SP Energy Networks 2015–2023 Business Plan

Executive summary

SP Distribution Ltd | SP Manweb plc

July 2013

SP ENERGY NETWORKS

A Message from Frank Mitchell CEO

To build our plans we have learned from our stakeholders and customers, reinforcing our top priorities as your regional electricity network company: Safety, Customer Service and Value for Money.

Over the last few years we have focused on the fundamentals that are important to our customers and our wider stakeholders. This has resulted in us delivering continuous service improvements, lower cost contracts and accelerated outputs. We remain on track to deliver all of our 2010-15 commitments.

By 2023 we intend to lead the industry by continuing to apply our guiding values to be:

- *A customer service focused company trusted by our communities and stakeholders.*
- *An engineering company with strong stewardship of assets and world class safety credentials.*
- *A company that attracts and develops skills for the future from the communities we serve.*

The UK energy industry is entering the most exciting period for half a century. We have an unprecedented opportunity to play a major part in the UK's low carbon transition and help set the industry blueprint for the next 50 years.

The future network and its users will require a different approach, and our ambition is to transform the way you think of us.

- *Access to Smart metering data will allow us to revolutionise our customer relationship to be much more proactive.*
- *We will use innovation to reduce costs, improve service, and lay the foundations for a smart network.*

Our stakeholders have told us they want us to:

Manage our ageing network to maintain public, staff and contractor safety

Much of our network was installed in the 1950-70s so is approaching the end of its operational life. We will continue our programme of renewing our assets over several price controls to minimise the impact on customer bills.

We will continue our industry leading approach to manage the replacement of end of life cables in high-rise and tenement flats.

We are ahead of the industry in making sure old overhead lines meet modern height and clearance standards. Our overhead lines across roads will be brought up to modern standards by 2015, and in all other areas by 2020.

Reduce the number and length of power cuts

Our customers already enjoy 30% fewer power cuts than the UK average, and a reliability in excess of 99.999%. By 2023 we plan to reduce the number of customer power cuts by 7%, the average length of those power cuts by 16%, and the time that our average customer is without electricity by 25%.

Improve customer service

Our goal is to lead the industry in the delivery of customer service. We have laid out a comprehensive set of customer commitments and will pay higher levels of compensation where we fail.

Continue to invest to reduce power cuts during major storms

Since the late 1990's we have rebuilt and cleared trees from more than 10% of our rural high voltage overhead lines, helping to reduce power cuts during storms by 75%. By 2023 we will make more than 25% of our rural high voltage overhead lines more resilient to storms.

Improve service to poorly served customers

A very small number of our customers receive a service which is much worse than others. We will continue to improve service to our poorly served customers and collaborate with other agencies to help our most vulnerable customers.

Prepare the network for low carbon technologies

While the 2020 UK carbon emission reduction target is 34%, both Scotland and Wales have more ambitious targets of 42% and 40%. Our network will be 'low carbon ready' sooner than the UK average.

Delivering value for money

We are acutely aware of the economic pressures on all of our customers. Since we published our draft plan highlights every component of our plan has been optimised for efficiency, taking into account real price effects, cost benefit analysis and industry benchmarking.

As a result we have reduced our forecast costs by over £700m compared to our May 2013 Draft Business Plan

- *Removing inefficient sub-contract margins*
- *Identifying scope for greater co-ordination*
- *Identifying other scope for efficiencies*
- *Including ongoing productivity of 1% p.a. compounding, reducing our forecast costs by 4.6% (£170M).*

As a result the cost of our final plan has reduced from £5.9bn to £5.2bn whilst our output commitments have increased and secondary deliverables have been maintained.

This means that on a like for like basis, whilst increasing our outputs and commitments to customers, our business will spend marginally less than allowed in DPCR5. We believe that the plan now represents best value for our current and future customers.

Our total plan

We plan to create more than 2,500 jobs across our supply chain, investing up to £90m in recruitment and training (the customer impact of which will be £60m after taking account of efficiencies elsewhere).

Our forecast costs of £5.2bn include £2.5bn to renew and maintain our network, £600m to accommodate customer future energy usage, £1bn of supporting activities and £1.1bn of external costs including UK corporation tax and local business rates.

