

# Financing Investments and Infrastructure: Availability and Accessibility

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**ARDA Executive Secretary**

**Nigerian Petroleum Downstream Industry and  
ARDA Virtual Workshop**  
**March 23<sup>rd</sup>, 2023**



**African Refiners & Distributors Association**  
جمعية المكررين والمسوقين الأفارقة  
**Association des Raffineurs & des  
Distributeurs Africains**

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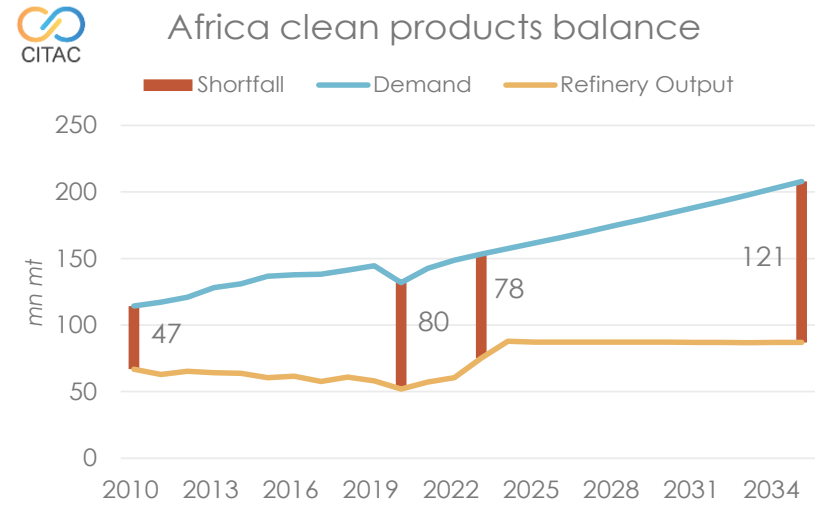
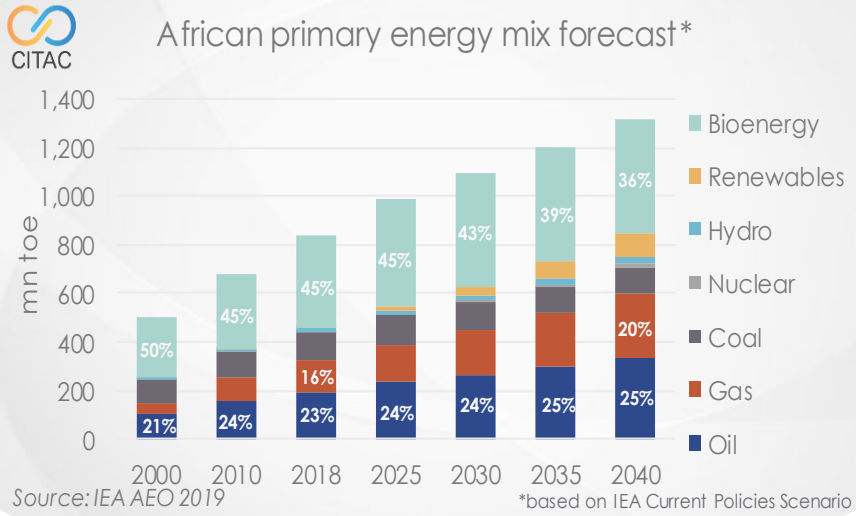
**The voice of african downstream oil**  
**La voix de l'aval pétrolier africain**  
صوت مصب النفط الأفريقي

# Introduction to ARA / ARDA

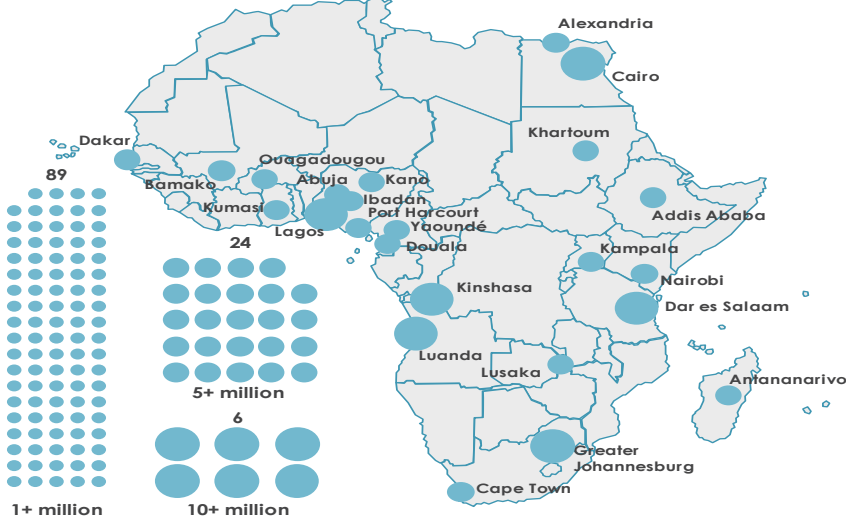
- ARA = African Refiners and Distributors Association ([www.arda.africa](http://www.arda.africa))
- Created in 2006; name changed in 2017 to reflect complete supply chain
- Acronym and logo changed from “ARA” to “ARDA” in October 2020
- **Role of the ARDA:**
  - Give unified voice to **African refiners** and independent **marketers, distributors** and **regulators**
  - Promote exchange of experience and best practices amongst all stakeholders
  - Champion efforts for investments across African Downstream supply chain
  - **Promote African Energy Security** – Maximize processing of African crude oil in African Refineries and transportation of cleaner fuels via integrated African Storage & Distribution infrastructure across the continent



