**Transaction Term Sheets Considerations for Renewable Embedded Generation(REG) for Clustered Customers**

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1. **Introduction**

This document is intended as a template for the key transaction term sheets for Electric Distribution Companies (DisCos/utilities), which enables utilities to interconnect an embedded solution through its injection substation to increase energy supply to a group of customers. This allows utilities to improve their revenue and reduce their loss levels. ***The REG information brief*** provides additional information insight into the business model. The summary of the key terms that enable this type of transaction arrangement is highlighted throughout this document. This term sheet is part of a UEDER Toolkit (“Toolkit”).

**What are the term sheet considerations?**

The term sheet is a legally non-binding document in which the involved parties provisionally spell out and agree on the key transaction parameters before further negotiations, particularly before moving into a binding contract agreement. Based on the contract terms illustrated below, it is essential that both parties prepare a finalized version for each transaction (for a single project or for a project portfolio).

***Summary of the business model implementation process[[1]](#footnote-2)***

| Item | Process |
| --- | --- |
| Initiation phase | * This phase includes the identification of a suitable cluster for a REG project, initial engagement with the regulator, aligning on the project term sheet between the developer and the utility
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| Preparation phase  | * This includes detailed data gathering, including determining suitable premium customers within the identified location, designing the REG system, identifying a suitable site to build the REG system, selecting a developer to execute the project and conducting the various network and grid integration assessments to enable customer delineation between premium and non-premium customers. Negotiating and finalizing a draft contract between the developer and the utility including the draft agreement for the selected premium customers.
 |
| Execution phase | * Selected premium customers[[2]](#footnote-3) will sign a customer agreement and other premium customers will be invited to attend a town hall meeting for documentation. Generation and distribution assets of the projects are deployed, tested and commissioned. The generation and distribution assets are maintained and operated by the developer and the utility, respectively, to provide improved supply to customers.
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1. **Key contract terms and their rationale**

