

Rating object	Rating information	
<b>TenneT Holding B.V.</b>  Creditreform ID: 400981340 Incorporation: 1998 Based in: Arnhem, The Netherlands Main (Industry): Electricity Transmission CEO: Manon van Beek	SME / Corporate Issuer Rating: <b>A / stable</b>	Type: Initial rating Unsolicited Public rating
	LT LC Senior Unsecured Issues: <b>A / stable</b>	Other: <b>n.r.</b>
	Rating date: 17 November 2021 Monitoring until: withdrawal of the rating Rating methodology: CRA "Corporate Ratings" CRA "Non-Financial Corporate Issue Ratings" CRA "Government Related Companies" CRA "Rating Criteria and Definitions" Rating history: <a href="http://www.creditreform-rating.de">www.creditreform-rating.de</a>	
<u>Rating objects:</u> Long-term Corporate Issuer Rating: TenneT Holding B.V. Long-term Local Currency (LT LC) Senior Unsecured Issues		

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## Analysts

Rudger van Mook  
Lead Analyst  
[R.vanMook@creditreform-rating.de](mailto:R.vanMook@creditreform-rating.de)

Tim Winkens  
Co-Analyst  
[T.Winkens@creditreform-rating.de](mailto:T.Winkens@creditreform-rating.de)

Neuss, Germany

## Summary

### Company

TenneT Holding B.V. – hereinafter also referred to as “TenneT”, “the Group”, or “the Company” – is the parent Company of the TenneT Group, and is headquartered in Arnhem, the Netherlands. Via its subsidiaries, it is active as a transmission system operator in the Netherlands as well as in Germany. The Company holds a monopoly position in the Netherlands and is one of four transmission system operators in Germany. In total, TenneT operates approximately 24,000 km of high-voltage connection and manages the supply of electricity to more than 42 million end users. The Group, whose activities are of high systemic importance, is fully owned by the Dutch state via the ministry of finance.

During the business year 2020, TenneT holding B.V. generated consolidated revenues of EUR 5,025 million (2019: EUR 4,422 million), EBITDA of EUR 2,370 million (2019: EUR 2,015 million), EBIT of EUR 1,296 million (2019: EUR 1,042 million) and an EAT of EUR 837 million (2019: EUR 623 million). So far, COVID-19 has not had any material impact on the financial figures of the Group.

### 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. These factors lead to relatively predictable revenues, cash-flows, and to stable financial performance altogether. Additionally, the Group’s high systemic importance, as well as its close relationship with the Dutch government, has a positive influence on the rating. These factors are partially offset by the rising investment needs of TenneT, which have led to negative FCF generation and increasing indebtedness over the past few years. The Group expects investments to increase to EUR 5 – 6 billion annually, which will put the Group’s cash-flows under further pressure. If TenneT does not take appropriate action, its financial profile will deteriorate, leading to a situation where its current rating will not be sustainable. However, the Dutch government has released its intention to make capital contributions if necessary, and TenneT is also seeking possible durable equity solutions to maintain its current financial profile for the German segment of the

Company. The capital contributions in the past and the budgeted capital contribution by the Dutch state confirms the close relationship between TenneT and the Dutch state.

### Outlook

The one-year outlook for the unsolicited corporate issuer rating is stable. This appraisal takes into account the current regulatory framework of Germany (2019 – 2023) and the newly issued regulatory framework in the Netherlands (2022 – 2026). Despite the fact that the Group's allowed income will most likely be lower due to reduced WACC and more stringent efficiency factors in the new Dutch regulatory framework, we believe that the support offered by these frameworks is sufficient to maintain a rating within the time frame of a year, despite increasing investment pressure.