# Africa's Growing Petroleum Products Demand must be met with Cleaner Fuels



## African Cities by population – 2035

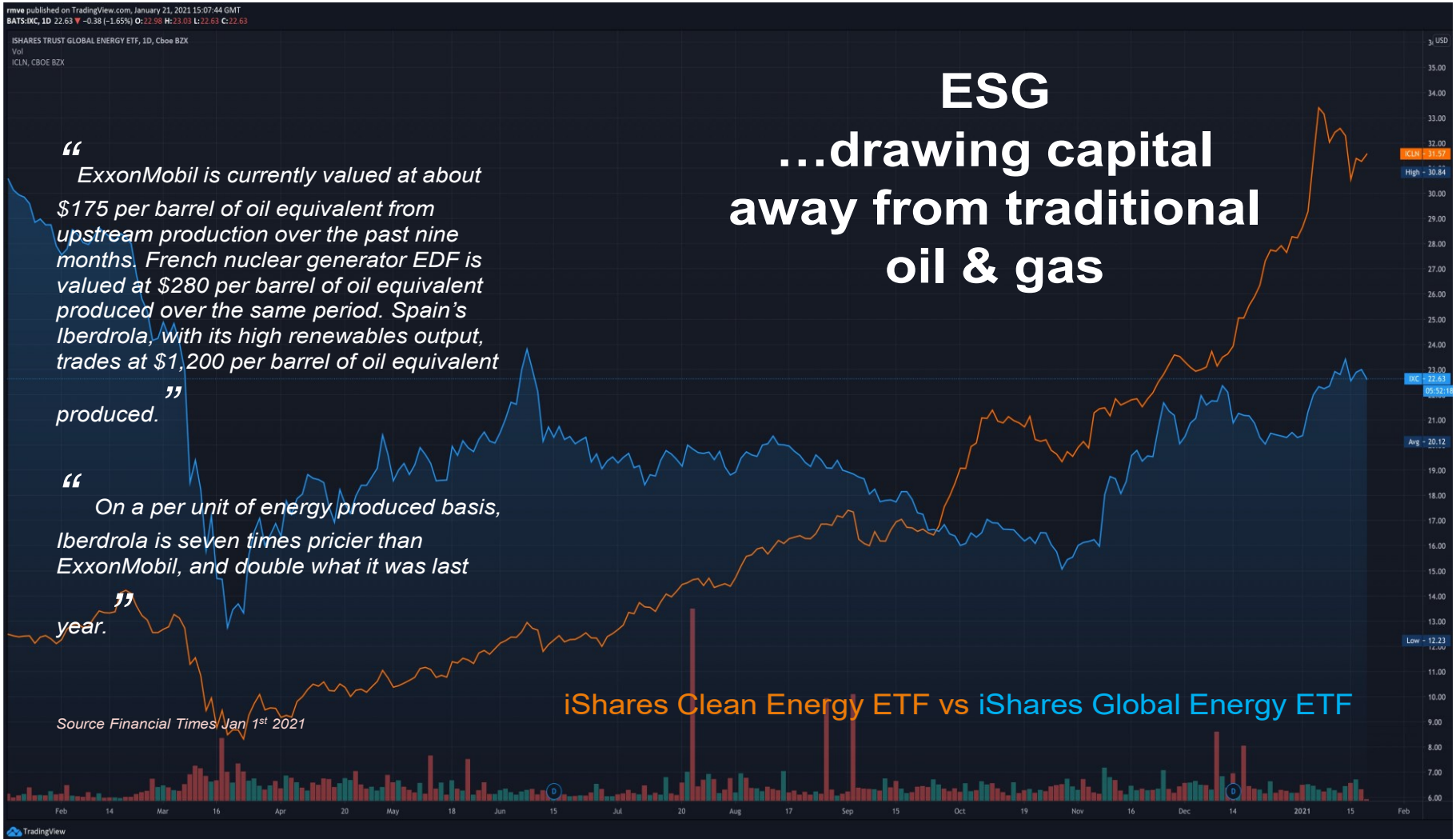


- Fossil fuels demand and products imports to grow over next two decades
- Major urban population growth to result in increased pollution
- Sustainable transition to cleaner fuels imperative to address public health issues

# ARDA Work Groups – Staffing

Work Group	WG Leader		WG Deputy Leader		Secretary
	Name	Company	Name	Company	
<b>Refining &amp; Specifications</b>	Daouda Kebe	SAR (Senegal)	Evans Mauta	Indeni (Zambia)	Georges Baou
<b>Storage &amp; Distribution</b>	Hippolyte Bassole	SONABHY (B. Faso)	Martin Wanyama	KPC (Kenya)	Jacques Cardeau
<b>Regulation</b>	Esther Anku	NPA (Ghana)	Lidia Ikapi-Neyer	SOGARA (Gabon)	Jacques Cardeau
<b>HSEQ</b>	Evans Mauta	Indeni (Zambia)	Armand Atte	SIR (Cote d'Ivoire)	Georges Baou
<b>Human Capital</b>	Bintou Kamara	PETROCI (Cote d'Ivoire)	Jessica Akintade	Sahara (Nigeria)	Huguette DOH
<b>LPG</b>	Emmanuel Omuojine	Rainoil (Nigeria)	Siriki Bamba	PETROCI (Cote d'Ivoire)	J.Marie Dervain
<b>Sustainable Financing</b>	<b>Anibor Kragha</b>	<b>ARDA</b>	<b>Reginald Crawford</b>	<b>Gemcorp (Angola, Liberia)</b>	<b>Huguette DOH</b>

# Environmental, Social & Governance (ESG) Issues are fundamental for accessing Finance



# What is ESG and Why is it Important?



## Environmental

- climate change
- resource depletion
- waste
- pollution
- deforestation



## Social

- human rights
- modern slavery
- child labour
- working conditions
- employee relations



## Governance

- bribery and corruption
- executive pay
- board diversity and structure
- political lobbying and donations
- tax strategy

Taken from UN PRI – “What is responsible investment?”

