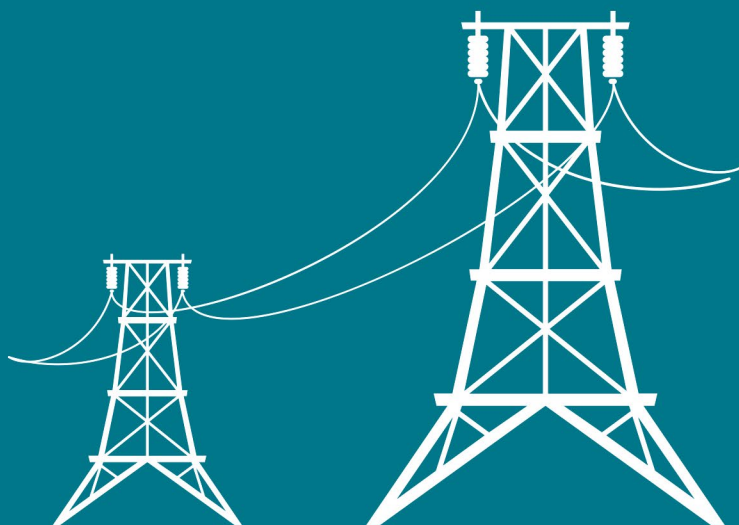




Making a positive difference
for energy consumers

Network Performance Summary 2018-19



RIIO-ET1

This report summarises the delivery and financial performance of onshore electricity transmission owner (TO) businesses under the current RIIO price control period (RIIO-ET1) in the following areas:

1. achievement of annual output targets and performance in 2018-19.
2. activity under the innovation funding streams in 2018-19.
3. the anticipated level of delivery against baseline outputs in response to changing needs which automatically adjust the cost allowances (known as 'volume driver' mechanisms).
4. the TO's current expectations of costs incurred against the total allowance anticipated across RIIO-ET1 and the current Rate of Regulatory Return on Equity (RoRE) range calculated by Ofgem.

Key messages

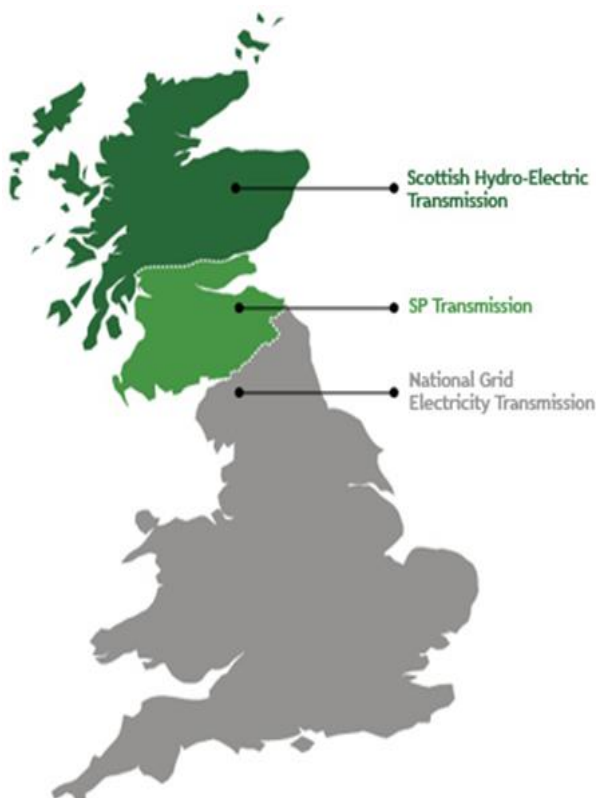
Annual outputs: All TOs have met or exceeded the annual targets set.

Volume drivers:

- NGET is forecasting to deliver lower than all its baseline outputs.
- SPT is expecting to fall short against its baseline output of 'sole-use' connection capacity.
- SHET is forecasting to exceed all its baseline outputs.

T1 performance: All TOs currently anticipate a totex underspend against the cost allowances (adjusted with volume drivers) across RIIO-ET1.

RoRE: Ofgem have calculated the RoRE range to be between 9.1% and 10.9%.



To ensure value for money for consumers, Ofgem regulate TOs through periodic price controls. The three TOs and the areas they operate are shown on the map.