### Relevant rating factors

Table 1: Financials | Source: TenneT Holding B.V. Consolidated Annual Report 2020, standardized by CRA

TenneT Holding B.V. Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IFRS, etc.)	CRA standardized figures <sup>1</sup>	
	2019	2020
Sales (million EUR)	4,422	5,025
EBITDA (million EUR)	2,015	2,370
EBIT (million EUR)	1,042	1,296
EAT (million EUR)	623	837
EAT after transfer (million EUR)	534	748
Total assets (million EUR)	22,858	26,734
Equity ratio (%)	26.02	26.74
Capital lock-up period (days)	167.56	124.79
Short-term capital lock-up (%)	62.75	81.89
Net total debt / EBITDA adj. (Factor)	7.94	8.02
Ratio of interest expenses to total debt (%)	1.22	1.01
Return on investment (%)	3.62	3.86

### General rating factors

- + Supportive regulatory framework in both the Netherlands and Germany
- + Natural monopoly in the grid area (Monopoly in the Netherlands; natural monopoly in Germany)
- + Relatively stable and predictable revenue and cash-flow generation due to regulated activities
- + Close relationship with the Dutch government
- + Good capital market access
  
- High dependency on the regulatory frameworks; highly sensitive to regulatory changes
- Ongoing high capital investments, putting negative pressure on the Group's cash-flow generation

### Reference:

The relevant rating factors (key drivers) mentioned in this section are predominantly based on internal analyses, evaluations of the rating process, the derived valuations of the analysts participating in the rating and, if applicable, other rating committee members. The fundamental external sources used are specified in the section "Regulatory requirements" and "Rules on the presentation of credit ratings and rating outlooks".

### Excerpts from the financial key figures analysis 2020:

+Sales, EBITDA, EBIT, EAT  
 +Equity ratio  
 +Return on Investment  
 +Ratio of interest expenses to total debt

- Net total debt / EBITDA adj.  
 - Capital lock-up period.  
 - Short-term capital lock-up period

**General rating factors** summarize the key issues that – according to the analysts as of the date of the rating – have a significant or long-term impact on the rating, whether positive (+) or negative (-).

<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 considers all balance sheet liabilities. Therefore, the key financial figures shown often deviate from the original values of the company.

**Current rating factors** are the key factors that, in addition to the underlying rating factors, have an impact on the current rating.

- Liquidity risks in relation to the pre-finance obligation of the feed-in volumes of renewable energy

#### Current rating factors

- + The Dutch state budgeted additional capital contributions in 2023, 2024 and 2025 in the spring memorandum of 2021 to prevent TenneT's financial profile from deteriorating
- + Issuance of hybrid securities; keeping the Group's equity base stable
- + Distribution of federal grants stabilized the Group's EEG accounts; redemption of EEG-related loans, reducing leverage
- Reduction in allowed income from 2022 onwards for the Dutch regulated activities following the publication of the new regulatory framework in the Netherlands (2022 – 2026); TenneT will appeal against the decision of ACM (Autoriteit Consument & Markt)
- Negative free cash flow generation due to ramp-up of investments following more stringent climate targets

#### Prospective rating factors

- + Durable equity solutions, improving the Group's financial profile
- + Positive regulatory changes affecting the Group's allowed income
- Capital contributions by the Dutch state will either not be realized or postponed
- No other durable equity solutions found for TSO Germany
- Negative regulatory changes affecting the Group's allowed income

#### ESG-factors

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. It faces heightened risk of increasing investment pressure following changing or new legislation, or policies with regard to national and European climate targets. The "European Green Deal" announced its new targets in 2019 and now aims to reduce carbon emissions within the European Union by 55% instead of 40% by 2030. This will most likely lead to the expectation that the Dutch and German governments further accelerate their CO2 reduction efforts, which in turn will lead to increased investment pressure for TenneT. The Group currently expects annual investments to increase to EUR 5 – 6 billion within the next 5 years. The efforts of TenneT in the energy transition will make large contributions to the Dutch and German CO2 reduction targets.

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, the Company hopes to contribute to sustainable solutions for the Netherlands and Germany.

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](#).

