ ENERGY is a leading energy group in Greece with the ultimate ambition of achieving net zero CO₂ emissions by 2050. In 2023, NBG acted as the Coordinator & Mandated Lead arranger for the implementation of multiple financing arrangements of existing and new projects, for electricity generation from RES for HELLENiQ's 100% owned subsidiary HELLENiQ Renewables.

The framework agreement with HELLENiQ ENERGY of up to €766 million financing is a landmark agreement in Greece as well as in Europe, supporting the development of RES projects through the green transformation of HELLENiQ ENERGY, substantially contributing to the achievement of HELLENiQ ENERGY's target of developing a RES portfolio of at least 1 GW by 2025 and over 2 GW by 2030.

This is an innovative transaction for the Greek market, as it is the first financial framework of standardized terms for financing existing and future RES transactions for a Greek group of companies and one of the largest respective agreements in Europe, as well as one of the most

⁹ [National Energy and Climate Plan](#), Hellenic Government 2025

important financing contracts that have been concluded so far in our country for investment in renewable energy sources.

The agreement provides common ground terms for projects that meet pre-agreed eligibility criteria, with the possibility to integrate both existing and new projects to be implemented in Greece at various stages of development. The energy produced is sold through contracts based on different structures (Feed-in Premium / Feed-in Tariff and / or financial bilateral Corporate Power Purchase Agreements) providing full flexibility to the investor and immediate implementation of the financing request.

4.3.5 CASE study 2: Financing of CCGT plant in Alexandroupolis

Apart from investing in renewable energy capacity, it is crucial to support the green transition in the medium term by shifting the energy mix towards "cleaner" fossil fuels with an emphasis on natural gas.

NBG is financing (as arranger and exclusive lender) the Alexandroupolis Combined Cycle Gas Turbine (CCGT) plant, a key energy infrastructure project aimed at boosting Greece's energy efficiency and regional energy stability.

The power plant, with a budget of €600 million, is being developed by a joint venture in which Public Power Corporation (PPC) and DEPA Commercial are key shareholders. This new power plant, with a planned capacity of approximately 840 MW, will utilize advanced gas turbine technology to generate electricity efficiently while maintaining lower carbon emissions compared to traditional fossil fuel plants. The CCGT plant is expected to initiate its commercial operation in 2027.

The new combined cycle power plant will feature one gas turbine, one steam turbine and one generator with a single shaft configuration. It will primarily use natural gas as fuel, as well as other varieties such as blends of hydrogen.

NBG's financial support reflects its commitment to Greece's transition towards a more sustainable and resilient energy system and underscores its dedication to supporting key infrastructure initiatives that align with Greece's energy strategy and regional energy security goals.

5 Sectoral view: Oil & Gas

5.1 Context

Global Oil & Gas (O&G) demand is projected to undergo a significant transformation as the energy transition progresses. Global oil supply is expected to peak in 2030 and then decrease by 8% by 2050⁶. While Oil will become relatively less important for road passenger transport, it will remain essential to other sectors like chemicals, aviation, and heavy trucking. Similarly, Natural Gas production is expected to peak in 2030 and then decrease by 1% to 2050¹⁰, remaining an essential input to the power generation sector.

Greece's O&G reserves are estimated by the Hellenic Hydrocarbons and Energy Resources Management Company to be worth over €250 billion. Recognising their potential for economic growth and energy security, gas exploration and production projects have been designated as projects of national importance in April 2022, expediting permitting procedures and approvals. The country's environmental laws, overseen by the Hellenic Marine Environment Protection Agency (HELMEPA), ensure environmental protection and effective management, particularly in marine environments.

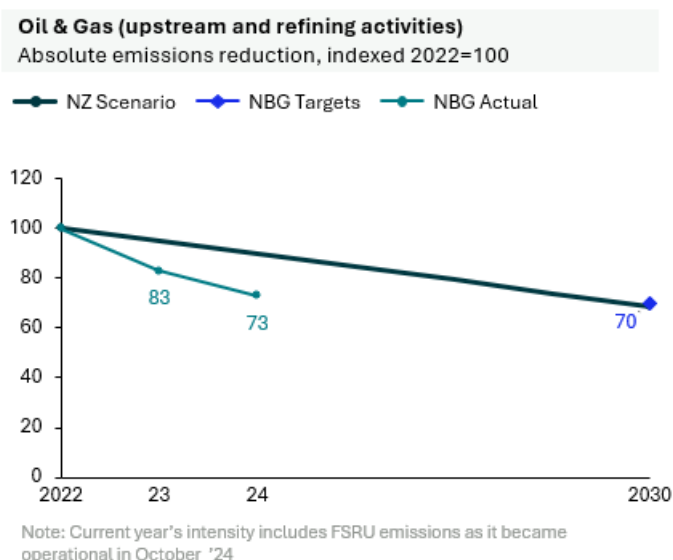
In the midstream sector, Greece's refining capacity, including the Elefsina and Aspropyrgos refineries, plays a crucial role in the country's energy landscape. Refinery facilities not only supply the domestic market but also export refined products to neighbouring countries, thereby supporting regional energy needs. Investments in modernizing refinery infrastructure ensure that Greece remains competitive in the global energy market while adhering to strict environmental standards.

The Greek Government has set ambitious targets for the natural gas sector, highlighting its role in the transition to a zero-emission future and minimizing dependence on O&G imports. With ten large-scale oil storage facilities capable of holding around 60 million barrels¹¹, Greece is poised to enhance its energy security and contribute to regional and European energy stability.

¹⁰ [World Economic Outlook](#) – Stated Policies Scenario, International Energy Agency 2024

¹¹ [National Energy and Climate Plan](#), Hellenic Government 2025

5.2 NBG financed emissions and targets



NBG has set an absolute emission target for Scope 1 and 2 emissions of the Oil & Gas sector aiming to decrease its financed emissions by 30% in 2030 vis-à-vis the 2022 baseline.

The selection of an alignment metric based on absolute emissions, reflects our readiness to support clients' plans to decarbonize and transition towards sustainable fuel types and renewable energy.

