



Green Investments – Renewable Energy and Energy Efficiency

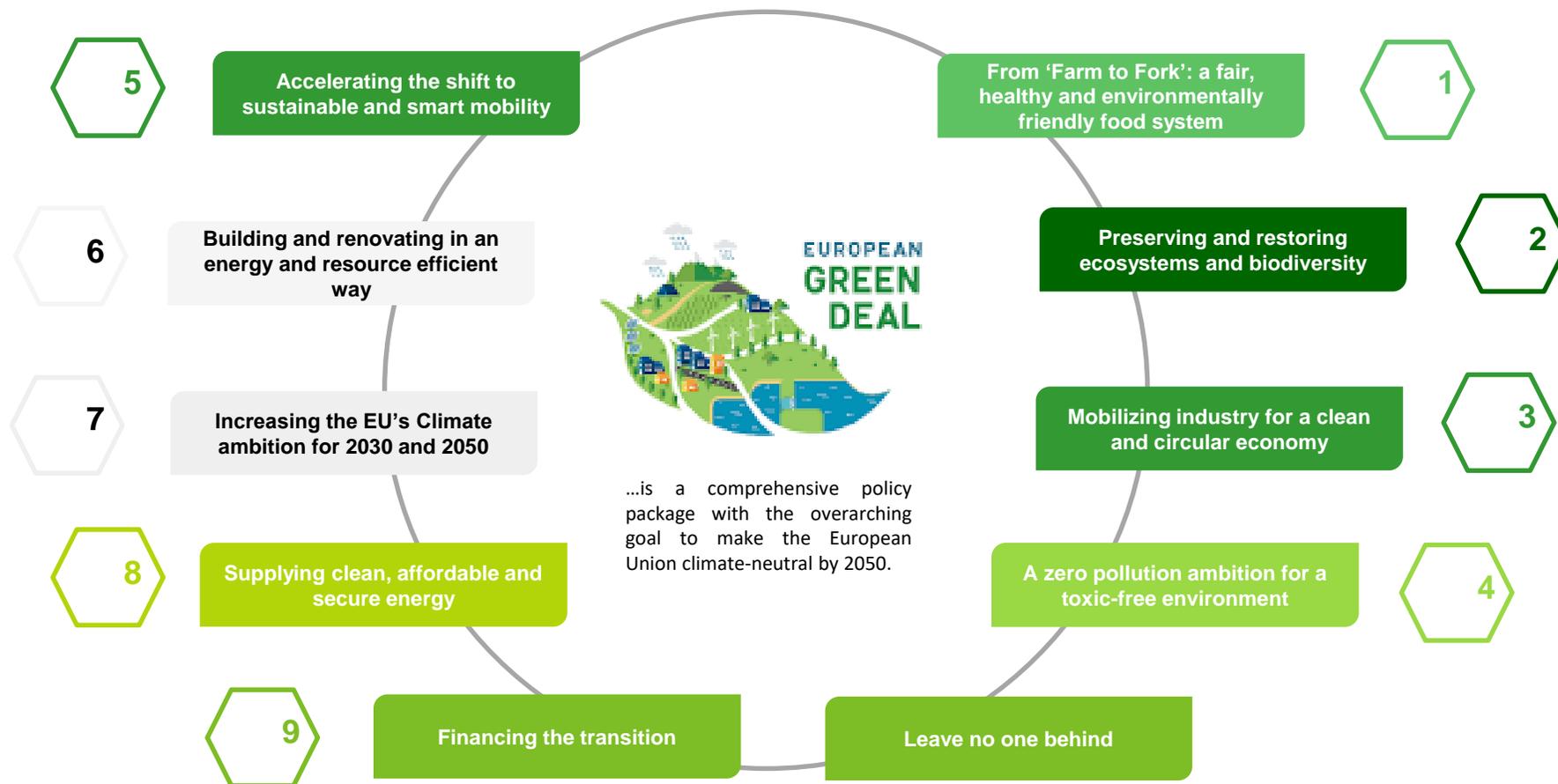
Sustainable&Specialized Lending
Sebastian Staicu

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The Green Deal

Targeting climate neutrality until 2050 and addressing the UN Sustainability Development Goals through the following strategies



