



ACQUISITION OF STAKES IN AKER AND AGM BLOCKS BY GNPC EXPLORCO



July 2021

Energy Transition ...an intro



- Changing trends in energy investment
- Shift from fossil-based fuels to renewables
- Reduction in supply of fossil fuel
- **Reduced IOCs investments** in hydrocarbon production at a time of depleting resources in developed countries' oil fields

The Hypocrisy of the West ...

- Advanced countries developed their economies using **profits** from oil and gas
- Having depleted their oil and gas resources, developed countries are now **investing in renewables using profits from oil and gas**
- Advanced countries are focused on persuading emerging oil and gas producers to:
 - Leave their newly found hydrocarbons **stranded**
 - **Borrow** from **them** to develop renewable energy
- Developing countries contribute only **3% to global carbon emissions (IEA, 2019)**

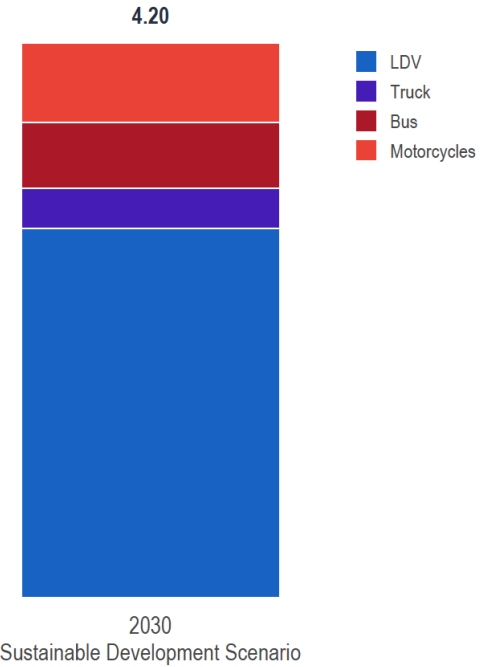
Demand for Hydrocarbons

- There will still be **increase in demand** over the next 30-40 years (Slide 5)
- Reasonably **high prices** will prevail
- Producing countries stand to **gain increased revenue for development**

Demand growth expected to surpass reduction in demand from substitution to electric cars

Demand growth (million barrels) to increase by 5 million barrels by 2030

Reduction in demand from electric cars reduce demand by 4 million barrels by 2030








Source: Lambert Energy Advisory Report (July 2021)






- Demand loss to electric cars more than offset by demand growth from Asia



Energy Transition and Decline in Production of Oil – Stranded Assets

Source	Comment
 , 2020	Are Oil and Gas turning into stranded assets?
 2021	Shell Ordered by Dutch Court to cut Carbon Emissions
 , 2020	We believe that oil assets are now stranded under the ground by lack of investment as well as investments constraints – well before demand strands them
 ,2020	Companies that fail to diversify their revenue stream may find their investments in developing oil and gas reserves may eventually end up as stranded, nonproductive assets
 2019	With the rising pressure of decarbonization and energy transition, companies that own untapped fossil fuel reserves may be exposed to stranded asset risk

Majors are shifting away from oil and gas

Company	Comments
	<p>Will decrease oil and gas production by 40% over 10 years and will not explore in any new countries in an official statement on August 2020.</p>
	<p>Not initiating any new exploration projects after 2025 and has been ordered by a court in The Netherlands to ensure a 45% reduction in the 2019 CO₂ emission levels by 2030. This will require Shell to reduce production of fossil fuels. Shell targets to become a net-zero carbon emissions energy company by 2050.</p>
	<p>Actively pursuing divestments, which may partly explain their decision to leave Ghana and Mauritania. Prior to this, ExxonMobil has appointed two activist board members fueling shift in strategy towards sustainable energy focused increased investment.</p>
	<p>Recently changed their name to TotalEnergies in their ambition to reinvent themselves and become a world class player in the energy transition.</p>
	<p>Considering spinning off oil and gas operations in West Africa and Middle East into new joint ventures to help reduce debt and fund its shift to sustainable energy.</p>

Implications of the Energy Transition for Emerging Oil Producing Countries

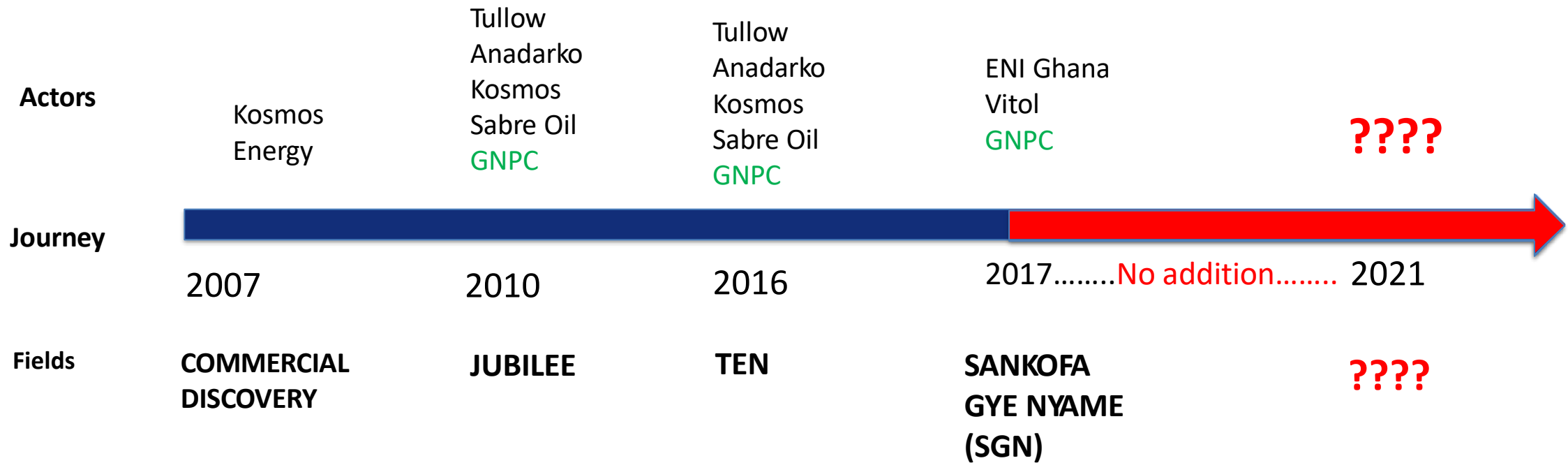
- Stranded hydrocarbon resources. Why?
 - Lack of capital to invest
 - Lack of operating capacity of NOCs
- Ghana is not an exception

What Should Ghana Do?

