



PPAs and Project Finance Structures

*Project and Leveraged Finance
Department*

Content :

Section	Page
Introduction	3-4
Renewable Energy Business Model	5
Selling Power for RES producers	6-7
Corporate PPAs world-wide	8
Project Finance Structures for RE plants	9-10
PPA Requirements in Project Finance Structures	11
Team & Contacts	12

Introduction

General Market Context

Renewable Energy in Romania

- 5000MW of renewable energy projects have been installed until 12.2016, 4.4% above the planned 4780 MW in the Romanian Renewable Energy Action Plan.

Regulation 943 (applicable starting 2020)/ Directive 944 (to be transposed in national law until 31.12.2020)

- Elimination of regulated prices for the electricity market.
- Directly negotiated power purchase agreements concluded outside OPCOM centralized markets will once again be allowed.
- Long term PPAs may be concluded as early as of the development stage, once a technical connection permit is obtained.
- Large consumers can participate in wholesale market.

New EU RES binding targets for 2030 - National energy and climate plans

- 30.7% for 2030 vs. app. 24.5% actual in 2017 → proposed new investments: 2,050MW of wind and 3,700MW of solar

Green Deal

- Climate neutrality until 2050
- EU Strategy for Offshore Renewable Energy by the end of 2020 → from currently 20GW of off-shore wind to 300-450GW until 2050
- EU Strategy for Renewable Hydrogen

RES power price

- At a power price of 50-60 EUR/MWh wind and solar energy technologies no longer need support schemes to become economically viable investments in the EU, as a result of increased CO2 price and efficiency improvements/ decrease of technology cost for RES

CfD scheme

- Memorandum on the basic principals of a new CfD scheme for new RES, nuclear and battery capacities in Romania has been signed between the Ministry of Economy, ANRE and Competition Council
- Ministry currently runs a study with an independent consultant to evaluate options/ details for implementing the CfD scheme.
- Expected to be implemented in 2021-2022.

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 capacity of the grid to support new RES power without further investments.

RE Business Models and PPAs

For high-scale Renewable Energy Plants

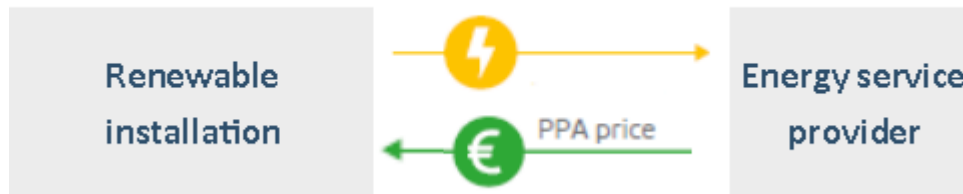
		On-site	Self-owned	Physical electricity delivery	Long-term fixed cost	Local visibility - in sight of consumers and local community	More suitable for SMEs	Additionality - encourages new build renewable projects
 Common Models On-site	A1: Self-owned on-site	•	•	•	•	•	•	•
	A2: Leasing	•		•	•	•	•	•
	A3: 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

Selling Power for Off-site RES Producers

Looking backwards

Merchant PPA (possible before 2014 and starting 07.2020 - OUG 74/2020)



Current general sales strategy for RES producers

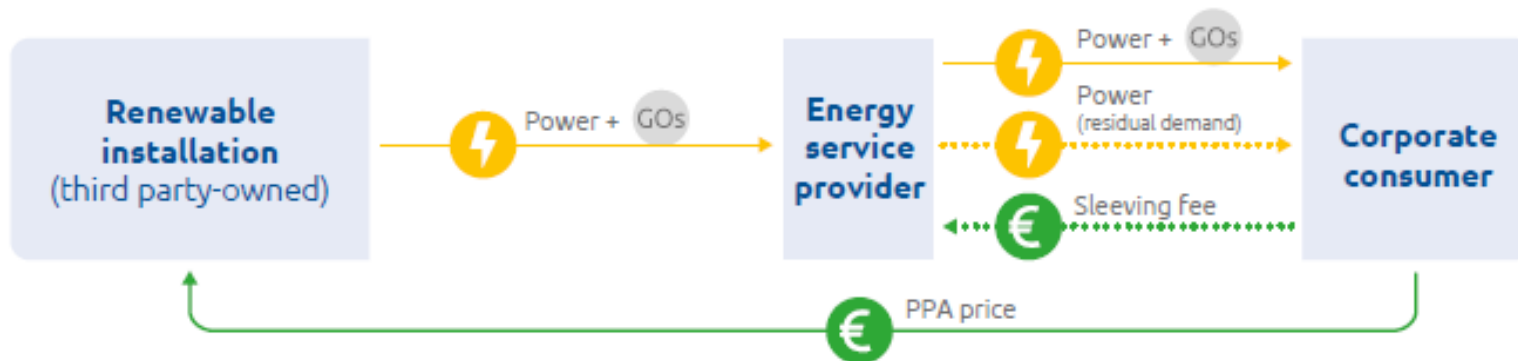


A combination of forward (up to 1 year) base-load sale contracts and acquisitions/ sale of power on the day-ahead market to balance production profile to base-load contract

