



PNG NATIONAL POWER SECTOR FORUM

3rd - 4th April 2025
APEC Haus

The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

Kingston Albert
Acting Chief Executive Officer

PRESENTATION OUTLINE

01

PPL Overview

02

Challenges

03

Energy Demand Forecast

04

PPL's Cost Drivers

05

Cost per Kwh

06

**Performance Turnaround
Strategy**

07

Key Initiatives

08

Summary

PNG Power Overview



National power utility company in Papua New Guinea.



Generation, Transmission, Distribution & Retail throughout the country.



Plays a crucial role in Nation's development as defined by the Vision of 2050 and Strategic Plan of 2030



Operations

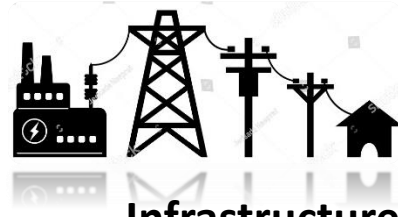
- ✓ 210,000 registered customers
- ✓ 665MW of power generated
- ✓ 3 main grid, 17 mini grids networks
- ✓ 1,071 km of HV + 2,589 km of Dist- lines
- ✓ 1,575 employees (20% female)
- ✓ Ageing generation & transmission infrastructure
- ✓ Reliance on IPPs & high cost (fuel) thermal generation
- ✓ No tariff adjustments in the 12 years to enable adequately cost recovery
- ✓ Existence of Law and Order issues

