

BSCCo Business Plan

2019/2020



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Forewords



Chief Executive's foreword to BSCCo Business Plan

Mark Bygraves
Chief Executive Officer

“We promise to continue to deliver our ‘best in class’ business-as-usual services, as well as embracing our drive and commitment to support our customers.”

I have the immense privilege of leading ELEXON, an organisation full of highly-regarded, highly-skilled market experts, as the energy market continues to change at an ever increasing speed. This is seen in the number of new entrants, and new products and services being introduced in the industry as it evolves. These new products and services range from home batteries to time-of-use tariffs; from smart meters to new demand side aggregation services; from electric vehicles to vehicle to grid (V2G) services; all promise to provide more choice for consumers than ever before. We see it as our number one priority to support you through these changes. In fact, we have already suggested a number of practical solutions to open up the Balancing Mechanism to new market participants and to enable consumers to have multiple energy providers.

We are determined to evolve along with the industry, maintaining and improving our historically high standards of service, retaining and attracting

talented colleagues and delivering to our customers' needs. However, despite the high levels of customer satisfaction demonstrated in Ofgem's and our own surveys, we are not complacent and we continuously look at areas where we can improve, be that our website or our underlying systems. But we also believe improvements can be made beyond the Balancing and Settlement Code (BSC). And our view is that the central services landscape is too fragmented and complex and that this can be confusing for new and existing market participants and, potentially, creates additional cost for consumers. That is why our Corporate Strategy clearly states:



“With the support of our stakeholders and partners, simplify and consolidate complex and fragmented services, develop new market solutions and actively facilitate innovation for the benefit of GB energy markets and the UK economy.”

ELEXON's Corporate Strategy



“We will lead, drive and deliver new opportunities for customers and industry participants in markets that weren’t previously open to them.”

We will share ELEXON’s breadth of knowledge and our well-established processes and governance along with our standards of service, with the Energy Codes Review team and apply them to any new arrangements.

To that end, our 2019/20 Business Plan demonstrates how we will lead, drive and deliver new opportunities for customers and industry participants in markets that weren’t previously open to them, including aggregators, electric vehicles, storage and value that can be obtained from smart meters.

Creating a digital platform to meet the changing energy market

During the year, we will continue to invest in our systems to deliver a flexible, scalable and open platform providing settlement and other value-added services to meet the future needs of a rapidly changing energy market. By working collaboratively with BSC Parties and other key stakeholders across

the industry, we will shape and design improved processes and customer interfaces that are for the benefit of the market. In the next few years, we are committed to transform and transition the current ageing BSC central systems to a modern technology platform that will be easier to maintain, mitigate the risks of failure and deliver better value for money to our customers, as well as greater flexibility for future market requirements.

Supporting our customers now and in the future

During the year, we will continue to develop solutions that support regulatory and government policy that benefit you. We take our role as trusted, independent, reliable market experts seriously and our 2019/20 BSCCo Business Plan sets out how we will support you now and in the future.

