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CREDIT OPINION
21 March 2017

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.

Update following affirmation of A3/P-2 ratings and assigned Baa3 rating to proposed hybrid issuance

Summary Rating Rationale

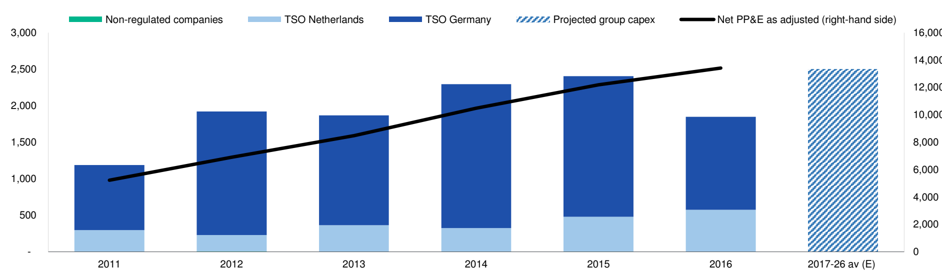
TenneT Holding B.V.'s (TenneT) A3/P-2 senior unsecured debt ratings are underpinned by the low business risk profile of its regulated electricity transmission network operations, which generate around 95% of the group's current earnings and cash flow under well-defined and relatively stable regulatory regimes in Germany and the Netherlands.

TenneT's German network activities account for the majority of the group's operating profit (72% over 2012-16 period) and asset base. We view the regulatory framework as relatively supportive for cost recovery with no time lag for the recovery of majority of investment costs. This is particularly important given the scale of TenneT's investment programme, €25 billion over the next 10 years (versus net PP&E of €13.4 billion at end 2016) with the majority expected to be in Germany, in onshore and offshore grid infrastructure to provide a reliable supply of energy throughout Europe and in TenneT's service areas in particular. Recent regulatory decisions in the Netherlands confirm our view that the regulatory environment is more challenging than in Germany but the impact is manageable for the group as these operations account for only around 20% of group operating profit.

We expect TenneT's financial profile to weaken as a result of the sizeable investment programme, which also poses technological and administrative challenges. However, we expect the impact to be manageable at the current rating level given (1) the group's track record of strong operational performance and (2) the measures taken by the company to strengthen its capital structure.

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 € millions)



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

Finally, 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 government of €1.19 billion in support of their investment programme in the Netherlands, the proceeds of which will be drawn down in four tranches over the 2017-20 period (with payment of the final tranche, €410 million, subject to reassessment in 2019).

Credit Strengths

» Monopoly electricity transmission network operations, regulated under two developed and fairly transparent regimes underpin low business risk profile.

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

Credit Challenges

» Falling regulatory returns in the current low interest-rate environment reduce financial flexibility.

» Very sizeable investment programme of around €25 billion over the next 10 years, which will increase the pressure on TenneT's financial profile and poses significant execution risk.

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

	12/31/2016	12/31/2015	12/31/2014	12/31/2013	12/31/2012
FFO Interest Coverage	5.4x	5.2x	8.5x	6.9x	5.2x
Net Debt / Fixed Assets	58.7%	42.2%	36.1%	41.9%	58.4%
FFO / Net Debt	9.9%	13.7%	31.8%	25.5%	15.1%
RCF / Net Debt	6.3%	10.9%	27.8%	23.3%	13.2%

Note: All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. When calculating net debt, the €500 million Perpetual Capital Securities, issued by TenneT in February 2010, 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 Cross Sector Rating Methodology 'Hybrid Equity Credit' (January 2017).