NBG's starting position in terms of absolute financed emissions in the Oil & Gas sector is relatively contained, primarily due to focusing on financing refineries (compared to EU peers financing upstream activities in the Oil & Gas value chain). Our target for 2030 is aligned with the Oil & Gas sectoral scenario and backed by the ambitious commitments of our key clients.

NBG incorporates on-balance sheet loan exposures and debt securities for clients engaged in refinery activities and floating storage and regasification unit (FSRU) projects, as well as in upstream exploration and production activities. Our target is consistent with a global 1.5°C-aligned pathway, as defined by the IEA NZE 2021 scenario including also methane emissions. As new 1.5°C-aligned scenarios with regional breakdown become available, we expect to consider embedding regional implications into target-setting approach to better reflect the operations of our clients.

Based on 31.12.2024 NBG's latest measurement shows a 27% reduction in our Oil & Gas emission vs. our 2022 baseline, signalling significant progress towards our 30% reduction target by 2030. This is driven by the ambition of our key financed clients – conventional refinery players, who are already transforming into integrated energy players with substantial investments in renewables, natural gas and sustainable fuels.

5.3 NBG's approach to Oil & Gas Decarbonization

5.3.1 Key supporting products and services

NBG supports ambitious client transition plans by helping conventional refining players transform into broader energy carriers. This involves major energy improvements in their facilities and capturing opportunities across the energy sector to decarbonize operations and unlock value from new RES projects and adjacent activities. For example, NBG focuses on supporting its clients to reduce refinery emissions (e.g., by increasing efficiency, electrification and digital transformation) and increase the production of biofuels, including biomethane, green hydrogen, and sustainable aviation fuels. Finally, NBG can support its clients' investment in novel decarbonization technologies, such as Carbon Capture, Utilization, and Storage (CCUS). As an example of NBG's support to broader regional decarbonization efforts, the Bank has acted as the sole coordinator and underwriter of the Alexandroupolis Floating Storage and Regasification Unit (AFSRU). The project constitutes a strategic priority for Greece, as it seeks to become a key transit route for gas destined for Europe and enjoys strong national and EU support. The construction and testing of the AFSRU infrastructure were completed in October 2024.

5.3.2 Client Engagement

As part of client engagement approach, the Bank carefully tracks the transition plans of its key clients in the Oil & Gas sector, to better understand their needs and support their decarbonization efforts. NBG's approach to assessing transition plans plays a key role in evaluating clients' progress, identifying further decarbonization opportunities, and comparing their emission trajectories to the Bank's 2030 target. However, it is understood that each client's decarbonization journey is unique, so the pace and extent of their transitions will vary.

5.3.3 Challenges and Enablers

The main challenges for the sector to reach Net Zero targets are:

- **Market volatility:** Increased energy consumption, coupled with the aftermath of the Covid-19 pandemic and geopolitical tensions, has introduced volatility into global Oil & Gas markets.
- **Technological immaturity:** While various technological innovations like carbon capture, renewable energy integration, and hydrogen production are available, they require further development and substantial investment to become fully operational.

Key Enablers

The main enablers for the transition of the sector are **policy and regulatory support**, along with **consumer and investor pressure**. Technological innovation and long-term solutions like clean hydrogen and carbon capture, utilization, and storage (CCUS) will be essential for achieving net-zero emissions by 2050. Decarbonizing energy supply is also vital for the transition of the Oil & Gas sector, with ongoing efforts in electrification and energy efficiency playing a critical role in meeting decarbonization goals.

5.3.4 Case Study - FSRU Alexandroupolis

The green transition should be supported in the medium term by incorporating lower-emission fossil fuels into the energy mix, with a particular focus on natural gas. In alignment with this objective, NBG is financing (as sole coordinator and underwriter) the Alexandroupolis Floating Storage Regasification Unit (FSRU) in Northern Greece, a project that contributes to the country's decarbonization journey and started commercial operation in October 2024.

The FSRU, a strategic energy project that is pivotal for Greece and Southeast Europe, is a Project of Common Interest (PCI) of the European Union with a budget of €481 million, led by Gastrade. It aims to establish a new natural gas gateway that enhances energy security and diversifies supply routes in the region.

NBG's financing underscores its commitment to supporting critical infrastructure projects that strengthen Greece's energy independence and promote regional energy stability. The Alexandroupolis FSRU, with a planned LNG storage capacity of 170,000 m³ and regasification capacity of 5.5 billion m³ per year, will facilitate the import of liquefied natural gas (LNG) from global markets. This will help reduce reliance on pipeline gas and provide a flexible and reliable energy supply to both Greece and neighbouring countries, such as Bulgaria, Serbia, and North Macedonia.

NBG's involvement not only highlights its leadership in financing energy projects but also aligns with Greece's national strategy to become an energy hub in Southeast Europe.

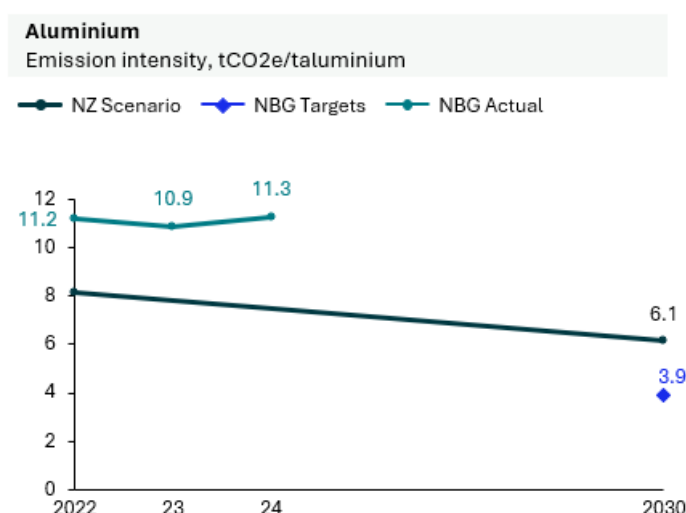
6 Sectoral view: Aluminium

6.1 Context

Aluminium is a crucial input for various clean energy technologies, but the industry itself is commonly defined as hard-to-abate in due to its current reliance on fossil fuels and current production processes. The energy intensity of primary aluminium averages around 70 GJ/t, making it more energy intensive than cement or steel on a per-tonne basis¹².

