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# Renewable Power Purchase Agreements (RE-PPA) in India

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India is one of the largest renewable energy economies in the world – it ranks as the third most attractive renewable energy economy for investments. Under the visionary leadership of Prime Minister Narendra Modi, India declared ambitious government commitments towards a New India powered by clean sources of energy and is well on its way to achieve the commitments before 2030. India has one of the largest expansions plans for renewable energy globally, with an aim to setup 450 GW of renewable energy installed capacity by 2030 and has already surpassed the 100 GW milestone (excluding large hydro). The Government of India seeks to facilitate capacity building and strength of the renewable energy sector through Power Purchase Agreements (PPAs) – thus, developing India's clean energy market to advance its decarbonization efforts. India was the 2nd largest market for corporate renewable PPAs in 2019, with an addition of 1.4 GW of capacity. Despite challenges posed by the

pandemic in 2020, the reforms introduced by the Government of India in the power sector are expected to stimulate a healthy development of the PPA market in India.

This report provides a comprehensive overview to elucidate the mechanisms involved in sanctioning of PPAs – including eligibility criteria, auction, as well as the relationship between the procurers, intermediaries and sellers. A key tenet of the research is the role played by the government's reforms that govern the structure of PPAs. It is a holistic guide for investors who are interested in the functioning of corporate PPAs, as well as investment and financing avenues for the renewable energy market in India. Invest India is grateful to the National Solar Federation of India for their valuable inputs and support in drafting this report. I hope you enjoy reading the report and it provides valuable insights into a detailed understanding of PPAs in India.

# Pranav R Mehta

Chairman, National Solar  
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At the outset, I would like to congratulate the team at Invest India and NSEFI for coming up with this exhaustive report on status of Renewable Energy (RE) Power Purchase Agreements (PPA) in India. Under the visionary leadership of Prime Minister Shri Narendra Modi, India is now witnessing the world's largest RE program and is on track to achieve 175 GW of RE by 2022, and consequently, 450 GW of RE by 2030. India is the only G20 country that is poised to fulfil its climate commitments. India's renewable energy capacity is the fourth largest in the world, and it is home to the world's fifth largest fleet with the government support and enabling FDI policies that allow 100 per cent FDI through automatic route, around USD 70 billion has been invested in RE over the past 7 years - making RE equity inflow a major shareholder in India total FDI inflow.

I am very happy to share that over the past decade, NSEFI members have contributed significantly in India's remarkable solar growth by way of capital investment, technology deployment, employment generation, skill development, innovative financing and above all, in achieving cost reduction- by working hand-in-hand and in a complimentary manner with the government. We at NSEFI are eagerly looking forward to working with Invest India to bring more investments, innovative financing to

power 'India's Decade of Energy Transition' that will witness investments flowing into storage, green hydrogen, solar manufacturing along with Rooftop and Utility scale solar projects.

This report on the status of RE PPAs in India will provide a wholistic overview of the various aspects of PPA that will help international investors with all the necessary information about RE contracts in India. This report consists of the information pertaining to the process of auction, awarding the project, eligibility criteria, along with other necessary aspects of the agreement terms, availability and dispatch risk, change in law and force majeure events. This report elaborates on government initiatives aimed at addressing key issues that investors may face after project is commissioned in terms of payment security, dispute resolution. Apart from the government PPAs an attempt has also been made to highlight the contours of private PPAs for projects generally setup for captive use by commercial and industrial establishments. I have no doubt in stating that this report will add as a comprehensive guide for every investor who consider investment in vibrant renewable energy market of India. This report will also enable conversion of investment interests into meaningful projects that have the potential to accelerate and intensify India's RE proliferation.



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## A. Introduction

A Power Purchase Agreement (PPA) is a commercial contract between the electricity producer and the electricity buyer (off taker). The contract defines all the commercial terms of the sale of electricity between the two parties, including when the project will begin commercial operation, schedule for delivery of electricity, penalties for under-delivery, payment terms, and termination. In India, central and state utility PPA contractual terms last on an average 25 years (long term PPA), whereas nascent private PPAs vary widely between 5-10 years (medium term) 10-25 year (long term PPA). Some advantages of PPAs are:

- Low upfront cost
- Predictable contract service timeline
- Less complexity in terms of system design and permitting process.

In the Indian context, PPA allows an independent power producer (IPP) to secure the payment stream for a project based on the Build-Own-Transfer model. It is between the purchaser/off-taker (often a state-owned electricity utility) and a privately owned power producer.