- GoG should support GNPC to accelerate its drive towards operatorship

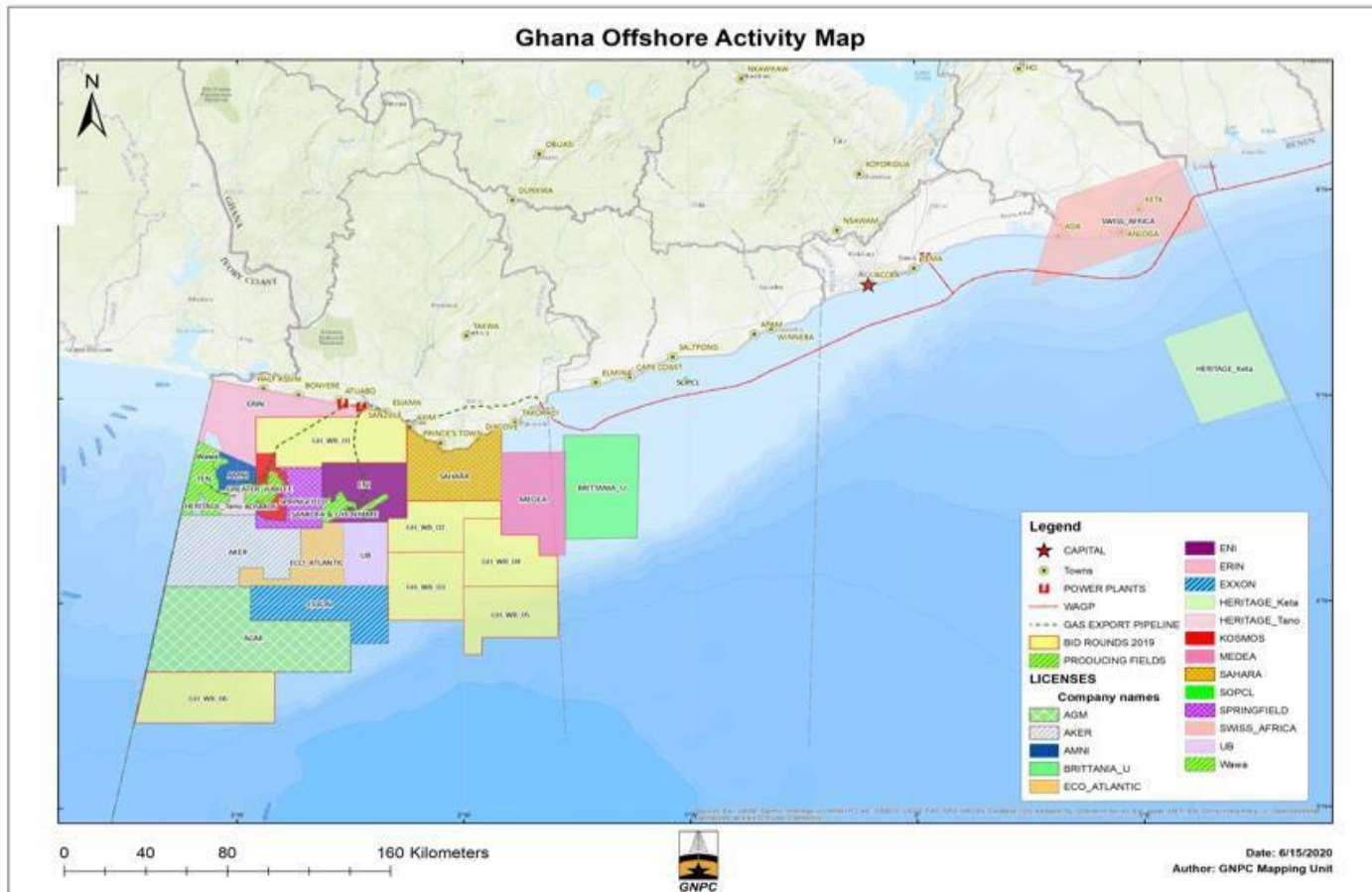
*To be revisited in Slide 16

EVOLUTION OF OIL & GAS PRODUCTION IN GHANA: 2010-2021





- No new development resulting in production from 2017 to 2021 by  Administration



Multiple Oil blocks – limited activity











- Eighteen (18) petroleum agreements (PAs). **Significantly, the only PA signed from 2017 to 2021 is Exxon Mobil**
- **Three (3)** producing fields – Jubilee, TEN, SGN
- **Five (5)** discoveries from 2017 to 2021 –Aker, AGM, Springfield, ENI Block 4 (2 fields),
- **Eleven (11)** with limited or no activity

EXPLORATION UPDATE-GHANA

Petroleum Agreements –Active		
		
1	West Cape Three Points (Kosmos)-2004	SDWT(AGM)-2013
2	Offshore Cape Three Points (Eni)-2006	ESWT (Base Energy)-2015
3	Deepwater Tano Cape Three Points (Hess Exploration /Aker)-2006	Deepwater Cape Three Points West (Eco Atlantic)-2015
4	Deepwater Tano (Tullow)-2006	Central Tano (Amni)-2014
5		WCTP Block 2 (Springfield)-2016
6		OSWT (GOSCO)-2015
7		East Keta (GOSCO)-2015
8		Cape Three Points Block 4(Eni)-2016
		East Cape Three Points (Medea)-2013

Petroleum Agreement-Terminated/Withdrawn	
	
DWCTP (Exxon)-2018	CTPS (UB Resources)-2015
	Southwest Saltpond (Britannia-U)-2014
	Keta Delta (Swiss Africa)-2016
	Shallow Cape Three Points (Sahara)-2014

