



Modified Single Buyer Model Impact for Energy Delivery

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Windhoek

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INTRODUCTION

Metdecci Energy Investment Plant(5MW) – Karibib

Electricity Control Board - *Mandate*

- ▶ Derived from the Electricity Act no 4, of 2007, Section 3 sub section (I)
 - ▶ to exercise control over and regulate the provision, use and consumption of electricity in Namibia.
 - ▶ to oversee the efficient functioning and development of the electricity industry and security of electricity provision.
 - ▶ to ensure the efficient provision of electricity
 - ▶ to ensure a competitive environment in the electricity industry in Namibia with such restrictions as may be necessary for the security of electricity provision and other public interest
 - ▶ to promote private sector investment in the electricity industry
- ▶ In accordance with prevailing Government Policies.

Core Regulatory Areas

► Licensing

- Oversight and approval of Generation, Transmission and Distribution infrastructure projects
- Issue, Amend, Transfer, Maintain, Cancel licenses

► Economic Regulation

- Tariffs setting and approval
- Financial viability and sustainability of the ESI

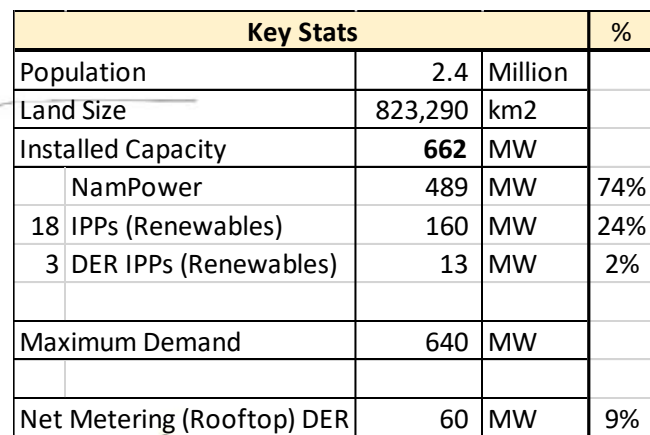
► Technical Regulation

- Ensure technical compliance of licensee
- Technical / Infrastructure Standards Setting
- Technical Compliance Audits and Inspections

