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Research Update:

Finnish Nuclear Producer Teollisuuden Voima Oyj 'BB+' Ratings Affirmed On Agreement With Supplier Consortium Companies

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Overview

- The settlement agreement signed by Teollisuuden Voima Oyj (TVO) and the Olkiluoto 3 (OL3) supplier consortium settles dispute claims in relation to the nuclear reactor project. The resolution follows a long arbitration process, and provides incentives for Areva to complete the project.
- We believe the terms of the agreement protect TVO from further cost overruns or Areva's risk of insolvency.
- We are therefore affirming our 'BB+' long-term issuer credit rating on TVO and removing it from CreditWatch negative. We are also affirming our 'B' short-term rating on TVO.
- The stable outlook reflects our expectation that the agreement's conditions precedent will be met and, once effective, the agreement will provide Areva with the capacity and incentives to complete the OL3 project with no material delay or cost overrun for TVO.

Rating Action

On March 22, 2018, S&P Global Ratings affirmed its 'BB+' long-term issuer credit rating on Finland-based nuclear power producer Teollisuuden Voima Oyj (TVO) and removed the rating from CreditWatch with negative implications, where we had placed it on Oct. 17, 2017. We also affirmed the 'B' short-term issuer credit rating on TVO. The outlook is stable.

At the same time, we affirmed and removed from CreditWatch our 'BB+' issue rating on TVO's €1.3 million revolving credit facility (RCF) and €4.0 billion euro medium-term note program. The recovery rating is unchanged at '3', indicating our expectation of average (30%-50%; rounded estimate 30%) recovery in the event of payment default.

Rationale

The affirmation reflects our view that the comprehensive agreement signed by TVO and the Olkiluoto 3 (OL3) supplier consortium (Areva GmbH, Areva NP, and Siemens AG) successfully resolves the longstanding dispute under an arbitration process for the costs and losses due to the delay of OL3.

The agreement settles the size of the litigation payment that the supplier consortium must make to TVO, which is set at €450 million. It also ensures that Areva has enough resources, both technical and financial, to complete the project. At the same time, we believe that the terms of the agreement incentivize the supplier to complete OL3 project by the end of 2019 and protects TVO against potential cost overruns through incremental penalties.

We note that the series of delays on OL3 construction, which was originally planned to come onstream in 2009, have significantly increased TVO's financial leverage as construction costs have been capitalized and will start to be depreciated when OL3 comes into operation. We expect the increased EBITDA at that point to reduce the company's leverage to about 13x-14x adjusted debt to EBITDA. This ratio will slightly benefit from the first settlement amount TVO will be receiving from Areva, which we now incorporate in our analysis (about €300 million).

We view the incentive payment of €150 million due to the supplier if OL3 is completed by June 2019 as an effective mechanism to reduce the risk of further delay, which should enable TVO to embark on its lengthy deleveraging path. Given the turnkey nature of the contract, the construction cost is now estimated at €5.5 billion. If the project were to be delayed beyond 2019, we believe that the penalty mechanism in place would protect TVO against additional cost overruns, up to a maximum of €400 million if the completion of OL3 were delayed to June 2021.

In our view, the undertaking of the consortium companies to dedicate adequate funds to the completion of OL3 project, including setting up a trust mechanism funded by the Areva entities, is sufficient to secure the second settlement instalment due by the end of 2019 (€122 million) and to cover the maximum amount of penalties for further delays. We consider that this trust mechanism is important to protect TVO from a potential insolvency of the Areva entities, given that they have no other operational activities apart from TVO after the restructuring and the sale of Areva NP to EDF.

The effectiveness of the agreement is subject to certain conditions precedent, some of which remain pending and are expected to be met over the coming weeks. Although this is unlikely in our opinion, if the agreement does not enter into force, the uncertainty about the outcome of the arbitration process and the risk that Areva might not be able to complete OL3 could lead us to revise our current assumptions, with potential negative implications for the ratings on TVO.

We view the €150 million additional shareholder loan commitments provided in December 2017 as a solid indication of the willingness of TVO's shareholders to support the company. We believe that the terms of the settlement agreement lend further comfort to shareholders for the economic value of the project as further cost overruns are covered by Areva, preserving TVO's production costs. Reduced market prices over the past four years have indeed reduced TVO's cushion against any increased cost overruns.

Our rating on TVO remains underpinned by its Mankala model, which largely insulates the company from competition and market risk. This stems from the company's ability to sell electricity produced 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 or not they have used their share of electricity. Annual fixed costs include interest and loan instalments and depreciation. We also consider TVO as playing an important role in the Finnish electricity market as it generates about 20% of total electricity produced in Finland. We expect this share to increase to 30% when OL3 comes into operation.

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 €1.3 billion of RCFs, maturing in 2021-2023, to ensure that it is able to cover funding needs over the next few years and an additional €380 million in committed lines were signed in 2016 and 2017. Although TVO should be able to charge its shareholders for instalments and interest payments on loans falling due annually--in accordance with the article of association--its debt does not benefit from any guarantees.