The price controls we set determine, among other things, the amount of revenue that TOs are able to earn from network users (through the charges consumers pay). They also stipulate the level of performance we expect TOs to deliver.

To set our price controls we use the RIIO (Revenue = Incentives + Innovation + Outputs) framework. The current price control lasts for a period of 8 years until April 2021. All financial values in this report are stated in the 2018-19 price base.

1. Annual Output Performance

As part of RIIO-ET1, we set a range of outputs which TOs have committed to deliver. Annual output targets apply in three areas: (1) reliability of service; (2) stakeholder and customer satisfaction; and (3) environmental impact. If TOs meet their annual output targets they receive incentive payments. Where TOs fail to achieve their annual output targets they incur financial penalties.

A further three outputs also apply under RIIO-ET1. They are: (1) adherence to legislative requirements (safety); (2) implementing and maintaining a network access policy (availability); and (3) responding to connection requests in accordance with licence timescales (timely connections). These additional 3 outputs do not have annual performance targets. Where TOs fail to meet existing licence or legislative requirements they may be subject to enforcement action and financial penalty.

The TO's performance for each output area is summarised below.

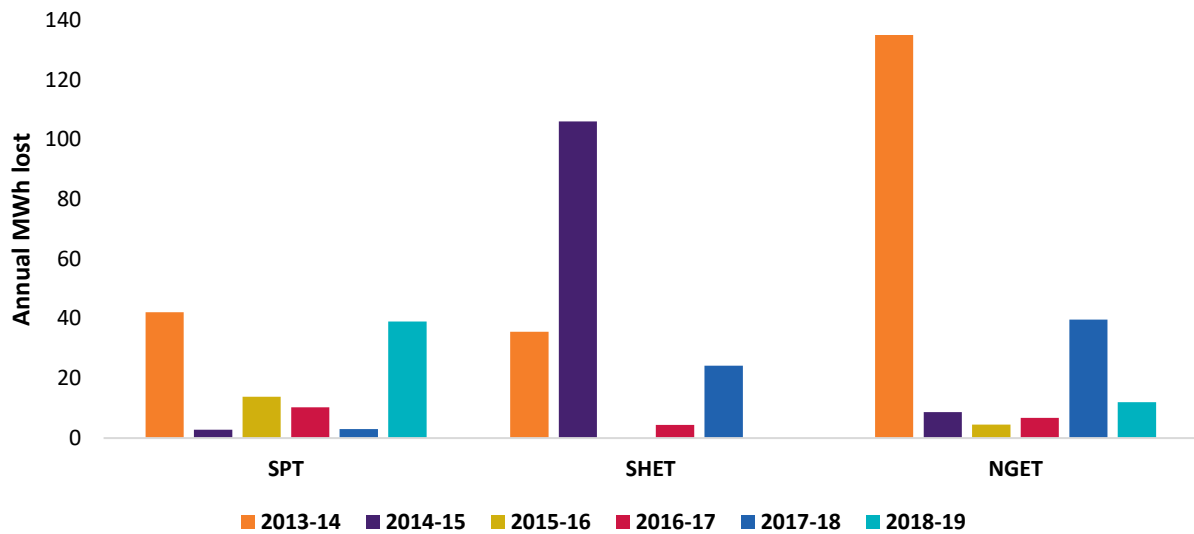
Reliability

All TOs have reported strong levels of network reliability in 2018-19 and outperformance of their annual Energy Not Supplied targets. This equates to an overall reliability of network supply rating in excess of 99.99%.

In terms of the annual values of megawatt hours (MWh) lost on the transmission system:

- SPT explained that significant weather incidents resulted in an increase in annual volumes between 2017-18 and 2018-19. The volume for 2018-19 is above the annual average level for RIIO-ET1 to date (19 MWh).
- SHET reported zero volumes in 2018-19 reflecting zero incentivised events. This is below the average level for RIIO-ET1 to date (28 MWh).
- NGET's annual volume of 12 MWh in 2018-19 is below the average level for RIIO-ET1 to date (34 MWh).

Figure 1: Annual MWh lost to incentivised events



Note: SHET report a zero value for annual MWh lost in 2018-19.

Stakeholder and customer satisfaction

This is assessed against the quality of network companies' engagement with stakeholders and customers. Performance in 2018-19 has been positive overall with improvements across the majority of engagement areas in comparison with last year.

