

A large, stylized graphic of a smart home control panel. It features a circular dial with various icons: a fan, a lightbulb, a door lock, a house, a camera, and a Wi-Fi symbol. The text "Smart Home" is written in a white, sans-serif font. The background is a gradient of teal and blue, with a pattern of small circles in the top right corner.

*Smart
Home*

Chapter 11

Value for money

I want you to provide value for money

11. I want you to provide value for money

What this stakeholder priority is about

Our electricity transmission network delivers an essential service across England and Wales. To meet the challenges of the future, our business needs to evolve.

We need to have a greater focus on our customers, be more resilient to external threats, and play a central role in decarbonising the energy system. All of this needs to be balanced with ensuring energy bills are affordable for consumers.

We have a strong focus on cost efficiency and delivering value for money. This ensures we help to drive down bills for current and future consumers.

Summary of what our stakeholders have told us so far

You expect us to meet your priorities efficiently. And to deliver value for money.

You have also said you expect to see a strong link between our performance for customers and the returns we earn for investors.

Our current performance on delivering value for money

In the eight-year T1 period, we expect to invest £10.4bn in our network.

When our customers' requirements changed during the T1 period, it meant we did not invest exactly what we had originally planned. Through uncertainty mechanisms, our allowances were adjusted to reflect those changes. We expect our original allowance of £14.4bn to be reduced by £2.2bn in the T1 period. This includes £0.6bn of our allowances that we voluntarily handed back to consumers for investment that we deferred. This has adjusted our allowance to £12.2bn.

We have provided value for money during the T1 period by delivering better services than predicted at the start of T1 – and at a lower cost. For example, we have saved 14% of our costs compared to our adjusted allowance through finding more efficient ways of achieving outputs for customers. We expect this to result in £1.8bn of savings by the end of the T1 period. We are sharing just over half of these savings with consumers as soon as possible and including them all in our business plan for the T2 period. Our efficiency performance reflects the strong incentives for us to make cost savings in Ofgem's T1 regulatory framework.

At the same time as making cost savings for consumers, we have improved our service performance. For example, we have beaten our target for energy not being supplied each year so far in the T1 period. Our customer and stakeholder satisfaction have increased and we have beaten our target leakage rate of the insulating gas SF₆.

We also expect to have connected 12.5GW of new generation during the T1 period. By doing so, we have provided new generators with a route to market. This has helped put downward pressure on wholesale prices, which make up 33% of consumers' electricity bills. By investing in our network, we have been saving consumers money.

In terms of the annual average domestic electricity bill, National Grid Electricity Transmission costs consumers £25.40 a year. This is under 50p per week for £10.4bn of investment in our network over an eight-year period.

Our direction of travel following stakeholder feedback so far

We are in the process of building our business plan with our stakeholders. In this section, we will playback the feedback we have heard from stakeholders – and ask for your views on what we suggest could happen next.

The benefits to consumers

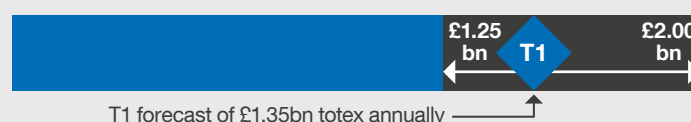
Our plans to create value for money will benefit consumers by:

- Building trust that we are a responsible business.
- Helping to lower network costs.

In Chapters 4 to 10 we discussed how we could respond to our stakeholders' feedback as we develop our business plan for the T2 period. We also showed

estimated ranges of totex for T2. The diagram below summarises our overall annual totex range for the T2 period.

Figure 11.1 Indicative annual totex range for the T2 period



The table below shows our indicative totex ranges for each stakeholder priority and then provides a total. We are providing this information to give an early indication of the potential scale of our totex during T2. These numbers could change before we submit our draft business plan in July, for example due to changes in the Ofgem regulatory framework or stakeholder feedback.