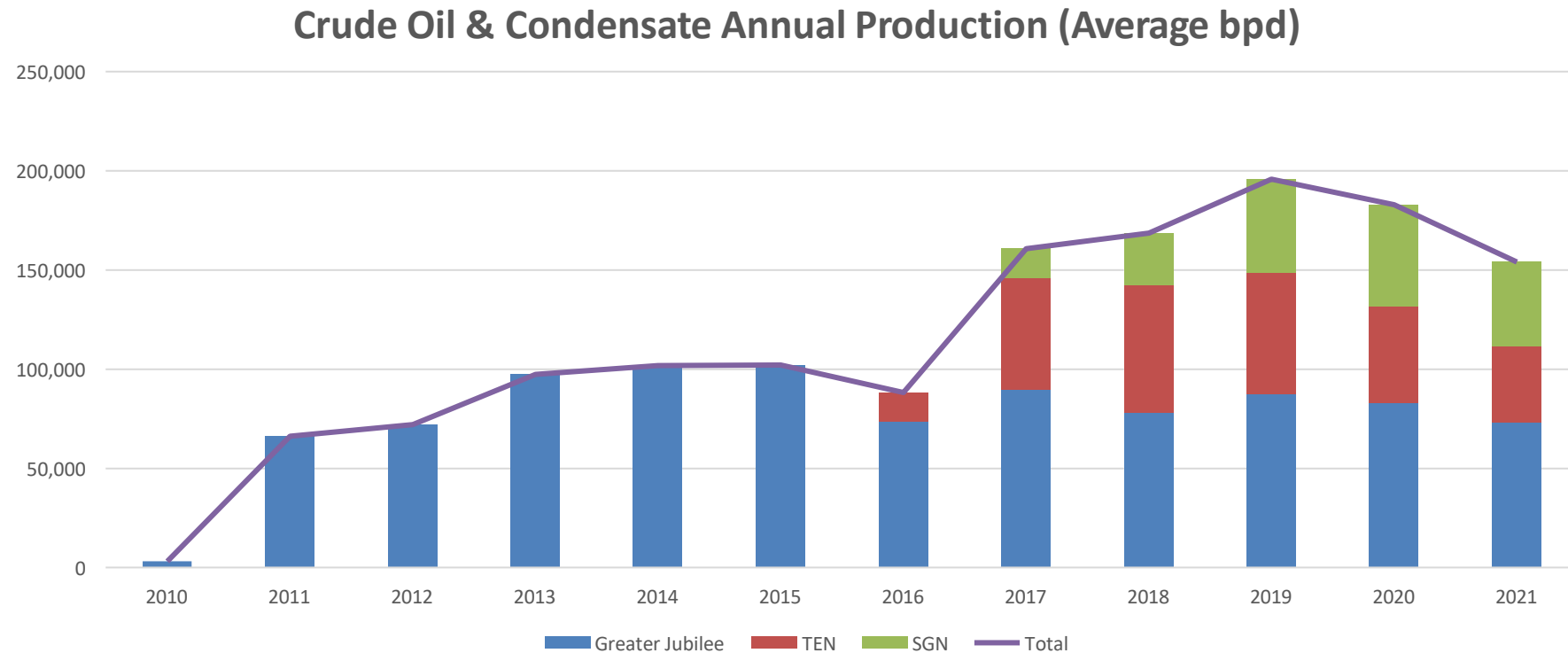
Oil Discoveries Since 2017	
DWTCTP-Aker (Pecan Southeast) - 2018	
SDWT-AGM (Nyarkom)-2019	
WCTP Block 2-Springfield (Afina) -2019	
CTP Block 4-Eni Ghana (Akoma) -2019	
CTP Block 4-Eni Ghana (Eban)-2021	

Producing Fields	Year	
Jubilee	2010	
TEN	2016	
Sankofa Gye Nyame	2017	

Crude Oil and Condensate Production: 2010 - 2021

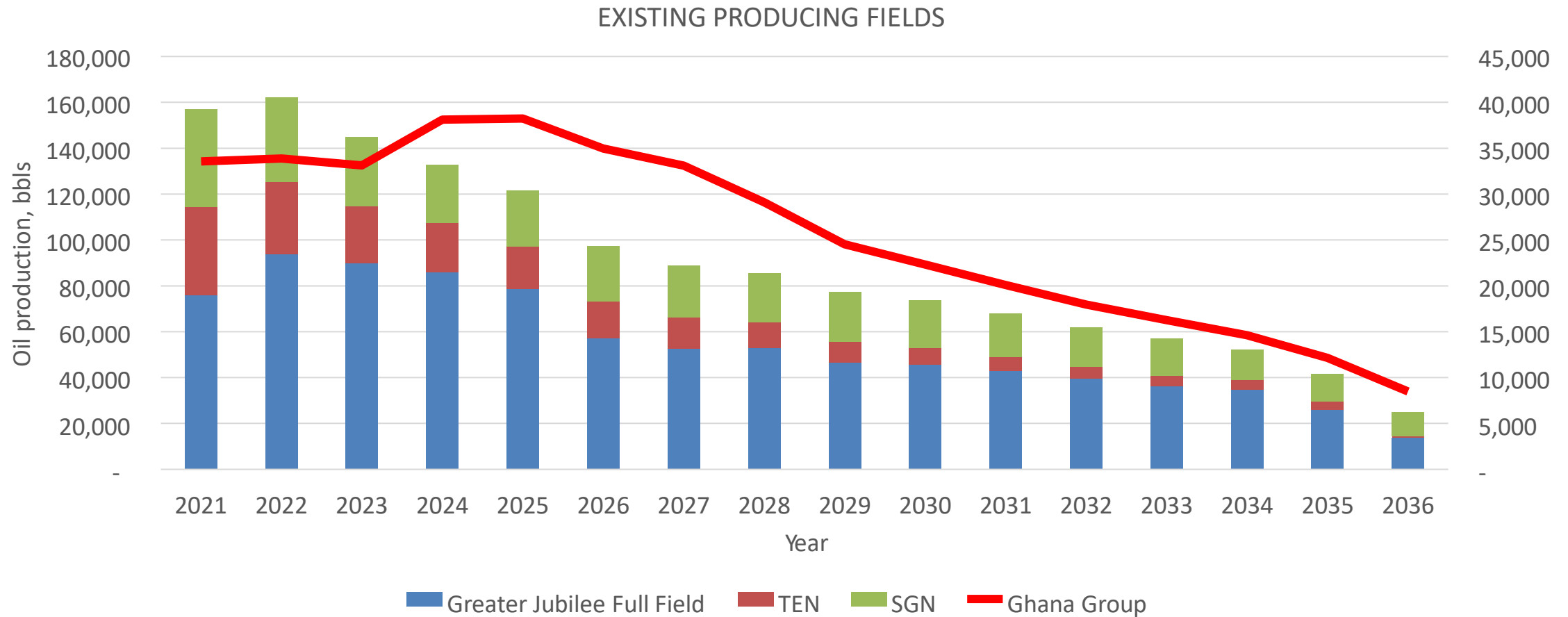
Crude Oil & Condensate Annual Production (Average bpd)				
Years	Greater Jubilee	TEN	SGN	Total
2010	3,236	-	-	3,235.86
2011	66,290	-	-	66,290.12
2012	72,195	-	-	72,195.28
2013	97,500	-	-	97,500.16
2014	101,922	-	-	101,922.44
2015	102,130	-	-	102,130.00
2016	73,720	14,525	-	88,245.30
2017	89,725	56,034	14,947	160,706.00
2018	77,973	64,548	26,119	168,639.76
2019	87,439	61,148	47,135	195,722.00
2020	83,127	48,641	51,088	182,855.77
2021	73,050	38,500	42,500	154,050.00

Production per field from 2010 to 2021



- Jubilee production started declining in 2016.
- TEN production started declining in 2019
- Production from SGN also started declining in 2021
- Total production started declining from 2020.