According to the IEA, the global direct emissions intensity of aluminium production has been declining by 2% annually, whereas the sector must accelerate its decarbonization to nearly 4% annually to meet the Net Zero Emissions by 2050 IEA scenario¹³. Decarbonization technologies for primary aluminium are not yet available at scale, which hampers the industry's progress toward reducing emissions.

6.2 NBG financed emissions and targets



NBG's has set an interim 2030 emission intensity target at 3.9 tCO₂e/taluminium by 2030, representing a 65% reduction from the 2022 baseline. While the starting position of the portfolio intensity (11.2 tCO₂/taluminium) stood above the MPP 1.5°C scenario pathway, our target for 2030 is set below the referenced scenario pathway, demonstrating NBG's commitment to support the ambitious decarbonization efforts of its clients.

While the Aluminium portfolio's emissions physical intensity has remained relatively stable in the past two years, significant reductions are anticipated from 2026 onward, driven by accelerated growth in renewable energy production and storage, as well as the deployment of new technologies such as carbon capture, currently in design or planning phase.

¹² [Net Zero Industry Tracker](#), World Economic Forum 2023

¹³ [Aluminium](#), IEA 2023

6.3 NBG's approach to Aluminium

6.3.1 Key supporting products and services

NBG aims to understand the needs of its Aluminium sector clients to facilitate investment in cutting-edge technologies, including green hydrogen and carbon capture and storage.

NBG aims to support its clients across their decarbonization journey by financing efforts to:

- **Research and implement advanced decarbonization technologies:** Implementing Carbon Capture and Storage (CCUS) and hydrogen/oxygen burner technology to decarbonize the aluminium and alumina production process.
- **Increase production of Green Aluminium products:** Supporting investments to increase production of hydrated alumina and secondary aluminium to enhance sustainability and reduce reliance on primary aluminium.
- **Incorporate RES and Low-Carbon Fuels in the production process:** Electrifying processes through RES or adopting low-carbon fuels such as Green Hydrogen and Biofuels to lower production emissions.

Additionally, NBG supports the transition to renewable energy sources like hydropower, solar, and wind, and the development of infrastructure such as energy storage systems and electrified production facilities. A dedicated Energy team helps reduce clients' indirect emissions through investment in renewable energy production and storage.

6.3.2 Client engagement

As part of its client engagement approach, NBG carefully tracks the transition plans of its key clients in the Aluminium manufacturing sector, to better understand their needs, and support their decarbonization efforts as well as their potential growth into the green aluminium value chain (e.g. vertical integration, new technologies, or low-carbon solutions).

NBG's approach to assessing transition plans plays a key role in evaluating clients' progress, identifying further decarbonization opportunities, and comparing their emission trajectories to the Bank's 2030 target. However, it is understood that each client's decarbonization journey is unique, so the pace and extent of their transitions will vary.

6.3.3 Challenges and Enablers

The main challenge for the sector to reach Net Zero targets is **technological immaturity** in terms of availability of decarbonization levers. Specifically, low emission refining and smelting technologies must be developed to reach Net Zero, but these technologies are not yet commercially viable. These technologies could help abate the 30% of aluminium emissions unrelated to electricity. For example, relevant technologies include inert anodes / wet cathodes (smelting), which are advanced electrolysis methods used in metal production that minimize carbon emissions and enhance efficiency by utilizing non-consumable electrodes and submerged cathodes for improved metal quality. None of these technologies are currently viable,

as measured by their Technology Readiness Level reported by the IEA¹⁴. These technologies may play a greater role beyond 2030 as they reach maturity.

The main enablers for the transition of the sector are **policy and regulatory support**, along with **consumer and investor pressure**. Decarbonizing energy supply will also be vital for the transition of the Aluminium manufacturing sector, with ongoing efforts in electrification and energy efficiency playing a critical role in meeting decarbonization goals. Technological innovation and collaboration across the value chain can also accelerate the transition.

6.3.4 Case study – METLEN RES financing

The METLEN Group is committed to achieving net zero emissions by 2050, driven by a comprehensive strategy that spans energy, industry, and sustainable innovation. The Group is leading the decarbonization effort in heavy industry and energy production through various ambitious initiatives.

Today it is the largest private company operating in the entire energy spectrum and is an integrated energy utility, from the development, construction and operation of thermal plants and RES projects, the design and construction of electricity infrastructure projects, to the supply of retail electricity and natural gas, the supply and marketing of natural gas and the provision of competitive energy products and services (energy efficiency and upgrade, Smart Cities services and hydrogen infrastructure, etc.). Central to its strategy is the increased reliance on RES. METLEN is rapidly expanding its portfolio of solar and wind parks, with projects across Europe and beyond.

METLEN operates the only vertically integrated bauxite, alumina, and primary cast aluminium production unit in Europe with privately owned port facilities and the largest cogeneration unit, while it has dynamically entered the field of recycled aluminium. The production of recycled aluminium is at the core of the circular economy. It is associated with the use of much less energy and therefore significantly fewer greenhouse gas emissions, which contributes positively to mitigating both global warming and climate change and the need to consume bauxite, which is a key natural resource.

Additionally, the production of primary cast aluminium, although a highly energy-intensive process, creates significant value due to the recyclability, durability, and contribution of the material to energy-efficient applications, and for this reason its demand is expected to increase significantly in the coming years. This activity is aligned with key Global Sustainable Development Goals, significantly enhancing employment in the domestic industrial sector, thus contributing substantially to the local and national economy.

In its industrial operations, particularly in the Metallurgy sector, METLEN is implementing advanced energy efficiency measures and innovative technologies to reduce emissions. A key project is the integration of state-of-the-art technologies for Carbon Capture and Storage Units (CCSU) to significantly curb emissions at its aluminium and alumina facilities.