# Potential Sources of Financing for Downstream Projects

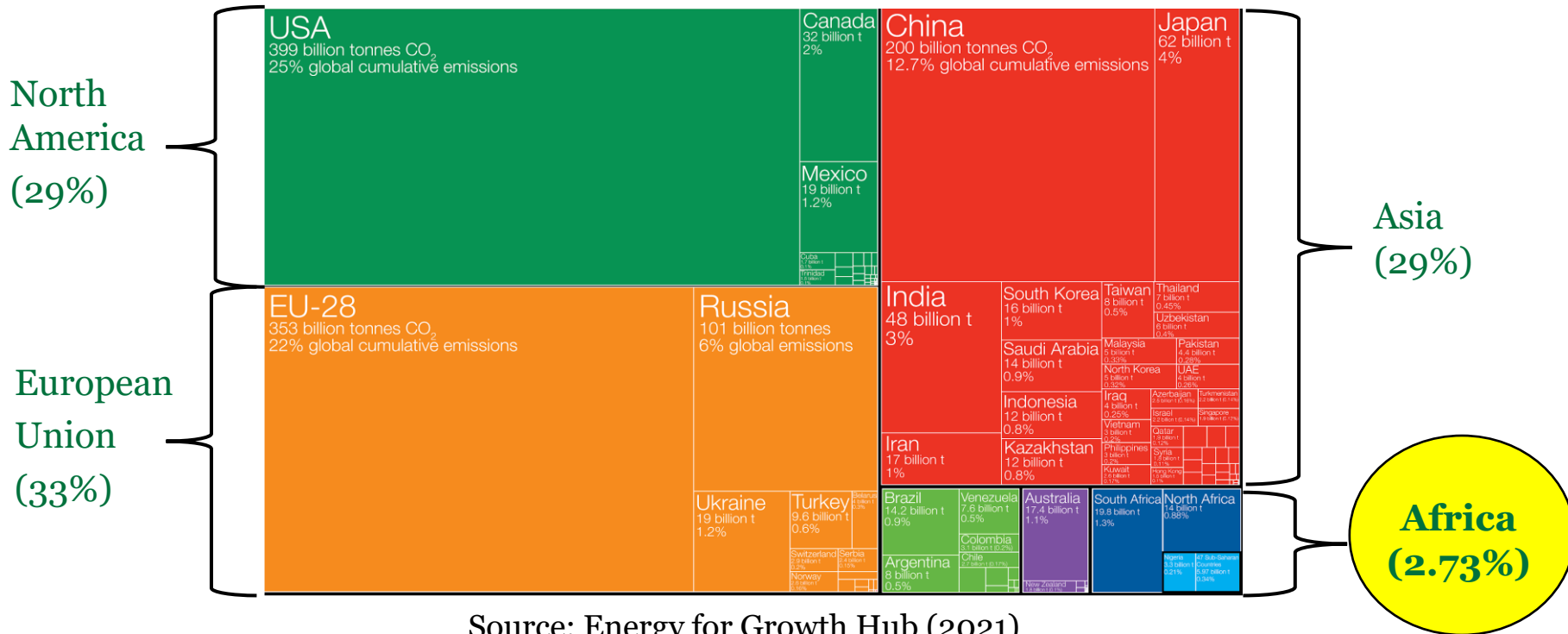


SOURCE	DESCRIPTION	INSTRUMENT
<p><b>BANK LOANS</b></p> <ul style="list-style-type: none"> <li>Commercial Banks</li> <li><i>Development Finance Institutions (DFIs)</i></li> <li><i>Export Credit Agencies (ECAs)</i></li> </ul>	<p>Senior-secured debt financing provided in local and/or foreign currency</p>	<ul style="list-style-type: none"> <li>Term Loans</li> <li>Receivables-backed Loans</li> <li>ECA-Covered Loans</li> <li>Limited Recourse Loans (with Trader)</li> </ul>
<p><b>Engineering, Procurement and Construction (EPC) Contractors</b></p>	<p>Debt financing - Usually arranged by EPC in partnership with its ECA or other local financial institutions</p>	<ul style="list-style-type: none"> <li>EPC Financing</li> <li>Supplier credit</li> <li>Mezzanine and/or quasi-equity</li> </ul>
<p><b>Specific-Purpose Funds</b></p>	<p>Funds set up by Governments, international organizations, multilateral &amp; financial institutions (long-term, competitive rates)</p>	<p>Intervention Funds</p>
<p><b>Commodity Traders</b></p>	<p>Secured and unsecured Debt Financing – typically tied to offtake agreement(s) and/or crude supply agreement (s)</p>	<ul style="list-style-type: none"> <li>Prepayment Financing</li> <li>Term Loans</li> <li>Mezzanine and/or quasi-equity</li> </ul>