Source: Moody's Financial Metrics TM

Detailed Rating Considerations

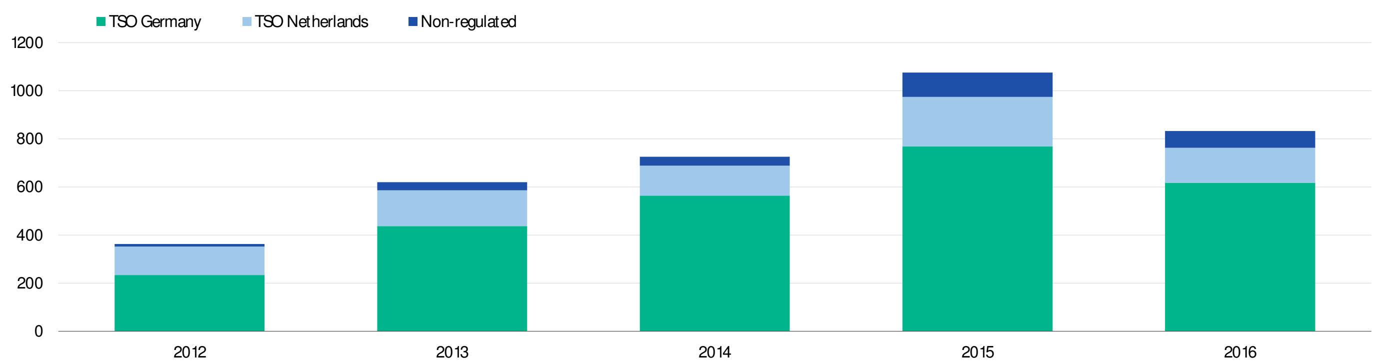
Low business risk underpinned by developed regulatory regimes

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 3

TenneT's underlying operating profit driven by German network expansion

Amounts in € millions



Source: TenneT's annual reports

TenneT operates under two well-defined and relatively stable regulatory regimes. The higher sub-factor scoring for 'stability and predictability of regulatory regime' under our regulated electric and gas networks methodology for the Netherlands ('Aa', in general) than Germany ('A'), primarily reflects the longer track record of incentive-based regulation - almost 15 years for electricity compared to just over 8 years in Germany. Given the majority of TenneT's operating profit (72% over the 2012-16 period) and assets are derived from its German network activities, we score TenneT 'A' for this sub-factor.

Exhibit 4

TenneT scored 'A' for Stability and Predictability of Regulatory Regime [supescript notes to be made]

Stability and Predictability of Regulatory Regime by Country as scored under Moody's Regulated Electric and Gas Networks methodology as of March 2017

Aaa	Aa	A	Baa
Great Britain1	Finland	Belgium	Portugal
	France	Czech Republic	Spain
	Ireland (RoI & NI)	Estonia	
	Italy	Germany	
	Netherlands2		
	Norway3		

Notes: 1) Only onshore incumbent network operators, excludes OFTOs and BUUK (Aa); 2) Excludes Gasunie (Baa historic, A forward looking) and TenneT (A); 3) Excludes Solveig (Ba)
Source: Moody's Investors Service

GERMANY

TenneT's current regulatory control in Germany runs until the end of 2018. Overall, we view the regulatory framework as relatively supportive for cost recovery. TenneT is able to recover the majority of its investment costs with no time lag, most of the group's capex relates to expansion investments which if approved by the regulator are remunerated under the investment measure mechanism, and it is able to share costs with the end consumers in case of delays in offshore connections. These arrangements have increased importance following the recent change in legislation in Germany requiring that connections, for the most part, are installed underground (rather than overground) which will further increase the cost of TenneT's already large investment programme in Germany, discussed below. We estimate that cost of undergrounding are, in general, around 4-5x higher for cable resulting in an overall increase in project cost of around 3x.

TenneT's cost of equity allowance (cost of debt is a pass through) will fall from 9.05% to 6.91% for most assets (nominal, pre-corporate tax and post-trade tax in both cases; post 2006 assets) from 1 January 2019. Whilst this will reduce cash flows, it is only one aspect of the whole control with key decisions on remaining parameters, in particular rulings on cost efficiency, expected later this year and in 2018. We expect the sector wide efficiency factor for the German TSOs to be reduced from 1.5% to 1-1.25% (both per annum) and TenneT to receive a 95-100% cost efficiency score. The more demanding these targets, the greater the risk of any under performance against cost allowances, with the subset of controllable and non-controllable costs also important.

NETHERLANDS

TenneT has increased cash flow visibility for its Dutch operations for almost five years following the regulator's Final Determination for the 2017-21 period published in September 2016. However, we view the Final Determination as challenging, in line with our assessment of the prior control (2014-16), reflecting primarily (1) further cuts to the allowed return; and (2) challenging cost assumptions. For existing and new assets alike, the allowed return will fall to 3.0% (real, pre-tax) by 2021, which is below that for other TSOs who receive a real return.