Fit for 55 Package

Legislative Package to deliver the 55% Climate Target



EU-ETS Carbon Permit Historical Price Development caused inflation in commodity prices

EEEXM

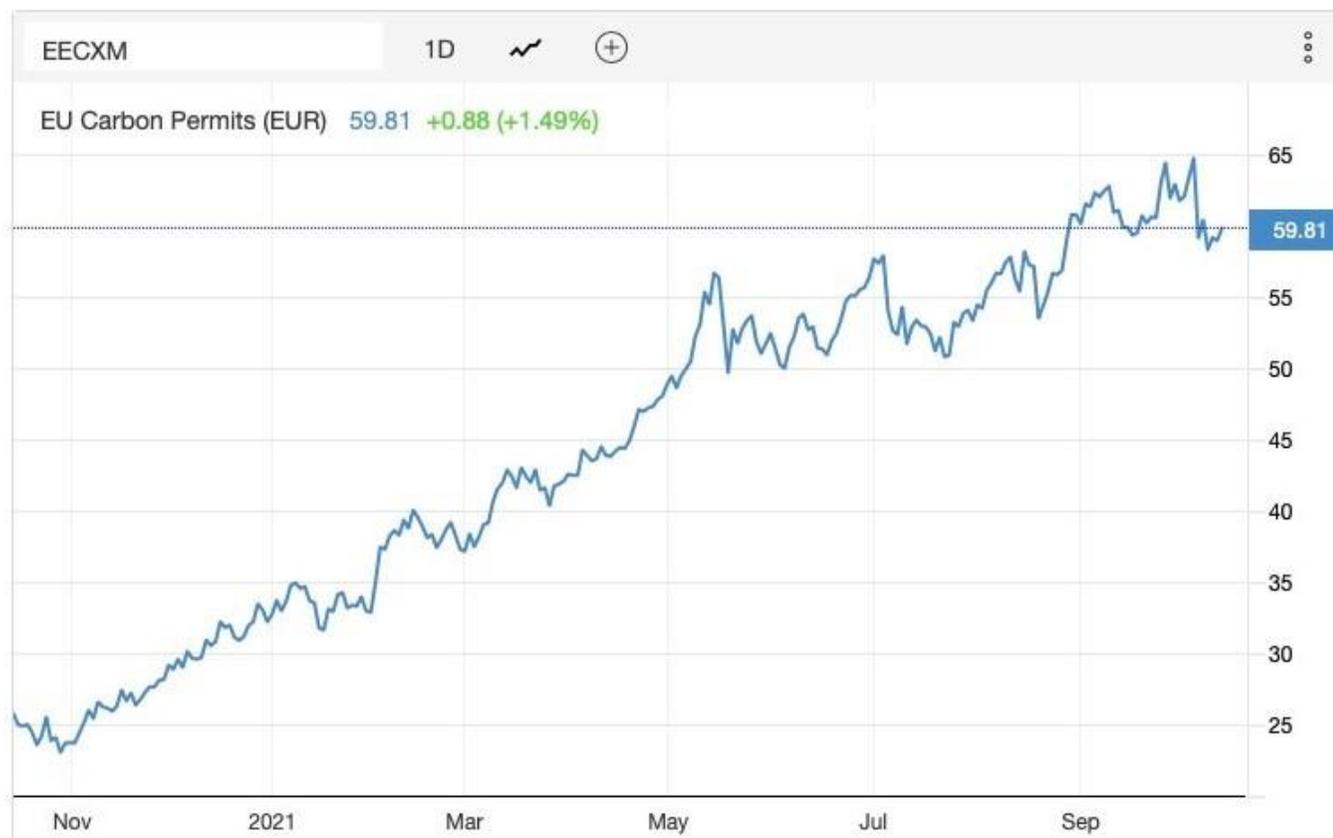
Daily Change:

Yearly:

59.77

▲ 0.84 (1.43%)

▲ 132.27%



<https://tradingeconomics.com/commodity/carbon>

Main EU and Romanian Main Green Targets – BEUR 150 Investments for Climate Change Mitigation

The new EU Targets are already in line with the Green Deal and the aim to be climate neutral until 2050. The Romanian targets are based on the NECP, which has to be revised most probably until Mid of 2024 to be in line with the Green Deal as well.

