**Transaction Term Sheets Considerations for Interconnected Minigrid & Commercial Street Utility-Enabled Distributed Energy Resources Business Model**

 

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1. **Introduction**

This document is intended as a template for the key transaction terms that Electric Distribution Companies (DisCos/utilities) and for DER developers to augment electricity supply to dense urban, peri-urban and commercial streets in either a ringfenced area or co-located and could be supplied from the same feeder. The utility-enabled interconnected Minigrid (IMG) and Commercial Street (CS) model ensures that the selected customers can access an improved electricity supply. At the same time, the utility revenue improves with lower loss levels. ***The IMG and CS information brief*** provides additional 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 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, both parties must prepare a finalized version for each transaction (for a single project or a project portfolio). The size of the DER will determine the regulation that needs to be utilised for the selected cluster. Both parties will agree on the suitable regulatory framework to determine the contract template to utilize:[[1]](#footnote-2). The finalized version should be approved to prevent the renegotiation of key terms when reviewing the agreement.

***Summary of the business model implementation process[[2]](#footnote-3)***

| Item | Process |
| --- | --- |
| Initiation phase | * The utility[[3]](#footnote-4) and/or the developer identify the potential customer/cluster of customers that require these services and initiate customer engagement[[4]](#footnote-5) to understand their interest in wanting reliable power. At this phase, the developer and utility kick-off alignment on the project term sheet. |
| Preparation phase | * The utility and the selected developer will agree on the DER solution design implemented by the developer, negotiate contract terms and further engage with the customer regarding the business model, and assess the viability of the proposed solution[[5]](#footnote-6). |
| Execution phase | * The utility and the developer have aligned on a draft agreement that will be shared with the selected customers directly or through a dedicated council[[6]](#footnote-7) presenting all customers. The council signs a contract with the utility and the selected developer. System construction and implementation of distribution network upgrade is executed. The services to the customer will be initiated based on the terms of the agreement. |

