Independent Power Producers (IPPs)

Selection Criteria and Pipeline Registration Process

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1 Introduction

1.1 Objective

This process describes the criteria and registration process for prospective IPPs.

The objective of this document is to provide clarity to any third party exploring the idea of becoming a commercial electricity generator as to the context, criteria, and registration process with the utility.

1.2 Scope

Geographically, this process applies to anyone contemplating a commercial electricity generation activity within the Port Vila concession area (ie. The island of Efate and part of Efate's satellite islands). This includes physical and moral entities, private and public entities alike.

Technically, this process applies to any renewable electricity generation technology (PV solar, wind, geothermal, hydroelectric etc.) being supplied to the electrical grid or a different physical or moral person. Systems are deemed commercial above 30 kWp. From this size 100% of the electricity generated must be pre-approved and fed into the grid through an PPA arrangement of the. NB: for projects below 30 kWp a different process applies.

1.3 Legal and contractual context

In virtue of the concession contract awarded to the concessionaire (and as amended), UNELCO Engie has exclusive generation and supply rights within the Port Vila concession area. As such the Government of Vanuatu and UNELCO Engie have entered into a long-term public-private partnership (PPP) with UNELCO Engie providing the expertise and knowhow to develop, operate and maintain the electric generation, transmission, distribution and retail activities.

UNELCO Engie, co-owned by Engie (51%) and Vanuatu National Provident Fund (49%), provides the concession grantor (Government of Vanuatu) with both the access to investment capacity (supported by both Engie's 60 Billion Euro business and VNPF's retirement fund) and knowhow (Engie's global installed capacity of 5,300 MW PV solar, 13,000 MW wind, 19,800 MW hydro, 220 MW geothermal, amongst other) to achieve the National Energy Road Map (NERM) targets and Nationally Determined Contributions (NDC) commitments to the international community in the context of the Paris Climate Agreement (CoP21).

While UNELCO Engie, exclusive PPP, is in capacity to roll out the renewable development plan, there are certain scenarios in which UNELCO Engie may consider providing a limited delegation of rights (in

the form of a PPA contract). These scenarios, centered on the interest of the country, its customers, and institutions, are laid out in the 'criteria' section (Chap. 3.1).

2 Current state of the generation and registered project pipeline

2.1 Currently commissioned and running generation assets on Efate

The current installed capacities, connected and feeding-into the Efate electric system, are summarized in the table hereafter.

Technology	Capacity MW
Thermal generation	21.1
PV Solar	2.4
Wind	3.4
Total intermittent renewable	*5.8*

In 2024, the peak demand for Efate island was 12.8 MW.

2.2 Project phases

In the interest of the clarifying the different phases of the projects in the pipeline, UNELCO Engie has adopted a standard nomenclature. This phase nomenclature is used as a reference throughout this document.

Stages	Key elements to complete to graduate to next stage
Stage 1 Feasibility	• Concept note (if relevant) • Preliminary project analysis

Stage 2
Full design
	• Detailed project description including:
	  ○ Technical specifications
	  ○ High level financials (CAPEX, OPEX and PPA price range)
	  ○ O&M approach
	  ○ Timeline
	• Explanation of financing
	  ○ Origin of funds (debt, equity, persons or institutions)
	  ○ Development partners portion (as applicable)

Stage 3
Authorizations & Negotiation
	• Administrative authorizations, including but not limited to:
	  ○ Environmental assessment and approval
	  ○ Building permits
	  ○ Land rent and custom owner approvals (as relevant)
	• Utility agreements and authorizations
	  ○ Power Purchase Agreement (PPA)
	  ○ Off-take and technical interconnection agreement
	• Endorsement of the project, if applicable, by relevant authorities

Stages	Key elements to complete to graduate to next stage
Stage 4 Build	• Tendering and contracting • Procurement and logistics • Construction • Commissioning
Stage 5 O&M	Operations and maintenance

2.3 Current projects registered in the project pipeline

The table below summarized the renewable generation projects that are registered in the project pipeline

Project name	Technology	Project Stage	Capacity
Kawene (UNELCO, non IPP project)	PV solar	Stage 2 (under construction)	3.0 MWp
New Zealand MFAT	PV Solar & BESS	Stage 1 (tender phase)	5.0 MWp
Government of Vanuatu	2 coconut oil gensets	Stage 1 (consultation phase)	1.6 MW
TOTAL			**9.6 MW**

3 How to be considered for registry in the pipeline ?

There are two necessary steps to request that a project be considered by the utility for inclusion in the registered pipeline: meet the project criteria and provide Stage 2 documents.