Challenges



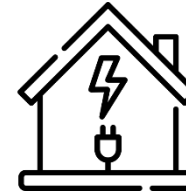
Generation

PNG has a mix of power generation sources



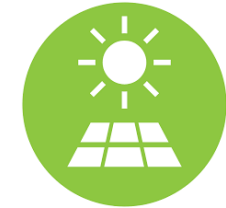
Infrastructure

Aging infrastructure-
reliability challenges



Electricity Access

The rural still lack access
to reliable power



Renewable Energy

PPL started investing in
to renewable energy



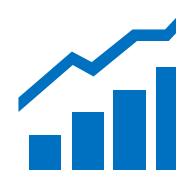
Energy Losses

Technical + Commercial
Losses , 26%



Regulatory Framework

Regulatory functions
transferred to NEA



Commercial Environment

Growing operational
costs with a fixed tariff

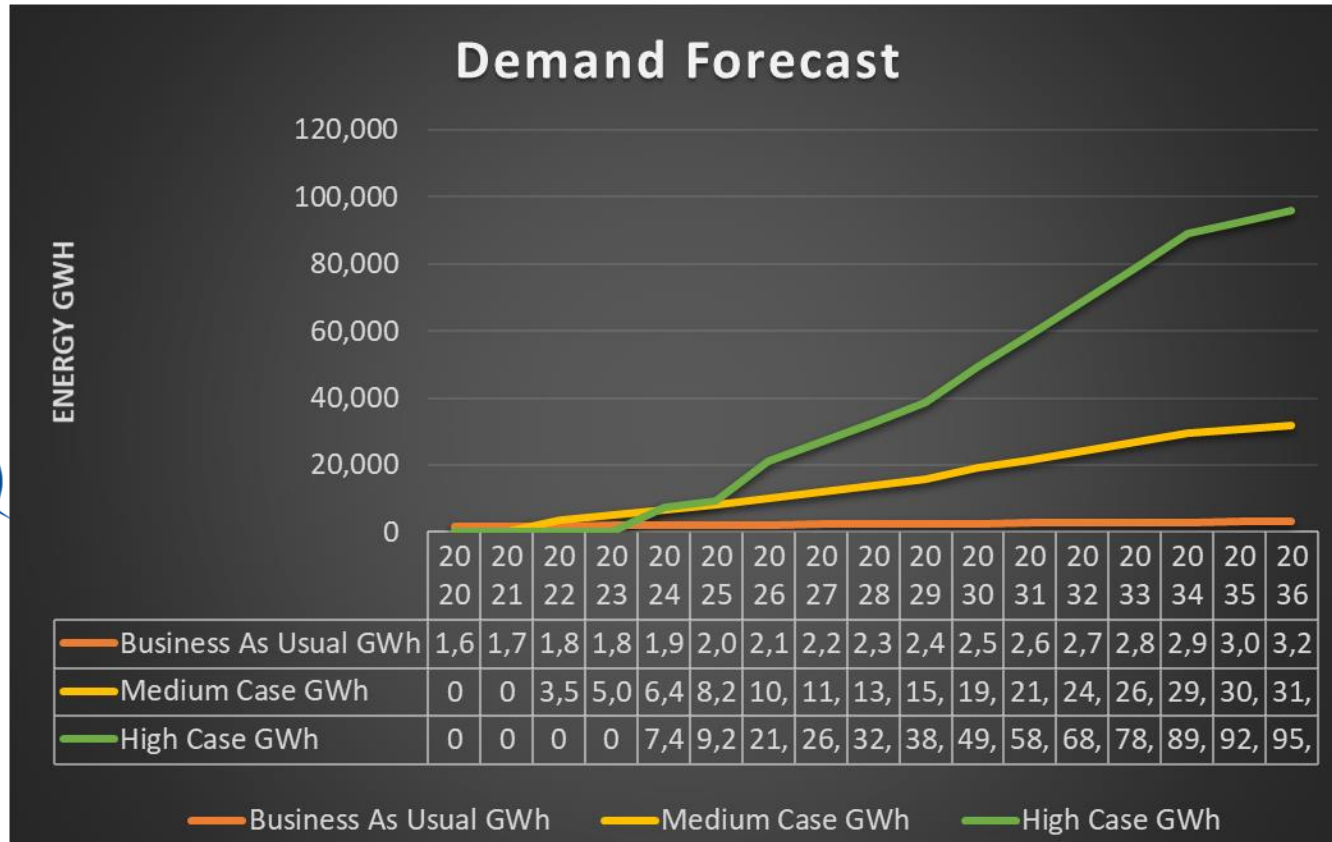


PEP Partnerships

Strong Commitment and
support from PEP

Key challenges in electricity sector includes infrastructure, accessibility, and affordability.

