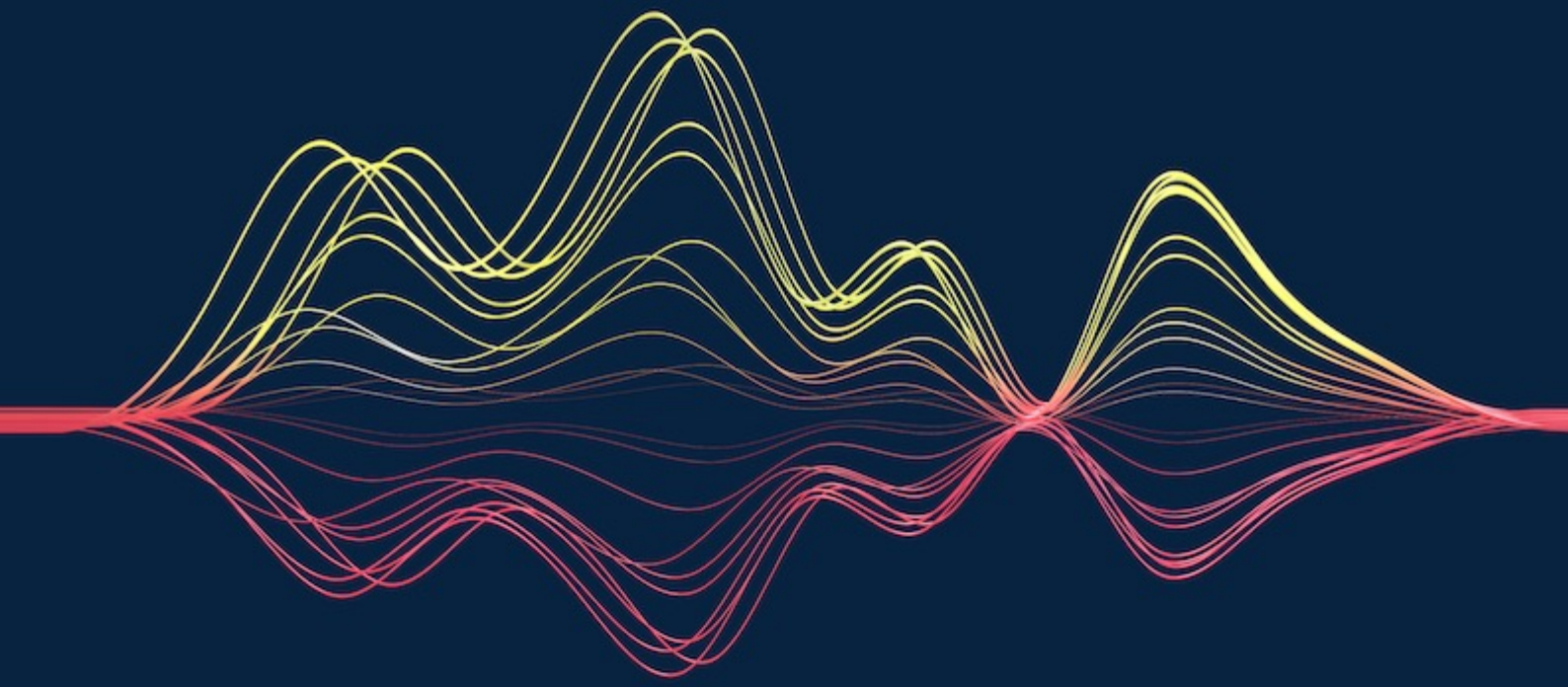
EGYPT

Corporate Power Purchase Agreements



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PPA structures and parties involved

To what extent are corporate PPAs presently deployed and what sort of structure do they take?

Following the initial Feed in Tariff (FiT) program launched in 2014, the Egyptian Electricity Regulatory Authority (EgyptERA), the regulator of electricity markets in Egypt, was motivated to start providing alternative schemes to the FiT, through the issuance of periodical books and decrees. This not only encouraged power generators to market their services to corporates and enter the market, it also motivated corporates to shop for lower tariff electricity to decrease their expenses, which resulted in various cPPAs being concluded in the last few years.

The operational schemes under Egyptian law are the net-metering scheme and the self-consumption scheme.

Under the net metering scheme, the consumer must enter into a balancing agreement with the Egyptian Electricity Transmission Company or with a licensed distribution company, to allow for the sale of any surplus generation through the installation of a bi-directional meter to set-off their electricity consumption with the excess electricity they feed into the network.