# Unique Roadmap needed to ensure just, sustainable energy transition for Africa



Regional Contributions to cumulative global CO<sub>2</sub> emissions

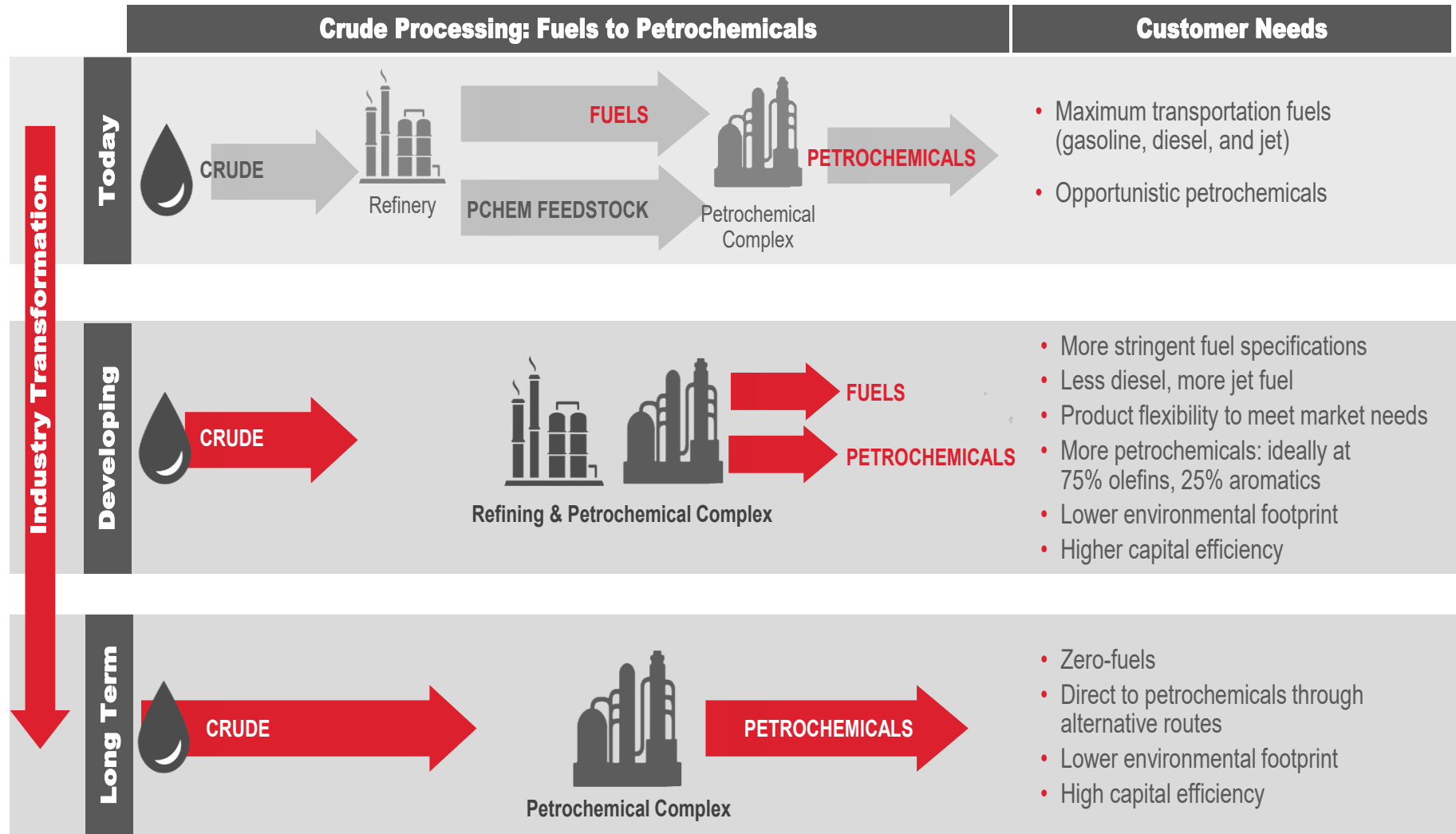


Source: Energy for Growth Hub (2021)

- Inclusive, equitable energy transition roadmap must be deployed that captures priorities, challenges and perspectives of Africa's low-emitting countries
- Roadmap must **not** prioritize near-term emissions reductions (with relatively little climate benefits) over support for economic development & energy transformation



# Future Refineries must maximize Value Addition via lower Carbon Footprint

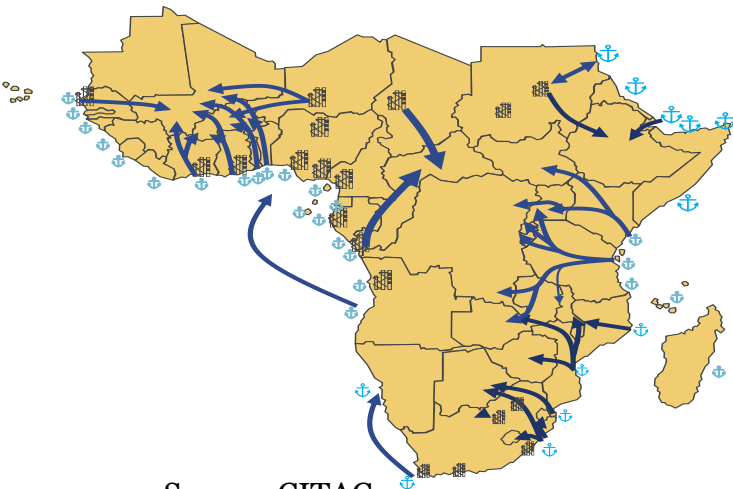


Source: Honeywell-UOP

# Coordinated Storage and Distribution Investments required to deliver Energy Transition Plans

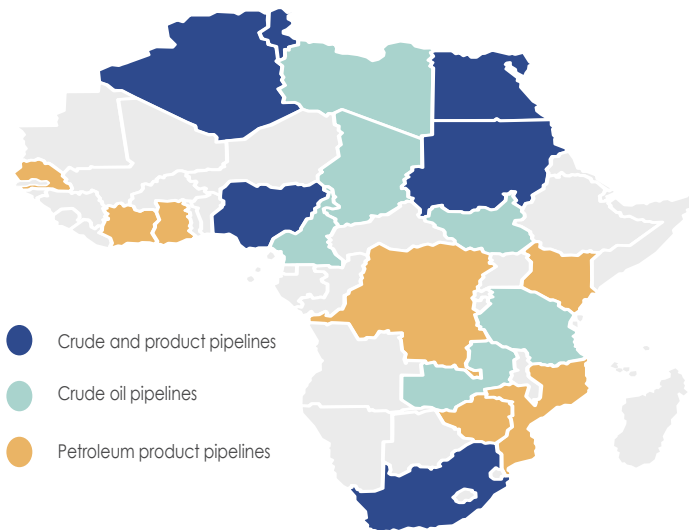


SSA Supply Routes



Source: CITAC

- Storage investments will be guided by:
  - Refining outlook per country
  - Existing capacity; hinterland supply routes
- Must invest in regional, pan-African oil and product pipelines
  - 6 countries with crude oil pipelines only
  - 8 countries with products pipelines only
  - 6 countries with both
- Deepwater ports in Africa will reduce congestion and shipping costs
  - Limitations in port infrastructure increase congestion; increase fuel costs
  - Minimum port draft of 14 meters can save US\$ 15 per metric ton of imported product



# Africa Energy Transition – Plans for Cleaner Fuels, Power and Renewables must be treated differently



## TRANSPORT AND COOKING FUELS

- **Refinery Upgrades to produce cleaner fuels and Petrochemical Projects**
- Initiative(s) to replace biomass with LPG as cooking fuel
- Storage and Distribution (S&D) infrastructure investments

## NEW ENERGIES FOR TRANSPORT

- Local production, imports, blending and refining of biofuels
- Ammonia and Hydrogen for land and marine use
- Sustainable Aviation Fuels (SAF)