2019/20 BSC Budget

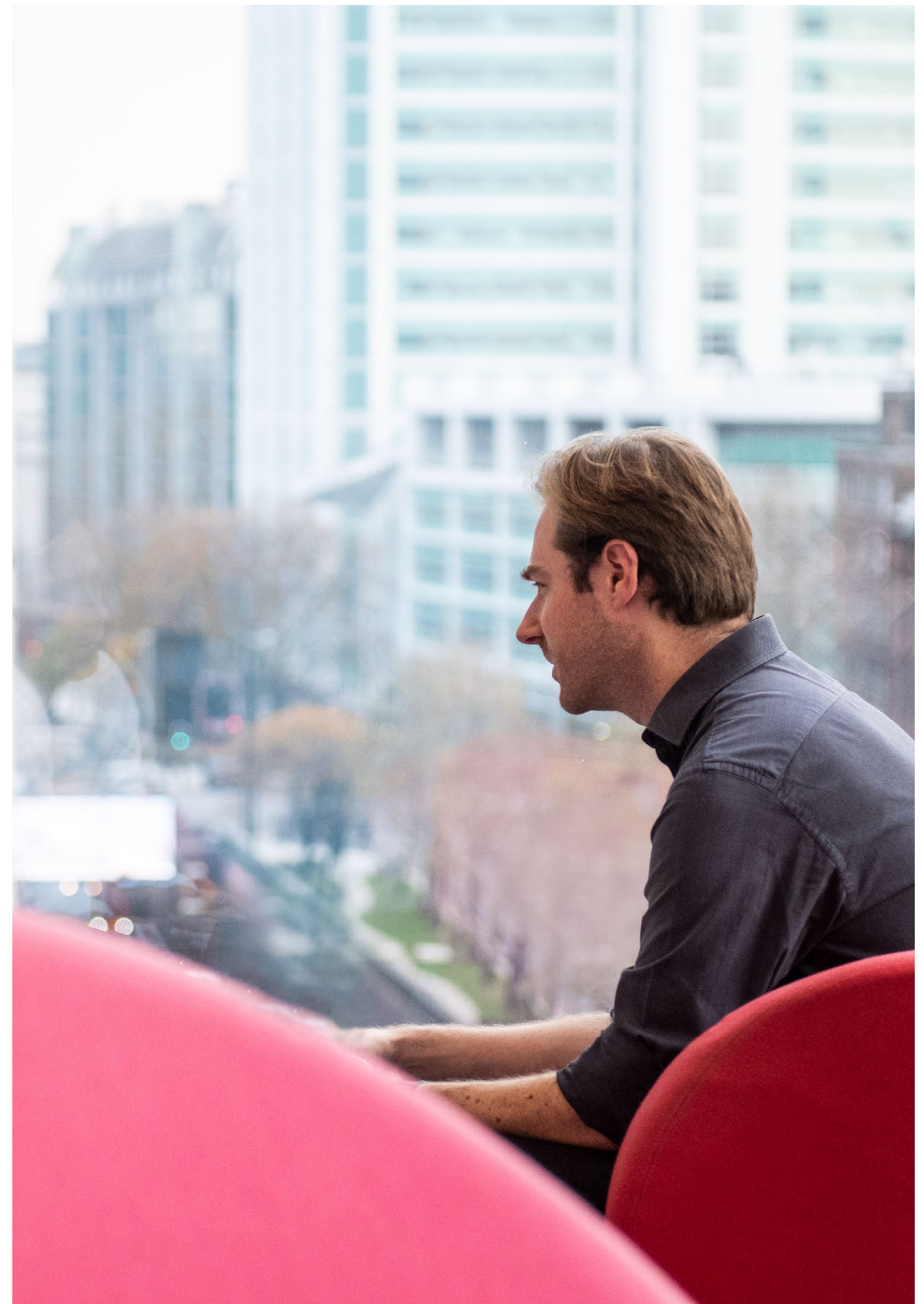
We are now serving more Parties than ever before, supporting many more new entrants and smaller organisations, consulting on more Modifications and Change Proposals, processing more Trading Disputes, Defaults and Supplier of Last Resort (SoLR) events, responding to more industry consultations and leading more market initiatives. We are also faced with reviews of the supplier hub, supplier licensing and now a once in a generation review of codes and code governance.

At the same time we will be implementing Market-Wide Half-Hourly Settlement and making changes to our systems and process to deliver TERRE, the largest system change since NETA, and opening the Balancing Mechanism to more and smaller players. Additionally we are leveraging those TERRE changes, which are mandatory, to redevelop our core systems in response to market transformation to make sure we can support you during the year, continuing to deliver our best-in-class service that you appreciate so highly. That is why, as you will see from the Budget section of this Business Plan, we have had to make a proportionate increase to our budget for 2019/20.

I welcome your comments and look forward to working with you and your businesses over the coming year.



Mark Bygraves
Chief Executive Officer



Chairman's foreword to BSCCo Business Plan

Michael Gibbons, CBE
Chairman

“All these initiatives, and others, show that we have fully engaged with the need to enable innovation in our industry.”

BEIS/ Ofgem

ELEXON strongly welcomes the Review recently announced by BEIS/Ofgem into codes and code governance.

