

CREDIT OPINION

8 May 2018

Update

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RATINGS

TenneT Holding B.V.

Domicile	Netherlands
Long Term Rating	A3
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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TenneT Holding B.V.

Annual update to credit analysis

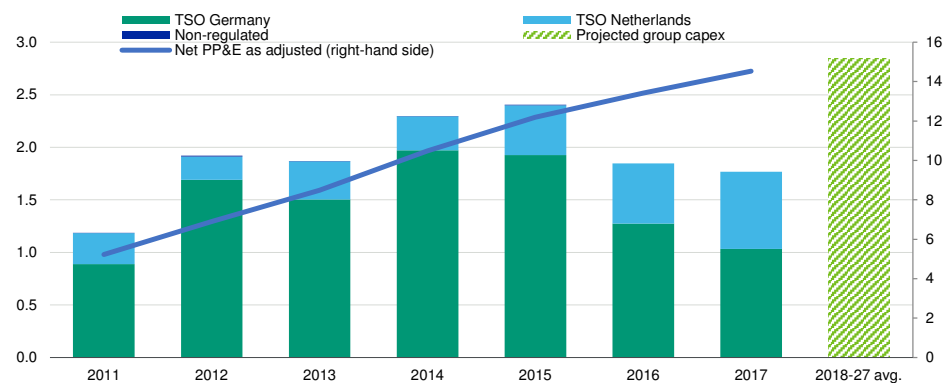
Summary

The credit quality of TenneT Holding B.V.'s (TenneT, A3/P-2 stable) benefits from (1) the company's monopoly position as the licensed provider of electricity transmission services in the Netherlands and its service area in Germany; and (2) the relatively stable and predictable flows it generates under these well-defined and relatively stable regulatory frameworks. We expect TenneT's network operations in Germany to account for the majority of the group's earnings (typically c. 70-75% of underlying EBIT) and regulated assets under its planned investment programme.

TenneT's credit profile is constrained by the group's continuing large investment programme, with the company guiding to c. €28 billion over the next 10 years, which will weaken credit metrics. However, we expect the impact to be manageable given (1) the measures taken to strengthen its capital structure in the last 18 months; and (2) both regulatory frameworks allowing timely cost recovery for large investment projects, albeit we expect cost allowances to tighten for the forthcoming regulatory period in Germany.

Exhibit 1

Further growth in TenneT's investment levels and asset base expected over coming decade Majority of investments expected to be in Germany, primarily onshore (amounts in € billions)



Note: Adjusted net PP&E is TenneT's reported tangible fixed assets adjusted for operating leases and capitalised interest.
Source: TenneT; Moody's estimates

TenneT's A3 rating incorporates a two-notch uplift from its stand-alone credit quality taking into account its ownership by the Dutch government (Aaa/P-1, stable) and the strategic importance to national energy policy. Government support was most recently evidenced in December 2016 when TenneT received a committed equity contribution from the Dutch state of up to €1.19 billion in support of their investment programme in the Netherlands.

Credit strengths

- » Monopoly position of electricity transmission network operations in the Netherlands and Germany
- » Stable and predictable cash flows underpinned by well-defined and relatively stable regulatory frameworks
- » Strong support by TenneT's owner, the Government of the Netherlands results in two-notch uplift from stand-alone credit quality

Credit challenges

- » Fall in allowed equity returns for German network operations from 2019 will reduce financial flexibility
- » Risk of challenging totex efficiency assumptions for forthcoming regulatory period in Germany
- » Large investment programme set to continue

Rating outlook

The stable outlook reflects our view that TenneT will be able to maintain credit metrics over the medium term in line with the minimum ratio guidance for its current rating, in particular Funds From Operations (FFO) to Net Debt at least in the high single digits in percentage terms, despite pressure from its investment programme.

Factors that could lead to an upgrade

Given the significant investment programme, upward rating pressure is considered unlikely at this stage. However, an upgrade could be considered if TenneT's credit metrics - during the main phase of its investment programme - were to exhibit FFO interest coverage solidly above 3.0x and FFO/Net Debt at least in low teens in percentage terms on a sustainable basis, and assuming no major deterioration in TenneT's low business risk profile.

Factors that could lead to a downgrade

TenneT's rating could experience downward pressure if its financial performance weakened significantly, with debt protection measures declining below levels that we consider commensurate with the current baa2 baseline credit assessment (BCA), for example, FFO Interest Coverage below 2.5x, FFO/Net Debt below high single digits in percentage terms or RCF/Net Debt falling to 5% or below, on a persistent basis. This could result from an increase in capex above the forecast level without offsetting measures to strengthen TenneT's balance sheet and/or adverse regulatory decisions.