**Prospective rating factors** are factors and possible events which – according to the analysts as of the date of the rating – would most likely have a stabilizing or positive effect (+) or a weakening or negative effect (-) on future ratings if they occurred. This is not an exhaustive list of possible future events with potential relevance for future ratings. Circumstances can arise that are not included in the list of prospective factors whose effects are impossible to assess at the time of the rating, either because these effects are uncertain or because the underlying events are deemed unlikely.

**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.

**Best-case scenario: A**

In our best-case scenario for one year, we assume a rating of A. We believe an upgrade of the 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.

**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 decrease in the Group's financial performance following reduced allowed income due to the roll-over of the regulatory framework in the Netherlands. The investment pressure for the Group is ongoing, leading to a significant increase in investments, thus deteriorating the financial profile of the Group.

**Business development and outlook**

During the business year 2020, TenneT holding B.V. generated consolidated revenues of EUR 5,025 million (2019: EUR 4,422 million), EBITDA of EUR 2,370 million (2019: EUR 2,015 million), EBIT of EUR 1,296 million (2019: EUR 1,042 million) and an EAT of EUR 837 million (2019: EUR 623 million). The COVID-19 pandemic had no material impact on the financial figures during 2020. Additionally, deviations from forecasted electricity transmission volumes will be incorporated into the tariffs in subsequent years.

The Company's segment information is based on underlying information, which matches regulatory revenues and expenses in a corresponding reporting period, and defers certain income items until used for investments or tariff reductions. This presents a clearer view of the financial situation, as it adjusts revenues and costs that will be incorporated or settled via tariffs in subsequent years. During 2020, TenneT generated underlying revenues of EUR 4,495 million, of which approximately 74% was generated by TSO Germany, and 26% by TSO NL. Underlying EBIT increased to EUR 910 million (2019: EUR 768 million). Both revenues and EBIT increased mainly due to higher regulatory reimbursements based on ongoing investments resulting in a growing RAB. The Group's net financial costs for the year decreased slightly to EUR 197 million (2019: 207 million) due to lower interest on provisions, and EAT increased to EUR 837 million (2019: EUR 623 million).

During 2020, TenneT invested a total of EUR 3,412 million (2019: EUR 3,064 million), of which EUR 1,281 million in the segment TSO NL and EUR 2,121 million in TSO Germany. The annual investments of TenneT have increased every year since 2018, mainly driven by the energy transition, which forces TenneT to expand both its offshore and onshore grid as well as to maintain its existing grid. The rising investment pressure for the Company is mainly due to more stringent targets set by the European commission, which now aims to reduce its carbon footprint by 55% by 2030, replacing the original target of 40%. Additionally, both the German and Dutch governments updated their offshore wind energy roadmap and set targets of realizing 20 GW and 10.6 GW of offshore capacity respectively by 2030. Currently, the Company expects annual investments to grow to EUR 5-6 billion within the next three to five years. During 2020, TSO NL submitted their investment plan for onshore and offshore investments to the ACM. This was approved by the ACM, which, however, reported to the Minister of Economic Affairs and Climate that TenneT would not be capable of realising its capacity investments in a timely manner due to capacity bottlenecks. During the period 2021 – 2030, the capital needs for TSO NL are estimated to be EUR 4.25 billion. For the period of 2023 – 2025, the Dutch state has budgeted a total contribution of EUR 2.57 billion to keep its financial profile from deteriorating. The basic principle, however, is that the Dutch state will first make additional capital available when TenneT

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.

actually needs it to retain its current credit rating by Moody's and Standard and Poors. In relation to TSO Germany, the Group is still looking at different alternatives for equity financing to finance its investment program. Among these options is that the German state could take a minority stake in TenneT, which from a rating perspective would be positive if this went hand-in-hand with a significant capital contribution.

