# MOODY'S INVESTORS SERVICE

# **CREDIT OPINION**

17 April 2023

# Update



### RATINGS

Statnett S	SF
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Domicile	Oslo, Norway
Long Term Rating	A2
Туре	LT Issuer Rating - Fgn Curr
Outlook	Stable

Please see the <u>ratings section</u> 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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# Statnett SF

Update following rating affirmation with stable outlook

## Summary

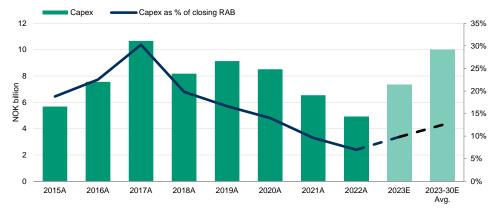
The credit quality of <u>Statnett SF</u> (A2 stable) is supported by the stable, predictable and supportive regulatory framework under which the company operates, which provides excellent cash flow visibility, and its long track record of efficiently delivering large capital investment programmes. Following completion of the NSL interconnector in late 2021, and the decision of the Norwegian government to stop the construction of further interconnectors, we expect Statnett's investments to be focused onshore, which carries limited execution risk.

These strengths are offset by Statnett's plans for a significant acceleration in capital investment. The company plans to invest NOK 60-100 billion in onshore power networks between 2023 and 2030 to support growth in Norway's electricity demand from around 140 terawatt hours (TWh) in 2022 to as much as 260 TWh by 2050, and to address transmission constraints that have led to large price differentials between northern and southern Norway. This implies annual investment over the period averaging NOK 7.5-12.5 billion, significantly higher than its annual expenditure of around NOK 6.6 billion over the 2020-22 period.

Statnett's A2 rating incorporates three notches of uplift for potential support from the <u>Government of Norway</u> (Aaa stable) from its Baseline Credit Assessment (BCA) of baa2. The government has demonstrated a strong record of supporting Statnett's large investment programme.

Exhibit 1

Capex will rise under Statnett's new capex plan but will, relative to its regulated asset base (RAB), remain well below the 2017 peak



Notes: 2023-30 based on midpoint of NOK 60-100 billion range. Source: Moody's Investors Service estimates

# **Credit strengths**

- » Monopoly electricity transmission operations, with revenue regulated under a stable, predictable and supportive regulatory framework providing excellent cash flow visibility
- » Long track record of efficiently delivering large capital investment programmes
- » Strong support by Statnett's owner, the Government of Norway, with the company playing a key strategic role in fulfilling government policy objectives

# **Credit challenges**

- » Relatively high financial leverage
- » Sizeable investment programme with NOK 60-100 billion of capital spending over the 2023-2030 period
- » Greater cash flow volatility from interconnectors, although any revenue shortfalls can be recovered with a short time lag

# **Rating outlook**

The stable outlook reflects our expectation that Statnett will continue to meet the minimum ratio guidance, including a ratio of Funds From Operations (FFO) to Net Debt of around 8% and Net Debt to Fixed Assets not above 80%, excluding changes in congestion revenue and over- and under-recovery of system operating expenses.

# Factors that could lead to an upgrade

» Underlying FFO/Net Debt around 10% and Net Debt/Fixed Assets below 70%.

# Factors that could lead to a downgrade

- » Underlying FFO/Net Debt below 8% or Net Debt/Fixed Assets above 80%, without prospect of a speedy recovery.
- » Material adverse changes in the regulatory framework or a material reduction in Statnett's cost efficiency score that results in a significant reduction in Statnett's allowed revenue.
- » Statnett's ratings are not likely to be affected in the event of a limited deterioration in Norway's creditworthiness. However, the company's ratings may be affected by changes in our assessment of the likelihood of government support. This could be the result of a change in the government's ownership levels or strategy for the company, neither of which we expect in the medium term.