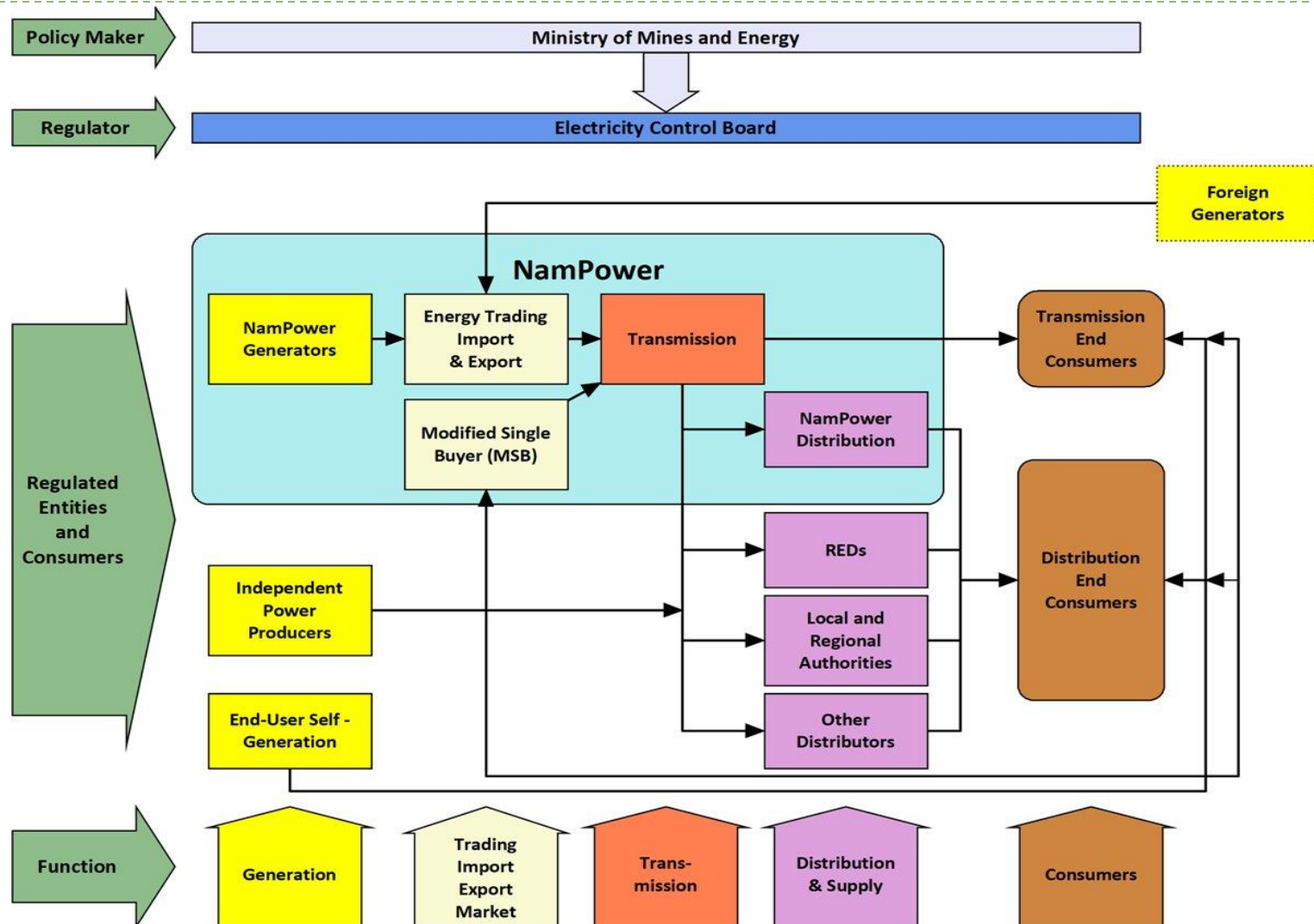
ELECTRICITY SUPPLY INDUSTRY STRUCTURE



Ruacana Falls – April 2018
Photo Contributed



Electricity Supply Industry (ESI) Structure



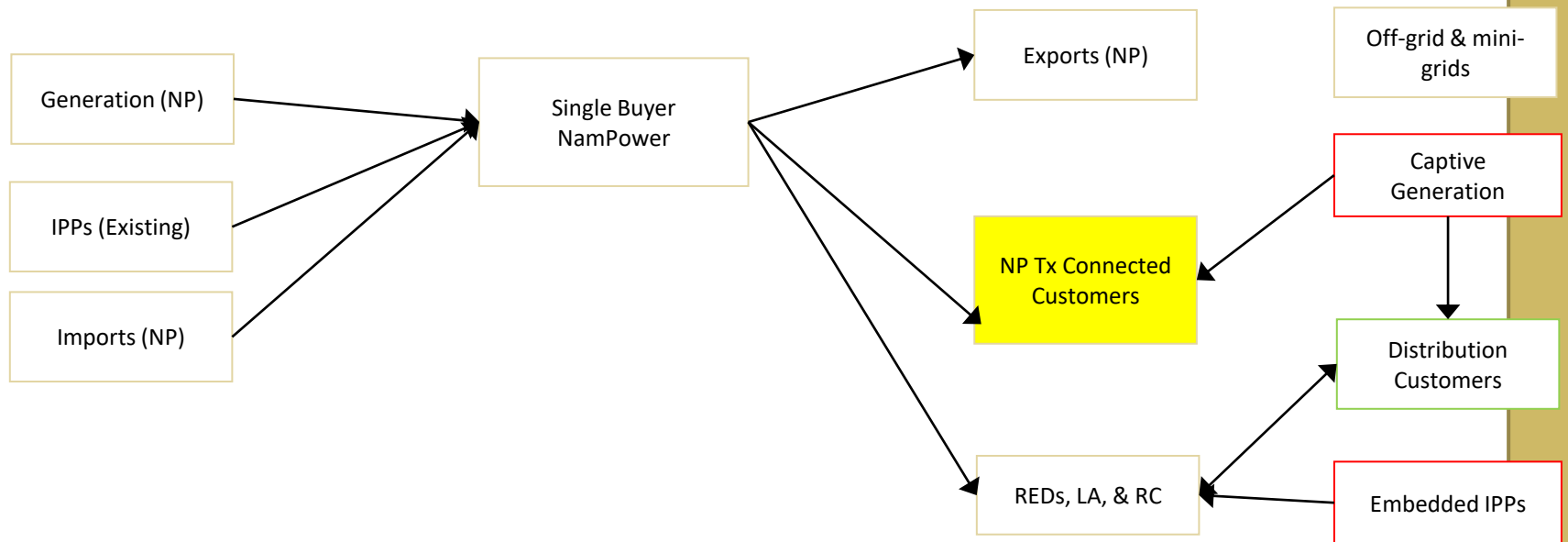
Modified Single Buyer

- ▶ Market platform that allows consumers and private generators to transact directly
 - ▶ It builds on the existing Single Buyer (SB) model i.e. it represents a modification of the existing market structure.
 - ▶ The MSB draws on global best practice, but it has been designed for Namibia,
 - ▶ Aligned with National Development Plans, Energy Policy and IPP Policy
 - ▶ 30% of total volumes (energy) will be contestable (Transmission customers) with the MSB
 - ▶ Supports electricity trading in accordance with a set of transparent rules,
 - ▶ Ring fenced unit within NamPower
 - ▶ MSB will enable development of plant specifically for export purposes.

Why do we need the MSB?

- ▶ To allow more new local generation capacity
- ▶ Address challenges in existing Single Buyer (SB) model
 - ▶ E.g. Monopoly; Reliance on imports, Slow decision making etc.
- ▶ Support efficient competition (lower tariffs) and customer choice
- ▶ Encourage more private sector investments in generation
- ▶ Reduce funding burden on NamPower / GRN
- ▶ Adapt tariff structures to accommodate changes in technology and to facilitate a dynamic electricity market
- ▶ Provide opportunity for the deployment of new technologies such as battery storage
- ▶ Opportunity for customers to invest in and benefit from reducing cost and new technologies
- ▶ Namibia to become more energy self-sufficient

Electricity Supply Industry Market Structure - Single Buyer (Previous)