NGET report an increase in scores across all metrics from 2017-18. SHET received an improved rating from the Ofgem-led panel assessment this year but remain below the annual performance target. SPT report strong survey and Key Performance Indicator scores but have seen a drop in the panel rating score (from 6.4 to 4.9) and fell short this year of the annual performance target for this area.

Table 1: TO engagement summary (2016-2019)

	16/17	17/18	18/19	Baseline
Stakeholder Survey Scores				
SPT	7.9	8.3	8.5	7.4/10
SHET	8.7	8.0	8.2	
NGET	7.7	7.9	7.9	
KPI Scores				
SPT	77	78	70.7	69/100
SHET	69	76	87.0	89/100
Ofgem Panel				
SPT	6.3	6.4	4.9	5/10
SHET	5.4	3.3	4.1	
NGET	7.0	5.1	5.5	
Customer Survey Scores				
NGET	7.41	7.74	7.92	6.9/10

Environment

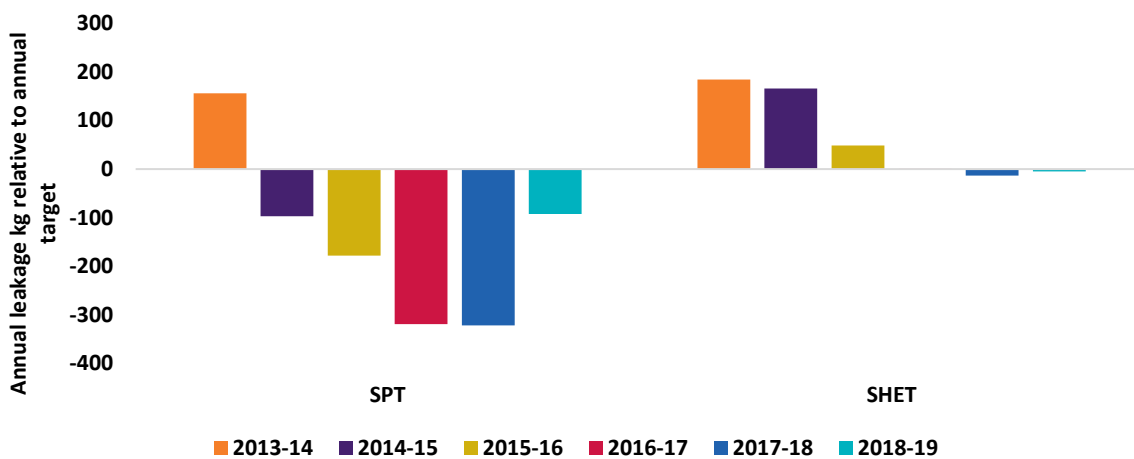
All 2018-19 TOs report having met their sulphur hexafluoride emissions targets for 2018-19. The overall level of leakage has, however, increased by 25% relative to the total emission rate reported in 2017-18 (13,000kg against 10,400kg).

SHET exceeded the annual target for the second time in RIIO-ET1, but only by 1% for 2018-19 (46kg increase against the 2017-18 annual leakage level).

Despite a large rise in annual leakage levels (51% increase against 2017-18) SPT came in 12% under their annual target - see figure 2.

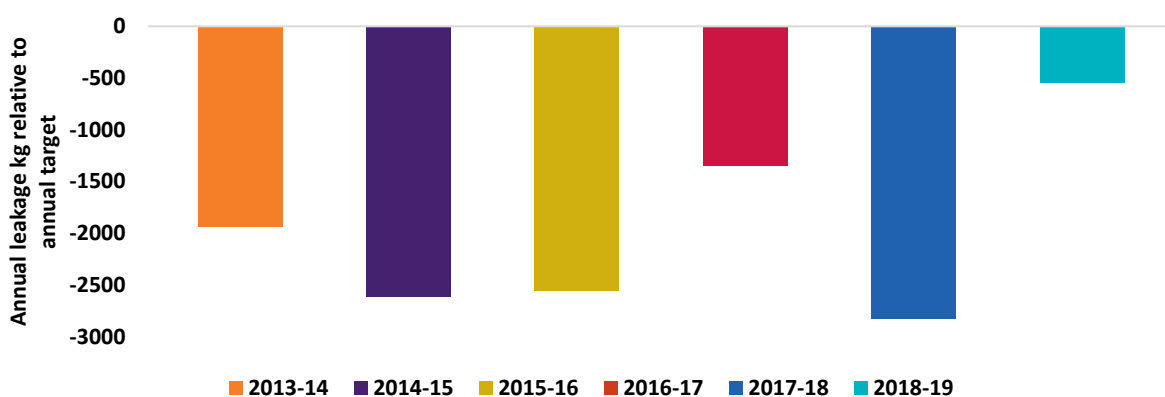
NGET TO recorded its worst annual leakage levels to date at 4% (551kg) below its 2018-19 annual target. In 2017-18 their performance was 23% (2,834kg) below their annual target – see figure 3.

