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CREDIT OPINION
20 May 2016

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

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 the Netherlands and Germany.

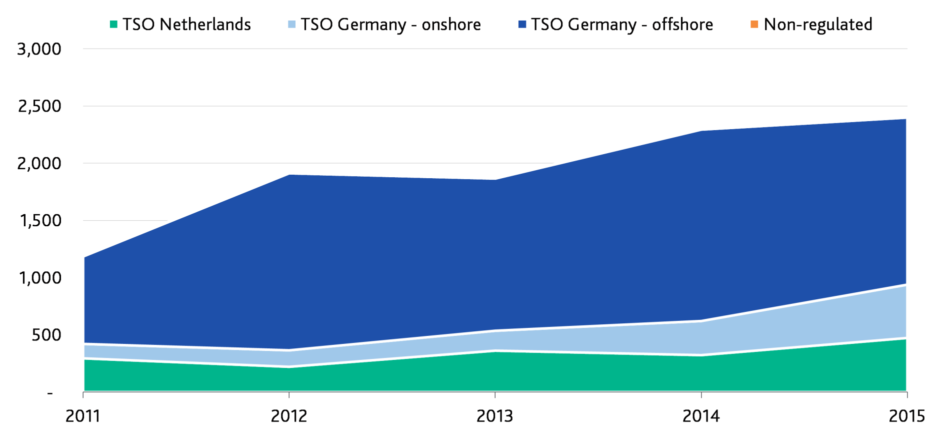
TenneT's Dutch activities are facing a challenging regulatory environment, with a significant reduction in the allowed return on the regulated asset base (RAB) for the three-year regulatory period that commenced in January 2014, and a further cut proposed for the next period 2017-21. However, TenneT's diversification into German network activities, which account for around 70-75% of operating profit, provide significant risk mitigation as they carry higher returns, with a reset only from 2019.

The ratings are constrained by TenneT's increasing leverage because of its sizeable €22 billion investment programme over the next ten years. Given the focus on renewable energy in the EU and particularly offshore wind capacity in Germany, TenneT is currently required to provide offshore connections to German wind farms with an overall capacity of more than 7.1GW. The large investment programme not only pressures TenneT's financial profile, but also poses technological and administrative challenges.

Exhibit 1

TenneT's investment plan focuses heavily on German network expansion

German onshore capex likely to grow going forward (amounts in € millions)



Source: TenneT

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 has also been underpinned by (1) the equity increase of €600 million received in two equal instalments in December 2011 and June 2012; and (2) the Dutch government's commitment to provide additional equity support, if required, for the ongoing development of the Dutch offshore network.

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 Dutch government (Aaa/P-1, stable) 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 more than €22 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 between the high single digits and low teens 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 cover solidly above 3.0x and FFO/Net Debt at least in low teens 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 BCA, for example, FFO Interest Cover 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 revenues

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

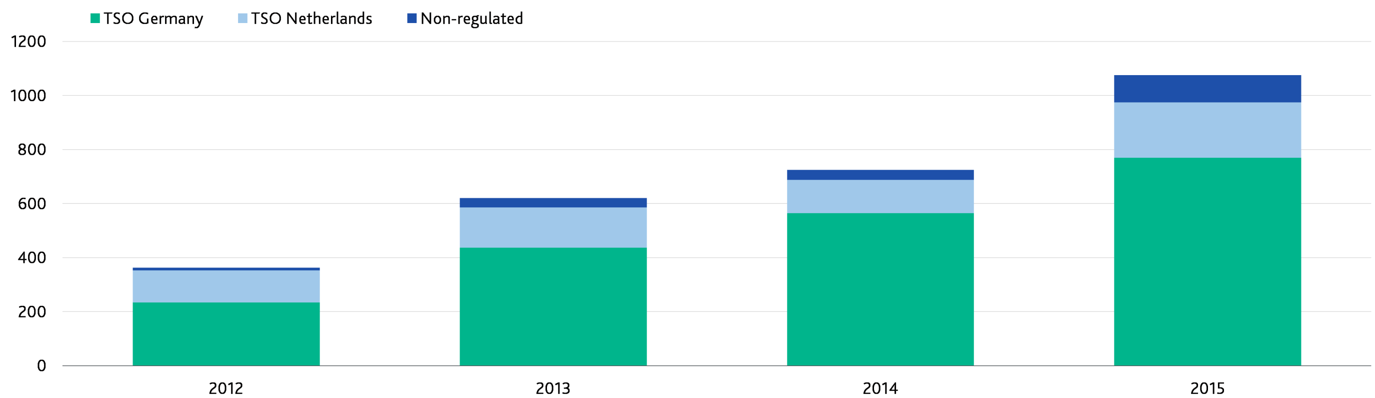
Note: All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. When calculating net debt, the €500 million Perpetual Capital Securities, issued by TenneT in February 2010, are treated as 50% equity and 50% debt when we apply 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' (March 2015).
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 growth driven by German network expansion
Amounts in € millions