Previous

Key Design Features of the MSB

New Trading
Arrangements

Contestable Customers
& Eligible Sellers

Phased
Implementation to
manage Risk

30% of total purchases
contestable from Sept
2019

Unbundled Tariffs

Changes in Market
Operations &
Administration

Updated Rules &
Regulations

No unbundling or
privatisation of existing
entities

NamPower: New MSB
Unit

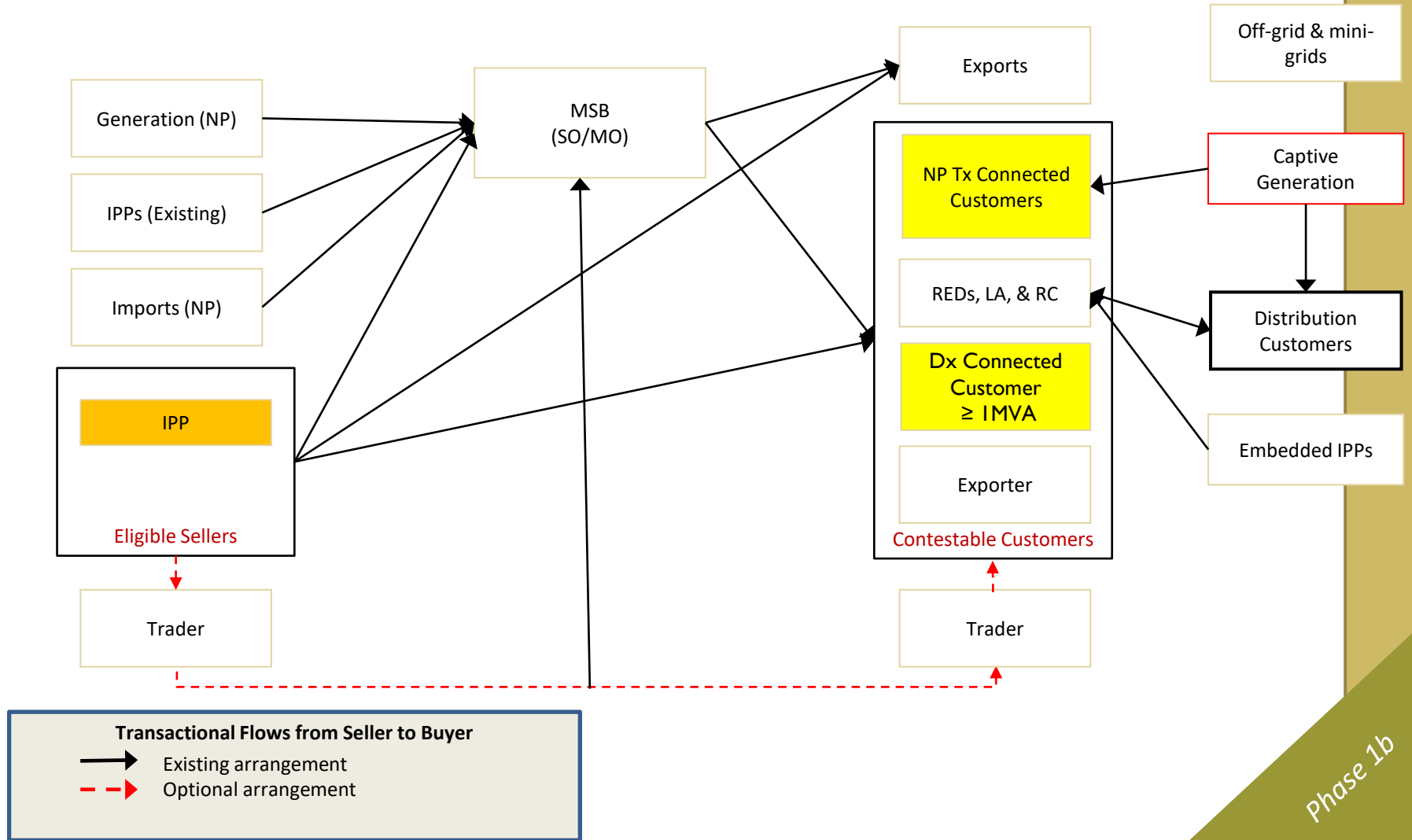
NamPower: Security of
Supply

NamPower: New
products & services

NamPower: new
generation and
transmission

Electricity Supply Industry

Market Structure – Modified Single Buyer (Current) 1b

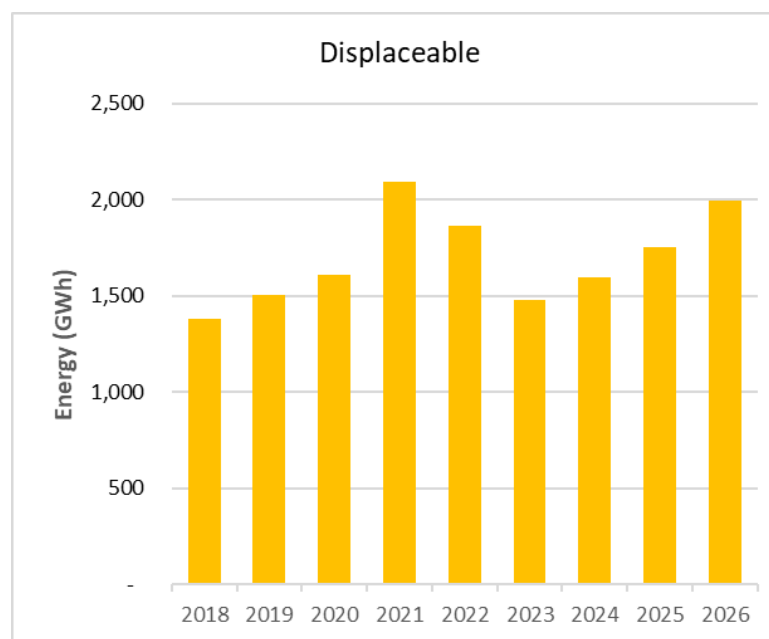
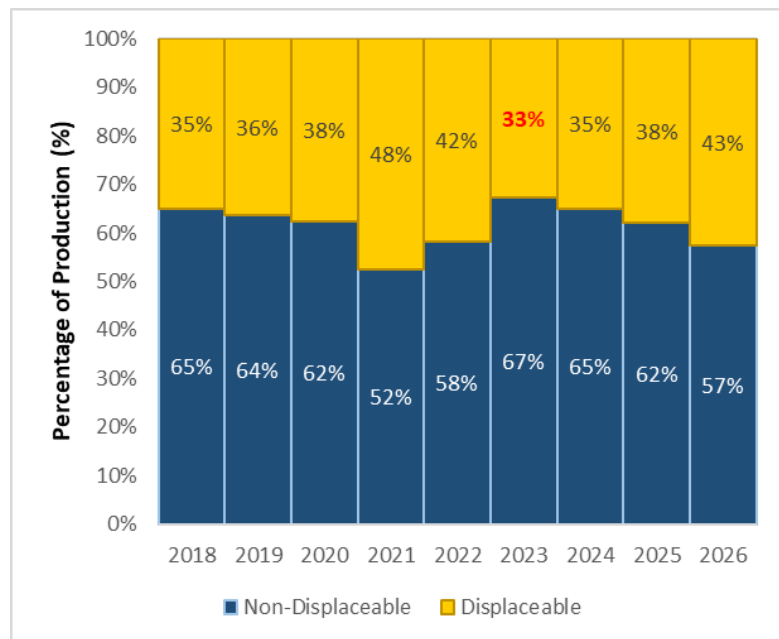


Market Participants & Authorisations

Participant		Authorisation
Market Operator (MO)	→	Included in Transmission License
System Operations (SO)	→	Included in Transmission License
Eligible Generator	→	Generation License
Contestable Customer	→	Approval from Regulator
Trader	→	Trading License
Importer	→	Import License
Exporter	→	Export License

Size of Contestable Market - “Why 30%”?

Displaceable Energy Source Potential



- ▶ Non - displaceable; Existing Public (NamPower), Existing and Committed Private (IPPs), Ministerial Determinations (NamPower and IPPs), Existing Firms Import
- ▶ Displaceable; Flexible Imports (SAPP)
- ▶ “Displaceable” energy varies between 33% - 48% of total production.
- ▶ The figure on the right shows the total contribution (GWh) of “Displaceable” energy

