



Supporting Ghana's Domestic Gas Ambitions

Ghana Gas Forum 2021

30 November 2021

Tullow Ghana | GGF 2021



Tullow: A leader in Africa, a pioneer in Ghana



Tullow the upstream developer and operator of choice for additional gas development in Ghana



Tullow is a leading African Oil & Gas Company



We are committed to responsible oil and gas development



Ghana Value Maximisation Plan to realise full potential of assets



Cote D'Ivoire
Gabon
Ghana

Our West African producing assets generate material cashflow



We maximise value through excellence in subsurface, development, operations and relationships



We have a continued focus on cost and capital discipline



We have a sustainable capital structure and are focussed on reducing debt



We deliver tangible social and economic benefits

1986

- Tullow started as a gas developer in Senegal in 1986

2000+

- Key acquisitions of gas fields and related infrastructure in the UK from BP.
- A leading player in the CMS & Thames areas
- Operator of the Bacton Gas Terminal
- Operator of Schooner & Ketch Fields
- Other gas assets in Europe and Asia

2007+

- Jubilee Field discovery
- FVGSA – 200 bcf at \$0/mmBtu.
- FVGSA served as a catalyst for transitioning power generation from hydro to thermal
- Reliable low priced gas keeps the weighted cost of delivered gas price in Ghana low

Next steps

- Further potential to Commercialise Gas
- > 2tcf gas resources discovered
- 1tcf potential over next ten years

Ghana Value Maximisation Plan: Unlocking value



Excellent opportunities at both Jubilee and TEN

World Class Asset Base

- High quality portfolio of oil producing fields and infrastructure provides solid platform
- More than 50% discovered recoverable volume yet to be produced in Ghana
- Identified and de-risked a rich set of diverse opportunities to maximize recoveries

Operational Turnaround

- Safely maximise production efficiency targeting 95%+ -oil, gas, water
- Systematic Opex reduction – YoY efficiency drive to deliver a low cost business
- Drilling performance - Reduced well complexity, rig downtime and strategic tendering
- Agile, innovative and low cost procurement

Integrated Business Planning with a Value Focus

- Tightly built 10 year plan of drilling, projects and commercial activity
- Drilling restarted April 2021, targeting 4-5 wells per annum, 2nd rig considered for 2023
- Jubilee South East and Jubilee Expansion projects in Execute, TEN Enhancement project
- Cashflow to nation focus; plan deliver \$8-10B of cashflow to the Government of Ghana

>\$10B of value delivery to
Government of Ghana

Over \$4BN of Capital
investment

**1TCF of low cost gas available
to Ghana**

Delivering 550mmbbls of
remaining oil production

Our Gas Strategy Focus Areas

Multi-layered approach to maximise value from gas resources



Maintain offtake consistency

75% of the 200BCF "nil" cost gas
already delivered to GOG

Key to maintaining oil production
levels on Jubilee

Systematic improvement of vessel
reliability and gas facilities

Post Foundation Gas Supply

500 BCF 10 year firm Gas supply proposal
issued to GOG

GSA negotiations underway, target
agreement in Q1 2022

Expected to deliver gas revenues to Tullow

Associated Gas Essential to delivery of Business Plan

Additional Gas potential

~1.7 TCF of undeveloped gas resource
predominantly in TEN

Potential to utilise existing upstream
infrastructure

GOG plans to expand midstream facilities

Incremental Value to Business Plan

Gas efficiency & offtake performance

Increased Gas Export

Gas Export Opportunity

- Improved reservoir management, enhanced oil production and minimised emissions
- Material value for Tullow and for Ghana