Figure 2: SPT and SHET SF6 annual leakage rates



Note: SHET’s annual leakage level relative to target in 2018-19 is 5kg and is not visible in the above figure.

Figure 3: NGET TO SF6 annual leakage rates



Safety

All TOs continue to meet all safety legislation requirements. In 2018-19 there was an improvement under the Incident or Injury Frequency metrics for all TOs compared to 2017-18.

Availability

All TOs have complied with the Network Access Policy (NAP) requirements for 2018-19. In March 2019, Ofgem approved a new NAP to reflect the legal separation of the TO and System Operator functions of National Grid.¹ SHET and SPT have a separate common NAP covering Scotland.²

Timely connections

This year the TOs made all connections offers to customers within the licence timescales. There has been a continued upward trend in the number of requests for connection. NGET sent out 186 offers (compared to 116 in 2017-18), while SHET sent out 81 offers (against 49 in 2017-18) and SPT 104 offers (up from 60 in 2017-18).

Network Output Measures (NOMs)

NOMs are a further output target. One measure - the Network Replacement Output – has allowances which are directly associated with the delivery of specified targets. Based on current information, we note that each TO does not expect to deviate significantly from its targets.

2. Innovation

This year all TOs have registered additional projects for funding under the Networks Innovation Allowance (NIA) funding streams. The purpose of NIA funding is to encourage TOs to identify, develop and test new ways of delivering electricity transmission.

In 2018-19 NGET spent £7.4m progressing 54 eligible NIA projects. SPT spent £1.3m against its portfolio of 15 NIA projects and SHET spent £0.75m progressing 10 NIA projects.

¹ <https://www.ofgem.gov.uk/publications-and-updates/decision-proposed-amendments-national-grid-electricity-transmission-s-network-access-policy>

² <https://www.ofgem.gov.uk/publications-and-updates/authority-decision-approve-network-access-policy-nap>

No electricity transmission projects were selected to receive funding through the Network Innovation Competition in 2018-19. There are no further windows for TOs to apply for Innovation Roll Out Mechanism (IRM) funding in RIIO-ET1.

3. Volume driver mechanisms

Volume driver mechanisms link adjustments of a network company's baseline cost allowance to its actual volume of network services provided over RIIO-ET1. The mechanisms recognise the uncertainty associated with changes driven by factors that are beyond the control of TOs.

For NGET, the required output across all three customer-led mechanisms (new generation connections, new demand connections and works to strengthen network boundaries) is significantly lower than its baseline level. This difference is due to the reduction in the number and size of customer connections.

By the end of 2021, NGET anticipate delivering:

- 12.6 gigawatt (GW) of new generation capacity against a baseline of 33.7 GW.
- 41 Supergrid Transformers compared to a baseline delivery target of 72 units.
- 12.4 GW of additional boundary transfer capability against a baseline of 25.3 GW.

In Scotland there are two customer-led volume driver mechanisms. Both apply only to new generation connections. The first is for providing network capacity to connect multiple generators ('shared use') and is measured by the increase in transfer capability in megavolt amperes (MVA). The second is the connection of single generators ('sole use') which is measured by the amount of new generation capacity in megawatts (MW).

SPT currently anticipate connecting 1,620MW of new generation capacity over RIIO-ET1. This is 65% of the 'sole use' baseline output level of 2,503MW. For 'shared use', SPT expect to deliver a significant increase in additional capacity over and above its 1,073MVA baseline level, resulting in an overall increase in network capacity of 3,482 MVA by the end of RIIO-ET1.