	EU	ROMANIA
Green House Gas Emissions	-40% cut compared to 1990 NEW: 55% cut compared to 1990	-40% cut compared to 1990: -43.9% vs. 2005 for EU-ETS covered emissions (-42% achieved in 2018)* -2% vs. 2005 for non-EU-ETS covered emissions (-4% achieved in 2018)** 0% net additions vs. removals from LULUCF (agriculture & forestry)
2019 figures	-24% while economy grew by 60%	-55%
Renewable Energy in total gross Energy Consumption	32% NEW: 40% (incl. 28% RES in transportation, up from 14% currently and new 49% RES target for buildings)	30.7%
2019 figures	19% (2019)	24.3% (2019)
Energy Efficiency	-32.5% improvements vs. baseline consumption Equivalent to: 1,128 Mtoe Primary EC; 846 Mtoe FEC NEW: -39% for primary energy consumption; -36% for final energy consumption	-45.1% improvements vs. baseline consumption Equivalent to: 32.3 Mtoe Primary EC; 25.7 Mtoe Final EC
2019 figures	1,351 Mtoe Primary EC; 984 Mtoe Final EC	32 Mtoe Primary EC; 23.5 Mtoe Final EC
Electricity Interconnection	15%	15.4%

*power & heat generation, energy-intensive industry sectors, aviation

**transport, buildings, non-ETS industry, agriculture (non-CO2) and waste – covered under the Effort Sharing Regulation

Measurement of Target Achievement

Decarbonization – Reduction of GHG emissions with a focus on:

- Energy / Transport / Buildings / Industry / Agriculture and rural development / Waste management / Urban development / Tourism and recreational activities / Protection of air, soil, water and biodiversity quality / Public education and awareness raising
- Increase of GHG removals in Forestry & Land use

Decarbonization - Renewable Energy:

- Promoting the use of renewable energy in electricity production (RES-E)
- Promoting the use of renewable energy in transport (RES-T)
- Promoting the use of renewable energy in heating and cooling (RES-I&R)

Research, innovation and competitiveness:

- Level of maturity of technologies contributing to decarbonization



Internal Energy Market:

- Increasing the power transmission grids interconnection capacities
- Liberalization of energy markets
- Regional integration of the internal energy market
- Support measures for other dimensions

Energy Security:

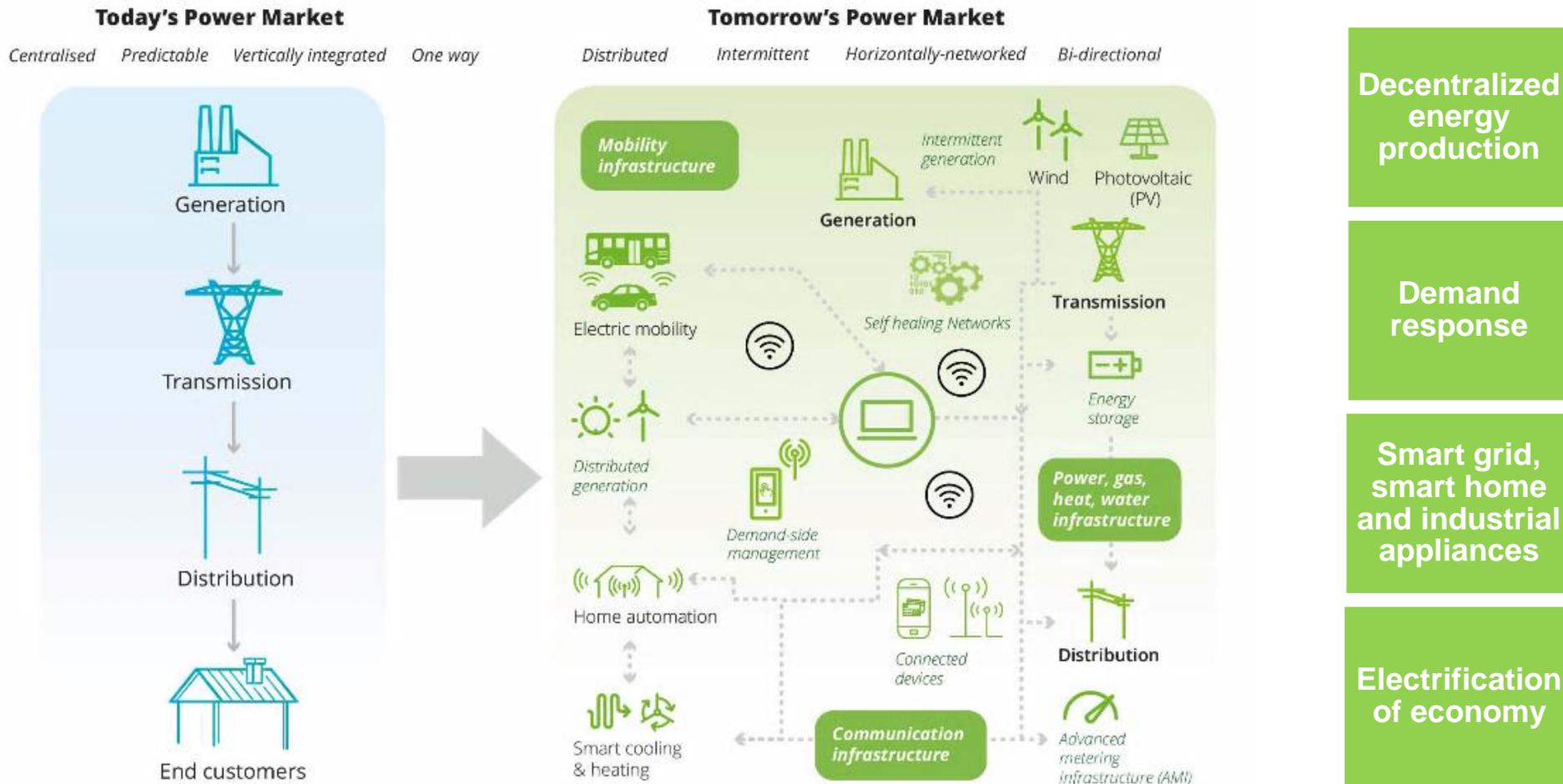
- Reduce dependency on energy imports from 20.8% (2020) to 17.8% (2030), relying on the increase of the production capacities by 35%

Energy Efficiency – Reduction of energy consumption in:

- Energy Sector
- Industry target 0.6 Mtoe per year
- Buildings target 0.83 Mtoe per year
- Transport target 0.4 Mtoe per year

Tomorrow's Power Market

Energy-as-a-service business model in the context of tomorrow's power market



<https://www2.deloitte.com/uk/en/pages/energy-and-resources/articles/energy-as-a-service.html>

RE Investment Models for Corporates

RE for own consumption and/or to be injected into the grid

		On-site	Self-owned	Physical electricity delivery	Long-term fixed cost	Local visibility - in sight of consumers and local community	More suitable for SMEs	Additionality - encourages new build renewable projects
 Common Models On-site	A1: Self-owned on-site	•	•	•	•	•	•	•
	A2: Leasing	•		•	•	•	•	•
	A3: On-site PPA	•		•	•	•		•
	A4: Private-wire PPA			•	•	(°)		•
 Common Models Off-site	B1: Physical PPA			•	•			•
	B2: Financial PPA				•			•
 Off-site Variants	C1: Self-owned off-site		•					•
	C2: Multi-buyer PPA			(°)	•		•	•
	C3: Multi-seller PPA			(°)	•			•
	C4: Cross-border PPA			(°)	•			•
	C5: Multi-technology PPA			(°)	•			•
	C6: Proxy generation PPA			(°)	•			•

Source: "Risk mitigation for corporate renewable PPAs" presentation prepared by RE-Source in March 2020

Producing for own consumption is a green and circular economy principle, in the spirit of bringing production processes closer to the consumption place.

Energy Investment through PPAs in Romania

What is a PPA?

A Power Purchase Agreement (PPA) mainly refers to a long-term electricity supply agreement between two parties, usually between a power producer and a customer (an electricity consumer or suppliers). The PPA defines the conditions of the agreement, such as the amount of electricity to be supplied, negotiated prices, duration of the contract, balancing responsibilities, guarantees, termination clauses and penalties for non-compliance.

What is the role of PPAs?

