



# UNDERSTANDING THE NAMIBIAN MID & DOWNSTREAM SECTOR – A NAMCOR PERSPECTIVE 2023

BY: PETRUS NUUYOMA

[www.namcor.com.na](http://www.namcor.com.na)





# PRESENTATION OUTLINE

1. INTRODUCTION
2. GLOBAL OVERVIEW OF THE MID & DOWNSTREAM SEGMENT
3. OVERVIEW OF THE NAMIBIA DOWNSTREAM SECTOR
4. HOW THE OIL DISCOVERY COULD CHANGE THE NAMIBIAN DOWNSTREAM SECTOR
5. OPPORTUNITIES IN THE DOWNSTREAM SECTOR

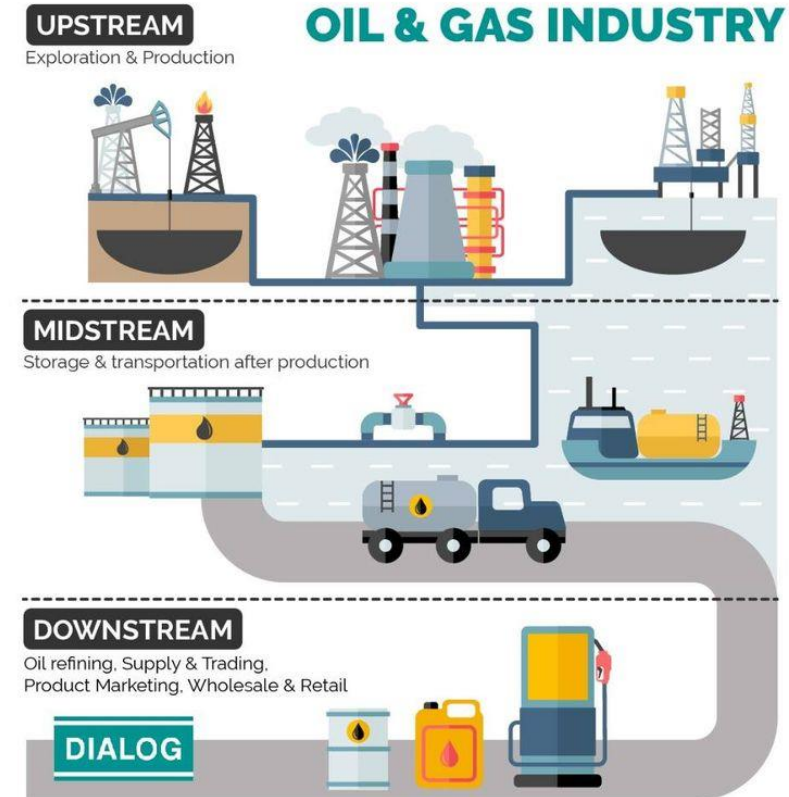


# I. INTRODUCTION



The petroleum industry is made up of three market segments:

- **Upstream**
- **Midstream**
  - Midstream refers to the transportation and storing of crude oil and refined products from the oil fields and primary storage facilities, usually via pipeline, oil tanker, or barge to the refinery (crude oil) for processing into various distillates, and to the end-users in the case of refined products.
- **Downstream**
  - Refining, trading, distribution and marketing of end-user petroleum products.



# CRUDE OIL



- A mixture of hydrocarbons that formed from the remains of animals, plants and other organisms that lived on earth millions of years ago.
- Heat and pressure from these layers turn the remains into what we now call crude oil or petroleum.



# CHARACTERISTICS OF MID & DOWNSTREAM SEGMENT.



- **Margin business**
  - **Producer Margin** = *Prevailing Crude Oil Price - Cost of Production*
  - **Traders Margin** = *Dated Platts Price on Delivery – [Cost FOB + Freight + Ocean loss & Insurance + Time Value for Money]*
  - **Refinery Margin** = *Dated Platts Price of refined Product - [Cost FOB + Freight + Ocean loss & Insurance + Refining Cost + Time Value for Money]*
- **Very complex. Key activities include:**
  - Oil transportation
  - Oil storing
  - Oil refining
  - Oil supply and trading
  - Petroleum products marketing
  - Wholesale and Retail
- Requires a global perspective (global supply and demand determine product prices)
- End-user consumption based.