SHET anticipates that it will deliver above baseline levels for RIIO-ET: 1,549MW of 'sole use' capacity (1,168MW baseline) and 4,166MVA of 'shared use' capacity (1,006MVA baseline).

4. Eight year totex performance drivers

All TOs currently anticipate a totex underspend against cost allowances adjusted by volume drivers across RIIO-ET1 (ranging from 3% to 21%). The combined value of total expenditure for the TOs across RIIO-ET1 is currently forecast to be close to £19.45 billion; a cumulative forecast underspend of 16% as highlighted in table 2 below.

Table 2: TO view of totex expenditure vs adjusted allowed totex (£m)

<i>£m, 2018-19 prices</i>	<i>Current RIIO-ET1 forecast (pre-true up position in respect of excluded services)</i>			
	Allowance	Expenditure	Difference	
			£m	%
NGET (includes 'voluntary deferral')	13,040	10,244	-2,796	-21%
SPT (includes end-of-period clawback)	2,362	2,286	-76	-3%
SHET (includes 'hand back')	4,048	3,793	-255	-6%
Total	19,450	16,323	-3,127	-16%

The adjusted allowances reflect the TOs' current estimates, except for SHET where we have included the impact of the agreed 'hand back' of allowance.³ The accompanying datafile separately illustrates the impact of any previously agreed 'hand back' as well as the current TO forecast of the end-of-period 'true up'.

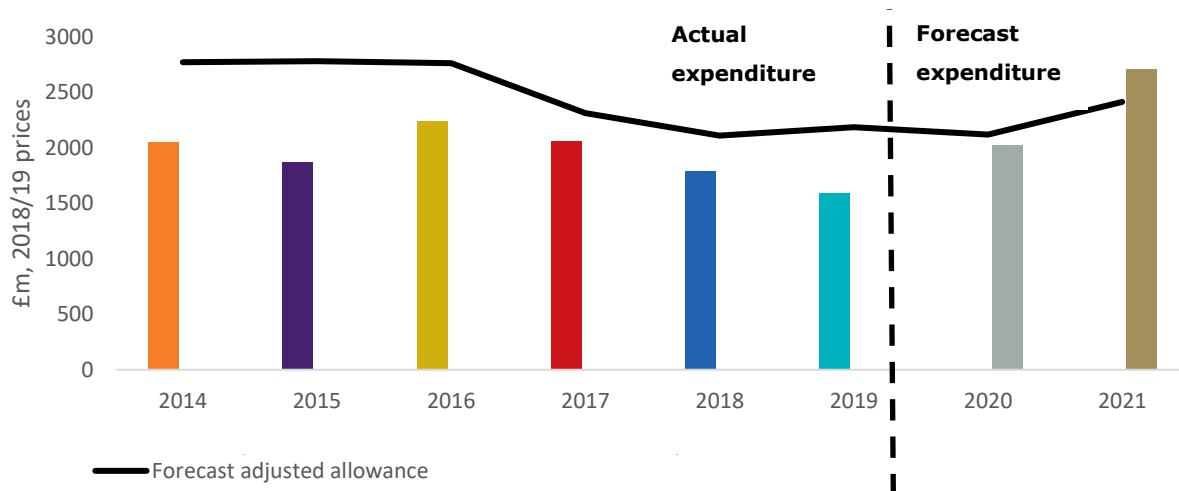
- SPT's forecast underspend (£76m or 3%) is driven by savings in both load related and non-load related spend outweighing the anticipated overspend in the other cost categories. This is comparable to the forecast position reported last year (£68m).
- SHET's forecast underspend (£255m or 6%⁴) is driven by savings in load spend which outweighs the expected overspend in non-load related expenditure. This is a reduction against the anticipated 2017-18 outperformance (£290m or 8%).
- NGET TO's performance (£2.8bn or 21%) is driven by savings across load and non-load spend across RIIO-ET1. This underspend has increased against the forecast position reported last year (£1.9bn or 15%).

The overall position of the TO's current expected costs incurred against the total allowance anticipated across RIIO-ET1 is illustrated in Figure 4 below.

³ SHET's expenditure forecast includes spend in RIIO-ET1 incurred on 'crossover' projects currently expected to deliver an output in timescales beyond 2023. There is no mechanism to fund these costs in RIIO-ET1.

⁴ Removing T1 expenditure associated with crossover schemes increases the forecast underspend to £301m (7%).