¹⁴ ETP Clean Technology Guide, IEA 2024

Aiming to achieve net-zero carbon emissions by 2050, METLEN has included in its Action Plan¹⁵ the feasibility of implementing the following key initiatives, subject to the further maturation of new technologies, aiming at drastically reducing GHG emissions (Scope 1) across its activities:

- Use of zero- or low-carbon hydrogen.
- Use of zero- or low-carbon fuels.
- Application of carbon capture and storage technologies.
- Application of Inert Anode technology in aluminium production.
- Further increase of secondary aluminium production.
- Electrification of mining to eliminate emissions of related equipment.
- Offsetting residual emissions.

METLEN is also committed to transitioning its fleet to Electric Vehicles (EVs) and improving the sustainability of its supply chain.

¹⁵ METLEN [Sustainable Development Report 2023](#)

7 Sectoral view: Cement

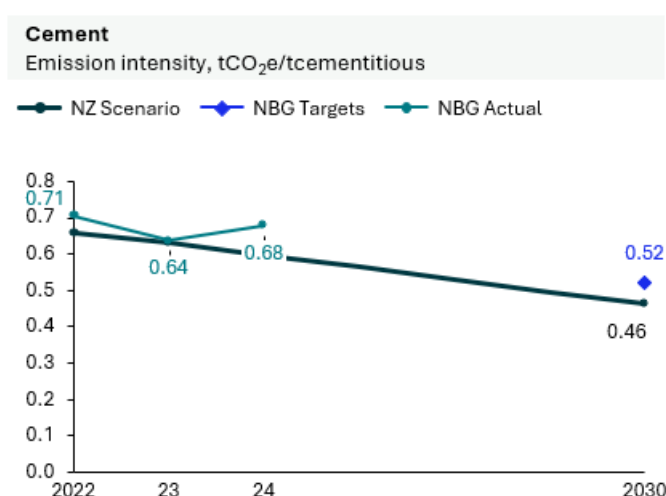
7.1 Context

The cement sector, responsible for 7% of global anthropogenic CO₂ emissions¹⁶, with a sectoral emission intensity of approximately 0.6 tCO₂e/tcementitious. Despite stable emissions intensity over the past five years, the sector must reduce its carbon intensity by around a quarter before the end of the decade, to 0.45 tCO₂e/tcementitious, in order to align with the IEA Net Zero Emissions by 2050 (NZE) Scenario¹⁷.

As the sector directly releases CO₂ in chemical processes during the cement production, its decarbonization presents significant technological and financial challenges. In the wake of stringent emissions reduction targets and rising carbon costs, European companies have been at the forefront of investments in thermal efficiency, alternative fuels, electrification of cement processing and carbon capture technologies¹⁸, which will be critical for the decarbonization of this hard-to-abate sector.

In Greece, the sector benefits from public infrastructure investments, private projects, and real estate demand. Notable decarbonization developments in the country include a low-carbon pre-calciner development, and ready-mix facilities at the Ellinikon urban regeneration project.

7.2 NBG financed emissions and targets



NBG's has set an interim 2030 emission intensity target at 0.52 tCO₂e/tcementitious by 2030, representing a 27% reduction from the 2022 baseline. The starting position of the portfolio intensity (0.71 tCO₂/tcementitious) stood above the IEA net-zero scenario pathway. Our emission intensity reduction target for 2030 entails a significant reduction in emission intensity but also stands slightly above the IEA NZE curve. The set target demonstrates NBG's commitment to supporting its clients' effort to reduce a material part of their emissions until 2030, whilst taking

¹⁶ [Cementing your lead: The cement industry in the net-zero transition](#), McKinsey 2023

¹⁷ [Direct emissions intensity of cement production in the Net Zero Scenario 2015-2030](#), IEA Net Zero 2023

¹⁸ [Decarbonizing cement: How EU cement-makers are reducing emissions while building business resilience](#), SP Global 2022

into account the challenges in abating clinker and cement production emissions in the short-term.

The portfolio's physical intensity has already registered a 4% decrease in emissions intensity from the 2022 baseline, dropping to 0.68 tCO₂e/tcementitious in FY2024 supported by significant investments towards net zero on various levers (e.g. low-carbon fuels, low-carbon products, use of renewable energy) from our clients.

7.3 NBG's approach to Cement Decarbonization

7.3.1 Key supporting products and services

NBG aims to further understand the needs of its clients operating in the Cement sector to facilitate investment into innovative technologies across all stages of cement production, as well as decarbonization technologies, such as green hydrogen and carbon capture and storage.

NBG aims to support its clients across their decarbonization journey by financing efforts to:

- **Incorporate Green Cement Technologies:** Transitioning to low-carbon alternatives, such as the industrial production of calcined clays and the introduction of new lower-carbon cement types.
- **Promote Energy Efficiency and Renewable Energy Integration:** Reducing indirect emissions by transitioning from fossil fuels to RES, green hydrogen, and alternative fuels in cement production. In doing so, NBG can rely on the Energy team's considerable expertise on investment in renewable energy production and storage.
- **Adopt Carbon Capture, Utilization, and Storage (CCUS) solutions:** Investing in CCUS technologies, whether for capturing emissions at the point of production or utilizing captured carbon in new products.

7.3.2 Client engagement

As part of our client engagement approach, we carefully track the transition plans of our clients involved in cement manufacturing activities to better understand their needs and support their decarbonization efforts providing the necessary capital for scalable solution or new technologies. As part of the engagement with our customers we maintain a close dialogue on their transition strategy and ESG performance overall, to understand their needs and challenges to accompany them in their climate transition and sustainability journey overall.

7.3.3 Challenges and Enablers

The main challenge for the sector to reach Net Zero targets is **technological immaturity** in terms of availability of decarbonization levers. Specifically, Cement production is a significant emitter due to its high energy requirements and substantial process emissions. The bulk of carbon dioxide is released as a chemical byproduct during the production of clinker, making it particularly challenging to decarbonize. Furthermore, decarbonization solutions such as innovative materials and alternative cementitious solutions, are still in early stages of

development. Adding to the previous challenges, increasing cement demand for housing and infrastructure is a competing priority for cement manufacturers.