Long-term Cash-flow predictability → Reduction of cash-flow volatility → Reduction of investment risk → helps investors secure helps long-term financing, incl. cheaper debt financing, such as project finance bank loans and bonds. In the context of the cheapening of RES technology and rise of EUA prices for conventional energy producers, some RES investors have decided to build new capacities without relying on any incentive scheme. Thus, in the context of the shift from regulatory risk to market risk, PPAs help reduce risk

How does the PPA generate cash-flow predictability and reduce investment risk?

By mitigating price risk (most PPAs include a fixed price over most of or the entire PPA period) and volume risk (most or the entire production of the RES producer is secured and assumed by the off-taker – consumer or supplier)

Who are beneficiaries?

Strategic (existing conventional looking for diversification, RES producers) and financial (private equity, investment funds) investors and corporate consumers.

Estimated impact on power market?

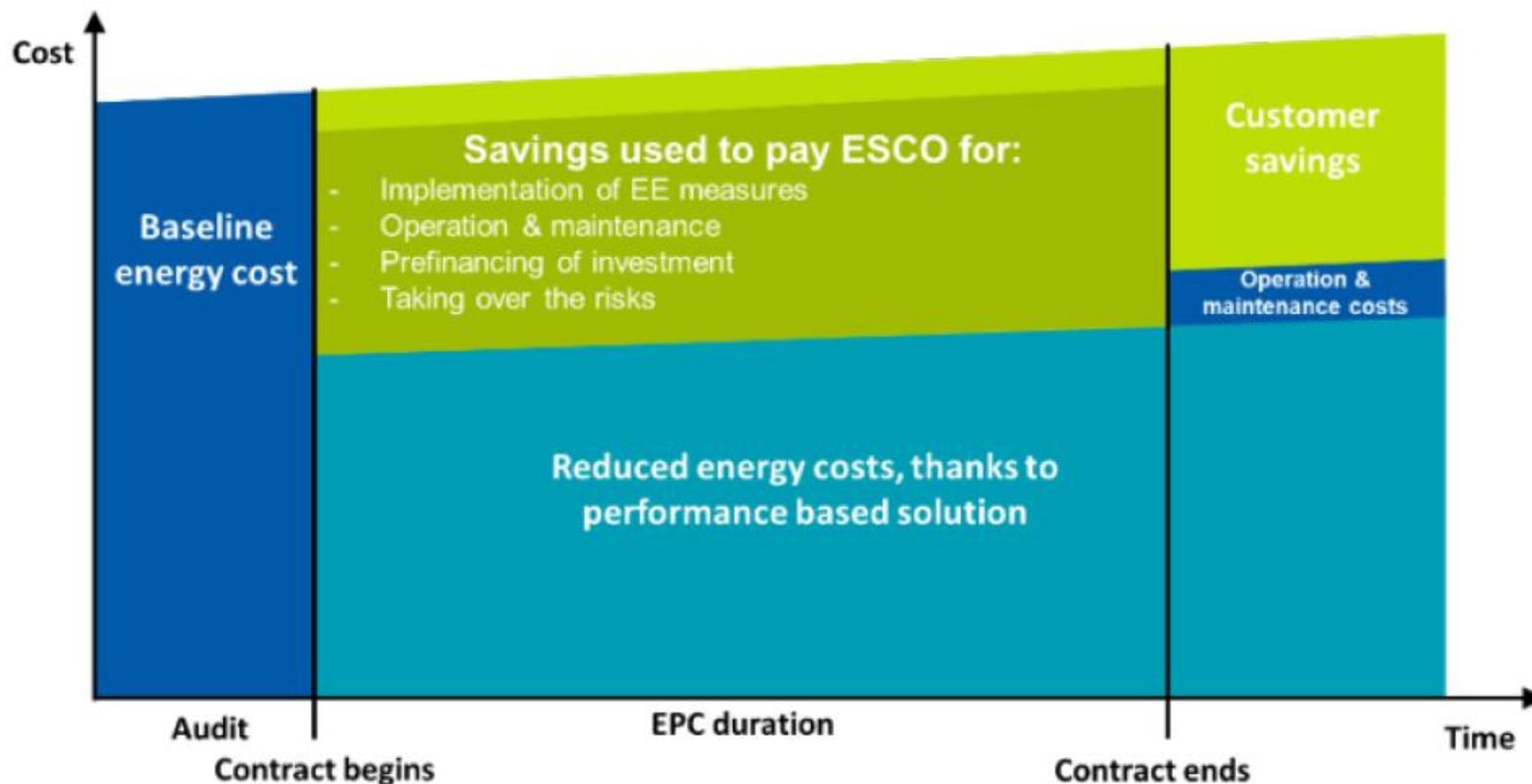
Increase investment in new power plants (mainly RES, but also conventional) generating more stability in terms of power prices, positively impacting the power prices for consumers and offering large consumer the possibility to lower power costs (whole vs. retail prices).