1. **Key contract terms and their rationale**

| Item | Clauses in the Template | Rationale and Further Considerations |
| --- | --- | --- |
| Contract period | * The template contract period is for **15 years**[[7]](#endnote-2). * There are clear options to terminate the contract prematurely and to renew the contract. * Commercial street solutions above 1MW the agreement[[8]](#footnote-8) can only become effective after the approval from the regulator. | Considering solar PV typically has a 25-year+ lifespan, a longer contract period allows DER developers to distribute project costs over a longer time frame, accessing financing with favorable terms, reducing the customer’s tariff, and increasing their net savings. This should be considered for contract using the mini-grid regulation since below 1MW with major performance review done after the initial term. |
| Baseline data[[9]](#footnote-9) | * Due to the improvement required by the DER Developer over the first three years a baseline will be established to enable the utility to measure performance. Developer will share its performance metric yearly throughout the tenure of the agreement | There are critical indicators that the utility will need to monitor which are metrics used by the regulator to measure the utility performance. The metrics that should be consideration are listed below:   * Number of Customers * Tariff band and Annual Energy Received * Billing and Collection Efficiency * ATC & C Loss * Average Hours of Supply * Metering Penetration   This approach is only applicable when the DER developer is acting as a franchisee |
| Right of usage of distribution network | * The utility grants the DER developer an exclusive right of usage of the distribution network within the ringfenced area for the contract period. * The DER developer is responsible to pay a usage fee for every energy distributed through the distributed network. * The DER developer confirms that all necessary assessments and review have been conducted to validate the physical condition of network assets. * Where the initial cost of repairs, new connections and/or extensions made to the distribution network is above 35% of the total capital expenditure (Capex) of procuring and installing the generation assets, the DER developer shall be entitled to fully recover of properly documented incurred costs above the 35% threshold from the utility within the first half of the Initial Term. * All new installation within the ringfenced area shall be transferred to the utility at the end of the contract based on the book value of the assets. The utility can agree to reduce the usage fee value that will adequately compensate for the financing of the new installation as the suitable option | Utility providing the developer exclusivity gives the developer the responsibility to manage and maintain the distribution network within the ringfenced area for the contract period. A DER developer is responsible for determining the condition of the assets and if the utility leads the assessment the developer is still responsible for validating the assessment.  This enables the DER developer to accept a distribution asset register which includes the condition of the assets. Both the utility and the developer can align on the assets that need replacement or maintenance.  Depending on the cost of the assets, If above 35% of the cost of the entire project and may increase the risk associated the finalizing the contract with the customers. The utility could consider reducing the usage fee[[10]](#footnote-10) after aligning with the DER developer on network upgrades that should be priority.  Utility paying for distribution assets based on the book value should only occur if cost was not fully covered by the usage fee, could not be recovered in the tariff at the end of the initial term and renewal of the contract will not occur.  To ensure the new installation meets a minimum standard for the utility and NEMSA it is advisable that the vendors selected should either have gone through the utility registration process or already registered as a vendor with the utility. |
| Electricity supply obligations  (Supply Hours) | * Obligation to provide power is shared between the DER developer and the utility. An example for illustrationn purposes is provided below:   + DER Priority Hours: **9:00 AM – 3:59 PM**, with 95% availability of supply   + Grid Priority Hours: **4:00 PM – 7:59 AM,** availability of supply will be confirmed by utility. * The DER developer is responsible for backing up the utility’s power supply to ensure the customer has reliable power as much as possible (namely ensuring that the customer ends up with very high reliability monthly on average, such as 90% reliability). * DER developer shall accept electricity supply from the utility. The value of failure to accept utility power for a given day shall be calculated by dividing the total number of kWh’s consumed in the given calendar day by 24 hours, multiplied by the number of hours the DER developer failed to accept, then multiplying it by the utility Grid Tariff | Dividing supply obligations by hour of day ensures that the DER system does not need to be oversized to meet the customer’s electricity needs during evening and night-time hours, while sufficiently utilizing low-cost solar generation during the day. It effectively reduces the cost of electricity supply to customers compared to the fossil-fuel alternative, and thus makes DER solutions more price competitive for customers who can be provided a relatively high number of hours of supply to ensure reliability.  Both parties are required to align on the reasonable hours of supply the utility can provide to ensure the DER developer can determine to what extent will the DER system backup the grid. The DER developer during operations can request for additional grid supply which will still be paid for based on the grid tariff. The best-case scenario is stated under the obligations for this business model but should be modified based on the expectation of the customers, location of the cluster and past performance of the grid within that area. |
| Billings and collections (B&C) | * The DER developer is responsible for billing the customer for **all electricity received** (from both the DER plant and the grid) and collecting the payment from the customer. * The utility will bill the DER developer for the electricity it provides, and then the DER developer will settle with the utility for electricity received from the grid at the specified utility grid tariff, minus any project-related debts (e.g., grid upgrade repayment if co-financed) the utility holds or incurs. | As opposed to business as usual where each customer is billed by the utility and the DER developer. The proposed arrangement gives the customer a single point of contact for all billing and collections: the DER developer. The DER developer and the utility settle their own money flows by deducting any debts the utility incurs from the electricity sales amount that the DER developer owes the utility for supply, typically monthly. This ensures that the utility is not required to transfer funds to the DER developer.  OPTIONAL: The utility could also require the assistance of the developer to handle the collection of customer debts as part of their billing obligations. The utility will need to align with the developer based on the utility process in engaging for these services. The developer will need to inform each customer of its additional role in this contract. It will be advisable that this should be viewed as a separate agreement aligning the various steps including debt verification but only reference in this contract (Disco will engage the developer for debt collection services since responsible for billing the customer) |
| Tariff | * The DER developer will sell electricity to the customer **at a single Blended Tariff** for all electricity consumed (from both the DER system and the grid). * The Blended Tariff is predefinedand composed of the DER Tariff and the utility grid tariff. To provide stability and transparency, the blended tariff can only be adjusted due to changes in market conditions and changes in the utility grid tariff. * The developer will purchase electricity from the utility for resale either the commercial street, peri-urban/rural community or an urban cluster. | The utility grid tariff is intended to be tied to the Multi-Year Tariff Order (MYTO) and the specific Band will need to be confirmed per transaction with the utility (with the expectation that it will be band A or B MD for most customers).  The DER developer has the option to utilize others tariff structure to suit the needs of the customers based on the contract. The DER developer will have to inform the utility regarding using an optional lower reliability tariff[[11]](#footnote-11) or optional time of use tariff[[12]](#footnote-12) for selected customers.  OPTIONAL: DER developer can also sell excess electricity produced by the generation assets to utility as “optional electricity resale” which the disco can resell to its customers in its network. This will need to be agreed with the utility and the additional cost required for the distribution assets to support electricity resale |