The TSOs in Germany are responsible for the financial management of the Renewable Energy Sources Act. This law stipulates that the TSO's in Germany have a pre-financing obligation for the market premium and the gap between the sale of renewable electricity and the feed-in tariffs. During 2020, as COVID-19 caused lower spot prices, the difference between forecasted and actual electricity prices was significant. As a result, TenneT's EEG receivables increased by EUR 1,625 million (2019: 88 million), meaning that the Group had to pre-finance the differences, thus causing a high cash outflow. To prevent a liquidity drain, TenneT raised an additional 12-month liquidity financing of EUR 1.5 billion and uncommitted financing of EUR 0.5 billion in 2020 to cover the large discrepancies that arose. The EEG-related loans were redeemed in January 2021 and the interest charged on these loans was charged to the EEG levies. Due to the German Climate Program 2030 (Klimaschutzprogramm 2030), the federal government of Germany decided to provide a grant of EUR 10.8 billion in 2021, which is to be divided among the 4 TSOs in Germany. TenneT will receive 32%, or EUR 3,456 million, of this amount, thereby significantly improving liquidity.

During the first half of 2021 the Group's revenue increased to EUR 2,482 million (H1 2020: EUR 2,390 million), mainly due to an increase in the Group's regulatory asset base and compensation of grid-related expenses. EBIT decreased to EUR 214 million (H1 2020: EUR 352 million), mainly due to increased grid expenses during the first half of the year, which will be reimbursed during the 2023 tariffs and revenues. The Group's EAT decreased to EUR 153 million (H1 2020: EUR 254 million) due to a lower EBIT. During the first half of 2021, TenneT again increased their investment volume to EUR 1,615 million (H1 2020: EUR 1,408 million). In order to finance the increased investments, the Company issued a green bond of EUR 1.8 billion in total, divided into three tranches. TenneT's development is aligned with its investment program. Due to its investment program, it is forced to ramp up investments, which will deteriorate its financial leverage if the Company does not take appropriate measures. The Company continues to seek durable equity solutions in order to prevent a further deterioration of its financial profile.

## Structural risk

TenneT Holding B.V. is the parent Company of the TenneT Group, and is headquartered in Arnhem, the Netherlands. The Group's activities mainly comprise that of a transmission system operator and it is active within the Netherlands via its subsidiary TenneT TSO B.V. ("TSO NL"), and in Germany via its subsidiary TenneT GmbH & Co. KG ("TSO Germany."). The Company holds a monopoly position in the Netherlands and is one of four transmission system operators in Germany. The Group operates approximately 24,000 km of high voltage connections in total. In the Netherlands, TenneT operates virtually all networks with a voltage level of 110 kV, 150 kV, 220 kV, or 380 kV, and in Germany it operates the 220 kV and 380 kV networks.

The current Group legal structure was established in 2005. In order to comply with regulations, the Company strictly separates the Dutch and the German regulated activities and the Group's unregulated activities. Aside from the regulated activities performed by TSO NL and TSO Germany as Transmission System Operators, the unregulated activities of the Group are performed by all its other subsidiaries.

The sole shareholder of TenneT is the Ministry of Finance of the Netherlands. According to the policy on Government participations ("Nota Deelnemingenbeleid 2013"), TenneT falls into the category "permanent state ownership". This entails that the state must maintain a majority stake in order to maintain a controlling influence due to its systemic importance. At least every 7 years the state reviews whether or not it is feasible and in the public interest to maintain a majority share in government participation. Currently, in light of TenneT's growing capex program, and in order to maintain its financial stability, the Group's shareholder is discussing the possibility of selling a minority equity stake to the German government. Creditreform-rating's unsolicited sovereign rating of the kingdom of the Netherlands stood at **AAA** as of 18 June 2021 and has a positive influence on the unsolicited corporate rating.

Corporate governance at TenneT consists of a two-tier board structure with an executive and a supervisory board, and the general meeting of shareholders. The executive board at TenneT consists of four statutory directors, all holding the position of managing directors within the Company, and responsibility for management of the Company. For certain decisions, such as decisions relating to significant investments, major change in the identity or nature of the Issuer or its enterprises, and the entering into and termination of important joint ventures, the Company needs prior approval of either the supervisory board or the general meeting of shareholders. The Company's supervisory board monitors the policies, the management and general affairs of the Company as implemented by the executive board. The supervisory board currently consists of five members. In matters for which the supervisory board is not allowed to grant approval, the approval of the general meeting of shareholders is required.