Exhibit 5

Evolution of real pre-tax allowed returns for electricity network operators

Allowed pre-tax return in year commencing

Electricity transmission	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Great Britain (1)	6.25%	6.14%	6.14%	6.03%	5.63%	5.39%	5.18%	5.03%	4.93%	4.79%	4.58%	4.36%	4.01%	
Ireland (Republic of)	5.63%	5.63%	5.63%	5.95%	5.95%	5.95%	5.20%	5.20%	4.95%	4.95%	4.95%	4.95%	4.95%	
Italy	6.90%	6.90%	6.90%	6.90%	7.60%	7.60%	6.40%	6.40%	5.60%	5.60%	5.60%			
Netherlands (2)	5.50%	5.50%	5.50%	6.00%	6.00%	6.00%	5.20%	4.40%	3.60%	4.00%	3.70%	3.50%	3.30%	3.00%
Sweden (3)					6.50%	6.50%	6.50%	6.50%	5.85%	5.85%	5.85%	5.85%		

Notes: (1) In Great Britain, allowed return in year t refers to period from April (year t) - March (year t+1), eg 2017 refers to period from April 2017 - March 2018. Moody's estimates for 2018-20 inclusive as of March 2017; (2) Moody's estimates for Netherlands in 2014 and 2015; (3) Allowed returns in Sweden for 2016-19 supervisory period reflect Administrative Court in Linköping ruling in December 2016.
Source: Regulatory data, Moody's estimates

In our view, TenneT faces the greatest risk of underperforming against cost allowances on two aspects of opex: (1) purchase costs of energy and capacity (E&C) given these will no longer be settled ex-post and are expected to increase with more renewables on the system; and (2) an opex allowance of 1% of the investment value of the offshore grid. In both cases there is no possibility for ex-post settlement, although TenneT have lodged appeals against both these decisions.

Overall, we consider the impact of the Final Determination as manageable given (1) the size of the Dutch network activities in the context of the group; (2) the favourable final ruling of the court for the prior period on cost efficiency, which positively impacts the static efficiency and thus frontier shift for this period; and (3) the introduction of investment cost recovery for certain onshore (RCR projects) and all offshore investment with no time lag.

Very sizeable investment programme poses execution risk

TenneT is undertaking a large investment programme on the Dutch and German electricity transmission grids (both onshore and offshore) that is expected to amount to around €25 billion over the coming ten years. The programme is aimed at connecting new, primarily renewable, generation sources, strengthening existing transmission assets and removing bottlenecks on both transmission networks.

The vast majority of the €3 billion increase compared to the prior ten-year plan relates to increased 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. For example, around 95% of the SuedLink (a 2x 2GW HVDC North-South connection) is now expected to be undergrounded which will increase project costs, split 50% with TransNet (owned by EnBW, A3 negative).

The majority of TenneT's planned investments in the offshore grid in both Germany and Netherlands is over the 2017-21 period. In the Netherlands, this reflects TenneT is responsible, after being designated the offshore grid operator last year, for the development, construction and operation of an offshore energy system that by 2023 will transport 3,500MW of wind power from the North Sea.

