



Rating Action: Moody's assigns Baa3 rating to TVO; stable outlook

04 May 2023

Paris, May 04, 2023 – Moody's Investors Service (Moody's) has today assigned a Baa3 LT issuer rating to Teollisuuden Voima Oyj (TVO). At the same time, Moody's has assigned a (P)Baa3 to the company's €5 billion EMTN programme. The outlook is stable.

The Baa3 issuer rating positively reflects (1) the start of commercial operations at the Olkiluoto 3 (OL3) nuclear power plant from 1 May; (2) the continuing strong operational and safety performance of the company's other nuclear power plants – Olkiluoto 1 and 2 (OL1 and OL2), which have fairly low and thus competitive costs of production; (3) TVO's status as a Mankala company; and (4) the solid weighted-average credit quality of TVO's major shareholders and the track record of support, in particular during construction of OL3.

The Baa3 rating is constrained by (1) the company's exposure to a single technology and a single site risk; (2) the short track record of regular electricity production of OL3; (3) TVO's high leverage with outstanding debt of around €5.5 billion as of end-December 2022; and (4) an expected increase in TVO's average costs of production following commissioning of the new plant.

As noted, the Baa3 rating takes account of the company's not-for-profit business model with TVO operating under the Mankala principle and able to fully pass its costs through to shareholders. The value ascribed to the business model is however, limited by the shareholder obligations being several and not joint.

RATINGS RATIONALE

On 20 April, TVO announced [1] acceptance of OL3. This followed a lengthy construction period with the Areva-Siemens consortium originally due to complete the plant in 2009. The complex project encountered multiples design and execution challenges but the plant was connected to the national grid on 12 March 2022 and regular electricity production finally started on 16 April 2023 following an extended testing and acceptance period.

With the start of commercial operations at OL3, the project costs related to the new plant are no longer capitalized. Rather, the recognition of depreciation starts and TVO's shareholders will have to cover all of OL3's fixed and variable costs. A two year supplier warranty period also commenced on 18 April 2023 with certain items benefitting from up to 8 years of guarantee.

TVO operates according to the Mankala principle. The principle, a peculiarity of Finnish energy production, is not enshrined in law but defined in the company's Articles of Association, which state that each shareholder [2] is obliged to pay all annual fixed costs of TVO's production in proportion to the number of shares held and variable costs according to the quantity of electricity consumed.

Whilst Moody's recognizes that unexpected shutdowns of OL3 could yet still occur in view of the plant just starting commercial operations, TVO would under the Mankala principle continue to invoice its costs – which include interest payments and debt amortization – to its shareholders. In that regard, TVO is exposed to the credit quality of its shareholders, which the rating agency estimates to be in the Baa range, on average.

In addition to the recently commissioned OL3 plant, TVO operates two Boiling Water Reactors (BWR) at its site in Olkiluoto – OL1 and OL2, which were commissioned in 1978 and 1980 respectively. The plants have a valid license until 2038 and have been operating with a very strong track record of high load factors of around 95%. Whereas the

OL1 and OL2 plants are very cost competitive, Moody's notes that TVO's marginal cost of production will increase because of OL3's substantially higher capital costs.

With OL3 now commissioned, Moody's would expect TVO to embark on a steady path of de-leveraging. However, its capital structure will remain highly leveraged for the foreseeable future with debt decreasing by an estimated €150 million per year in tandem with the depreciation of TVO's assets. Financial strategy and management credibility and track record are key governance considerations under Moody's General Principles for Assessing Environmental, Social and Governance Risks Methodology.

LIQUIDITY

TVO's liquidity profile is good. As at the end of March 2023, the company had cash balances of €169 million. Further liquidity cushion is provided by access to an almost fully undrawn €1 billion committed revolving credit facility (€75 million was drawn as at the end of the first quarter) maturing in June 2025. This is more than enough to cover TVO's short term debt with €283 million of debt coming due over the next 12 months. However, TVO has substantial refinancing needs every year over the horizon 2024-2028. Moody's would expect TVO to refinance upcoming debt maturities in a timely manner.

RATING OUTLOOK

The stable outlook reflects Moody's expectation that TVO will now embark upon a stable, but slow, path of deleveraging. Under its articles of associations, TVO will continue to recover its fixed and variable costs from shareholders regardless of the actual output produced at OL3 but the stable outlook also anticipates continued successful operation of the three nuclear plants with no major unplanned outages. The stable outlook does not incorporate any re-leveraging of TVO's balance sheet.

FACTORS THAT COULD LEAD TO AN UPGRADE OR DOWNGRADE OF THE RATINGS

Upward pressure is not expected in the short to medium term. Upward rating pressure could build if OL3 demonstrates a successful track record of successful operations and TVO's leverage moves sustainably down from its current high point. Furthermore, upward pressure would also require OL1 and OL2 to maintain their strong operational performance at the same time as TVO's expected production costs remain competitive in comparison with the wholesale power markets. Finally, upward pressure would also require maintenance or improved credit quality of TVO's shareholders and continuing confidence in the Mankala model.

Downward rating pressure could develop if there was a material deterioration in the operational performance or competitiveness of TVO's nuclear fleet and/or there were concerns about the company's ability to pass on its costs to its shareholders. Downward rating pressure could also build should the credit quality of TVO's shareholders decline.

TVO's ESG Credit Impact Score is not material to the rating (CIS-2), mainly reflecting its low exposure to environmental (E-2) and governance (G-2) considerations. In particular, TVO's generation consists of carbon free nuclear production. Costs related to nuclear decommissioning and nuclear waste are ultimately passed on to its shareholders. TVO has moderately negative exposure to social risks (S-3), and more particularly demographic and societal trends, whereby it could come under public scrutiny as a utility with nuclear generation and in the face of affordability concerns. Whereas volatility in electricity prices does not affect TVO itself given that it sells its output at cost price, a prolonged period of lower prices below its cost price of production could eventually threaten the viability of the structure for its shareholders.

PRINCIPAL METHODOLOGY

The principal methodology used in these ratings was Unregulated Utilities and Unregulated Power Companies published in May 2017 and available at <https://ratings.moodys.com/rmc-documents/75129>. Alternatively, please see the Rating Methodologies page on <https://ratings.moodys.com> for a copy of this methodology.

COMPANY PROFILE

Teollisuuden Voima Oyj owns and operates three nuclear power units – OL1, OL2 and OL3 with a total capacity of 3.4 gigawatts (GW). Commercial operations of the new OL3 plant will start on 1 May 2023. TVO operates according to the Mankala principle, meaning that it supplies all of the electricity that it generates to shareholders at cost price.

REGULATORY DISCLOSURES

For further specification of Moody's key rating assumptions and sensitivity analysis, see the sections Methodology Assumptions and Sensitivity to Assumptions in the disclosure form. Moody's Rating Symbols and Definitions can be found on <https://ratings.moody.com/rating-definitions>.

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Moody's general principles for assessing environmental, social and governance (ESG) risks in our credit analysis can be found at https://ratings.moody.com/documents/PBC_1288235.

At least one ESG consideration was material to the credit rating action(s) announced and described above.

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REFERENCES/CITATIONS

[1] <https://www.tvo.fi/en/index/news/pressreleasesstockexchangereleases/2023/tvoconfirmsacceptanceofolkiluoto3epran>

[2] Main shareholders of TVO are UPM Kymmene, Stora Enso, Kemira, Fortum and various municipalities

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