Figure 4: Actual and forecast expenditure vs forecast allowance: All TOs



Network companies are incentivised to outperform their RIIO-ET1 totex allowance using the totex incentive mechanism (TIM). The TIM means that any underspend of the totex allowance is shared between the TO and its customers. The efficiency sharing rate is symmetrical for any overspends: the TO is exposed to any shortfall and the remainder is passed onto customers by increasing allowances to be recovered through network charges.

The overall position of the TOs costs incurred against adjusted cost allowances to date for RIIO ET1 (1 April 2014 to 31 March 2019) is an underspend of £3.33bn. Through the TIM, customers will receive £1.74bn of the overall underspend; the TOs will retain the remaining £1.59 bn.

Load related performance (capex)

The forecast overall spend across RIIO-ET1 for this category is significantly under allowance (£1.7bn or 18%) and has increased since 2017-18 (when it was forecast at £1.1bn or 13%).

The main drivers behind the current forecast position include: TOs finding ways to strengthen their networks at a lower cost than previously estimated; efficiencies in delivery; reductions in the scope of works and construction periods through 'lean' engineering design, and optimisation of the investment plan to reflect projects being delayed or deferred.

- SPT’s forecast underspend (£58m or 5%) is driven by savings through their 'in-house' design and capital delivery management approach. Its performance takes account of the estimated value of the end-of period clawback for falling short against

its baseline output of 'sole-use' connection capacity. SPT's performance across RIIO-ET1 under this cost category is comparable with last year's forecast (£56m or 5%).

- SHET's forecast underspend (£362m or 11%) is primarily driven by savings in the delivery management of very large capital projects (eg Caithness Moray project).⁵ This is a reduction on last year's estimated performance across RIIO-ET1 (underspend of £411m or 13%). The reduction is driven by changes in the contracted generation background; specifically, the inclusion of significant forecast expenditure to progress Scottish island related schemes⁶ in the final two years of RIIO-ET1 (against last year's forecast for the same period) and the re-profiling of schemes currently expected to deliver an output in the first two years of RIIO-ET2⁷.
- NGET's performance (£1.19bn or 26%)⁸ is primarily driven by cost reductions achieved through scope changes and cheaper delivery methods. NGET identify £264m of specific project efficiencies in the generation portfolio (against the anticipated level of £126m in 2017-18); specific examples totalling £233m of efficiency in the 'wider works' portfolio (an increase against £55m identified in 2017-18) and a further £141m of efficiency savings in the demand portfolio (£184m identified in 2017-18).
- NGET estimate a further £380m saving attributable to the use of power flow control device technology ('smart wire'). NGET explains the savings to be a result of the combination of faster delivery and lower investment costs arising from schemes using the new technology to deliver boundary capacity increases compared to traditional delivery methods. The replacement of investments with schemes featuring 'smart wire' devices therefore has two broad impacts: reducing the forecast RIIO-ET1 expenditure against the anticipated 2017-18 level and introducing a level of allowance where none previously existed (the timing of the previous conventional investments resulted in no additional boundary capability within RIIO-ET1 timescales and, accordingly, no allowance).

⁵ Removing the impact of SHET's 'hand back' increases the current forecast LR underspend to £425m (12%).

⁶ SHET currently anticipates delivery post 2023; no additional allowances have been included for these schemes.

⁷ SHET's generation connection mechanism contains an automatic trigger to adjust allowances for the first two years after RIIO-ET1.

⁸ Removing the impact of the NGET's voluntary deferral increases the forecast LR underspend to £1.36bn (28%).

Non-load related performance (capex)

The TOs anticipate achieving different levels of performance across RIIO-ET1 under this category. That was also the position in 2017–18.

NGET and SPT anticipate expenditure on non-load activities to be lower than their previous forecast allowance in 2018-19. In the case of NGET, the level of expected underspend across RIIO-ET1 is on an upward trend against previous forecasts. For SHET, the opposite is true: it is currently forecasting to spend above expected allowance across RIIO-ET1 and the value is down against previous forecasts.

The overall expectation is that the cumulative spend by TOs will be significantly under the RIIO-ET1 allowance (£1.9bn or 27%). This is a greater underspend than forecast in 2017-18 (£1.5bn). Drivers behind the increased underspend include changes in the timing, working practices and internal processes used to maintain and replace existing assets.