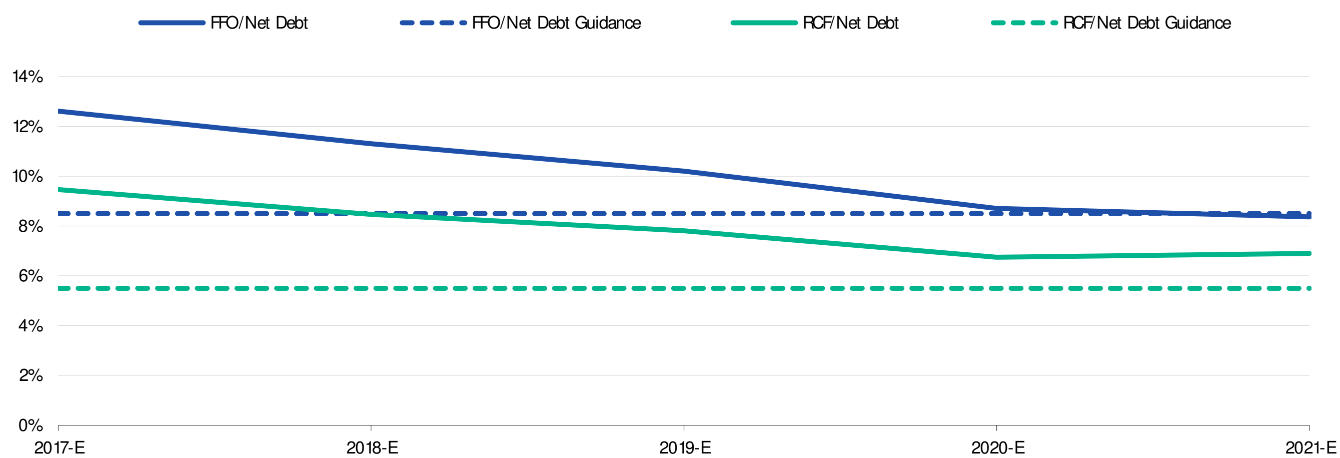
Recent strengthening of capital structure means demands of capex programme expected to be manageable

In December 2016, TenneT received a committed equity contribution from the Dutch government of €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 tranche was drawn down earlier this month). Whilst payment of the final tranche, €410 million, is subject to reassessment in 2019, we expect TenneT to receive the full amount based on its planned capex programme. Subject to successfully completing the recently announced proposed hybrid issuance, TenneT will further strengthen its capital position (based on its features, the instrument qualifies for basket "C" treatment Cross Sector Rating Methodology 'Hybrid Equity Credit' (January 2017) and thus 50% equity credit).

This recent capital strengthening, coupled with TenneT entering the further step-up in investment level with a solid financial profile, means we expect TenneT to meet our ratio guidance for the existing baa2 BCA over the forecast horizon, with FFO / Net Debt at least in the high single digits in percentage terms the most demanding metric. Continued headroom against guidance on FFO interest coverage principally reflects the continued low interest rate environment. The group's lower dividend payout ratio, 35% (was 50%) of underlying profit (less dividend paid to non-controlling interest and dividend on the existing hybrid) for a further three years, is expected to result in RCF / Net Debt being in the 7-8% range over the forecast horizon. We expect Net Debt / Fixed Assets to increase to the mid-to-high 60s in percentage terms by the end of the decade.

Exhibit 6

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 low teens to low twenties in percentage terms in recent years; (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 Financial Metrics TM,Moody's calculations and projections

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 instalments in December 2011 and June 2012.

Liquidity Analysis

We expect TenneT to maintain an adequate liquidity position over the next 12 months, supported by: (1) operating cash flows (€1-1.2 billion on an underlying basis in 2017); (2) draw down of committed equity contributions from the Dutch state (€150 million received earlier this month and €350 million in 2018); (3) a €2.2 billion committed revolving credit facility, expiring in July 2021; and (4) the proceeds from the planned hybrid issuance. These will be sufficient to cover €1.1 billion of debt maturities (almost all commercial paper outstanding), dividend payments (including hybrid interest) of around €0.2 billion and planned investments of around €2-2.5 billion in 2017.