# **Key indicators**

### Statnett SF

	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	2023-proj.	2024-proj.
FFO Interest Coverage	6.5x	5.5x	7.7x	11.7x	9.0x	1.5x	3.6x
Net Debt / Fixed Assets	67.3%	66.9%	67.6%	63.1%	57.6%	62.9%	63.8%
Net Debt / Regulated Asset Base	94.7%	80.0%	78.0%	67.9%	60.6%	66.0%	69.4%
FFO / Net Debt	11.2%	10.0%	12.8%	16.4%	21.3%	2.2%	10.1%
RCF / Net Debt	10.4%	8.9%	10.2%	14.1%	19.6%	1.6%	8.0%
Underlying FFO / Net Debt (excluding post-tax impact of over / (under) recovery of revenues)	10.5%	11.5%	11.5%	11.8%	7.3%	10.9%	17.4%

Notes: All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Projections (proj.) are Moody's opinion and do not represent the views of the issuer. Source: Moody's Financial Metrics<sup>TM.</sup>

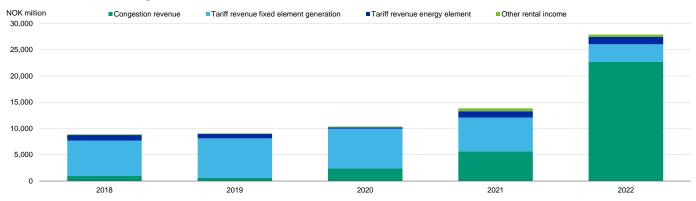
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

# Profile

Statnett is the owner and operator of Norway's high-voltage electricity grid. It is 100% owned by the Government of Norway, through the Ministry of Petroleum and Energy, and is regulated by the Norwegian Energy Regulatory Authority (NVE-RME).

### Exhibit 3

### Evolution of revenue from regulated activities



Note: In 2022, total operating revenue from regulated grid operations: NOK 21,963 million. The exhibit excludes extraordinary transfer to grid owners (2022: -NOK 5,918 million) and income from other owners in the regional and main grids (2022: -NOK 4 million) *Source: Company reports* 

# **Detailed credit considerations**

Stable and predictable cash flow generated under one of the most well-established and transparent frameworks in Europe

Statnett's tariffs are set by the Energy Regulatory Authority (RME), a separate regulatory body within the Norwegian Energy Regulatory Authority (NVE), which has a long track-record of stable, transparent and predictable regulation that ensures timely recovery of investment costs and a stable return on assets. Under a regulatory framework first introduced in 1997, Statnett's cost allowances roll forward with updated parameters (e.g. interest rates, inflation and Regulated Asset Base [RAB]) each year, providing excellent cash flow visibility. Under this methodology, Statnett's allowed equity return, which we expect to be around 9.3% (post-tax) in 2023, has been consistently higher than those in comparable European regulatory regimes. The transparency of the regime is demonstrated by extensive public consultation and the publication of regulatory parameters and models. If Statnett disagrees with regulatory decisions, there are established processes for appeals, initially to the Energy Complaints Body ("Energiklagenemda") in the case of a decision taken by the RME or to the Ministry of Petroleum and Energy in the case of a decision taken by the NVE.

Reflecting these considerations, <u>we raised</u> Statnett's "Stability and Predictability of the Regulatory Regime" subfactor score under the Regulated Electric and Gas Networks methodology to Aaa from Aa in April 2023.

In 2021, refinements were implemented to improve the company's cost efficiency incentives. Whereas the "cost norm" was previously based on a benchmarking analysis of seventeen European electricity transmission system operators, it is now linked to Statnett's own historical costs and inflated based on a bespoke inflation index. From January 2023, the share of Statnett's cost allowances subject to an efficiency challenge rose to 70% from 60%.

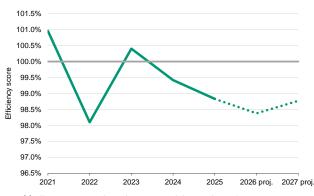
Statnett's efficiency is calculated by comparing its unit costs in the most recent available year to a five-year average of those costs. For example, the efficiency score for 2023 was calculated by dividing unit costs in 2021 to average unit costs in the 2015-2019 period, yielding an efficiency score of 100.4%. However, as relatively high costs experienced before 2017 drop out of the average, Statnett's efficiency score for 2024 and 2025 will fall below 100% (see exhibit)

The cost norm, which from January 2023 is used to set 70% of Statnett's cost allowance, is calculated by reducing the efficiency score by 2%, to reflect required improvements in efficiency over time, and then applying it to the cost base. The remaining 30% is linked to the cost base without adjustment for efficiency. As a result of this mechanism, Statnett has tended to recover slightly less than 100% of its cost base, and this gap is likely to widen over the next few years. In addition, because the cost base reflects actual operating costs from two years earlier (adjusted for inflation), actual costs will exceed the cost base in periods when costs are increasing in real

terms. Some costs items are exempted from the efficiency adjustments either as system operating costs, which are subject to a 0.6% productivity requirement. or as pass-through costs (see the highlighted blue box below).