## POWER

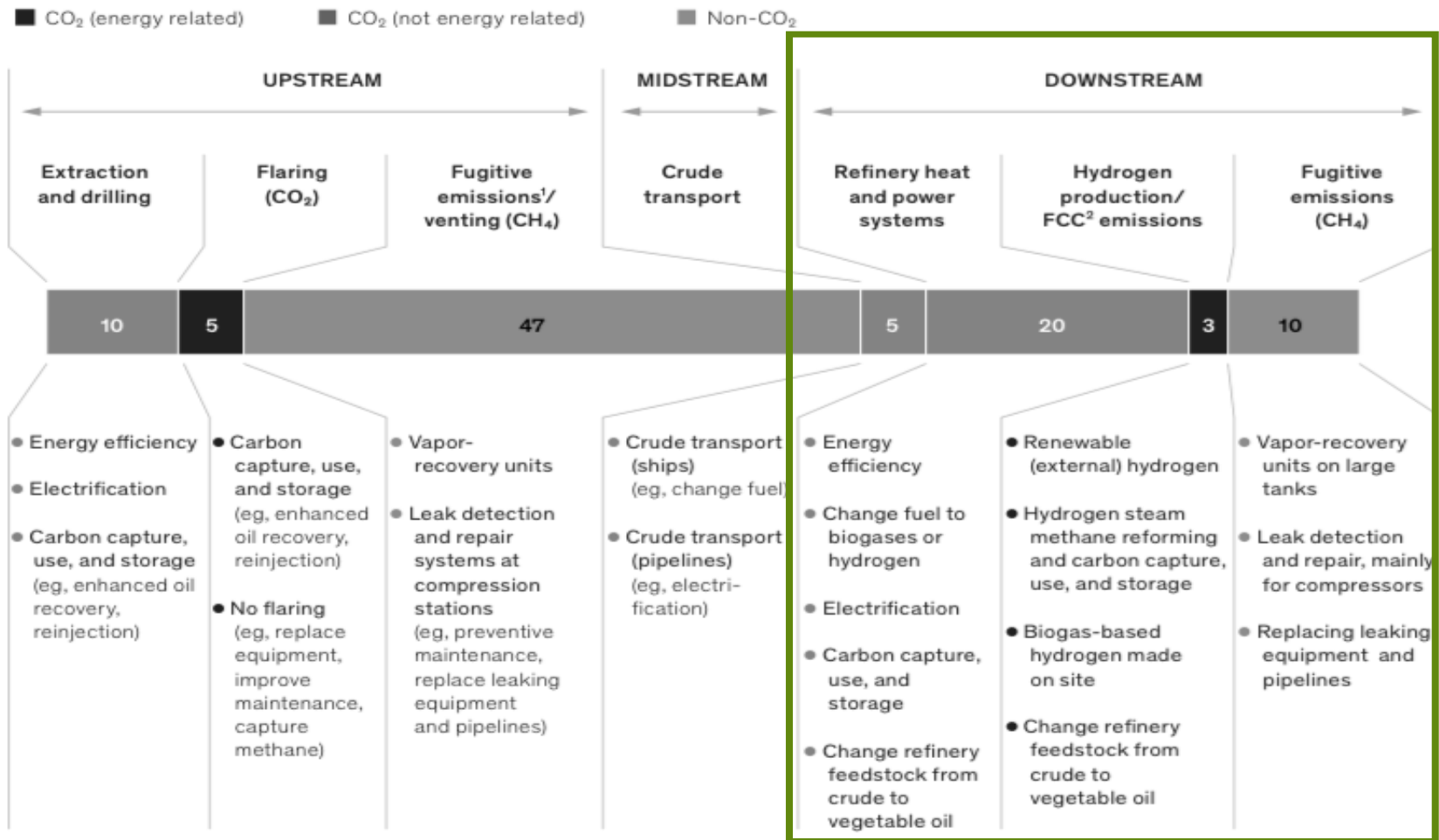
- Focus on natural gas & renewables as near-term, cleaner primary energy source(s) for Africa, replacing coal & oil
- Power transmission upgrades
- Support domestic & industry demand before EVs

**Government policies and public financing critical for success**

# Current technologies can address most of the oil and gas industry emissions

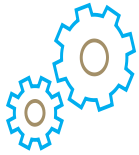


Emissions by source, share, and possible solutions, %



Source: VITOL

# Funding for Refinery Decarbonization Projects

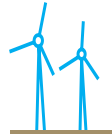


**Process/energy efficiency**

Scope 1

Operate in yield/energy efficient manner, electrification of drivers

Monitor, report and act



**Renewable power**

Scope 2

Renewable power provides a proven technology solution plus integral part of H<sub>2</sub> economy



**Hydrogen economy**

Scope 1 & 3

Green or blue hydrogen projects enable fuel switching to take place and support low carbon feedstocks



**Low carbon feedstocks**

Scope 3

Renewable fuels and low carbon products



**Circular economy**

Scope 3

Integration of chemical recycling of plastics and other waste feedstocks within the refinery / petrochemical / polymer supply chain