Enabling innovation

It is an honour to chair ELEXON and the BSC Panel at a time when we find ourselves near the centre of so many important changes in the energy industry. Moreover, I believe that we have already demonstrated considerable leadership for the benefit of the industry and its consumers in several key areas, notably:

- Half Hourly Settlement (HHS), which could expand the uses and importance of the smart meter roll-out
- the setting up of a regulatory sandbox to encourage innovation; to date the BSC is the only code to do so
- our proposal to facilitate electricity customers having more than one supplier.

All these initiatives, and others, show that we have fully engaged with the need to enable innovation in our industry.

Welcome the Review of Code and Code Governance

But we are conscious that the BSC is only a part, albeit an important one, of the central systems that run the energy industry, and that there is a real, and urgent, need to ensure better coordination with the other codes.

I am sure we could also all operate more simply and more quickly. That is why ELEXON strongly welcomes the review recently announced by BEIS/Ofgem into codes and code governance, and we look forward to helping to develop and implement firm proposals that deliver these aims.

I congratulate the Executive Team and staff here at ELEXON on their leading performance, again, in the Ofgem's code administrators' performance survey, and I feel that such a result should enable our role in the review to be well respected.

The Board's agreement on a new ELEXON Strategy in the middle of the year was very important for us. At its heart is the commitment to innovation and to a new, agile, flexible platform to deliver it. Our aspirations for the future rest on the wish to drive and share best practice across the energy industry in all we do.

BSC Panel and ELEXON's Board – a range of diverse experience

As Chairman of both ELEXON and the BSC Panel, I am especially pleased that the relationship between the two is based on mutual respect between two high performing bodies.

The BSC Panel model is frequently cited as one of the better models for ensuring broad representation of stakeholders (including as it does Citizens Advice and other non-industry appointees) and independence of decision making. I was pleased to welcome two new members to the Panel last year:

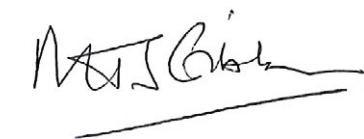
- Lisa Waters, who brings a wealth of experience and understanding of the challenges faced by both BSC Parties, as well as those outside of the BSC: small generators, storage operators, and prosumers, who are shaping the future of the energy markets; and
- Mark Bellman, who brings profound knowledge and experience in energy settlement both from operational and financial perspectives and expertise in gas markets.

Coinciding with these appointments, Andy Knowles and Barbara Vest have departed and I am grateful to them for their service on the BSC Panel.

I highlight particularly Barbara Vest's extraordinarily long standing commitment to the BSC.

We will welcome two new members to the ELEXON Board and they will replace Volker Beckers and Alison Chappell and I would like to thank both Volker and Alison for their relentless drive and focus in directing ELEXON's efforts to serve the energy industry and consumers.

I am certain these new appointments will maintain ELEXON's focus and contributions to the new more consumer-focused, smart and flexible energy system.



Michael Gibbons, CBE
Chairman



Looking back



**“Supporting and contributing
to the ongoing energy
market transformation.”**

Looking back: highlights of 2018/19 business strategy implementation

In 2018/19, we continued to proactively support and contribute to the ongoing energy market transformation. So, in addition to delivering and evolving the BSC effectively, efficiently and economically, we built on our industry-leading service culture for the benefit of consumers and market participants.

Highlights: 2018/19 Financial Year

We will provide a full overview of the 2018/19 financial year and all activities in our Annual BSC Report, which will be published by the end of June 2019. Meanwhile, we provide highlights for 2018/19 against each of our Strategic Priorities: Delivery, Improvement, Customer focus and Capability.





2018/19 Delivery:

Actively manage our services to ensure that we deliver in a reliable, economic and efficient way

✓ P344

EU Developments
P344, Project TERRE ((Trans European Replacement Reserves Exchange) was approved in August 2018 for implementation in February 2019 BSC Release.



Data publication (BMRS)
The BMRS is the primary channel for providing operational data relating to Great Britain’s Electricity Balancing and Settlement arrangements, as well as REMIT and European Transparency Regulation data.

11,000

Visitors welcomed for training and educational sessions, industry modification work groups and meetings



Data publication (BMRS)
– Results are consistently high for the second year,
– We have further improved on all key indicators in 2018,
– ‘Provision of support’ is close to 100%.
See figure 01



Supporting Ofgem and customers through SoLRs
We remained committed to supporting Ofgem, the industry and customers through the unprecedented levels of Supplier of Last Resort (SoLR) events in 2018/19.