The project criteria verification is meant to ensure that neither developers, the utility, nor the other electric system stakeholders, waste time and resources working on projects that fall clearly outside of the desired scope.

The advancement to Stage 2 requirement to enter the pipeline is required so that (a) sufficient diligence has been made to be able to evaluate the viability of the project (both for the developer and the utility) and (b) that a 'place in the pipeline' is only reserved once a reasonable threshold of viability and demonstrated developer commitment has been reached (so as not to unduly 'block' other promising projects).

3.1 Project criteria

The utility will only consider projects that correspond to the project criteria. The criteria are updated periodically, based on the evolution of the energy mix and requirements, and are meant to ensure that IPP projects provide value to the electric system that goes beyond the what the current stakeholders can provide (ie. Incremental or differentiated value)

There are three broad sets of criteria: Relevance and Technical compatibility, Ownership and Pricing.

(a) <u>Relevance of the project to the development masterplan, the achievement of the long-term strategic objectives, and compatibility with the technical imperatives of the electric system</u>

The contemplated project must be:

- **Non-fossil fuel based and must fulfill UNCCC criteria of a 100% renewable project** (and provide the corresponding carbon abatements)

- **A mature renewable technology**. UNELCO Engie, in the context of Efate, will only consider projects that are mature, reliable and safe. While UNELCO Engie will not necessarily exclude projects *de facto* it can say that:
  - Onshore PV Solar, Onshore Wind, and Bio-fuels/oils are likely to conform with these criteria.
  - Geothermal, Hydroelectricity, Biomass (in Efate and considering local resources), 'may' meet these criteria.
  - Thermal ocean energy, wave and tidal energy, floating PV Solar, nuclear, biogas, etc. are unlikely to meet these criteria.

- **Located in an area that is compatible with electrical system needs and constraints.**
  - While UNELCO can, at the cost of the developer, provide rational grid extensions to connect a project, it should be relatively close to an HV power line.
  - The construction or interconnection should not entail environmental and social impacts that are disproportionate to the perceived benefits of the project.
  - If the project is based on an intermittent technology, UNELCO may indicate areas of the grid that are preferable considering the location of other projects.
  - If there are areas where reactive power, or line losses may make the project undesirable, the utility may also indicate that another location is preferable.

- **The project must be developed based on generally accepted industry norms and standards;** and be of standard quality for commercial utility facility.

(b) Ownership

As indicated in the legal and contractual context, UNELCO Engie along with its two major shareholders, is quite capable of meeting the capital requirements, mobilizing the skills and expertise to build and operate, and take advantage of economies of scale to procure projects at least cost.

UNELCO Engie is therefore only seeking additional partners if these parties provide clear incremental and differentiated value compared to the exclusive public-private-partnership already in place.

There are four scenarios in which UNELCO Engie will consider an IPP agreement:

- **A Government of Vanuatu project**. The Government of Vanuatu represents the people and is the Grantor of the concession; a project by the Government, if it is commercially viable, has the added benefit of ensuring that any 'profits' flow directly back to the country (or towards the financing of the electricity sector development: access, energy efficiency, further renewable projects etc.).
- **A Vanuatu National Provident Fund (VNPF) project**. The VNPF holds the financial and retirement interests of all the ni-Vanuatu people that are in the formal employment sector. By providing the VNPF with an investment opportunity, any financial benefits from the IPP contract will flow directly back to the country and to the retirement accounts of the VNPF members.
- **A private company whose PPA price is significantly below project cost because of a grant agreement**. If a private company makes the effort and takes the time to secure a significant private facility grant from an international development agency, and that this grant allows the private company to propose to the utility a PPA price that is well below an 'unsponsored' project price, the utility will naturally consider enter this partnership as the Efate customer stands benefit in terms of affordability.