We consider the structural risk profile of TenneT Holding B.V. to be low. The Company's corporate structure is in compliance with the requirements of the regulatory frameworks of both the Netherlands and Germany, and has well-defined corporate governance structures which are in compliance with the Dutch Corporate Governance code. The sole shareholder of the Company is the Ministry of Finance of the Netherlands, which according to the policy on government participations must maintain a majority stake. In our opinion, this confirms the high degree of systemic importance of TenneT, as well as the commitment to provide capital contributions, which lowers the structural risk profile of the Company.



## Business risk

The Group operates predominantly in a regulatory environment and is exposed to risks arising from regulatory changes. The Group is active in both Germany and the Netherlands, and is therefore subject to different regulatory regimes. The most significant risks that TenneT faces are changes to its regulatory frameworks, which could have a substantial adverse financial impact on the Group. However, as the Group is active in two different regulatory regimes, the risk is somewhat mitigated. Approximately 100% of the Group's underlying revenues last year are generated within a regulatory environment, of which approximately 26% within the Netherlands and 74% within Germany. The usually remaining revenues are generated in the non-regulated segment, and comprise facilitation of spot, short-term and long-term trading in electricity, to manage and operate a commercially-operated interconnector between the Netherlands and the United Kingdom, and to facilitate radio and TV signals via the air and for telecom purposes.

The Dutch market is regulated by ACM ("Autoriteit Consument & Markt") and the German market is regulated by BnetZA ("Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post und Eisenbahnen"). Both regulatory regimes are based on a revenue cap, which applies for both onshore and offshore activities. Revenue earned above or below the ex-ante (expected) transmission volumes is settled in subsequent years. The allowed income of the regulatory regimes is based on the TSO's non-influenceable and influenceable operating costs, its depreciation on regulatory assets and the allowed return on capital. Non-influenceable costs are completely passed through to revenues, whereas the influenceable costs work with a so-called efficiency factor to incentivize the TSO's to optimize their efficiency.

The regulatory regime in the Netherlands revolves every 3 to 5 years, the new regulatory period due to roll over in the coming business year (2022 – 2026). The most important changes in comparison with the current rating methodology is the change in WACC, which fell significantly (from 3.0% in 2021 to 2.0% – 1.9% for onshore assets, and 2.4% for offshore assets). The risk-free rate will be based on ex-post values (actual values), and could therefore deviate from the ex-ante values. Additionally, the ACM will gradually decrease the individual efficiency factor from 0.979 in 2021 to 0.891 in 2025 / 2026, and will implement a productivity factor (frontier shift) of 0.5% to onshore and 0.2% to offshore, forcing TenneT to realize annual additional efficiencies. For the operational expenditure for offshore assets, the ACM intends to estimate the directly attributable operational expenditure of operating a grid connection system as a percentage of the investment value. According to TenneT's investment presentation of November 2021, the proposed value is 1.4%. The above-mentioned factors will, in total, most likely lead to a reduction in allowed income during the next regulatory cycle for the Group's Dutch regulated activities. TenneT will likely appeal against the decision of ACM.

The German regulatory regime revolves every 5 years. The current tariff methodology began in 2019 and will end after 2023. The mechanics of the German tariff methodology are similar to the Dutch regulatory framework. Tariffs are set based on benchmarking values and the individual cost basis of the TSO. The guidelines are set out in the Incentive Regulation Ordinance (ARegV), the German energy industry act (EnWG) and the Ordinance for electricity grid access (StromNEV). The TSO's costs are divided into three separate classes. Permanently non-influenceable costs are those costs that cannot be influenced by the TSO itself and are therefore completely accounted for in the tariffs. The residual costs are divided into two separate classes. The temporarily non-influenceable costs, which are the residual costs that are deemed fully efficient, are reduced annually with a sectorial productivity factor ("Xgen"), which was set at 0.9% by the BNetzA. The influenceable costs are also affected by this sectorial productivity factor, but are additionally adjusted with an annual efficiency benchmark ("Xind") to further incentivize TSO's to keep costs down. The Xind is an individual efficiency score, and TenneT's score was set at