Ofgem’s code administrators’ performance survey findings
ELEXON’s satisfaction rating further increased in Ofgem’s second cross-code administrators’ performance survey, with 86% of those being surveyed satisfied or very satisfied with the services and support. See figure 02

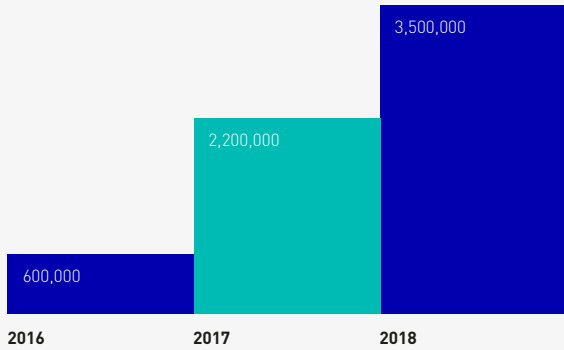
Figure 01
Stats on the increase in BMRS usage

Most popular APIs

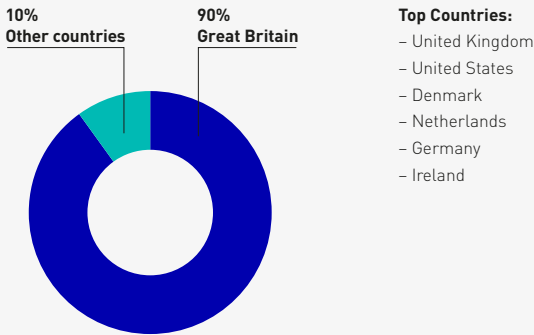
- System prices
- REMIT
- Generation by fuel type
- Gate closure data (Final Physical Notifications -FPNs, Maximum Export/Import Limits-MEL/MIL)

1,235 Average daily users

Page views



Global reach



Average daily downloads (API hits) and data volume (GB)

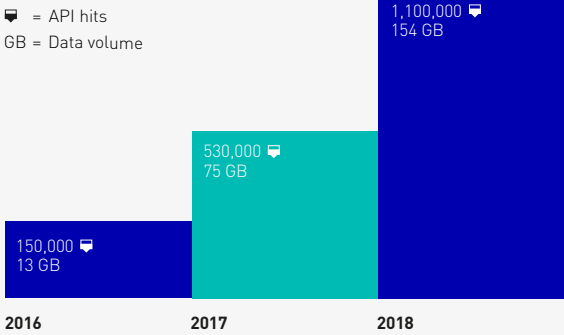
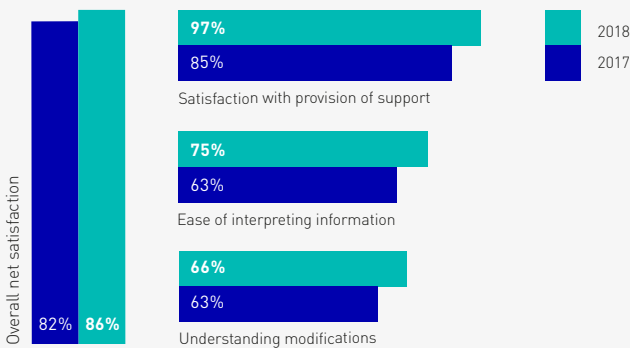