#### Exhibit 4

Low unit costs achieved in 2020 and 2021 will create a challenging efficiency target over the next few years



Notes: (1) Efficiency score only applies to 70% of the cost base of transmission owner activities and does not consider the 2% productivity requirement; (2) Projections are Moody's estimates and assume a constant unit cost for the 2022-2025 period. *Source: NVE-RME, Moody's Investors Service estimates* 

#### Exhibit 5

Statnett scores 'Aaa' for Stability and Predictability of Regulatory Regime reflecting well-established and transparent regulatory framework

Stability and predictability of regulatory regime by country as scored under our <u>Regulated Electric Gas Networks</u> methodology (published in April 2022) as of April 2023

Aaa	Aa	Α	Baa
Great Britain <sup>1</sup>	Czech Republic	Belgium - Flanders	Belgium - Wallonia
Ireland <sup>2</sup>	Finland	Estonia	Poland
Norway <sup>3</sup>	France	Germany	Slovakia
	Northern Ireland	Portugal	Spain
	Italy		
	Netherlands <sup>4</sup>		

Notes: (1) Only onshore network operators, excludes offshore transmission owners (Aa); (2) We upgraded regulatory framework in Ireland in April 2021; (3) We upgraded the regulatory framework in Norway in April 2023; (4) Excludes <u>N.V. Nederlandse Gasunie</u> and <u>TenneT Holding B.V.</u> (both A). *Source: Moody's Investors Service* 

Because of higher inflation and increases in five-year swap rates, Statnett's allowed return on capital increased in nominal terms from 5.37% in 2021 to 7.47% in 2022. We expect it will remain above recent historical levels over the forecast period, reflecting (1) the use of a four-year moving average of inflation (two historic years and two forward years) to calculate the allowed cost of equity, and (2) significant increases in swap rates, which we expect to persist.

#### Exhibit 6

### Statnett's allowed return is likely to remain elevated

	Fixed /										
Parameter	Variable	2015A	2016A	2017A	2018A	2019A	2020A	2021A	2022A	2023E	2024E
Gearing	Fixed	60%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Risk free rate (real)	Fixed	2.5%	2.5%	2.5%	2.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Inflation rate	Variable	2.25%	2.53%	2.33%	1.98%	2.23%	2.10%	2.23%	3.83%	3.40%	2.45%
Risk free rate (nominal)		4.81%	5.09%	4.89%	4.53%	3.76%	3.63%	3.76%	5.39%	4.95%	3.99%
Asset beta	Fixed	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Equity beta	Fixed	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875	0.875
Market risk premium	Fixed	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Equity risk premium	Fixed	4.375%	4.375%	4.375%	4.375%	4.375%	4.375%	4.375%	4.375%	4.375%	4.375%
Tax rate	Variable	27%	25%	24%	23%	22%	22%	22%	22%	22%	22%
Cost of equity (nominal, post-tax)		9.13%	9.41%	9.21%	8.86%	8.11%	7.98%	8.11%	9.71%	9.28%	8.33%
Risk-free rate (nominal)	Variable	1.44%	1.18%	1.48%	1.87%	1.79%	0.89%	1.46%	3.04%	3.68%	3.62%
Credit spread	Variable	0.75%	1.00%	0.65%	0.63%	0.77%	0.87%	0.57%	1.11%	1.20%	1.20%
Cost of debt (nominal, pre-tax)		2.19%	2.18%	2.13%	2.50%	2.56%	1.76%	2.03%	4.15%	4.88%	4.82%
WACC (nominal, pre-tax)		6.31%	6.32%	6.12%	6.10%	5.69%	5.15%	5.37%	7.47%	7.68%	7.16%

Source: NVE-RME, Moody's Investors Service estimates

### Calculation of allowed regulated revenue

Statnett's revenue cap is the sum of six components:

- 1. 30% Cost Base. This is the sum of:
  - a. Inflation adjusted operating and maintenance (O&M) costs (O&M from year n-2 uplifted for inflation in the two years since);
  - b. Depreciation in the current year; and
  - c. Regulatory return; 101% \* RAB \* WACC.
- 2. 70% Cost Norm = Cost base \* Efficiency score.
- 3. Transmission Losses = Transportation losses in grid in year n-2 \* Nordic system price in year n (removing almost all price risk for Statnett).
- 4. Cost of System Services = 30% of actual costs in year n-2 and 70% cost norm applies. Of note, no efficiency factor applies to system operation costs but only a 0.6% productivity requirement.
- 5. Transit costs. These are pass through costs.
- 6. Property taxes, as determined by the municipalities. These are pass through costs.

### Investments are likely to increase

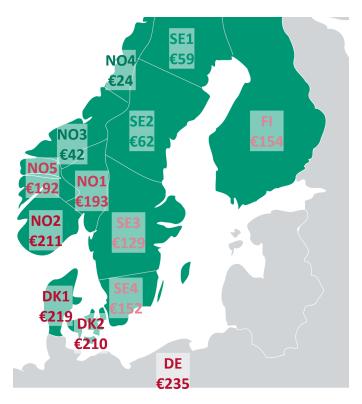
Statnett's capital spending rose above historical levels from 2016 to 2020, with final investment decisions taken in 2015 on new subsea interconnectors to Germany (NordLink) and the UK (North Sea Link, NSL), which each had a project cost of NOK 7-9 billion. NordLink became operational in late 2020 and NSL in late 2021.

Onshore capex was also higher than historical levels over this period because of the construction of new power lines and the substantial strengthening and uprating of existing power lines. 2017 was the peak of Statnett's investment cycle, where capex amounted to 30% of RAB, the highest level in our European rated universe (see Exhibit 1). Following completion of the interconnectors, investment fell sharply in 2021 and hit a low in 2022.

In November 2022, <u>Statnett announced</u> plans to invest NOK 60-100 billion between 2023 and 2030, implying annual investment over the period of NOK 7.5-12.5 billion per year. The investment is needed to support growth in Norway's electricity demand from around 140 terawatt hours (TWh) in 2022 to as much as 260 TWh by 2050 and support decarbonation objectives by facilitating more grid connections, applications for which have increased rapidly from 3 in 2016 to 90 in 2020 and 179 in 2021. Lack of interconnection within Norway has contributed to persistently large power price differentials within the region, as surplus power in the north cannot be transported to demand centres in the south.

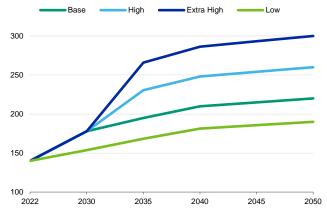
#### Exhibit 7

Power price differentials surged in 2022 Average day-ahead prices in €/MWh



#### Exhibit 8

Electricity consumption will increase significantly in all scenarios Statnett's scenarios for the development of electricity consumption in Norway



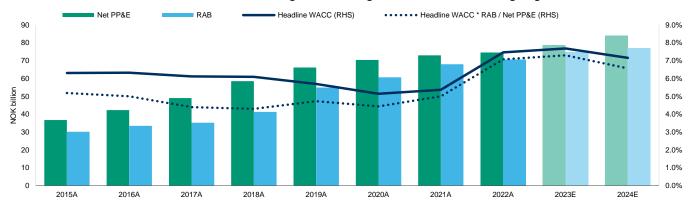
Source: Company reports

#### Source: Nordpool

A System Development Plan, which will focus on upgrading the electricity network (stations and line upgrades from 300kV to 420kV), is expected to be published in November 2023 following an extensive consultation process. In addition, Statnett will be responsible for the overall planning of the offshore grid, which will require additional investments to support targets to connect 30 gigawatts (GW) of offshore wind by 2040. However, we expect limited offshore transmission investments for Statnett at this stage.