As per a recent amendment to the net-metering scheme, it is only applicable if the consumer (off-taker) is the owner of the PV plant, which was not the case in previous CPPAs in Egypt. Nevertheless, it still permits the consumer to contract with a third party to construct, operate, and maintain the PV plant. Based on the above, for the consumer to make use of this scheme, the consumer will need to obtain the necessary licenses and permits from the Egyptian Electricity Regulatory Authority (EgyptERA) from the outset.

In contrast, the self-consumption scheme permits the consumer to enter into a PPA with licensed generators for the construction, ownership, and operation of the PV Plant, including its connection to the consumer's internal grid. However, it is important to note that any energy surplus generated by the generator will not be injected into the government electricity grid.

Do the country's regulators allow corporate owners to purchase (1) directly from a facility, or (2) from a choice of suppliers?

Egyptian laws and regulations allow corporate owners to buy directly from a facility and to choose from different suppliers. The option to choose from different suppliers that are offsite is currently non-operational but is expected to be operational in the next few years.

Over the past two years, EgyptERA has been working with Det Norske Veritas (DNV), financed by the European Bank for Reconstruction and Development (EBRD), to implement new rules and regulations that would govern the private-to-private market. The initial draft allows eligible consumers (mainly consumers connected to the Transmission Network and contracted with the EETC) to buy electricity from eligible generator through cPPAs.

Other than the generator and the off-taker, are any third parties commonly party to the PPA structure (e.g. a utility or other market agent)?

No, but the law does not prohibit an arrangement like this.

Is a generator permitted to sell electricity directly to an end user? If so, do they require a licence or other form of authorization?

Generators are permitted to sell electricity directly to end users. Under the Electricity Law, carrying out the activities of generation or supply of electricity requires a licence from EgyptERA.

However, projects with capacities of 500 kWh or less and projects where the power is produced for personal use don't have to get a license if they satisfy certain conditions.

Challenges

What are some of the technical, political, financial or regulatory challenges to corporations adopting green energy in the short/medium term in your country and how have these challenges been overcome (or how can they be overcome)?

Generators are still facing financial and political problems because:

- government has imposed subsidies on utilities in Egypt;
- there are no restrictions on carbon emissions and therefore no need for buyers to adopt green energy solutions; and
- short-term renewable energy project feasibility has been affected due to the current economic situation (devaluation of the Egyptian pound and increased interest rates).

This has led to an increase in levelized cost of electricity (LCOE) for renewable energy while government electricity prices have yet to adjust.

To compensate the current challenges, regulators have provided other benefits to generators such as the RECs or no grid connection fees under certain conditions. However, it remains politically challenging to remove the subsidies provided to consumers.

Regulatory changes

Are there any anticipated regulatory changes which will alter the regulatory landscape for corporate green energy and corporate PPAs?

As previously stated, EgyptERA has been working with DNV to implement new regulations that govern the private-to-private market. The main objective of the new regulations is to pave the way for the implementation of new privately owned renewable projects. These projects are to be connected to the grid and sold using cPPAs to the developers of green hydrogen.

Incentives and benefits

What is the corporate appetite for green energy, including any political or financial incentives available to corporates to adopt green energy?

The electricity sector is deemed as an investment activity as per Law No.72 of 2017 (Investment Law). So it is subject to the general incentives and the special incentives in accordance with the territory of the activity.

As general incentives, the projects are exempted from stamp tax, documentation and registration of the incorporation contract, real estate, finance contracts and mortgage related fees for five years from the date of establishment. Additionally, the registration contracts of the land required for the project are exempted from any fees. Any imports of machinery, equipment, or devices will be subject to a unified 2% of the value custom.

Special Incentives are in the form of a deduction from the net taxable profits in accordance with the territory. A 50% discount from the taxable profit is applied for Zone A, which covers the geographical locations that are in the most need of development (underdeveloped locations). A 30% discount is applied for Zone B, which covers all geographical areas other than those of Zone A, for projects working in specific activities, including projects relating to the generation and distribution of electricity. Renewable Energy secondary industries such as PV plants and electrolysers were also included in 2022. Similarly, the Value Added Tax Law No.67 of 2016 exempts the generation, transmission, distribution of electricity from VAT.

Other financial incentives include the new CBE 11% subsidized interest rates for industrial and renewable projects.

Project developers can now benefit from the Egyptian Pollution Abatement Programme (EPAP), which grants developers up to 10% of the loan amount for renewable projects.

What are the key local advantages of the corporate PPA model which can benefit our clients?

CPPAs benefit from the flexibility to agree on pricing as there is no restrictions to be imposed by the government.

Moreover, RECs are increasing in value and tradability; so generators and corporates are currently enjoying this benefit.