Oil production going forward is expected to decline



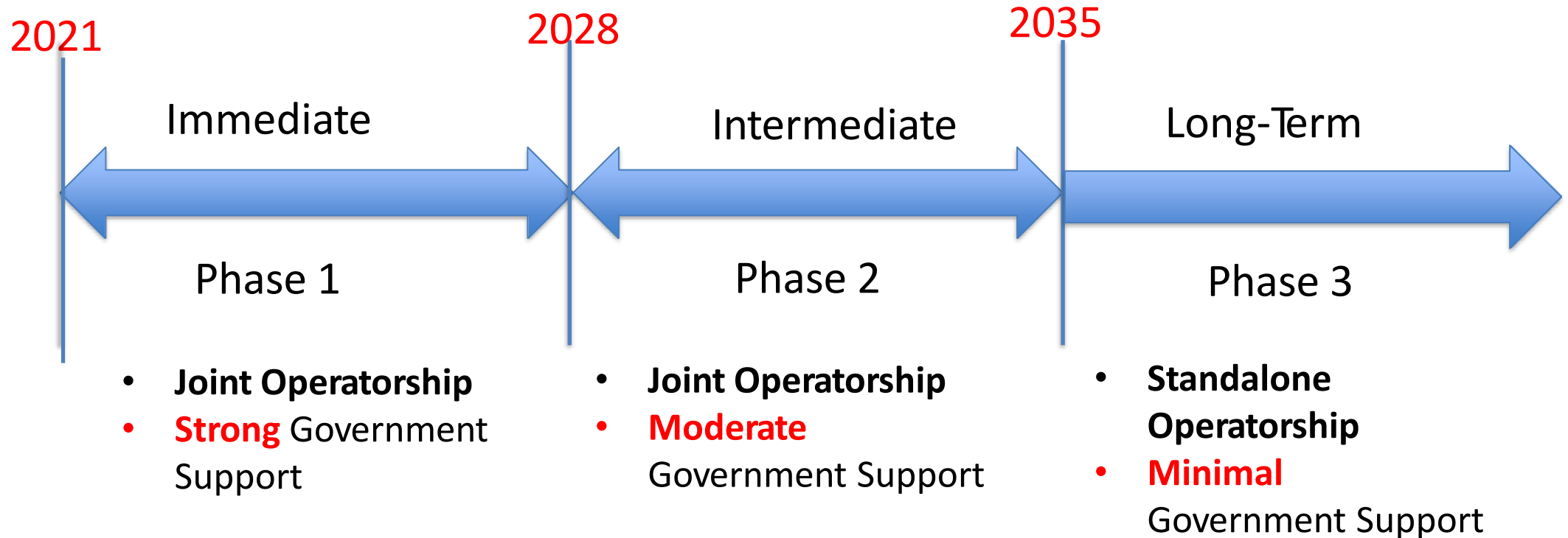
- After 2023 production levels **begin to decrease**
- Oil production is expected to decline **if nothing is done.**

Reasons For Decline in Production

- Technical challenges
- No new field has been developed since 2017
- Lack of investment for new developments due to Energy Transition – e.g. **ExxonMobil in Ghana and Mauritania**

What should be Ghana's Response?

- **Build capacity of GNPC to become Operator**
- **Phased process**





Aker & AGM Blocks

Resource in the DWT/CTP and the SDWT Blocks

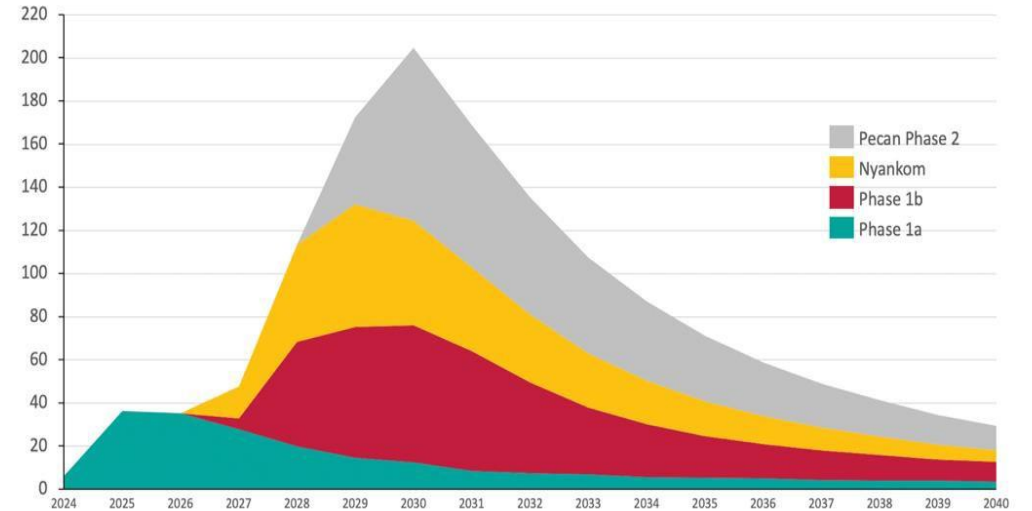
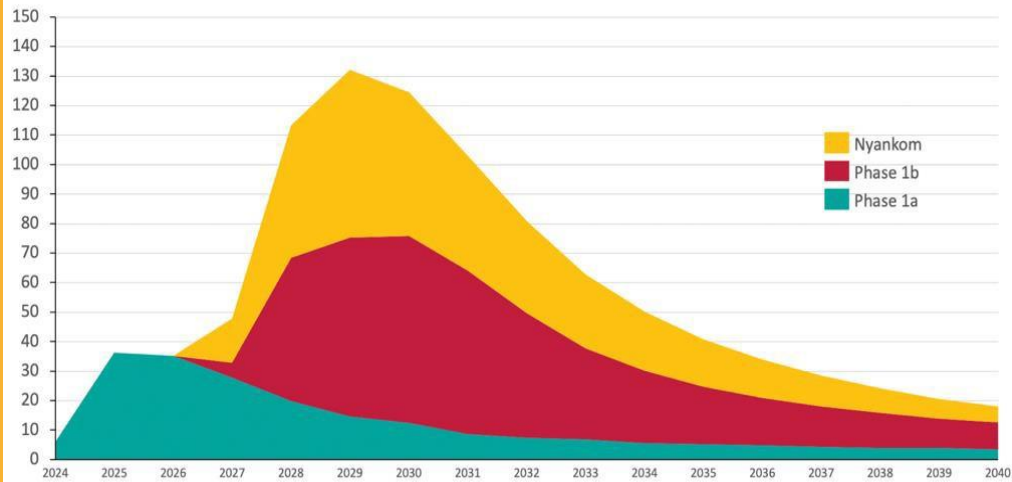
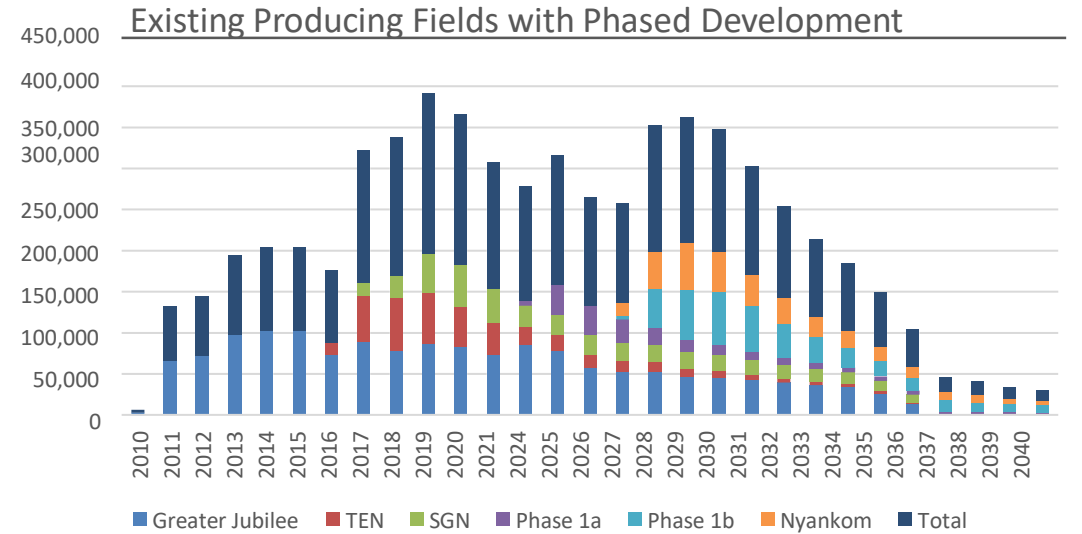
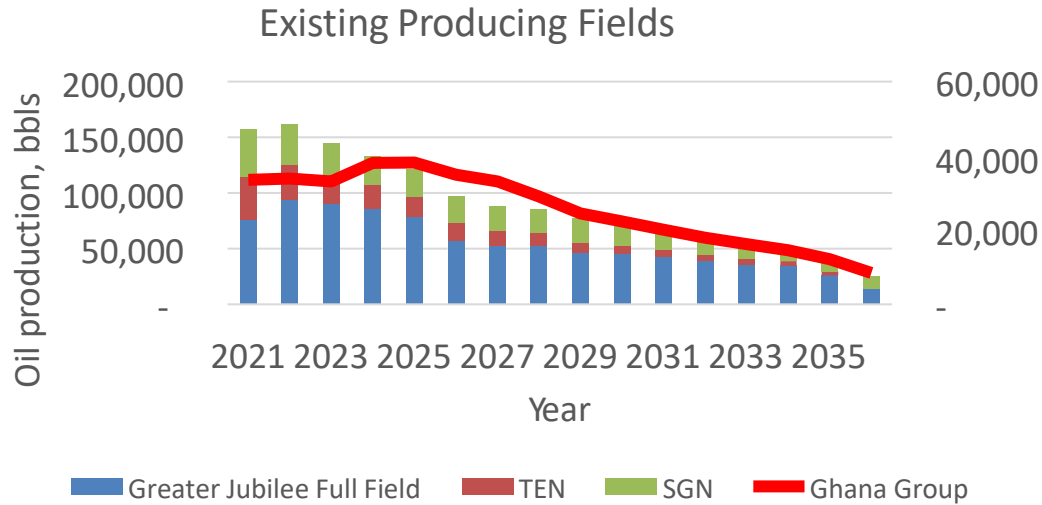
Block	Contingent Resources MMbls	Prospects MMbls	Contingent + Prospects MMbls
DWT/CTP	550	400	950
SDWT	167	4000	4167
Total	717	4400	5117

