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

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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) and for DER developers to augment electricity supply to C&I customers through DER solutions enabled by the utility. The utility-enabled C&I model aims to ensure that the selected customers can access an improved electricity supply while the utility revenue improves with lower loss levels. ***The C&I 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, it is essential that both parties prepare a finalised version for each transaction (for a single project or a project portfolio). A finalized version should be approved by both parties to prevent the renegotiation of key terms when reviewing the agreement. Two agreement templates are designed to support the implementation of this business model. The first agreement focuses on developing a solution up to 20MW, and the other agreement focuses on a solution below 1MW that is either an off-site solution or an on-site one that plans to supply another customer.

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

| Item | Process |
| --- | --- |
| Initiation Phase | * The utility[[2]](#footnote-3) and/or the developer identify the potential customer that requires these services and initiate customer engagement[[3]](#footnote-4) to understand their interest in wanting reliable power. At this phase, the developer and utility will kick off alignment on the project contract terms.
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| Preparation Phase  | * The utility and the selected developer will agree on the on-site solution design[[4]](#footnote-5) implemented by the developer, further engage with the customer regarding the business model, and assess the viability of the proposed solution[[5]](#footnote-6).
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| Execution Phase | * The utility and the developer have aligned on a draft agreement that will be shared with the customer. The customer 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.
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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 at least **10 years**[[6]](#footnote-7).
* There are clear options to terminate the contract prematurely and to renew the contract.
 | 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. Although 10 years is the minimum recommended, both parties should consider longer contract periods (e.g. 15 years[[7]](#footnote-8)).  |
| Electricity supply obligations(supply hours) | * Obligation to provide power is shared between the DER developer and the utility. An example is provided below:
	+ DER Priority Hours: **9:00 AM – 2:59 PM**, with 95% availability of supply
	+ Grid Priority Hours: **3:00 PM – 8:59 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 95% reliability).
* The utility is responsible for making necessary upgrades to the distribution network (which the DER developer could help finance) to ensure it can achieve the agreed reliability standards.
 | 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 of electricity from the grid.The DER developer and utility can align on suitable Grid Priority per transaction. This will depend on grid availability, planned upgrade to the distribution network, and the commitment that the utility can make. A standard scenario is provided as the grid priority hours obligation 3:00pm – 8:59am . Alignment with the utility can lead to a lower commitment but not greater than the standard scenario. It is essential to that the utility expected revenue is greater than BAU[[8]](#footnote-9) as this should guide alignment discussion between partners which should be linked to the customers' operations. |
| Minimum consumption | * The contract provides for the DER developer and the C&I customer to agree upon a reasonable Minimum Consumption, which is the minimum amount of total kWh the C&I customer will consume or pay for every quarter.
* Minimum Consumption levels proposed should be quantities of electricity that the C&I customer feels confident it will consume based on historical load data.
* The facility size will be determined to meet the minimum consumption.
 | The intent of this clause is to provide assurance to the DER developer that the C&I customer does not plan to defect from the contract. A Minimum Consumption confirms that the C&I customer plans to continue to use electricity at similar levels as in the initial assessment (as materialized loads will greatly impact project economics). This discourages customers from intentionally oversizing their systems, which would undermine the economics of the project for the DER developer and utility. The developer will propose the DER size which will be stated on the cover page of the contract.The Minimum Consumption can be calculated monthly, quarterly basis, or on a six-month basis to account for seasonal fluctuations in the C&I customer’s operations.  |
| 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[[9]](#footnote-10)) the utility holds or incurs.
 | As opposed to business as usual where the customer is billed by the utility and the DER developer (i.e., typical C&I scenario) 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 Disco 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 the 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.
* Utility will include a **premium fee** in the utility Grid Tariff, which will ensure the **prioritization of the feeder for supply and maintenance.**
 | Having one blended tariff that the customer pays for all electricity consumed makes billing straightforward for customers. It also avoids inappropriate incentives for the customer to change their consumption pattern that might undermine project economics.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). |
| 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 DisCo Grid Tariff. Market Conditions will be assessed monthly.
* Utility Grid Tariff will be amended to pass through changes based on the utility MYTO tariff review process with the regulator.
 | Customers have expressed that electricity cost volatility significantly affects their business and is a primary factor in their decision-making process for supply options. At the same time, a lock-in tariff may hurt or be in favor of economics for the DER developer and the utility. For example, if the Blended Tariff remains the same but the Utility Grid Tariff increases from MYTO review, it reduces the portion of the Blended Tariff that is returned to the DER developer.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. |
| Under-performance  | * If the DER developer fails to meet the minimum supply during its priority hours, the developer shall pay the customer **liquidated damages** based on actual performance *(details are defined in the contract)*
* If the utility fails to meet the minimum grid availability, the utility will be liable to pay the DER developer the **Recoverable Expenditure**, which equals the grid electricity supply discrepancy multiplying either utility Premium Fee or Extraordinary Backup Tariff (detailed clauses are included in different versions of the template for reference)
	+ 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 Premium Fee is introduced to incentivize utility to improve service for the customer and support them to recoup grid upgrade costs. In case of underperformance, those incentives would be deducted accordingly. This is suitable for projects where the customer is maintaining their existing genset or the proposed utility agreed availability is below 60% of the ideal priority grid hours.
	+ 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 backup when the grid fails, to ensure high overall reliability to the customer.
 | The DER developer is sizing the DER system based on the assumed DER Priority Hours where it will need to supply the C&I customer, 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. If this persists, the utility could owe the DER developer more than the DER developer owes the utility for electricity it supplies, which will then trigger project termination as defined draft contract. Both parties will agree on the duration to settle payment debts. The recommended duration in the draft contract will be 60 days.This protects the DER developer from being owed money by the utility. This also protects the utility from racking up debt to the DER developer without a clear ability to repay the debt.Developer meeting the customer supply can be determined over 3 months period, which can be adjusted based on the customer expectation of the DER. The DER will pay liquidated damages based on the table below and the liquidated damages can be adjusted based on discussion with the developer to understand their standard practice for similar contracts.