Customer bill impact

The latest analysis from Ofgem shows that electricity distribution charges represent 16% of an average UK customer electricity bill.

Using the UK average consumption 3,300kWh, as required by Ofgem:

- *Our customers in Central and Southern Scotland will see an 8% reduction in our bills from £99 p.a. to £91 p.a.*
- *Our customers in England and Wales will see a 12% decrease from £126 p.a. to £111 p.a.*

These numbers are expressed in 12/13 prices and will vary depending on actual inflation and consumption.

Conclusion

We have set out a plan to satisfy our stakeholder needs and to transform the way you think of us as your electricity network company.

I would like to thank you for your input in developing our plan and encourage you to give us your feedback both on our final plan and ongoing service.

We look forward to providing you updates on our progress, and obtaining your ongoing input to our priorities through our various stakeholder engagement activities over the next decade.

Frank Mitchell

Our customer bills, based on UK average consumption will reduce by an average 8% in Scotland and 12% in England and Wales.

Executive summary

Our whole business plan in brief

This summary sets out our vision to transform the way you think of us as your electricity network company and includes highlights from the plan. Our £5.2bn of costs for the period 2015-23 will maintain safety and network performance, ensure we meet customers future energy needs, and further improve our network resilience to storms. Innovation embedded in our plan has reduced our forecast costs by more than £100m.

We have set out clear output commitments for customers, introducing voluntary arrangements going well beyond regulatory requirements.

We will use incentive mechanisms to make further investments to deliver tangible benefits to customers.

A reduction of £700m from our draft plan published in May demonstrates our commitment to deliver in a highly efficient manner. Further demonstrated by our proposed financial package that clearly strikes an appropriate balance of risk between customers and stakeholders.

We will deliver all of this whilst reducing our average typical domestic customer bill by 8% in Central and Southern Scotland and 12% in England and Wales.

In this summary:

- Planning for 2023 and beyond
- Efficient expenditure
- Outputs
- Secondary deliverables
- Financing our plan efficiently
- Our revenues and customer impact
- Bill impact

Planning for 2023 and beyond

This plan sets out our vision and commitments to transform the way you think of us as your electricity network company

The UK energy industry is entering the most exciting period it has faced in half a century. We recognise that SP Energy Networks has a critical role in facilitating the transition to a low carbon economy at a time when we need to replace increasing numbers of end of life assets.

This presents an unprecedented opportunity for SP Energy Networks to play a major part in the UKs low carbon transition, and help to set the blueprint of the energy industry for the next 50 years.

By 2023 we intend to lead the industry by continuing to apply our guiding values to be:

- *A customer service focussed company trusted by our communities and stakeholders.*
- *An engineering company with strong stewardship of assets and world class safety credentials.*
- *A company that attracts and develops skills for the future from the communities we serve.*

We are acutely aware of the economic challenges our customers face:

- *We have benchmarked internationally to target costs amongst the lowest in the industry.*
- *We have set a further productivity improvement target of 1% p.a. across key areas.*
- *Innovation within our plans will deliver more than £100m benefits for customers.*
- *We have reduced our costs by £700m compared to our May 2013 published draft plan highlights, but increased our proposed outputs.*

The future network and its users will require a different approach, and our ambition is to transform the way you think of us.

- *Smart meters will allow us to revolutionise our customer relationship, allowing us to be much more proactive.*
- *We will innovate further to reduce costs, improve service, and lay the foundations for a smart network.*

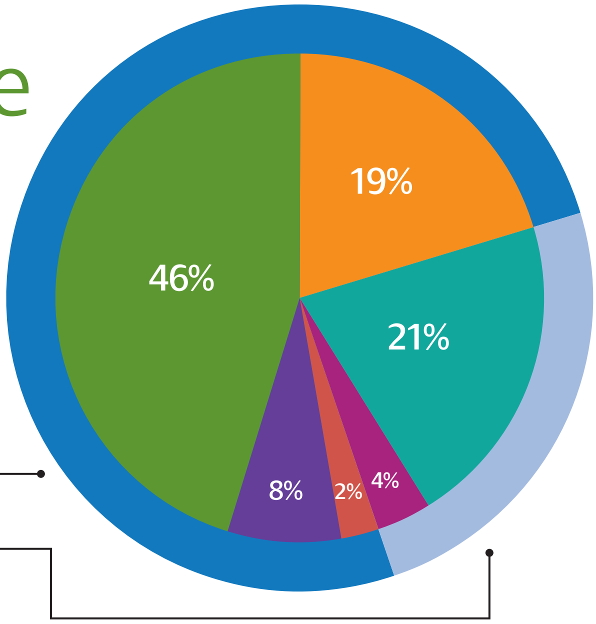
We have set out a plan to address our stakeholders' priorities:

