

6 December 2021 – Neuss, Germany

## Rating Action / Update:

**Creditreform Rating has affirmed the unsolicited corporate issuer rating of Teollisuuden Voima Oyj at **BBB-**. The outlook has been revised from negative to **stable**.**

Creditreform Rating (CRA) has affirmed the ratings of the unsolicited, public corporate issuer rating of Teollisuuden Voima Oyj – together referred as “TVO or the Company” -, as well as the unsolicited corporate issue rating of long-term local currency senior unsecured notes issued by Teollisuuden Voima Oyj at BBB-. The outlook has been revised from negative to stable.

## Current relevant factors for the rating

The following considerations were of specific relevance for the rating assessment:

- Regular electricity production further postponed to June 2022 due to extended turbine overhaul and inspection works.
- Amendment of the settlement agreement in relation to OL3 covering further delays.
- No substantial change in our assessment of the creditworthiness of major shareholders
- Strong ongoing production of electricity with high load factors
- Currently strong price environment on Nordpool electricity markets

## ESG-criteria:

CRA generally considers ESG factors (environment, social and governance) within its rating decisions. In the case of Teollisuuden Voima Oyj we have not identified any ESG factor with significant influence.

Teollisuuden Voima Oyj mainly generates CO2-neutral electricity, which is in line with the general political direction of reducing CO2-output. The production of nuclear energy and the disposal of used fuel is heavily regulated, and the supervision thereof is based on the Finnish nuclear energy legislation and the underlying principle of ensuring that the use of nuclear energy is safe and in line with the overall good of society. Additionally, we see it as positive from an ESG perspective that TVO relinquished its shares in the coal fired Meri-Pori power plant, which reduced its emissions of CO2.

The European Commission is currently discussing whether nuclear power should be adopted in the EU Taxonomy. If the EC decides that nuclear energy will not be adopted in the taxonomy this could have detrimental effects on the Company as some investors might turn away from nuclear energy as an investment, which might complicate finance and capital market related matters for TVO in the future. The decision with regard to the adoption of nuclear energy in the EU Taxonomy is expected at the end of this year.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

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**ESG factors** are factors related to environment, social issues and, governance. For more information, please see the "Regulatory requirements". CRA generally takes ESG relevant factors into account, when assessing the rating object and discloses them when they have a significant influence on the creditworthiness of the rating object, leading to a change in the rating result or the outlook.

## Rating result

### Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

The rating result is largely determined by one of the Company's key rating factors, namely the creditworthiness of TVO's shareholders. As TVO only provides electricity at cost price and only to its shareholders, its creditworthiness largely depends on them. We currently consider the Company's shareholder base sufficient to support the unsolicited corporate issuer rating of BBB-. In the event of a default of one of its shareholders, TVO could, according to its Articles of Association, immediately cut off distribution of electricity and sell it to the party submitting the best offer. This currently would not be a problem, considering the Nordpool day-ahead Finnish area prices are currently well above cost price.

Despite the turnkey principle of the plant contract and the joint and several liability for the supplier consortium, there are risks regarding the completion of the OL3 power plant contract. The settlement agreement of 2018 between the supplier consortium and TVO provided relief, but due to further delays regular electricity production is now scheduled for June 2022. Due to these further delays the Company and the supplier consortium amended the terms of the global settlement agreement of 2018. These new amendments to the contract provide further relief and will, according to our understanding, cover delays until September 2022 including a trust that had to be replenished in order to guarantee the financing of the OL3 project and possible compensation payments in case of further delays. The now expected completion of the OL3 project is within the boundaries of the amendments of the global settlement agreement.

TVO is awarded some degree of systemic relevance as it provides approximately 18% of all energy consumed in Finland. This percentage is expected to rise to approximately 30% after the commissioning of the OL3 power plant.

## Outlook

The one-year outlook for the unsolicited corporate issuer rating has been changed from negative to stable. This assessment is based on the fact that TVO has a solid track record, the OL3 project is in its final stages and expected to start regular electricity production in June 2022 and the amendments to the global settlement agreement have provided relief to the Company with regard to the OL3 project. However, further possible delays with regard to the OL3 project that extend beyond September 2022 could result in further cost overruns, which might further affect the profit-yielding capacity of the plant. This is because, to our understanding, the amendments to the global settlement agreement do not cover delays beyond September 2022. Should the project run into further delays, which are not covered by the settlement agreement, this could have an immediate negative effect on TVO's outlook or rating depending on the degree of the delays.