The main enablers for the transition of the sector are **policy and regulatory support**, along with **consumer and investor pressure**. Decarbonizing energy supply will also be vital for the transition of the Cement sector, with ongoing efforts in electrification and energy efficiency playing a critical role in meeting decarbonization goals. **Technological innovation and collaboration** across the value chain can also accelerate the transition.

7.3.4 Case study – Financing Titan carbon capture project

The Titan Group is a global company that produces cement and building materials, with a focus on sustainability, innovation, and digitalization. Titan Group signed a Front-End Engineering Design (FEED) contract with Thyssenkrupp Polysius for its large-scale carbon capture project, IFESTOS. This partnership marks a major step forward in the implementation of IFESTOS, one of the largest projects of its kind in Europe. Set to be implemented at the Kamari plant near Athens, IFESTOS aims to reduce CO₂ emissions of the plant to net zero and enable the annual production of 3 million tons of zero-carbon cement.

Under the agreement, Thyssenkrupp Polysius will design and equip the two kiln lines of the Kamari plant with oxyfuel systems for CO₂ capture. First -and second-generation oxyfuel and cryogenic capture technologies will combine to capture 98.5% of the plant's CO₂ emissions. This approach will enable the avoidance of more than 1.9 million tons of CO₂ annually, which represents around 12% of the annual emissions of all Greek industrial installations and will make IFESTOS one of the largest carbon capture facilities in Europe.

IFESTOS will introduce an innovative process for CO₂ enrichment enabling carbon capture. The basic principle of the pure oxyfuel technology developed by Thyssenkrupp Polysius is to separate the CO₂ produced in a kiln plant from the exhaust gases of cement plants and thus prevent it from being released into the atmosphere. To achieve this, pure oxygen is used in the combustion process instead of ambient air. In combination with downstream treatment, almost 100% of CO₂ emissions from cement clinker production can be captured. The separated process gas is then treated to produce high-purity CO₂ and can then be used as a feedstock in the chemical industry or as a raw material in other industries, or alternatively stored.

8 Sectoral view: Commercial Real Estate

8.1 Context

In 2025, Greece's tertiary sector contributed 2.2 Mtoe to the total final energy consumption of 16.2 Mtoe. While buildings in this sector predominantly rely on electricity, their energy intensity has exceeded the EU-27 average since 2017, indicating a significant potential for energy efficiency improvements in commercial buildings¹⁹. The key lever to achieve these will be energy efficiency retrofits. In line with other EU member states, Greece will be required to retrofit 16% of the non-residential buildings with the poorest energy efficiency by 2030 and 26% by 2033²⁰.

The Greek commercial real estate market is evolving towards greater maturity, driven by key players emphasizing standardization, professionalism, accreditation, technology, and transparency, with a growing focus on sustainability and urban regeneration. Most Real Estate Investment Companies (REICs) adhere to strict Environmental, Social, and Governance (ESG) guidelines and have issued green bonds to fund sustainable investments²¹.

ESG criteria and sustainable development are becoming central to occupier and investor strategies. Investors seek to certify their properties under internationally recognized systems aiming to maintain asset values and demand. Office users are increasingly seeking spaces that comply with the EU's sustainability requirements. In response, the supply of green office buildings in Greece has started to expand, with the total office space doubling from 2023 to 2024, reaching approximately 3m m²²².

In Greece, the National Energy and Climate Plan has prioritised the design & implementation of financing campaigns to increase the energy efficiency of Corporate Real Estate along with the provision of tax incentives to further promote energy efficiency initiatives. For example, the "Exikonomo-Epihiro" program has been launched towards 1,143 eligible firms to subsidize the installation of energy efficient equipment, heat pumps & smart metering systems to monitor energy consumption²³.

Sustaining these trends and achieving long-term CRE energy-efficiency goals, however, will require addressing financial barriers, workforce shortages, and securing long-term regulatory support.

¹⁹ [National Energy and Climate Plan](#), Hellenic Government 2025

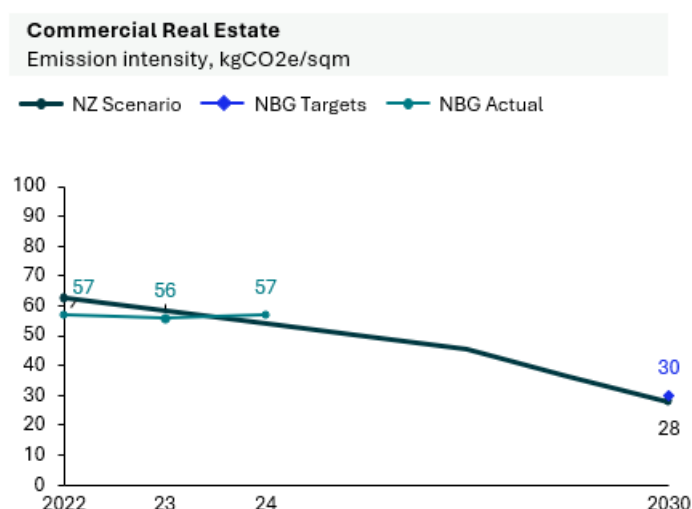
²⁰ [Energy Performance of Buildings Directive](#), European Commission 2024

²¹ [The Future of Real Estate Survey](#), KPMG Greece 2023

²² [Green office spaces dominate the Greek Market](#), eRED 2023

²³ [National Energy and Climate Plan](#), Hellenic Government 2025

8.2 NBG financed emissions and targets



NBG's has set an interim 2030 emission intensity target at 30kgCO₂e/m² by 2030, representing a 47% reduction from the 2022 baseline. The starting position of the portfolio intensity (57kgCO₂e/m²) stood just below IEA net-zero scenario pathway.

Based on 31.12.2024, NBG's latest portfolio intensity in the Commercial Real Estate sector stands at 57 kgCO₂e/m², remaining unchanged from 2022's level of 57 kgCO₂e/m²²⁴ baseline and standing well below the CRREM Greek 1.5 °C scenario.