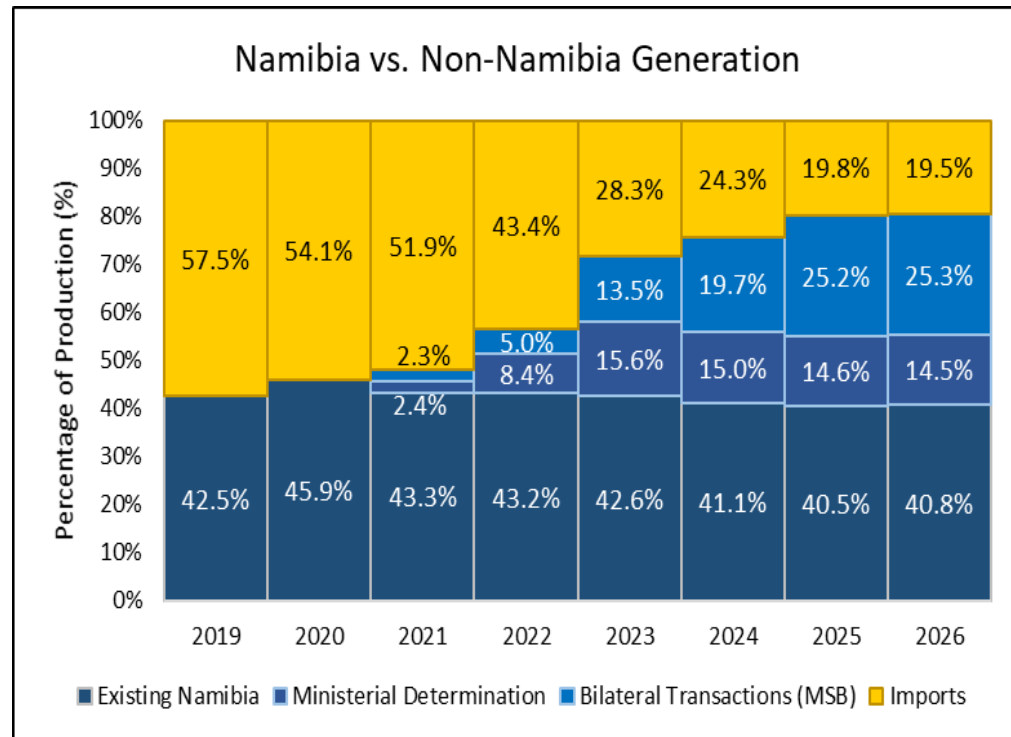
Potential Impact on Self-sufficiency Energy – Why 30%?



Degree of contestability:

- ▶ Maximum “Displaceable” energy (avoid causing stranded investments or contracts)
- ▶ Risk of energy demand forecast error
- ▶ Increased unlicensed (<500kVA) generation behind the meter
- ▶ Contestability “room” for distribution connected customers (Phases Ib of MSB)
- ▶ Not all transmission customers are interested in entering into MSB transactions

Based on the above it is agreed to allow Contestable Customers to buy up to 30% of their energy purchases via MSB transactions



Implementation Status



- ▶ MSB Market opened - 1st September 2019
- ▶ All new licence applications, assessed in terms of the MSB Market Design,
- ▶ Eligible Sellers
 - ▶ Licensed 8
- ▶ Contestable Customers
 - ▶ 19 CC registered ~ 454MW Solar PV Equivalent
 - ▶ NamZinc ~ 300MW Solar PV Equivalent
- ▶ Export license (I)

Transmission and Embedded Distribution Contestable Customer		Solar PV (MW) Capacity Equivalent		
		MW	Licensed	Available
1	Cenored (Pty) Ltd	30	6	24
	City of Windhoek	125	-	125
	Elizabeth Bay Mine	1	-	1
2	Erongo RED (Pty) Ltd	76	3	72
3	Gobabis Town Council	4	-	4
4	Keetmanshoop Municipality	5	-	5
	Luderitz Town Council	3	-	3
5	Mariental Town Council	4	1	3
6	Namibia Breweries Limited*	3	1	2
	Navachab Gold Mine	8	-	8
7	Nored (Pty) Ltd	# 63	-	63
	Ohorongo Cement	5	6	-
8	Okahandja Town Council	7	-	7
	Oranjemund Town Council	4	-	4
9	Orano Mining Namibia	7	-	7
	Oshakati Premier Electric	9	5	4
	Rehoboth Town Council	5	-	5
10	Rosh Pinah Zinc Mine	7	5.7	1
	Rossing Uranium	23	-	23
11	Skeleton Coast Trawling*	1	1	0
12	Sun Water (Pty) Ltd*	1	1	-
13	Swakop Uranium	29	12	17
14	Tsumeb Smelter	26	-	26
15	Whale Rock Cement	2	-	2
16	Namibia Poultry Industries (Pty) Ltd	3	3	-
17	NamibMills*	2	-	2
18	NamZinc			
19	Plastic Packaging (Pty) Ltd*	1	-	1
TOTAL (MW)		454	45	411
Registered as Contestable Customers				
*Distribution connected embedded				
Updated 10-Nov-21				