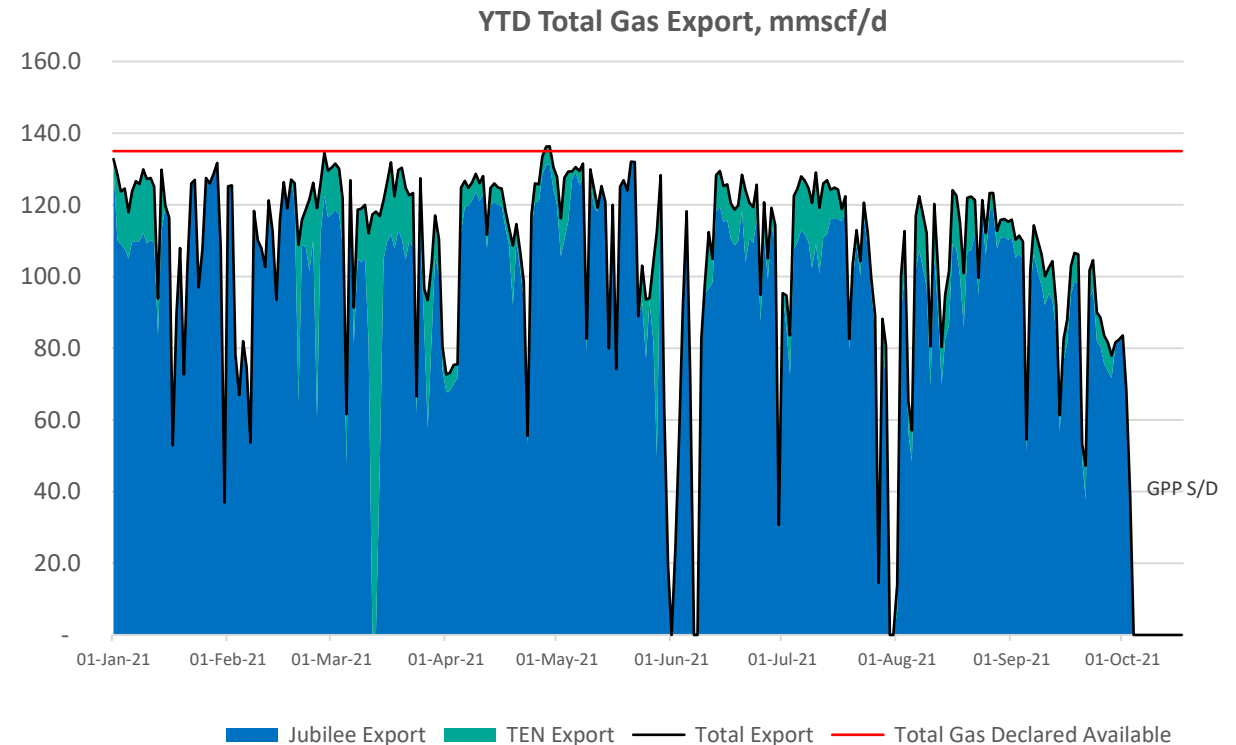
2021 Progress Update

- YTD Average 105 MMscfd
- Improved facilities reliability and substitution
- Improved collaboration within gas value chain to maximise offtake

Forward Plan

- GPP improvements and spare downstream compressor
- Debottleneck Jubilee FPSO gas handling capacity
- Target gas offtake beyond 130mmscf/d
- Secure agreement for firm offtake beyond J-FV