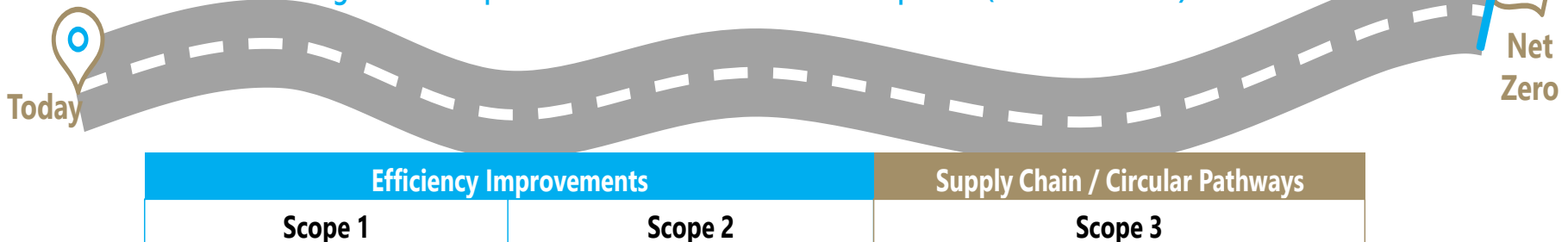


**Carbon capture utilization and storage**

Scope 1,2&3

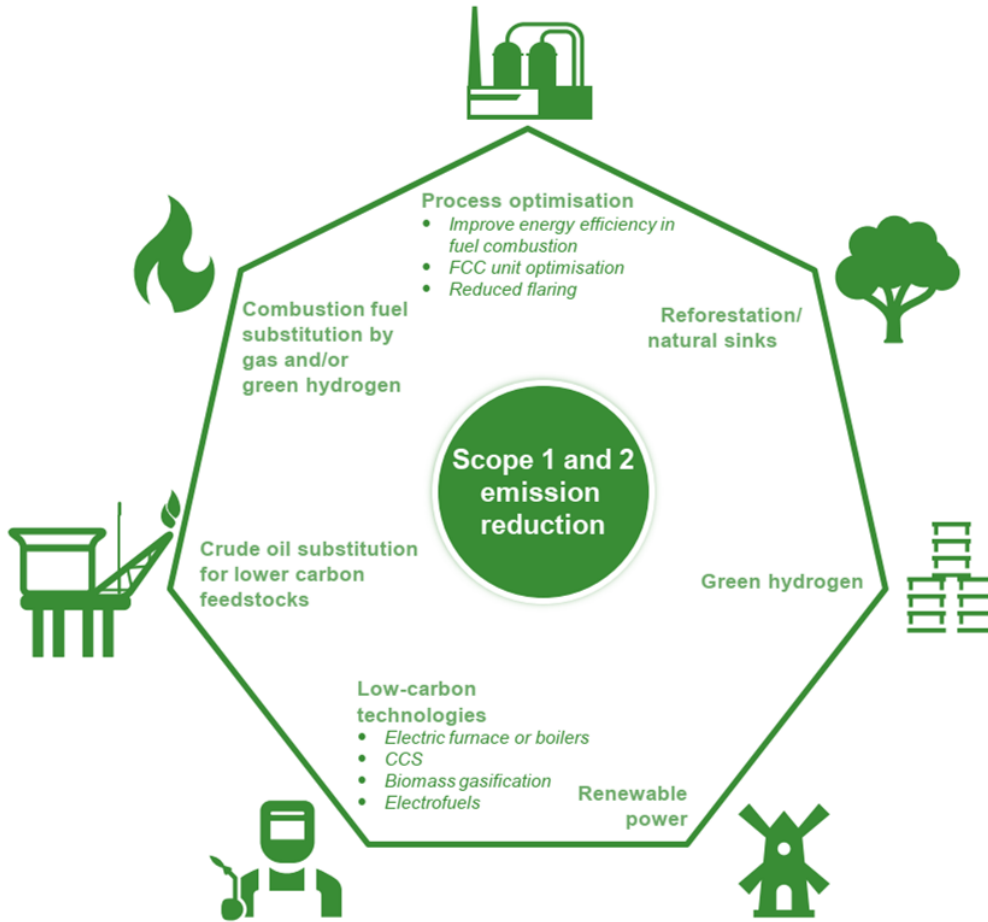
Match sources of CO<sub>2</sub> against sinks; integration within industrial hubs

underpinned by understanding of regional energy policy/regulations, digitalization advances, monitoring and reporting, appreciation and access to technology innovation and funding, supporting organizational governance plus realistic business case development (CAPEX & OPEX)



**Source: Advisian**

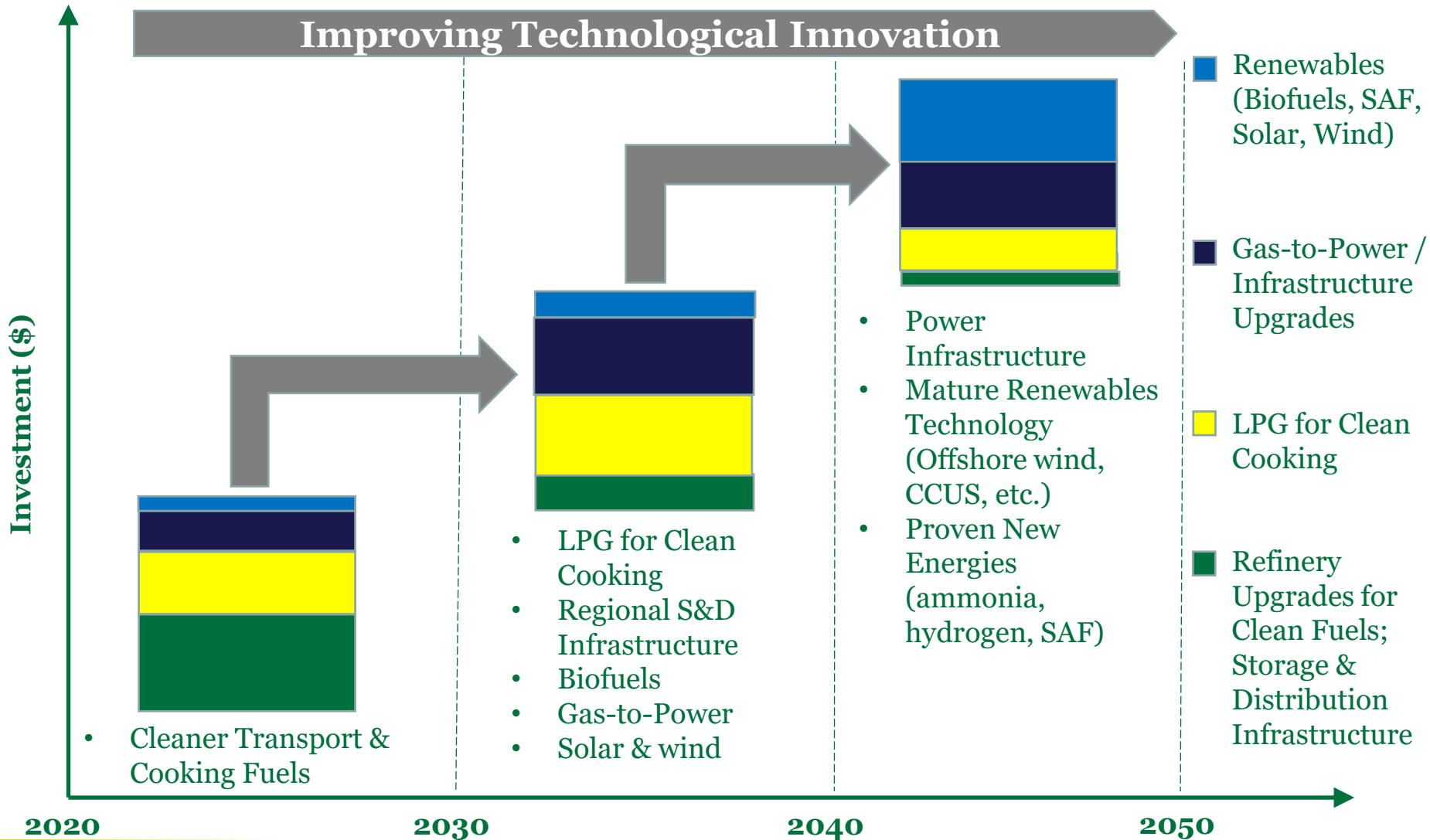
# Carbon Mitigation Strategies are key for long-term Refining Sustainability and for securing Financing



