

## **Declaration**

**This presentation is made in my personal capacity. It is neither made on behalf nor represent the views or opinion of Total E & P Nigeria Limited (TEPNG)**

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- **Causes of the Gas-to-Power Problem**
- **Ongoing Effort towards remedying the situation**
- **Emerging Opportunities for the Development of the Domestic Gas Supply Infrastructure**
- **Going Forward**

# **CAUSES OF THE GAS-TO-POWER PROBLEM**

- **Lack of national gas policy or a legal regime for gas at the onset, most, if not all the policies/laws were focused on oil production**
- **Non existence of large-volume gas users in the country at the early stages outside NEPA (PHCN)**
- **A regime of very low gas tariff for supply to NEPA that was not cost reflective (30 to 40 US Cents per MBtu), and even at this very low cost, NEPA was not making payments regularly**
- **Gas processing and transportation infrastructure is more capital intensive compared to oil infrastructure because of the issue of safety**
- **The only attraction for gas monetization was therefore in the gas export sector. Thus, the major effort made by the Oil & Gas industry in gas gathering, processing and transportation were done for the export gas market (via LNG)**
- **Aggravation of the problem by the ‘Initial Disconnect’ between NIPP and the Oil & Gas industry: Completed or almost completed Power Plants, but no gas supply**

# **ONGOING EFFORT TOWARDS REMEDYING THE SITUATION**

- **New gas policy including penalty for gas**
- **Development and ongoing implementation of the National Gas Master Plan**
- **The development of large scale gas processing facilities for the production of 'dry gas' for the domestic market**
- **The Establishment of the Gas Aggregation Company of Nigeria (GACN) which acts as the 'Go-between and Clearing House' between gas producers and buyers**
- **The move towards cost reflective tariff for gas (even for supply to the power sector)**
- **The Regime of Domestic gas Supply Obligation (DGSO) regime for Oil & Gas Companies & the penalty for failure to supply gas under the DGSO**
- **The emergence of swap arrangement amongst gas producers to facilitate gas supply and meet DGSO**

# **EMERGING OPPORTUNITIES FOR THE DEVELOPMENT OF THE DOMESTIC GAS SUPPLY INFRASTRUCTURE**

- **External markets for natural gas not as attractive as before with the development of domestic gas sources in some major consumer nations (Shale gas development in the US for instance, recent discovery of shale gas in China, etc) which could result in significant drop in the world gas price**
  - **The discovery of significant gas deposits in many new frontiers (Mozambique, Tanzania, Kenya, Uganda, Australia, etc.)**
  - **Increasing number of LNG Plants in the World: more supply sources and thus increasing competition amongst suppliers external for buyers, thus focus has to shift to domestic consumption**
  - **Increasing interest of the private sector in the Power, Fertilizer and Petrochemical industries is creating/will create a big domestic market for gas**
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## **GOING FORWARD**

- **Need to fast-track the move towards real cost-reflective gas tariff that ensures investment cost recovery and reasonable return on investment must now be put on the fast track to give more confidence for private sector investment: Government's regulated tariff regime should give way to '*Willing Seller – Willing Buyer*' price agreements**
- **Based on past experience, there is likely to be a wait-and-see attitude by the gas suppliers to the new generating companies and IPPs for them to prove themselves credit-worthy customers before they embark on major projects to supply and/or improve the supply to them**
- **High likelihood of increased competition for gas supply between the Power industry and the Petrochemical/Fertilizer industries, and with the tendency for suppliers to move in the direction of the latter as they would be considered as the more creditworthy clients.**

# GOING FORWARD CONT'D

- **Near and/or Co-Location of some major gas consumers for the optimal usage of the available gas supply infrastructure (which in essence will reduce the number of such infrastructure projects and cost) should be encouraged/facilitated by the authorities. *For instance, a big green field fertilizer plant project and a large gas-fired power plant project could be located in the same vicinity and having one gas supply infrastructure project.***
- **Co-financing of gas supply pipeline infrastructure projects by gas suppliers and buyers. Contribution from buyer could be considered an upfront payment for a given volume of future gas supply.**
- **Necessity for the establishment of Gas Buffer storage facilities by and/or for large power plants to minimize shutdown of plants due to temporary unavailability of gas from supplier: *Sudden loss of generation from a big plant can lead to Grid instability or worse still, a system collapse.***
- **Upgrade of some existing OCGT plants to CCGT to ensure optimal usage of the available gas supply. Whereas OCGT Plants generally have efficiency in the range 33 to 38%, modern CCGT plants have average efficiency of around 53 to 57%. This is equivalent to around 50% additional power production from the same amount of gas input.**

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Thank you for your Audience