Key indicators

Exhibit 2

TenneT's IFRS-based credit metrics reflects volatility in volumes and auction receipts as well as true-up adjustments for over- and under-recovery against allowed regulatory revenue

	31/12/2013	31/12/2014	31/12/2015	31/12/2016	31/12/2017
FFO Interest Coverage	6.9x	8.5x	5.2x	5.3x	6.9x
Net Debt / Fixed Assets	41.9%	36.1%	42.2%	58.9%	58.6%
FFO / Net Debt	25.5%	31.8%	13.7%	9.8%	13.5%
RCF / Net Debt	23.3%	27.8%	10.9%	6.6%	11.2%

Notes: (1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. When calculating net debt, the €1,000 million Perpetual Capital Securities, issued by TenneT in March 2017, are treated as 50% equity and 50% debt when we apply our adjustments to TenneT's financial statements. Based on its features, the instrument qualifies for basket "C" treatment under our Cross Sector Rating Methodology 'Hybrid Equity Credit' (January 2017).

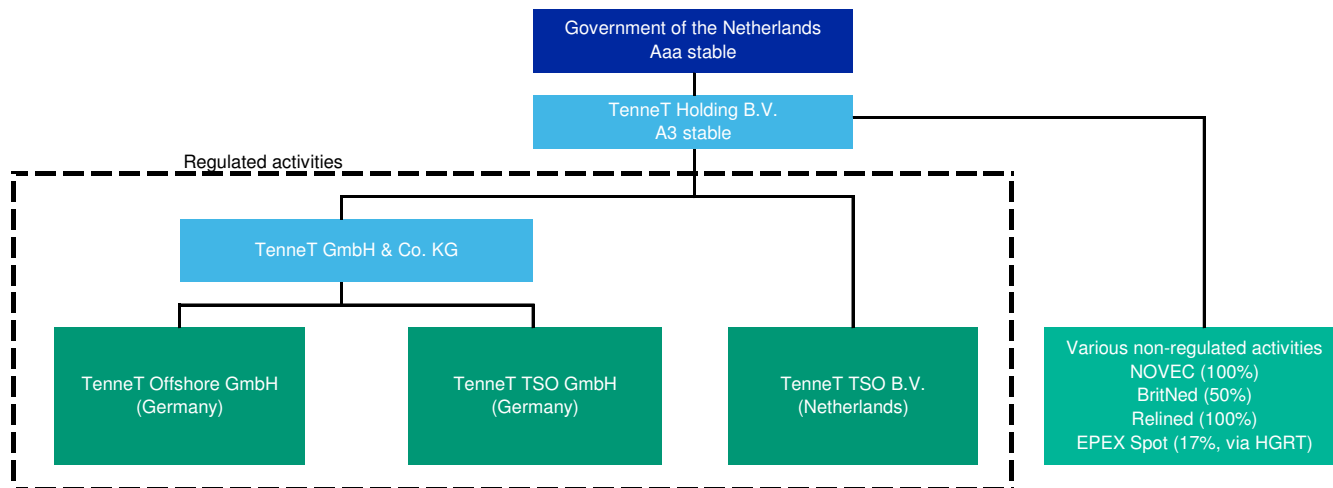
Source: Moody's Financial Metrics TM

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody.com for the most updated credit rating action information and rating history.

Profile

TenneT Holding B.V. (TenneT) is the fully state-owned holding company of TenneT TSO B.V. and TenneT GmbH & Co. KG, the intermediate holding company for the group's German subsidiaries TenneT TSO GmbH and TenneT Offshore GmbH. TenneT TSO B.V. is the sole owner and operator of the Netherlands' high voltage transmission grids. TenneT TSO GmbH is the owner and operator of the high-voltage electricity transmission network that runs north to south through large sections of Germany. With a total grid length of 22,800 kilometres (km), TenneT's network area covers approximately 41 million end-consumers in the Netherlands and Germany.

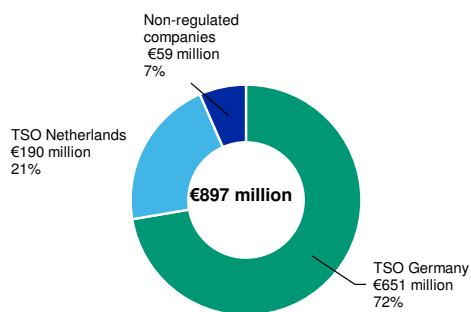
Exhibit 3
Simplified organisation structure as of 31 December 2017



Source: Annual report

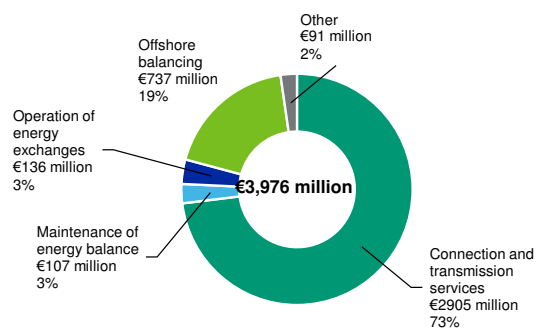
Close to 100% of TenneT's revenue and around 95% of its operating income stems from regulated network activities in the Netherlands and Germany. The remaining activities, including participations in the North West European energy exchange (EPEX Spot) and the merchant cable operator BritNed, are strongly associated with the core business.

