



Press Release: Rating Action

JCR Affirms AA Rating on Teollisuuden Voima Oyj; Outlook Stable

Issuer: Teollisuuden Voima Oyj
FC (Foreign Currency Long-Term Senior Debts): AA (Stable)

JCR has affirmed its AA rating on the foreign currency long-term senior debts of Teollisuuden Voima Oyj (TVO).

Teollisuuden Voima Oyj's (TVO) biggest shareholder is Pohjolan Voima Oy (PVO, AA/ Stable; JCR), which forms the second largest power wholesale group by shareholding.

The rating is supported primarily by (a) its strategic importance in Finland's national energy and environment policies, (b) its minimized risk in cost recovery on the so-called "Mankala" principle, a cooperative business model widely accepted in Finland with a total cost pass-through arrangement and (c) its excellent operational track records and competitive power generation costs.

PVO and other shareholders of TVO observe the principle in which each shareholder is entitled to purchase electricity from TVO *pro rata* to the shareholding whereas obliged for the purchase and payment of the cost likewise to TVO (a total cost pass-through arrangement). Cost recovery by sale to other shareholders, or even on the market, is also permissible should the arrangement be breached by any shareholder. There are several shareholders which also operate as a Mankala power supplier vis-à-vis their own shareholders. Such multi-layered Mankala structure is deemed to defuse and dilute risks attributable to shareholders. JCR therefore holds the financial risk at TVO is constrained due to its business model.

Outlook of the rating is stable. Although the domestic demand for electricity has yet fully recovered after the global economic slowdowns since the latter half of 2008, TVO maintained a cost competitive full-capacity operation at its nuclear plants Olkiluoto 1 and 2 (OL1 and OL2) and posted a record high EUR 305 million of annual turnover in 2009. Profit after tax was -EUR 41 million, the third consecutive loss made after 2007 and 2008. By showing a loss retained earnings have been partly returned to the shareholders. After all, the profit is not a purpose of TVO whose mission is to provide electricity at cost exclusively to its shareholders. The Olkiluoto 3 (OL3) nuclear plant construction albeit belated came nearer to completion, which is expected to be 2012, has caused continuing increase in debt. JCR holds TVO will maintain its debt repayment ability intact thanks to its business model

however. There is an arbitration filed at the International Chamber of Commerce over the liability for the delay in OL3 construction between TVO and its contractor group. JCR will closely watch its development into the future.

- (1) TVO is established in 1969 as a core nuclear power plants operator of Finland. As a base-load electricity producer TVO satisfied about 18% of the country's electricity consumption in 2009.

It supplies electricity totally, in principle, to its shareholders not for profit but at cost. Its shareholders base is exclusive and stable, consisting of PVO (58.1%) and the Finland's largest power company Fortum Power and Heat Oy (26.0% shares), which itself is 51% state-owned, Kemira Oy, a chemical and energy firm, municipality-owned electricity generation and transmission companies and a major distribution company (6 in total). TVO's articles of association entitle its shareholders to receive electricity supply at cost in proportion to their shareholdings while obliging them to purchase electricity and pay annual fixed cost including financial costs in proportion to their stakes and variable costs in proportion to the volume of electricity purchased. Moreover, the articles set a deadline for payment of the fixed cost one month ahead of actual electricity delivery. Electricity supply could be immediately suspended, should a shareholder fail to pay by the due date. Surplus electricity that might ensue can be sold primarily to other shareholders or in the liquid wholesale electricity market, Nordpool. Although electricity wholesale price is highly volatile at Nordpool, TVO's electricity cost has always been below the market price, making its collection risk extremely low.