Source: TenneT's annual reports

TenneT operates under two well-defined and relatively stable regulatory regimes. While the Dutch regime has a longer track record of incentive-based regulation than that in Germany, the latter has seen a number of credit-positive developments. Key improvements include the removal of the two-year time-lag in recovering costs under major investment measures and legislative changes to share costs with the end consumers in case of delays in offshore connections.

In January 2014, TenneT's Dutch regulated network subsidiary entered into a new regulatory period, which saw the weighted average cost of capital falling significantly to 3.6% (pre-tax, real), albeit gradually over the three-year period 2014-16, from 6.0% in the previous period, reflecting a falling interest rate environment.

In April 2016, the Authority for Consumers and Markets (ACM), the economic regulator for the Dutch energy networks, published its draft consultation for the next regulatory period commencing in 2017, proposing a further cut in the allowed return to 3.1% by 2021 (see Moody's sector-in-depth comment 'Dutch Regulated Energy Networks: Lower allowed return poses fresh challenge', published in May 2016).

TenneT's diversification into German network activities, which account for around 70-75% of operating profit, provide significant risk mitigation. To date, the decline in allowed returns has been less pronounced for the German grids - for the second regulatory period 2014-18 equity returns were set at 9.05% (nominal, pre-corporate tax, after trade tax), only marginally lower than the 9.29% previously - given the need to encourage investment. However, when the German regulatory body, the Federal Network Agency (Bundesnetzagentur, BNetzA) will reset the cost of equity allowance for the electricity and gas networks later this year, we believe a material reduction in returns for the next regulatory period is likely given the continuing low interest-rate environment.

Exhibit 4 summarises the allowed returns for the current periods as well as for the next relevant regulatory period based on draft proposals for the Dutch networks and Moody's estimate for the German networks.

Exhibit 4

Allowed returns continue to fall

	Netherlands E-TSO (2011-13)	Netherlands (2014-16)	Netherlands Draft Proposals (2016)	Netherlands Draft Proposals (2021)	Netherlands Draft Proposals (new assets)	Germany (2014-18)	Moody's estimate Germany (2019-22)
Risk-free rate	3.9-4.0%	2.50%	2.49%	1.28%	1.19%	**3.80%**	2.00%
Risk premium	1.1-1.9%	1.20%	0.93%	0.82%	0.77%	0.18%	0.70%
Transaction fee		0.15%	0.15%	0.15%	0.15%	0.00%	0.00%
Cost of debt	**5.0-5.9%**	**3.85%**	**3.57%**	**2.25%**	**2.11%**	3.98%	2.70%
Market risk premium	4.0-6.0%	5.00%	5.00%	5.00%	5.00%	5.44%	5.44%
Asset Beta	0.39	0.35	0.42	0.42	0.42	n/a	n/a
Equity Beta	0.68-0.83	0.61	0.74	0.74	0.74	0.66	0.66
Equity risk premium	3.3-4.1%	3.06%	3.68%	3.68%	3.68%	3.59%	3.59%
Cost of Equity (post-tax) - new assets	**7.2-8.1%**	**5.56%**	**4.89%**	**4.89%**	**4.89%**	7.39%	5.59%
Cost of Equity (pre-tax) - new assets		7.42%	6.49%	6.49%	6.49%	**9.05%**	6.84%
Inflation factor						1.56%	1.20%
Cost of Equity (pre-tax) - old assets						**7.14%**	5.37%
Gearing	50-60%	50%	50%	50%	50%	60%	60%
Tax	25.5%	25%	25%	25%	25%	18%	18%
WACC (nominal, pre-tax)	6.9-8.4%	5.63%	5.03%	4.37%	4.30%	6.01%	4.36%
Inflation assumption	1.5-1.6%	2.00%	1.26%	1.26%	1.26%	1.56%	1.20%
Calculated WACC (real, pre-tax)	5.3-6.7%	3.56%	3.72%	3.07%	3.00%	4.38%	3.12%
Allowed WACC (real, pre-tax)	**6.0%**	**3.6%**	**3.7%**	**3.1%**	**3.0%**	n/a	n/a

