



United Nations
Economic Commission for Africa



Summary Regulatory Review of the Electricity Market in Seychelles:

Towards Crowding-in Private
Sector Investment



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Analysis of Electricity Market Policy and Regulatory Framework

Seychelles is pursuing sustainable development guided by visionary pro-transformation strategies. Through Vision 2033, it aims to achieve a more diversified economy resulting in a people-centered prosperous nation while remaining in harmony with nature. It is also pursuing a Blue Economy development roadmap aimed at leveraging its expansive marine resources to towards sustainable development. The vision is being implemented through the National Development Strategy (2019-2023) in the short to medium terms.

Affordable, reliable, and sustainable energy supply is essential to meeting these development aspirations. The electricity market is responding to these requirements. Electricity consumption grew considerably by 43 percent between 2010 to 2019. Generation capacity has also grown from about 54 MW installed capacity in 2010 to 86 MW by 2019. Seychelles has already achieved universal access to electricity; however, demand for energy for development purposes is rising. Meeting the growing electricity demand and strengthening the energy pillar for the transformation agenda requires further developing electricity generation, transmission, and distribution capacities.

Towards this end, effective support to the people-centered transformation agenda requires investment in generation, transmission, distribution, and off-grid system capacities. Particularly in the context of COVID-19, its economic impacts and public finance constraints, effective engagement of the private sector to bridge the infrastructure investment gap is essential. In this context, facilitating effective public and private sector partnerships and further improvements in the regulatory and business climate are crucial steps towards crowding-in private sector investment.

Through the Energy Act of 2012, Seychelles has demonstrated the political will for reform through instituting regulatory provisions and oversight on the proper functioning and development of the electricity market. Through the Grid Code, and further regulatory provisions, such as the Energy License Regulation of 2016, further development of the regulatory and policy environment is observed to meet emerging electricity market regulatory requirements.

This report provides an analysis of electricity sector policies, laws, and regulations of Seychelles in relation to crowding-in private sector investment in the electricity value chain. It is part of the United Nations Economic Commission for Africa and RES4Africa Foundation joint program on *Regulatory Review of the Electricity Sector in Africa: Towards Crowding-in Private Sector Investment* currently being implemented in seventeen African countries.

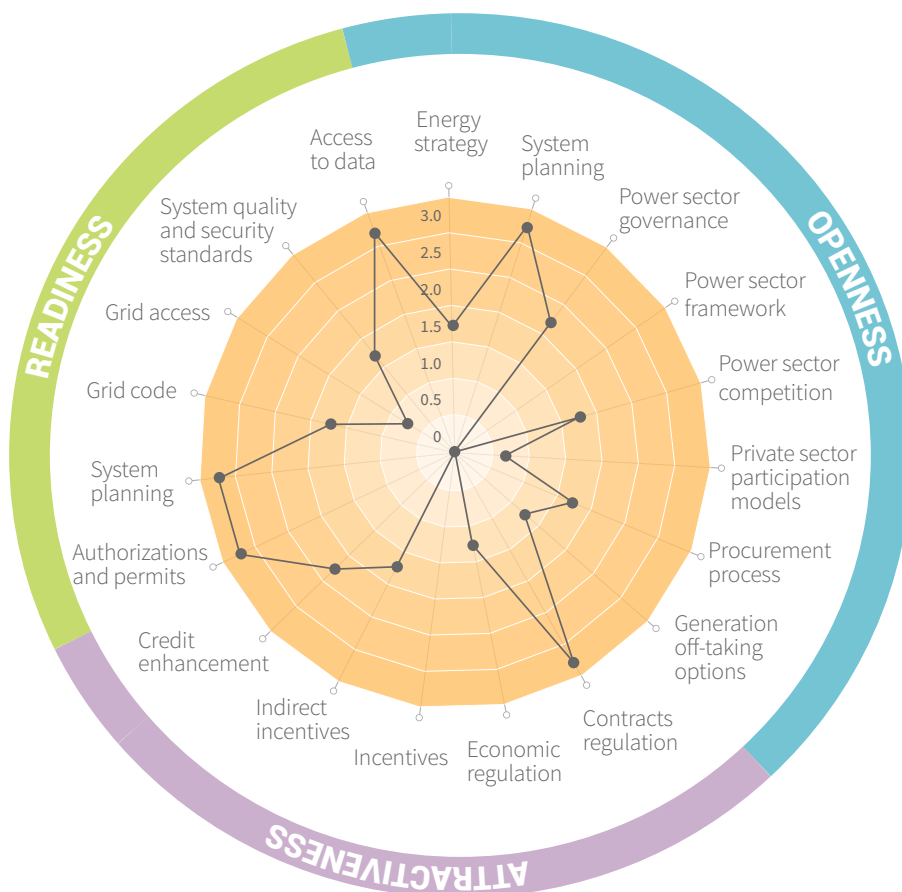
The purpose of this regulatory review is to pinpoint the main strengths and gaps of the policy and regulatory framework currently in force vis-a-vis private sector participation in the electricity market. It further aims to offer concrete recommendations for regulatory improvement and reform towards attaining a competitive, resilient, and sustainable electricity market which effectively crowds-in private capital.