Current impact of PPAs in the Romanian market?

Rising interest from investors to develop new projects, by acquiring existing approved connection capacities or securing new ones. However, there are uncertainties regarding the extent of the grid's capacity to support new RES power without further investments.

ESCO Business Model

An ESCO is a commercial business providing a range of energy solutions including design and implementation of projects focused on energy savings, retrofitting and energy conservation.



Decarbonization through Energy Efficiency Investments **BCR**

Cross-sectorial investments:

- Energy sector (production and distribution)
- Manufacturing of goods sector
- Food sector
- Real estate (commercial, industrial, logistics, public sector and private individuals)

Investment examples:

- Rehabilitation of district heating systems
- Improving industrial production lines
- Replacement of equipment, machinery, boilers, furnaces
- Rehabilitation of buildings – thermal insulation, windows, doors, lighting
- Renewable energy sources for power – PV, biomass, biogas
- Efficient cogeneration and trigeneration systems
- Reduction of heat losses/ waste heat recovery
- Renewable for heating
- Heat-pumps (water/ground)
- Boilers, burners, radiant panels
- Energy management systems
- Replacement of passenger and industrial vehicle, rolling-stock and boat fleets to efficient and low-carbon fuels

Targeted energy efficiency:

- At least 30% reduction of energy cost

Sustainable Loans vs. Sustainability-linked Loans

Activity-based financing

Definition of use of proceeds required

Green

- Focus on **sustainable environmental** impact



Social

- Focus on **sustainable social** impact



Sustainable

- Amalgam of **green and social aspects** in financing



Behavior-based financing

No definition of use of proceeds required
Interest / Coupon payments linked to certain indicators