MARKET RULES

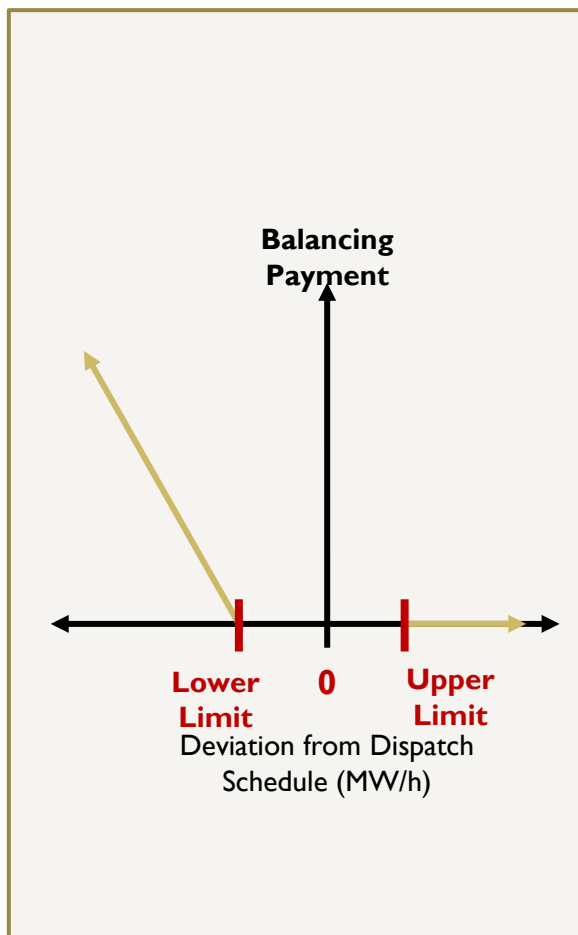
Momentous Energy (5MW) – Keetmanshoop

Market Rules



- ▶ **Overview of the Rules**
 - ▶ Qualifying Requirements to Trade
 - ▶ Network Capacity Management
 - ▶ Bilateral Trading Nomination
 - ▶ Metering and Settlements
 - ▶ Financial and Invoicing
- ▶ **Rules supported by**
 - ▶ Balancing Framework
 - ▶ Wheeling Framework

