

5 April 2023 – Neuss, Germany

Rating Action / Update:

Creditreform Rating has affirmed the unsolicited corporate issuer rating of TenneT Holding B.V., at **A**. The outlook remains **stable**

Creditreform Rating (CRA) has affirmed the ratings of the unsolicited, public corporate issuer rating of TenneT Holding B.V. – hereinafter referred to as “TenneT” or “the Group”, as well as the unsolicited corporate issue rating of the long-term local currency senior unsecured notes issued by TenneT Holding B.V. at **A**. The outlook for the ratings remains **stable**. For more information with regard to TenneT’s structural, business, and financial risks, please refer to the full rating report of 17 November 2021, and the press releases of 1 July 2022 and 11 August 2022, all published on our website.

Current relevant factors for the rating

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

- Negative net results due to a disproportionate increase in ancillary costs following volatility on energy markets
- Based on Underlying figures performance was relatively stable
- Significant increase in indebtedness resulting from increasing investments and pre-financing the rise in ancillary costs
- Dutch government budgeted EUR 5.11 billion of capital contributions to aid with the scheduled investments in the Dutch grid for the period 2022 - 2025
- BNetzA published the pre-tax return on equity for the new regulatory period in Germany starting 2024, which will most likely reduce remuneration for regulatory assets
- TenneT and both the Dutch and German governments are discussing the possibility of a potential full sale of TenneT’s German activities, potentially having a positive effect on the rating result

ESG-criteria:

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

As a transmission system operator active within the Netherlands and Germany, TenneT plays a central role in the energy transition in Europe. The Group is exposed to changing legislation and policies with regard to national and European climate targets. The “European Green Deal” aims to reduce European carbon emissions within the European Union by 55% by 2030. The objectives put forth in the Green Deal have been converted to national policy. The Group expects its investments to increase structurally over the next 10 years, and will make large contributions to the Dutch and German CO₂ reduction targets. TenneT aids in the energy transition by connecting renewable energy production to the grid. As of the end of 2022, the Group had installed 9.9 GW of transmission capacity to transmit renewable energy from offshore power sources to the onshore grid. The target is to install 40 GW of transmission capacity in total by 2030.

To align its financial policy with its sustainability strategy, TenneT has developed a Green Financing framework. The Green Financing instruments under this program are linked to renewable energy projects defined in the EU taxonomy. In this way, it hopes to contribute to sustainable solutions for the Netherlands and Germany. During the 2022 business year, the Group issued a

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ESG factors are factors related to environment, social issues and governance. For more information, please see the section “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.

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.

total of EUR 6.85 million in green bonds, thus becoming the largest issuer of green bonds globally with approximately EUR 19.85 billion of green bonds currently outstanding.

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

Rating result

The current unsolicited corporate issuer rating of TenneT Holding B.V. attests a high level of creditworthiness, representing a low default risk.

TenneT has a low business risk profile due to the nature of its business, which is backed by the Dutch and German regulatory frameworks. This is further enhanced by its (natural) monopoly position in its grid area as the only TSO in the Netherlands and one of four in Germany. The regulatory frameworks lead to relatively predictable revenues, cash flows and stable financial performance. Additionally, TenneT's high systemic relevance, as well as its close relationship with its shareholder, the Dutch government, has a positive influence on the rating. These factors are partially offset by increasing investment needs, which have led to negative FCF generation and increasing indebtedness over the past few years. Over the coming 10 years, investments are expected to continue to increase. In order to maintain its current financial strength, the Group needs to find durable equity solutions to cover its investment needs. The Dutch government has committed to providing aid to help cover the equity needs for the investments in the Dutch grid and has already budgeted EUR 5.11 billion for the period 2022 – 2025. In our opinion, this underlines the high systemic relevance of TenneT, as well as its close relationship with the Dutch government. A solution for the German equity needs has not yet been found. Currently, TenneT and the Dutch and German governments are discussing a potential full sale of TenneT's German activities, which could potentially have a positive influence on the rating.

A further deterioration in the Group's financial profile, and with no durable equity solution for the German equity needs, could lead to a downgrade of the Group's unsolicited corporate issuer rating, as its equity needs currently exceed capital contributions allocated.

Outlook

The one-year outlook for the rating is **stable**. We believe that TenneT's performance will remain stable due to the regulatory frameworks in Germany and the Netherlands. We believe 2023 could bring higher revenues, as the increased ancillary costs will be reimbursed via the tariffs over the coming years. Also, the German government has made clear that it intends to compensate the German TSO's for expected higher grid fees in 2023. The German support package will absorb the rising grid costs for the German activities and keep grid costs stable. Additionally, the EUR 1.8 billion capital contribution which the Group is to receive from the government of the Netherlands will help to Group to maintain a stable financial profile.