Exhibit 4
Underlying EBIT split by operating segment in FY2017



Source: Company's report

Exhibit 5
Revenue breakdown under IFRS accounting in FY2017



Source: Company's report

Detailed credit considerations

Low business risk underpinned by developed regulatory regimes

TenneT's monopoly electricity transmission activities in the Netherlands, where it is the national TSO, and in Germany are governed by well-defined and relatively stable regulatory regimes. Given the majority of TenneT's operating profit (typically c. 70-75% of underlying

EBIT) and assets are derived from its German network activities, our assessment of the stability and predictability of the regulatory framework for the group's operations is primarily driven by our assessment of the German framework. Germany adopted incentive-based regulation later than most other Western European regulatory countries. The first regulatory period for TenneT's German operations commenced in 2009 compared to 2001 for its German operations, and this shorter track record, along with reduced transparency of key regulatory parameters, is reflected in our assessment of the German framework, which continues to evolve.

Exhibit 6

TenneT scored 'A' for Stability and Predictability of Regulatory Regime

Stability and Predictability of Regulatory Regime by Country as scored under Moody's Regulated Electric and Gas Networks methodology

Aaa	Aa	A	Baa
Great Britain ¹	Czech Republic	Belgium - Flanders	Belgium - Wallonia
	Finland	Estonia	Poland
	France	Germany	Spain
	Ireland (Rol & NI)	Portugal	
	Italy		
	Netherlands ²		
	Norway ³		

Notes: 1) Only onshore incumbent network operators, excludes OFTOs (Aa); 2) Excludes Gasunie and TenneT (A); 3) Excludes Solveig (Ba); (4) As of April 2018

Source: Moody's Investors Service

In Germany, tighter expenditure allowances and reduced equity returns expected from 2019

Past decisions taken by the Federal Network Agency (Bundesnetzagentur, BNetzA), the economic regulator for the German energy networks, have been pragmatic and in support of the large investment requirements, which have increased further in recent years following the change in legislation in Germany requiring that connections, for the most part, are installed underground (rather than overground). For example, German TSOs benefit from (1) allowed returns on capital invested during the construction period (for enhancement capex recognised under the so-called 'investment measures'); (2) a generic opex allowance for investment measures in construction; (3) a cost sharing mechanism for payments to offshore wind farms; and (4) an overall liability cap for connection delay damages.

However, over the last 18-24 months, we believe that the regulator has taken decisions that, whilst improving timely investment recovery (primarily in distribution), will result in more frequent assessment of expenditure requirements, tighter efficiency targets and reduced financial flexibility. Most of these decisions will impact TenneT from January 2019 and the start of the next regulatory period (which will run until December 2023), though other key parameters that will affect our overall assessment of the likelihood of out- or under-performance against regulatory cost allowance have not yet been finalised - see highlight box below for more information.

Recent decisions taken by BNetzA will result in tighter cost allowances; key decisions on sector wide and company specific cost efficiency parameters remain however

The BNetzA has announced the tightening of two components of TenneT's total expenditure allowance. However, our overall assessment of the likelihood of TenneT under- or out-performance against regulatory costs allowances for the forthcoming regulatory period will be significantly affected by the BNetzA's ruling on (1) the assumed annual sector productivity improvement target; and (2) TenneT's efficiency.

Firstly, the allowance for expenditure under the investment measure mechanism will reduce by the portion of expenditure that is linked to network replacement rather than expansion, to avoid double counting with the regulatory depreciation allowed as part of the revenue building blocks. The extent of the resulting tightening in cost allowances is moderated by new offshore connections and core onshore high voltage direct current (HVDC) cables, which account for a large part of TenneT's investments, being exempt from this approach.

Secondly, the current generic opex allowance for projects under construction (0.8% p.a. for onshore investments and 3.4% for offshore investments) has also been reviewed and the offshore allowance will be reduced for the third regulatory period and, we understand, will likely reflect actual expenditure incurred. This fixed percentage allowance, particularly for offshore investments where TenneT has connected 5.3GW of offshore wind farms to the grid already, has benefitted TenneT's metrics in recent years. Operational expenses incurred in 2018 will be reimbursed based on actual cost. We note that TenneT (TenneT TSO GmbH, TTG) has appealed this decision.

We expect the BNetzA to conclude its efficiency assessment for the electricity networks, based on the cost structure exhibited in 2016, in late 2018. To-date, the BNetzA has applied a general sector-wide efficiency frontier shift; 1.5% for the current regulatory period (it was 1.25% in the first regulatory period). Given low inflation rates, a similar value would require companies to continue to achieve cost savings throughout the regulatory period, as their investment programmes are expanding.

We note that the BNetzA recently set the sector-wide efficiency factor for gas networks at 0.49% for the 2018-22 regulatory period, but it remains unclear whether a similar reduction will apply to the electricity networks. Individually, the four German TSOs have historically achieved cost efficiency scores at or close to 100%, and we would expect this to continue despite the change in methodology for computing the German TSOs' individual efficiencies (reference grid analysis instead of international benchmarking will be used).