| Tariff adjustments | * The blended tariff can be adjusted due to market conditions (e.g., inflation rate, fossil-fuel price, foreign exchange rate) exceeding the acceptable thresholds as defined in the contract, or due to changes in the utility grid tariff either through a minor, major or extraordinary review. Market Conditions will be assessed **every year.** * Utility grid tariff will be amended to pass through changes based on the utility MYTO tariff review process with the regulator. | The intent of these adjustments is to provide a **transparent, structured** way the Blended Tariff can and cannot be modified, to protect the interest of all three parties. Due to the type of customers that will be served, the frequency of review market conditions can be discussed to ensure alignment between parties. |
| Under-performance | * If the utility fails to meet the minimum grid availability, the utility will be liable to pay the DER developer the r**ecoverable expenditure**, which equals the grid electricity supply discrepancy multiplying with the Backup Tariff (detail is provided in the template agreement which is part of the toolkit)   + The extraordinary backup tariff is the tariff the DER developer will charge per kWh, reflecting the added fossil-fuel cost of running backup generation in the absence of grid supply. This is suitable for projects where the developer is investing in and managing (new) backup generation assets and anticipating significant fossil-fuel consumption.   + The recoverable expenditure will be subtracted from the total amount the DER developer owes the DisCo for electricity supplied from the grid. * The DER developer will provide the required backup when the grid fails, to ensure high overall reliability to the customer. * DER developer who is also a franchisee is expected to achieve certain targets within an agreed period based on the metrics in the baseline data.If DER developer is not able to achieve the targets set yearly, it would be regarded as an under-performance event. * If the DER developer can’t deliver up to an average of 90% reliability over 12 months period, then there will be a reduction of the tariff charged to the customers. | The DER developer is sizing the DER system based on the assumed DER priority hours assigned to the DER solution, as well as the amount of time it will need to back up the grid supply. If the DER developer is required to back up the grid supply for more time than initially expected, that likely requires the DER developer to run expensive fossil-fuel generators. This places an undue financial burden on the DER developer. The calculated recoverable expenditure offers the parties a way to easily and systematically resolve this when it’s a once-in-a-while occurrence. The amount shouldn’t be significant as the grid availability standard is pre-aligned with utility. The utility is required to come up with “minimum” hours they can guarantee which supply and have incorporated it into system design.  These clauses are designed to protect both the utility and the DER developer in case of under-performance. If the utility is not meeting its Grid Availability Standard, it owes the DER developer for excess electricity the DER developer is forced to generate via more expensive sources.  Both the DER developer and utility will set performance targets to ensure within a certain period the ringfence area is able to meet key performance target if the contract is a franchisee arrangement. It is also recommended that duration agreed to reach performance targets is not more than 3 years after commissioning of the DER. This is to ensure the utility can see the impact of the solution in relation to its performance improvement plan and increase in customer acceptance and satisfaction. |
| 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.   + If the utility fails to meet the minimum Grid Availability Standard for a consistent period, the utility’s supply obligations and can’t pay the recoverable expenditure.   + If a larger percentage of the customers top paying their bills based on the various payment and tariff options, the developer can uninstall its system.   + If the DER developer average power availability is less than an average of 90% power availability, according to monthly reliability data metrics over an agreed period or can’t meet the yearly set performance targets. | OPTIONAL – CONTRACT TERMINATION BEFORE PROJECT COMMISSIONING. The contract can also be terminated at the earlier stage of the project. For instance, if the project construction is not progressing or abandon for 3 consecutive months after the date of commercial operation[[13]](#footnote-13) or 12-month period after signing.  The utility can also introduce a Long Stop Date in the agreement. If commercial operation is not achieved within the agreed period of an additional 6 months. DisCo will have the right to waive any expenses incurred in its distribution network prior to termination of the agreement if the utility is not willing to waive the certain conditions or provide an extension |
| Bank Guarantee | * This could be waived when looking at IMG in rural communities. For solutions that will serve commercial customers in the commercial street, peri-urban locations or commercial cluster a payment guarantee is expected. A minimum of three month should be agreed between both parties as standard stated in the market rule. The value of the guarantee will be reviewed once the project is operational for at least 6 months and will be based on the grid supply. | Both parties can agree to exclude the payment of guarantee if loss level in the cluster or commercial street is above 70% and focus on reducing the loss level to within a shorter period.  Here are some alternatives for consideration for future transactions if needed when looking at the cluster and commercial streets waive the bank guarantee if the developer meets certain criteria such as good credit and financial standings. 2) Requiring payment based on the agreed loss level of the cluster prior to commissioning of the DER to ensure there is no losses to current revenue while using three months collection as a guide. |
| Project Implementation account | * Optional | The utility can propose for the developer to have a dedicated project account for the deployment of the project. This is to ensure that the required funds for the project are made available to ensure rapid implementation. The developer will be required to provide project funding structure including when the funds will be available to dedicated account to ensure implementation.  During the project the utility can request for a bank letter to validate availability of funds. No availability of funds without providing the adjusted timeline and how the risk will be mitigated to the utility could lead to liquidated damages or termination of the agreement depending on the lack of funds impact to project timeline.  For timeline adjusted by an additional 3 months will lead to liquidated damages of 50%[[14]](#footnote-14) of the estimated DUOS per day. As the utility will not be able to obtain this additional fee due to project delay.  For timeline adjusted by an additional 6 months will lead to the termination of the agreement. 50% of the estimated DUOS per day will be used to discount the cost spent on metering |
| Interconnection Plan | * As part of the schedules, the operators are required to include the schematic, single-line diagram, and responsibilities of the parties which will be stated as a condition precedent. | The developer can present its proposed interconnection plan which will illustrate how the DER will be connected to the customer premises to deliver both DER and main grid energy supply. It is also essential that both the utility and the developer agree on their responsibility as part of the interconnection plan.  The role of the utility, developers are defined as Condition precedent in the contract. For instance, key conditions that are identified and assigned to the developers and utilities.  The developer shall:  Perform jointly with the utility initial calibrations and accuracy tests for the metering systems. undertake the installations and cabling works required to connect the DER to the grid point of connection. Undertake jointly with the utility an analysis of the physical condition of the Distribution Network at the grid point of Interconnection to ascertain that the Distribution Network at the grid point of Interconnection is in good condition and is in accordance with the requirements of the technical codes.  The utility shall:  provide the operator with a copy of its plan to execute the necessary prior distribution network upgrades and any relevant planned distribution network upgrades as relates to the distribution network that serves the interconnected customer, and procedures to ensure the operator’s connection standard complies with the technical codes including confirming the implementation of the upgrade. Complete the installation of the grid metering system and perform jointly with the operator initial calibration and accuracy tests for the metering system. |
| Customer Management | * This will be a schedule that provides a list of all required information a developer should share at end of their contract or when the contract is terminated | The information will assist the DisCo in integrating their customers previously managed by the developer back to their network and also determining the right service band. The template agreement has a list of items that should be considered by the Utility |