Notes: (1) In Germany the cost of debt is included in the overall total expenditure allowance that is subject to efficiency target. For investment budgets, the cost of debt is a pass through item. The above WACC comparison is for illustrative purposes only. (2) 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. (3) Under the Dutch regime, the WACC reduces in gradual steps over the regulatory period. (4) TenneT has lodged an appeal with the Trade and Industry Appeal Tribunal (CBb) against the reduction in allowed return and other cost measures for the 2014-16 period, and received a preliminary decision in its favour on the allowance of the cost of debt element embedded within the WACC. The final decision for the new regulatory period may incorporate an adjustment based on the court's ruling. However, we do not expect any material improvement in operating cash flows over the medium term.
Source: ACM, BNetzA, Moody's calculations

Very sizeable investment programme poses execution risk

TenneT faces a sizeable investment programme of around €22 billion over the coming ten years, with around €6 billion and over €16 billion to be spent on the Dutch and German electricity transmission grids, respectively. The programme is aimed at connecting new, primarily renewable, generation sources, strengthening existing transmission assets and removing bottlenecks on both transmission networks.

TenneT's strategy of selling stakes in its offshore projects to private investors, such as Mitsubishi on four German offshore projects and Copenhagen Infrastructure Partners (a Danish pension fund) on another one, is intended to alleviate some pressure on credit metrics. However, with the majority of the capex programme being front-ended in the next five years, TenneT will need to continue enjoying unrestricted access to capital markets and bank financing to avoid liquidity pressures.

Risk of constructions delays, particularly linked to German offshore developments, is somewhat mitigated by legal mechanisms that allow TenneT to share the cost of damages payments due to delays outside of its control across all German TSOs and ultimately the end consumer.

Compared with the previous year's ten-year investment plan, TenneT's Dutch capex requirements have increased to include approximately €2.0-2.5 billion of additional spend to develop the Dutch offshore grid while the German on-shore investments will increase due to the legal requirement for underground cabling rather than overhead lines. We understand that the Dutch government has committed to provide additional equity funding as and when needed for the Dutch offshore grid development to ensure that TenneT can maintain a financial profile that would support an overall solid credit quality.

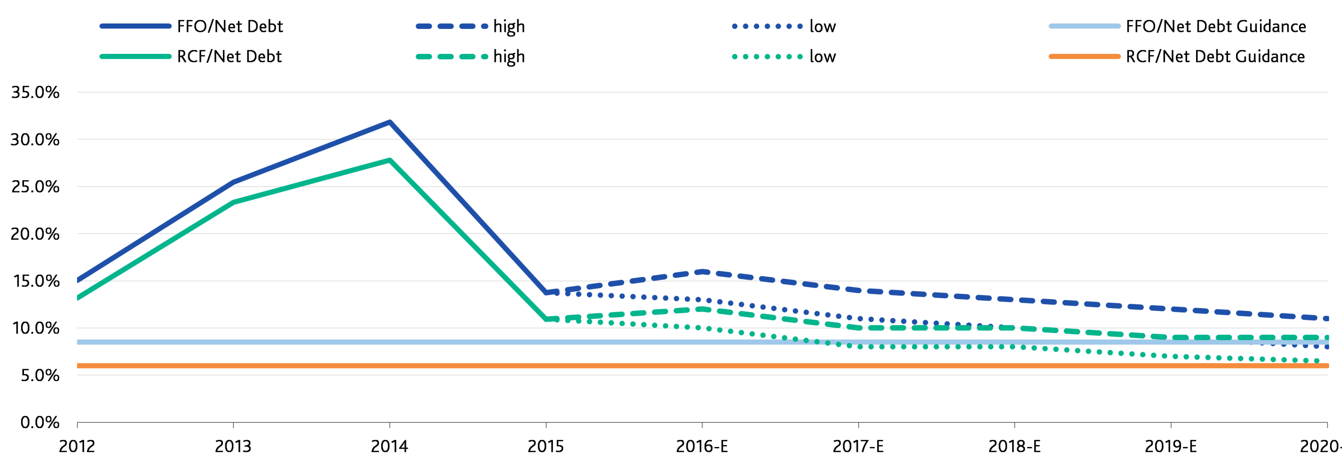
Financial metrics expected to deteriorate as capex programme progresses