Planned investments are smaller, relative to Statnett's RAB (NOK 68 billion as of December 2021), than the 2016-20 investment programme, with planned capital investment representing annually around 10-15% of RAB over 2023-30 compared to a peak of 30% in 2017. Following completion of the NSL interconnector in late 2021, and the decision of the Norwegian government to stop the construction of further interconnectors, future investments also carry lower execution risk than previous investment programmes, which included subsea interconnectors to the UK and Germany. Nonetheless, the investment programme will put downward pressure on Statnett's FFO/net debt ratio because assets only generate a return when they are energised and because increased operating costs, including early-stage development costs associated with the capital programme, are recovered with a two-year lag.

Exhibit 9



Differential between RAB and PP&E has narrowed following commissioning of interconnectors, reducing drag on returns

Source: Statnett, NVE-RME, Moody's Investors Service

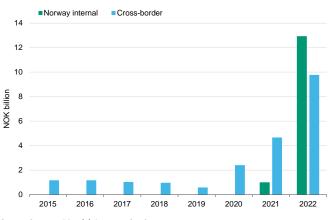
### Unprecedented congestion revenue used to reduce network tariffs

Statnett earns congestion revenue from electricity trades across international interconnectors and between the five Norwegian bidding zones. This revenue was negligible before 2020, when power price differentials between Norway and neighbouring countries started to increase. This growth continued in 2021, because of further increases in price differentials and entry into service of NordLink and NSL. In 2022, sharp rises in European power prices and low reservoir levels in the south resulted in enormous congestion revenue on both the domestic and international interconnectors.

Under Statnett's regulatory framework, congestion revenue (less associated costs) reduce the base for tariffs to be collected from Norwegian customers. To slow the pace of over-recoveries, Statnett reduced the consumption tariff to zero from 1 April 2022 and the energy component to zero from 1 September 2022. While the energy component was raised again from 1 November 2022 due to regulatory constraints, we expect tariffs to remain at very low levels through 2023. Statnett also made a direct payment to customers of NOK 5.9 billion.

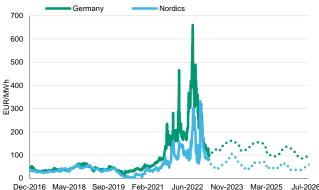
#### Exhibit 10

For the first time in 2022, congestion revenue from domestic flows outweighed cross-border congestion revenue...



#### Exhibit 11

... which remains driven by a significant electricity price differential between the Nordics and neighbouring markets, and is expected to persist



Jec-2010 May-2018 Sep-2019 Feb-2021 Jun-2022 Nov-2023 Mar-2023 Jun-2

Source: Statnett, Moody's Investors Service

Note: Dotted lines represent futures prices for monthly contracts. Source: FactSet, Moody's Investors Service

Despite these actions, which reduced customer bills by NOK 11.3 billion, Statnett had accumulated NOK 9.3 billion in over-recoveries as of December 2022. Statnett will give back to consumers another NOK 2.3 billion in the first quarter of 2023 and further payouts will depend on the evolution of energy prices and on future congestion revenue.

Timing differences between congestion revenue and customer rebates have created significant volatility in Statnett's FFO and credit metrics, with FFO/net debt rising to 21.3% in 2022 and likely to fall sharply in 2023. Moody's assessment of Statnett's credit quality focuses on underlying cash flow.

Statnett can decide to reverse tariff reductions at any time by way of a notification to the regulator. We however expect a short time lag between the notification and tariffs to increase again but with a limited strain on Statnett's liquidity.

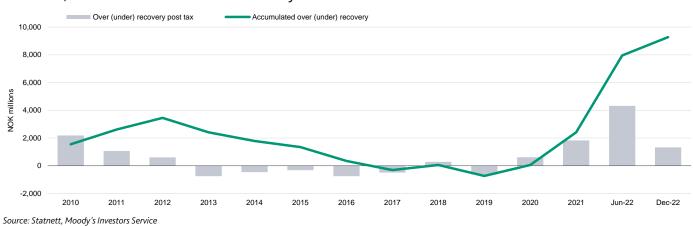


Exhibit 12 Before 2022, allowed and actual revenue had been broadly in balance

# Significant rating uplift from ownership by Government of Norway

Statnett's A2 rating incorporates a three-notch uplift for potential state support from its standalone credit quality (or Baseline Credit Assessment [BCA]) of baa2. This is based on the credit quality of the government of Norway (Aaa stable) and our assessment of moderate dependence between Statnett and the government and a strong likelihood of Statnett receiving support.