99.92%. The return on capital is included in the tariffs and, for the current regulatory period, is based on a financing mix of 40% equity and 60% debt. The return on equity before tax for assets belonging to the regulatory asset base is determined at 5.12% for investments made before 2006, and 6.91% for investments made after 2006. In general, the expectation is that due to decreasing interest rates the WACC will also be decreasing in the new regulatory framework in Germany after 2023. It is noteworthy to make mention of the fact that the Group's leverage is lower than the assumptions of the regulatory frameworks.

For the offshore grid, TenneT decided to use a grandfathering model, which means that all projects finished or commissioned before 2019 will continue to fall under the prior framework. Under this framework the BNetzA granted a lump sum of 3.4% of the offshore assets. Offshore projects finished or commissioned from 2019 onwards will be reimbursed based on the actual costs. However, under this regulatory framework it is possible that the BNetzA may not approve certain capital expenditures on the offshore grid if they are higher than that of an efficient and comparable grid operator.

According to the Renewable Energy Sources Act (Erneuerbare Energien-Gesetz [EEG]), the TSO's in Germany are obligated to take off the feed in volumes produced by renewable energy facilities, and have to sell them on the day-ahead or intraday markets on a power exchange. This line of business has no effect on the Group's profitability, as the costs related to these activities, including management and the financing thereof, are completely passed through and recovered in full via the EEG levies. To recover these costs, the levies are calculated based on forecasts of electricity spot prices and renewable energy volumes, which can deviate significantly from actual prices and volumes. This could result in lower-than-required EEG levies, which can lead to higher liquidity needs. In order to prevent any liquidity problems, TenneT raised an additional 12-month liquidity financing of EUR 1.5 billion and uncommitted financing of EUR 0.5 billion during 2020.

We consider TenneT's business risk profile to be low. The Group benefits from supportive regulatory frameworks and operates in a natural monopolistic environment. Almost all of its revenues are generated by regulated activities, which are based on regulatory frameworks that consider the Company's cost basis, allowed return on capital, and the approximate demand for electricity in the market. As a result, TenneT's revenues and cash-flows are relatively easy to predict. We do, however, have a critical view of the fact that the regulatory frameworks foresee a reduction in allowed income, while at the same time the envisaged investments foresee an increase in order to finance the energy transition. In addition, it is difficult to plan for TSO's as their plan horizon cannot accurately predict beyond the duration of their regulatory frameworks, particularly because the energy markets are changing rapidly and it has become increasingly difficult to plan ahead, which could lead to deviations between allowed income and costs.

### Financial risk

For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. The following descriptions and indicators are based primarily on these adjustments.

The Group's balance sheet total has been growing rapidly over the last year, mainly driven by the acceleration of its investment program. During the business year of 2020, the adjusted balance sheet total grew to EUR 26,734 million (2019: EUR 22,858 million) as TenneT invested a record total of EUR 3,412 million (2019: EUR 3,064 million). However, the balance sheet also grew due to increases in the Group's EEG account, which increased considerably during 2020 due to the accrual of unbilled and outstanding invoices of the EEG levy, as well as the accrual for horizontal balancing amounts.



At the base of TenneT's financial profile stands its equity ratio of 26.74% (2019: 26.02%), which managed to grow slightly despite the significant balance sheet increases. The increase in equity to EUR 7,150 million (2019: EUR 5,948 million) was due to the retention of profit and the issuance of a hybrid security instrument of EUR 1,000 million in July 2020. Fifty percent of the perpetual securities<sup>2</sup> have been allocated to equity. In order to maintain financial stability, TenneT is examining the possibilities of further equity financing to retain its financial profile, keeping in mind the increasing investment pressure over the coming years, which will increasingly burden cash-flow generation. The Dutch state has already budgeted EUR 2.57 billion of capital contributions to accommodate the Group's Dutch investments over the period 2023 – 2025. TenneT is still looking at different alternatives for equity financing for TSO Germany.