The regulatory analysis is undertaken following a comprehensive UNECA and RES4Africa regulatory review methodology, which was developed with the participation of African and international regulatory experts. The approach enables three broader assessments: the degree of *openness* of the electricity market to the private sector based on evaluation of the power sector structure and governance; the *attractiveness* of the market based on an assessment of sector economics, fair competition, and overall economic regulation; and the *readiness* of the market based on an assessment of technical regulations.

Main findings related to the Generation segment

The generation market, related to regulation and private sector investment participation, demonstrates key areas of regulatory strength, and areas of needed regulatory improvements. The *openness* of the market is strengthened by superb system planning and moderate performance in power sector governance. Improving market *openness* would require further regulatory development in the areas of power sector framework and competition, enabling private sector participation business models, addressing procurement regulation, increasing generation off-taking options, and reviewing and updating national energy and climate change policies and strategies. The generation market is *attractive* in key areas, including strong contracts regulation and moderate support through credit enhancement. However, economic regulation and incentives to private investors are major areas of regulatory gaps. The market demonstrates *readiness* related to superb performance on the administration of authorizations and permits, network planning, and overall transparency and access to data. Further regulatory improvements in the grid code, related to grid access, and establishing system quality and security standards will improve market *readiness* to private sector investors.

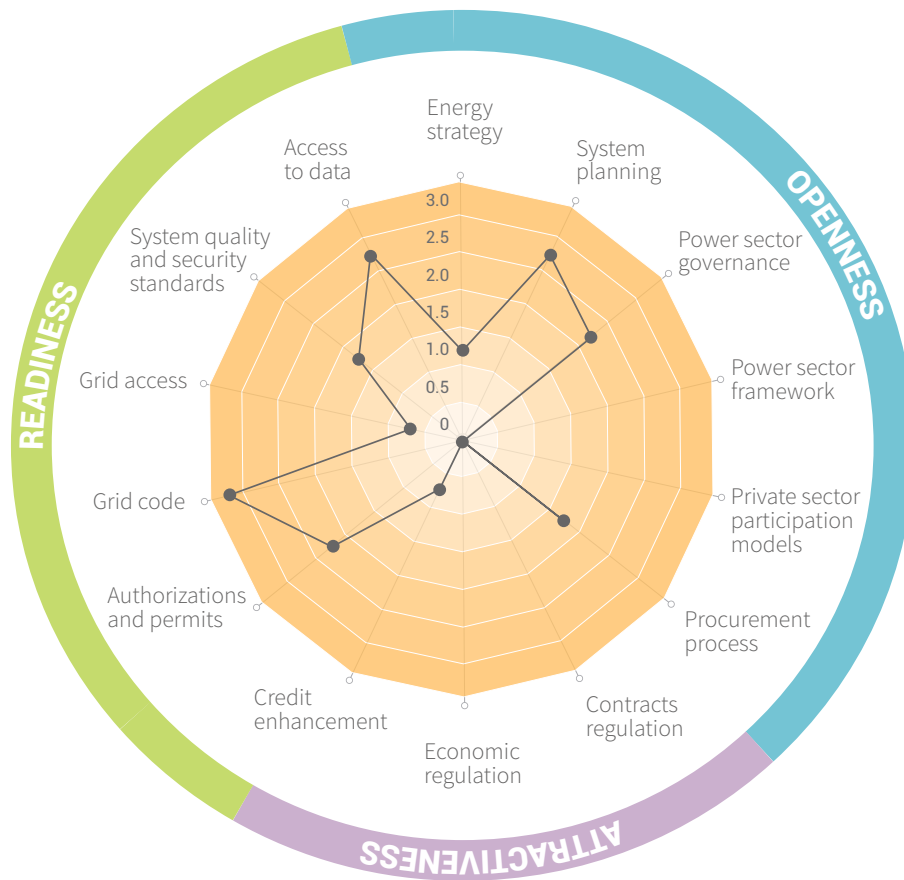
Figure 1: Overview of the generation segment