### **Best-case scenario: BBB-**

In our best-case scenario for one year, we assume a rating of BBB-. In this scenario we assume that the scheduled commissioning for the OL3 power plant proceeds on schedule and that there are no further cost overruns that impact the Company's cost structure.

### **Worst-case scenario: BB**

In our worst-case-scenario we assume a rating of BB. This could be the case if the scheduled commissioning of the OL3 plant is delayed significantly, resulting in large cost overruns which could impact TVO, as the guarantee period according to the amendments to the global settlement agreement only covers a delay until September 2022.

## Business development and outlook

During 2020 TVO's electricity production, including the coal-fired Meri-Pori power plant, was 14.67 TWh (2019: 14.93 TWh). The production in total of the OL1 and OL2 was 14.59 TWh (2019: 14.75 TWh), with a combined load factor of 93.5% (2019: 94.8%). The slightly lower load factor, which mainly resulted in the slightly lower production volume, followed refueling and maintenance outages on the power plants as well as an unexpected disturbance at the OL2 plant, which caused an interruption of electricity production of 9 days. The lower volume was, to a lesser extent, also caused by the deconsolidation of the Meri-Pori power plant, as the Company relinquished its shares at the start of July 2020. TVO produced approximately 18% of all electricity consumed in Finland in 2020. During the business year of 2020 TVO generated revenues of EUR 275.12 million (2019: EUR 254.21 million), EBITDA of EUR 72.68 million (2019: EUR 43.05 million), EBIT of EUR 27.22 million (2019: EUR -2.44 million) and an EAT of EUR 0.45 million (2019: EUR 87.20 million). The higher revenues in comparison to the prior year were mainly due to the nuclear waste management fee of the Finnish nuclear waste management fund.

During the first nine months of 2021 TVO's electricity production's from the Okiluoto plants was 10.47 TWh (Q1- Q3 2020: 10.93 TWh), with a combined load factor of 90.1%. The lower load factor and production volume was due to longer outages in comparison to the prior period. It is however noteworthy that the Company's load factors are among the highest within their global peer Group. The revenue for the period up to the third quarter in 2021 was EUR 233 million (Q1-Q3 2020: EUR 216 million) and a profit of EUR 2 million (Q1-Q3 2020: EUR 14.9 million).

Table 1: Financials of Teollisuuden Voima Oyj | Source: Teollisuuden Voima Oyj Annual report 2020, standardized by CRA

Teollisuuden Voima Oyj Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IAS, Group)	CRA standardized figures <sup>1</sup>	
	2019	2020
Sales (million EUR)	254.21	275.12
EBITDA (million EUR)	43.05	72.68
EBIT (million EUR)	-2.44	27.22
EAT (million EUR)	87.20	0.45
EAT after transfer (million EUR)	87.20	0.45
Total assets (million EUR)	7,947	8,208
Equity ratio (%)	22.96	25.22
Capital lock-up period (days)	9.56	11.05
Short-term capital lock-up (%)	173.53	155.86
Net total debt / EBITDA adj. (factor)	136.75	82.29
Ratio of interest expenses to total debt (%)	-1.25	0.64
Return on Investment (%)	-0.01	0.35

<sup>1</sup> For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally-generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt takes all balance sheet liabilities into account. Therefore, the key financial figures shown often deviate from the original values of the company.

In March 2018, TVO signed a comprehensive settlement agreement with the supplier consortium Areva-Siemens to settle all the ongoing legal matters with regard to the delay of the OL3 power plant. Under the penalty mechanism in the settlement agreement, TVO is entitled to receive a penalty payment from the supplier if the supplier consortium fails to complete the project by the end of 2019. As of the end of Q3 2021, the Company is, as the project was not completed before the end of June 2021, entitled to receive the maximum amount of EUR 400 million. During the first three quarters of 2021 TVO already received EUR 207 million from the plant supplier, and therefore registered non-bearing receivables of EUR 193 million. These payments will be used to reduce the capitalized construction costs of OL3, which in turn will limit the increase in production costs due to lower depreciation. On 17 May 2021 TVO published that it and the Areva-Siemens consortium had reached a concensus on the completion of the OL3 project. The major terms of the agreement are that the trust mechanism as described in the settlement agreement has to be replenished with EUR 600 million as of January 2021 by the Areva companies, which would secure the financing cost for the OL3-project's completion until September 2022. Furthermore, both parties (Supplier consortium and TVO) are to cover their own costs from July 2021 until the end of February 2022 and, the consortium is to pay additional compensation payments if plant construction faces further significant delays. The compensation will depend on the actual completion date and is limited to an amount of EUR 56.7 million, which will also cover delays until 30 September 2022. Additional amendments to the project agreement provide TVO with relief regarding the completion of the OL3 plant. Further delays, not covered by the guarantee period until 30 September 2022, constitute a risk for the Company. The final agreement was signed on 2 June 2021.