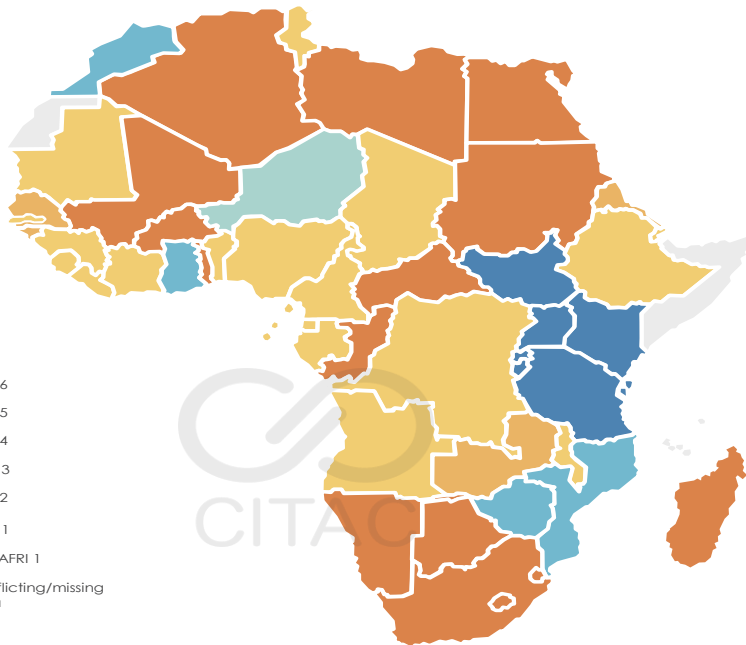
Source: VITOL

- Refineries play central role in global emissions as emitters of CO<sub>2</sub> and suppliers of fossil fuels.
- Regulation will increasingly affect profitability of refining companies in selected regions, and impact long-term demand patterns.
- Top performers in refining sector mitigate downside risks through internal-abatement efforts and new value creation opportunities
- **ARDA and SIR Refinery completed Phase 1 of Carbon Abatement Project in 2022**

# African Energy Transition – A Tale of Three Decades



# ARDA Fund for Refinery Upgrades for Clean Fuels, S&D Infrastructure and Petrochemicals Projects



REGION	COST ESTIMATE (+/- 50%)
North Africa	US\$ 5.955 Billion
West & Central Africa	US\$ 6.285 Billion
East & Southern Africa	US\$ 3.415 Billion
<b>GRAND TOTAL</b>	<b>US\$15.655 Billion</b>

Source: CITAC – Cost Estimates for Refineries to produce AFRI-6

## ARDA FUND FOR BANKABLE AFRICAN DOWNSTREAM PROJECTS

1. ARDA-endorsed African Refinery projects that deliver cleaner fuels and reduce carbon emissions while reducing petroleum products imports
2. Strategic Storage & Distribution infrastructure investments across Africa
3. Petrochemical Projects for value addition and reducing carbon footprint



# Dedicated Africa LPG Sector Development Fund

## Background

- ARDA, GLPGP and Standard Bank proposed Fund in 2Q 2021 to deploy financing for rapid scale up of clean cooking with LPG in SSA
- Fund to provide critical mass of technical advice and financing for qualified countries via national LPG sector ecosystems

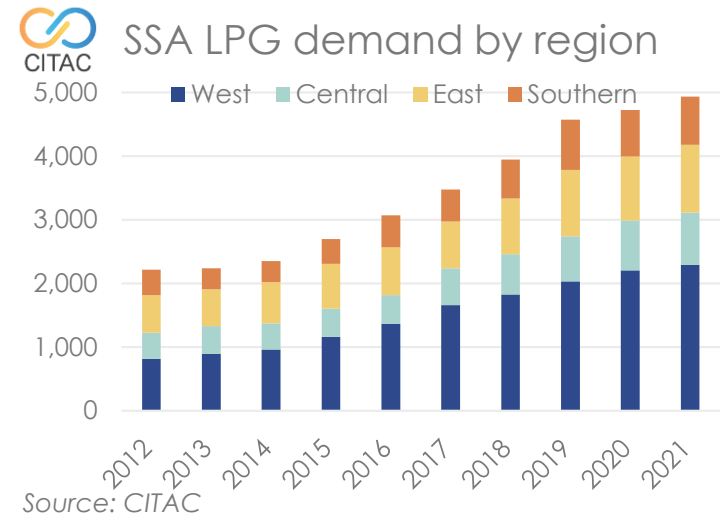
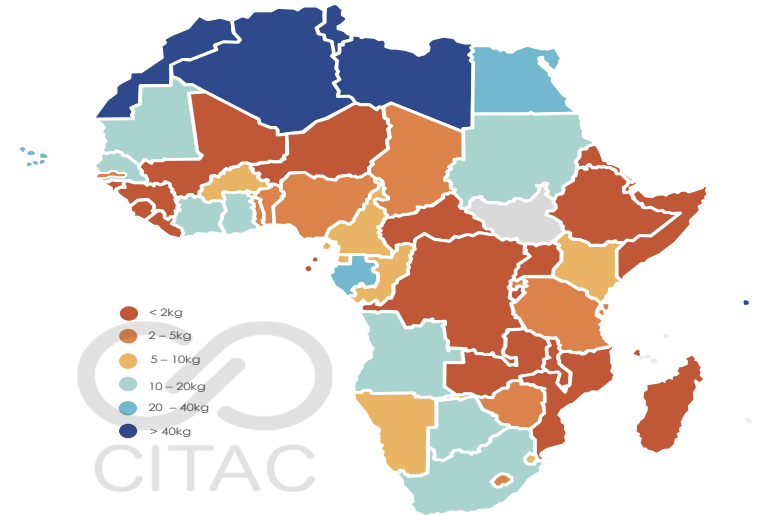
## Current Status