## MAJOR OIL COMPANIES



- Upstream
- Midstream
- Downstream

## NATIONAL OIL COMPANIES



- Upstream
- Midstream
- Downstream

## LARGE INTEGRATED COMPANIES



- Upstream
- Midstream
- Downstream
- Renewables

## OIL REFINERS



- Downstream  
(Refining only)

## OIL TRADERS



- Downstream  
(Trading and Distribution)

## 2. GLOBAL OVERVIEW OF THE MID & DOWNSTREAM

### SOME COMMON CRUDE OIL BENCHMARKS:

ORIGIN/COUNTRY	CATEGORY	CRUDE TYPES	SPECIFIC GRAVITY	SULPHUR %
Angola	Cabinda	Heavy Sweet	0.87	0.1
Russia	Medium sulphur	Urals	0.87	1.4
Saudi Arabia	Light Sour	Arabian light	0.86	1.8
Venezuela	Very heavy sour	Bachaquero	0.98	2.7
United States	Light Sweet	West Texas Intermediate (WTI)	0.82	0.2
North Sea	<b>Light Sweet</b>	Brent Blend (ICE)	0.83	0.4
Malaysia	Light Sweet	Tapis	0.79	0.02

**NAMIBIAN CRUDE: LIGHT SWEET AND PRICING TO BE CLOSER TO BRENT CRUDE**



# WORLD LARGEST OIL REFINERIES:



RANK	OWNER	LOCATION	CAPACITY (barrels per day)
1.	Reliance	Jamnagar, India	1 240 000
2.	Paraguna	Venezuela	940 000
3.	SK Innovation, Ulsan	S. Korea	840 000
4.	Abu Dhabi National Oil Company	Ruwais, UAE	817 000
5.	GS Caltex Corp	Yeosu, S. Korea	785 000
6.	S-Oil	Onsan, S. Korea	669 000
7.	Dangote Group	Lagos, Nigeria	650 000
8.	Motiva	Porth Arthur, USA	600 000
9.	ExxonMobil	Singapore	592 000
10.	ExxonMobil	Baytown, Tx, USA	560 000
11	SaudiAramco	Ras Tanura, S. Arabia	550 000
12	Formosa Petroleum	Taiwan	540 000
13.	Marathon Pet Co	Garyville, USA	522 000
14.	ExxonMobil	Baton Rouge, USA	502 000
15	Kuwait Petroleum	Mina Al Ahmadi	466 000
16.	Shell	Singapore	462 000
17	CITGO	LA, USA	440 000
18	CNPC	Dalian, China	410 000
19	BP	Indiana, USA	406 000





# REFINED PRODUCTS FROM CRUDE OIL:



• Gasoline



• Diesel



• Jet Fuel



• Fuel Oil



• Kerosine



• Naphta



• Liquified Petroleum Gas



# GLOBAL OIL-PRICING, UNITS AND COMMERCIAL TERMS:



- S&P Global Platts – 1909 (Founded in the US)
- Argus Media Group – 1970 (Founded in the UK)

## UNITS:

- US\$/Barrel
- US\$/Metric tonne
- US cents per gallon
- Trade is guided by International Commercial Terms (Incoterms) reviewed every 10 years by the International Chamber of Commerce.

	Any Transport Mode		Sea/Inland Waterway Transport				Any Transport Mode				
	EXW	FCA	FAS	FOB	CFR	CIF	CPT	CIP	DAP	DPU	DDP
<b>Incoterm®</b>	EX Works	Free Carrier	Free Alongside Ship	Free on Board	Cost & Freight	Cost Insurance & Freight	Carriage Paid To	Carriage Insurance Paid To	Delivered At Place	Delivered At Place Unloaded	Delivered Paid
<b>Transfer of Risk</b>	At Buyer's Disposal	On Buyer's Transport	Alongside Ship	On Board Vessel	On Board Vessel	On Board Vessel	At Carrier	At Carrier	At Named Place	At Named Place Unloaded	At Nam Place
<b>Charges/Obligations</b>											
<b>Packaging</b>	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Loading Charges</b>	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Delivery to Port/Place</b>	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Port Duty &amp; Taxes</b>	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Origin Terminal Charges</b>	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Loading On Charges</b>	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Carriage Charges</b>	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller	Seller	Seller
<b>Insurance</b>	**	**	**	**	**	Seller	**	Seller	**	**	**
<b>Destination Terminal Charges</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
<b>Delivery to Destination</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller
<b>Loading at Destination</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller	Buyer
<b>Port Duty &amp; Taxes</b>	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller



# GLOBAL OIL DEMAND & SUPPLY

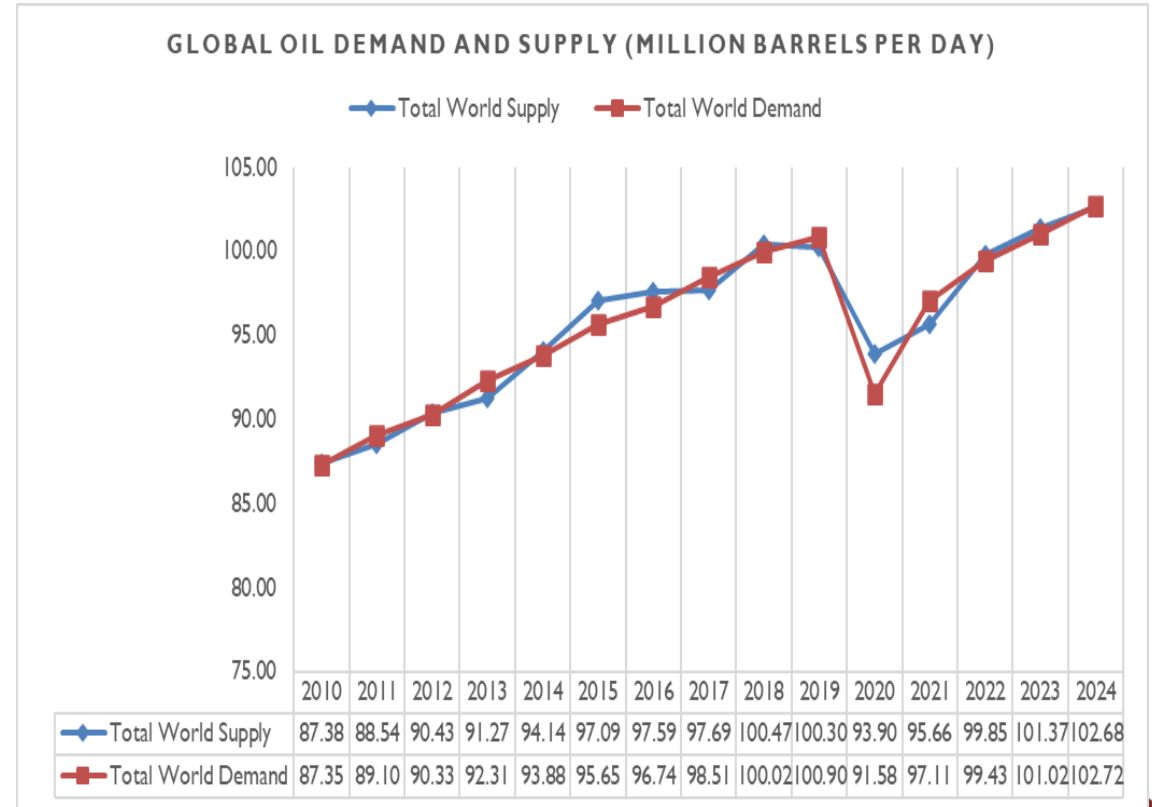
- **Global Oil Supply and Demand determines our local pump prices**

## DRIVERS OF DEMAND:

- Consumers (transportation and industries)
- Ship owners
- Airlines
- Petrochemicals usage

## DRIVERS OF SUPPLY:

- OPEC plus – Battle for market shares and domestic fiscal issues
- Geo-politics
- War (Russia-Ukraine)
- “Acts of God” (Natural Disasters)



# GLOBAL OIL PRODUCTION



- Dominated by top 5 OPEC and top 5 Non-OPEC countries.
- OPEC dominates global oil supply and not production.
- Formed with clear objectives:
  - To coordinate and unify petroleum policies among member states.
  - To secure fair and stable prices for all oil producers
  - Ensure an efficient, economic, and regular supply of oil to consumers.
  - Ensure a fair return on capital investment in the industry.
- US is the biggest oil producer, but also the biggest consumer

Top 5 Producing Countries (OPEC)			
Rank	Country	May, 2023 (mbpd)	As % of OPEC production
1	Saudi Arabia	9.90	29.59
2	Iraq	4.20	12.55
3	United Arab Emirates	2.89	8.64
4	Iran	2.75	8.22
5	Kuwait	2.57	7.68
<b>Total Top 5 OPEC production</b>		<b>22.31</b>	<b>66.68</b>
<b>Total OPEC production</b>		<b>33.46</b>	

OPEC production data includes only the production of crude oil.

Top 5 Producing Countries (Non-OPEC)			
Rank	Country	May, 2023 (mbpd)	As % of Non-OPEC production
1	U.S. (50 States)	21.10	31.34
2	Russia	9.11	13.53
3	Canada	5.57	8.27
4	China	5.23	7.77
5	Brazil	4.26	6.33
<b>production</b>		<b>45.27</b>	<b>67.24</b>
<b>Total Non-OPEC production</b>		<b>67.33</b>	



# INTERNATIONAL OIL TRADING



# INTERNATIONAL OIL TRADING

## TO MAKE PROFIT:

- Buy low now and sell later
- Or sell high now and buy low later
- You can do either depending on the market conditions
- Your choice and the market will determine whether you will make or lose money

## When should you buy or sell?

- Surging oil prices = Bullish view

Action: Buy now (go long) and sell later at a higher price

- Falling oil prices = Bearish view

Action: Sell now (go short) and buy later at a lower price

- Long position makes money when prices are rising and loses money when prices are falling.
- Short position loses money when prices are rising and makes money when prices are falling.