Reliable gas offtake supports oil production



Integrated delivery: Subsurface, Operations, Commercial and Government

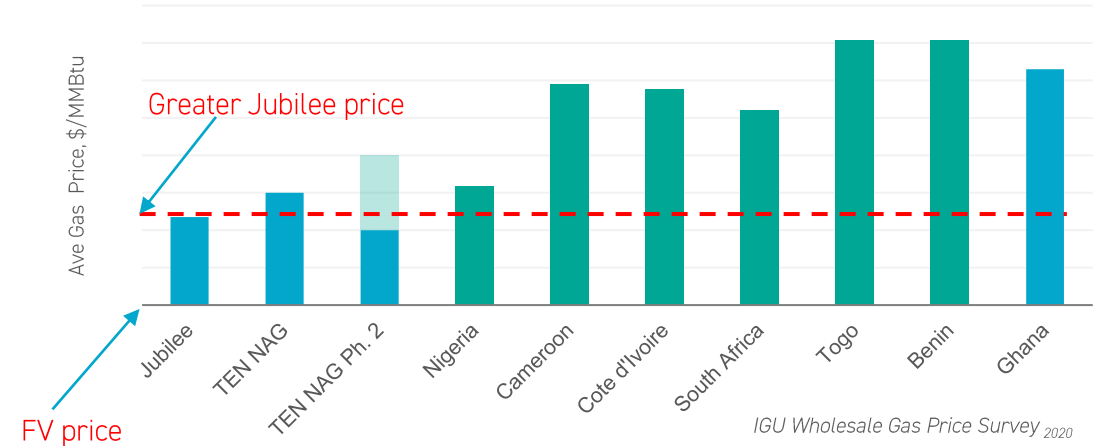
Jubilee & TEN – Value to Ghana

Lowest priced Gas – best value for Ghana

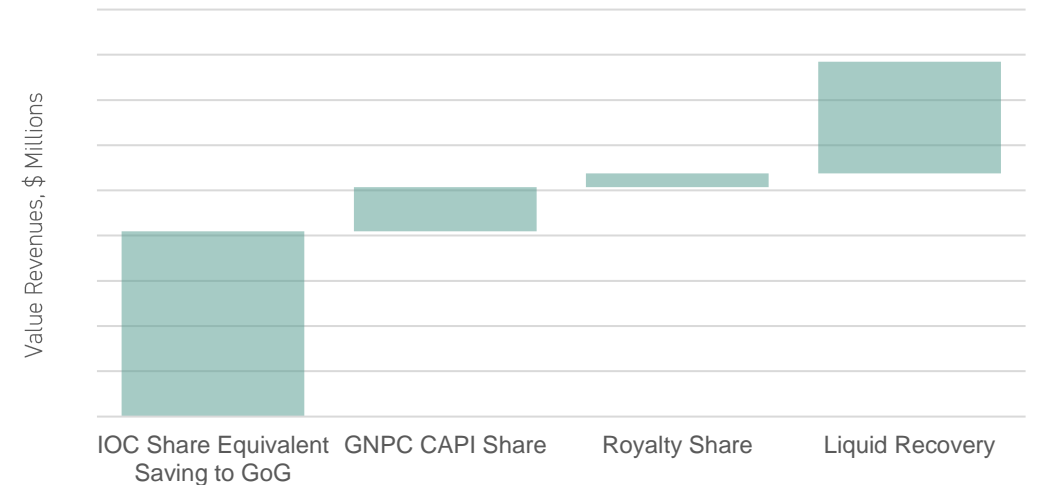


- \$1.9bn Foundation Volume value delivered to date (162bcf) and \$460M more from FV (38bcf)
- \$0/mmBtu priced FV and subsequent low priced TAG enabling Ghana minimise Weighted Average Cost of Gas
- Jubilee gas pricing is highly competitive relative to other sources of gas in Ghana and in the Region
- Proposed GJ GSA price represents a potential saving of ~\$4 billion relative to other source of gas in Ghana (assuming an alternative source price of \$7/mmBtu)
- ~\$7/mmBtu delivered gas price saves GoG ~\$200 - 280m annually compared to crude fired power generation
- Tullow is committed to delivering low priced 500 bcf GJ gas post foundation volume for power generation and provide significant carbon offset contribution to Ghana's Energy Transition drive
- GoG value from Jubilee gas export includes royalty share and liquid recovery

