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Research Update:

Teollisuuden Voima Oyj 'BB+' Ratings Affirmed Despite Additional Delay In Power Plant Completion; Outlook Stable

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Overview

- The Areva-Siemens consortium, supplier of the Olkiluoto 3 (OL3) nuclear power plant, has announced a further delay of four months in the completion of the plant, postponing the start of regular electricity production to January 2020.
- We believe that Finland-based nuclear power producer Teollisuuden Voima Oyj (TVO) remains protected against cost overruns driven by the further delay, in line with the terms of the settlement agreement it signed with the supplier consortium in March 2018.
- We are therefore affirming our 'BB+' long-term and 'B' short-term issuer credit ratings on TVO.
- The stable outlook reflects our expectation that the Areva-Siemens consortium will have the technical and financial resources to complete OL3 with no material cost overruns for TVO and that TVO's shareholders will continue to support the company.

Rating Action

On Dec. 12, 2018, S&P Global Ratings affirmed its 'BB+' long-term and 'B' short-term issuer credit ratings on Finland-based nuclear power producer Teollisuuden Voima Oyj (TVO). The outlook is stable.

At the same time, we affirmed our 'BB+' issue rating on TVO's €1.3 billion revolving credit facility (RCF) and €4.0 billion euro medium-term note (EMTN) program. The recovery rating is unchanged at '4', indicating our expectation of average recovery (30%-50%; rounded estimate: 30%) in the event of a payment default.

Rationale

The ratings affirmation reflects our expectation that the additional four-month delay in the completion of the Olkiluoto 3 (OL3) nuclear plant announced by the plant's supplier, the Areva-Siemens consortium, will not generate material cost overruns for TVO. This is because TVO is protected under the terms of the settlement agreement that it signed with the OL3 supplier consortium in March 2018. We anticipate that TVO will not need to pay the €150 million incentive fee due to the supplier if OL3 had been still due for completion in June 2019. TVO will also be entitled to receive incremental penalty payments for each month of delay since January 2020, up to a maximum amount of €400 million, if the completion of OL3 is delayed to June 2021.

Given the turnkey nature of the OL3 engineering, procurement, and construction contract, we estimate that the construction cost remains unchanged at €5.5 billion, and any cost overruns mainly relate to capitalized interest.

The updated schedule reflects that commissioning tests at OL3 were not progressing as expected. Hot functional tests, designed to verify the safety and operability of the plant without fuel, registered some months of delay in May 2018 and this caused subsequent delays in the timeline. Fuel is now due to be loaded into OL3 reactor in June 2019, instead of January 2019, with the start of regular electricity production in January 2020, instead of September 2019.

We understand that adequate funds dedicated to the completion of the OL3 project have been set aside through a trust mechanism on which TVO has complete visibility. We consider that this trust mechanism is important to protect TVO from a potential insolvency of Areva entities, because after the restructuring and the sale of Areva to EDF Electricité de France, Areva does not have any operational activities apart from the completion of OL3. While the entities of the supplier consortium have joint and several liability for potential penalties, the key risk to monitor is the extent to which Areva is able to complete the project if there are further delays or cost overruns.

Our ratings on TVO continue to be underpinned by its "Mankala" model, which largely insulates the company from competition and market risk. This stems from the company's ability to sell the electricity it produces to its shareholders at cost. TVO's owners--comprising major Finnish industries, utilities, and municipalities--are responsible, in line with TVO's articles of association, for TVO's annual fixed costs (about 80%-85% of total costs) in proportion to their shares and irrespective of whether they have used their share of electricity. Annual fixed costs include interest and loan installments and depreciation.

We consider TVO as playing an important role in the Finnish electricity market as it generates about 14 gigawatt hours (GWh) of electricity, corresponding to 20% of the total electricity produced in Finland. We expect this share to increase to 30% when OL3 is operating at full capacity (about 12-13 GWh of electricity production). Generally, the OL1 and OL2 plants have high load factors of more than 90%, despite outages, and their operating licenses were extended in September 2018 for an additional 20 years.

The strengths of TVO's business model are partially offset by an extremely high amount of debt--about €4 billion as of September 2018--excluding the €666 million loan that TVO received from the Finnish State Nuclear Waste Management Fund and on-lent to its shareholders.