Construction work on OL3 is now largely finished and the Finnish nuclear authority, STUK, granted a fuel loading permit for the Olkiluoto 3 plant (OL3) on 26 March 2021. Fuel loading was completed in April 2021. On 20 August 2021 TVO published that it had received additional information with regard to the start of regular electricity production. Due to the extension of the turbine overhaul and inspection work, regular electricity production will be postponed for three months. The updated schedule foresees that the plant unit will be connected to the national grid in February 2022, with the start of regular electricity production scheduled for June 2022. The total costs for the project are currently estimated at EUR 5.7 billion.

Teollisuuden Voima Oyj operates according to the Mankala principle, which means that its primary goal is not to make profit, but to provide its shareholders with energy for which they are charged cost price. TVO's shareholders pay variable costs based on the electricity that is supplied and pay fixed costs in proportion to their ownership. Due to this not-for-profit principle, many of the financial key figures should not be interpreted as they would be for companies with a more conventional business model. TVO's profit and loss is usually zero unless specific circumstances dictate otherwise. Based on this business model, the Company's shareholders play a vital role in its risk assessment and are a key rating factor. Currently TVO's shareholder base consists out of 5 different shareholders, of which 84.3% is contributed by the two largest shareholders.

Based on our research and analysis we believe that the creditworthiness of the Company's major shareholders is sufficient to support a corporate issuer rating of BBB-. The largest shareholder, Pohjolan Voima Oyj (58.5% as of 01.07.2021), is a Finnish energy company which also operates according to the Mankala model. Pohjolan Voima Oyj is mainly owned by Finnish industrial companies of which the majority shareholder is UPM Energy Oy, part of the UPM Kymmene Group. The second largest shareholder is Fortum power and heat (25.8% as of

01.07.2021), a subsidiary of Fortum Oyj. Creditreform confirmed Fortum Oyj's unsolicited corporate issuer rating at BBB with stable outlook on 21 July 2021.

After a strong decline in energy prices during 2020 and a recovery in 2021, Finnish area day-ahead prices currently stand at EUR 85,90 on the monthly chart in November. This is well above the cost price of TVO, which is roughly at EUR 20/MWh and is expected to rise to approximately EUR 30/ MWh when OL3 commences commercial production. This factor does not have an immediate effect on TVO's assessment as it sells its electricity at cost price. However, it has an indirect effect on our risk assessment as an ongoing low market price environment could reduce the willingness of its shareholders to remain invested in TVO. In our view there is ongoing shareholder support as the electricity area prices in Finland are above the Company's cost price. Additionally, in December 2020 an additional shareholder loan commitment of EUR 400 million was signed, indicating that the shareholders remain invested in TVO:

## Issue rating

### Issue Rating

The rating objects of this issue rating are exclusively the in Euro denominated long-term senior unsecured issues, issued by Teollisuuden Voima Oyj, and which are included in the list of ECB-eligible marketable assets. The ECB list of eligible marketable assets can be found on the website of the ECB.

The notes have been issued within the framework of the EMTN programme, of which the latest base prospectus dates from 8 June 2021. The current EMTN programme amounts to EUR 4 bn. The notes under the EMTN programme benefit from a negative pledge provision and a cross default mechanism. A change of control clause does not exist in the terms and conditions.

We have provided the debt securities issued by Teollisuuden Voima Oyj with a rating of BBB-. The rating is mainly based on the corporate rating of Teollisuuden Voima Oyj.