- **A private company that wishes to pursue a technology that UNELCO Engie has studied but considered questionable**. In certain cases, UNELCO Engie may have studied the prospects of a technology in the past and considered that the investment or risk involved was not commensurate with the position of a regulated utility. In the case of Efate, this would for example concern hydroelectric or geothermal energy. If a private company is willing to bear a higher level of risk while proposing cost competitive PPA (cf. following subchapter c for the cost competitiveness criteria); it could be considered by the utility.

(c) Cost and Price

A *least cost* doctrine was upheld during the Efate tariff determination in 2021 (and applicable for at least 5-years). This signifies that striving to meet Vanuatu Government 2030 Renewable Energy remains subject to the preliminary condition that such a transition does not decrease customer affordability.

In very pragmatic terms, this signifies that no project proposed should exceed the current and expected fossil fuel generation cost. More tangible, if:

- the renewable project's output is intermittent, the cost per kWh of the project should not exceed the marginal cost of diesel generation in Port Vila;
- if the output is dispatchable, the cost per kWh of the project should not exceed the total cost of diesel generation in Port Vila.

The above values represent a maximum. These values are not guarantees that the utility will in fine conclude a PPA at those levels as competing renewable projects may be more cost effective; however, those values provide the renewable developer with an understanding of the price ceiling above which a project will most likely be excluded prima facie.

3.2 Minimum Advancement: Stage 2

If the developer is confident that he meets the criteria listed prior (or if in doubt has exchanged with the utility to ensure compliance), he must proceed to conduct Stage 1 and Stage 2.

If in the view of the Developer, the project is still promising and meeting the target criteria once this diligence has been made; the deliverables of Stage 1 and 2 must be provided to the utility along with a declaration of intent letter requesting addition of the project into the registered pipeline.

3.3 Utility decision regarding registry

The utility will study the request provided based on the criteria set in chap. 3.1 and the documents provided as per chap. 3.2.

(a) **If the utility gives a positive response**, it will generally indicate that the project has been approved for addition in the registered pipeline and that:
- developer will have up to one year to complete Stage 3.
- developer will have a further maximum of one year to complete Stage 4 once Stage 3 is complete.

Should either of the deadlines not be met (except extraneous circumstances accepted by the utility), the utility may inform the developer that they have foregone their place in the pipeline and may consider alternative projects to replace it. This mechanism is meant to ensure that (a) Developers have the level of certainty required to continue investing in the project by holding an official place in the pipeline, while also (b) ensuring that Developers continue to move forward in a timely way so as not to block other Developers and the utility by simply 'sitting' in the pipeline.

(b) **If the utility gives a negative response**, it will generally explain what criteria were not met and-or elements of the documentation that are not acceptable. If the elements can be improved to meet the goals, the utility will provide constructive feedback to encourage the developer to make adjustments required.

The utility has exclusive generation rights and retains all rights to accept or refuse to delegate its rights; by creating this process it is acknowledging that there may be an opportunity for other stakeholders to participate in certain aspects of the electrical system, but it is neither soliciting nor providing any guarantee as to the outcome of a spontaneous submission.

4 Summary

4.1 Summary of the process

1. Read this document carefully, in particular what the utility is looking for, what criteria it has set and requirements that will need to be met. If in doubt, contact the utility prior to engaging cost and development efforts.
2. Complete Stage 1 and 2.
3. Submit a formal request to the utility for pipeline registry with the required documentation.
4. Utility will analyze the offer in reasonable time and provide either a reply, a request for additional data or solicit and Q&A session with the Developper to complete queries.
5. If the Utility confirms registration in the pipeline, the Developper may proceed with Stage 3 (in particular the authorization and exchanges with the utility on the PPA).

4.2 Contact information

For any queries and submissions, please contact:

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