Companies that operate using the net metering scheme or self-consumption scheme are exempt from paying integration fees up to a capacity of 10 MW. This used to be set at 1 MW.

What subsidies are applicable to the generation and sale of renewable energy?

No subsidies are currently applicable for generation and sale of renewable energy.

Does your country implement a national support scheme with tradable green certificates (such as guarantees of origins)?

EgyptERA issued certificates of origin for the power for each MW/h, provided that the electricity produced is not less than 1 MW/h. The certificate is intended to incentivise the consumption of energy from renewable resources by permitting trading in the certificates.

The Egyptian Exchange (EGX) has partnered with the Agricultural Bank and Libra Capital to establish Libra Carbon. This is the first Egyptian company to specialized in the management and issuance of carbon certificates. The company will include all of the necessary components for trading and issuance of carbon certificates.

Typical PPA terms and risk allocation

To the extent corporate PPAs are deployed, how are prices, terms and risks affected?

Topic	Details
Do prices tend to be floating or fixed?	A range of pricing mechanisms could be employed in a cPPA. The following are the commonly used mechanisms in Egypt: • A fee corresponding to the difference between the government tariff and the target rate set by the contract. This pricing mechanism is more commonly used in most of the cPPAs in Egypt. • Fixed price (with no inflation) for the duration of the cPPA. However, this is rarely used given that usually this price will be higher than the government price.
What term is typically agreed for the PPAs?	The typical term of cPPAs is from 20 to 25 years, but this may vary depending on the interests of the parties.
Are the PPAs take-or-pay or limited volume?	PPAs are generally agreed on a take-or-pay basis.
Are there any other typical risks?	One of the typical cPPA risks is the lack of free market structure so the buyer is generally the sole buyer of the electricity. If there is a dispute between the generator and the

buyer, the generator won't be able to sell the energy generated to any other entity.

Change in law is a common risk. Any legislative change or binding court judgment which changes the legal nature poses a risk of changing the commercial benefit of the transaction for the parties.

To the extent corporate PPAs are deployed, in whose favour will the risks typically be balanced?

Type of risk	Details
Volume risk	As most cPPAs are based on fixed volumes with a take-or-pay principle, the off-taker bears the risk. However, this risk may be balanced using a net metering agreement with local distribution company which may then cover or purchase any shortfall or surplus of electricity.
Change in law	The cPPA will usually include change in law provisions, as this will usually prevent the cPPA from being frustrated in the event of a significant change in law. Such clause seeks to rebalance the original economic intentions of the parties.
Increase / reduction of benefits	The reduction of benefits is normally covered by a clause in the cPPA where it may render the PPA not economically viable; so the clause should stipulate that if the PPA is no longer economically viable to any of the parties, the parties will reconvene and reassess the model.
Market liberalisation (if applicable)	Currently, it is not applicable. But there is a plan adopted by the Egyptian government to liberalise the electricity market in 2025.
Credit risk	Most cPPAs are constructed based on a financing to be obtained by the generator, so the generator bears the risk.
Imbalance power risk	Balancing in Egypt is done by EETC, as detailed below.
Production profile risk	The consumption profile is usually more stable than the production profile. Usually, this risk is allocated to the buyer under a cPPA, and the buyer acquires any missing volume from the local distribution company.

Balancing

Does your country operate a balancing responsibility scheme?

Yes.

If your country operates a balancing responsibility scheme, who is the balancing authority and do the generator and offtaker typically undertake balancing themselves?

On the Egyptian electrical grid, the power injected must be equal to the power withdrawn at each moment. The balancing authority in Egypt is EETC, the operator of the public electricity transmission network, which is responsible for the physical balance of the grid in real time.

That said, EETC financially compensates for the differences observed related to the injections and withdrawals within its balance perimeter from the electrical network.

Significant transactions

What significant transactions/deals have taken place in the last 12-18 months?

A PPA was signed with Al-Nowais Group of the United Arab Emirates for a photovoltaic power plant in Kom Ombo, under BOO system with a capacity of 500 MW, and the commercial operation is targeted at the end of 2023. A PPA was also signed with Al-Nowais Group for a wind park constructed in the Gulf of Suez with a capacity of 500 MW, and the commercial operation is expected at the end of 2023.

The global wind and solar company majority-owned by Aker Horizons, and Actis, a leading global investor in sustainable infrastructure, has signed an agreement to sell the Lekela Power portfolio to Infinity Group and AFC, subject to regulatory approvals and customary closing conditions. Lekela Power's portfolio encompasses operational power projects, with an aggregate installed capacity of over 1 GW, located in South Africa, Egypt, and Senegal.

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