- Contingent resources of 717 million barrels confirmed
- Substantial prospects in the two blocks especially SDWT

Phased Development of DWT/CTP and the SDWT Blocks

Development Sequence	Field	FID	First Oil	Volumes Bbl/day
First	Pecan Phase 1A	2022	2024	40,000
	Pecan Phase 1B	2022	2027	40,000
Second	Nyankom (fast-track)	2024	2027	60,000
Third	Pecan Phase 2	2027	2030	60,000
Total				200,000

Phased Development (continued)



- Developments will arrest the decline in production.

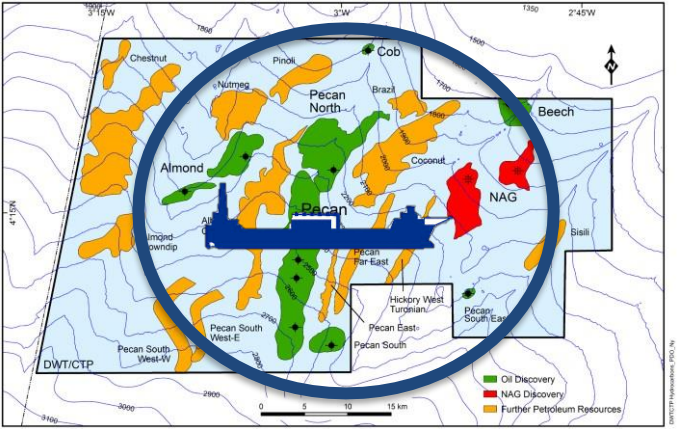
Development Strategy

Pre-Covid: Area development approach using large FPSO with a breakeven of US\$45/bbl. **Less robust to oil price volatility**

Onset of Covid-19: Phased Development approach with multiple smaller FPSOs. **More robust to oil price volatility** with breakeven of US\$30/bbl

Change in approach in the Pecan Field development after COVID-19 has made the development more robust

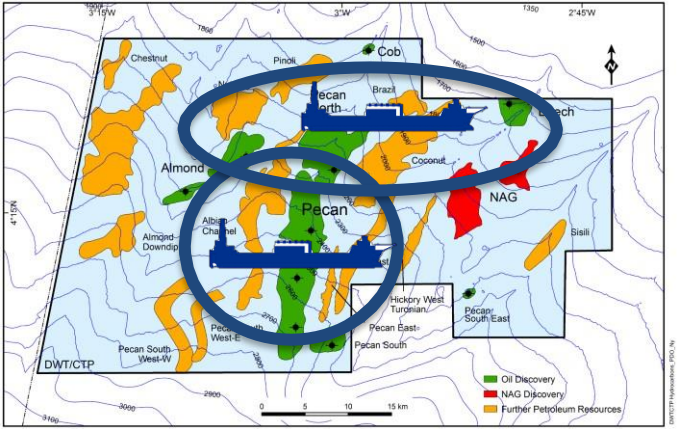
PRE-COVID



The map shows the Pecan field with various sub-fields labeled: Chestnut, Pecan North, Pecan, Pecan South, Almond, NAG, Beech, and others. A large blue circle encompasses the central area, indicating a single FPSO approach. A legend at the bottom identifies green as Oil Discovery, red as NAG Discovery, and yellow as Further Petroleum Resources.

Area approach with one big FPSO
Breakeven of US\$45/bbl
Vulnerable to oil price volatility

COVID ERA



The map shows the same Pecan field as the pre-COVID era. However, the development is now divided into several smaller, distinct areas, each with its own FPSO, indicated by multiple blue circles. A large blue arrow labeled 'COVID-19' points from the pre-COVID map to this one.