The regulator announced in autumn 2016 that allowed equity returns would fall by c. 2% points from January 2019 (cost of debt is a pass through¹). The higher regional court in Düsseldorf concluded in March 2018 that the allowed equity return determined by the BNetzA for the forthcoming regulatory period may have been set too low because – in the court's opinion – the regulator did not adequately reflect on all available evidence when taking the decision to cut the return. We note that (1) the BNetzA has filed a legal appeal against this decision in April 2018; and (2) even if a reset resulted in a higher equity return allowance the regulator has yet to determine company-specific and sector-wide efficiency assumptions for the electricity networks, expected later this year, which could reduce any benefit of higher returns.

Exhibit 7

Fall in allowed equity return from 2019

	1st regulatory period (2009-13)	2nd regulatory period (2014-18)	3rd regulatory period (2019-23)
Risk-free rate	4.23%	3.80%	2.49%
Market risk premium	4.55%	4.55%	3.80%
Equity Beta	0.79	0.79	0.83
Equity risk premium	3.59%	3.59%	3.15%
Cost of Equity (post-tax) - new assets	7.82%	7.39%	5.64%
Cost of Equity (pre-tax) - new assets	9.29%	9.05%	6.91%
Inflation factor	1.45%	1.56%	1.46%
Cost of Equity (pre-tax) - old assets	7.56%	7.14%	5.12%

Note: Under the German regime, the cost of equity allowance differs for assets acquired or built before 2006 ('old' assets) and after 2006 ('new' assets). Old assets receive a real equity return adjusted for inflation, new assets receive a nominal return.

Source: BNetzA, Moody's calculations

In the Netherlands, result of outstanding appeals unlikely to materially impact TenneT's metrics

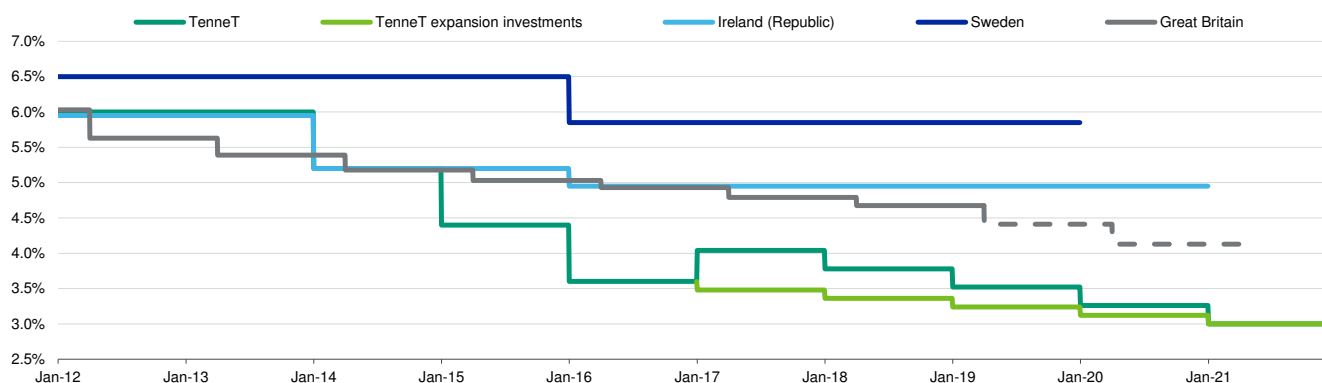
TenneT has good cash flow visibility for its Dutch operations for a further 3.5 years under the regulator's Final Determination for the 2017-21 period published in September 2016.

Under the regulatory framework, TenneT is able to recover investment costs for all offshore projects and certain onshore ones (RCR projects) during construction, which is particularly important given the group's significant capex programme (discussed below). Whilst allowed returns are materially lower than those of other European TSOs whose operations are also governed by a real framework, reducing operating cash flows, this is partially offset by the group's low average cost of debt (c. 2% at end 2017 we estimate) which is below, and we expect will remain below, the regulator's assumption (which falls from 3.58% to 2.29% over the period for existing assets²) for the duration of the regulatory period.

Exhibit 8

TenneT's allowed return is below that of peers and expected to fall over the period to 2021

Evolution of real pre-tax allowed returns for European electricity TSOs



Notes: (1) The Dutch regulator at the Final Determination for the 2017-21 regulatory period set a real, pre-tax WACC for all system operators of 4.3% in 2016 and 3.0% in 2021. This method takes into account embedded costs. However, because embedded debt costs is not applicable for expansion investment, the WACC for expansion investment falls from 3.6% to 3.0% (a cost of debt of 2.19% is applied across the period for these investments). We note that subsequent to the Final Determination, the regulator announced to the CbB court that it will adjust the gearing as part of the WACC calculation, leading to a 0.1% mark-up on the WACC. We expect a final ruling later this year. (2) Great Britain refers to National Grid Electricity Transmission (A3, stable).

Source: Regulatory data; Moody's estimates

We expect TenneT to perform in line with cost allowances for the regulatory period reflecting, primarily, the reduced static efficiency target for this period (0.8% per annum, resulting from a favourable court ruling for the prior period on TenneT's costs efficiency). Our assessment also reflects TenneT mitigating the risk of underperformance against the fixed allowance for purchase costs of energy and capacity (E&C), whose costs we expect to rise significantly as more intermittent generation is added to the grid, by reaching agreement

with the regulator that cross border congestion income can be used to fund the costs of costly remedial measures to guarantee and/or increase the cross border capacity.