Sustainability-linked

ESG rating

- Interest / coupon payments are linked to **ESG rating score**

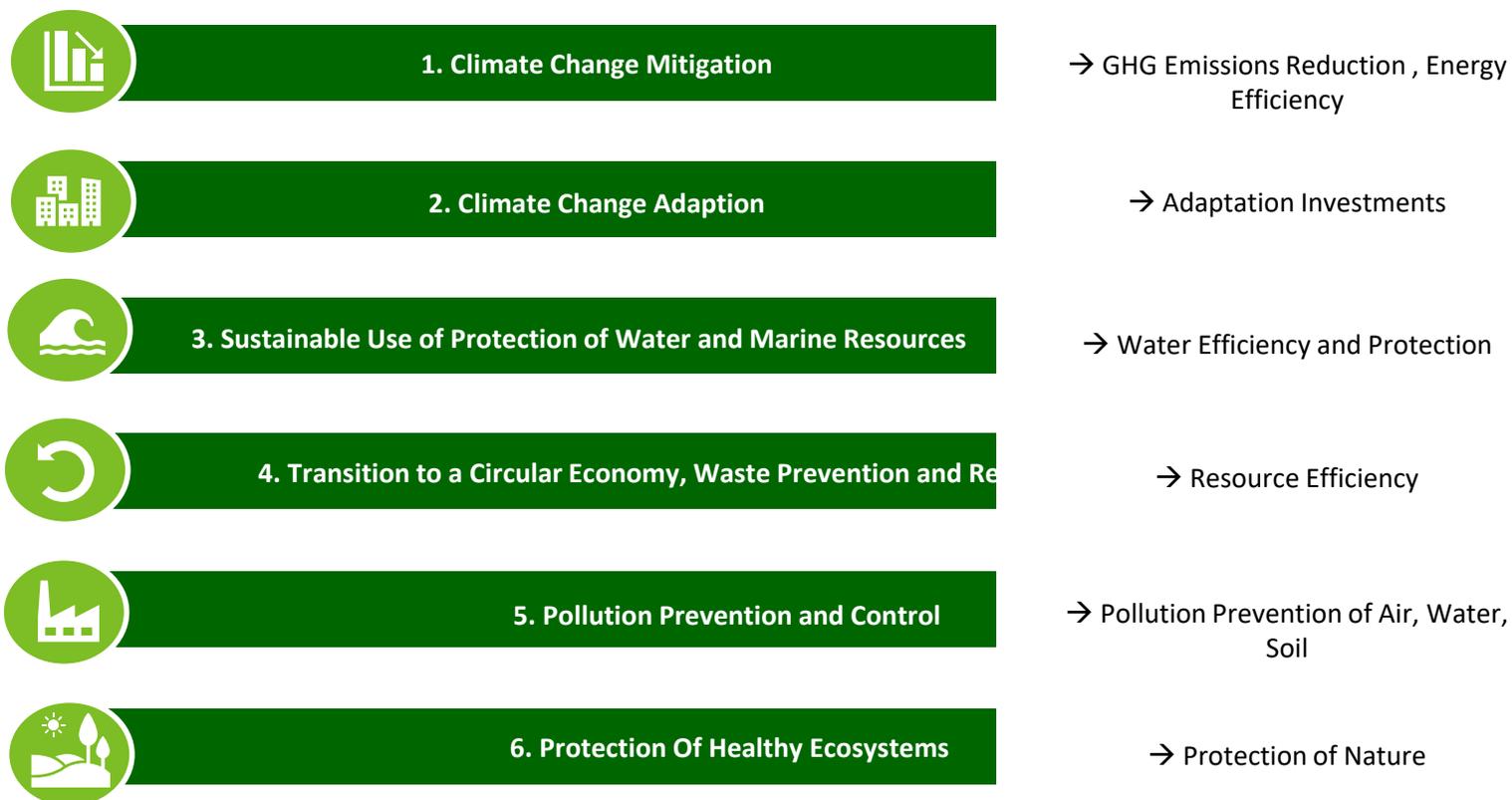


KPI (SPT)

- Interest / coupon payments are **linked to Key Performance Indicator (Sustainable Performance Target)**



EU Environmental Objectives



EU Taxonomy - in a nutshell

What is the Taxonomy?

A list of economic activities that are considered environmentally sustainable for investment purposes.

What is set out in the Proposal?

The framework to develop the taxonomy. For an economic activity to be on the list, it has to comply with three conditions:

What EU objectives are currently covered?

EC has published delegated acts only Climate Change Mitigation and Climate Change Adaptation in 06.2021. The activities will be further extended and new Delegated acts for the other 4 will be published in 12.2021