## B. How are Renewable Projects Awarded in India?

Power development projects are awarded in India through a reverse bidding tendering process. Section 63 of Electricity Act, 2003 promotes the competition in electricity sector and provides for adoption of the tariff by the appropriate commission. Government tenders in renewable energy are released by the Solar Energy Corporation of India (SECI), NTPC, other central utilities and by the respective state government departments.

For centrally bid and Inter State Transmission System (ISTS) projects, an intermediary, between the distribution licensee(s) and the power generator(s) is required for aggregation of power from the generators and sale to the distribution licensees/customers, or to enhance the credit profile. The intermediary in turn earns a trading margin (per unit basis), which is disclosed at the time of notification of the bid. The intermediary procurer signs a PPA with the generator and Power Sale Agreement (PSA) with the procurer/Distribution Company (DISCOM).

The procurer is also required to produce documents such as draft agreement and Request for Selection (RfS) adhering to the guidelines stipulated by the Ministry of New and Renewable Energy (MNRE). In this bidding mechanism, a bidder is allowed to bid for a minimum project limit which is required to be specified in the RfS at one site (**e.g., for hybrid projects, limit is 50MW**), as per MNRE guidelines for tariff based competitive bidding. The procurer may also choose to specify the maximum capacity that can be allotted to a single bidder.

The bids invited by the procurer(s) or intermediary procurers are conducted

through electronic mode (e-bidding). The terms of bid, the draft PPA and RfS documents are published by the agency that calls for bids with notice on public procurement portal. For bids involving an intermediary, the procurer or intermediary procurer provides opportunity for pre-bid conference to the prospective bidders and also provides written interpretation of the bid documents to any bidder. For bids invited by SECI, MNRE guidelines are followed.

Methodology for comparison of bids is specified in the RfS document. The ranking of bidders will start from the bidder quoting the 'lowest tariff (L1)'. The agency conducting may also define a band within which they will accept bid offers. For projects bid by the SECI, selection of all successful bidders is conducted based on 'bucket filling approach' starting with L1.

Under the competitive tariff-based bidding, the bidders are required to submit documents in respect of matters as mentioned below to ensure timely commencement:

- A.** Land acquisition or lease agreement, allowing transfer of land lease rights to the lenders or procurer.
- B.** No Objection Certificate (NoC) for environmental clearance.
- C.** Forest clearance (if applicable) for the project.
- D.** No Objection Certificate (NoC) from Ministry of Defense (if applicable).
- E.** A letter from Central Transmission Utility (CTU) confirming technical feasibility of connectivity of the plant to CTU substation.
- F.** Any other clearances (if any), as may be legally required.

## C. PPA Financing and PPA Fundamentals

A bankable PPA is a long-term offtake agreement executed with a creditworthy off-taker, which has a sufficient tenor to enable repayment of debt by providing an adequate and predictable revenue stream.

The PPA financing model is primarily a 3rd party ownership model, which requires a separate, taxable entity (system owner) to procure, install, and operate the solar PV system, on a consumer's premises (i.e., the government agency). The government agency enters into a long-term contract (typically referred to as the PPA) to purchase 100 per cent of the electricity generated by the system (generator(s)) the system owner.

The procurer may select a fixed tariff in INR/Kilo Watt Hour (kWh) or an escalating tariff in INR/kWh with a pre-defined quantum of annual escalations. The RfS documents describe the process for final selection of bidders along with the prevailing incentives available. For capacity under competitive bidding, the PPA is signed with the successful bidder/project company or a Special Purpose Vehicle (SPV) formed by the successful bidder. The evaluation committee critically evaluates the bids and certifies as appropriate. For transparency, bidding agency publicly discloses the name(s) of the successful bidder(s) and the tariff quoted by them.



# Key Components of the PPA Contract

## The Indian Context

# 1. Terms of Agreement

This specifies the terms of the agreement. The terms of agreement can range widely, on a case-to-case basis. The agreement signed between the procurer and producer can be of medium term or long term for the sale of power up to the Aggregate Contracted Capacity (ACC). The terms of the agreement is applicable to all the procurers (Government Public Sector Undertaking (PSU)/state DISCOMs/private industry) procuring power outside the power exchange.