### 3. OVERVIEW OF THE NAMIBIAN DOWNSTREAM SECTOR



- Trading, storing, distribution, wholesale and retail marketing of refined petroleum products.
- The Namibian Downstream sector is N\$20 billion-a-year revenue industry
- Namibia has no crude oil reserves or refinery currently.
- All refined fuel requirements are met by imports, predominantly from the Middle East, Europe and Singapore.
- The market is regulated by the Ministry of Mines and Energy.
- All market participants are licensed, and prices of petrol and diesel are regulated.
- The industry is oligopolistic in nature (few players).



# LEGISLATIVE FRAMEWORK



The industry is regulated by the Ministry of Mines and Energy through the following legislations:

- Energy Policy of 2017
- Petroleum Products and Energy Act of 1990 (Amended in 2000 and 2003)
- Petroleum Products Regulations of 2000 (Amended in 2021)

**Licenses you can apply for to participate in the downstream sector:**

- Wholesale License (Import, Export, Store, Distribute, Re-sell)
- Retail License (Service Station)
- Consumer Installation Certificate (Own use)





# LEGISLATIVE FRAMEWORK.....



## Gazetted Specifications:

- Unleaded Petrol 95 (ULP)
- Automotive Diesel Oil 50 PPM (ADO 50) and Ultra Low Sulphur Diesel 10 PPM (ULSD 10 PPM)
- No “ngungula” fuel specifications allowed



# WHY DOESN'T NAMIBIA IMPORT FUEL FROM ANGOLA?



- Angolan diesel is 1500 PPM (high sulphur) while our gazetted diesel is 50&10 PPM.
- Angolan petrol is 91 Research Octane Number (RON) while our gazetted petrol is ULP 95.
- SADC Convention of Cleaner Fuels dictate that all SADC countries phase-out high sulphur diesel by 2027.



# NATIONAL FUEL CONSUMPTION

- Volumes determines business viability
- There are over 200 service stations countrywide.
- Consumption is approximately over 1.1 billion litres
- Diesel is more consumed than petrol

## CASE FOR AN OIL REFINERY:

- 1.1 billion litres = over 6 million barrels a year
- 6 million barrels = 17 000 barrels per day (bpd)
- Refinery of 17 000 bpd or bigger to meet our domestic demand

2022	ULP 95	Diesel 10ppm	Total consumption
Jan	29,421,800	62,425,800	91,847,600
Feb	26,161,500	58,294,700	84,456,200
Mar	30,224,000	66,244,300	96,468,300
Apr	27,963,300	57,621,800	85,585,100
May	30,221,300	63,211,100	93,432,400
Jun	24,815,600	60,245,900	85,061,500
Jul	27,172,300	59,522,000	86,694,300
Aug	27,187,000	63,257,000	90,444,000
Sep	27,108,700	63,518,600	90,627,300
Oct	27,943,200	67,713,700	95,656,900
Nov	27,645,900	65,650,900	93,296,800
Dec	31,789,100	67,106,900	98,896,000
<b>Total Consumption</b>	<b>337,653,700</b>	<b>754,812,700</b>	<b>1,092,466,400</b>



