



## SHELL IN NIGERIA **DOMESTIC GAS**

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### **Domestic gas - helping to drive economic growth**

Nigeria holds the 7th largest natural gas reserves in the world. Under the Nigeria Gas Master Plan initiative, the Federal Government of Nigeria aims to leverage this resource base to meet the aspired target of growing the economy at 10% pa under the Vision 20: 2020 program. The Nigerian government predicts domestic demand for gas will rise fivefold to some five billion standard cubic feet a day by 2013. To meet this demand, the government has set domestic gas supply obligations for producers as well as the basis for pricing of gas sold to different categories of customers – namely the strategic power sector, wholesale industrial and commercial users, and strategic gas-based industries that use gas as feedstock. Nigeria has about eight gigawatts (GW) of installed electricity generation capacity, but only about three to four GW of that is currently in operation. The government has set targets to increase the country's actual power generation to 14 GW by the end of 2013 and 40 GW by 2020, and correspondingly to increase gas production. Much of the additional gas growth is expected to be used for electricity generation.

Commitment and the process for achieving these electricity generation targets have been articulated in the Power Sector Road Map that was released in 2011. The Shell Petroleum Development Company of Nigeria Limited (SPDC) supports the government's aspiration to increase domestic gas utilisation. In 2011, the Federal Government also launched the Gas Revolution agenda which aims to encourage the establishment of world class petrochemical and fertiliser industries whilst using natural gas as an enabler for job creation to catalyze Nigeria's economic growth. SPDC concluded a key gas-to-power supply contract for 90 million standard cubic feet of gas a day (MMscf/d) to the Egbin Power Plant in Lagos State, in 2011, and is currently at advanced stages of finalising the World Bank's partial risk guarantee to securitise the supplies. The company has also commenced discussions with potential investors with fertiliser aspirations under the gas revolution agenda that is part of the new Nigerian Gas Master Plan Commercial Framework.

### **A long history in gas**

SPDC is at the forefront of gas development and utilisation in Nigeria, having pioneered the production and delivery of gas to consumers for over 40 years. In the 1960s, SPDC Joint Venture (SPDC JV) began supplying gas to industries in Trans-Amadi -Port Harcourt, Aba territories, and to power plants at Afam in Rivers State in the Niger Delta. For most of that time until about 1998, SPDC JV was the sole supplier of gas in the country. Today, SPDC is the single largest supplier at about 45% of the country's domestic gas supply, a high percentage of which is used for power generation.

In 1998, Shell became the only international oil and gas major to set up a wholly-owned downstream gas sales and local distribution company – Shell Nigeria Gas Limited– to supply industrial customers in the south-western and eastern parts of the country (for more information, please see separate briefing note on Shell Nigeria Gas).



LNG tanker, Bonny



*A technician at the Gbaran-Ubie integrated oil and gas plant*

### **Making progress**

The leading role of the SPDC Joint Venture continues to this day. Despite challenges such as funding constraints, fiscal regime uncertainty and security, the SPDC JV is making progress on major projects that will help boost Nigeria's gas and power supply for years to come. For example, the SPDC JV integrated Okoloma gas plant (with capacity to process 240 MMscf/d) and the 650 MW Afam VI combined-cycle power plant were constructed and delivered within 30 months despite tough security challenges. In August 2008, the SPDC JV began generating electricity from the Afam VI power plant fed by natural gas from the Okoloma gas plant. The power plant began producing over 400 MW to the national grid via the open cycle phase and has attained a generation capacity of 620 MW through the full combined-cycle phase. This integrated project has contributed between 14% to 20% of

Nigeria's current power supply. Gas from Okoloma also serves industrial and other users within the eastern grid network.

Another recent example of the SPDC JV's commitment to Nigerian content development is the multi-million dollar pipeline contract signed in April 2010 with Daewoo Nigeria Limited. The agreement will enable the SPDC JV to supply more gas to power stations in the country. The contract will involve the construction of pipelines that will distribute gas to the domestic gas network owned and operated by the Nigerian Gas Company. Once complete, SPDC will deliver some 250 MMscf/d from that project.

However, there remain significant challenges to gas development in Nigeria such as the immaturity of a commercial and regulatory framework and the absence of an interconnected gas network grid. In addition, the investment climate in Nigeria needs to become clearer and more certain. The government is developing a new oil and gas industry legislation – the Petroleum Industry Bill (PIB) – which among other things proposes new parameters affecting investments. The large investments required to develop the Nigerian gas industry will only be forthcoming once an attractive investment climate is firmly established.

### **Foundations for the future**

Shell companies in Nigeria are keen to undertake more gas to power projects provided that they are commercially viable. The companies are working closely with the Nigerian government to ensure such an effective commercial framework is in place. Nigeria has huge domestic gas potential and with the right infrastructure, solid regulatory and commercial frameworks and the requisite security conditions, the projects necessary to build the foundations that could lead to sustained economic growth and diversity can be kicked off. To achieve this, there are many things that need to be done in a coordinated manner, led by the federal government. Shell companies in Nigeria are keen to support the federal government and other stakeholders in implementing its gas and power aspirations in a sustainable and commercially viable way.

More information on the operations of Shell companies in Nigeria can be found at [www.shellnigeria.com](http://www.shellnigeria.com).