During recent years, the Company has generated significant negative free cash flows excluding EEG working capital. In 2020 FCF excl. EEG working capital was EUR -1,316 million (2019: EUR -838 million). FCF generation is leading to an increase in indebtedness, which rose to EUR 13,523 million (2019: EUR 10,262 million) as of 31 December 2020. This increase, however, can be partly attributed to the EEG-related loans. It is noteworthy that, despite rising indebtedness, TenneT managed to keep its Net Total Debt / EBITDA of 8.02 (2019: 7.94) relatively stable in 2020 due to an increasing EBITDA generation as a result of a growing RAB. As of 30 June 2021, indebtedness was slightly lower, at EUR 13,109 million. The reason for this was the redemption of the EEG related loans in January 2021 as the higher EEG pre-finance obligations last year were compensated by the EEG levy, and due to receipt of the first part of the grant in the context of the German Climate Program 2030. FCF excl. EEG working capital remained clearly negative at EUR -1,027 million (H1 2020: EUR -441 million) due to ongoing high cash-outflows resulting from the investment program. To finance this, the Company issued its largest green bond ever, of EUR 1.8 billion.

The Group aims to target a dividend policy of 35% of the underlying profit for the year, after payment of distributions to hybrid securities and minority investors. During the 2020 business year TenneT paid EUR 112 million in dividends (2019: EUR 120 million) to ordinary shareholders, which is more or less in line with its strategy. We view the dividend policy of the Group as generally adequate; however, under the current circumstances, considering that TenneT is generating negative FCF, and as investment pressure continues to rise, this policy puts further downward pressure on the Group's financials.

As of 30 June 2021, TenneT had total cash equivalents and bank overdrafts of EUR 1,605 million (2020: EUR 477 million), almost all of which were restricted cash. However, liquidity remains strong given the fact that the Company has at its disposal a revolving credit facility of EUR 3.3 billion, relatively predictable cash-flows and very good access to capital markets.

Despite the Group's high leverage, relatively weak ability to deleverage, and the negative free cash flow generation that is expected for the coming years, we consider the Group's financial risk profile as intermediate. This results from the fact that the Company benefits from regulatory frameworks that allow for relatively predictable revenue and cash-flow generation. We believe, however, that TenneT must take appropriate measures in order to retain its current financial leverage. The Group is currently looking into different equity financing measures.

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<sup>2</sup> Perpetual bonds with a first call date of longer than 5 years will be 100% allocated to equity, with a maturity date between 1 and 5 years 50% to equity and 50% to liabilities, and a maturity date shorter than 1 year 100% to liabilities. As of 31 December 2020, the perpetual securities had a remaining time to first call date of between 1 and 5 years and are therefore allocated to equity for 50%.

## 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 4 May 2021 and a 1<sup>st</sup> supplement dated 25 October 2021. This EMTN program amounts to EUR 15 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 a 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.	17.11.2021	<b>A / stable</b>
Long-Term Local-Currency Senior-Unsecured Issues	17.11.2021	<b>A / stable</b>
Other	--	n.r.

Table 3: Overview of 2020 Euro Medium Term Note Program | Source: Eurogrid GmbH, Base Prospectus dated 30 April 2020

Overview 2020 EMTN Program			
Volume	EUR 15,000,000,000	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.