Figure 02
Code administrators’ performance survey, 2018

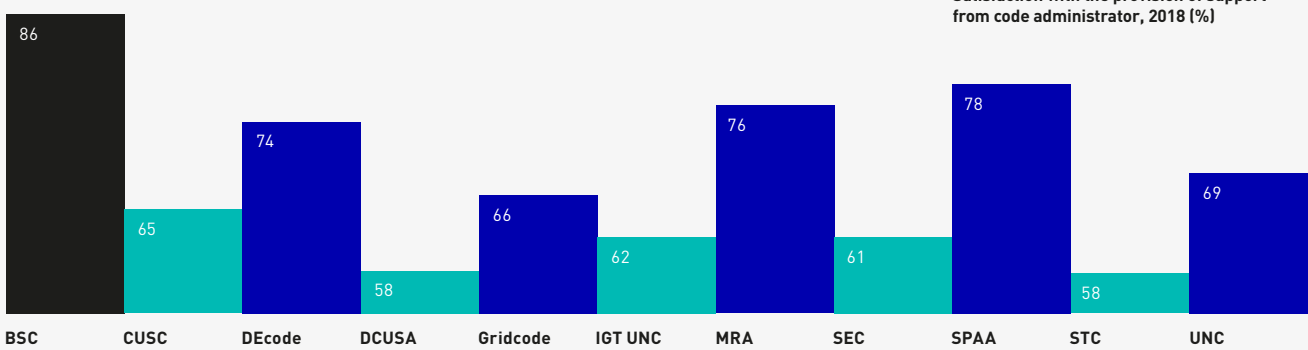
Ofgem’s code administrators’ performance survey, 2018

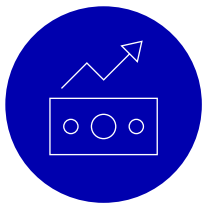
86%
Are satisfied or very satisfied with ELEXON’s service (nearly 50% are very satisfied)

Key customer service indicators Source: Ofgem



Comparison of satisfaction from all code administrators





2018/19 Improvement:

Enhance and evolve our services to support industry changes and development of the energy market



Performance Assurance Framework (PAF)

- Plain English: Easy to read and technically correct
- Flexible/applicable to different situations
- Accurate: at minimising the errors in settlement.

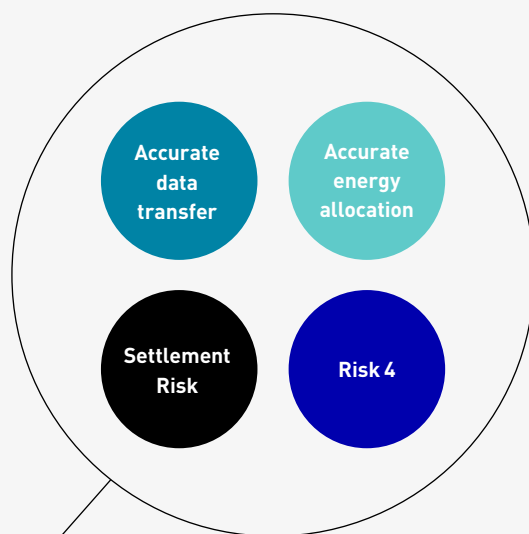
We developed a new Risk Evaluation Methodology which provides a forecast impact in financial terms, and a new risk register with fewer risks and enhanced information about them to support risk mitigation. *See figure 03*



Acting on feedback

We continued to make improvements to our website and teleconferencing facilities to enable wider participation in workgroups and meetings.

Figure 03
Risk Monitoring Approach



Monitor and analyse (ELEXON)

- Engage stakeholders in identifying risks and risk appetite
- Use data sources that give accurate and actionable views of risk materiality and improve credibility of data and KPIs
- Strategic and tactical deployment of Performance Assurance Techniques (PATs)
- Allows PAF processes to meet changing assurance needs and enable evidence-based decision making



Benefits to the BSC Parties / PAF Stakeholders

- Easier to feed in views on risk evaluation and mitigation
- Trustworthy data sources
- Minimise reporting burden for BSC Parties and their agents
- Better understanding of how Settlement Risks impact their organisation

34 Settlement risks

“The Market Entry Support Operators have been miles above the industry standard in their interaction with us.”

New market entrant, 2018



P362

BSC Sandbox

Implemented in August 2018, ELEXON's BSC Sandbox can enable innovative products and services to enact trials of new business models and services with end customers.



Multiple provider white paper

In April 2018 ELEXON published a white paper 'Enabling Customers to Buy Power from Multiple Providers' which offers a practical solution to adapting BSC central services to support individual customers buying electricity from more than one supplier. *See figure 04*



Digital market management

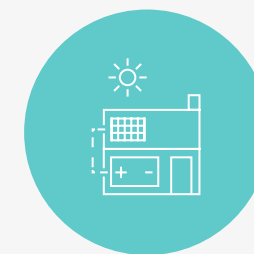
We launched a new process and self-service platform for market entry, exit and registrations.