Main findings related to the Transmission segment

Similar to the generation market, transmission system investment by the private sector is driven by market regulation. The *openness* of the transmission segment of the market to private investment is enhanced by strong system planning and moderately by power sector governance and procurement administration. Key challenges remain related to energy policy and strategy (such as binding targets, policy review procedures, and formal monitoring mechanisms), power sector framework (such as bundling transmission asset management and system operation services), and private sector participation business models for the transmission segment of the market (such as participation models of IPT, concession and merchant are not implemented). The *attractiveness* of the transmission segment to private participation is largely constrained due to challenges related to contracts regulation (such as standardized Transmission Service Agreement), economic regulation (such as clear network tariff definition), and the absence of credit enhancement instruments. The *readiness* of the transmission segment to private investment participation is similarly enhanced by moderate performance related to ease of authorization and permitting, and superb regulatory performance resulting from a well-developed grid code. However, regulatory challenges remain related to grid access and clarity on system quality and security standards. Overall, while aspects of the current regulation have advanced in some areas, numerous regulatory challenges require attention and development.

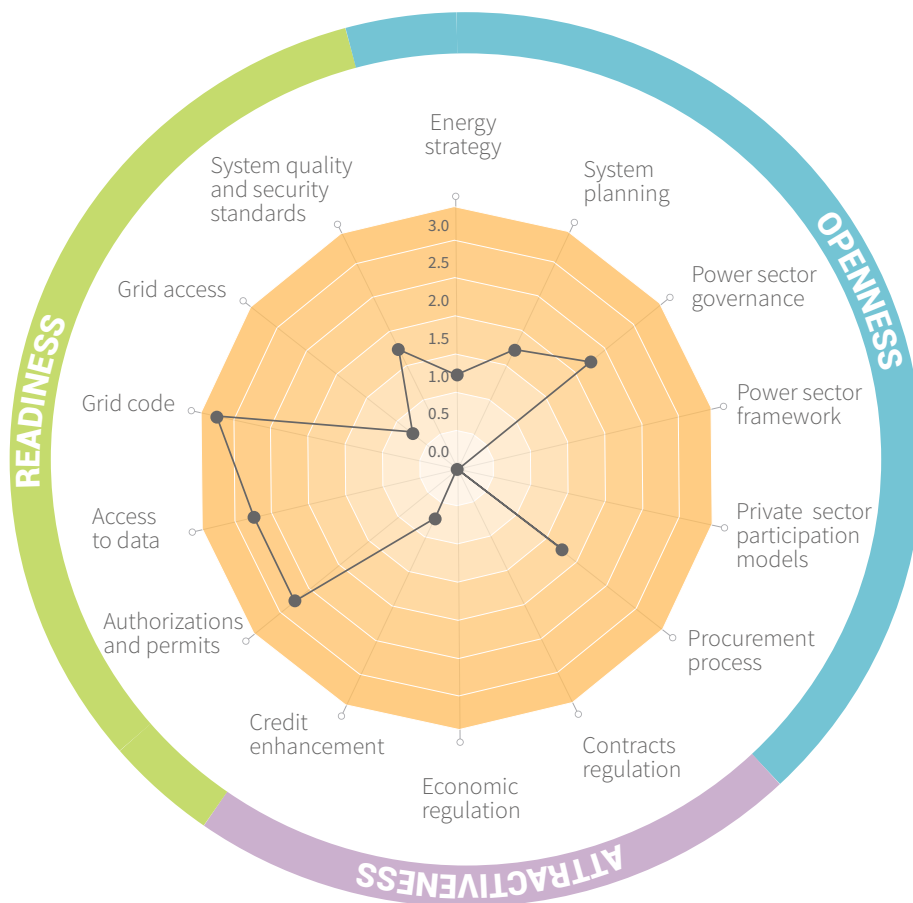
Figure 2: Overview of the transmission segment