We expect that (1) TenneT's appeals (treatment of E&C costs; and the opex allowance of 1% of the investment value of the offshore grid); and (2) the sector wide appeal on the WACC, will not materially alter TenneT's metrics given the sums involved in the context of the group. A court ruling on these appeals is expected within the next couple of months.

Continued very sizeable investment programme will increase leverage

TenneT is continuing to undertake a very sizeable investment programme on the Dutch and German electricity transmission grids (both onshore and offshore). The programme is aimed at connecting new, primarily renewable, generation sources, strengthening existing transmission assets and removing bottlenecks on both transmission networks.

TenneT's guidance of planned capex over the forthcoming ten years has increased from c. €19 billion in 2015 to c. €28 billion in 2018 (compared to net PP&E of €14.9 billion at end 2017). The vast majority of these increases relate to the higher costs for German onshore investments as a result of undergrounding, rather than overgrounding, now being required for the vast majority of the routes for new connections. We expect the absolute cost increases are greatest for the HVDC North-South connections in Germany (SuedLink and SuedOstLink) given the size of these projects.

Exhibit 9

Summary of TenneT's largest planned investment projects

Country	Type	Key projects
Germany	Onshore ¹	DC - SuedOstLink; SuedLink AC - Ostbayernring; Wahle - Mecklar; Emden-Ost - Merzen; Stade - Landesbergen; Westküstenleitung; Ostküstenleitung
Germany	Offshore	5.3GW connected (mainly DC), expected to rise to over 10GW by 2025
Netherlands	Onshore	380kV projects: Ranstad 380 North ring; North West 380; South West 380; Doetinchem - Wesel
Netherlands	Offshore	0GW currently connected. 3.5GW to be connected by 2023. Further targets thereafter
	Interconnectors ²	NordLink (Germany - Norway) COBRACable (Netherlands - Denmark)

Note: (1) Some of the DC projects in Germany are being built by two German TSOs given the proposed lines go through the licence areas of both TSOs. For example, the costs of the SuedLink project (a 2x 2GW HVDC North-South connection) is being shared equally between TenneT and TransnetBW (owned by EnBW, Baa1 stable). (2) Interconnectors not connecting Germany and the Netherlands.

Source: Moody's Investors Service

Given (1) the time associated with obtaining the relevant permissions for the above onshore projects in Germany; and (2) the proposals by the Dutch government for an additional 7GW of offshore wind capacity to be grid connected between 2024 and 2030³, we expect TenneT's investment levels to remain at very sizeable levels throughout the early and mid 2020s.

Measures taken to strengthen capital structure means demands of capex programme expected to be manageable

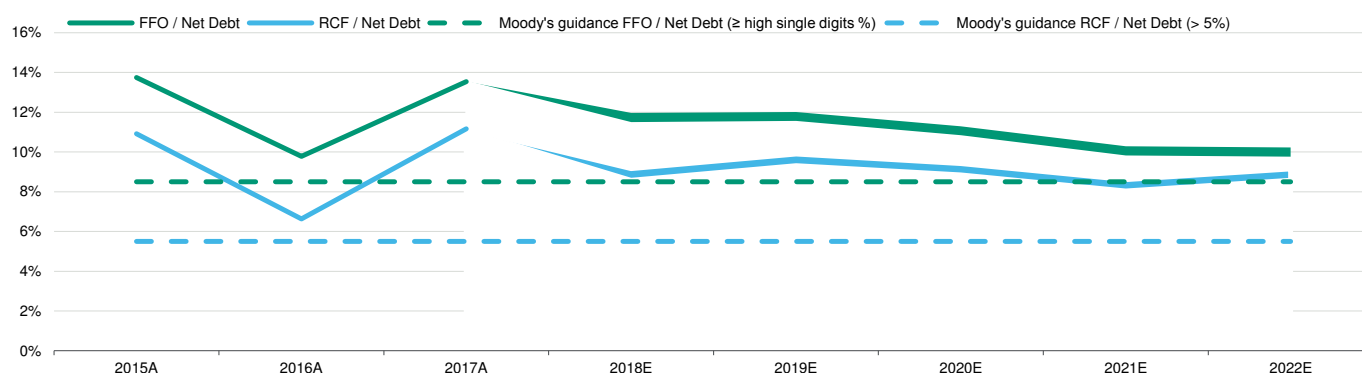
Over the last 18 months, TenneT has taken a series of measures to strengthen its capital structure which, coupled with a strong financial profile, mean we expect to TenneT to maintain over the medium term our ratio guidance for FFO / Net Debt at least in the high single digits in percentage terms.