Our base-case scenario incorporates the following assumptions:

- The settlement agreement signed with the OL3 EPR plant supplier consortium enters into force under the current terms.
- TVO receives the €300 million settlement payment (net of the maximum incentive payment due to the supplier) and Areva pays no penalties, assuming OL3 will be completed by June 2019.
- Remaining capital expenditure (capex) to complete OL3 (including capitalized interest) slightly higher than €1 billion over 2018-2019, reflecting milestone payments to the supplier, gross of any settlement payments.
- Annual maintenance capex on OL1 and OL2 amounting to about €50 million-€80 million, higher than the maintenance capex expected on OL3 once it is in operation.
- TVO's production cost slightly lower than €30/megawatt hour (mwh) when OL3 comes into operation, increasing from €20/mwh, reflecting the start of the depreciation of OL3's capitalized costs and interest.
- TVO's shareholders will continue to fully cover the company's production costs (including interest expenses) for existing plants OL1 and OL2, which we expect will remain competitive in the near term.
- No unexpected outages at OL1 and OL2.
- Use of €200 million of shareholder loan commitments for OL3, out of €350

million committed amount.

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

- Debt to EBITDA of about 13x-15x from 2020 onward; 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 calendar year 2018 will exceed uses of liquidity by more than 1.2x, supported by €1.68 billion of undrawn RCF and committed liquidity facilities. We believe the company would likely be able to absorb high-impact, low-probability events with limited need for refinancing and has sound relationships with banks. Furthermore, we anticipate shareholder loan commitments will be sufficient to meet the equity-to-debt covenant.

We estimate that TVO's principal liquidity sources during the 12 months to Dec. 31, 2018 will comprise:

- About €140 million in unrestricted cash and equivalents as of Dec. 31, 2017;
- Access to an undrawn €1.3 billion RCF, of which €300 million matures in 2021 and €1 billion in February 2023; €280 million bilateral revolving credit facilities signed in 2017, maturing in 2020; and to a €100 million undrawn term loan signed with the European Investment Bank to be withdrawn by 2019.
- Shareholder loan commitments totaling €350 million related to OL3, of which we expect €100 million to be withdrawn in 2018.

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

- About €400 million of debt repayments over the next 12 months; and
- Expected capex of about €600 million, mainly toward OL3 milestone completion, gross of any settlement payment.

The company's loan documentation includes one financial covenant, which 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 are lent to the shareholders, and provisions related to nuclear waste management. Shareholder loans are included in equity. As of Dec. 31, 2017, the equity-to-assets ratio was about 28.9%.

Outlook

The stable outlook reflects our expectation that the third nuclear reactor will be completed on time by June 2019, as the penalty mechanism in place under the settlement agreement signed with the supplier consortium effectively transfers the risk of potential cost overruns to the supplier. It also reflects the stability of cash flow driven by the contractual nature of TVO's revenue and cost structure backed by its shareholders, and our expectation that TVO's cost advantage versus market prices will not further deteriorate.

Downside scenario

We could take a negative rating action if the settlement agreement does not enter into force, putting at risk the completion of OL3 project due to the uncertainty of the impact of the arbitration outcome on Areva's liquidity. We see this event as unlikely. We could also lower the rating on TVO if we see any doubts regarding Areva's capacity to complete OL3, leading to further material delays or cost overruns that are not compensated by the supplier. These factors could hinder TVO from beginning its long deleveraging path. We could also lower the ratings if we see a widening negative gap between market prices and TVO's production costs, indicating lower future value for shareholders. Finally, we could also lower the ratings if we saw a diminishing willingness or ability of the shareholders to support TVO, which could be indicated by weakening credit quality of its main shareholders.

Upside scenario

We could raise the rating on TVO if the company significantly reduced its leverage, but we see this scenario as unlikely at the moment.

Ratings Score Snapshot

Issuer Credit Rating: BB+/Stable/B

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

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

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 euro medium-term note program are 'BB+' and '4', respectively.
- The issue rating is constrained by the large senior unsecured debt amount. 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 its 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 amendment to Article 4 of the articles of association without the prior consent of the majority lenders.

Simulated default assumptions

- Year of default: 2020
- Minimum capex (% of sales): 6%
- Cyclicality adjustment: 10% (standard sector assumption for unregulated power)
- Operational adjustment: +35% (this reflects that the minimum capex is much higher than 6% of sales, given the high capital intensity of the business. This also reflects our forward looking valuation for this company).
- Emergence EBITDA after recovery adjustments: €326 million
- Implied enterprise value multiple: 6.0x
- Jurisdiction: Finland

Simplified waterfall

- Gross enterprise value at default: €1,954 million
- Administrative costs: €98 million
- Net value available to creditors: €1,856 million
- Senior unsecured debt claims: €6,145 million*
- 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
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, 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

Related Research

- Finnish Nuclear Producer Teollisuuden Voima Oyj (TVO) Ratings Placed On Watch Negative On Lower Financial Flexibility, Oct. 17, 2017

Ratings List

Ratings Affirmed; CreditWatch/Outlook Action

	To	From
Teollisuuden Voima Oyj		
Corporate Credit Rating	BB+/Stable/B	BB+/Watch Neg/B
Teollisuuden Voima Oyj		
Senior Unsecured	BB+	BB+/Watch Neg
Recovery Rating	4(30%)	4(30%)

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