

When Abdel Fattah El Sisi seized power in July 2013 Egypt was beset by chronic electricity shortages. Six years on, and total electricity generating capacity is nearly double the peak load. Much of the credit for this rests with the electricity minister, Mohammed Shaker, who was appointed in March 2014 before Sisi's election as president, and with Sherif Ismail, who took over the petroleum ministry in July 2013 and set in place policies that stimulated a revival in the natural gas sector. However, the political dividends have accrued to Sisi, who can point to the turnaround in the energy sector as a notable achievement of his presidency – and as a justification for its extension.

### Raft of combined-cycle gas plants and renewables projects create power surplus

Total capacity in Egypt's power sector increased by 80% between June 2013 and June 2018 to 55.5 GW, while the peak load increased by just 14% to 30.8 GW, according to the state-owned Egyptian Electricity Holding Company's (EEHC's) recently released report for the 2017/18 (July-June) fiscal year.

The initial boost in power generation resulted from an emergency plan to install 3.6 GW of gas turbines, which was completed in 2015. The next big surge was thanks largely to the construction of three huge power stations as part of a €6bn (\$6.7bn) contract signed in 2015 with Germany's Siemens and local partners Orascom Construction and Elsewedy Electric. The plants each have capacity of 4.8 GW, in a combined-cycle format, based on 1.2-GW blocks comprising two gas turbines and one steam turbine driven by heat recovered from the gas cycle. The three plants, located at Beni Suef, Burullus and the new administrative capital, were completed in 2018, and their capacity was included in the 2017/18 total.

After that, capacity was expanded once more following the start-up of about 1.4 GW of solar panels installed by 32 companies in Benban, north of Aswan.

Work is also under way on several large-scale new [solar and wind projects](#). In its report, the EEHC noted that no new thermal power stations are expected to come on stream before July 2022. Three large thermal power station contracts – one combined cycle and two coal-fired – have been negotiated with private investors, but it is not certain that they will all go ahead. A contract has also been signed with Russia's Rosatom for a 4.8-GW nuclear power station at El-Dabaa, west of Alexandria, but this is unlikely to start generating electricity until the late 2020s.

## Government says extra capacity necessary to meet rising demand

The scale of the surplus of generating capacity over demand raises the question of whether the Egyptian government may have over-invested in this sector, adding to the financial burden on both the state and consumers.

As regards surplus capacity, the government has argued that demand is likely to increase rapidly over the coming years, as economic growth climbs towards the target of 7%, and that extra power supplies are needed for the 14 satellite cities under construction – of which the largest is the new administrative capital – as well as for future investments in areas such as desalination and [electric vehicles](#). Egypt also has ambitious plans to [export electricity](#) around the region, including via a 3-GW link to Saudi Arabia, which is under construction. Moreover, new plants such as the Siemens stations, operate at a much higher rate of efficiency than many of the older units, which can be phased out.

## Electricity projects account for 24% of total loans and credits guaranteed by Treasury.

On the cost front, Egypt landed a bargain for the Siemens contract, by global industry standards. According to the US Energy Information Administration, the average cost for the installation of combined-cycle generating capacity in the US was about \$955 per KW; the cost per KW for the Siemens plants in Egypt was \$465, based on the announced contract price. The relatively low price could reflect economies of scale for such an unusually large project, as well as savings through using locally procured materials and labour. The project was also carried out at a brisk pace, taking just over two years to complete.

Financing for the Siemens contract came in the form of credits arranged by a consortium of banks led by Deutsche Bank, HSBC and KfW-IPEX, and guaranteed by the Ministry of Finance. The electricity ministry is now considering bids from two private investment groups to acquire the Siemens plants, which would enable the government to shift the debt off its books. According to the finance ministry's 2019/20 budget statement, electricity projects account for 24% of the total E£1.28trn (\$77bn) of loans and credits guaranteed by the Treasury.

## Consumer subsidies are gradually reduced, tariffs rise to \$0.05 per KWh

One of the conditions for securing finance from banks and development institutions for projects such as the Siemens plants, the solar parks and wind farms has been a government commitment to ensure the solvency of the electricity sector. [Subsidies for electricity consumption](#) have been steadily whittled away through annual tariff hikes, with the target of eliminating the subsidy in 2021/22. The median tariff for residential consumers has risen from the equivalent of \$0.017 per KWh in 2013 to about \$0.05 following the most recent hike, which went into effect in July. The government estimates that the cost of supplying electricity to households is about \$0.068 per KWh.

Sisi has repeatedly lectured Egyptians about the need to make sacrifices for the greater good. The benefits have not always been clear cut, but the president can at least be assured of the legacy of having kept the lights on.

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