Table 11.1 Annual indicative totex ranges by stakeholder priority and in total

Indicative average annual controllable totex by stakeholder priority in £bn (to nearest £0.05bn)	Estimated totex in £bn			Basis of range
	T1 annual average	T2 low annual average	T2 high annual average	
1. I want you to provide a safe and reliable network.	0.65	0.6	0.75	This is the range within which we expect to reach an asset health plan that is optimised for network risk and short- and long-term deliverability. We are assuming we target end of T1 levels of network risk for T2.
2. I want you to make it easy to connect to and use the electricity network.	0.20	0.10	0.25	This range is based on the extremes of transmission investment driven by the four FES 2017 energy scenarios, which are being updated for FES 2018. The scale of this range shows why uncertainty mechanisms are important.
3. I want you to be transparent.	–	–	–	Costs are less than the £50m a year threshold.
4. I want you to enable the ongoing transition towards the energy system of the future.	0.30	0.30	0.65	The range is based on the extremes of transmission investment driven by the four FES 2017 energy scenarios, which are being updated for FES 2018. The scale of this range shows why uncertainty mechanisms are important.
5. I want your network to be protected from external threats.	0.05	0.10	0.10*	This is an estimated minimum based on areas we have currently identified to improve our resilience; there is the potential for new requirements and new threats to be identified as we work with the Government and relevant agencies.
6. I want you to care for communities and the environment.	0.05	0.05	0.15	The range reflects stakeholder views and is largely driven by an estimate of potential future visual impact projects.
7. I want you to be innovative.	–	–	–	Costs are less than the £50m a year threshold.
8. I want you to provide value for money	–	–	–	Our activities to drive efficiencies are in the other stakeholder priorities.
9. Electricity transmission totex	1.25	1.15	1.90	
10. Business support costs	0.10	0.10	0.10	Range is within £50m a year threshold.
11. Annual average total	1.35	1.25	2.00	
5-year total (5 x row 11)	6.75	6.25	10.00	

Our forecast for our average yearly totex for T1 (2013/14 to 2020/21) is £1.35bn. Our range for our indicative yearly totex for T2 is from a low of £1.25bn to a high of £2.00bn. The main factors driving this range are the different future energy scenarios. Each one alters how many new generators and how much new demand we will need to connect to our network. They also impact how much network reinforcement we will need to carry out.

Several elements underpin our figures. We have included the efficiencies we have achieved in the T1 period into our T2 totex ranges. However, we have not included real price effects. This refers to the difference between the changes in the price of inputs that transmission owners purchase relative to economy-wide inflation. Neither have we included inflation or any assumptions about future efficiency changes. Also, these ranges only relate to controllable expenditure. There are some elements of our funding – and therefore consumer bills – that we do not control. The costs for these are passed straight through to consumers, such as business rates and licence fees.

Rows 1 to 8 show the totex ranges for our stakeholders' eight main priorities. To calculate the overall controllable totex for T2, we need to add the business support costs from row 10. These include costs such as human resources, finance, IT, regulatory compliance, contract management, insurance, and property management. These departments are needed to run any large organisation. We benchmark our business support spending against other organisations, wherever it is possible.

Stakeholder scrutiny of our plans

We have been carrying out a major programme of stakeholder engagement to listen to what our stakeholders want in the T2 period and to build our plan with them (see Chapter 3). Our goal is to deliver a truly stakeholder-led plan that delivers what our stakeholders want at a cost they find acceptable.

Our independent Stakeholder Group will put both our stakeholder engagement and our T2 business plan under close scrutiny. The group will report to Ofgem with its views. Ofgem has also set up an independently chaired RII0-2 Challenge Group. This group will create a public report for Ofgem, written from the perspective of consumers, on all network companies' business plans.

The stakeholder engagement process and the review by our Stakeholder Group and Ofgem's Challenge Group will ensure that our overall package for T2 reflects our stakeholders' views and represents value for money.

Providing evidence that our plan offers value for money

There are several ways we will provide evidence to our stakeholders, our Stakeholder Group, Ofgem's Challenge Group and Ofgem that our business plan proposals are value for money.

We will carry out cost-benefit analysis (CBA) of our proposed projects for the T2 period. Certain areas of our spending are automatically covered by CBA. For example, schemes that deliver wider network capacity are assessed by the ESO's NOA process. NOA selects the most efficient option from a range of alternatives for investing in the transmission system. It uses a CBA process that takes account of system constraint costs.

For projects that are not covered by automatic CBA, we use our own CBA to select our preferred options. This allows us to take account of wider benefits to consumers. For example, we can analyse whether spending more now could save more for consumers later.

Where appropriate, we will invite independent groups to challenge and approve our processes and costs, to further prove they provide value for money.

As part of our CBA, we need to include evidence on benefits. In some cases, we can measure these by the value consumers attach to service improvements in a particular area – such as environmental improvements that have been made or fewer instances of energy not being supplied. In developing our T2 period plan, we are using consumers' willingness to pay much more than we have done in the past. This will ensure our final submission reflects, more extensively, what consumers consider to be value for money.

We will test whether the cost and service proposals we set out in our business plan are acceptable to our stakeholders and consumers.

When putting together our baseline funding for the T2 period:

- We will listen to our stakeholders and take account of their views on where and how they think we could be more efficient.
- We will build in the cost efficiencies we have already achieved so consumers can continue to benefit from them.
- We will benchmark our capital expenditure (capex) against our historical and current costs and draw on evidence from leading organisations, including international evidence where available.
- We will benchmark our business support expenditure against other organisations, wherever it can be compared.

