

# **Overview of the Suriname Electricity Sector Plan (ESP)**

May 2025



## The ESP will guide improvements in access, service quality, and sector planning

**Objective:** Guide the sustainable development of the power sector and ensure a reliable supply of electricity over a 20-year long-term strategic view, with a 5-year action plan

The ESP will support Suriname achieve its sector goals, which are:

Availability: Ensure customers have a reliable electricity supply and that EBS has sufficient energy sources to meet current and future demand



Affordability: Ensure supply costs are minimized, and resources are allocated efficiently



**Environmental sustainability**: Minimize GHG emissions and local pollutants produced across the entire value chain of electricity supply



# The ESP covers strategic, technical, and regulatory plans



## **Volume I - Strategic Plan**

- Outlook of Suriname's energy sector domestically and within the international context,
- Targets regarding renewable energy, energy efficiency, and energy access



## Volume II - Technical Plan

- Demand forecast
- Expansion plans for EPAR, ENIC, and rural districts (generation, transmission, and distribution)
- Energy efficiency plan
- Investment plan for rural electrification
- Tariff/subsidy evolution path



## **Volume III - Regulatory Plan**

- Single buyer procedures
- Electricity tariff methodology
- Regulatory accounting rules
- Performance standards
- Feed-in-tariff methodology for distributed generation
- Energy efficiency

Note: Text in italics above is content being developed by other consultants.

# The new ESP reflects new drivers of change

The discovery of and plans to extract oil and gas are expected to significantly shift Suriname's context. The 2025 ESP is aligned with these new realities.



• Further exploration opportunities are being analyzed in Block 58

• Energy transition: Natural gas will be used as a transition fuel while the uptake of renewables increases

<sup>1</sup>APA Corporation. 2024, "APA Announces Final Investment Decision for First Oil Development Offshore Suriname." Link

on NG

## 1,301MW of new capacity to be added in EPAR's 20-year expansion plan



#### 1,301MW of new capacity by 2044:

- Simple Cycle and Combined Cycle (SC+CC): 840MW
- Solar: 396MW
- Reciprocating Internal Combustion Engine (RICE): 62MW
- Battery Storage: 3MW

# Data tracking and monitoring will be important to assessing progress and making informed decisions

The Energy Information Management System (EIMS) is a platform for collecting, storing, tracking, and processing, data submitted by electricity sector stakeholders. Its purpose is to:

- Streamline and simplify data collection and analysis
- Promote transparency and reduce information asymmetry
- Help the EAS monitor performance of the sector
- Help Government make informed decisions



# Tariff setting and regulation should be cost-reflective

**Guiding principles for tariff-setting methodology:** 



**Electricity Act's principles for setting cost-reflective tariffs:** 

- Allow EBS to recover the efficient costs, plus a permitted margin on capital invested
- Reflect the difference in costs incurred per customer type
- Include a connection fee or fixed charge to cover costs of maintaining the grid

In addition, tariffs should:

- Reflect the short-run marginal cost (SRMC) by the time of day to incentivize efficient generation and consumption of electricity
- Include a mechanism to recover the cost of renewables
- Incentivize efficient investment in distributed generation
- Be established for a multi-year regulatory period



# Improved tariff setting can help Suriname meet distributed generation policy goals

Goals of regulation in a market with distributed generation:



Encourage investment in distributed generation where societal benefits outweigh costs Discourage investment in distributed generation when its costs exceed its benefits



Ensure profits of utilities do not fall as customers switch to distributed generation



Ensure power system safety as distributed generation connections grow

### Recommendations to achieve distributed generation goals:

- Pursue the transition to marginal cost-reflective tariffs while maintaining affordability for low-income customers
- Define and regularly update the feed-in tariff based on avoided generation costs at the time of sale
- Set a cap on system sizes or total distributed generation to limit EBS's financial risk based on the integrated resource plan
- Limit the feed-in tariff to the duration of the contract or the expected life of the distributed generation system



## Single Buyer procedures guide how EBS procures and manages IPP contracts

The Electricity Act designates EBS as the single buyer for the National Grid. As the single buyer, EBS organizes public tenders and prepares documentation. The EAS supervises the overall process