|  |  |
| --- | --- |
| **DER Availability Standard Deviation** | **Operator Liquidated Damages (% of Previous Month’s Blended Tariff)** |
| 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% |
| 49.99% or less | 100% |

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| 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 would be terminated, and the DER developer and customer can enter into a bilateral agreement.
	+ If the DER developer breaches, the developer will uninstall the system and restore the land, and rooftop to good condition, at its own cost.
	+ If the customer defaults, the customer may purchase the asset at Fair Value, or pay the DER developer a termination fee which is calculated based on the remaining book value of assets.
 | This is a new business model arrangement, and these clauses give all three parties a way to exit in extreme circumstances. For example, DER developers may be wary of the utility’s ability to provide reliable grid supply. The DER developer is making a large capital investment in the project and does not want that investment to be lost if the utility ultimately cannot perform. To mitigate this perceived risk, the contract allows the DER developer and C&I customer to enter a bilateral arrangement if the utility consistently cannot meet the grid availability standard and other options to revise it have been exhausted. This allows for the utility to go back to its previous service arrangement with the customer where supply from the grid could be consumed when available. 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 for 3 consecutive months after the date of commercial operation[[10]](#footnote-11) or 12-month period after signing.  |
| Bank guarantee | * Waived only when a Bank guarantee can't be obtained from the customer.
 | Normally, a DER developer would require the customer to provide a bank guarantee as payment security. Utilities would often require payment security from the developer as a customer. Payment guarantees must be for the utility and the developer obtained from the customer as the blended tariff is used for payment. In this case, it is essential that utility and the developer view each other as **partners** and opened to waive bank guarantee requirements under these conditions. * The developer cannot secure customer bank guarantees as the customer does not provide such security but a creditworthy customer
* The developer meets certain criteria such as good credit and financial standing and the agreement with the utility include terms that allows the utility to directly bill the customer if the developer misses consecutive payments.

Developers will also need to consider requesting payment security from customers that covers the total energy cost with customers that have poor payment records with the utilities. To ensure payment it should be required that all utilities debts are paid prior to procurement of DER solution |
| 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% of the estimated premium fee 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 premium fee per day will be used to discount the network improvement cost spent on improving the utility network to improve the grid supply to the selected customer |
| 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, and customer are defined as Condition precedent in the contract. As most C&I contracts will focus on on-site solutions there will be cases for off-site solutions due to space availability and additional activities can be determined by the parties. For instance, key conditions that are identified and assigned to the Developers and DisCos. The developer shall:Perform jointly with the utility and the Interconnected Customer initial calibrations and accuracy tests for the Metering Systems. undertake the installations and cabling works required to connect the Mini-Grid to the Grid Point of Connection.undertake jointly with the utility and the Interconnected Customer 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. |

**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.

***Contacts:***

Wayne Omonuwa, womonuwa@rmi.org

Zihe Meng, zmeng@rmi.org

1. The C&I 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. 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-3)
3. Customer identification can be done either by the Utility or the Developer [↑](#footnote-ref-4)
4. Both parties could also agree on an off-site solution [↑](#footnote-ref-5)
5. The assigned project team will kick of various studies including determining the cost-effective way to upgrade the distribution network as defined in the implementation plan document. [↑](#footnote-ref-6)
6. Currently, 20-year DER contracts are rare; According to industry interviews, this is due to customers’ reluctance to sign onto long-term contracts, in part due to historic price volatility. However, while the template Tripartite Agreement is intended to provide structure on how to calculate tariffs to give parties the ability to predict what tariffs and electricity costs will likely be, it also provides adequate flexibility to modify the tariff based on current market conditions to account for macroeconomic volatility. [↑](#footnote-ref-7)
7. Some DER projects have signed agreements for 15 years, which results in lower tariffs and higher cost savings [↑](#footnote-ref-8)
8. BAU – Business as Usual [↑](#footnote-ref-9)
9. DisCo is required to pay for grid upgrade investment if not able to co-finance, as the premium fee is designed to support the repayment plan. However, it is included in the tariff but since a DisCo liability. It is included in the DisCo portion of the tariff. [↑](#footnote-ref-10)
10. 9 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-11)