
Press release

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MAN Supplies Gas and Dual-Fuel Engines in Israeli Desalination Plant Refit

Efficient engines drive seawater pumps and ensure plant's independent power supply

MAN Energy Solutions will supply 2 × MAN 14V51/60DF and 5 × 18V51/60G engines to the refit of a seawater desalination plant in the Israeli city of Ashdod. The two dual-fuel engines will drive two 15 MW seawater pumps, while the five gas engines – as gensets with a total capacity of 99 MW – will ensure the plant's off-grid power supply. As required, the gensets will also be able to feed into the national grid. The new set-up replaces the facility's former eight electrical pumps and significantly lowers its energy consumption while maintaining the original capacity.

The power plant is located about 40 km south of Tel Aviv on the Mediterranean coast and has been in operation since 2015. With an annual output of some 100 million cubic meters of seawater, the plant is responsible for around one-sixth of the total volume of water desalinated in Israel. The Ashdod desalination operation Ltd is owned by Shapir Engineering and Marine Ltd and GES Global Environmental Solutions Ltd.

“In Ashdod, the operator has chosen an innovative set-up as, typically, seawater pumps are driven by electric motors. The mechanical drive chosen here reduces operating costs while increasing the overall efficiency of the plant. In addition, efficient fuel-utilization is ensured, even in part-load operation,” said Tilman Tütken, Vice President Strategic Projects, Power, at MAN Energy Solutions. “In conjunction with the additional power-plant engines, this creates a fully independent system that ensures the reliable and efficient operation of the plant.”

The operator plans to use a single power-plant engine on a rotating basis to provide continuous power to the plant, while the other four engines will serve as back-up for the national grid, balancing peak loads in Israel's energy demand.

MAN PrimeServ signs ten-year service agreement

Post-commissioning, MAN Energy Solutions' global, after-sales brand – MAN PrimeServ – will continue as project partner and share maintenance duties with plant staff. As part of a ten year, long-term service agreement (LTSA), MAN PrimeServ will supply spare parts and technical service to both the 14V51/60DF and 18V51/60G engines. The agreement also includes a training program to instruct the customer's plant staff in the operation and maintenance of MAN equipment.

The plant staff will additionally benefit from MAN's digital-service solution – PrimeServ Assist – which strongly supports the efficient operation of power

plants. The solution remotely monitors engine operation 24/7 through dedicated service personnel that notify the customer immediately in the event of critical deviations in engine performance.

Seawater desalination secures Israeli water supply

Since the beginning of the 21st century, the Israeli government has increasingly relied on seawater desalination to guarantee the water supply for industry and the general population, even during longer periods of drought. A total of five such plants are currently in operation, which together desalinate around 585 million cubic metres of seawater. In the next few years, two more plants with an additional capacity of over 300 million cubic metres will be established. Once complete, the seven plants will cover 85 to 90% of Israeli water needs.



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MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.