TenneT's recent financial performance has been relatively strong, boosted by (1) higher than expected electricity volumes; (2) additional regulatory allowances to offset delay risks of offshore connections and provide liquidity to deal with fluctuation in renewable energy feed-in; (3) incremental opex allowances for investment budgets received already during the construction period; and (4) increased capacity auction revenues from its interconnector activities. In 2015, TenneT faced higher feed-in tariff payments and balancing/redispatch costs, while also having to apply previous excess auction receipts towards a reduction in customer charges. Based on TenneT's reported underlying performance (which removes the effect of under- or over-recoveries on allowed revenues), FFO/Net Debt (as adjusted by Moody's) would have been less volatile, in the high teens to low twenties in percentage terms on average, and underlying operating profit growing in line with network expansion (see also Exhibit 1 above).

In order to maintain its current baa2 BCA we expect TenneT to exhibit FFO Interest Cover in the range of 2.5-3.0x, FFO/Net Debt broadly around 10% on average and RCF/Net Debt above 7% as the investment programme is being executed. On a Net Debt/Fixed Assets basis, we expect TenneT to maintain leverage around 60-65% over the medium term, with the maximum leverage sustainable at the current rating being up to 75%.

Exhibit 5

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



Note: (1) All ratios are based on 'Adjusted' financial data and incorporate Moody's Standard Adjustements 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' (March 2015). (2) 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.

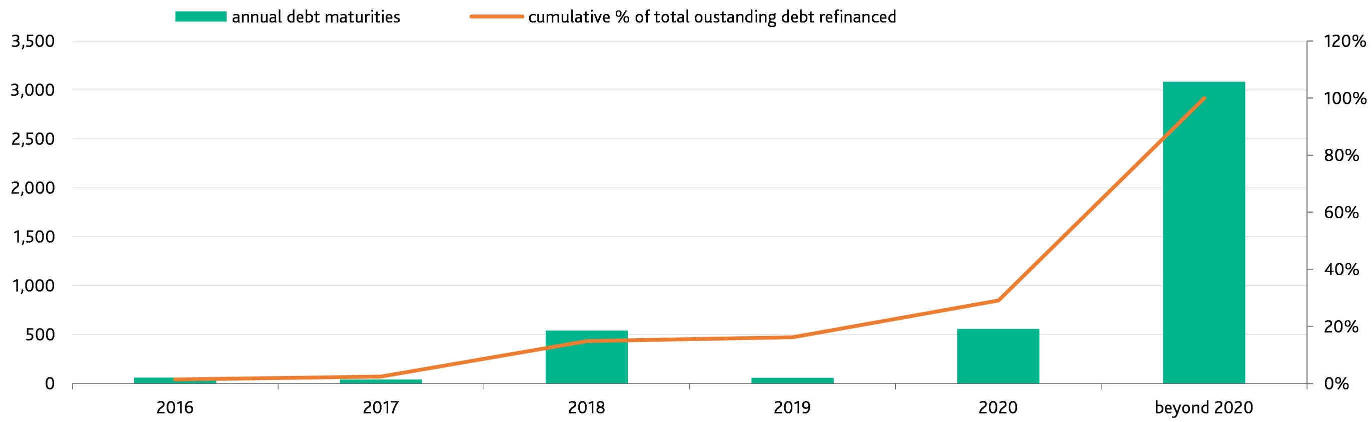
Source: Moody's Financial Metrics TM, Moody's calculations and projections

Liquidity Analysis

We expect TenneT to maintain a solid liquidity position over the next 12 to 18 months, supported by: (1) operating cash flows; (2) ongoing equity contributions of third parties to offshore projects in Germany; (3) €2.2 billion of committed credit facilities, to expire in July 2020 (with a one-year extension options), which remained undrawn at the end of 2015; and (4) €150 million under committed loans from the European Investment Bank. These sources will be sufficient to cover short-term maturities of around €395 million as well as planned investments in the amount of around €2.5-3.5 billion within the 12-18 months from December 2015.