- *Managing our ageing network to maintain public and staff safety.*
- *Reducing time off supply for our average customer by 25%. Funded through incentives.*
- *Fewer customers affected by storms & a voluntary standard to restore customers within 36 hours afterwards.*
- *Being amongst the top performing network companies in customer service. Paying additional voluntary compensation if we fail.*
- *Improving service to poorly served customers & playing a role in addressing energy social issues.*
- *Preparing the network for low carbon technologies.*
- *An appropriate and efficient financial package that delivers long term value for customers and stakeholders.*

In addition to our business plan we will make further investments to deliver customer value, funded and rewarded through incentive mechanisms

Efficient expenditure

Includes 1.0% p.a. efficiency



Total £5.2bn

75% — £3.9bn
Traditional core business

25% — £1.3bn
New and external costs

46% — £2.4bn of our costs relate directly to managing our ageing network, including:

- *Repairing more than 180,000 network faults.*
- *Inspecting and maintaining 30,000 substations, 70,000km of underground cables and 40,000km of overhead lines including:*
  - *Completing circa 3.5million asset inspections.*
  - *Cutting trees away from more than 300,000 spans of overhead lines (public safety).*
  - *Clearing trees away from 5000km of overhead lines (storm resilience).*
  - *Maintaining around 900,000 items of network equipment.*
- *Replacing 30 major substations each supplying 19,000 customers (average).*
- *Replacing 84 large substations each supplying 3,000 customers (average).*
- *Extending the life of 84 large substations each supplying 3,000 customers (average).*
- *Replacing more than 2,500 small substations each supplying up to 500 customers.*
- *Replacing more than 250,000 services inside customers homes & buildings.*
- *Making 25% of our high voltage network, and an additional 32% of our low voltage network resilient to storms.*

4% — £0.2bn of our non-core costs relate to facilitating the uptake of low carbon technologies by 2023:

- *Smart network innovation trials.*
- *Facilitating smart metering roll out by electricity suppliers and using the data from the meters.*
- *Enabling customers to use up to:*
- *620,000 solar panel installations (3% of households).*
- *310,000 heat pump heating systems (9% of households).*
- *130,000 electric vehicles (4% of households).*

8% — £0.4bn of our costs allow us to accommodate customers' future requirements:

- *Upgrading 125 major substations (each supplying between 1,000 and 20,000 customers) creating up to 500MW of local capacity for future customer needs.*
- *Connecting up to 5GW of new renewable generation.*
- *Connecting up to 2.5GW of housing, commercial and industrial customers.*
- *Accommodating 1% load growth.*

21% — £1.1bn of our costs are other non-core costs, including:

- *Corporation tax paid to UK government.*
- *Business rates paid to local government.*
- *Transmission charges paid to National Grid.*
- *Legacy pension costs.*

19% — £1.0bn of our costs are engineering and corporate support activities, including:

- *Recruitment and training of up to 100 apprentices and graduates per annum.*
- *Project management.*
- *Vehicles for our staff.*
- *Control rooms and call centres.*
- *Network design and management.*
- *Operating 34 offices & depots.*

2% — £0.1bn of our costs relate to Real Price Effects

- *An independent economic view of the increased costs above the Retail Price Index.*

Outputs

Our commitments to transform the way you think of us as your electricity network company

Outputs

Our Outputs are the things that our customers and stakeholders directly experience and value. We have laid out our comprehensive outputs package within Chapter 8 — Our outputs and incentives.