After joining PCAF in 2023, NBG obtained updated CRREM v2.02 emission factors and applied them to the 2023 CRE financed emissions measurement. For consistency, these were also used to revise the 2022 measurement, resulting in a revised 2022 baseline figure²⁵.

The emission factors update led to a significant decrease in the measured emission intensity of NBG's CRE portfolio, now in line with the CRREM 1.5 °C scenario for CRE in Greece.

Concurrently, NBG remains committed to supporting our clients' plans to improve the energy efficiency of their buildings by financing retrofits of existing properties collateralizing our portfolio, or the construction or acquisition of (new) energy-efficient commercial buildings associated with higher EPC energy class ratings.

8.3 NBG's approach to Commercial Real Estate

8.3.1 Key supporting products and services

NBG's product offering for the Commercial Real Estate (CRE) sector includes supporting the acquisition or construction of (new) energy-efficient commercial buildings associated with higher EPC energy class ratings, as well as enabling its clients' plans to improve the energy efficiency of their commercial buildings through financing retrofits of existing properties. Additionally, NBG's product offering for the commercial real estate sector includes the following targeted green products:

²⁴ Baseline re-stated with PCAF emission factors based on CRREM scenario v02.02.

²⁵ Baseline was restated from 83 kgCO₂e/m² to 57 kgCO₂e/m²

- **Funding for photovoltaic systems and other RES:** This product offers financing for the installation of solar panels and the construction of photovoltaic power stations, with favourable interest rate and reduced expenses especially for the implementation of smaller-scale photovoltaic systems. In 2024, NBG materially improved the terms of the offered loans, including improved interest rates, prolonged maximum tenor of the loans, and waiving of the requirements for collateral/pledge on the machinery of the investment. The outstanding balance as of 31 December 2024, amounted to €71 million.
- **Other “green products” in collaboration with the Hellenic Development Bank (HDB):** Co-financed Green investment loans through the Business Growth Fund to support the green growth of SMEs. The fund provides financing for the implementation of an investment plan for one of the Sub-programs:
 - Sub-program 1 - Green Mobility Loans.
 - Sub-program 2 - Loans for Energy Upgrade of Buildings.
 - Sub-program 3 - Loans for Renewable Energy Sources.

8.3.2 Client engagement

As part of its client engagement approach, NBG carefully tracks the transition plans of its key clients in the commercial real estate sector, with particular attention financing towards client investments in new energy efficient developments and retrofits, especially in the hospitality sector which accounts for the majority of NBG’s CRE collaterals. Collection of information on the energy performance of CRE financed properties is underway to enable the offering of more targeted solutions to customers.

8.3.3 Challenges and Enablers

The main challenges for the CRE portfolio to reach Net Zero targets are:

- **Data Gaps:** Currently, there is no publicly available registry in Greece regarding the properties’ energy performance information that could be used as a source of CRE portfolio alignment assessment by credit institutions. Also, there is lack of actual Energy Performance Certificates (EPCs), as their issuance is mandatory only upon a transaction (i.e. construction of new building, sale or rent, major renovation) according to the provisions of the relevant EU Directives (Energy Performance of Buildings Directive (2010/31/EU) and the Energy Efficiency Directive (2012/27/EU). As a result, our estimations for the CRE portfolios are based largely on proxied EPCs. NBG is making targeted efforts to increase the share of actual EPC for its CRE portfolio, starting from the largest obligors and collaterals on its portfolio.
- **Need for upfront investment:** Building energy improvements require significant upfront investment in energy-efficiency technologies. Especially in the case of SMEs and small business this can be a significant challenge.

Enablers for decarbonization of the CRE portfolio include **technological advancements**, increased **public-private collaboration**, and training programs that address key skill gaps, e.g., heat pump installers and retrofit specialist workers. The revised Energy Performance of Buildings Directive (EPBD) provides guidance for the CRE sector by setting Minimum Energy Performance Standards (MEPS) to renovate the worst-performing non-residential buildings, targeting 16% by

2030 and 26% by 2033. It also establishes zero-emission standards for new buildings and promotes renewable energy systems, aiming for a fully decarbonized CRE sector by 2050²⁶.

The decarbonization of CRE is intrinsically linked to the decarbonization of the power generation sector. Commercial buildings are significant consumers of electricity for operations such as lighting, heating, cooling, and powering office equipment. Transitioning to low-carbon or renewable energy sources within the power generation sector is critical for reducing the carbon footprint of commercial properties.

8.3.4 Case Study – Financing building conversion into LEED-certified Offices

Primalaft, a fully owned subsidiary of Premia Properties (a listed Real Estate Investment Company), is developing the conversion of the former Athens Metro Mall in 180 Piraeus Street into a bioclimatic, LEED certified, modern office building. The project has a budget of €36.3 million, which is financed via an RRF Loan of €18.2 million, an NBG Co-financing Loan of €10.9 million and Sponsor's Equity of €7.3 million.

The Company's investment plan concerns the change of use, expansion and energy upgrade of an existing building and simultaneous construction of a new, energy-efficient building with office space and parking. More specifically, it concerns the upgrading/construction of 20 energy-efficient office spaces with a total area of 26,500 m² (within a plot of 12.5 acres, with the simultaneous further utilization, restoration, upgrade (ventilation, electric car chargers) of three existing basements of total surface area of 26,450 m² with 600 parking spaces.

Premia is committed to sustainability and its impact on the environment at a corporate and a property level. As part of this commitment, Premia monitors its assets' sustainability performance and explores ways to enhance their efficiency. In this context, has achieved significant decrease in the total GHG Scope 1 and 2 emissions of 2023 compared to 2022. Achieving sustainability certifications such as LEED and BREEAM is a key priority.

The new office building, with its high energy efficiency and sustainability standards, is contributing to the transition path of Premia to a portfolio of primarily "green" buildings. NBG, through the loans it granted to Primalaft, acts as a key partner and enabler of Premia's sustainability transition.

