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## Press Release: Rating Action

### **JCR Affirms AA Rating on Teollisuuden Voima Oyj; Outlook Stable**

**Issuer: Teollisuuden Voima Oyj**

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).

The rating mainly reflects Teollisuuden Voima Oyj's (TVO) business model that provides its shareholders with electricity at cost without pursuing profits, its excellent track records stemming from the continued high capacity utilization ratio with minimal suspension despite its concentration on nuclear power generation, and the maintenance of competitive production cost. While TVO's shareholders are entitled to receive electricity supply, they are obliged to pay annual fixed cost including debt payments in proportion to their stakes and variable costs in proportion to the volume of electricity they consume. JCR considers that this business model highly mitigates TVO's financial risk.

The rating outlook is stable. TVO's business model will be maintained as potential demand for the electricity it supplies at competitive price is expected to remain strong, given the tight power supply-demand gap in Finland and the Nordic region in the medium to long term despite the near-term economic recession, and the cost advantage of nuclear power which is free from CO<sub>2</sub> emissions that involve increasingly high trading costs.

The commercial operation of TVO's third nuclear power plant in Olkiluoto (OL3), originally scheduled to start in the spring of 2009, has been put off till June 2012 due mainly to a longer-than-expected delay in the construction work on the reactor building caused by the need to meet the mandatory safety requirements. While additional construction costs necessitated by the delay will be mostly covered by the contractor based on the terms of the fixed-price, turnkey contract, the prolonged postponement will lead to additional administration and other costs to be borne by TVO. However, an increase in the electricity price due to the additional costs is expected to be limited, little affecting the competitiveness of TVO's electricity price. TVO's debt has increased as a result of the OL3 project, but JCR holds that its creditworthiness will remain unchanged supported by its proven business model.

(1) TVO was founded in 1969 as a nonprofit private power company to supply electricity to its

shareholders at cost. Currently, it issues three different kinds of shares depending on types of power generation (two existing nuclear power plants, OL3 under construction and a coal-fired plant) and has a stable shareholder base with six shareholders mainly consisting of leading Finnish private and municipal power companies. It supplies about 20% of Finland's electricity production. Major shareholders are Pohjolan Voima Oy (PVO, AA/Stable by JCR) which holds a 57.9% stake and Fortum Power and Heat Oy which holds a 26.1% stake. TVO's articles of association entitle its shareholders to get electricity supply at cost in proportion to their shareholdings while obliging them to pay annual fixed cost including debt payments in proportion to their stakes and variable costs in proportion to the volume of electricity they consume. Moreover, the articles set a deadline for payment of the fixed cost one month ahead of actual electricity delivery. Electricity supply is immediately suspended should a shareholder fail to pay by the due date. Surplus electricity that might ensue could be sold in the market. Thus TVO can avoid possible collection risks. Around half of electricity in Finland is produced under this formula, which has been established as a mutual assistance model that contributes to stable power supply. In case the business model is forced to be altered due to a change in national policy in the future, or should the cost advantage of the electricity produced under this formula is lost, which is difficult to imagine at present, the rating will come under downward pressure. Since some of the shareholders including PVO operate under the same model, TVO's shareholders through ownership chain eventually number about 60. By sector, TVO is 44% owned by various companies in the industry through ownership chain, 26% by Fortum, a power company 51% owned by the government, and 30% by municipalities.

- (2) TVO's facilities comprise two nuclear power plants with a capacity of 860 MW each and a coal-fired plant with a capacity of 565 MW. (The latter is owned by Fortum, and TVO holds the right to take 45% of the electricity generated there in accordance with the size of its stake.) Nuclear power accounts for more than 90% of TVO's total electricity output. The ratios of capacity utilization at its two nuclear plants have been staying above 95% since 1999, one of the highest by international standards. 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 860 MW. Electricity generated there in 2008 reached a record high. Furthermore, TVO's uncompromising commitment to safety standards keeps suspension of the power plants minimal.
- (3) TVO's average nuclear power production cost in 2008 was kept as low as EUR16.5/MWh, allowing it to supply electricity at prices significantly lower than the market prices in the Nordic region (Nord Pool). Finland has limited natural resources and its demand for electricity is high due to the presence of more energy-intensive industries and huge heating needs during winter. The country is the sole chronic importer of electricity in the Nordic region. The government has set a target to increase the generation capacity to cover all of the domestic demand, but the power supply-demand gap is likely to remain tight in the medium to long term despite the near-term economic recession, given the country's growing energy consumption. The government has pledged to cut greenhouse gas emissions through its commitment to the EU environmental regulations. This will raise the advantage of nuclear power which is free from greenhouse gas. Accordingly, potential demand for the electricity supplied by TVO is expected to remain strong.

- (4) In a bid to ease medium- to long-term power supply shortage, TVO started construction of its third nuclear power plant (capacity: 1,600 MW) in 2005. The commercial operation of OL3, originally scheduled to start in the spring of 2009, has been postponed till June 2012 due mainly to delay in the construction work (by the consortium of France's Areva and Germany's Siemens) caused by the need to meet the safety requirements. However, an increase in the electricity price of OL3 due to the delay is expected to be limited at about EUR2-4/MWh, keeping the competitiveness of TVO's electricity price unchanged. JCR will nonetheless watch the cost impact of the construction delay. TVO had procured EUR1.7 billion, nearly half of its needed funds, by the end of September 2008 through the domestic commercial paper market, bank and institutional investor senior debts, borrowing from shareholders and capital increase. As TVO will have to procure additional funds more in the form of senior debts than capital increase, its equity ratio, which peaked at 61.8% at the end of 2003, will decline gradually toward the start-up of OL3 (34.0% at the end of September 2008). But TVO aims at keeping the equity ratio above 25% in the medium-to-long term. Its interest-bearing debt increased to EUR1,886 million at the end of September 2008. However, TVO has unused credit lines and liquid assets totaling around EUR1.7 billion, which more than covers its capex and debt repayment scheduled in 2009.
- (5) TVO's revenue in the nine months to September 2008 grew 8% year-on-year to EUR178 million. But it incurred a EUR 33.1 million loss before appropriations and taxes due to higher spent nuclear fuel disposal and personnel costs. However, the net balance broke even as in the past due to transfers from the depreciation reserves.

Note: See a separate press release for JCR's credit rating on TVO's parent company, 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).