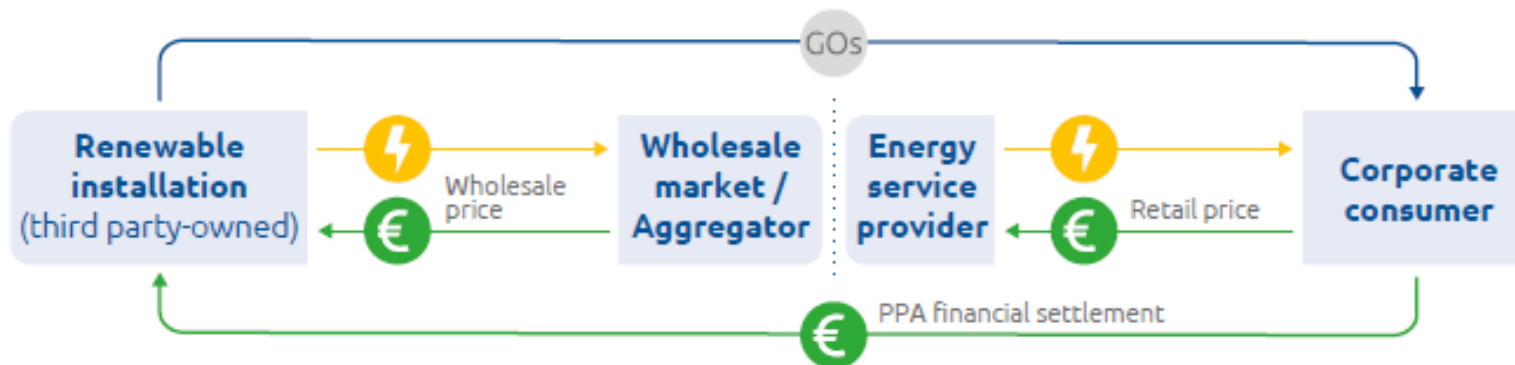
Selling Power for Off-site RES Producers

Looking forward – Corporate PPAs

Corporate renewable PPA via Physical contractual structure



Corporate renewable PPAs via Financial contract structure

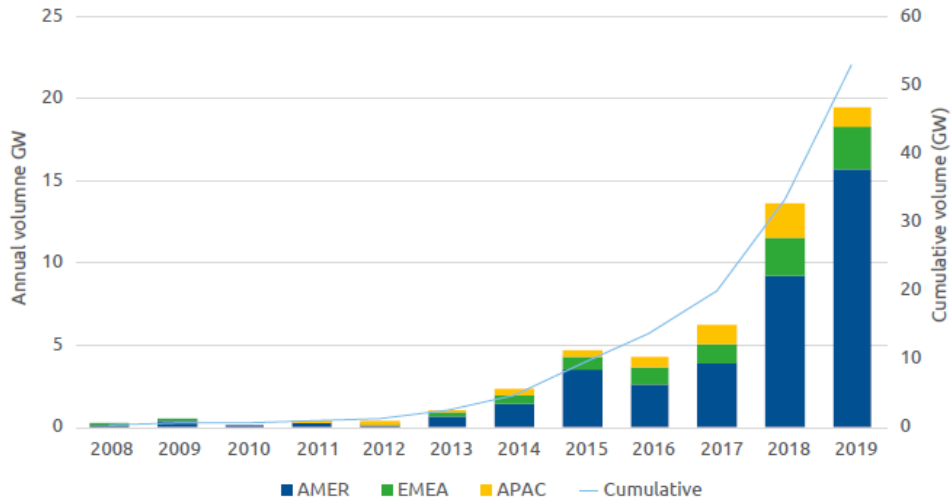


Source: "Risk mitigation for corporate renewable PPAs" presentation prepared by RE-Source in March 2020