In case of captive/rooftop power projects under Renewable Energy Service Company (RESCO) models, where the term is of 20-25 years, the ownership of the system may be transferred to the purchaser free of cost (~INR 1) after the term (in case of no default). The procurer may also purchase the project prior to term of contract and enter into only Operations and Management (O&M) agreement with the seller. For projects under competitive bidding, the RFS documents describe the same.

# 2. Subsequent conditions to be satisfied by Seller/ Procurer(s)

**A. Installation Work (In case of captive projects, requiring new power plant construction):** Power producer will design, manufacture, supply, engineer, erect, test & commission and operate & maintain. On mutual agreement between off-taker and producer, power producer shall provide the off-taker (procurer), a bill of materials listing major equipment constituting the system after the commercial operation date. This also involves responsibility of connecting power plant up to delivery point (location of main meter) from the system, if required by a dedicated electrical cable for power transmission.

**B. Lead Procurer (in case of >1 off-takers):** If the power is being procured in the group captive mode (multiple procurers using 100 per cent power capacity from a single plant), then a lead procurer must be assigned to represent all the off-takers for discharging their rights and obligations. In such case, each procurer agrees to any

decision, communication, notice, action, or inaction of the lead procurer which shall be deemed to have been on its/his behalf. Moreover, alternate lead procurer is to be assigned by these procurers to act as lead procurer in case of default of lead procurer.

**C. Bank Guarantee:** In case of new captive power plants, the project developer must deposit some amount of security deposit in form of Bank Guarantee (BG) into an escrow account or as mutually decided. This security deposit can be encashed by the off taker in case of liquidated damages (delayed commercial operation date, etc.). The power producer can receive the security deposit back on timely completion of the project. Moreover, at times the power producers, require the off takers to submit some amount of BG (usually around 1-2 months billing amount) or requiring a Letter of Credit (LC) to be opened prior to dispatch of power towards security of payments for the energy scheduled.

#### **D. Earnest Money Deposit and Performance Bank Guarantee:**

For RE Projects setup under the tariff based competitive bidding, an Earnest Money Deposit (EMD) of the estimated capital cost is required to be submitted with the response to RfS in BG, or Letter of undertaking (LoU) form is required to be submitted by the producers. Performance Bank Guarantee (PBG) is also fixed by the procurer to be submitted at the time of the signing of PPA. This PBG can be encashed to recover any damages/dues of the generator. Currently as per Ministry of Finance O.M. No. F.9/4/2020-PPD dt 12.11.2020, no provisions on EMD should be kept and PBG should be only 3 per cent of contract value. Generators can also submit LoU issued by Indian Renewable Energy Development Agency (IREDA) and Power Finance Corporation (PFC) in lieu of EMD or PBG.

**E. Seller's Obligations:** Sellers' obligations include obtaining and maintaining consent as required by law; project execution in timely manner, ownership of the project throughout the term, and meeting all the requirements to dispatch the electricity. During the operation of the plant, the generators are required to pay for the liquidated damages equivalent to lower of 6 months or balance PPA period.

#### **F. Capacity Utilisation Factor (CUF):**

The generators are required to agree to a particular CUF in the PPA or the RfS documents. The generators should maintain the required CUF. This agreed CUF should not fall below 90 per cent of the agreed CUF and maintain the range as specified (e.g., the range should be in 90 per cent to 120 per cent). The generators are required to pay procurers, for the shortfall in the CUF or energy supply as agreed upon.

#### **G. Procurer's Obligations:**

Procurers are responsible for the payment of transmission charges, load dispatch centres charges

(regional and state) and other charges if any (e.g., cross subsidy surcharge paid if power is not captive).

