

18.23 **Progress towards installation of the Narva Shale Oil Upgrader Plant in Estonia**

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Enefit / Eesti Energia AS / Eesti Energia Oil and Gas and Jacobs Consultancy are continuing strategic planning and conceptual design for a Shale Oil Upgrader Plant, located near Narva, Estonia. This Upgrader Plant will process at least 20,000 barrels per stream day (~1 million tons per year) of raw Estonian shale oil liquids produced by the new Narva Shale Oil Plant currently under construction that will include multiple parallel Enefit280 Oil Shale Retorting & Condensation Trains. The upgrader Plant will be capable of processing an additional 10,000 BPSD of supplemental crude-derived feedstocks when such capacity is needed.

Highlights of this presentation include:

A brief conceptual review of the new generation Enefit280 technology and a progress update on construction of the shale oil plant; results and new insights from the "Confirming Shale Oil Hydrotreating Pilot Plant Program" conducted this year in modified ARHDS aging test pilot plant at Intertek PARC (1.3 liters per hour shale oil liquids); preliminary designs for a 20,000 BPD Shale Oil Hydrotreater Unit; comparisons of Gas POX vs. Fuel Gas HTU/SMR/PSA for an integrated Hydrogen Plant (165 to 190 TPD high purity hydrogen); Environmental Management & Sulphur Block; assay work on final hydrotreated products; and continuing engineering & implementation plans.