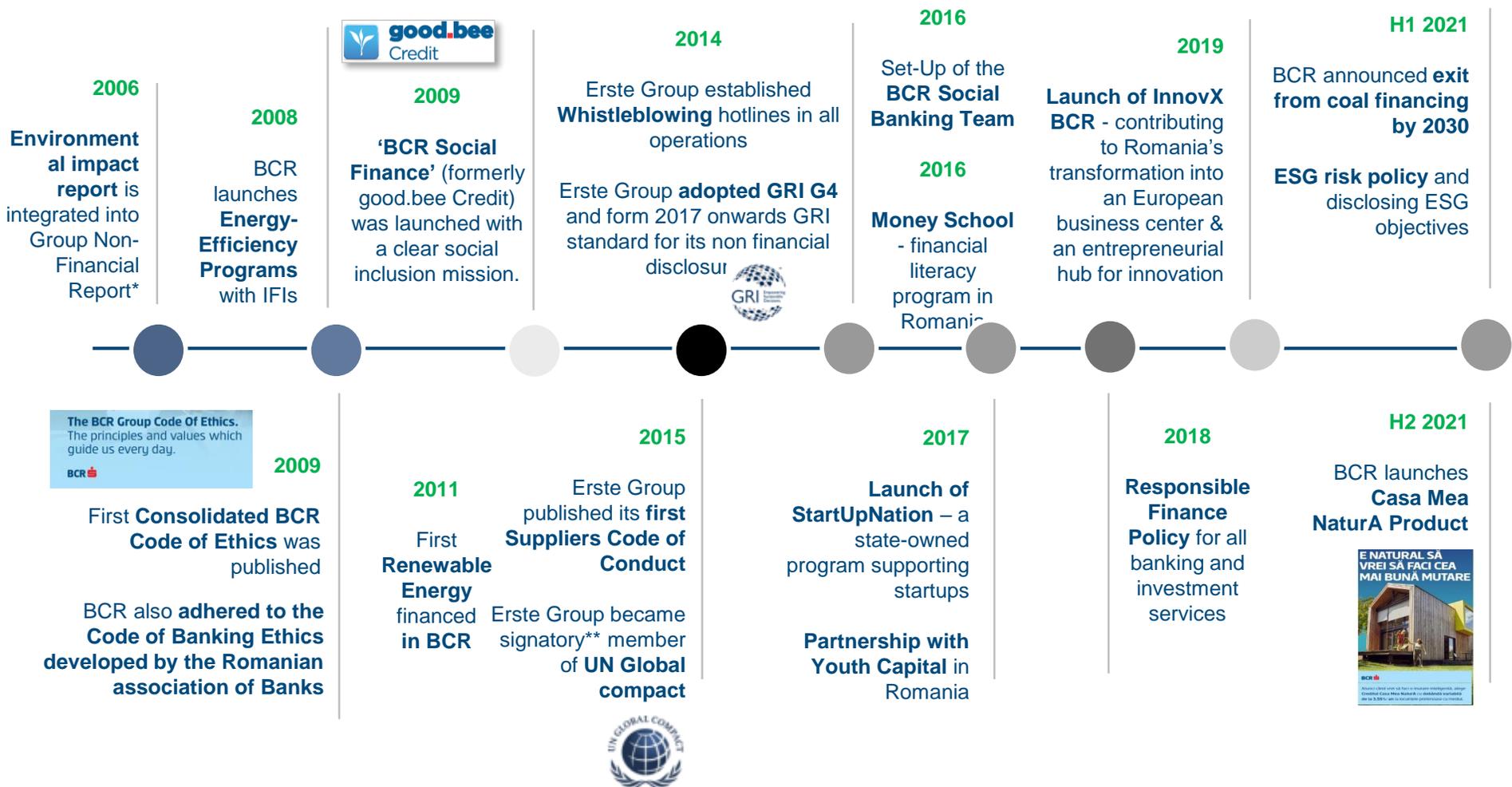


Substantial Contribution to Climate Change Mitigation

- What is a **low-carbon activity**? Low-carbon activities are sustainable in themselves. They make a direct contribution to the European emission reduction targets.
- What is a **transition activity**? Transitional activities help products and services with high CO2 emissions gradually become low carbon. Through a strict transition path, emissions are reduced. This is where the largest contribution to the climate objectives is expected.
- What is an **enabling activity**? Enabling activities support the transition to low carbon activities.

Low-Carbon Activity	Transition Activity	Enabling Activity
<p>Forestry – Afforestation Plan of a duration of at least 5 years</p> <p>Environmental Protection and Restoration Act.</p> <p>Energy – Generation from RES and Heat Pumps</p> <p>Water – water/ waste water collection, treatment and supply systems</p> <p>Waste – Collection, composing, biogas, material recovery, landfill gas capture and utilization</p> <p>Transportation – alternative fuel, rail , water, non-motorized transport</p> <p>Construction and Real Estate – green buildings: new, acquisition and ownership</p>	<p>Manufacturing – of cement, aluminum, iron, steel, carbon black, soda ash, chlorine, organic basic chemicals, anhydrous ammonia, nitric acid, plastic in primary form</p> <p>Transportation – alternative fuel, rail , water, non-motorized transport</p> <p>Construction and Real Estate – Renovation of existing buildings</p>	<p>Energy – Transmission, distribution and storage of energy</p> <p>Manufacturing – Green technologies</p> <p>Waste – Transport and storage of CO2</p> <p>Transportation – Infrastructure for personal mobility, cycle logistics, rail, water, low-carbon air</p> <p>Construction and Real Estate – Installation, maintenance and repair of energy efficiency equipment / charging stations for electric vehicles and RES technologies</p>

BCR's Sustainability Journey



*Non-Financial Report 2020 (RO figures explicitly illustrated): <https://www.erstegroup.com/en/investors/reports/financial-reports>

**EG withdrew its membership in UN GC in Dec 2019 after fulfilling the program obligations