The Norwegian government has demonstrated a strong track record of supporting Statnett's large investment programme in recent years. In December 2013, when planned investment levels first rose materially, the government approved a (1) NOK 3.25 billion equity injection paid in 2014; (2) no dividend for the 2013 accounting year; and (3) a reduction in the dividend payout ratio to 25% of net income (from 50%) for the 2014-16 accounting years. The reduced payout ratio was extended to 2018, before returning to a target of 50%.

The government's November 2022 White Paper on state ownership reaffirmed the enshrined commitment in law that only the government can own Statnett. "The State's rationale for ownership in Statnett is that the company owns the transmission grid in Norway and is responsible for system operation. The State owns 100 per cent of Statnett. The State's goal as owner is socioeconomically rational operation and development of the national transmission grid for electric power."

Statnett is classified as Category 2 under the white paper, meaning "the State's goal is sustainable and the most efficient possible attainment of public policy goals".

# Liquidity analysis

We view Statnett as having good liquidity. Statnett has a good access to capital markets and benefits from (1) a large cash and cash equivalents balance (NOK 3.2 billion at 31 December 2022) and (2) a NOK 8.0 billion revolving credit facility (RCF), renewed in March 2023, which includes a NOK 4 billion swingline loan, matures in March 2028 and contains no financial covenants.

Because of further payouts to customers in 2023 and 2024, we expect more volatility in cash flow in the next two years. FFO of around NOK 6 billion in 2023 will not be sufficient to cover increased capital spending of around NOK 7.5 billion and modest dividend payments of NOK 0.3 billion. Statnett also has significant debt maturities in 2023 with NOK 8.9 billion in short-term debt as of December 2022 but the Company has already issued SEK 3.1 billion in February 2023 (NOK 2,944 million equivalent) of bonds in 2023 and will cover the remaining shortfall with other debt issuances.

POSITIVE

IMPACT

NEGATIVE

IMPACT

This is in line with Statnett's policy of maintaining sufficient liquidity reserves to fund operations and investments over a twelve-month period without needing access to the capital markets.

# **ESG considerations**

# Statnett SF's ESG Credit Impact Score is Neutral-to-Low CIS-2



For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.

#### Source: Moody's Investors Service

Neutral-to-Low

Statnett's ESG Credit Impact Score is neutral/low (**CIS-2**), indicating that its ESG attributes are not material to its credit rating. Its score reflects moderate environmental and social and low governance risks. The effect of ESG risks to the rating is mitigated by the expectation that its government shareholder would support the company if this were to become necessary.

### Exhibit 14 ESG Issuer Profile Scores



Source: Moody's Investors Service

## Environmental

Statnett's environmental risk is moderate (**E-3** issuer profile score), primarily reflecting the risk that extreme weather events may result in interruptions to supply and higher operating costs. The number of faults on Statnett's network because of extreme weather events has fallen in recent years, but may increase if the frequency of severe storms rises. This risk is mitigated by the fact that the cost of energy not supplied has not been material to date, despite several severe storms, and that the regulatory framework should allow such costs to be recoverable from customers in the subsequent regulatory period. Carbon transition risk is neutral/low. Although Statnett has invested heavily in interconnectors to export electricity from Norway, where 98% of power generated is from renewables, the largest of these investments are now complete and will generate stable cash flow. Given the high penetration of renewables and of electrical heating and transportation in Norway, Statnett may face lower costs to reinforce and modernise its network than comparable networks in other countries. The Norwegian government is considering measures to reduce use and emissions of sulphur hexafluoride (SF6), a greenhouse gas used for electrical insulation, which may include environmental taxes.

#### Social

Statnett's moderate social risk (**S-3**) reflects the risk, common to all regulated utilities, that public concern over environmental, social or affordability issues could lead to adverse regulatory or political interventions. Statnett's allowed returns are high relative to networks

in other EMEA countries, but this in part reflects higher market interest rates in Norway compared to the Eurozone. Norwegian electricity prices are among the lowest in the world, which reduces the risk of consumer activism and societal pressure.