Our regulator, Ofgem, will carry out a full, expert review of our costs baseline and will challenge us on how efficient we are. Ofgem has access to unique information, such as the costs of the two Scottish TOs, that we are not allowed to have due to competition law.

Adjusting our allowances appropriately – uncertainty mechanisms

Throughout this consultation, we have explained the uncertainties the energy sector faces during the T2 period. This is reflected in the ranges we have published for our totex. If we fix allowances at the start of T2, there is a risk we could have too much – or too little – funding to give our customers and consumers what they want.

As mentioned above, during the T1 regulatory period, the volume of generation connecting to the transmission network in England and Wales was lower than expected. Adjustments called 'uncertainty mechanisms' automatically reduced our funding. In areas where there was no mechanism to adjust our funding, we voluntarily gave money back to consumers instead.

We think our stakeholders will only want us to be funded for the activities we carry out.

We welcome feedback on our direction of travel for the T2 period. We intend to propose more uncertainty mechanisms, and to make them more sophisticated. If we do that, our allowances will more accurately adjust to reflect the work we need to carry out for our customers and consumers. We will consult on our uncertainty mechanism proposals with our stakeholders. Ofgem will also scrutinise them when it carries out the RIIO-T2 price review.

There are different types of uncertainty mechanisms. There are 'pass-through' mechanisms for costs outside our control, such as licence fees and business rates. There are 're-openers' that involve Ofgem assessing the cost of schemes when they arise. There are also 'volume driver' uncertainty mechanisms. These adjust our allowances based on the volume of work we need to carry out, which is uncertain at the beginning of the T2 period.

The volume driver uncertainty mechanisms we are currently developing for T2 can be seen in the table below. We may develop others if we see a further need to protect consumers. In developing our proposals, we are following the guidance on page 16 of Ofgem's [RIIO-2 Business Plans Initial Draft Guidance Document](#) about the information required for uncertainty mechanisms.

Table 11.2 Volume driver uncertainty mechanisms we are considering for the T2 period

Uncertainty mechanism	Ensures that consumers only pay for the actual volume of...
Generation connection	New generation we connect to the electricity transmission network.
Demand connection	Additional exit capacity delivered to meet growth in demand.
Embedded generation	Additional thermal capacity and fault level capacity we deliver to address the impact of embedded generation on the transmission network.
Strategic Wider Works (SWW) pre-construction	Pre-construction work we carry out before we begin building large projects.
Incremental Wider Works (IWW)	Wider network reinforcement work we carry out to address network constraints identified as part of the ESO's NOA process.

Defining our output commitments

An important part of providing value for money is spelling out exactly what our stakeholders, customers and consumers will receive for their money. We intend to make clear output commitments across as many of our costs as we can. Outputs are measurable consumer-facing outcomes that network companies can deliver. These include licence obligations and government standards. They also include service quality improvements that consumers are willing to pay for.

The benefit of outputs to consumers is they are transparent. We can be held to account to deliver them. If we do not deliver an output, we expect to see consequences through our regulatory contract. By focusing on outputs, we can look for more cost-effective and innovative ways to achieve them. When we do that, we give customers what they want at the lowest cost and can share any savings with them.

Ofgem has proposed that network companies should have outputs related to three overarching outcomes:

- Meet the needs of consumers and network users.
- Maintain a safe and resilient network.

- Deliver an environmentally sustainable network. In the previous chapters, we have mentioned outputs we could deliver in the T2 period within these three categories.

Ofgem has provided the opportunity for network operators to propose 'bespoke' outputs that reflect their stakeholders' views. As explained in Chapter 9, we published [a discussion paper on forward-looking outputs](#) in December 2018. We suggested some possible improvements we could deliver in the 2020s that we summarise in the table below.

Table 11.3 Possible outputs in our forward-looking outputs discussion paper

Area	Possible outputs
Carbon	SF ₆ (sulphur hexafluoride), insulating gases, controllable carbon, embedded carbon, business carbon footprint and losses.
Environment	Natural environment improvements, cable fluid leaks, natural resources, educating the public about the environment and educating businesses about electric vehicles.
Community	Community investment; working with partners; and safety of the public.
Social value	UN Sustainable Development Goals, equality and diversity, social mobility, supporting education and employability.
Sustainable procurement	Supplier diversity, jobs created in the supply chain, prompt payment, paying suppliers the living wage, addressing modern slavery and drive emissions reductions in the supply chain.
Trust and legitimacy	Local community satisfaction, public trust and level of staff engagement.