Benchmarking of West African Gas Sales Prices



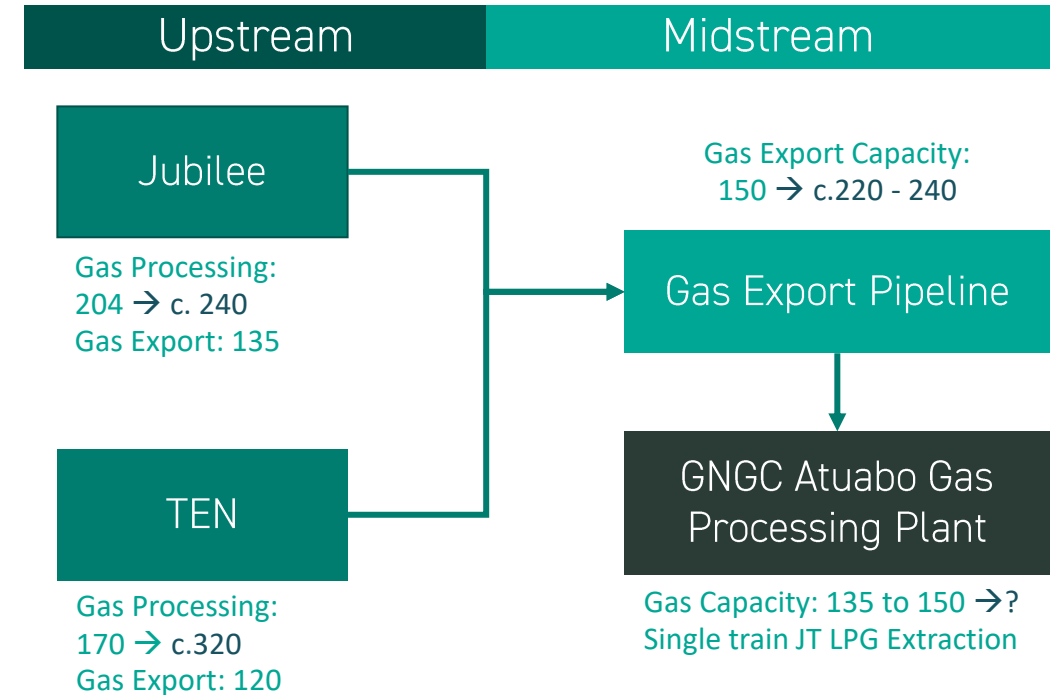
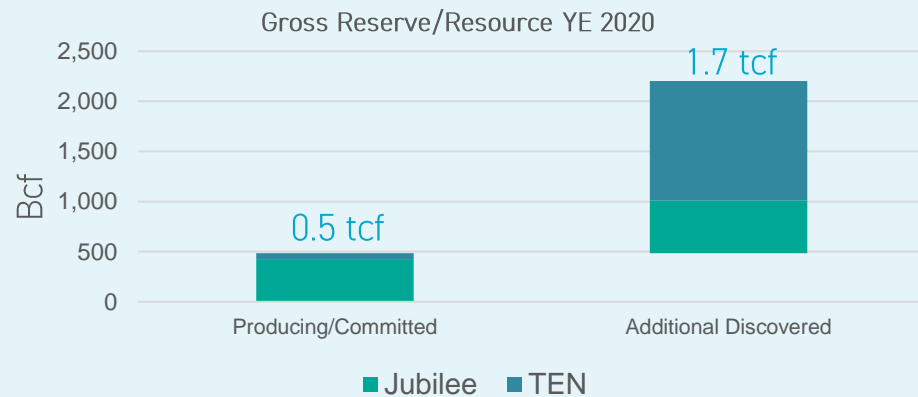
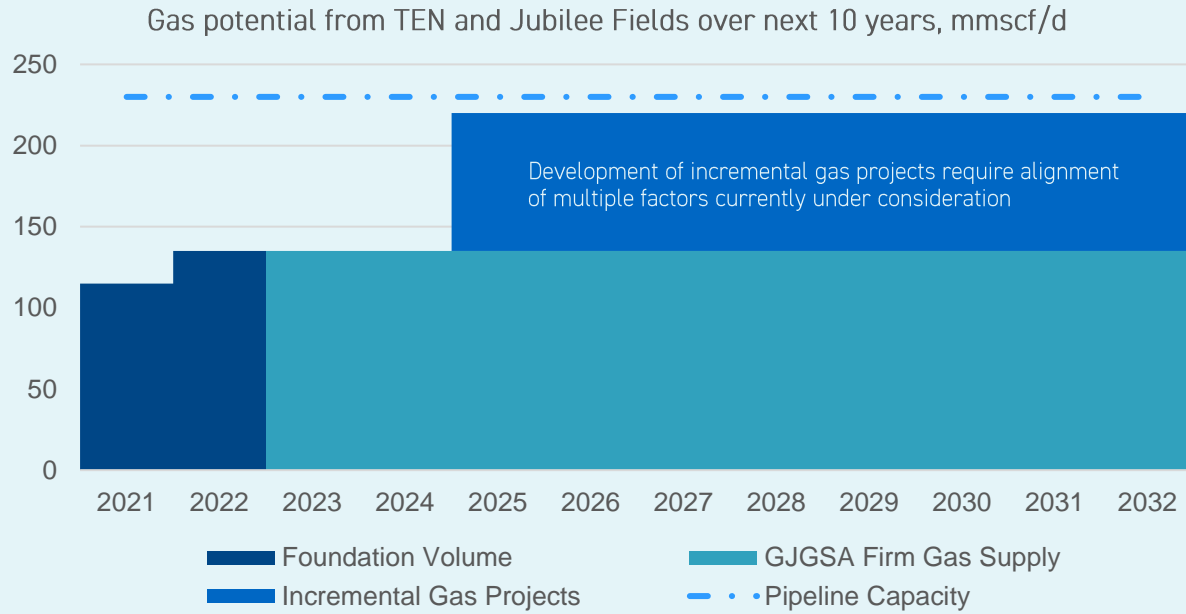
Value of Greater Jubilee Gas to GoG Illustration