In Finland roughly a half of the electricity supply is carried out in this way, cooperative business model called "Mankala" – from a producer to shareholding whole sellers and retailers; whole sellers to shareholding retailers; and retailers to end consumers – making it well established and accepted, historically and socially, as a successful way to contribute to a stable and cost-effective supply of electricity. Given PVO and other shareholders of TVO taking Mankala business models too, TVO has in the end a fairly diversified stake holders, direct and indirect, of as many as about 60 consisting of 44% by industrial companies, 30% by municipalities and some by the Finnish government as 26% is held by half-state-owned Fortum. In theory, although unthinkable at the moment, there is a possibility in future in which the Mankala business model turned out to be unsustainable for some reason or it ceased to give TVO a competitive advantage in the electricity production, thus causing a downward pressure on the rating.

- (2) TVO's facilities comprise two nuclear power plants, OL1 and OL2, with capacity of 880 MW and 860 MW respectively. In addition, it holds the right to take 45% of the electricity generated by a coal-fired plant (Meri-Pori, with a capacity of 565 MW) owned by Fortum, in order to adjust its generation volume. After the completion of OL3 with a capacity of 1,600 MW, TVO's facilities will have a 27-8% share in the country's power generation capacity. The capacity factors at its two nuclear plants have been staying above 95% since 1999, one of the highest by international standards, thanks to a state-of-art nuclear plant management including efficient annual outages. TVO has been constantly modernizing the two nuclear plants under its policy to keep them in operation for 40 years. As a result, their capacity has been increased by 30% from 660 MW at their start-up to the current levels. Electricity generated there in 2009 renewed the previous year's record

high.

TVO's average nuclear power production cost in 2009 has been about EUR18.0/MWh, allowing it to supply electricity at prices significantly lower than the market prices on the Nordpool. While Finland has limited natural resources, its electricity demand is high due to the presence of energy-intensive industries and huge heating needs during winter. Electricity consumption per capita in Finland is one of the greatest among developed nations, and the country is a constant importer of electricity. However, the power supply-demand gap in the Nordic region is likely to tighten in the medium to long term, and the government has a target to cover its domestic power demand without import. Also with a rising interest in clean energy without greenhouse gas emission, potential demand for the electricity supplied by TVO is expected to remain strong.

JCR notes that a potential increase in the electricity price of OL3 due to the delay in construction is expected to be limited at EUR3-5/MWh, keeping the competitiveness of TVO's electricity price unchanged. However, as the contractor AREVA=Siemens consortium filed its claims amounting approximately EUR 1 billion for arbitration at the International Chamber of Commerce (ICC) in 2008, while TVO also filed its counter claims of approximately EUR 1.4 billion against the damage caused by the delay, JCR will closely watch further development of the arbitration .

- (3) Since TVO operates on a total cost pass-through arrangement with diversified, direct or indirect, shareholders and has an option to sell electricity on the market, shareholders its collection risk is considered to be extremely low. The local tax authority allows the company in principle to transfer the depreciation reserves so as to adjust the net profit to zero. TVO has returned part of the retained earnings to the shareholders by reporting a loss three times consecutively till 2009. TVO is expected to keep the retained earnings approximately at the current levels in the coming years. The amount of its interest bearing debts is increasing due to the OL3 construction. The trend is expected to continue for the time being, given remaining investment in OL3 till its completion and maintenance of OL1 and OL2. However, TVO will maintain its equity ratio at no less than 25% as a long-term policy and can count on a capital injection by its shareholders if necessary. The liability for the Nuclear Waste Management Fund has been mostly paid.

JCR has little concern at the level of its liquidity, considering cash and cash equivalents, undrawn amounts of CP and commercial loan programs and subordinated shareholder lending.

Note: See a separate press release for JCR's credit rating on TVO's largest shareholder, PVO.

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The primary rating methods applied to the ratings are posted on JCR's website (<http://www.jcr.co.jp>) "Corporate Rating Methodology." The rating methods are subject to change or addition. However, the changes and additions including those that have been made in the past are posted in chronological order. Please refer to the rating methods above after checking by comparing the date of press release about the ratings with the release date of the rating methods (effective date of each of such rating methods).