Highlights from our six output categories

Output Area	We will
Safety Minimising the risks associated with distributing electricity	• Achieve zero employee lost time accidents • Work with contractors to reduce their accident rates by 75% • Remove high risk 'low' lines including those across roads by 2015 and all others by 2020 • Continue our industry leading approach to renew end of life cables in flats • Increase our extensive public education programmes
Reliability & Availability Ensuring our network is resilient to extreme events and reliable under normal circumstances	• Reduce the average number of times customers lose power by 7% • Reduce by 16% the length of time those customers have no power • Reduce by 25% the average time all customers are without power • Improve service to 40% of our poorly served customers • Improve service to 25% of our worst served customers • Reduce customers without power for more than 12 hours by 70% by 2016 and 100% by 2023. • Pay double Guaranteed Standard payments, excluding storms, where we make other arrangements • Introduce a voluntary Guaranteed Standard for restoration after storms
Environment Reducing our impact on the environment and playing our part in the low carbon transition	• Install lower loss transformers to reduce Electricity Supplier costs by up to £60M over the next 50 years • Reduce the carbon footprint of the business year on year • Reduce cable oil leaks by 50% • Buy equipment that far exceeds IEC international standards for SF6 insulating gas leakage rates • Underground 85km of overhead lines in areas of visual importance
Connections Providing excellent service to all customers who want new connections	• Continue to facilitate industry leading competition in our network areas • Improve our communication channels with customers • Improve availability and transparency of connection information and costs • Connect our new customers in time scales that are amongst the industry best • Pay customers double compensation for any Guaranteed Standard failure
Customer Satisfaction Continuously improving	• Improve our overall customer satisfaction scores by 20% by 2023 • Never force disconnect calls, always give the option to speak with a person • Communicate with customers proactively and in ways that they prefer • Pay compensation of £10 where we do not deliver an agreed action on your enquiry. • Continue to offer hot meals and accommodation to vulnerable customers after 12 hours in exceptional events, and within 48 hours to all customers*
Social obligations Recognising and meeting the needs of vulnerable customers	• Roll out an awareness campaign for our Priority Services Register (PSR) • Contact PSR registered customers every 2 years (minimum) • Contact PSR registered customers more frequently before planned outages and during emergency power cuts customer service • Train our people to recognise and deal with vulnerable customers sensitively • Establish a specific network fund within the framework of the existing Energy People Trust to target initiatives to help vulnerable customers

Secondary deliverables

Efficiently maintaining network safety and performance

Secondary deliverables are critical activities that form part of our regulatory contract and include management the health of our assets (Health Index) and the relative loading of our network (Load Index).

Health Index

Our plan is to prevent the deterioration of our network over the next two decades, and manage increased risk during the intervening period through:

- *New programmes of life extending asset refurbishment to complement asset replacement.*
- *More frequent inspections and intrusive maintenance of assets with higher risk of failure.*
- *Introduction of on-line monitoring in major substations to identify potential failures before they occur.*

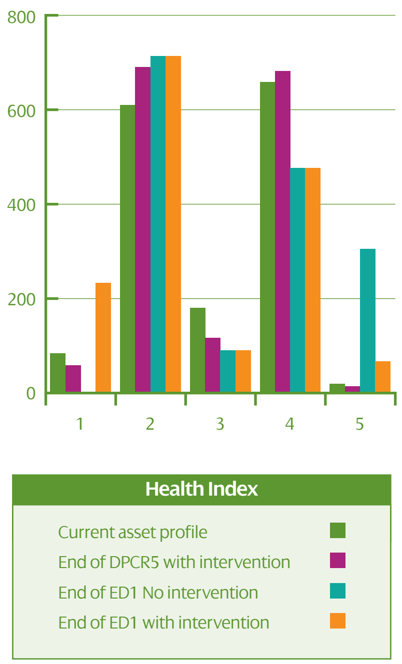
Our investment plans to manage our network are set out in detail in Chapter 9 — Our expenditure forecast and our secondary deliverables are detailed in Annex 2.2.