### Governance

Statnett's governance risk is neutral/low (**G-2**). As a government-owned company, we assess that the independence of Statnett's board is relatively weak and that management may face competing priorities. Governance risks are balanced by other considerations associated with government ownership, including transparent reporting and oversight.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. To view the latest scores, please click <u>here</u> to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

# **Rating methodology and scorecard factors**

We assess Statnett using Moody's rating methodologies for <u>Regulated Gas and Electric Networks</u>, published in April 2022, and <u>Government-Related Issuers</u>, published in February 2020. The forward view reflects underlying metrics, normalised for any under- or over-recovery of allowed revenue.

# Exhibit 15 Statnett SF — Key Rating Factors

Regulated Electric and Gas Networks Industry[1][2]	Curre FY 12/31		Moody's 12-18 Month Forward Vie As of April 2023 [3]		
Factor 1 : Regulatory Environment and Asset Ownership Model (40%)	Measure	Score	Measure	Score	
a) Stability and Predictability of Regulatory Regime	Aa	Aa	Aaa	Aaa	
b) Asset Ownership Model	Aaa	Aaa	Aaa	Aaa	
c) Cost and Investment Recovery (Ability and Timeliness)	Α	Α	А	A	
d) Revenue Risk	Aa	Aa	Aa	Aa	
Factor 2 : Scale and Complexity of Capital Program (10%)					
a) Scale and Complexity of Capital Program	Ва	Ва	Ва	Ва	
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)	9.0x	Aaa	4x - 5.5x	A	
b) Net Debt / Fixed Assets (3 Year Avg)	62.7%	Baa	64%-68%	Baa	
c) FFO / Net Debt (3 Year Avg)	16.3%	Baa	13%-15%	Baa	
d) RCF / Net Debt (3 Year Avg)	14.0%	A	12%-14%	Baa	
Rating:					
Scorecard-Indicated Rating from Grid Factors 1-4		A3		A3	
Rating Lift		0		0	
a) Scorecard-Indicated Outcome		A3		A3	
b) Actual Rating Assigned				A2	
Government-Related Issuer				Factor	
a) Baseline Credit Assessment				baa2	
b) Government Local Currency Rating				Aaa / stable	
c) Default Dependence				Moderate	
d) Support				Strong	
e) Actual Rating Assigned				A2	

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Standard Adjustements for Non-Financial Corporations.

[2] As of 31 December 2022.

[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 <sup>a</sup>

# Ratings

Exhibit 16

Category	Moody's Rating
STATNETT SF	
Outlook	Stable
Issuer Rating	A2
Senior Unsecured	A2
ST Issuer Rating	P-1
Source: Moody's Investors Service	

# Appendix

### Exhibit 17 Peer comparison table

		Statnett SF			American Transmission Company LLC			ElectraNet Pty Ltd.			National Grid Electricity Transmission plc		
		A2 Stable			A2 Stable			Baa2 Stable		Baa1 Stable			
	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	FYE	
(in EUR million)	Dec-20	Dec-21	Dec-22	Dec-20	Dec-21	Dec-22	Jun-20	Jun-21	Jun-22	Mar-20	Mar-21	Mar-22	
Revenue	982	1,372	2,206	664	638	713	219	247	266	2,275	2,212	2,394	
EBITDA	659	795	1,172	512	491	548	158	184	193	1,720	1,795	1,880	
Total Debt	4,708	5,000	4,374	2,215	2,477	2,806	1,363	1,465	1,655	8,938	10,503	10,946	
Net Debt	4,511	4,605	4,073	2,213	2,476	2,806	1,360	1,463	1,653	8,938	10,503	10,931	
(FFO + Interest Expense) / Interest Expense	7.1x	11.7x	9.0x	5.2x	5.0x	4.7x	2.8x	2.9x	3.5x	6.4x	7.3x	4.7x	
Net Debt / Fixed Assets	67.6%	63.1%	57.6%	50.1%	49.7%	50.0%	65.4%	66.0%	65.2%	59.1%	64.4%	63.7%	
FFO / Net Debt	11.6%	16.4%	21.3%	17.5%	16.7%	15.2%	6.8%	7.5%	8.7%	15.5%	13.5%	13.8%	
RCF / Net Debt	8.9%	14.1%	19.6%	8.9%	9.1%	8.8%	5.4%	6.2%	7.5%	4.5%	8.7%	9.8%	
Debt / EBITDA	7.0x	6.2x	3.9x	4.7x	4.8x	5.2x	8.5x	7.9x	8.3x	5.3x	5.6x	5.8x	
Debt / EBITDA	7.0X	0.2X	3.98	4.7X	4.08	5.2X	0.5X	7.9X	0.38	5.5X	5.6X		

Source: Moody's Financial Metrics™. 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.