Phased approach with multiple smaller FPSOs
Breakeven of US\$30/bbl
More robust to oil price volatility

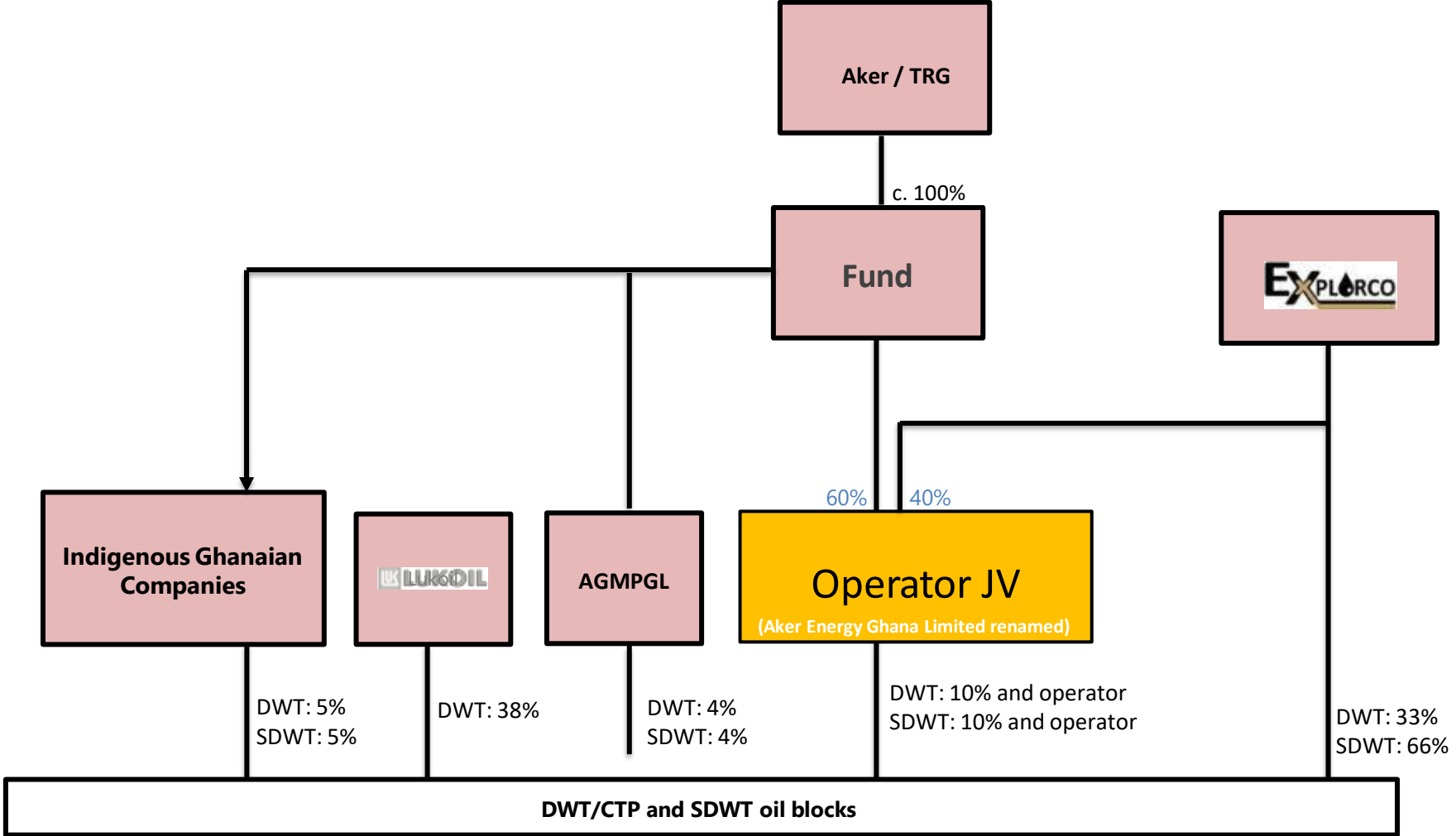


GNPC Route to Operatorship – The Transaction

GNPC's Route to Operatorship – Acquisition into Aker & AGM Block

- GNPC to **partner** with Aker Energy and AGM
- Jointly **develop** the DWT/CTP and SDWT blocks
- Form a **joint operator company** (40% GNPC Explorco, 60% Aker/AGM through a Fund)
- Joint Operator company will hold 10% stake in each of the blocks
- GNPC will acquire **directly** and **indirectly**:
 - **37%** of the Aker Energy stake in the DWT/CTP block and
 - **70%** of the AGM stake in the SDWT block
- GNPC Exploration and Production Company Limited (GNPC Explorco) as **acquisition vehicle**
- GNPC **initiative**, Aker/AGM has agreed to **collaborate**

Post-Transaction Structure – Create an Operator JV



GNPC Explorco's License Interest in the Blocks - Post Transaction

Block	Direct	Indirect via Operator JV	Total
DWT/CTP	33%	4%	37%
AGM	66%	4%	70%

Why Aker Energy/AGM?

- Aker has substantial deepwater Experience and Technology:
 - Operator in the Aker BP Fields - 220,000 bbpd from one field,
 - More than 100,000 bbpd from other fields
 - Strong operator capacity in deep-water operations
- Pecan and Nyankom are significant discoveries and prospects with substantial work done.
- The blocks in total contain more than 700 Mmbbl
- GNPC Explorco will be able to use deep water technology to develop targeted fields and other fields in the Ghanaian basin.
- It is appropriate to focus on building deep water capacity as most of Ghana's oil is in deep waters
- Aker will hold interest in the two fields, provide IGC Financing and financing for the FPSO



Valuation



Valuation: Objectives, Model, Sources

Valuation Objectives

- Assess the value of the resources (fair acquisition price)
- Viability of the Acquisition

Valuation Model

Net Present Value (NPV)

Valuation sources

Entities	Remarks
GNPC	Buyer valuation
Aker/AGM	Seller valuation
Pareto Securities	Third party commissioned by Aker/AGM (Seller)
Arctic Securities	Third party commissioned by Aker/AGM (Seller)
Lambert Energy Advisory	Third party commissioned by GNPC and Aker/AGM (Seller & Buyer)

- Lambert Energy Advisory Report was received after the submission of the initial proposal to the Minister for Energy