# MAJOR PLAYERS IN THE NAMBIAN DOWNSTREAM MARKET



## BY MARKET SHARE:



35%



19%



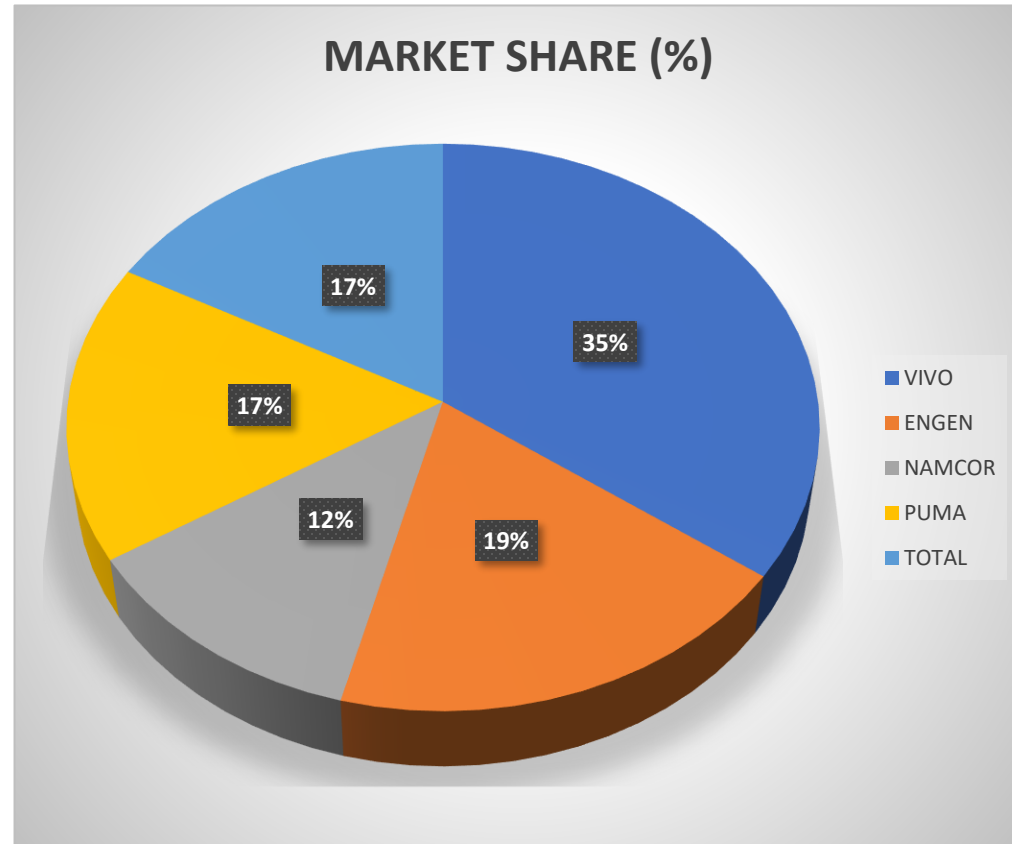
17%



17%



12%



# WHERE DOES NAMIBIA IMPORT FUEL FROM?



# PRICE REGULATION



- Prices of diesel and petrol are regulated at both retail and wholesale level.
- Basic Fuel Price Model is used.
- BFP is a cost-recovery and import parity model which is based on deemed cost of sourcing product from international refineries, insuring it against all losses and ship it to Walvis Bay.
- Comprises of all cost elements involved in the supply chain until the product is in the tanks in Walvis Bay. Such elements include:
  - FOB (refined oil price)
  - Freight
  - Insurance
  - Ocean losses
  - US\$/N\$ exchange rate
  - Demurrage
  - Cargo dues.
- Add rail & road transport, statutory levies and taxes, industry and retail margins to determine inland pump prices.



# HOW DO PARTICIPANTS MAKE MONEY IN THE NAMIBIAN INDUSTRY?



## WHOLESALEERS:

- They cannot operate service stations – vertical integration is prohibited by law.
- They need to develop a large fuel retail network to sell fuel to.
- They buy from the international market below/on par with the regulated price (BFP) and sell to retail network at a full regulated margin.
- They sell to commercial businesses and export clients.
- They generate revenue from rental and franchise fees from the retail network



## MAJOR IMPORT REQUIREMENT

- Coastal Storage to store imported product and uplift for distribution.
- There is a need for more fuel storage tanks in Namibia.





## RETAILERS:

- Location determines traffic flow and, ultimately, volumes.
- The price at which you buy and resell fuel is regulated together with the retail margin.
- Customer service becomes a determining factor of how much volume to pump.



## 4. HOW WILL THE OIL DISCOVERY CHANGE THE NAMIBIAN MID&DOWNSTREAM SECTOR?



### SHORT-TERM:

- Based on “Production Well” to Barge/Crude Oil Tanker offshore operations.



- Government can generate revenue from royalties and taxes
- Revenue from crude oil can subsidize local pump prices through the National Energy Fund (Angolan model).



## MEDIUM TO LONG TERM:

Consider offshore pipeline, onshore crude oil storage facilities and a refinery:



- Requires massive investment.
- Local volumes are relatively small to justify a refinery.
- Namibia supply neighboring countries from refinery.
- Refinery will bring local pump prices down



# BUSINESS OPPORTUNITIES IN THE DOWNSTREAM SECTORS:



- Job opportunities – potential for massive expansion
- Distribution of fuel across the country (Wholesale License) – foreign transporters dominate the market
- Fuel Retailing (Retail License)
- Fuel storage facility (Wholesale License)





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**THANK YOU**