

Shell in Nigeria

Harnessing Nigeria's gas



Nigeria has the seventh largest natural gas reserves in the world, yet only a fraction of that has been harnessed. For many years there was little demand for it. So, companies safely burnt off associated gas – gas that comes out of the ground along with crude oil they produce – in a process called flaring. And gas fields remained undeveloped.

Demand for natural gas has since grown, both in Nigeria and abroad. There is also pressure to reduce flaring. Shell is trying to harness this gas and is supporting government efforts to put it to good use. We are also committed to ending the continuous flaring of associated gas at our operations. That requires constructing gas gathering plants and an extensive pipeline network to collect gas from more than 1,000 wells scattered across the Niger Delta, an area larger than Portugal.

Gas projects

In 2000, we set a target to eliminate continuous flaring at our Nigerian operations by the end of 2008. Since 2000, we have invested some \$3 billion dollars in these gas-gathering projects. In that time SPDC's total flaring has fallen about 60%, half of which is due to the impact of recent production losses due to security concerns. We still need to invest more than \$3 billion to complete them but a lack of funding and the uncertain security situation has meant we have not been able to finish these projects as fast as we hoped.



Partners fund the SPDC-operated joint venture based on their ownership share. Since the government-owned Nigerian National Petroleum Corporation (NNPC) owns 55%, the joint venture's funding critically depends on the government's ability to provide this share. And since 2006, a rise in militant attacks has made it unsafe for staff to work in large parts of the delta for long periods of time.

For example, a project to build gas-gathering facilities at the Forcados Yokri field in the Niger Delta was initially scheduled for completion in 2006. But violence and kidnappings in the area made it unsafe for work crews. Though we can work there again now, there are no funds and the project remains stalled.

When completed, we estimate that our projects will together gather some 85% of the total associated gas produced in our operations. The remainder comes from a number of small producing fields that are set apart from the gas gathering system. We are considering how to harness this gas. Using it for local power generation is one possibility, and we are partnering with the government to explore this option.

Progress

In 2008, SPDC made progress on a number of gas projects. In October we began starting up the Okoloma gas plant and the Afam ó power plant in Rivers State, the Niger Delta. When it reaches full capacity sometime in 2009, this integrated gas and power project will increase Nigeria's gas supply by 20% and will increase electricity by 20% as well. Okoloma supplies Afam with non-associated gas. And in January 2009, SPDC finished upgrading Nigeria's Bonny Terminal and the Bonny associated gas plant, which can harness 20 million cubic feet of gas a day.

SPDC also agreed new funding arrangements with the government in 2008 that will allow further progress on some projects. These are bridge loans and modified carry agreements, which make available loans of billions of dollars at favourable below-market interest rates from Shell to the Nigerian government. One project that will benefit is underway at Gbaran-Ubie in Bayelsa State, the Niger Delta. Planned for completion sometime around 2011, the project will produce at its peak around one billion cubic feet of associated and non-associated gas per day – equivalent to adding 25% to Nigeria's current gas production.

To encourage further investment to boost the supply of gas to domestic consumers, Nigeria needs a comprehensive commercial framework that will provide the incentives, tax regime and protections necessary to deliver financial returns.

More information on Shell's operations in Nigeria can be found at www.shellnigeria.com



- Since the 1960s, SPDC has been at the forefront of efforts to develop Nigeria's gas resources and is currently the sole supplier of gas to domestic customers.
- We currently produce 70-80% of Nigeria's gas supply – about 420 million scf/d.
- Shell Nigeria Gas (SNG) is the only international oil and gas company to set up a gas distribution company in Nigeria to supply industry customers.
- SNG has connected 50 industrial customers to its two gas distribution networks as at end March 2009.
- SNG is Nigeria's only gas distribution company that is ISO 14001-certified, an internationally recognised environmental certification.
- All the company's employees and managers are Nigerians.