## Financial ratio analysis

Table 4: Financial key ratios | Source: TenneT Holding B.V. annual report 2020, structured by CRA

Asset Structure	2018	2019	2020
Fixed asset intensity (%)	82.26	86.45	83.32
Asset turnover	--	0.21	0.21
Asset coverage ratio (%)	68.64	68.01	70.26
Liquid funds to total assets (%)	6.16	3.94	2.12
Capital Structure			
Equity ratio (%)	27.89	26.02	26.74
Short-term-debt ratio (%)	26.61	22.14	22.11
Long-term-debt ratio (%)	28.57	32.78	31.80
Capital lock-up period (in days)	237.69	167.56	124.79
Trade-accounts-payable ratio (%)	13.66	8.88	6.43
Short-term capital lock-up (%)	59.24	62.75	81.89
Gearing	2.36	2.69	2.66
Leverage	--	3.72	3.79
Financial Stability			
Cash flow margin (%)	--	46.66	39.66
Cash flow ROI (%)	--	9.35	7.76
Total debt / EBITDA adj.	9.71	8.39	8.26
Net total debt / EBITDA adj.	8.88	7.94	8.02
ROCE (%)	6.22	7.28	7.29
Total debt repayment period	--	6.36	12.38
Profitability			
Gross profit margin (%)	49.87	59.41	59.24
EBIT interest coverage	4.46	5.03	6.58
EBITDA interest coverage	8.30	9.73	12.03
Ratio of personnel costs to total costs (%)	8.09	8.49	8.47
Ratio of material costs to total costs (%)	51.75	42.67	43.07
Cost income ratio (%)	84.35	80.05	78.30
Ratio of interest expenses to total debt (%)	1.24	1.22	1.01
Return on investment (%)	3.44	3.62	3.86
Return on equity (%)	--	10.72	12.78
Net profit margin (%)	11.74	13.60	16.01
Operating margin (%)	18.38	22.74	24.78
Liquidity			
Cash ratio (%)	23.14	17.81	9.59
Quick ratio (%)	65.41	59.90	74.33
Current ratio (%)	66.67	61.21	75.43

## Appendix

### Rating history

The rating history is available under <https://www.creditreform-rating.de/en/ratings/published-ratings.html>.

Table 5: Corporate Issuer Rating of TenneT Holding B.V.

Event	Rating created	Publication date	Monitoring until	Result
Initial rating	17.11.2021	www.creditreform-rating.de	Withdrawal of the rating	A / stable

Table 6: Corporate Issuer Rating of LT LC SU Issues, Issued by TenneT Holding B.V.

Event	Rating created	Publication date	Monitoring until	Result
Initial rating	17.11.2021	www.creditreform-rating.de	Withdrawal of the rating	A/ stable

### Regulatory requirements

The rating<sup>3</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:

Unsolicited Corporate Issuer / Issue Rating	
With rated entity or related third party participation	No
With access to internal documents	No
With access to management	No

<sup>3</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 2020 TenneT Holding B.V.</li> <li>Consolidated interim financial report 2021 TenneT Holding B.V.</li> <li>Investor Presentation TenneT Holding B.V. November 2021</li> </ul>
<b>Finance</b>
<ul style="list-style-type: none"> <li>EMTN Prospectus TenneT Holding B.V. 4 May 2021</li> <li>EMTN Prospectus supplement TenneT Holding B.V. 25 October 2021</li> </ul>
<b>Additional documents</b>
<ul style="list-style-type: none"> <li>Spring memorandum 2021 Dutch government</li> <li>Method decision TenneT transport 2022 – 2026</li> <li>Investor presentation TenneT Holding B.V. November 2021</li> <li>Legal Structure TenneT Holding B.V.</li> <li>Press releases</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="#">Government-related Companies</a>	1.0	19.04.2017
<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
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 17 November 2021, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 17 November 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](#).

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Creditreform Rating AG

### Contact information

Creditreform Rating AG

Europadamm 2-6  
D-41460 Neuss

Phone: +49 (0) 2131 / 109-626  
Telefax: +49 (0) 2131 / 109-627

E-Mail: [info@creditreform-rating.de](mailto:info@creditreform-rating.de)  
Web: [www.creditreform-rating.de](http://www.creditreform-rating.de)

CEO: Dr. Michael Munsch  
Chairman of the Board: Michael Bruns

HR Neuss B 10522