Other types of debt instruments or issues denominated in other currencies have not been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

### Overview

Table 2: Summary of CRA Ratings | Source: CRA

Ratingobjekte	Details Information	
	Datum	Rating
Teollisuuden Voima Oyj	06.12.2021	BBB- / stable
Long-Term Local Currency Senior Unsecured issues	06.12.2021	BBB- / stable

Table 3: overview of TVO Debt Issuance Programme | Source: TVO's EMTN Base Prospectus 8 June 2021

Issue Details			
Volume	EUR 4.000.000.000	Maturity	Depending on the respective bond
Issuer	Teollisuuden Voima Oyj	Coupon	Depending on the respective bond
Arrangers	Nordea Bank AB (Publ)	Currency	Depending on the respective bond
Credit Enhancement	-	ISIN	Depending on the respective bond

All future LT LC senior unsecured Notes that will be issued by Teollisuuden voima Oyj under the current EMTN programme, denominated in Euro and which are included in the list of ECB-eligible marketable assets will, until further notice, receive the same rating as the current LT LC senior unsecured notes under the EMTN programme. Notes issued under the programme in another currency other than Euro or other types of debt instruments have not been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

## Appendix

### Rating history

The rating history is available under:

<https://www.creditreform-rating.de/en/ratings/published-ratings.html>

Table 4: Corporate issuer rating of Teollisuuden Voima Oyj | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Update	06.12.2021	09.12.2021	Withdrawal of the rating	BBB- / stable
Initial Rating	24.10.2018	29.10.2018	Withdrawal of the rating	BBB- / stable

Table 5: LT LC senior unsecured issues by Teollisuuden Voima Oyj | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Update	06.12.2021	09.12.2021	Withdrawal of the rating	BBB- / stable
Initial rating	24.10.2018	29.10.2018	Withdrawal of the rating	BBB- / stable

### Regulatory requirements

The rating<sup>2</sup> was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

The rating object participated in the creation of the rating as follows:

With Rated Entity or Related Third Party Participation	No
With access to Internal Documents	No
With Access to Management	No

<sup>2</sup> In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

The rating was conducted based on the following information.

List of documents
<b>Accounting and controlling</b>
<ul style="list-style-type: none"> <li>Consolidated annual report TVO 2020</li> <li>Consolidated interim report TVO Q3 2021</li> <li>Rating update 2021 Fortum Oyj</li> <li>Financial statement release 2020 Pohjolan Voima Oyj</li> <li>Consolidated annual report UPM-Kymmene Corporation</li> </ul>
<b>Finance</b>
<ul style="list-style-type: none"> <li>TVO EMTN Base Prospectus 2021</li> </ul>
<b>Additional documents</b>
<ul style="list-style-type: none"> <li>Press releases and internet research</li> <li>TVO Credit Investor Presentation September 2021</li> </ul>

A management meeting did not take place within the framework of the rating process.

The documents and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

The rating was conducted based on the following rating methodologies and the basic document.

Rating methodology	Version number	Date
<a href="#">Corporate Ratings</a>	2.3	29.05.2019
<a href="#">Non-financial Corporate Issue Ratings</a>	1.0	October 2016
<a href="#">Rating Criteria and Definitions</a>	1.3	January 2018

The documents contain a description of the rating categories and a definition of default.

The rating was carried out by the following analysts:

Name	Function	Mail-Address
Rudger van Mook	Lead-analyst	R.vanMook@creditreform-rating.de
Natallia Berthold	Analyst	N.Berthold@creditreform-rating.de

The rating was approved by the following person (person approving credit ratings, PAC):

Name	Function	Mail-Address
Philip Michaelis	PAC	P.Michaelis@creditreform-rating.de

On 6 December 2021, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 7 December 2021. There has not been a subsequent change to the rating.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring, if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

#### ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

#### **Conflict of interests**

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

In the event of providing ancillary services to the rated entity, Creditreform Rating AG will disclose all ancillary services in the credit rating report.

#### **Rules on the presentation of credit ratings and rating outlooks**

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

##### Corporate issuer rating:

1. Annual report
2. Website
3. Internet research

##### Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating
2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.



The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a "rating action"; initial release is indicated as "initial rating", other updates are indicated as an "update", "upgrade" or "downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the [ESMA website](#).

An explanatory statement of the meaning of Creditreform Rating AG's default rates are available in the credit rating methodologies disclosed on the website.

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Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. This rating is therefore no statement of fact, but an opinion. For this reason, Creditreform Rating AG cannot be held liable for the consequences of decisions made on the basis of any of their ratings. Neither should these ratings be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings are not meant to be used as substitutes for one's own research, inquiries and assessments.

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