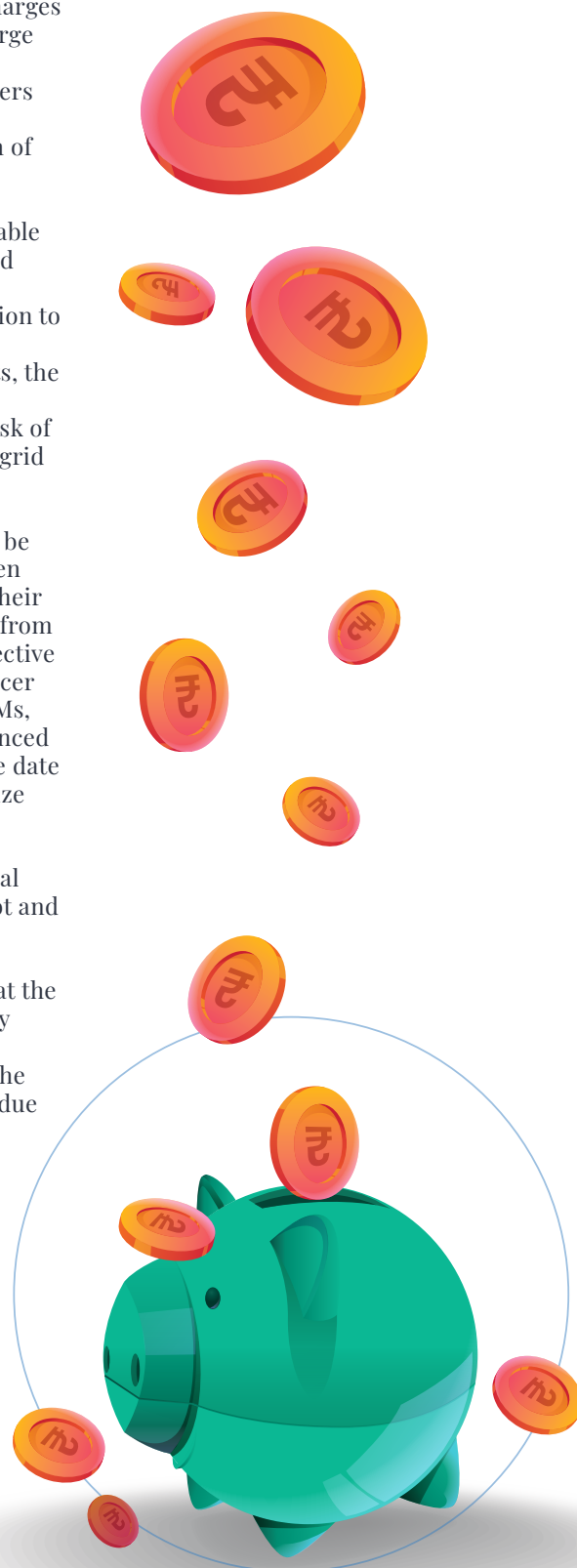
In rooftop solar systems, procurers must make all reasonable arrangements for the evacuation of the infirm power from the plant which includes providing an electrical connection for reasonable construction, commissioning and start up power as reasonably requisitioned by written intimation to the procurers. While in ground mount large open access projects, the procurer must make all arrangements and foresee the risk of connecting themselves with the grid and to the nearest substation. Based on prevalent terms and conditions, consumers may also be responsible for obtaining open access for transmission of their respective contracted capacity from the injection point to their respective delivery point. The power producer shall give the concerned DISCOMs, nodal agency and procurer advanced preliminary written notice of the date on which it intends to synchronize the project.

**H. Capital Structure:** The capital structure, i.e., percentage of debt and equity holding of the project is required to be disclosed in the agreement. This also ensures that the minimum amount towards yearly debt repayment of the project is provided by the procurer, even the event of non-dispatch of power due to multiple reasons.

#### **I. Shareholding Dilution in the project:**

**i.** All conditions of eligibility of the initial shareholders should be met by the new shareholders.

**ii.** No dilution before Commercial Operationalisation Date (COD) and no permission is required by the producer after one year of COD.



## 3. Capacity, Availability and Dispatch

**A. Scheduling and Dispatch:** Shall comply with the provisions of the applicable law regarding dispatch instructions to the provisions of the Availability Based Tariff (ABT) and grid code. Apart from any scheduled or unscheduled outage of the generating unit(s) and /or of the transmission system, the seller must offer the contracted capacity to the procurer(s) at the interconnection point and arrange for transmission up to the injection point. The generator and the procurer shall follow the forecasting and scheduling process as per the regulations regarded by the appropriate commission. The Clause 5.2(u) of the Indian Electricity Grid Code (IEGC) provides for status of "must-run" to wind and solar power projects.

**B. Dispatch Risk:** Take and Pay (for wind and solar): all renewable PPA in India work on the principal of 'Take and Pay'. In India the off taker must take the power produced and pay a fixed tariff for all energy. If energy cannot be physically taken by the off taker and output is "curtailed," energy will be calculated and paid for on a "deemed" delivered basis. Moreover, on mutual discussion, the power producer may also sell the electricity in the power exchange. The PPA and PSA should also discuss in detail about the compensation mechanism for the curtailed power. MNRE's guidelines for 'Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects', provides the compensation formula

that is required to be followed by the intermediary procurer.