Load Index

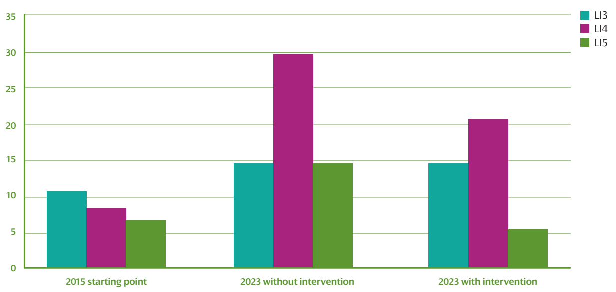
Increasing load on our network will trigger reinforcement when it reaches a certain level. Our plan, supported strongly by stakeholders, is to adopt a reduced trigger point for reinforcing our network. This 20% reduction (explained in more detail in Chapter 5 — Meeting our challenges and Chapter 9 — Our expenditure forecast), does not go as far as some other electricity distributors, but we believe strikes the right balance of cost and risk for existing and future customers.

More detail of our proposed asset investments and their impact upon both Health and Load Index are detailed in Chapter 9 — Our expenditure forecast and set out in detail within Annex 2.2 — Health Index Graphs (accompanying this document) showing the impact across our range of asset categories. Our Zonal Maps within our Annex 2.9 provide a geographical display of our investment plans.

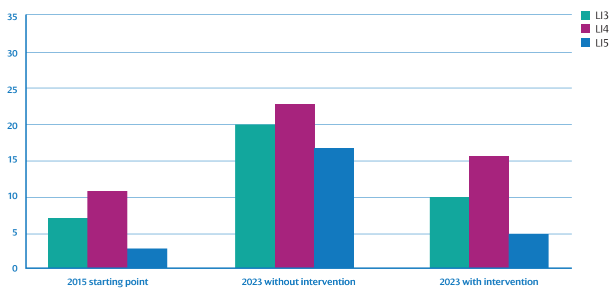
33 kV Circuit Breakers



SPD Load Index Change



SPM Load Index Change



Financing our plan efficiently

Our financing proposals are efficient and strike an appropriate balance of risk and reward between stakeholders

In any price control review the regulator allows network operators to collect money from customers in order to pay dividends and interest charges. These account for around 20% of our charges to suppliers (3% of customers' bills).

Ofgem challenge network operators to prove that their financing plans are efficient. In other words, we must show that we are asking our customers to pay enough, but no more than we really need, to attract and retain funding from investors. If we receive too little, we won't be able obtain sufficient funds from investors to allow us to maintain the network. If we receive too much, our shareholders will receive higher returns than they deserve. Neither is in the interests of customers.

We have prepared an efficient financing plan which meets this challenge. Scottish Power Transmission was 'fast tracked' at the RIIO-T1 review. We have learnt from that process and have further improved the quality and transparency of our evidence to demonstrate the efficiency of our financing plan.

Cost of debt (The cost of borrowing to fund investments) — Indexed

Ofgem prescribe a mechanism which links this to an index. The purpose is to ensure that customers will only pay for efficient debt costs. Our financing plan uses Ofgem's proposed simple 10 year trailing average for this index without adjustment.

Cost of equity (The cost of financing investments from shareholder equity) — 6.7%

We have carried out a thorough analysis which takes account of theoretical models, market evidence, stakeholders' views and relevant regulatory precedent. We are also took into account risk, after mitigation from uncertainty mechanisms.

Notional gearing (The proportion of investments funded by borrowing) — 65%

Our work on setting the notional gearing fully takes into account interactions between cash flow volatility and the cost of equity, again taking into account the risks and opportunities afforded by the overall package and their impact on the return on regulatory equity.

Other financing parameters and policies

Our plan fully reflects Ofgem's prescribed policies including those applicable to the treatment of pensions and tax.

Financeability

We tested that our financing plan is efficient by carrying out an assessment similar to that used by credit rating agencies including qualitative factors such as the regulatory environment. We targeted a credit rating that is consistent with that built in to the cost of debt index and with our licence obligation to maintain an investment grade credit rating. We have not included financeability adjustments under our fast track assumptions.

We have set out our approach to financing and provided supporting analysis in Chapter 12 — Financing our plans efficiently and Annex 3.1 — Efficiently financing our plans and our detailed financeability scenarios.