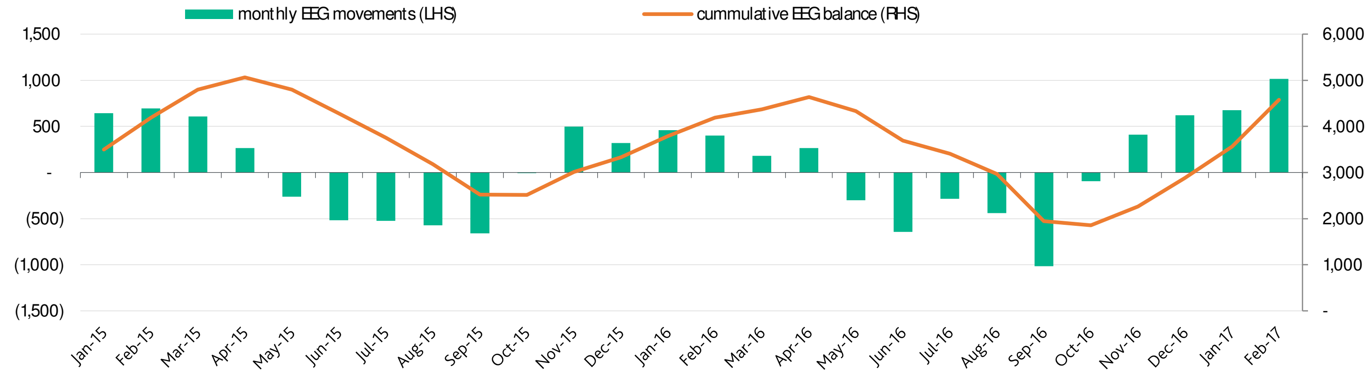
The group extended its average (long-term) debt tenor to c9-years at end 2016, from c7-years at end 2015, with the €2.0 billion issuance of green instruments (€1.5 billion of green bonds and €0.5 billion schuldschein) and the draw down of the final tranche from its long-term loan commitment with the EIB in 2016. As well as further reducing maturity concentration, this ensures a greater alignment between the evolution of its current and future financing costs with the methodology currently used by the Dutch and German regulators to set allowed returns for its network operations.

Under the German Renewable Act (Erneurbare 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 6.88 ct/kWh for 2017), which is added to the consumer tariffs. Following the German regulator's ruling in 2016 that funds related to EEG can no longer at the TSOs 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 provides enough cushion to avoid any financing requirement for TenneT.

Exhibit 7

Cumulative balance and monthly movements of renewable surcharge balance (aggregate for Germany)

Aggregate for Germany (amounts in € millions)



At end 2016, TenneT's share of the cumulative surplus balance was €981 million. However, as of 2016 the German regulator decided that the funds related to EEG can no longer be at the TSOs free disposal and should be separated. The separation of funds was realised in October 2016.

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

Profile

TenneT Holding B.V. (TenneT) is a 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 over 22,500 kilometres (km), TenneT serves approximately 41 million end-consumers in the Netherlands and Germany.

Rating Methodology and Scorecard Factors

TenneT's baa2 Baseline Credit Assessment (BCA, i.e. its stand-alone credit quality absent any potential government support) reflects the application of our rating methodology for Regulated Electric and Gas Networks, published in March 2017. Based on historical and projected financial metrics the grid-indicated rating is Baa2, in line with the BCA. We note projected 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.

Exhibit 8

TenneT Holding B.V. - Rating Factors Grid

Regulated Electric and Gas Networks Industry Grid [1][2]	Current FY 12/31/2016		Moody's 12-18 Month Forward View As of March 2017 [3]	
Factor 1 : Regulatory Environment and Asset Ownership Model (40%)	**Measure**	**Score**	**Measure**	**Score**
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	B	B
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)	6.3x	Aa	6x - 7x	Aa
b) Net Debt / Fixed Assets (3 Year Avg)	46.6%	A	55% - 60%	A
c) FFO / Net Debt (3 Year Avg)	16.0%	Baa	11% - 14%	Baa
d) RCF / Net Debt (3 Year Avg)	12.6%	Baa	8% - 11%	Baa
Rating:				
Indicated Rating from Grid Factors 1-4		Baa2		Baa2
Rating Lift	0	0		
a) Indicated Rating from Grid		Baa2		Baa2
b) Actual BCA assigned				baa2
Government-Related Issuer		**Factor**		**Factor**
a) Baseline Credit Assessment		baa2		baa2
b) Government Local Currency Rating		Aaa		Aaa
c) Default Dependence		Moderate		Moderate
d) Support		Strong		Strong
e) Final Rating Outcome		A3		A3

Note: (1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Standard Adjustements for Non-Financial Corporations. (2) As of 12/31/2016. (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 Financial Metrics TM

Given its 100% ownership by the Dutch government, TenneT falls within the scope of our rating methodology for Government-Related Issuers (GRIs), published in October 2014. TenneT's rating incorporates a two-notch uplift to its baa2 BCA. This reflects our view of a strong probability of government support in the case of financial distress, the credit quality of the Dutch Government (Aaa stable), as well as a moderate default dependence (i.e. the degree of exposure to common drivers of credit quality).

Ratings

Exhibit 9

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

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