Best-case scenario: A

In our best-case scenario for one year, we assume a rating of A. We believe an upgrade of the unsolicited corporate issuer rating within the time horizon of a year to be unlikely. This assessment is primarily based on the negative FCF generation of the Group, in combination with its current regulatory framework and increasing investment pressure.

The best-case scenario does not reflect a potential full divestiture of TenneT's German activities. This could potentially have a credit positive effect, potentially leading to a review of the unsolicited corporate issuer rating.

Worst-case scenario: A-

In our worst-case scenario for one year, we assume a rating of A-. In this scenario we assume a noticeable deterioration in the Group's financial profile as the Group's indebtedness increases and its financial profile continues to deteriorate. In this scenario, the equity needs for the German grid remain unresolved.

Business development and outlook

The higher energy prices resulting from the war in Ukraine affected TenneT's business development during the 2022 business year as total revenues increased significantly to EUR 8,299 million (2021: EUR 5,524 million). More than half of the increase in revenues was driven by rising energy prices, other factors being a growing (regulatory) asset base, as well as tariff compensation for the increased ancillary services performed in 2021.

The volatile situation on the energy markets also led to higher ancillary costs, particularly in relation to feed-in management, transmission restrictions, grid losses and re-dispatch costs. The increase was caused both by higher energy prices as well as increased transmission restrictions. Total grid costs for the year amounted to EUR 7,517 million (2021: EUR 4,102 million). The disproportionate increase in ancillary costs for the year led to a significant decline in EBITDA to EUR 137 million (2021: EUR 828 million) and a negative EBIT of EUR -1,096 million (2021: EUR -337 million). It is worth noting, however, that based on the Group's underlying figures, which reflect future regulatory assets and liabilities for all regulatory activities in the current year, the Group shows stable development. When reflecting these future reimbursements, the underlying revenues amounted to EUR 9,840 million (2021: EUR 6,367 million), and operating profit amounted to EUR 1,210 million (2021: EUR 834 million). The increase in the underlying EBIT was largely driven by higher regulatory returns due to increased interest rates. Based on IFRS figures, the Group generated a net loss after taxes of EUR -879 million (2021: EUR -320 million). The higher net loss was driven by higher operating loss, as well as increased finance expenses, but was partially offset by a positive deferred tax effect.

In order to prevent further increases in grid costs, the German government decided to compensate the increasing grid fees (particularly ancillary services and wholesale power prices) that the German TSO's were expecting to have to charge in 2023. This cost absorption by the German government means that grid fees will remain on the level of 2022 for the Company's German activities. Moreover, the ACM (Dutch regulator) issued a statement that it intended to include a partial advance (between 25% and 40%) of the expected difference between the budgeted and actual costs of ancillary services for the year 2023 in the tariff proposal for 2024. This will reduce the need to pre-finance increased ancillary costs.

Table 1: Financials of Company TenneT Holding B.V. | Source: TenneT Holding B.V. Annual report 2022/2021, standardized by CRA

TenneT Holding B.V. Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IAS, Group)	CRA standardized figures ¹	
	2021	2022
Sales (million EUR)	5,524	8,299
EBITDA (million EUR)	828	137
EBIT (million EUR)	-337	-1,096
EAT (million EUR)	-320	-897
EAT after transfer (million EUR)	-401	-967
Total assets (million EUR)	31,004	37,764
Equity ratio (%)	20.50	15.67
Capital lock-up period (days)	308.98	233.19
Short-term capital lock-up (%)	73.28	44.01
Net total debt / EBITDA adj. (factor)	25.90	184.67
Ratio of interest expenses to total debt (%)	0.74	0.94
Return on Investment (%)	-.045	-1.65

The German regulatory period will finish at the end of 2023. In 2024, a new regulatory period will start, and the regulator BNetzA has published the return on equity, which will be reduced significantly from 6.91% to 5.07% (pre-tax), negatively impacting German cash flows significantly from 2024 onwards. TenneT, along with the other TSO's in Germany, have appealed this decision.

TenneT remains among the largest investors in the energy transition in both the Netherlands and Germany. In order to meet the ambitions of the Energy transition and an increasing demand for electricity, the electricity grid needs to be strengthened considerably in both Germany and the Netherlands. As a result, investments in the grid have risen considerably over recent years, and will continue to do so. During the 2022 business year, the Group invested EUR 4,493 million (2021: EUR 3,969 million). Driven by higher ancillary costs and increasing investments, the Group generated significant negative cash flows after investments (excluding EEG working capital).

