

308/20). At the same time, the low oil price and a reduction in hydrocarbons output forced the government to support its 2015 budget deficit by spending \$35bn from the Fonds de Régulation des Recettes, the closest it has to a sovereign wealth fund. A further \$150bn in reserves are estimated to remain.

Commenting on these economic pressures, Bouterfa said that “the current environment marked by a drastic reduction in state revenue requires us to find sustainable answers to the question of financial availability in order to carry out our investment programme”. According to a programme published in June, the total value of planned investments in all aspects of the sector by 2025 is 5.76trn dinars (\$54.18bn) of which Sonelgaz itself will be responsible for 4.83trn dinars. As well as extending the transmission and distribution networks, this will pay for an additional 27.8GW of generation capacity. Approximately half the planned investments are scheduled for the period until 2017. While this massive programme is necessary to meet expected increases in demand, Sonelgaz cannot support it from its own balance sheet. In the past decade it has already built an additional 8.7GW of capacity, increasing total production by 123%. It has also increased its power transmission grid by 59%, its gas transmission network by 168% and its gas distribution network by 152%.

Even if significant tariff increases are possible, on their own they will not solve Sonelgaz’s problems. This fact explains the other two major power sector developments which Bouterfa mentioned in his general meeting speech. In 2016, the company intends to launch its sixth bond issue on the Bourse d’Alger (AE 308/17). The previous five bonds were launched between 2002 and 2008 and raised 86.65bn dinars. The history of the company’s debt financing is essentially that of massive government support. It was effectively bailed out in 2010 when the government converted 200bn dinars of debt into equity and provided a state-backed 20-year preferential loan to finance the investment programme which five years ago was estimated at 3.58trn dinars – less than two thirds of what it is now (AE 190/9). The intended return to financing from the market is recognition that unlimited state funding is no longer viable.

Sonelgaz is also contemplating a fresh internal restructuring for the first time since it was reorganised and its monopoly taken away by the 2002 electricity and gas law (AE 42/5). Bouterfa said this was needed to “refocus on its mission, to reaffirm its responsibilities, and to consolidate and strengthen supervision”, as well as ensuring the greatest possible return from planned investments. The idea would be to eliminate costly subsidiaries and to achieve economies of scale. Both the primary legislation and Sonelgaz’s own articles will have to be amended to make this possible.

## EGYPT

### EIB to finance new Gulf of Suez wind farm

A €115m loan for the New & Renewable Energy Authority (NREA) is under appraisal at the European Investment Bank (EIB) to finance a 200MW wind farm in the Gulf of Suez.

The loan represents 31.9% of the total cost of the plant, estimated at €360m. The government aims to increase wind energy’s share of total generation capacity to 12% by 2020, and the NREA prequalified 28 wind power projects in January.

This new loan follows EIB approval of a €50m loan for another wind farm of similar size in the Gulf of El Zeit, co-financed by Germany’s KfW. In February, the NREA and Spain’s Gamesa signed a contract for the construction of a 220MW wind farm consisting of 110 wind turbines of 2MW each in the Gulf of El Zeit (AE 299/10). The project has a total cost of €220m and will be financed by the Japan International Co-operation Agency.

Other projects planned for the Gulf of Suez, which boasts average wind speeds of 8-10 metres/second, include one financed jointly by the United Arab Emirates’ Masdar and the NREA, while Japan will finance a 200MW plant in the West Nile area, according to the NREA.

## GHANA

### Metka to develop 250MW gas power plant

Greek power contractor Metka has signed an agreement worth \$350m to provide fast-track engineering, procurement and construction services and operations and maintenance support for a 250MW gas power plant. The deal was struck with the Ghanaian government in partnership with Africa and Middle East Resources Investment Group (Ameri Energy) – the investment vehicle of Sheikh Ahmed Bin Dalmook Al-Maktoum, a member of Dubai’s ruling family – who is the concessionaire for the project. It will be developed under a five-year build, own, operate and transfer arrangement.

The plant will be built at Aboadze, near the Western Region capital Takoradi, which is already home to the Takoradi I, II and III gas power plants, and will be fuelled by associated gas from the offshore Jubilee field. It will have ten General Electric (GE) TM2500+ mobile gas turbines. Metka has opened a regional office in Accra and intends to pursue more projects in sub-Saharan Africa, telling *African Energy* that the company has been exploring opportunities for the past two years and “is currently negotiating important contracts for the provision of electricity in a number of developing countries in the region”.

Ghana’s government has been strident in its rhetoric on the blackouts which have plagued the country this year, with power minister Kwabena Donkor repeatedly promising to resign if load-shedding was not eliminated by year-end. The government announced a plan to deal with the problem in March (AE 297/12, 294/5), and the Metka plant is one of five facilities intended to help increase generation capacity by 1,000MW in the short term.

Two 225MW power barges from Turkey’s Karpower have experienced a number of delays, with reports in the Ghanaian media suggesting that first power will not be achieved until November. Although the details of the ten-year power purchase agreement signed with Karpower last year have not been made

public, *African Energy* understands from industry sources that the price represents a reasonable deal, despite local news reports complaining of its high cost.