Corporate PPAs for RES

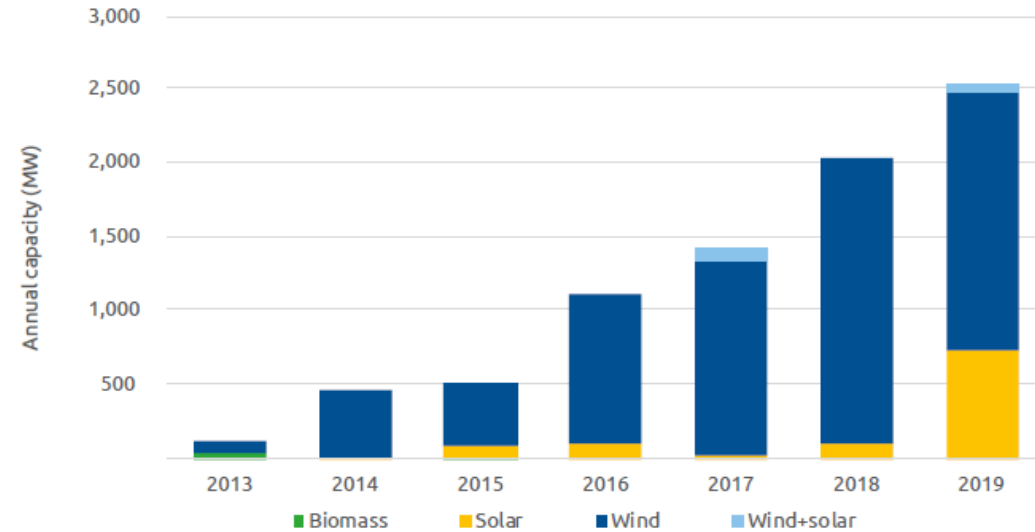
Global Market Development

Global corporate offsite PPA volumes, by region



Source: WindEurope

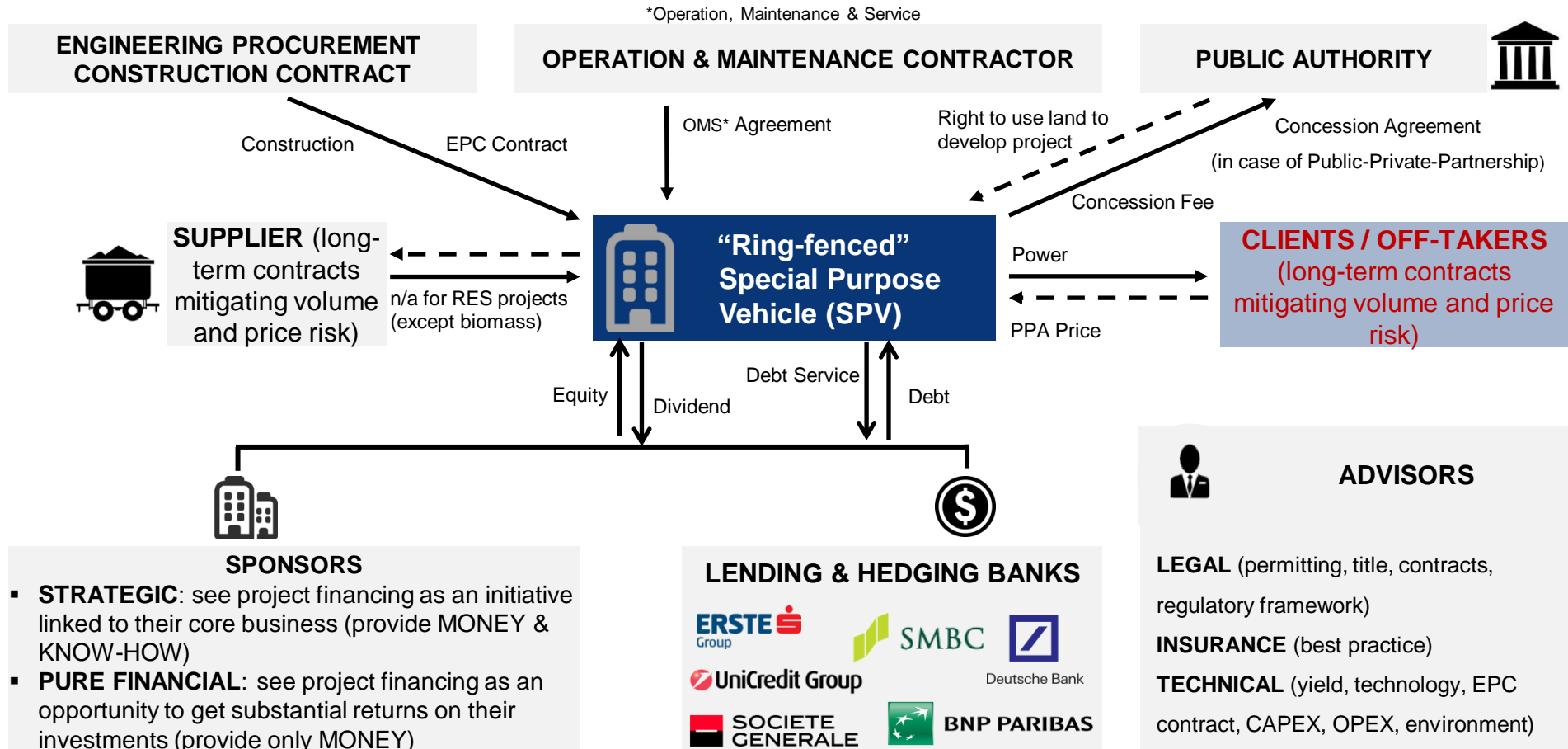
EMEA corporate PPAs, by technology



Source: WindEurope

Project Financing Transaction Structure

Allocation of risk for energy production projects



Project Financing Transaction Structure

Lending Principles for energy production projects

Conditions	Explanation
Strong Sponsor	Investors capabilities to sustain the project, extensive track record, excellent financial standing.
Non-recourse/ Limited Recourse	Limited recourse during construction period/ in some cases for covering off-take/ regulatory risk (in case of incentive schemes).
Min. Equity Level	Not less than 30%, but subject to debt sizing criteria (min. DSCR level)
Loan Maturity	Max. 15 years, but (i) no more than 75% of the asset technical life and (ii) no more than off-take agreements tenor;
Technology	Only proven technologies supplied by reputable suppliers with proper maintenance program in place.
Permitting	All the permits and authorizations for the “ready to build phase” in place
Reputable EPC and O&M	Lump Sum and Turnkey EPC Contract with Standard Liquidated Damages securing delays, performance ratios, availability etc.
Supply and Off-take Agreements	Long term supply and off-take agreements with reputable parties accepted by the lender will be required.
Clean legal& technic. DD from Reputable Party	Review of technical specifications, performance parameters, yield forecast, permitting, real estate, corporate, legal framework and project contracts.
Hedging	Offtake price, Interest Rate and FX risk solution, to mitigate market volatility
Suitable Insurance	Insurance must cover business interruption, mechanical breakdown, operational risks and third party liabilities.
Mortgage	Mortgage over all shares, constructions, equipment, Project Contracts, accounts
Other	In some cases market reports, environmental studies and commercial DD are also required.