- SPT's forecast underspend (£100m or 12%) is driven by the change to SPT's working practices associated with the procurement and management of capital delivery. This is comparable to last year's forecast position (£93m).
- SHET's forecast overspend (£90m or 27%) is less than forecast last year (£100m). The anticipated overspend is primarily driven by a revised understanding of asset conditioning. That has resulted in additional capex costs due to asset conditions being worse than anticipated when RIIO-ET1 was set (eg. the replacement of towers that were not identified as in need of replacement in the original business plan).
- NGET's forecast underspend (£1.9bn or 32%⁹) is primarily driven by cost savings across the non-load portfolio which are associated with a more targeted asset replacement approach, as well as some reductions in the scope of works and the deferral of work no longer considered to be required to be completed during RIIO-ET1. This underspend has increased against the forecast position reported last year (£1.6bn).

The effects and level of TOs' efficiencies and cost savings are difficult to independently verify. Based on the information submitted NGET we understand that the overall difference

⁹ Removing the impact of the NGET's voluntary deferral increases the forecast NLR underspend to £2.4bn (37%).

between forecast cost and allowance anticipated by NGET is the result of a revised understanding of asset condition (eg. transformers not deteriorating as fast as initially predicted), the extension of asset lives (eg types of overhead line conductor) and a more targeted asset replacement approach (eg. reduced delivery scope and time for switchgear replacement).

NGET 's level of spend across RIIO-ET1 has also decreased relative to last year's position. NGET have reported that the re-phasing of three major projects has reduced spend by approximately £200m¹⁰ against 2017-18 levels in the non-load cost category. We will continue to work with NGET to review its forecasts and the revenue implications these have. Cost allowances and expenditure will be subject to reconciliation during the end-of-period 'close out' process.

Non-operational cost performance (capex)

The overall position on non-operational capital expenditure is largely unchanged from last year. All TOs are anticipating a significant overspend against allowance; £187m is currently forecast. The position has increased slightly relative to the 2017-18 forecast (£160m) and reflects an increase in the costs of ongoing IT transformation projects and recent cyber improvements to meet new security challenges.

Controllable operating cost performance (opex)

Overall, TOs are forecasting to overspend allowances in this cost category by £241m (9%) over RIIO-ET1. This is comparable to the 2017-18 forecast (£200m or 8%). Similar to last year, the forecast position is attributable to overspends by NGET and SPT (whose respective overspends are £164m and £73m). SHET currently anticipates its spend to be broadly in line with the allowance for RIIO-ET1 (forecasting only a £1m overspend).

Reasons for the forecast overspend include increases in ongoing IT program costs, costs incurred in restructuring programmes and higher business support costs as a consequence of the TO business growing in size relative to other business areas.

We note that SPT and SHET currently anticipate that their rate of opex spend across RIIO-ET1 will continue to increase. Over the next two years SPT forecast an increase opex spend

¹⁰ NGET explains that the decrease in the London Power Tunnels 2 project is driven by efficiencies in contracting and procurement. For the Sheffield cable project the decrease is due to a smaller section of cable needing to be replaced, and the decrease in the Dinorwig project is due to the delivery date moving back.

of approximately 40% (to £45m per annum). SHET anticipate doubling the rate of their opex spend (to £50m per annum) reflecting its assumptions on increased Regulated Asset Value (RAV) growth towards the end of RIIO-ET1. In contrast, NGET anticipate a decrease in the rate of their opex spend towards the end of RIIO-ET1.

Customer bill impact

Our Tariff methodology provides an estimate of the overall cost of domestic energy bills. This includes an estimate of the proportion of the overall cost of energy which is attributable electricity transmission costs. The methodology uses an average electricity demand applied uniformly across all regions and over time.

Our latest bill assessment using this methodology estimates that the average GB customer in 2019-20 will pay £36.2 per annum in real 2018-19 price terms for electricity transmission costs. Charges differ considerably depending on the region in which a domestic consumer resides, ranging from £16.5 in North Scotland to £46.1 in South East England.