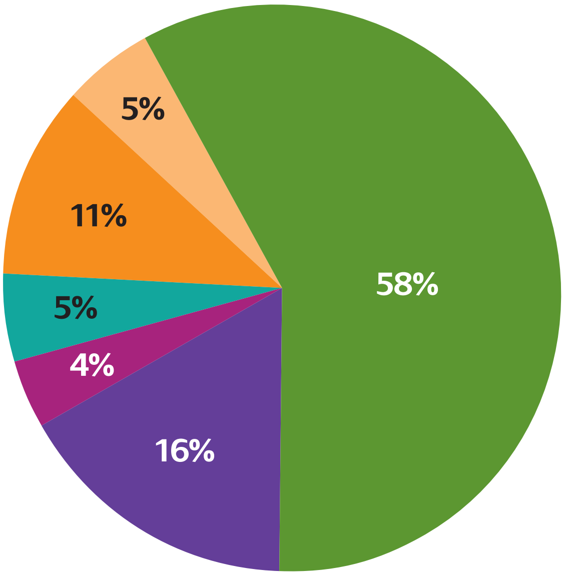
Parameter	Electricity Distribution DPCR5 2009	SPEN July 2013
Cost of Debt	3.6%	Indexed
Cost of Equity	6.7%	6.7%
Notional Gearing	65%	65%
Dividend Yield	5%	5%
Capitalisation	85%	80%
Asset Lives	20 years	45 years for new investments
Financeability	Investment Grade	Investment grade

Our revenues and customer impact

The makeup of average UK customer's electricity bill

58% — Wholesale energy, supply costs and profit margin
16% — Distribution charges
11% — Environmental charges
5% — Other costs
5% — VAT
4% — Transmission charges

Ofgem customer bill fact sheet January 2013.



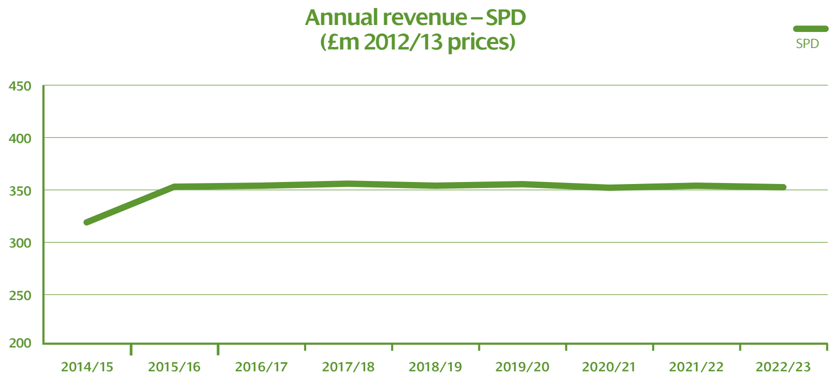
Our charges and customers' electricity bills

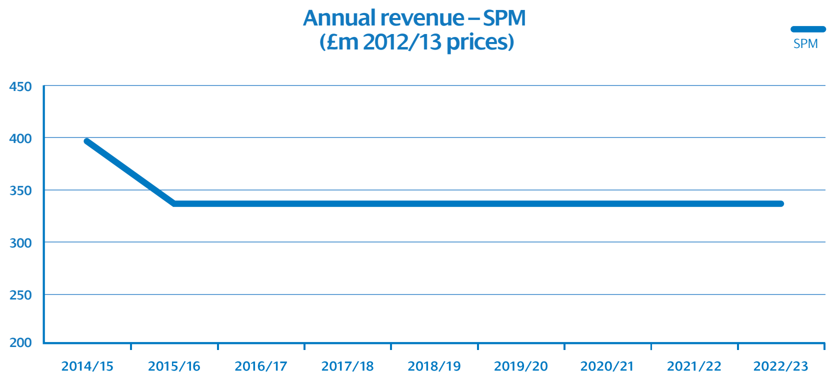
Ofgem publishes information on the components of customers' electricity bills. The latest information shows that electricity distribution charges make up 16% of customer's electricity bills on average across the UK.

Base allowed revenues that we charge to suppliers

The impact of our plan and financial modelling results in the following **base** allowed revenue profiles for our two network companies:

The **total** allowed revenues we will be allowed to recover from suppliers will be subject to the outcome of the RIIO ED1 settlement by Ofgem and our performance against the incentives we outlined earlier.