| Item | Clauses in the Template | Rationale and Further Considerations |
| --- | --- | --- |
| Contract period | * The template contract period is 20 **years**[[3]](#footnote-4).
* There are clear options to terminate the contract prematurely and to renew the contract.
 | Considering that this is an embedded generation and there are limitations on the utility’s ability to increase tariffs, it is advisable for both parties to agree on a minimum of 15 years with allowances for termination based on contract breaches. Ensuring that the tariff provided to the utility can easily be passed to both the premium and non-premium should be considered when determining the contract duration. |
| Contract capacity | * This means the maximum of [MW] which may be requested in whole or part by the utility and which shall be made available by the embedded generator in accordance with this Agreement.”
 | The contract capacity defines the maximum generation capacity which the embedded generator is expected to make available to the utility when requested and is the basis on which the Underperformance Events are defined. This clause is included in the PPA template to define the amount of generation capacity that the utility has the certainty of being able to receive from the embedded generator. This ensures that the utility will always have enough capacity to meet its supply obligations to premium customers.The utility and the embedded generator are expected to agree on a reasonable amount for the contract capacity.  This contract capacity amount should be set based on the measured peak power demand of the premium customers and the selected non-premium customers. This ensures that the embedded generator will always be able to supply the utility with enough available capacity to supply the premium customer 24/7 and during the solar operational hours provide power to the non-premium customers  |
| Sale and purchase of energy | * On and after the commercial operations date until the expiry of the operational Period or earlier termination, the embedded generator agrees to make the contract capacity available to the utility on their demand and the utility agrees to pay for the net electrical output supplied according to the terms and conditions herein specified.
* The embedded generator guarantees that the contract capacity when requested by the utility shall be made available at least [95%] of the time within a one (1) month interval
 | The embedded generator is expected to make the contract capacity available to the utility with [95]% availability because the utility will also have a PPA with prime premium customers which will specify [90]% availability in their contract. These numbers have also been chosen to generally ensure that there is a buffer between the level of reliability that the utility expects to receive from the embedded generator and the level of reliability that any premium customers expect to receive from the utility. If the utility and the embedded generator choose to modify the reliability numbers, it is important to ensure that the buffer between the reliability level the utility guarantees for premium customers and the reliability level that the embedded generator guarantees the utility is maintained. |
| Minimum chargeable energy | * The utility shall purchase on a take or pay basis, the minimum chargeable energy. The minimum chargeable energy shall be reviewed every 6 months[[4]](#footnote-5).
 | The contract includes a minimum Take or Pay amount of electricity (known as the minimum chargeable energy) that the utility is expected to pay for each month. This is included to provide revenue assurance for the embedded generator and improve the bankability of the project and ensure a minimum monthly revenue[[5]](#footnote-6). Additionally, since the minimum chargeable energy impacts financial results for both the utility and the embedded generator, the contract template includes a provision for the amount to be reviewed every six months[[6]](#footnote-7). The minimum chargeable energy should be selected to be equal to the average daily demand of the premium customers. Firstly, this helps to provide assurance for the embedded generator that it will be compensated for providing reliable supply to premium customers.Secondly, linking the minimum chargeable energy to premium customer demand and not total customer demand ensures that the Take or Pay agreement does not impose an undue financial burden on the utility because even if premium customer demand is lower than expected, the utility will have sufficient demand from other customers to offtake the minimum chargeable energy[[7]](#footnote-8).Thirdly, it prevents oversizing of the embedded generator systems, which would undermine the economics of the project and will affect the proposed REG tariff by embedded generator and the utility tariff charged to the premium customers. |
| Obligation of the embedded generator towards interconnection | * The embedded generator shall bear all Shallow connection costs[[8]](#footnote-9), dedicated network upgrades costs, finance the procurement of customer meters and undertake the procurement, supply, construction of the embedded generator’s Plant and connection Equipment
 | The distribution network will have to be upgraded for the utility to successfully provide the level of reliability being promised to Premium Customers and to reduce technical losses. Additionally, to reduce collection losses and enable the supply differentiation that the model requires, all REG customers need to have smart meters installed. Although the utility maintains responsibility for the distribution network, given the liquidity challenges currently faced by utility, the REG model proposes that the embedded generator bears the cost of the dedicated network[[9]](#footnote-10) upgrades and meter procurement. The cost of these items will be repaid by the utility through the REG tariff.  |
| Billings and collections | * The embedded generator will issue an invoice to the utility for the Net Electrical Output delivered during the month.
* The utility is still responsible for billing their customers which includes the premium customers.
 | Utility is still responsible for managing billing and collections from their customers. This enables the utility to maintain its active relationships with its customers and most importantly, it ensures that the customers’ mode of engagement and payment processes with the utility do not change. However, the utility and the embedded generator can agree on a hybrid system depending on the specific needs of different locations. Invoices issued by the embedded generator go through a payment waterfall mechanism which is explained further in the document. This payment waterfall is designed to provide revenue assurance to the embedded generator and the operation of the account has to conform to NERC’s Guidelines for Secondary Escrow Account Management. |
| Tariff adjustments | * The tariff payable shall be reviewed on 1st January of each year following the Commercial Operations Date and shall be escalated on the basis of inflation and change in foreign exchange rates, changes in the gas price and changes in applicable law and tax
* Notwithstanding any provisions of this Agreement, either Party may call for a review at any time during a year in the event that the value of the relevant index rises or decreases by more than the agreed percentage over the base value for the year.
 | The contract has been designed with two avenues to update the tariff. Firstly, there is the normal tariff review process which occurs at the beginning of every year during which the tariffs can be updated to account for changes in predetermined parameters. Additionally, the contract allows either Party to call for a review at any time in the year. This is to give the Embedded Generator and the DisCo the flexibility to respond to sudden and drastic changes in the predetermined conditions. The thresholds that will trigger a review of the tariff are listed in Annex. When selecting these thresholds, the normal movement of these parameters should be considered, and the level should be set to ensure that only changes that are beyond the normal movement of these parameters can trigger a call for review. |
| Under-performance  | * If an underperformance event occurs, the utility shall be entitled to deduct the underperformance liquidated damages from the Tariff of the applicable month for every day the underperformance event occurs provided that settlement will be made on a monthly basis.
* In the event an underperformance event occurs during the operational period, the embedded generator shall pay the liquidated damages reflected in the table below provided in the last section, key takeaways.
* If the embedded generation system availability goes below fifty percent (50%), it shall constitute an embedded generator event of default.
 | These clauses are designed to ensure that the utility is compensated if the Embedded generator fails to provide the contract capacity. This compensation mechanism provides a way for the utility to hold the developer accountable if it fails to supply the contract capacity as required and enables the utility to provide the required compensation to the premium customers[[10]](#footnote-11). The threshold for the liquidated damages can be adjusted by both parties. However, it is essential that parties understand the potential impact on their business to ensure that even in cases of underperformance positive outcome of the project is still acceptable. Proposed liquidated damages that an embedded generator will pay in an underperformance event are stated in the table below.

|  |  |
| --- | --- |
| Embedded Generation System Availability  | Embedded Generator Liquidated Damages (% of Tariff of the Applicable Month of the Underperformance Event Deductible)  |
| 95 – 100%  | 0%  |
| 90 – 94.9%  | 10%  |
| 85 – 89.9%   | 20%  |
| 80 – 84.9%   | 30%  |
| 70 – 79.9%  | 40%  |
| 60 – 69.9%  | 50%  |
| 50 – 59.9%  | 60%  |