The OL3 plant, which was originally due to come on stream in 2009, has registered a series of delays that have significantly increased TVO's financial leverage as construction costs have been capitalized and will start to depreciate when OL3 starts operations. We expect the increased EBITDA after the completion of OL3 to reduce the company's S&P Global Ratings-adjusted debt to EBITDA to about 13x-14x.

We acknowledge that TVO's financial metrics are substantially weaker than those of profit-maximizing companies due to its non-profit nature. Therefore, TVO has a relatively short-dated debt-maturity profile--about four years--compared with the economic lifetime of its asset base of over 40 years. This increases the company's exposure to refinancing risk.

However, TVO maintains a €1.3 billion RCF maturing in 2021-2023 to ensure that it is able to cover its funding needs over the next few years. Although TVO should be able to charge its shareholders for installments and interest payments on loans falling due annually--in accordance with its loan agreements--its debt does not benefit from any guarantees.

Our base-case scenario incorporates the following assumptions:

- Cost overruns driven by the OL3 completion delay, mainly represented by higher interest payments, but largely compensated for by the absence of incentive payments due from TVO to the supplier consortium.
- No significant penalties due to TVO, assuming that OL3 will be completed by January 2020.
- Annual maintenance capital expenditure (capex) on the existing OL1 and OL2 plants amounting to about €50 million-€80 million, higher than the maintenance capex that we expect on OL3 once it is in operation.
- TVO's production costs of slightly less than €30 per megawatt hour (/mwh) when OL3 starts operations, increasing from €20/mwh currently, reflecting the start of the depreciation of OL3's capitalized costs and interest.
- Continued full coverage by TVO's shareholders of TVO's production costs (including interest expenses) for OL1 and OL2, which we expect will remain competitive in the near term.
- No unexpected outages at OL1 and OL2.
- Use of a €100 million shareholder loan, out of €250 million of undrawn commitments, mainly related to OL3.

Based on these assumptions, we arrive at the following credit measures:

- Debt to EBITDA of about 13x-15x from 2020; and
- Funds from operations interest coverage of 2x-3x from 2020.

Liquidity

We assess TVO's liquidity as adequate. We estimate that sources of liquidity for the 12 months to Sept. 30, 2019, will exceed uses of liquidity by more than 1.2x, supported by a committed and undrawn RCF of about €1.3 billion and additional committed facility lines. We believe that TVO would likely be able to absorb high-impact low-probability events with limited need for refinancing and has sound relationships with its banks. Furthermore, we anticipate that TVO's shareholder loan commitments will be sufficient to meet the equity-to-debt covenant.

We estimate that TVO's principal liquidity sources in the 12 months to Sept. 30, 2019, will comprise:

- About €113 million in unrestricted cash and equivalents as of Sept. 30, 2018;
- Access to an undrawn €1.3 billion RCF, of which €300 million matures in 2021 and €1 billion in February 2023. We do not reflect in our liquidity calculation an additional €100 million facility signed with the European Investment Bank that is to be withdrawn by March 2019, as this line does not mature beyond the next 12 months.
- About €200 million of senior unsecured notes issued on Nov. 15, 2018, under the €4 billion EMTN program, for refinancing some notes due early next year and for general purposes.
- Shareholder loan commitments totaling €250 million related to OL3, as €100 million was withdrawn as planned in 2018.

We estimate that TVO's principal liquidity uses in the same period will comprise:

- About €300 million of debt repayments over the next 12 months; and
- Expected capex of about €450 million, mainly for OL3 milestones and cost overruns related to the further delay.

TVO's loan documentation includes one financial covenant that stipulates an equity-to-assets ratio of 25%. In calculating the ratio, TVO excludes the loans it receives from the Finnish State Nuclear Waste Management Fund, whose proceeds TVO has lent to the shareholders, and provisions related to nuclear waste management. Shareholder loans are included in equity. As of Sept. 30, 2018, the equity-to-assets ratio was about 29.4%, and we expect the shareholder loan commitment to be withdrawn so that TVO can meet the covenant while OL3 is being completed.