- Deliver registration requirements for P344 (TERRE)
- Remove manual entry and duplication of data capture

Figure 04
Multiple Suppliers



Local community energy projects



Peer-to-peer trading



New business models for EVs

ELEXON

White Paper: Enabling customers to buy power from multiple providers

Elaxon White Paper: 'Enabling customers to buy power from multiple providers' proposes how we can swiftly enable consumers to derive benefits from new business models and new flexible arrangements.

The problem

Regulations place a single supplier at the centre of the customer relationship.

Importance

Prevents consumers benefitting from multiple suppliers (e.g. EV Lease, local community project, peer-to-peer trading).

ELEXON's proposal

Unlocks the potential and can be implemented more quickly.



2018/19 Customer focus:

Improve the customer experience and develop richer customer relationships



Helping BSC Parties operate efficiently

An Operational Support Manager (OSM) is an assigned prime contact for a BSC Party. They guide new and existing parties through requirements to successfully fulfil their obligations under the BSC.

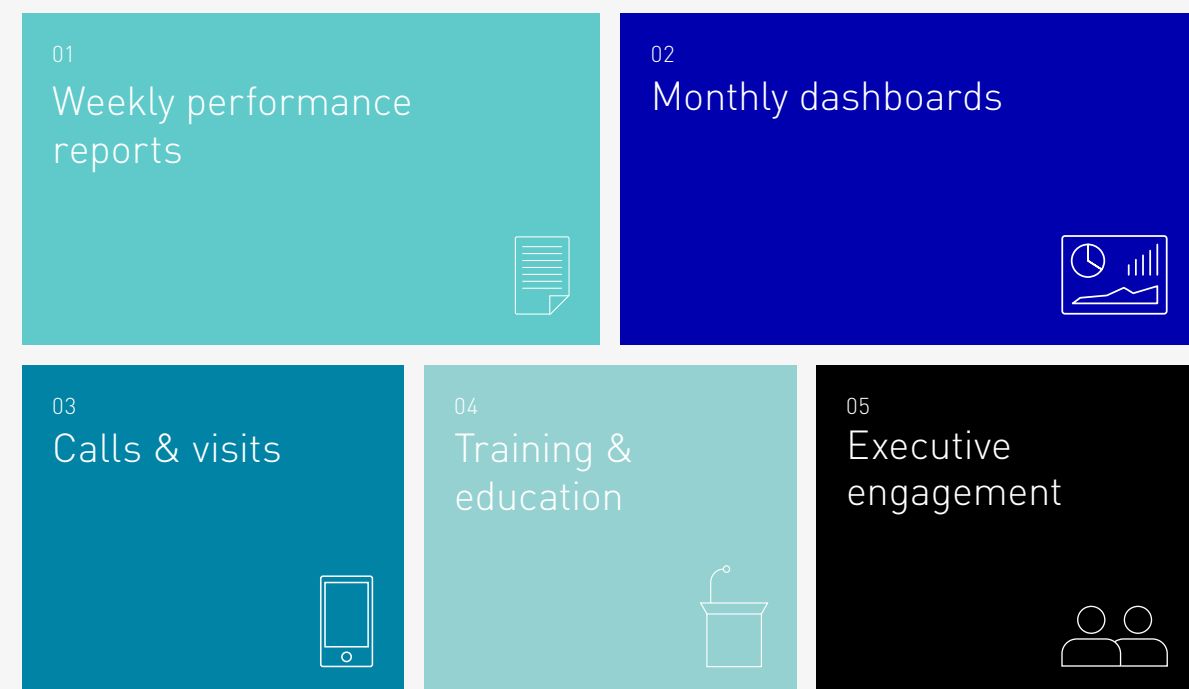
- Rigorous on-boarding for operational obligations
- Regular touchpoints to help keep on top of requirements
- A comprehensive programme of training and bespoke advice
- Monthly reports, calls and visits.



Regular communications touchpoints

ELEXON has proactively changed and adapted its operational services to support a significant number of new market entrants who have little or no prior experience in the energy markets. See figure 05

Figure 05
Regular communications touchpoints



“We are extremely happy with the continued support from the market entry team.”