Assumptions Underlying Valuations

Variable	GNPC	Aker Energy and AGM	Arctic Securities	Pareto Securities	Lambert Energy Advisory
Oil Price Adjustment Per Annum	20 year average price (US\$66.7)	20 year average price (US\$66.7)	US\$60/bbl (with 2% adjusted inflation)	US\$60/bbl (with 2% adjusted inflation)	US\$65/bbl (with 2% adjusted inflation)
Volumes, Gross (Discoveries)	452 mmbbl	547 mmbbl	547 mmbbl	547 mmbbl	547 mmbbl
Pecan Phase 2	Excluded	Included	Included	Included	Included
Prospects Included	No	No	Yes	Yes	Yes
Discount Factor	10%	10%	10%	10%	10%
Production Profile Source	GNPC	Operator	Operator	Operator	Operator
Cost Estimate Source	GNPC	Operator	Operator	Operator	Operator
Post-Tax Values (Contingent Resources)	Yes	Yes	Yes	Yes	Yes

Assumptions Underlying Valuations (continued)

- All valuation sources included PROSPECTS except GNPC
- All valuation sources included PECAN PHASE 2 except GNPC
- GNPC valuation **subsequently** adjusted to include PROSPECTS + PECAN PHASE 2

Valuation of Contingent Resources and Prospects for the Aker Energy/AGM & GNPC Explorco stakes

Source of Valuation	Contingent Resources (US\$ Million)		Prospects (US\$ Million)		Contingent Resources + Prospects (US\$ Million)	
	Current Aker Energy / AGM Stakes	GNPC Explorco Acquisition (pro rata)	Current Aker Energy / AGM Stakes	GNPC Explorco Acquisition (pro rata)	Current Aker Energy / AGM Stakes	GNPC Explorco Acquisition (pro rata)
GNPC*	1 656	1 288	353	297	2 009	1 585
Aker Energy / AGM	2 326	1 815	720	616	3 046	2 430
Pareto	1 890	1 466	358	313	2 248	1 779
Arctic	1 970	1 528	435	329	2 405	1 857
Lambert	2 110	1 632	440	351	2 550	1 983

***GNPC valuation excludes Pecan Phase 2**

Comparison of GNPC's valuation with Lambert Energy Advisory Valuation (Adjusted for Pecan Phase 2 in Lambert)

Parameters	Lambert		GNPC		Lambert <i>minus</i> GNPC (in million US\$)
	Current Aker Energy / AGM Stakes (in million US\$)	GNPC Explorco Acquisition (pro rata) (in million US\$)	Current Aker Energy / AGM Stakes (in million US\$)	GNPC Explorco Acquisition (pro rata) (in million US\$)	
Contingent Resources	2,110	1,632	1,656	1,288	344
Add: Prospects	440	351	350	297	54
Total Contingent + prospects	2,550	1,983	2,006	1,585	398
Less: Pecan Phase 2	-280	-207			-207
Pecan 1 + Nyankom	2,270	1,776	2,006	1,585	191

Comparison of GNPC's valuation with Lambert Energy Advisory Valuation (Adjusted for Pecan Phase 2 in GNPC)

Parameters	Lambert		GNPC + Lamberts valuation of Phase 2		Lambert <i>minus</i> GNPC (in million US\$)
	Current Aker Energy / AGM Stakes (in million US\$)	GNPC Explorco Acquisition (pro rata) (in million US\$)	Current Aker Energy / AGM Stakes (in million US\$)	GNPC Explorco Acquisition (pro rata) (in million US\$)	
Contingent Resources	2,110	1,632	1,656	1,288	344
Add: Prospects	440	351	350	297	54
Total Contingent + prospects	2,550	1,983	2006	1,585	398
Pecan Phase 2			280	207	-207
Pecan 1 + Nyankom	2,550	1,983	2,286	1,792	191

Commentary on Valuation Results

- **Original** GNPC valuation excludes Pecan Phase 2 and it is conservative, giving the lowest valuation of the two blocks:
 - Total Value of the blocks – US\$ 2.0 billion
 - GNPC Explorco share – US\$ 1.6 billion
 - Buyer Perspective
- After adjusting for Pecan Phase 2, GNPC valuation of the two blocks is as follows:
 - Total Value of the blocks – US\$ 2.29 billion
 - GNPC Explorco share – US\$ 1.79 billion
 - Buyer Perspective
- Aker Energy & AGM valuation of the two blocks includes Pecan Phase 2 and gives the highest valuation for the two blocks:
 - Total Value of the blocks – US\$ 3.05 billion
 - GNPC Explorco share – US\$ 2.43 billion
 - Seller Perspective

Commentary on Valuation Results (continued)

- Objectivity is potentially compromised in buyer and seller valuations.
- Reliance on valuations from the independent sources: Pareto, Arctic and Lambert.
- Summary of valuations from the independent sources as follows:

Source	Aker & AGM US\$ million	GNPC Explorco share US\$ million
Arctic Securities	2410	1860
Pareto Securities	2250	1780
Lambert Energy Advisory	2550	1990

Commentary on Valuation Results (continued)

- Valuations of Pareto, Arctic and Lambert range between **US\$2.25 billion and US\$2.55 billion**
- GNPC valuation adjusted for **PROSPECTS** and **PECAN PHASE 2** of **US\$ 2.29Billion** falls within the Pareto, Arctic and Lambert valuation range
- Arctic and Pareto were commissioned by Aker & AGM while Lambert was commissioned jointly by Aker & AGM and GNPC
- **GNPC and Aker/AGM have agreed to use the Lambert valuation as a reference point for negotiation**
- Based on the Lambert valuation, GNPC Explorco share of resources in the two blocks is approximately **US\$2 billion**

Price to Pay for Acquisition

- To be agreed by negotiation based on the Lambert Energy Advisory valuation
- Gain to GNPC Explorco is the **net of the resource value and price paid**
- **Possible Scenarios**