The higher negative cash flows after investments led to higher financial indebtedness of EUR 19,715 million (2021: EUR 13,705 million). Approximately EUR 2,278 million was used to pre-finance the increased ancillary services. The residual amount was largely allocated to investments. The increase in indebtedness, as well as the negative net result led to a decrease in equity to 15.67% (2021: 20.50%); however, the decrease in equity was partially offset by the capital contributions of EUR 1,230 million received during the business year. Other financial key figures also showed a significant deterioration against the prior year. Notwithstanding, based on underlying figures, the financial key ratios have remained relatively stable despite the increase in financial debt, as underlying EBITDA showed a significant increase against the prior year. As a result of the ongoing increasing investment pressure, we do not believe that TenneT will be able to maintain its financial profile without any sustainable equity solutions.

¹ 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.

TenneT expects its equity needs to be approximately EUR 10 billion for its investments in the Dutch grid, and approximately EUR 15 billion in the German grid in order to maintain its current financial strength. In light of these estimates, TenneT's shareholder, the government of the Netherlands, has budgeted capital contributions of EUR 5.11 billion in total for the period of 2022 -2025, of which EUR 1,230 million was received during the business year 2022. An additional EUR 1.8 billion is expected to be provided during the business year 2023. The equity needs for the German grid are currently still open. TenneT and both the German and Dutch governments are currently discussing the possibility of a full sale of TenneT's German activities to the German government, which could then potentially cover the Group's equity needs. No further information is currently available with regard to these developments. We note that a further deterioration in the Group's financial profile and failure to find a durable equity solutions could lead to a downgrade of the Group's unsolicited corporate issuer rating, as its equity needs currently exceed the capital contributions allocated.

Issue rating

The rating objects of this issue rating are exclusively the long-term senior unsecured Notes, denominated in euro, issued by TenneT Holding B.V., 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 under the EMTN program with its latest prospectus of 28 April 2022 and a 1st supplement dated 6 October 2022. This EMTN program amounts to EUR 25 billion. According to the terms and conditions of the prospectus, the issuer is able to issue both senior notes and subordinated notes. Here we will solely focus on the senior Notes of TenneT Holding B.V.; should this change in the future, we will explicitly make mention of this. The senior Notes and coupons under the EMTN program constitute direct, unconditional, unsecured, unsubordinated obligations of the Issuer, and rank at least pari passu among themselves and with all other present and future unsecured obligations of the issuer. Additionally, the notes benefit from a negative pledge provision, a change of control clause, and a cross default mechanism.

Corporate issue rating result

We have provided the debt securities issued by TenneT Holding B.V. with an unsolicited corporate issue rating of **A** with **stable** outlook. The rating is predominantly based on the corporate rating of TenneT Holding B.V. Other types of debt instruments or issues denominated in other currencies of the issuer 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: Overview of CRA Ratings | Source: CRA

Rating objects	Details	
	Date	Rating
TenneT Holding B.V.	05.04.2023	A / stable
Long-Term Local-Currency Senior-Unsecured Issues	05.04.2023	A / stable
Other	--	n.r.

Table 3: Overview of 2023 Euro Medium Term Note Program | Source: TenneT Holding B.V. Source: Base Prospectus dated 28 April 2022

Overview 2023 EMTN Program			
Volume	EUR 25,000,000,000	Maturity	Depending on the respective bond
Issuer	TenneT Holding B.V.	Coupon	Depending on the respective bond
Arranger	ING Bank N.V.	Currency	Depending on the respective bond
Credit enhancement	none	ISIN	Depending on the respective bond

All future LT LC senior unsecured Notes issued by TenneT Holding B.V. with similar conditions to the current EMTN program, denominated in euros and included in the list of ECB-eligible marketable assets will, until further notice, receive the same ratings as the current LT LC senior unsecured Notes issued under the EMTN program. Notes issued under the program in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG. For the time being, other emission classes or programs (such as the commercial paper program), and issues not denominated in euro, will not be assessed. 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 TenneT Holding B.V. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	17.11.2021	23.11.2021	05.07.2022	A / stable

Table 5: LT LC senior unsecured issues by TenneT Holding B.V. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	17.11.2021	23.11.2021	05.07.2022	A / stable

Regulatory requirements

The rating² 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

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
Corporate Ratings	2.4	July 2022
Government-related Companies	1.0	April 2017
Non-financial Corporate Issue Ratings	1.0	October 2016
Rating Criteria and Definitions	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
Tim Winkens	Analyst	T.Winkens@creditreform-rating.de

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

Name	Function	Mail-Address
Stephan Giebler	PAC	S.Giebler@creditreform-rating.de

On 5 April 2023, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 6 April 2023. There has not been a subsequent change to the rating.

² 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 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 at this point:

No ancillary services in the regulatory sense were carried out for this rating object.

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.

Disclaimer

Any rating performed by Creditreform Rating AG is subject to the Creditreform Rating AG Code of Conduct, which has been published on the web pages of Creditreform Rating AG. In this Code of Conduct, Creditreform Rating AG commits itself – systematically and with due diligence – to establish its independent and objective opinion as to the sustainability, risks and opportunities concerning the enterprise or the issue under review.

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