Main findings related to the Distribution segment

The distribution segment of the electricity market demonstrates key areas of regulatory strength, such as in availability of a sound grid code and good authorization and permits administration. Private sector participation in this market segment is constrained by several challenges, including energy policy (such as review and monitoring procedure), prevailing market framework (which is functionally vertically integrated), contracts and economic regulation (standardization and tariffs definition for distribution networks), support to the private sector through credit enhancement, and other areas related to the *readiness* of the market (such as grid access and system quality and security standards). Overcoming these barriers will be essential if Seychelles, in the short to the long-term, seeks to crowd in private investment in distribution assets..

Figure 3: Overview of the distribution segment

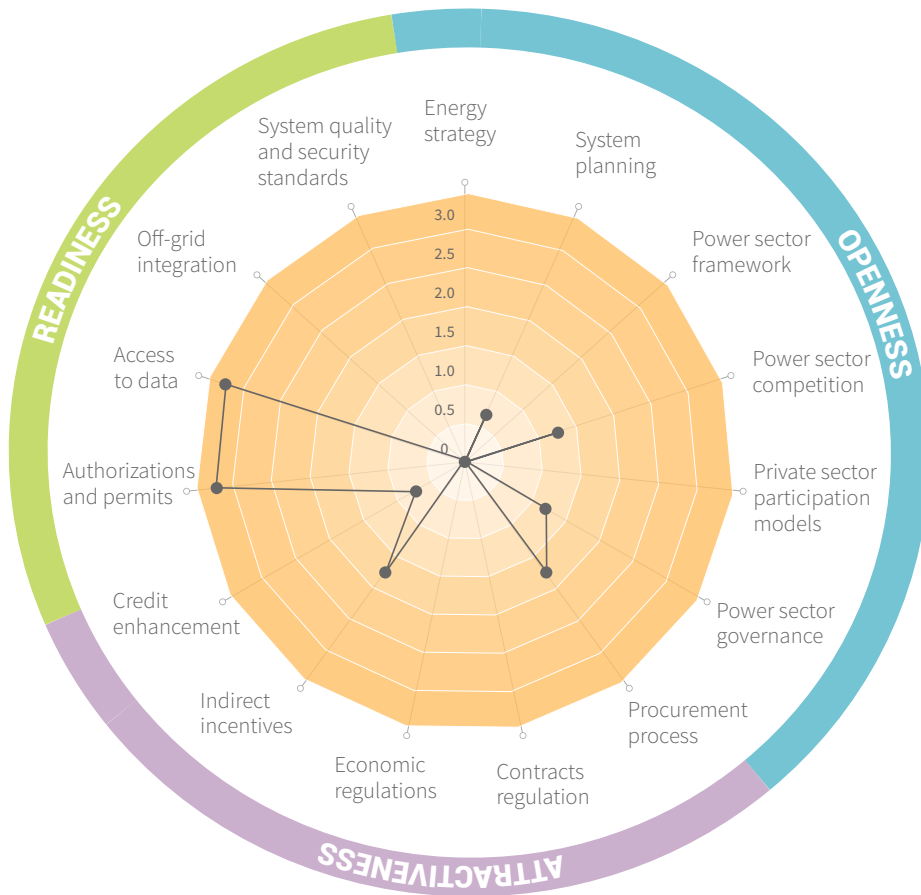


Main findings related to the Off-grid segment

Seychelles has achieved universal access to electricity. As a result, electricity sector policy and strategy are not largely driven by the electrification agenda. This is evident particularly in the off-grid market segment. Off-grid development is closely associated with access expansion, particularly in rural and peri-urban settings. With full electrification, this segment of the market and its related regulation are not well-developed. However, future population and economic growth will necessitate the need to develop sustainable energy, likely including in the off-grid market. It is, therefore, essential to put in place the requisite regulatory requirements for robust development of the off-grid market, including through effective private sector participation.