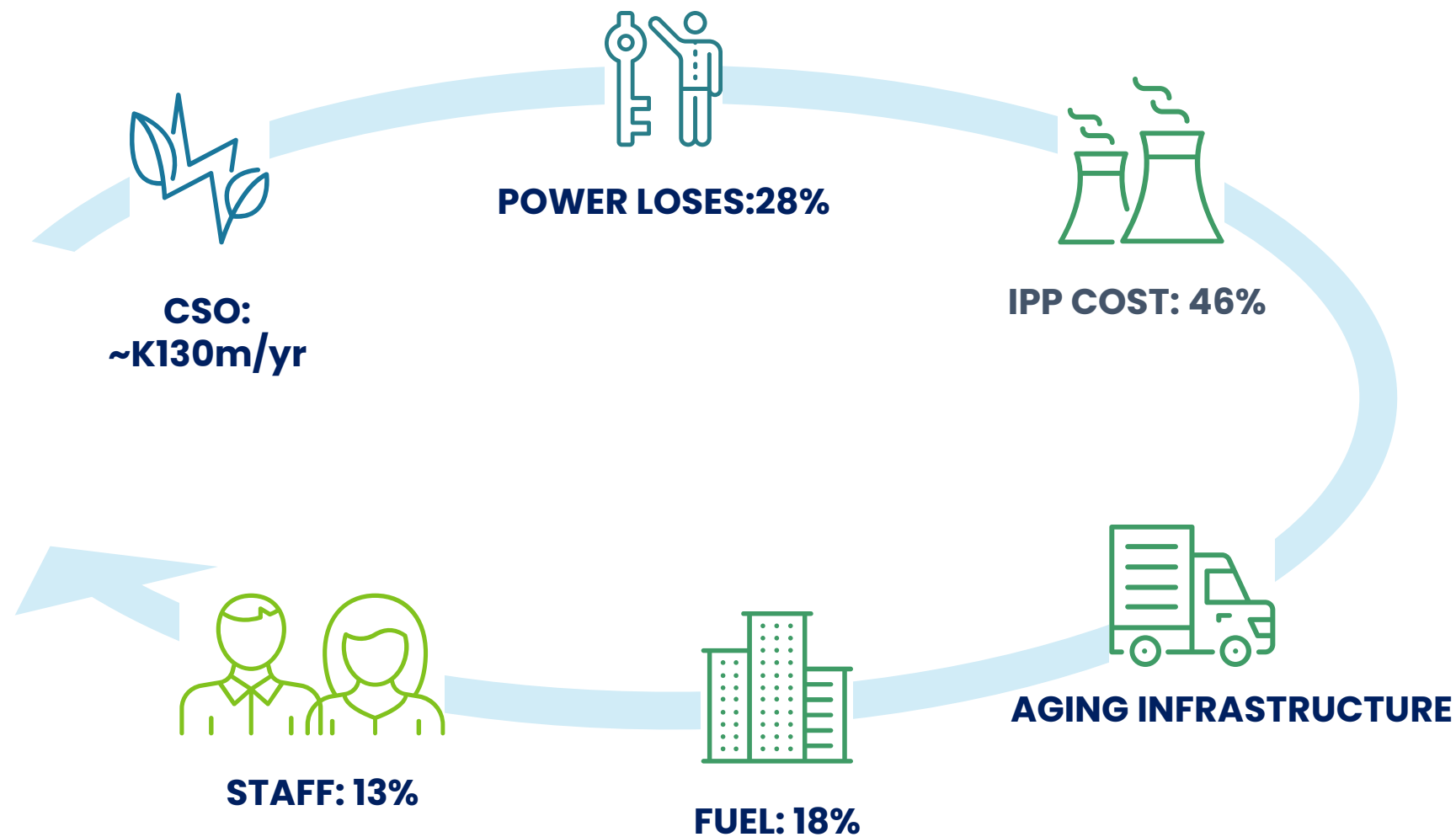
Energy Demand Forecast



- ❖ **Business as Usual - Demand**
Forecast including natural center growth rates
- ❖ **Medium Case – BAU Demand**
Forecast + connection of new industries and growth in existing Mines
- ❖ **High Case – Medium Case Demand**
Forecast + connection of proposed new Mines

Generation shortfall & limited infrastructure Capacity.

PPL's Cost Pressures



High Debtors - Collectable

Cost Per Kwh

GRID	Main Grids	Mini Grid
Avg Weighted Tariff	K0.87	K0.92
Avg Cost/kwh	K1.25	K1.19

**K0.33/kw
lose**

The Tariff Vs Cost per kwh GAP increases every year.

Performance Turnaround Strategy

Stabilization

Immediate actions/low hanging fruits to position PNG Power on a stronger footing both commercially and technically



Recovery

Medium-term activities to reduce costs, reduce technical and non-technical losses, and ensure PNG Power can deliver a high-quality service to its customers, and ultimately contribute to revenue growth.



Reform

A fundamental restructuring of the power sector in PNG, including preparing PNG Power for Privatization, unbundling etc...



Growth

Increase margin through ongoing process improvement initiatives and continue to grow revenue base whilst strengthening the capital structure.



Key Initiatives in Execution

PORT MORESBY GRID

Biggest revenue contributing center for PPL

INITIATIVES	STATUS
Rouna 1 and 3 Hydro Rehabilitation Project	2025
Port Moresby Grid Rehabilitation Project	2025
Port Moresby to Rigo Transmission Project	2025
New Motukea substation and distribution	2027
Caution Bay to Pom 66kv Transmission Line	2027
New Gerehu Substation Project	2028

Reliability Improvement Projects

Key Initiatives in Execution

RAMU GRID

Most challenging center

INITIATIVES	DUE
Mount Hagen to Hides 132kV Transmission Project	2025
Ramu to Mount Hagen 132kV Transmission Projects	2026
Ramu to Lae 132kV Transmission Line	2025
Lae 66kv Transmission Line (loop system) Project	2027
Ramu1 Hydro Power Plant Rehabilitation	2026
Ramu 2 180 Mw Hydro Electric Project	2029

OTHER CENTERS

Most challenging center

Gazelle Grid Rehabilitation Project	2026
8 X Solar + BESS Hybridization Project	2025

Improve Reliability & Reduce Load Shedding

Key Initiatives in Execution

RETAIL

Revenue Growth and
Protection Initiatives

INITIATIVES	COMMENTS
Smart Meter Project	Phase I Implementation
GoPNG Prepaid Meter	Procurement stages
Major [New] Customer Connections	Ongoing
Meter Boxing	Revenue Protection
Feeder Team Formation	Energy Balancing/accounting

Commercial Lose Reduction & Improve Cashflow

Key Message

- PPL Will continue to play a significant role in economic development of PNG.
- Energy Security
- Costs are expected to be absorbed by PPL
- The health of PPL however is at a critical situation putting the lifeline of the economy at risk
- Cost of Operations have significantly increased
- A lot of support in Capital Investments done, benefits realization are not now.



HELP PPL NOW BEFORE ITS TOO LATE

A wide river flows from the background towards the foreground. In the immediate foreground, a concrete weir or dam structure is visible, with water cascading over it, creating white foam and spray. The river's surface is a mix of blue and green, reflecting the sky and surrounding vegetation. The far bank is a steep, densely forested hillside. The sky is overcast with soft, grey clouds. A semi-transparent white rectangular box is centered horizontally across the middle of the image, containing the word "End" in a bold, dark blue font.

End