Supporting Ghana's Domestic Gas Ambitions



Bringing new gas developments onstream & ensuring adequate throughput and processing capacity



- Gas processing capacity constrained by pipeline and processing capacity
- Existing export infrastructure has potential to achieved 240 mmscf/d
- Tullow is aware of several midstream expansion projects under consideration
- Tullow is happy to work with GoG on project selection and development

Supporting Ghana's Domestic Gas Ambitions



Ghana's Gas Master Plan seeks to develop a medium to long term strategy for infrastructure development priorities that will contribute to the development of the natural gas resources to ensure security of energy supply to meet growing demand and fuel Ghana's industrialisation agenda

In summary... Tullow's Commitment

- 1. Ghana Value Maximisation Plan and commitment to Ghana**
 - World Class Asset Base, Operational Turnaround
 - Willing to work with stakeholders to arrive at optimal infrastructure development solution
- 2. Reliable Gas Production**
 - High uptime/availability of Export Gas with further plant improvements planned
 - Contractual flexibility (substitution) – means that gas availability was 98% for 2021
- 3. Value of Jubilee/TEN Gas**
 - \$1.9bn FV value delivered to date (162bcf) and \$460M more from FV (38bcf)
 - \$0/mmBtu priced FV and subsequent low priced TAG and GJ gas enabling Ghana minimise Weighted Average Cost of Gas
- 4. Facility Expansion and Planned Investments**
 - Jubilee gas processing from 190 to c.220mmscf/d and TEN from 170 to 340 mmscf/d
 - c.240 mmscf/d max export via pipe unconstrained
 - GoG looking into capacity expansion options; Tullow willing to support
- 5. Firm Commitment to Supply Gas (GJGSA)**
 - 0.5tcf gas equivalent to \$4bn value equivalent to GOG
 - In contrast, low gas offtake will adversely impact production (sacrifice over 40mmbbls of recoverable oil volumes)
- 6. Further Potential to Commercialise Gas - Over 2tcf gas resources discovered**
 - 1tcf potential over next ten years
 - Opportunity to advance NAG projects if required

GoG Support needed...

- | | |
|----------------------------------|---|
| Commitment to domestic Gas | Support for continued development of TEN discovered & prospective resources |
| Actively prioritise domestic gas | Jubilee/TEN supply of cheapest gas to keep weighted average cost low |
| GJGSA | Delivery GJGSA before FV of 200 bcf delivered |
| Commercial Framework | Conducive upstream gas sales terms (Price, Take-or-Pay, Payment Security) |
| Gas supply & capacity planning | Collaborative planning and development of gas supply & infrastructure options |
| Gas-to-Power value chain funding | Robust downstream self funding structure |

Thank you!

Tullow Ghana Limited