- Gas now viewed as essential transition fuel
- IFC awarded GLPGP multi-country study to assess enabling environment for LPG projects
- ARDA/GLPGP re-engaging on Fund for execution of LPG and BioLPG projects

## Next Step

- **Engage DFIs to support LPG Sector Fund**

Africa LPG per capita consumption (2021)



# Key Takeaways

- Africa's growing energy demands must be met with cleaner fuels to address pollution and public health issues
- ESG and Energy Transition / Carbon Emissions Mitigation considerations are critical for securing project financing going forward
- Complementary traditional and non-traditional funding sources required to execute critical downstream projects
- Measured, decade-by-decade Sustainable Finance Plan required to ensure investments are made to deliver unique African Energy Transition Plan(s)
  - Coordinated refinery upgrade and S&D infrastructure projects are critical
- ARDA committed to securing project financing for strategic opportunities in African Downstream oil sector
  - Funds for Refinery Upgrades for Clean Fuels, Storage & Distribution Infrastructure & Petrochemicals and LPG Sector Development

# Thank You for your Attention





# 2021 ARDA Virtual Work Group Workshop Series

S/N	Work Group	Date	Theme
1	LPG	April 27	Building an African Market for African LPG – Collaboration on Continent-Wide Production, Aggregation, Logistics, Risk Mitigation, Financing and Market Development
2	Storage & Distribution	April 29	Developing a robust Storage & Distribution Roadmap to ensure a world-class African Petroleum Products Supply Chain
3	Refining & Specifications	May 25	Upgrading African Refineries to produce Cleaner Fuels
4	HSE & Quality	May 27	HSEQ as a License-to-Operate Issue for African Downstream Operations
5	Human Capital	June 22	Strategic Human Resources - Aligning Human Capacity Development Objectives with Business Goals
<b>6</b>	<b>Sustainable Financing</b>	<b>June 24</b>	<b>Sustainable Finance Plan for Africa</b>
7	Regulation	July 27	Role of Regulators in ensuring Compliance with AFRI Fuels Roadmap

# Agenda – Sust. Financing Workshop (June 24, 2021)

SESSION	TOPIC(S)	SPEAKER(S)
<b>09:30-11:00</b> <b>Structuring Project Financing for Downstream Investments</b>	<ul style="list-style-type: none"> <li>• Considerations for Structuring Project Financing</li> <li>• Alternative Financing Solutions – Monetizing Gas Flaring</li> <li>• Equator Principles &amp; ESG Considerations for Financing</li> </ul>	<ul style="list-style-type: none"> <li>• Adil Kurt-Elli (Aldersmead)</li> <li>• Mark Davis (Capterio)</li> <li>• Paul Davies / J-P Sweny (Latham &amp; Watkins)</li> </ul>
<b>11:00 – 12:30</b> <b>Case Studies – Project Financing across African Downstream</b>	<ul style="list-style-type: none"> <li>• Project Financing for SIR</li> <li>• Case study: Project Financing across African Downstream</li> <li>• Project finance experience: Process &amp; Main Challenges</li> <li>• Project Finance and Sustainable Financing in Oil &amp; Gas Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• Shayo Olumide (AFC)</li> <li>• Richard Egan (Vitol)</li> <li>• Fabrizio Miele (Tecnimont)</li> <li>• Dele Kuti (Standard Bank)</li> </ul>
<b>13:30 – 15:00</b> <b>Sustainable Finance Plan for Africa</b>	<ul style="list-style-type: none"> <li>• Sustainable Financing Plan for Africa in field of Energy &amp; Infrastructure</li> <li>• Sustainable Finance Plan for Africa</li> <li>• Resource Mobilization Plan</li> </ul>	<ul style="list-style-type: none"> <li>• Hughes Goa (ECOWAS)</li> <li>• Rene Awambeng (Afrexim Bank)</li> <li>• Adil Kurt-Elli (Aldersmead)</li> </ul>

# 2022 ARDA Virtual Work Group Workshop Series

S/N	Work Group	Date	Theme
1	LPG	April 21	LPG Adoption as Driver for Africa's Cleaner Energy Transition
2	Storage & Distribution	April 28	Reducing Carbon Footprint of Africa's Storage & Distribution Supply Chain
3	Refining & Specifications	May 12	Refineries of the Future – Delivering Cleaner Fuels via Efficient, Lower Carbon-Intensive Operations
4	HSE & Quality	May 31	Developing Robust ESG Best Practices for the African Downstream
<b>5</b>	<b>Sustainable Financing</b>	<b>June 23</b>	<b>Strategic Options for Financing Energy Transition in the African Downstream</b>
6	Human Capital	June 30	Future-Proofing Operations – Upgrading Skills to deliver High Performance during Energy Transition
7	Regulation	September (GhipCon)	Regulatory Frameworks to support Execution of African Downstream Energy Transition Roadmap

# Agenda – Sust. Financing Workshop (June 23, 2022)

SESSION	TOPIC(S)	SPEAKER(S)
<b>09:30-11:00</b>  <b>Development of Finance Plan to support African Downstream Energy Transition Roadmap</b>	<ul style="list-style-type: none"> <li>AFC Infrastructure Climate Resilient Fund</li> <li>Finance Plan for African Downstream Energy Transition</li> <li>Finance Plan to support African Downstream Energy Transition Roadmap</li> </ul>	<ul style="list-style-type: none"> <li>Ayaan Adam (AFC Capital Partners)</li> <li>Yann Rogombe (FEDA Group)</li> <li>Rene Awambeng (Afreximbank)</li> </ul>
<b>11:00 – 12:30</b>  <b>Implementation of Carbon Abatement Projects in African Refining Sector</b>	<ul style="list-style-type: none"> <li>Carbon Abatement Projects in Africa: A Responsibility that brings Opportunity</li> <li>Strategic Decarbonization Options for Oil Refineries</li> <li>Cabinda Oil Refinery Net-Zero Emissions by 2050 Plan</li> </ul>	<ul style="list-style-type: none"> <li>Michael Curran and Maryro Mendez (Vitol)</li> <li>Nicola Knight and Francisco Alanis (Advisian)</li> <li>Reginald Crawford (Gemcorp)</li> </ul>