We consider the committed equity contribution from the Dutch government of up to €1.19 billion in support of TenneT's investment programme in the Netherlands, the proceeds of which will be drawn down in four tranches over the 2017-20 period (the 2017 and 2018 tranches totalling €500 million have already been drawn down), provide the greatest benefit to TenneT's capital structure. Whilst payment of the final tranche, €410 million, is subject to reassessment in 2019, we expect TenneT to receive the full amount based on delivery of its planned capex programme.

The upsizing of TenneT's hybrid capital in 2017, with an associated net increase in hybrid equity credit of €250 million and the continued lower dividend payout ratio, 35%⁴ (rather than 50%) for the remainder of this decade, also strengthens TenneT's position.

Exhibit 10

TenneT's financial profile will weaken as the capex programme progresses but is still projected to remain in line with our guidance for the current ratings



Notes: (1) TenneT's historic IFRS-based metrics reflect volatility in volumes and auction receipts as well as true-up adjustments for over- and under-recovery against allowed regulatory revenues. When these are stripped out underlying performance is less volatile, with FFO / Net Debt in the mid teens in percentage terms in both 2016 and 2017; (2) All ratios are based on 'Adjusted' financial data and incorporate Moody's Standard Adjustments for Non-Financial Corporations; (3) This represents Moody's forward view, not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's estimates

Strong support by TenneT's owner, the Government of the Netherlands, results in two-notch uplift from stand-alone credit quality

TenneT's A3 rating incorporates a two-notch uplift from its stand-alone credit quality taking into account its ownership by the Dutch government and the strategic importance to national energy policy. Government support was most recently evidenced by the aforementioned €1.19 billion committed equity contribution from the Dutch government, in support of the group's investment programme. Prior to this TenneT also received an equity increase of €600 million from the government, received in two equal installments in December 2011 and June 2012.

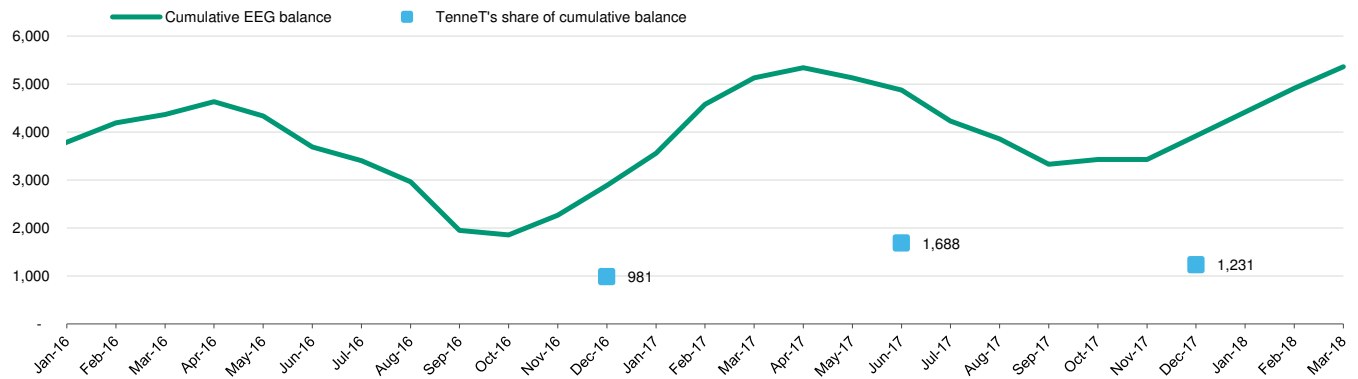
Liquidity analysis

We expect TenneT to maintain a good liquidity position over the next 12 months, supported by: (1) operating cash flows (c. €1.1-1.2 billion in 2018); (2) draw down of committed equity contributions from the Dutch state (€350 million received in February and €280 million expected in 2019); (3) a committed undrawn (as of December 2017) €350 million EIB facility related to TenneT's share of costs on the NordLink interconnector; and (4) a fully undrawn (as of December 2017) €2.2 billion committed revolving credit facility, expiring in July 2021. These will be sufficient to cover c. €0.9 billion of debt maturities in 2018 (mainly commercial paper outstanding following the redemption of a €500 million bond in February), dividend payments (including hybrid interest) of €0.2-0.3 billion and planned investments.

Under the German Renewable Act (Erneuerbare Energien Gesetz, or EEG), TenneT is also required to buy renewable energy at set feed-in-tariffs and sell it on the spot market. The difference is covered through a surcharge payment, determined annually (set at 6.79 €/kWh for 2018), which is added to the consumer tariffs. Following the German regulator's ruling in 2016 that funds related to EEG can no longer be at TenneT's free disposal and should be separated from its normal business, the material working capital swings experienced previously within a year are no longer an issue for TenneT. Furthermore, the allowed liquidity reserve buffer under the EEG is expected to provide enough cushion to avoid any material financing requirement for TenneT.