Regulatory Framework	Clear and stable legal framework accommodating market reality/ needs and offering predictability.

PPA requirements in Project Financing

Main Points

Counterparty:	Energy supplier and/or large consumer with strong creditworthiness and long-term perspective of business
Volume:	Pay as produced, off-taker to pay for each MWh produced by RES producer, irrespective of production profile. Contract should cover 80-100% of P90 energy produced during loan period
Price:	Fixed price for the entire contract period (or linked to market, in case they are combined with a CfD)
Balancing	Should be assumed by a power supplier (as part or outside the PPA, depending who are the parties to the PPA)
Duration:	For the entire loan period
Termination Compensation:	Off-taker to pay termination compensation, so that the RES producer ends-up in the same position, as if the PPA would still produce effects
Guarantees:	Depending on financial strength of off-taker, a bank guarantee/ corporate guarantee (from an investment grade party) should be provided to guarantee the fulfilment of its obligation and payment of the termination compensation
Timing:	Valid and enforceable PPAs need to be signed as a CP for signing the financing agreement. Obligation of the off-taker to buy power should start at COD (commercial operation date).
Template:	Standardization is essential, especially in case of corporate buyer with little experience regarding such contract. The European Federation of Energy Traders have developed a standard for all types of PPAs.
Other important conditions:	Change in Law, Termination clauses (no unilateral termination)

Team & Contacts



Cristina Ghimbovshi
Head of Project Finance

Tel.: +40 373 516 653
Mobile: +40 785 252 993
cristina.ghimbovshi@bcr.ro



Anca Ilin
Coordinator Project&Leveraged Finance

Tel: +40 373 513 649
Mobile: +40 786 463 422
anca.ilin@bcr.ro



Sebastian Mihai Staicu
Project Finance Manager

Tel: +40 373 515 571
Mobile: +40 784 242 375
sebastianmihai.stacu@bcr.ro



Mihai Dorin Voican
Project Finance Manager

Tel: +40 373 516 525
Mobile: +40 733 040 225
mihaidorin.voican@bcr.ro