**C. 'Take or Pay'** is also applicable for power plants other than solar and wind where fuel is used to spin the turbines and can easily ramp up and ramp down their power output. In this, a fixed price is paid for the contracted capacity is paid by offtaker.

**D.** The seller over any settlement period cannot offer power or entitlement capacity for dispatch to any third party, unless the power is not scheduled by the procurer.

**E. Excess Power Sale Beyond Contracted Capacity:** In case of any excess energy available from the projects beyond the contracted capacity, the project developer/seller will be allowed to sell such excess energy in the open market without revenue sharing. However, in case of backdown by the procurer, such sale of power to a third party should also be without any revenue sharing mechanism. For solar-wind hybrid plants being setup under the tariff based competitive bidding, the seller may sell excess power beyond the contracted CUF to any buyer, however, the procurer may buy the excess energy at a 75 per cent of the PPA tariff. Such provisions should be clearly disclosed in the RfS document or PPA.

**F. Transmission and Distribution (T&D) Losses:** T&D losses from the interconnection point onwards are borne by the procurer.

## 4. Metering

For installation of meters, meter testing, meter calibration and meter reading and all other incidental matters, the seller and the offtaker(s) must follow the Central

Electricity Authority (CEA) regulations. Installation of these is the responsibility of the producer.

## 5. Billing and Payment

**A.** From the commencement of power supply, offtaker(s) pay a monthly tariff payment, comprising of tariff for every contract year. Procurers are also paid a rebate for advance and timely payments to encourage such timely payments.

**B.** Sellers must issue a signed monthly bill with Joint Meter Reading (JMR), Regional Load Dispatch Centre (RLDC), daily energy account and other supporting data, documents and calculations for the immediately preceding month within 10 days.

The seller and procurer have to designate a bank account for the purpose of collection and payment of monthly bill, 90 days before CoD, in case of captive Long-Term Agreement (LTA).

**C. Late Payment Surcharge (LPS):** Due to delay in monthly bill beyond due date, a LPS is payable by the procurer to seller (e.g. some organisations charge 2 per cent LPS on day-to-day basis and compounded monthly). The LPS payable by DISCOMS is capped at 3 per cent and increase by 0.5 per cent for every month.

**D. Payment Rebates:** Procurers are eligible for rebates on payment of any full month bill before the due date based on actual credit into seller account (e.g. payable at the rate of 1-2.25 per cent and may be reduced 0.05 per cent per day).

**E. Payment Security Mechanism:** The offtaker(s) are required to provide the seller a monthly unconditional, revolving and irrevocable LC, maintained by the procurer(s), towards monthly bills and/or supplementary bills payments, which may be drawn upon by the seller. This LC should be provided from default escrow agent under the default escrow agreement for a minimum 1 month. The LC issued by offtaker(s) on a case-to-case basis must be renewed prior to its expiry (e.g., 45 days or 1 year with amount varying between 120-200 per cent of

estimated average billing per cycle). The LC negotiation charges are borne by the seller. For projects bid under tariff based competitive bidding the intermediary procurer (if any) may collect the LC amount from both parties to protect the interest of the procurer and generator.

Payment Security Fund is setup by the intermediary procurer (if any) to support the payment for minimum 3 months of billing, to projects established under tariff based competitive bidding (e.g., 5 lakhs/MW). The amount to be collected by the intermediary for this fund is required to be clearly disclosed in the RfS for both the generators(s) and procurer to protect the interests.

Moreover, to provide adequate security on energy payment and termination compensation (if any), the payment security (in addition to the LC) by Distribution Licensee, is provided in the form of State Government Guarantee (SGG) or a Tri-Party Agreement (TPA) in a legally enforceable form. The TPA signed for payment security is between the Reserve Bank of India (RBI), the central government, and the state government. The intermediary procurer invoking the security is responsible for pay-out of payments to generators during default.