**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. Franchise agreement template will be used for cluster solution above 1MW while the Mini-grid agreement template will be used for cluster solution below 1MW. Both agreement template utilize their various regulatory framework respectively [↑](#footnote-ref-2)
2. The IMGCS implementation plan template which is also part of the UEDER toolkit outlines the steps, processes and recommendations for executing the business model. [↑](#footnote-ref-3)
3. If a developer is not selected at this stage, the utility could initiate a procurement process to select a developer for its pipeline of projects at the preparation phase. [↑](#footnote-ref-4)
4. Customer identification can be done either by the Utility or the Developer [↑](#footnote-ref-5)
5. Various studies including determining the cost-effective way to upgrade the distribution network as defined in the implementation plan document. [↑](#footnote-ref-6)
6. This is a council that is responsible in ensuring various services are provided to the community/cluster/co-located customers properly. This council can also be known as an association. [↑](#footnote-ref-7)
7. For commercial clusters suitable for IMG, it will be easier for developers to reach transactions close with parties on a 10-year contract [↑](#endnote-ref-2)
8. Regulatory approval is required as a franchise agreement will be signed since a mini-grid regulation can’t be utilized. [↑](#footnote-ref-8)
9. This is only included in contracts where the developers are franchisee since developing solutions above 1MW. [↑](#footnote-ref-9)
10. There are cases why reduction will not apply, if a developer is getting grants that assist in reducing the cost of the project. The percentage of the grant of the project will be determine to understand to what level to start reduce the risk associated with a high distribution cost. [↑](#footnote-ref-10)
11. Its allows for come customers to opt into receiving less hours of electricity at a lower tariff than the blended tariff [↑](#footnote-ref-11)
12. [↑](#footnote-ref-12)
13. 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-13)
14. Parties can align on the proposed percentage if this term is to be included to the agreement [↑](#footnote-ref-14)