The following measures are recommended to reform and improve the electricity market regulatory environment towards enhancing the *openness*, *attractiveness*, and *readiness* of the market to private sector investment.

Figure 4: Overview of the off-grid segment



Recommendations



To enhance the *Openness* of the electricity market



Power sector
governance

- ⚡ Incorporate clear generation and renewables targets, their formal review procedure, and a monitoring framework during the next policy and strategy development window.
- ⚡ Address the lack of publicly available regulatory decisions (transparency); reform the lack of sufficient independence of the regulator from political authorities (such as autonomous mode of appointment of leaders and board members); resolve the lack of sufficient financial independence of the regulator and enforceability of its decisions, and empower the SEC by making its decisions legally enforceable.



Power sector
framework

- ⚡ Address transmission and distribution services unbundling, separation of transmission assets management from system operation, and wholesale and retail market competition to reform the power sector framework towards greater resilience and private sector effective participation.



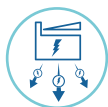
Private sector
participation
model

- ⚡ Strengthen the applicability of private sector participation business models, and expand the regulatory space for alternative electricity generation, transmission, and distribution models.



Procurement
process

- ⚡ Strengthen the procurement system by enacting the draft PPP law, evaluating and considering the adoption of appropriate PPP models for project finance, adopting clear rules and procedures for the treatment of unsolicited proposals similar to solicited ones, instituting scheduling of tenders, and developing a track record of competitive and credible tendering.



Generation off-
taking options

- ⚡ Enable the adoption of models such as private (corporate) PPAs (mechanism for two private parties to negotiate power transactions) and adopt regulation that enables self-consumption coupled with net metering for surplus power to provide private investors with additional off-taking options.



To enhance the *Attractiveness* of the electricity market



Economic regulation

- ⚡ Expand on the existing tariff setting approach by adopting a transparent tariff methodology, within the existing cost-reflective approach, that would also support the identification of tariff components across generation, transmission, and distribution.



Incentives



Indirect incentives

- ⚡ Strengthen fair competition in the electricity market to reduce the need of offering more incentive packages to investors, with the exception of emerging markets such as off-grids, or certain technologies.



Credit enhancement

- ⚡ Strengthen the system of financing options with innovative private sector financing instruments, including for financial risk mitigation, for energy infrastructure development.



To enhance the *Readiness* of the electricity market



Authorizations and permits

- ⚡ Strengthen the system of permitting and authorizations by expanding existing rules to address right-of-way regulation.



Grid code

- ⚡ Strengthen provisions of the grid code by addressing system operation rules, including the dispatch of ancillary services, efficient market settlement rules, market settlement information, and management of investor exposure to imbalance risks; curtailment compensation to generation investors, including specification of limitations on curtailment to generation investors; and ancillary services management, such as black start capacity, spinning reserves, and governing rules and regulations.



Grid access

- ⚡ Supplement grid access regulation by standardized contractual framework for grid connections by private parties, and expand on existing connection regulation to clarify the allocation of connection costs to different parties.



System quality
and security
standards

- ⚡ Similar to the main grid quality and security standards, in anticipation of a growing off-grid market in the long-term, develop regulation related to quality and security standards for off-grid systems.



Off-grid system
integration

- ⚡ Pursue the development of a dedicated off-grid electricity market regulation and laws.

As Seychelles takes further bold steps towards its energy sector regulatory reform, the UN Economic Commission for Africa and the RES4Africa Foundation remain committed to partnering with Seychelles in addressing any of the identified regulatory and policy gaps. They also commit to supporting regulatory capacity development, as well as any area of particular reform interest of Seychelles towards greater *openness*, *attractiveness*, and *readiness* of the electricity market.



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