## 6. Force Majeure

A 'force majeure' means any event/circumstance or combination that prevents (wholly or partly) or un-avoidably delays an affected party in the performance of its obligations. It is effective to the extent; they are not within the reasonable control and couldn't be avoided. These events are classified into ways:

### A. Natural Force Majeure Events

### B. Non-Natural Force Majeure Events

A notice to other party should be provided of force majeure event. The reliefs available under such conditions, must be defined by the agreements. These are some of the reliefs that are usually provided by the

country:

- i.** No breach of obligations.
- ii.** Both affected parties are entitled to claim relief for a force majeure.
- iii.** In natural force majeure event to offtaker(s), no tariff is paid for the duration.
- iv.** During indirect non-natural force majeure event, offtaker(s) are required to make payments for debt service (up to maximum of capacity charges based on normative availability), under the financing agreements, provided that such payments for debt service be proportional to the contracted capacity of the offtaker(s). Such compensation must be returned to the offtaker(s) if compensation from other source is received.

## 7. Change in Law

Change in Law (CIL) refers to occurrence of any of the following events after the date of final signing of the contract or the date of issuance of Letter of Intent (LoI) or after the last date of bid submission:

**A.** Any enactment, coming into effect, adoption, promulgation, amendment, modification, or repeal of any law, including rules and regulations.

**B.** Change in its interpretation or its applicability of any law.

**C.** Imposition/inclusion of new requirement for obtaining any consents, clearances and permits or any change in the terms and conditions.

**D.** Any change in tax or introduction of any tax made applicable.

**However, the following are not included in the 'CIL':**

**A.** Change in any taxes on corporate income, withholding tax on income or dividends distributed to the shareholders of the seller.

**B.** Change in respect of Unscheduled Interchange (UI) charges or frequency intervals by an appropriate commission.

**C.** Change on account of regulatory measures by the appropriate commission including calculation of availability.

The CIL can be claimed based on above factors by the offtaker or seller, by making application in the relevant commission or tribunal. It is, therefore, required that the rates and proportionate tariff adjustments on which CIL can be claimed must be specified in the contract. Moreover, the formula for CIL claim on hybrid RE projects is also provided by MNRE.

The purpose of determining CIL compensation is to restore to the extent of same economic position as if such change has not occurred, through monthly tariff payments or via a supplementary bill. This relief against CIL is provided depending on the phase of the project viz. construction period (impact of increase/decrease of capital cost) and operating period (any decrease in revenue or increase in expenses).

## 8. Governing Law and Dispute Resolution

Both the seller and procurer can raise any claim, dispute, or difference of any nature, by giving a written notice to the other party. The notice must contain a description of the dispute, its grounds and all written material in support. Simultaneously, parties shall continue to perform their respective obligations (which are not in dispute).

The dispute resolution can be filed in the appropriate commission for provisions relating to the Electricity Act, 2003 only. For resolution of dispute through arbitration – it shall be arbitration under the Indian Arbitration and Conciliation Act, 1996 and the Rules of the Indian Council of Arbitration.



## 9. Tariff

The quoted tariff must be used for raising bills against the energy supplied in every billing cycle.

- i.** The method of determination of tariff payments for any contract year during the term of agreement must be disclosed in the agreement to avoid any disputes in future; moreover, the calculation and formulation required must be provided into the agreement.
- ii.** For RE sources such as hydro, storage and waste to energy, the tariff may be paid

into two parts comprising of capacity (towards total capacity available) and energy charges (amount towards actual kWh consumed) to cover the operation cost, debt repayments and a reasonable equity return.

- iii.** Optional: The full capacity charges may be payable based on the contracted capacity at normative availability and incentive must be provided for availability beyond 85 per cent to seller. In case of lower availability than the normative availability, capacity charges should be payable on proportionate basis, in addition to penalty paid by seller.



## 10. Taxes and Duties

The seller shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the seller, contractors or their employees, that are required to be paid by the seller. Procurer(s) are not liable for any payment of, taxes, duties, levies, cess etc. for discharging any obligation of the seller by the procurer(s) on seller's behalf. If any tax has been deducted by the seller at source, a valid credit must be shared by the off taker to seller. Further, change in taxes or duties for projects can be claimed under change in law (if applicable).

## 11. Grid Code Compliance

The following matters shall be determined as per the provisions of the Grid Code and Availability Based Tariff (ABT):

- A.** Availability declaration and calculation of availability factor.
- B.** Spinning reserves requirement.
- C.** Procedure for revision of availability.
- D.** Consequences of failure to demonstrate capacity or capacity misdeclarations.
- E.** Scheduling and dispatch.
- F.** Other matters which may be related to availability or availability factor.



## 12. Miscellaneous

**A. Currency Risk:** To avoid currency risk, the PPA should be either denominated in or linked to an exchange rate of the currency of the power producer's debt, and there should be no limitation or additional approvals required to transfer funds to offshore accounts as required.