²⁶ Questions and Answers on the revised Energy Performance of Buildings Directive, European Commission 2024

9 Sectoral view: Residential Real Estate

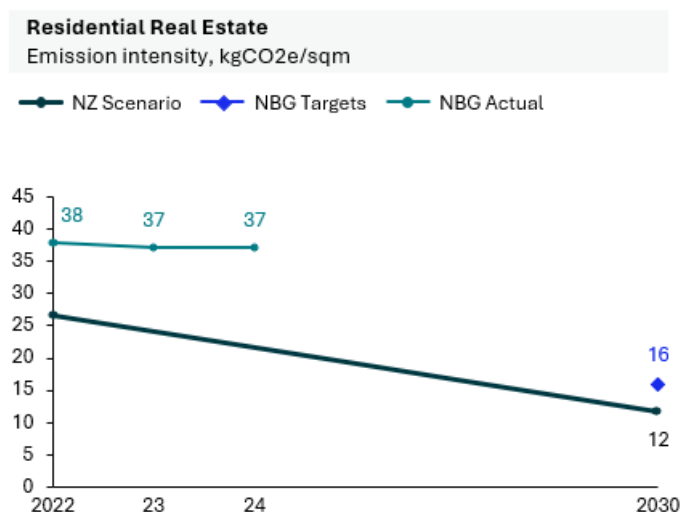
9.1 Context

Greenhouse gas emissions from buildings represented 35% of energy-related EU emissions in 2021²⁷, highlighting the importance of the sector for achieving the transition in Europe. The European Union initially aims to reduce the average use of primary energy in residential buildings by 16% by 2030 and by 20-22% by 2035²⁸.

Over 65% of the residential building stock in Greece falls into the lowest EPC classes (E-G) and consists mainly of old buildings (97.81%) constructed up to 2009, while the majority of energy is consumed to meet heating needs²⁹. Greece's buildings emissions are material, representing around one quarter of overall emissions of the country³⁰. To tackle this challenge, Greece has embarked on a programme of retrofits enabled by a series of policy incentives. In 2022, 95,000 applications for government residential energy upgrade programs were approved, and 86,545 interventions were completed in 2023. Nevertheless, there is still considerable progress to be made in decarbonizing the residential real estate stock: the NECP estimates that Greece would require nearly 2 million retrofits in a country with around 4 million households³¹.

As a result of the national residential real estate context, as of end 2024, almost half of NBG's portfolio stock is collateralised by residential real estate with energy class EPC lower than C.

9.2 NBG financed emissions and targets



NBG's has set an interim 2030 emission intensity target at 16kgCO₂e/m² by 2030, reflecting a 45% reduction against a 2022 baseline. Based on 31.12.2024, NBG's latest portfolio intensity in the

²⁷Greenhouse gas emissions from energy use in buildings in Europe, European Environment Agency 2024

²⁸ [Energy Performance of Buildings Directive](#), European Commission 2024

²⁹ [Energy Inspections of Buildings, and Statistical Analysis for the Year 2022, Hellenic Government 2023](#)

³⁰ [National Energy and Climate Plan](#), Hellenic Government 2025

³¹ [ECB Data Portal](#), European Central Bank 2024

Residential Real Estate sector stands at 37 kgCO₂e/m², marking a slight drop from 2022's level of 38 kgCO₂e/m² baseline.³²

After joining PCAF in 2023, NBG obtained and applied to the 2023 RRE financed emissions measurement updated PCAF emission factors. For consistency, these were also used to revise the 2022 measurement, resulting in a revised 2022 baseline figure³³.

The update of PCAF emission factors led to a significant increase in the measured intensity of NBG's RRE portfolio, causing a divergence from the CRREM 1.5 °C scenario for RRE in Greece. This change implies a greater challenge in reaching the 2030 target.

Other than on Greece's power generation transition, reducing the overall RRE portfolio intensity trajectory will depend on new lending to high-energy class residential new homes, on one hand, and on new lending for existing home retrofits, on the other. To this end, NBG aims to continuously improve its offering for residential real estate clients, as detailed in the section below.

9.3 NBG's approach to Residential Real Estate

9.3.1 Key supporting products and services

NBG's product offering for the Residential Real Estate (RRE) portfolio includes supporting the construction or acquisition of (new) energy-efficient residential buildings associated with higher EPC energy class ratings, as well as enabling clients to improve the energy efficiency of their residential properties through financing retrofits of existing properties. In the residential retrofit market, NBG expects financing opportunities in the range of €150-180 million for the next 3 years, depending also on the availability of state programs.

NBG's product offering for the residential real estate sector currently includes the following targeted green products:

- **Estia Green Mortgage Loans:** Loans cater to diverse needs, including fixed-rate options, energy-efficient home loans with reduced rates, and flexible repayment plans.
- **State-driven EXOIKONOMO Programs:** Loans for home energy efficiency improvements with 100% subsidy of interest rate and zero fees, accompanying the state subsidy offered. NBG maintains a strong market position in this product, capturing 1/3 of new disbursements in the market during 2024. The outstanding balance of all "EXOIKONOMO" programs as of 31 December 2024, amounted to €36 million.
- **European Investment Fund (EIF) Green Loan:** In May 2024, NBG was the first Greek bank to offer unsecured loans under EIF's guarantee by 80% for green upgrades on homes with a preferential interest rate, on the condition that the energy upgrade should be of at least one energy class or lead to energy savings of at least 30%, compared to the initial EPC assessment.

³² Baseline re-stated with PCAF emission factors based on CRREM scenario v02.02.

³³ Previous baseline disclosed of 29 kgCO₂e/m²

9.3.2 Client engagement

As part of its client engagement approach, NBG offers more attractive terms on financing products for higher efficiency homes. Moreover, NBG leverages analytics to identify clients who can benefit most from retrofitting their properties, including in the context of relevant State-sponsored programs such as Exoikonomo. The focus is on highlighting the economic benefits and guiding clients to leverage current and upcoming offerings accordingly.