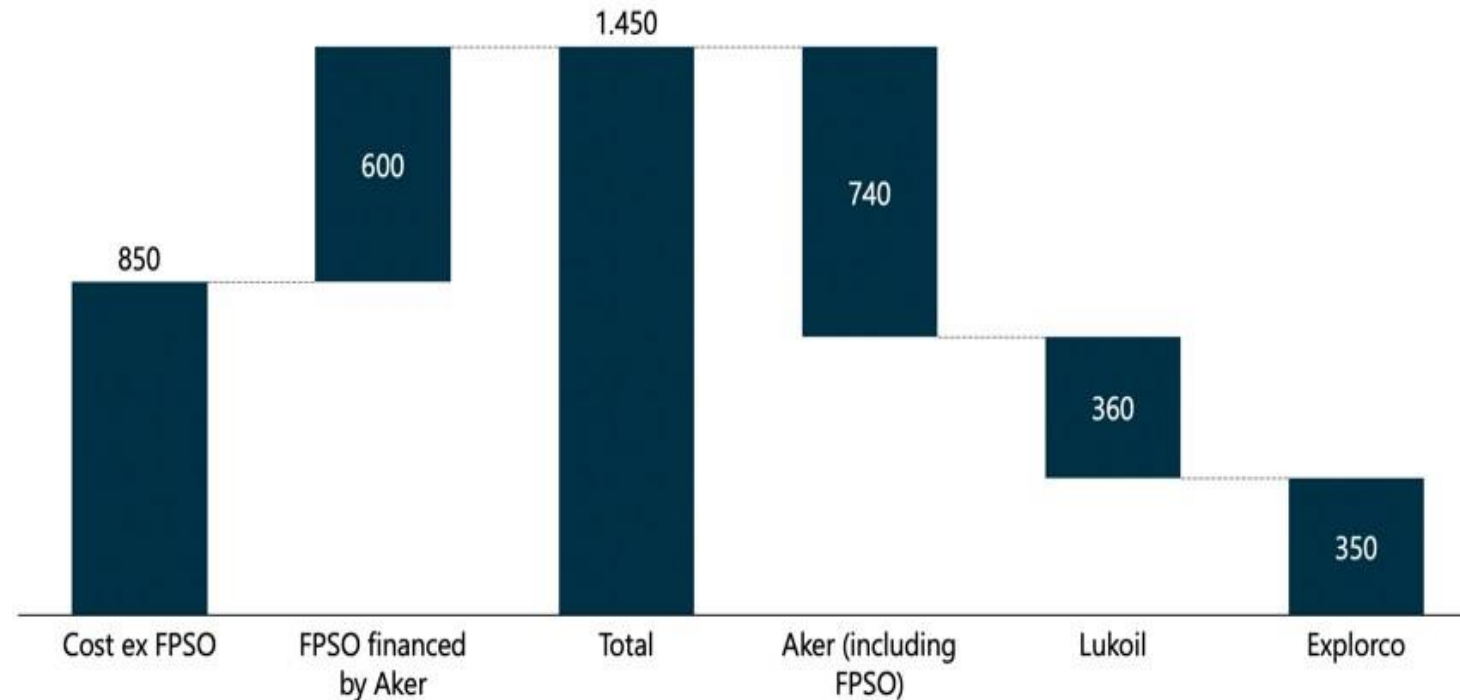
Scenarios	Lambert valuation of resources in the two blocks US\$ million	Acquisition price for GNPC Explorco share US\$ million	Net gain to GNPC Explorco US\$ million
1	2 000	1 500	500
2	2 000	1 200	800
3	2 000	1 100	900
4	2 000	1 000	1000

Financial Obligation of GNPC Explorco to First Oil in Pecan Phase 1A

- Financial Obligation = Acquisition Price + Cost to First Oil in Pecan Phase 1A
- Acquisition price to be negotiated
- GNPC Explorco share of cost to First Oil in Pecan Phase 1A agreed by the partnership is US\$350 Million

Partner's Share of Capex to First Oil in Pecan Phase 1A Field

- Total Capex to First Oil in Pecan Phase 1A = **US\$1.45 Billion**
- Distribution of Capex to partners are shown in the graph below:



- **Aker's share of cost = US\$740 million, comprising FPSO (US\$600 million) and cash calls and IGC financing (US\$ 140 million)**

- Aker will remain the largest financier of Pecan Phase 1B Field









Payment of GNPC Explorco share of Capex to First Oil in Pecan Phase 1A

- **Total amount is US\$350 Million**
- **Payment staggered over 3.5 years as follows:**

Year	US\$ million
2021	22
2022	50
2023	105
2024	173
Total	350

Financing of GNPC Explorco Share of Capex to First Oil in Pecan Phase 1A


- GNPC Explorco share of Capex to Pecan Phase 1A First Oil is **US\$350 million**
- To be financed as follows:

Source of Finance	US\$ million
GNPC Annual Budget for 3 years (including recovery of debts) 	150
Borrowing from local Banks (disbursement over 3 years)       	200
Total	350

Financing of Acquisition Cost

- Amount to be agreed by GoG (MoE and MoF)
- **Staggered payment** and **NOT** one bullet payment
- At least **three (3) installments** as per table below:

Milestone	Timeline	Amount	%
At Signing		US\$ XXX	XX
Approval of Plan of Development		US\$ XXX	XX
First Oil (Securitization of Crude Oil)		US\$ XXX	XX

- Minister for Energy and Minister for Finance to agree on milestones, timelines, and amount payable with Aker/AGM
- **Loan from GoG**  **on commercial terms to pay for acquisition cost**

Debt Servicing (Loans Repayment)

- Loans (provided by **GoG** and **Local Banks**) to be repaid from **sale of GNPC Explorco share of crude oil**
- Early repayment from **Securitization of crude oil**
- Using GNPC Explorco share of crude oil to repay loan **does not infringe the Petroleum Revenue Management, 2011, Act 815 as amended and relevant laws** according to the Attorney General and Minister for Justice



Benefits of Transaction

Benefits From the Transaction

- GNPC gets to build **Operator Capacity** at a Critical Time in History
- Substantial **foreign exchange** inflows estimated around **US\$27 billion** in nominal terms
- Avoid **Tax Pressure** from IOCs
- **Reduction in Operational Costs** through efficient procurement
- GNPC will be in charge of **Local Content**
- **Creation of jobs (direct and indirect)**
- Aker will be a committed Long-term Partner

Benefits From the Transaction continue

- Acceleration of Oil Production During Energy Transition
- Refining of crude oil to supply Ghana's white products needs and promotion of other petro-chemical industries e.g. Fertilizer
- Taxes and royalties to GoG of approximately US\$7.51 billion in nominal

Benefits From the Transaction (continued)

- GNPC Explorco will inherit **pre-acquisition development cost** amounting to **US\$965 million** as at 30th June 2021 as a **tax advantage** (Capital Allowances) as follows:
 - Hess + Aker cost **US\$811 million**
 - Cost incurred by AGM **US\$154 million**
- **Acquisition cost** and **development cost** incurred by GNPC Explorco will be **recouped fully** once production starts.
- **Tax and other concessions made to Aker Energy & AGM will substantially accrue to GNPC and IGCs**

Conclusion

GNPC has analyzed the Transaction and has concluded that:

- The intended acquisition by GNPC Explorco into Aker Energy/AGM offers an **opportunity for GNPC to acquire operatorship capacity** to enable it play a major role as an Exploration and Production company.
- Will enable GNPC and Ghana to, not only face the emerging Energy Transition in a **well-prepared manner**, but also **create significant value** for Ghana.
- Aker Energy/AGM present a more **immediate, practicable and viable route** to operatorship

Recommendations

Transaction be approved by GoG for the following reasons:

- Acquisition price will be at a discount to the value of the resource
- Recovery of investment made as development cost
- Job creation (directly and indirectly)
- Royalties to GoG
- Taxes payable to GoG
- Foreign Exchange earnings to Ghana
- Control over procurement by GNPC and GNPC Explorco
- Efficient local content promotion by GNPC and GNPC Explorco
- Potential for further exploration and appraisal activities
- Possibility of developing inactive and new oil blocks

GoG to provide financial and other ⁵¹necessary support to GNPC



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Thank you