Bill impact

What do our current draft plans mean for our customers?

We are acutely aware of the financial pressures on customers and the other factors that increase electricity bills. We have built our investment plans to maintain safety and network reliability while minimising costs, and we have increased our plans from this point only when supported by our stakeholder engagement in terms of concept and willingness to pay.

In order to provide comparability across network companies we are required to present the bill impact as movement relative to typical 2014–15 charges and using UK average domestic consumption 3,300 kWh.

We have also included average 2010–15 domestic customer charges (updated to 2012–13 price basis) consistent with the information at our stakeholder events.

The average domestic customer in Merseyside, Cheshire, North Wales and North Shropshire (SPM) will see our component of their bill drop 12% from £126 p.a. to £111 p.a. average (2015-2023).

The average domestic customer in Central and Southern Scotland (SPD) will see our component of their bill drop 8% from £99 p.a. to £91 p.a. average (2015-2023).

These numbers are expressed in 12/13 prices and will vary depending on actual inflation and consumption.

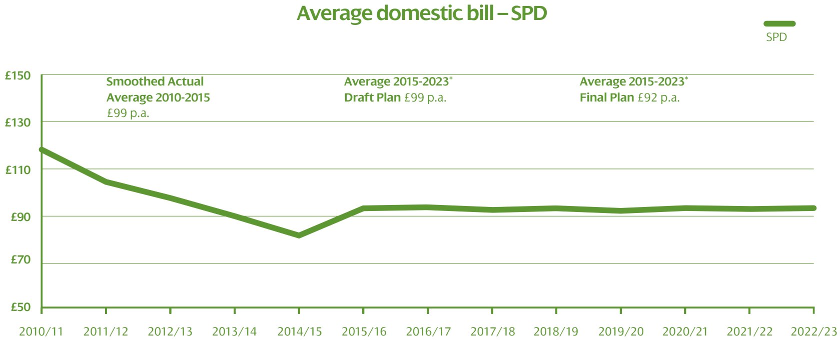
Why is the SPM bill higher?

There are two reasons for this, firstly this is a consequence of differences between when assets were installed in SPD and SPM.

Secondly, our distribution network in England and Wales includes the 132kV network, in Scotland this part of the network is owned by the Transmission companies and therefore these costs are included within the charges SPD customers receive via their energy supplier.

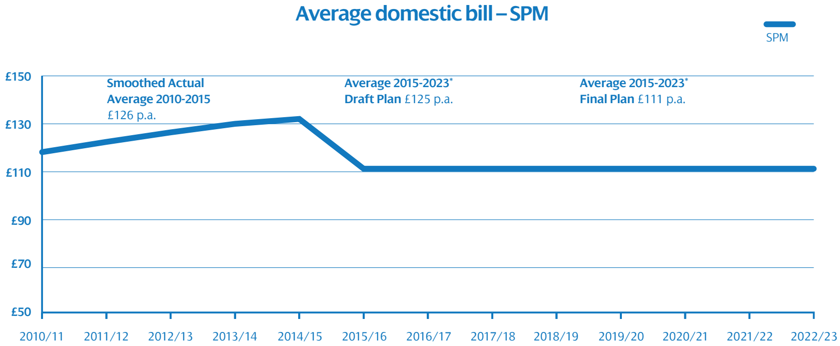
Our customer bills, based on UK average consumption will reduce by an average 8% in Scotland and 12% in England and Wales

Average domestic bill – SPD



*Based on UK average consumption

Average domestic bill – SPM



*Based on UK average consumption

SPD 12/13 Prices	Average bill 2010-2015	Average bill 2015-2023	Change %
Small business	£399	£381	-5%
Medium business	£8,993	£8,520	-5%
Large business	£53,645	£51,113	-5%
Unmetered	N/A	N/A	-5%

SPM 12/13 Prices	Average bill 2010-2015	Average bill 2015-2023	Change %
Small business	£403	£387	-4%
Medium business	£6,864	£6,577	-4%
Large business	£44,056	£42,238	-4%
Unmetered	N/A	N/A	-4%