Exhibit 11

Like other German TSOs TenneT holds significant EEG funds, albeit since October 2016 these are not at the group's free disposal
 TenneT's share of cumulative balance of renewable surcharge balance in Germany (amounts in € millions)



Note: (1) In 2016 the German regulator decided that the funds related to EEG can no longer be at TenneT's free disposal and should be separated. The separation of funds was realised in October 2016. The other German TSOs continue include EEG funds in reported cash and cash equivalents

Source: www.netztransparenz.de/EEG/EEG-Konten-Uebersicht; TenneT

Rating methodology and scorecard factors

TenneT is rated in accordance with the rating methodology for [Regulated Electric and Gas Networks](#), published in March 2017, and the rating methodology for [Government-Related Issuers \(GRIs\)](#), published in August 2017.

Exhibit 12

TenneT Holding B.V. - Rating Factors Grid

	Current FY 12/31/2017		Moody's 12-18 Month Forward View As of May 2018 [3]	
	Measure	Score	Measure	Score
Regulated Electric and Gas Networks Industry Grid [1][2]				
Factor 1 : Regulatory Environment and Asset Ownership Model (40%)				
a) Stability and Predictability of Regulatory Regime	A	A	A	A
b) Asset Ownership Model	Aa	Aa	Aa	Aa
c) Cost and Investment Recovery (Ability and Timeliness)	A	A	A	A
d) Revenue Risk	A	A	A	A
Factor 2 : Scale and Complexity of Capital Program (10%)				
a) Scale and Complexity of Capital Program	B	B	Ba	Ba
Factor 3 : Financial Policy (10%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Factor 4 : Leverage and Coverage (40%)				
a) FFO Interest Coverage (3 Year Avg)	5.9x	Aa	5.5x - 6.0x	Aa
b) Net Debt / Fixed Assets (3 Year Avg)	53.8%	A	58% - 62%	Baa
c) FFO / Net Debt (3 Year Avg)	12.2%	Baa	11% - 13%	Baa
d) RCF / Net Debt (3 Year Avg)	9.5%	Baa	8% - 10%	Baa
Rating:				
Indicated Rating from Grid Factors 1-4		Baa2		Baa1
Rating Lift	0	0	0	0
a) Indicated Rating from Grid		Baa2		Baa1
b) Actual BCA Assigned				baa2
Government-Related Issuer				
		Factor		
a) Baseline Credit Assessment		baa2		
b) Government Local Currency Rating		Aaa		
c) Default Dependence		Moderate		
d) Support		Strong		
e) Final Rating Outcome		A3		

Note: (1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Standard Adjustments for Non-Financial Corporations. (2) As of 12/31/2017. (3) This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures. (4) Projected financial metrics are based on underlying performance, whereas reported metrics are based on IFRS and so will be impacted by volatility in volumes and auction receipts as well as true-up adjustments for over- and under-recovery against allowed regulatory revenues.

Source: Moody's Financial Metrics TM

Ratings

Exhibit 13

Category	Moody's Rating
TENNET HOLDING B.V.	
Outlook	Stable
Issuer Rating -Dom Curr	A3
Senior Unsecured -Dom Curr	A3
Jr Subordinate -Dom Curr	Baa3
Commercial Paper -Dom Curr	P-2
Other Short Term -Dom Curr	(P)P-2

Source: Moody's Investors Service

Appendix

Exhibit 14

Peer comparison table

(in US millions)	TenneT Holding B.V. A3 Stable (baa2 BCA)			Statnett SF A2 Stable (baa2 BCA)			N.V. Nederlandse Gasunie A2 Positive (baa1 BCA)			Eurogrid GmbH Baa1 RUR-DNG		
	FYE Dec-15	FYE Dec-16	FYE Dec-17	FYE Dec-14	FYE Dec-16	FYE Dec-16	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-14	FYE Dec-15	FYE Dec-16
Revenue	\$3,158	\$3,146	\$4,492	\$858	\$767	\$767	\$2,194	\$1,811	\$1,713	\$11,477	\$10,490	\$10,438
EBITDA	\$1,047	\$1,061	\$1,737	\$422	\$409	\$409	\$1,585	\$1,246	\$1,189	\$578	\$62	\$403
Total Debt	\$5,596	\$8,526	\$10,538	\$3,005	\$3,519	\$3,519	\$5,870	\$5,081	\$4,497	\$720	\$2,148	\$3,038
Net Debt	\$5,592	\$8,360	\$10,472	\$2,682	\$3,181	\$3,181	\$5,813	\$5,011	\$4,246	\$36	\$1,053	\$1,748
FFO Interest Coverage	5.5x	5.5x	7.2x	5.1x	6.7x	6.7x	7.5x	7.3x	7.6x	16.4x	13.4x	5.9x
Net Debt / Fixed Assets	42.2%	58.9%	58.6%	61.7%	64.5%	64.5%	52.4%	50.1%	46.1%	1.1%	27.2%	39.7%
FFO / Net Debt	13.7%	9.8%	13.5%	10.0%	10.6%	10.6%	19.4%	19.5%	20.7%	1093.8%	41.8%	17.6%
RCF / Net Debt	10.9%	6.3%	9.3%	10.0%	9.3%	9.3%	12.6%	11.7%	12.5%	772.5%	31.6%	11.6%
Debt / EBITDA	5.5x	8.4x	5.7x	8.5x	8.8x	8.8x	4.1x	4.2x	4.0x	1.4x	35.4x	7.9x

Note: All figures & ratios calculated using Moody's estimates & standard adjustments. FYE = Financial Year-End. LTM = Last Twelve Months. RUR* = Ratings under Review, where UPG = for upgrade and DNG = for downgrade.