# **Energy efficiency can reduce demand by 20-60%**

### $\mathcal{P}_{\mathcal{Q}}$ Energy efficiency uptake has been limited

- Most refrigerators and freezers are of standard efficiency
- Motors ranging from 1kW to 100kW were mostly standard efficiency or below
- No solar water heaters adopted
- 90% of lighting in all sectors uses LED technology, but less than 1% with occupancy and daylight sensors

### Barriers for implementing energy efficiency

- Low tariffs hinder viability (to improve as subsidies are phased out)
- Lack of appraisal tools, financing, and risk mitigation for EE investments
- Shortage of qualified professionals, implementation skills, and limited data
- Limited public perception of climate change and mitigation benefits

### 5-year roadmap to implement energy efficiency measures:

Establish energy performance standards and building codes Establish financial instruments for investing in EE

Remove or decrease import duties EE equipment

Raise awareness of EE





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# **Appendix slides**



# Standard regulatory practices, such as fuel cost pass-throughs, do not incentivize investment in renewable energy

Fuel cost pass-throughs can lead utilities to **under-recover costs when adding RE to the generation mix** 





# **Components of cost reflective tariffs**

**Reasonable cost of service** 



**Operating Expenditures** 

# **Assessment of Suriname's existing model**

Cost component	<b>Recommended principle</b>	Current tariff methodology	Areas for improvement
Return on Investment	<ul> <li>Return on investment can be estimated using the formula (WACC*RAB)</li> </ul>	<ul> <li>Uses the rate of return as an input, but it is unclear which rate of return is used</li> </ul>	<ul> <li>Clarify which rate of return is used</li> <li>Consider using the pre-tax WACC or vanilla WACC approach to calculate the rate of return</li> </ul>
Depreciation	<ul> <li>Depreciation of an asset is accounted for from its first year of operation</li> <li>The sum of existing and new PP&amp;E constitutes the regulatory asset base (RAB)</li> </ul>	<ul> <li>Calculates the net asset value</li> <li>Uses depreciation as a hardcoded input</li> </ul>	<ul> <li>Clarify if the net asset value represents the assets purchase price or the replacement asset value</li> <li>Clarify how depreciation is calculated</li> </ul>
Fixed O&M costs	<ul> <li>The regulator should define what O&amp;M costs may be included in the revenue requirement</li> <li>Fixed O&amp;M costs should be disaggregated into the components of the value chain</li> </ul>	<ul> <li>Calculates total fixed O&amp;M costs by summing up staff costs, T&amp;D costs, and other O&amp;M costs</li> </ul>	<ul> <li>Define allowed O&amp;M costs, that is, O&amp;M costs that may be included in the revenue requirement</li> <li>Disaggregate fixed O&amp;M costs into the components of the value chain</li> </ul>
Electricity Purchases	<ul> <li>Tariffs should include a pass-through variable charge to recover the cost of power purchased from IPPs and distributed energy customers; or</li> <li>Tariffs should be reset wherever utility-scale RE generation is commissioned</li> </ul>	<ul> <li>Does not include a pass-through charge in the tariff</li> <li>No legal provision for the reset of tariffs wherever utility-scale RE generation is commissioned</li> </ul>	<ul> <li>Include a renewable energy charge to recover the cost of power purchased from IPPs and distributed energy customers. This charge should appear as a separate item in the tariff structure and be adjusted regularly</li> </ul>
Cost of generation of EBS-owned assets	<ul> <li>The variable charge should reflect SRMC by the time of day</li> <li>Tariffs should include a pass-through variable charge reflecting the variations in fuel costs</li> </ul>	<ul> <li>Reflects the long-run marginal cost</li> <li>Does not include a pass-through charge in the tariff. Fuel cost calculations are included within the calculation of the generation base price, and using the ratio of the average Staatsolie oil price over three months and a reference oil price rather than the actual monthly cost of fuel</li> </ul>	<ul> <li>Include time-of-use tariffs to reflect the SRMC by the time of day</li> <li>Include a fuel adjustment charge. This charge should appear as a separate item in the tariff structure and be adjusted according to the Decree</li> </ul>