  |
| Termination | The customer, DER developer and utility have the right to terminate the agreement after following the dispute resolution steps outlined in the contract and the issue persists. | This is a new business model arrangement, and these clauses give all three parties a way to exit in extreme circumstances. The contract can also be terminated at the earlier stage of the project. For instance, if the project is abandoned for 3 months consecutively after the date of commercial operation[[11]](#footnote-12) or 12 months period after signing. |
| Bank guarantee and Payment waterfall | * In this contract the bank guarantee is waived and replaced with the independent collections account and a payment waterfall. Payment to the embedded generator for the Net Electrical Output supplied to the utility shall be settled in accordance with the following payment waterfall from the independent collection account:
* The Nigeria electricity market shall be paid in full where the funds in the independent collection account is sufficient to satisfy all the payment obligations or paid 30% of the collections for that month, whichever amount is lower.
* The embedded generator is paid in full or paid the balance of collections for that month, whichever amount is lower.
* The utility is paid in full or the balance of collections for that month, whichever amount is lower.
* The maintenance reserve account is paid in full or the balance of collections for that month, whichever amount is lower.
* Any funds left over will be retained in the independent collection account and will contribute towards settling payments in the next settlement period
 | Since it is not practical for the utility to set up bank guarantee based on their financial position. A payment waterfall is designed to take two things into consideration. Firstly, that the embedded generator requires revenue assurance to invest in the embedded generator project. Secondly the operation of the account has to conform to NERC’s Guidelines for secondary escrow account management. As a result, the waterfall has been designed so that the Nigeria Electricity Market is either paid in full for any electricity purchased from the grid or paid a minimum amount of 30% of the collections for the month in accordance with NERC’s Guidelines. following this, the embedded generator is **prioritized** in the waterfall order and is either paid in full or paid the remainder of the collections for the month. After this, the Nigeria electricity Market is paid in full if there is any balance to be paid, before the utility receives its full disbursement.This process ensures that payments meant for the embedded generator are not included in the revenue escrowed with utility collection since there is a guideline that supports a second account management process. In this case, we encourage the utility and the Embedded generator to view each other as partners who are able to have visibility of the total revenue collected for the month prior to executing the waterfall mechanism and agree as partners to any adjustments or expenses that should be made for the network to further reduce losses.  |
| Deemed Commissioning | * Optional
 | The DisCo’s failure to complete the relevant section of the DisCo’s Connection Equipment or the Distribution Network, commissioning of the relevant phase of the Plant shall be deemed to have occurred (“**Deemed Commissioning**”) upon the expiration of the notice issued DisCo shall be liable to pay the Embedded Generator an amount equal agreed as liquidated damages for every Month it is in default of Commissioning. This also applies when the Embedded Generator fails to commission its plants.Both parties should agree on whether this term should be included in the agreement. Where the timeline of the project can't easily be adjusted due to the type of premium customers requesting for additional supply it is essential to consider term. The amount that should be paid as liquidated damages should be agreed to by both parties. Payment of the liquidated damages can be made through the revenue obtained from the project as one of the considerations. |

**Key takeaways to support preliminary contractual negotiation**

Each term has been carefully designed to create a contract that appropriately and fairly distributes responsibility and risk between the parties. Some prerequisites to initiate contract negotiation to support the acceptance of the terms illustrated are stated below:

* All parties should understand the business model value proposition and the key benefits to each party.
* All parties should understand each others’ perspectives and align on a fair contract to balance their interests.
* Both the DER developer and the utility should accept that there is room for improvement as they implement various projects.

Accepting terms between the developer and the utility ensures quicker contract execution.

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1. The REG implementation plan template which is also part of the UEDER toolkit outlines the steps, processes and recommendations for executing the business model. [↑](#footnote-ref-2)
2. These are the customers that consumed a higher portion of the energy and regarded as the anchor customers in the area. An area could have 100 premium customers but 20 of these customers are regarded as the prime premium customers. [↑](#footnote-ref-3)
3. Aligning on 15-20-year contracts for investment recovery is rare in the Nigeria Energy Market due to uncertainties in payments from buyers and if such buyers will still be in existence. However, the REG business model has developed a payment assurance mechanism to encourage these types of long-term contracts. [↑](#footnote-ref-4)
4. Both parties can agree to adjust the review process to quarterly if they are more comfortable with it and the duration of the contract should also be considered. [↑](#footnote-ref-5)
5. Compared to an IMG this provides investors the ability to estimate project revenue in a worst-case scenario [↑](#footnote-ref-6)
6. If the review period for the Minimum Chargeable Energy is going to be changed from six months, the new review period should not be longer than a year to ensure that the Minimum Chargeable Energy is reviewed before or at the same time as the REG Tariff. [↑](#footnote-ref-7)
7. The non-premium customers on the feeder will be more than the premium customers but it is expected that the combined load of the premium customers' accounts for at least 40% with an additional 10% for customers selected as typical band A. This typical customers could later become premium. [↑](#footnote-ref-8)
8. means all costs relating to the connection of the Embedded Generator’s Plant to the Dedicated Network.  [↑](#footnote-ref-9)
9. This does not mean that the Disco can’t agree to take financial responsibility of a portion of these cost by taking advantage of energy program in the market or accessing other funds. [↑](#footnote-ref-10)
10. This will be outlined in the DisCo’s service agreement with the prime premium customers and other premium customers will be notified of the DisCo’s obligation. [↑](#footnote-ref-11)
11. means the date after which all testing and commissioning has been completed in accordance with Good Industry Practices and is the initiation date to which the developer can start producing electricity for sale to the Interconnected Customer pursuant to this Agreement [↑](#footnote-ref-12)