Outlook

The stable outlook reflects our expectation that the supplier consortium will be able to complete the third nuclear power plant OL3 without material cost overruns for TVO, supported by sufficient liquidity in the trust mechanism. We factor into our analysis the fact that TVO is entitled to receive incremental penalty payments at the completion of the OL3 project for every month of additional delay, up to a maximum amount of €400 million. This could partly offset any potential increase in capitalized interest costs in the case of further delays in this period.

The stable outlook also reflects our expectation that shareholders will continue to support TVO and that TVO's cost advantage over market prices will not deteriorate materially.

Downside scenario

We could take a negative rating action if we believed that the Areva-Siemens consortium does not have enough resources, either technical or financial, to complete OL3. Pressure on the rating could also arise if additional delays on OL3 cause higher capitalized interest for TVO that is not sufficiently and timely compensated for by penalty payments by the time the project is completed.

We could also lower the ratings if we saw the shareholders' willingness or ability to support TVO diminish, which could be indicated by the weakening credit quality of TVO's main shareholders, or by a widening negative gap between market prices and TVO's production costs, indicating lower future value for shareholders. In our view, these factors could hinder TVO from beginning its long deleveraging path.

Upside scenario

We could raise the rating on TVO if the risk of the completion of the OL3 nuclear plant dissipates and the plant starts regular electricity generation with no operational issues.

In order for a positive rating action to occur, we would expect to see TVO start on its lengthy deleveraging path, which we see as a key step in order to ensure continuous support from the shareholders.

Ratings Score Snapshot

Issuer Credit Rating: BB+/Stable/B

Business risk: Strong
- Country risk: Very low
- Industry risk: Moderately high
- Competitive position: Excellent

Financial risk: Highly leveraged
- Cash flow/Leverage: Highly leverage

Anchor: bb

Modifiers
- Diversification/Portfolio effect: Neutral (no impact)

- Capital structure: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Financial policy: Neutral (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Positive (+1 notch)

Issue Ratings--Recovery Analysis

Key analytical factors

- The issue and recovery ratings on the senior unsecured €1.3 billion RCF (€300 million facility A and €1.0 billion facility B) and €4.0 billion EMTN program are 'BB+' and '4', respectively.
- The issue rating is constrained by the large amount of senior unsecured debt. Our recovery expectations are in the lower half of the 30%-50% range (rounded estimate: 30%).
- In our simulated default scenario, we assume the default of one of TVO's shareholders, combined with ongoing price pressures in the wholesale market.
- We value TVO as a going concern, given its importance to the Finnish electricity market, since it will produce approximately 30% of the total electricity requirement once OL3 is on stream.
- We understand that the event of default includes a change in ownership affecting 10% of existing shareholders and an amendment to Article 4 of the articles of association without the prior consent of the majority lenders.

Simulated default assumptions

- Year of default: 2020
- EBITDA at default: About €300 million
- Implied enterprise value multiple: 6.5x
- Jurisdiction: Finland

Simplified waterfall

- Gross enterprise value at default: About €1.9 billion
- Net recovery value for waterfall after admin. expenses (5%): About €1.8 million
- Senior unsecured debt claims: About €6 billion*
- Recovery expectations: 30%-50% (rounded estimate: 30%)

*All debt amounts include six months' prepetition interest.

Related Criteria

- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- Criteria - Corporates - General: Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016
- Criteria - Corporates - Recovery: Methodology: Jurisdiction Ranking Assessments, Jan. 20, 2016
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - General: The Treatment Of Non-Common Equity Financing In Nonfinancial Corporate Entities, April 29, 2014
- Criteria - Corporates - Industrials: Key Credit Factors For The Unregulated Power And Gas Industry, March 28, 2014
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Ratings List

Ratings Affirmed

Teollisuuden Voima Oyj	
Issuer Credit Rating	BB+/Stable/B
Senior Unsecured	BB+
Recovery Rating	4(30%)

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Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column. Alternatively, call one of the following S&P Global Ratings numbers: Client Support Europe (44) 20-7176-7176; London Press Office (44) 20-7176-3605; Paris (33) 1-4420-6708; Frankfurt (49) 69-33-999-225; Stockholm (46) 8-440-5914; or Moscow 7 (495) 783-4009.