Exhibit 6

TenneT's maturity profile (excl. short-term commercial paper)
Amounts in € millions

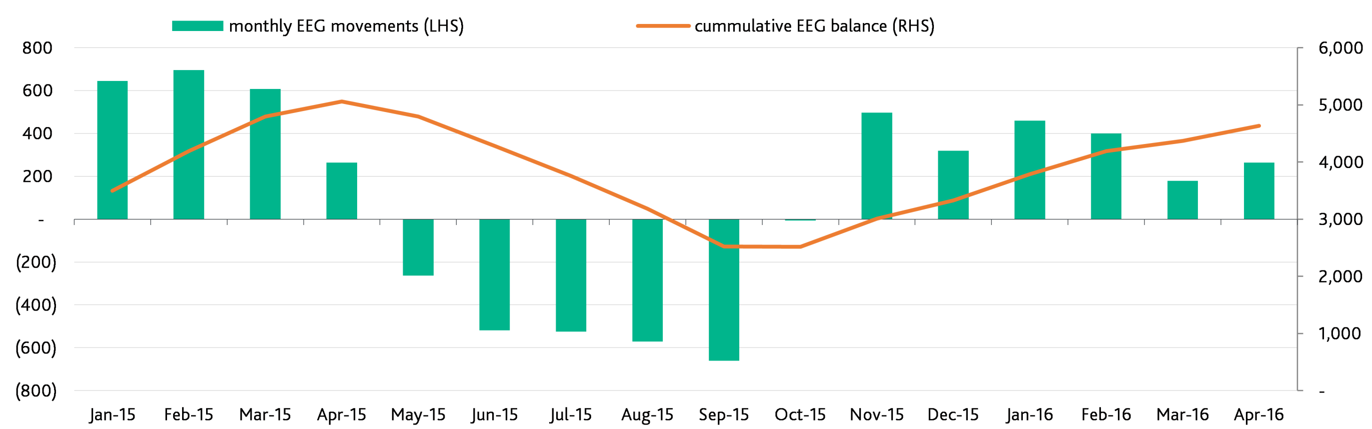


Source: TenneT

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 6.354 ct/kWh for 2016), which is added to the consumer tariffs. This can create material working capital swings within a year, but TenneT has demonstrated its ability to manage these efficiently through the use of short-term debt to be repaid by cash inflows in the subsequent year or by new financing.

Exhibit 7

Cumulative balance and monthly movements of renewable surcharge balance (aggregate for Germany)
Aggregate for Germany (amounts in € millions)



Source: https://www.netztransparenz.de/de/EEG-Konten-Übersicht.htm

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 22,245 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 November 2014. Based on historical financial information (particularly when not adjusted for future regulatory liabilities from over-recovered revenues as is the case under IFRS), the grid-indicated rating is Baa1, one notch higher than the assigned BCA. When taking into account the significant investment programme, as described above, we expect the grid-indicated rating to converge towards the assigned BCA of baa2.

Over the next 12 to 18 months we expect TenneT's financial profile to weaken, taking account of the ongoing capex requirements. However, financial performance may only gradually deteriorate and certain investments could be re-phased based on connection requirements and/or delays in approval proceedings.

Exhibit 8

TenneT Holding B.V. - Rating Factors Grid

Regulated Electric and Gas Networks Industry Grid [1][2]	Current FY 12/31/2015		Moody's 12-18 Month Forward View As of May 2016 [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)	6.9x	Aa	5x - 7x	Aa
b) Net Debt / Fixed Assets (3 Year Avg)	40.1%	Aa	45% - 55%	A
c) FFO / Net Debt (3 Year Avg)	22.6%	A	12% - 18%	Baa
d) RCF / Net Debt (3 Year Avg)	19.6%	A	10% - 15%	Baa
Rating:				
Indicated Rating from Grid Factors 1-4		Baa1		Baa2
Rating Lift	0	0		
a) Indicated Rating from Grid		Baa1		Baa2
b) Actual Rating Assigned				A3
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 12/31/2015. (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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