**B. Termination:** The PPA should set out clearly the basis on which either party may terminate the PPA. As termination by the off taker may leave the project with no access to the market and thus, should be limited to significant events. The terminal value is required to be fixed (often as a per cent of total asset value varying in different phases) in the contract. The PPA must also clearly guide on the payments to be made by the off taker to be provided in case of termination which is equal to the full amount of the power producer's outstanding bank debt.

The off taker may also ask for a minimum binding duration of the contract which shall also be specified (if any) in the PPA document after achievement of payback period of plant (e.g. around 6-8 years) which permits off taker to reduce risk with long binding contracts.

**C. Collateral Assignment:** The PPA should also discuss about the collateral assignment of the agreement to the power producer's lenders with the right to receive notice of any default. Additional step-in rights are generally set forth in a separate direct agreement between the lenders and the off taker. Upon occurrence of a financial default, lenders' representative is required to issue a notice to the developer ("Notice of Financial Default") along with particulars and send a copy to the off taker(s) for its information and record.

### D. Performance Test:

**i.** The performance test must be conducted under any and all ambient conditions (temperature, humidity etc.) that may exist during the time of the performance test and no corrections on the final gross and net output of the unit must be allowed, unless relating to degradation factor specified.

**ii.** The correction curves may also be used only if the grid may only be used if the grid system operation during the performance test exceeds electrical system limits.



# 13. Government Regulations for PPA

**As per Electricity Act, 2003 following is the section dealing with procurement of power other than DISCOMs under open access:**

**A. Section 9 of The Electricity Act, 2003 deals with the captive generation, and dedicated transmission lines. The reference is quoted as below.**

## **Section 9. (Captive Generation)**

*(1) Notwithstanding anything contained in this Act, a person may construct, maintain or operate a captive generating plant and dedicated transmission lines...  
... Provided further that no license shall be required under this Act for supply of electricity generated from a captive generating plant to any licensee.  
(2) Every person, who has constructed a captive generating plant and maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use...'*

**B. Section 49 of The Electricity Act, 2003 deals with agreement for the purchase and supply of electricity. The reference is quoted as below**

## **Section 49. (Agreements with respect to supply or purchase of electricity)**

*'Where the Appropriate Commission has allowed open access to certain consumers under Section 42, such consumers, notwithstanding the provisions contained in clause (d) of sub-section (1) of Section 62, may enter into an agreement with any person for supply or purchase of electricity on such terms and conditions (including tariff) as may be agreed upon by them.'*

**C. Section 86 of The Electricity Act, 2003 deals with roles and responsibility of the state commission, one of which inter alia include regulatory procurement tariff in the state; and to determine open access charges (viz. surcharges, losses, transmission charges). The reference is quoted as below:**

## **Section 86. (Functions of State Commission)**

*(a) determine the tariff...  
.... Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers...  
... (b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.*

# 14. Government Backed Initiatives – PPA Reforms in India

**A. Guidelines for tariff based competitive bidding:** MNRE issued guidelines which act as the guiding documents to be followed by the procurers for promotion of competitive procurement of electricity from RE power plants, by distribution licensees, and also to protect consumer interests. The guidelines also facilitate transparency and fairness in procurement processes and provides a framework for the inter-state/intra-state sale-purchase of long- term power.

**B. Standard Bidding Guidelines:** Government has, in the initial days announced standard bidding guidelines which act as a guiding document for all the tenders being floated into the country. Moreover, the guidelines also act

as a base for the PPAs that are signed with companies or utilities. The standard bidding guidelines were floated by the Ministry of Power (MoP) to bring uniformity in the tender, both at central and state levels.

**C. Unified Bidding Guidelines:** MNRE is working on bringing Unified Bidding Guidelines to act as standard document for ‘Tariff Based Competitive Bidding’ procurement of power from grid connected renewable power projects, with or without energy storage system and/or balancing power across the country. The finalization of document is pending and is under rigorous discussion to resolve the currently pertinent challenges in the country.

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10. Indian Railways Model PPA- [https://indianrailways.gov.in/railwayboard/uploads/directorate/ele\\_engg/pdf/Final%2oModel%2o%2oPPA%2o.pdf](https://indianrailways.gov.in/railwayboard/uploads/directorate/ele_engg/pdf/Final%2oModel%2o%2oPPA%2o.pdf)
11. Accepted/upcoming industry practices.

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