Furthermore, NBG has recently joined the European Energy Efficiency Financing Coalition, an EU initiative aimed at creating a favourable market environment, and scaling private funding for energy efficiency investments needed to achieve the EU's energy and climate targets for 2030 and 2050.

As part of its client engagement strategy, NBG will seek to deepen client discussions on retrofitting properties. The focus will be on enhancing the Bank's retrofit loan offerings for both existing clients and new mortgage originations, identifying suitable properties for energy efficiency upgrades, and reaching out to selected clients to highlight the interventions' economic advantages, while guiding them to effectively leverage relevant government subsidies.

9.3.3 Challenges and Enablers

The main challenges for the sector to reach Net Zero targets are:

- **Need for upfront investments:** Home energy improvements require significant upfront investments in energy-efficiency technologies. To afford these upfront investments, the government could support low-income households with limited access to finance. Many households face high energy bills due to inefficient buildings, leading to energy poverty, which requires targeted financial policies.
- **Stakeholder consensus:** For multi-family properties, a further challenge arises from the necessity to secure agreement from multiple stakeholders, including landlords and co-tenants of the apartment block. The challenge complicates the planning and execution of major renovation projects (e.g., solar panel installation) aimed at improving energy efficiency and overall building performance.
- **Data Gaps:** Currently, there is no publicly available registry in Greece regarding the properties' energy performance information. Furthermore, there is lack of actual Energy Performance Certificates (EPCs), as their issuance is mandatory only upon a transaction (i.e., construction of new building, sale or rent, major renovation) according to the provisions of the relevant EU Directives (Energy Performance of Buildings Directive (2010/31/EU) and the Energy Efficiency Directive (2012/27/ EU). As a result, the estimations for the RRE portfolios are based largely on proxied EPCs.

As much of the emissions from buildings come from electricity use, the decarbonization of the RRE sector in Greece is highly dependent on the decarbonization of the power generation sector; the challenges facing the Power Generation sector are described in Chapter 4.3.3.

Government incentives are a key enabler in making energy efficiency retrofits affordable for citizens. These incentives, which include grants, tax credits, and subsidized interest-rate financing programs, help mitigate the upfront costs of energy-efficient upgrades and renewable energy investments, making greener practices financially viable for homeowners. To maximize

their effectiveness, these incentives should be integrated with attractive banking products that provide the necessary funding and additional financial support. Therefore, continued policy support at national and EU-level is required. This includes the EXOIKONOMO Programmes, which subsidize retrofits and other loans and subsidies for energy efficiency improvement of homes. Continued technological advancements, and training programmes that address key skill gaps and retrofit specialist workers will also be necessary.

The **decarbonization of residential real estate** is intrinsically linked to the decarbonization of the power generation sector. Residential buildings consume a significant portion of electricity for heating, cooling, lighting, and appliances. Transitioning to low-carbon or renewable energy sources in the power generation sector is essential to reduce the carbon footprint of residential properties.

Other enablers for decarbonization include **technological advancements**, increased **public-private collaboration**, and **training programs** that address key skill gaps, e.g., heat pump installers and retrofit specialist workers. The revised Energy Performance of Buildings Directive (EPBD) provides guidance for the residential real estate sector by setting Minimum Energy Performance Standards (MEPS), technical assistance and financial support measures, to ensure the achievement of the required decrease in the average primary energy use of the entire residential building stock.

9.3.4 Case study – Green financing to households (ESTIA GREEN, EIF GREEN LOAN)

Energy efficiency solutions and related home energy upgrades are currently in the epicentre of demand, as highlighted by the public response to EXOIKONOMO, a highly successful state initiative for RRE green upgrades; NBG is prominent in this market with a share currently standing at 35% (as of June 2024). Acknowledging the growing potential and increasing interest for green financing, NBG has also developed targeted retail lending solutions for greener houses and offers customers significant pricing incentives for financing home energy upgrades with or without mortgage prenotation.

In particular, **ESTIA GREEN** is a dedicated “green mortgage” loan, which offers incentives to customers who want to purchase/construct an environment-friendly, energy efficient residence, or are interested in financing energy upgrade improvements on their house. Reduction of variable interest ranges from 0.10% up to 0.25% depending on the energy class of the residence (C to A+), upon purchase or completion of a construction/repair project. A recent addition to NBG green loan offering is the EIF energy home upgrade loan; this loan is provided under the European Investment Fund (EIF) guarantee of 80% and requires no collateral. Customers may be funded for green upgrades on their homes (i.e. green renovation of houses or acquisition of green appliances, net metering) with a very low interest rate spread of 2%, on condition that the energy upgrade should be of at least one energy class (final EPC \geq B) or accomplish energy savings of at least 30%, compared to the initial EPC assessment. For both products, a 50% discount, as an additional incentive, is applied on the one-off loan review and approval charges.

NBG's EIF Green Loan, guaranteed by the European Investment Fund (EIF), supports the energy upgrading of homes through eco-friendly services and products or by investing in renewable energy sources (RES). Additionally, it facilitates the acquisition of zero-emission vehicles, including electric or hydrogen cars, electric bicycles/scooters, and electric home chargers. The loan features a favourable interest rate margin of 2%, increased by a levy under Law 128/75

(0.60%). It offers a simple and quick acquisition process, along with an extended repayment period. Borrowers can access amounts ranging from €300 to €50,000, with a repayment period of up to 8 years, without the need for collateral. For home energy upgrades, the financing covers improvements that lead to an enhancement of at least one energy class (final \geq B) or energy savings of at least 30% compared to the initial state, excluding RES. Eligible home equipment includes insulation, cooling/heating systems, and window replacements. Investments in RES, such as photovoltaic systems, home wind turbines, and geothermal solutions, are also covered by this loan.

These products complement a wide range of standard lending products for the purchase, repair and renovation of residential properties. The Bank also welcomes upcoming and future initiatives supported by the State to contribute to the energy upgrade of the existing RRE stock (e.g. ANAVATHMIZO TO SPITI MOU, a new State-driven Programme with simpler process and an interest-rate subsidy for specific upgrade improvements).