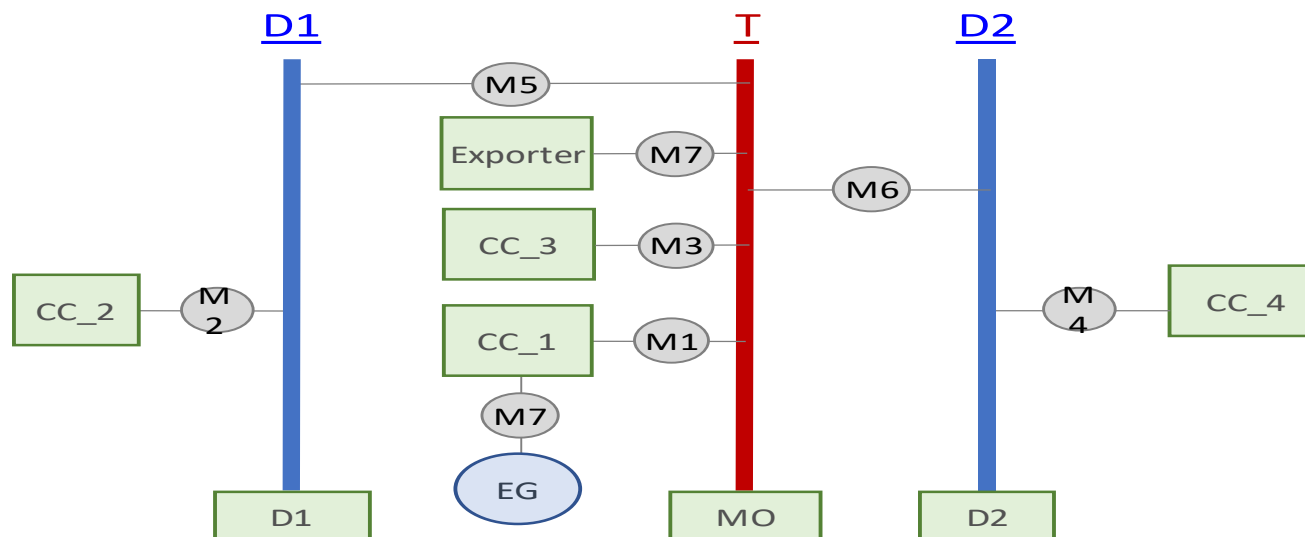
Balancing Framework



- ▶ Balancing refers to the real time adjustment of supply and or demand to ensure the security and reliability of the electric system. In Namibia, the Systems Operations (SO) function in NamPower is responsible for balancing.
- ▶ The need for balancing services and the cost to procure these services are the result of unforeseen fluctuations by suppliers and consumers of electricity.
- ▶ This framework addresses the commercial arrangements in the event an Eligible Generator or Importer deviates from the Final Dispatch Schedule published by the MO.
- ▶ The objective of the Balancing Framework is to recover the cost of providing balancing services from the parties who cause the need for the service in accordance with the 'user-pay' principle.

Wheeling Framework

- ▶ Providing a transparent, fair and practical framework for the determination and implementation of wheeling services and charges for the use of transmission and distribution networks.
- ▶ The MSB, supported by the Wheeling Framework, will intensify competition, provide for more customer choice and increase generation self-sufficiency while lowering the cost of electricity by enabling Bilateral Transactions across Namibia's integrated electricity system.



Tariff Unbundling

- ▶ To ensure the wheeling framework meets its objective it is essential to unbundle transmission and distribution tariffs.
- ▶ Through the unbundling of tariffs, customers choices is based on like-to-like commodity
- ▶ Unbundling is required to ensure that customers pay for the services they use and are not able to escape certain energy related charges, due to either behind the meter supply or a bilateral transactions.
- ▶ NamPower have already unbundled their tariff
 - ▶ Use of System Charges
 - ▶ Network Access Charges
 - ▶ Reliability Charges
 - ▶ Losses Charges



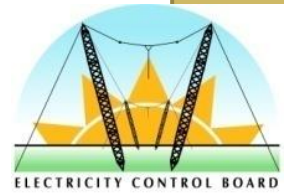
CONCLUSION

Momentous Energy (5MW) – Keetmanshoop

Impact for Energy Delivery to the Mining Sector



- ▶ *Breaking New Frontiers in a Post Pandemic Era*
 - ▶ MSB creates more opportunities for competition, choice and increased private investment
 - ▶ Contestable Customers (Mines) have an opportunity to transact on bilateral arrangements with IPPs
 - ▶ Through the reform and development of the MSB there is an excess of 450 MW Solar PV equivalent capacity that can be developed by Private Sector
- ▶ *Mining operations to move toward carbon neutrality and focus their impact on sustainable footprint*
 - ▶ Contestable Customers (Mines) have a choice to build plant that will meet their sustainable footprints
 - ▶ The MSB allow Namibia the best chance of building more local plant, as efficiently as possible
- ▶ Allow Namibia to build generation plants for export purposes
- ▶ The ECB and the ESI believes the MSB present fresh opportunities for the role players in the industry



Thank You!
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