## Ghana 1000 progress

Meanwhile, progress is finally being made at the Ghana 1000 project, led by GE and Endeavor Energy, with Eranove and Ghanaian oil trader Sage Petroleum (*AE 294/5*). GE Mining regional commercial director for Africa John Watson told the GMP Securities African Energy Revolution Seminar in London on 28 September that financial close would happen by year-end or early 2016 at the latest. An agreement securing a floating storage and regasification unit from Exceletrate Energy was signed earlier this year. At the time, the 125MW first phase of the project was expected to be completed in late 2016. An initial 750MW is due online by 2018, and 1,300MW within five years.

Ghana has also continued to sign agreements for large renewable power projects. Ireland's Mainstream Renewable Power announced last month that it had signed a grid connection agreement for the 225MW Ayitepa wind farm with the Ghana Grid Company Ltd (GridCo). The project is expected to cost \$525m to build and would account for as much as 5% of the country's grid capacity. The project will require the construction of a new substation between the villages of Sege and Dawa in the Greater Accra region. "The signing of the grid connection agreement represents a key milestone in the progression of the Ayitepa wind farm towards construction early next year. It is also the first renewable energy grid connection agreement in Ghana to date and will hopefully set the precedent for many more over the coming years," said Mainstream development manager for Africa Liam Leahy.

## GUINEA

### Kaléta dam inaugurated

President Alpha Condé on 28 September formally inaugurated the 240MW Kaléta dam, whose first turbine started generating power in May. The ceremony, attended by Niger President Mahamadou Issoufou and his Congolese counterpart Denis Sassou Nguesso, took place less than two weeks before Guinea's 11 October presidential election, in which Condé is seeking a second five-year term. Improved power supplies were one of his main campaign pledges in 2010, but efforts to improve the situation have run into a number of challenges (*AE 304/1*).

The dam, on the Konkouré River 150km north-east of Conakry, was built by China International Water & Electric Corporation (CWE) at a cost of some \$446m, 75% funded by the Export Import Bank of China. Guinean officials said the government had put pressure on CWE to reduce the construction time for the dam to three years from the four years stipulated in the contract. "A dam of this size has never been built in so short a time," said energy and water minister Cheick Taliby Sylla.

While the inauguration was well attended by Condé supporters with banners expressing support for his *Rassemblement du*

Peuple Guinéen Arc-en-Ciel coalition, concerns have been expressed at how much power the dam will produce, especially in the dry season. Testing of the three turbines earlier this year was hampered by low water levels in the reservoir. The Garafiri dam, inaugurated in 1999 during a visit by French President Jacques Chirac, has seldom produced its nameplate 75MW.

As well as its potential to improve power supply, the project has been welcomed for improving access to the area. A road to the site will be tarred after the rainy season, and a bridge across the Badi River has replaced the previous crossing by canoe.

The project is a key element in efforts to improve regional supply by developing the West African Power Pool. Condé has promised that construction of the larger, 500MW Souapiti dam will start within a few months at a site 6km upstream from Kaléta.

## REGIONAL

### AfDB approves €121.5m for OMVG project

The African Development Bank (AfDB) has approved €121.5m (\$137m) of financing for the €937.5m Gambia River Basin Organisation (OMVG) energy project (*AE 308/10*). This aims to increase access to power to 20% (from 12% currently) in Guinea, 42% (35%) in Gambia, 65% (19%) in Guinea-Bissau and 75% (60%) in Senegal by 2020. The project consists of construction of the 128MW Sambangalou hydropower plant, and an interconnection network comprising 1,677km of 225kV transmission lines, 15 high/medium voltage substations and two load dispatch centres. Work is expected to be completed by 2020 and will provide cheaper and more reliable power to the 1.3m utility company customers in the region, as well as helping to develop a regional electricity market.

The OMVG countries have been working with international institutions to break the reliance of Gambia, Guinea-Bissau and Senegal on expensive liquid fuels, and the idea of supplying a high-voltage network using a hydroelectric plant has been mooted for some time. The OMVG energy project initially centred on the 240MW Kaléta power plant in Guinea but the Guinean government decided in 2011 to build the plant with Chinese support. Guinea has agreed to supply 30% of the electricity from Kaléta to the other OMVG countries, with 4% going to Guinea-Bissau, 6% to Gambia and 20% to Senegal.

The Sambangalou dam will have a 181km<sup>2</sup> reservoir – 20% in Senegal and 80% in Guinea – with storage capacity of 3,794mcm. Ten villages containing 1,436 people will be moved to make way for the project. The power plant will be situated on the Senegal side of the Gambia River 18km south of Kedougou. Electricity generated will be shared 48% with Senegal, 20% with Guinea, 18% with Gambia and 14% with Guinea-Bissau. Work on Sambangalou is expected to cost €320.5m. The 1,677km interconnection line will span the four countries and will be used to evacuate power from both Sambangalou and Kaléta. The 15 substations will be built at Soma and Brikama in Gambia; Boké, Kaléta, Linsan, Labé and