5. Rate of Regulatory Return on Equity (RoRE)

RoRE is made up of several components. The allowed equity return is the return on equity that a company would earn if their expenditure and allowance matched¹¹ and there were no other incentives. Operational performance (totex) compares the totex allowance to a company's actual totex expenditure and any underspend or overspend is then shared between the company and consumer through the totex incentive mechanism. Operational performance (other) accounts for a company's overall incentive performance. Putting these three component parts together produces operational RoRE. Financing and tax performance is finally added to produce total RoRE.

We have calculated the current RoRE range as being between 9.1% and 10.5%. This is based on our own assessment of the value of TOs' forecast performance at the end of RIIO-ET1. A summary of our assessment of the TOs' RoRE performance is shown in figure 5 (comparing this year to last year) and table 3 below.

¹¹ Totex Incentive Mechanism would be £0.00. Assumption made that the Information Quality Incentive (IQI) would also be £0.00.

Figure 5: RoRE based on Notional Gearing – RIIO-ET1 period

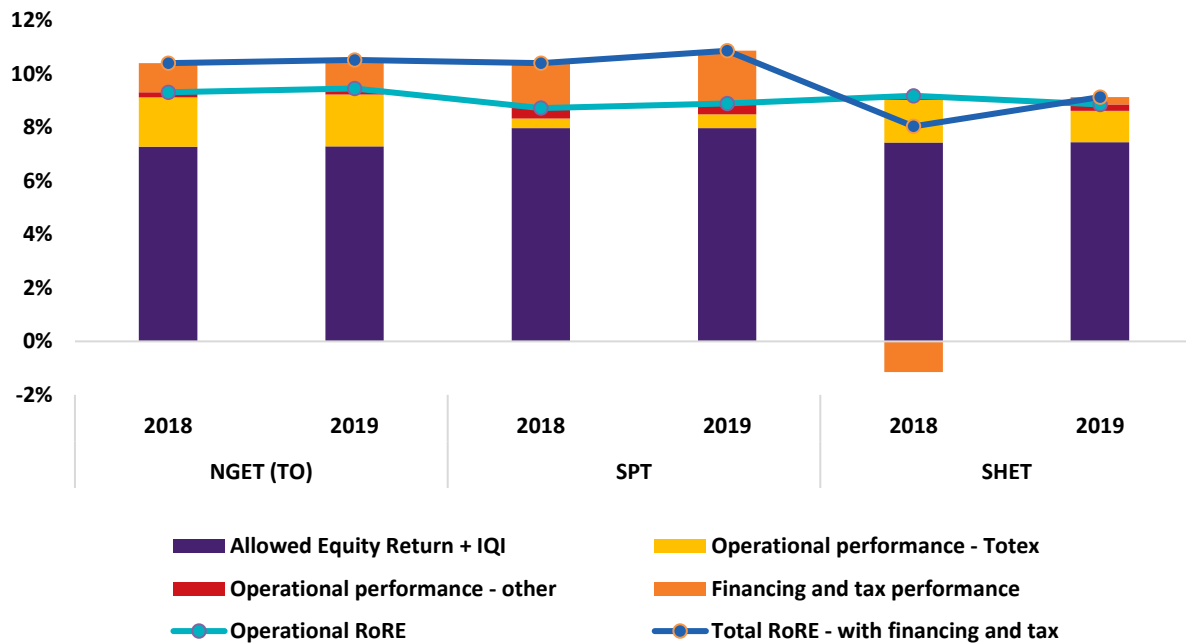


Table 3: RoRE based on Notional Gearing – RIIO-ET1 period (2018-19 forecast)¹²

	NGET TO	SPT TO	SHET TO
RIIO-ET1 operational RoRE	9.5%	8.9%	8.9%
Financing and tax performance	1.1%	2.0%	0.3%
Total RoRE	10.52%	10.86%	9.13%

Accompanying this report is a regulatory financial performance annex that sets out our assessment of RIIO-1 network companies’ regulatory financial performance during RIIO-ET1. Our assessment is based on information the companies have provided under the regulatory financial performance reporting (RFPR) process.

This performance summary is an abbreviated version compared to previous years’ annual reports. It highlights the key performance results for the sector in 2018-19. If you require additional performance data please refer to the supplementary datafile which is published along with this report.

¹² The RoRE calculation includes adjustments to allowances that reflect the company expectation of the ‘true-up’ process at the end of the RIIO-ET1 period. For SHET the calculation does not include the impact of the ‘hand back’.