We are also considering outputs we could deliver for the ESO that would lower overall energy costs for consumers. We provide more details in our paper [Thoughts on a whole-system incentive for the SO:TO interface for the RII-O-T2 price control](#). And we welcome your comments.

Delivering ongoing cost savings

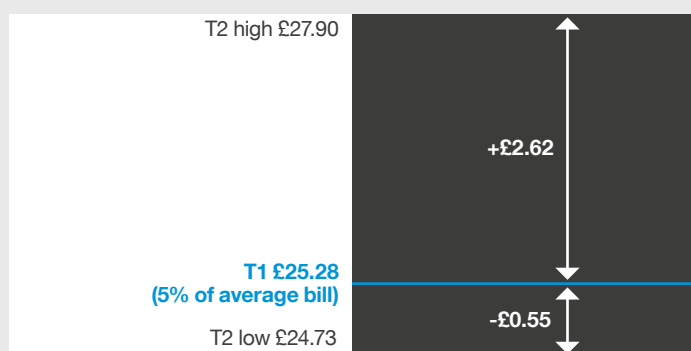
As well as setting ourselves a challenging baseline for the T2 period, we will continue to strive to deliver our services at a lower cost to our customers and consumers. For example, as we deliver our business plan, we will market test the vast majority of our spending and assess it against the latest techniques and the best prices. We will also implement the innovations we delivered towards the end of the T1 period to improve service and lower cost.

The totex incentive mechanism (TIM) makes sure that consumers start to receive the benefit of these savings quickly, rather than waiting for the next price control allowances to be set. We are working with Ofgem and our stakeholders to ensure a strong TIM stays in place for T2. This will ensure we are incentivised to keep innovating and finding cost savings for consumers. Ofgem is consulting on the TIM on pages 88 to 97 of Ofgem's [RIIO-2 sector-specific methodology consultation](#).

Impact on consumer bills

Based on our provisional totex range, the effect on an average household electricity bill in T2 would be between a reduction of 55p and an increase of £2.62. This is compared with our forecast average for T1.

Figure 11.2 Indicative consumer bill impact



In calculating these effects on consumer bills, we are only looking at the impact of our T2 totex ranges compared to totex in the T1 period. We have not taken account of other factors that can have an impact, such as the cost of capital for the T2 period or future

inflation. This is to give our stakeholders a sense of what our totex ranges for the T2 period could mean for consumer bills.

The main factors that could increase consumer bills in the T2 period are:

- Protecting the network from external threats, so consumers have a secure transmission network.
- Investing to connect new generation to the transmission network, so we support the transition to a low-carbon energy system.
- Network reinforcement to maintain its condition and prevent consumers' bills increasing in the future.

How we will continue to engage with our stakeholders

We will continue to engage on our overall package for the T2 period and how we can make sure it provides value for money.

This consultation is the first opportunity for stakeholders to see how we have understood their feedback and our suggestions for addressing what matters to them. It is also the first time our stakeholders have seen our indicative totex ranges for the T2 period. We welcome your feedback on this consultation.

We are planning to survey consumers on how willing they are to pay for the service improvements we could make in the T2 period. We are also planning to ask consumers whether they find our overall draft plan acceptable when we are closer to submitting it to Ofgem's Challenge Group.



We welcome your views:

Question:

What are your views on our indicative ranges for our totex expenditure in the T2 period?

Submit your feedback online [here](#):

How to use this document

We want your feedback

Who is this consultation aimed at?

We are interested in the views of all stakeholders who are impacted by what we do or interested in shaping the future of electricity transmission. This includes the views of all users of our network, government, regulatory bodies and energy industry professionals.

Tell us what you think

This consultation is open until 31 March 2019. You may give us feedback in the ways outlined below. We particularly seek your views in response to the specific questions we have posed. These are summarised on page 9. You may respond to all questions or just those relevant to your specific views.

Ways to feedback:

Make notes

Throughout the document, we have provided space for you to read and make notes at the start of each chapter (opposite). Use the section numbering as a way to reference accurately. You can then type up your notes and send them in an email or submit them online.



Interactive pdf notes

Alternatively, we will be sending out editable pdf versions of this document with note fields for you to type directly into.

Email

We have a dedicated email address specifically for your feedback to this document. We welcome your thoughts at: **gary.stokes@nationalgrid.com**

Alternatively, you can put your thoughts in writing and send to: **Gary Stokes, National Grid House, Warwick Technology Park, Gallows Hill, Warwick CV34 6DA.**

Online

You can go directly to the website and submit your comments [here](#).



You can learn more about how we are working with stakeholders by visiting our [website](#). This site makes it easy to follow our progress and shows you how to get involved.



**Please share
your thoughts:**