Source: Moody's Financial Metrics™.

Exhibit 15

TenneT's adjusted debt breakdown

EUR Millions	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17
As Reported Debt	3,218	3,325	4,661	7,504	7,742
Pensions	68	126	130	179	186
Operating Leases	139	160	110	150	348
Hybrid Securities	250	250	250	250	500
Moody's-Adjusted Debt	3,675	3,861	5,151	8,083	8,776

Note: All figures & ratios calculated using Moody's estimates & standard adjustments

Source: Moody's Financial Metrics™.

Exhibit 16

TenneT's adjusted EBITDA breakdown

EUR Millions	FYE Dec-13	FYE Dec-14	FYE Dec-15	FYE Dec-16	FYE Dec-17
As Reported EBITDA	1,042	1,299	1,033	1,042	1,538
Operating Leases	14	16	11	15	87
Interest Expense - Discounting	-7	-12	-15	-20	-19
Non-Standard Adjustments	-15	-32	-86	-78	-69
Moody's-Adjusted EBITDA	1,034	1,271	943	959	1,537

Notes: (1) All figures & ratios calculated using Moody's estimates & standard adjustments; (2) The operating lease adjustment materially increased in 2017 because operational lease commitments for German powerplants previously recorded under grid related commitments were reclassified to operational lease commitments; (3) Non-standard adjustments pertain to share in profit of joint venture and associates.

Source: Moody's Financial Metrics™.

Exhibit 17

TenneT Holdings B.V.

Selected historical adjusted financials

(in EUR Millions)	FYE Dec-2013	FYE Dec-2014	FYE Dec-2015	FYE Dec-2016	FYE Dec-2017
Income Statement					
Revenue	2,429	2,569	2,844	2,843	3,976
% Change In Sales (Yoy)	49.1%	5.8%	10.7%	0.0%	39.9%
EBITDA	1,034	1,271	943	959	1,537
EBITDA Margin %	42.6%	49.5%	33.2%	33.7%	38.7%
EBIT	774	939	187	353	832
EBIT Margin %	31.9%	36.6%	6.6%	12.4%	20.9%
Interest Expense	152	161	168	180	201
Net Income	379	518	-5	141	450
Balance Sheet					
Cash & Cash Equivalents	120	83	3	157	55
Current Assets	2,466	2,089	1,778	3,199	3,843
Net Property Plant And Equipment	8,484	10,478	12,196	13,461	14,870
Non-Current Assets	8,929	11,005	12,738	14,590	15,734
Total Assets	11,398	13,613	14,516	17,789	19,577
Current Liabilities	3,675	4,796	4,682	5,201	5,575
Gross Debt	3,675	3,861	5,151	8,083	8,776
Non-Current Liabilities	5,035	5,262	6,876	8,926	9,786
Total Liabilities	8,710	10,548	11,558	14,127	15,361
Total Equity	2,689	3,065	2,958	3,663	4,216
Total Liabilities & Equity	11,398	13,613	14,516	17,789	19,577
Cash Flow					
Funds From Operations	905	1,202	708	775	1,181
Cash Flow From Operations	2,154	1,615	1,256	425	1,503
Capital Expenditures	-1,782	-2,157	-2,515	-1,806	-1,838
RCF	830	1,051	562	497	812
FCF	297	-693	-1,405	-1,659	-704
FFO / Net Debt	25.5%	31.8%	13.7%	9.8%	13.5%
RCF / Net Debt	23.3%	27.8%	10.9%	6.3%	9.3%
FCF / Net Debt	8.4%	-18.3%	-27.3%	-20.9%	-8.1%
Interest Coverage					
EBITDA / Interest Expense	6.8x	7.9x	5.6x	5.3x	7.7x
(FFO + Interest) / Interest Expense	6.9x	8.5x	5.2x	5.3x	6.9x
Leverage					
Debt / EBITDA	3.4x	3.0x	5.5x	8.3x	5.7x
Debt / Book Capitalization	0.5x	0.5x	0.5x	0.6x	0.6x

Notes: (1) IFRS-based credit metrics reflects volatility in volumes and auction receipts as well as true-up adjustments for over- and under-recovery against allowed regulatory revenue. (2)

All metrics are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations

Source: Moody's Financial Metrics™

Endnotes

1 though the company's actual cost of debt feeds into the BNetzA's assessment of cost efficiency

2 2.19% for expansion investments

3 Under the National Energy Agreement concluded in 2013, five offshore wind farms with a total capacity of 3.5 gigawatts (GW) will be built in the Dutch sector of the North Sea in the period until 2023, in addition to the existing wind farms, which have a total capacity of 1 GW. The coalition agreement provides for a further 7 GW increase in offshore wind energy capacity between 2024 and 2030.

4 of underlying profit (less dividend paid to non-controlling interest and dividend on the existing hybrid

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