## Exhibit 18 Statnett's adjusted net debt breakdown

		FYE	FYE	FYE	FYE	FYE
(in NOK million)		Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
As Reported Total Debt		45,249	50,059	55,895	53,903	47,376
	Pensions	313	253	275	266	247
	Leases	344	0	0	0	0
	Non-Standard Adjustments	(3,450)	(4,526)	(6,707)	(4,228)	(1,663)
Noody's Adjusted Total Debt		42,456	45,786	49,463	49,941	45,960
	Cash & Cash Equivalents	(3,046)	(2,196)	(2,073)	(3,944)	(3,163)
Moody's Adjusted Net Debt		39,410	43,590	47,390	45,997	42,797

Source: Moody's Financial Metrics™. All figures are calculated using Moody's estimates and standard adjustments.

### Exhibit 19

### Statnett's adjusted FFO breakdown

	FYE	FYE	FYE	FYE	FYE
(in NOK million)	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
As Reported Funds from Operations (FFO)	4,639	4,720	5,615	7,690	9,424
Leases	72	0	0	0	0
Capitalized Interest	(313)	(338)	(260)	(120)	(176)
Alignment FFO	3	(15)	7	(85)	(118)
Cash Flow Presentation	0	0	135	50	7
Moody's Adjusted Funds from Operations (FFO)	4,410	4,380	5,497	7,535	9,137

Source: Moody's Financial Metrics™. All figures are calculated using Moody's estimates and standard adjustments.

### Exhibit 20

Statnett's selected historic Moody's adjusted financials

	FYE	FYE	FYE	FYE	FYE
(in NOK million)	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22
NCOME STATEMENT					
Revenue	8,651	9,159	10,522	13,944	22,243
EBITDA	5,341	5,603	7,066	8,080	11,812
EBITDA margin %	61.7%	61.2%	67.2%	57.9%	53.1%
EBIT	3,289	3,198	4,193	4,961	8,742
EBIT margin %	38.0%	34.9%	39.8%	35.6%	39.3%
Interest Expense	800	982	908	702	1,145
Net income	2,050	1,732	2,591	3,323	5,923
BALANCE SHEET					
Total Debt	42,456	45,786	49,463	49,941	45,960
Cash & Cash Equivalents	3,046	2,196	2,073	3,944	3,163
Net Debt	39,410	43,590	47,390	45,997	42,797
Net Property Plant and Equipment	58,560	65,813	70,139	72,844	74,362
Total Assets	70,312	75,985	82,625	84,326	87,008
Regulated Asset Base (RAB)	41,291	54,971	60,735	67,694	69,024
CASH FLOW					
Funds from Operations (FFO)	4,410	4,380	5,497	7,535	9,137
Cash Flow From Operations (CFO)	3,751	4,174	5,774	8,141	9,105
Dividends	326	484	1,261	1,039	737
Retained Cash Flow (RCF)	4,084	3,896	4,236	6,496	8,400
Capital Expenditures	(8,246)	(9,129)	(8,519)	(6,533)	(4,926)
Free Cash Flow (FCF)	(4,821)	(5,439)	(4,006)	569	3,442
NTEREST COVERAGE					
(FFO + Interest Expense) / Interest Expense	6.5x	5.5x	7.1x	11.7x	9.0x
LEVERAGE					
Debt / EBITDA	7.9x	8.2x	7.0x	6.2x	3.9x
Net Debt / EBITDA	7.4x	7.8x	6.7x	5.7x	3.6x
Net Debt / Fixed Assets	67.3%	66.2%	67.6%	63.1%	57.6%
Net Debt / Regulated Asset Base	95.4%	79.3%	78.0%	67.9%	62.0%
Debt / Book Capitalization	70.5%	69.7%	69.4%	66.3%	58.5%

Source: Moody's Financial Metrics™. All figures and ratios are calculated using Moody's estimates and standard adjustments. Moody's Forecasts (f) or Projections (proj.) are Moody's opinion and do not represent the views of the issuer. Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.

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