New market entrant, 2018



Guiding BSC parties through market change

We have hosted a number of events and forums to guide parties through the ongoing and upcoming market changes.

- Industry days on smart meter roll out
- Industry days on TERRE implementation
- Stakeholder event on Half-Hourly settlement consultation
- ‘Introducing ELEXON’ seminars.



Market Entry Support

We assisted a wide range of new energy industry participants and technology providers through our education and advice on market entry requirements.

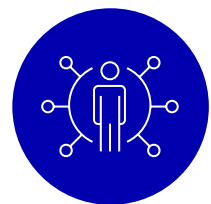


Cross-code work on changes

We worked with National Grid and Energy Networks Association to develop a European Network Codes (ENCs) implementation plan which supports BSC Parties in managing the changes that these Network Codes and EU Guidelines have introduced.

We also work with all code governance bodies through code administration code of practice (CACOP)





2018/19 Capability:

Develop our service capabilities to enable industry to benefit from our experience



Holistic Business Model

We believe end-to-end service is an essential pre-requisite for effectively coordinating the implementation of industry strategic change. See figure 06



Meter-to-Bank Process

We administer the BSC – rules governing the 'meter to bank' process, including imbalance prices calculation every half hour, and Contracts For Difference (CFD) and Capacity Market (CM) payments.



Sharing knowledge and Best Practices

We are committed to sharing our best practices and learning from other industries to improve our delivery capabilities. Our stakeholders are asking for additional support from us on the ongoing and new market initiatives and we are happy to share our knowledge.



Support to the energy market reforms

Over the last years ELEXON has provided support to government and Ofgem in reforming the energy markets and central arrangements.

- Leading on Half-Hourly Settlement and Target Operating Model design for Ofgem
- Opening up Balancing Mechanism for new market participants
- Contributing to the Faster Switching Programme.

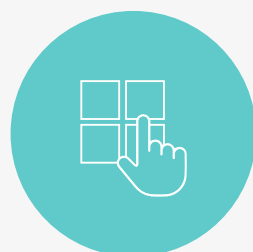
- Feeding into other codes administrators' work to ensure the 'whole system' approach
- Contributing to Government and Ofgem taskforces on Energy Data and EV Energy

Figure 06
Holistic
Business Model



Code Management

- Industry rules management
- Trusted critical friend
- Dedicated customer support



Code operation

- Central data platform delivery
- 24/7 settlement
- Design/change implementation
- Assurance services



New policy support

- Impartial, expert advice/guidance
- Market scanning
- Providing support to deliver policy outcomes

We also collect and distribute payments to Contracts For Difference Generators and Capacity Market providers

We are proud to receive a
Silver Investor in People
accreditation, which serves as
a testament to our continued
efforts to develop our people



Looking forward



“Focusing on performing above your expectations to deliver the high levels of service.”

Looking forward: Our strategic priorities for 2019/20

During 2019/20, you, our customers and stakeholders, will continue to be our number one priority. We will focus on performing above your expectations to deliver the high levels of service you have come to expect from us under what is becoming an increasingly multi-dimensional industry with many changes and demands impacting your business.

“Our customers and stakeholders will continue to be our number one priority.”

We believe there is clear scope for us to contribute to the energy industry transformation, as a trusted code manager and provider of key central systems and data platforms, while actively supporting and participating in a number of the Government’s and Ofgem’s joint Smart Systems and Flexibility Plan work streams. These workstreams include:

Enabling storage

Working with Ofgem and BEIS to ensure that the supply volumes used to settle amounts due under the CFD scheme and CM auctions are calculated appropriately for storage.

Supporting new business models

Designing a Target Operating Model for Market-wide Half-Hourly Settlement to facilitate all the possible innovations it could offer, in particular smart tariffs.

EV rollout and integration

Participating in the EV Energy Taskforce, we will explore the flexibility of the energy market and the arrangements in delivering EVs’ potential to provide Demand Side Response and storage services to ensure the efficient grid integration.

Energy industry data

Participating in the Energy Data Taskforce, which will identify opportunities in the energy sector where data can be used more efficiently.

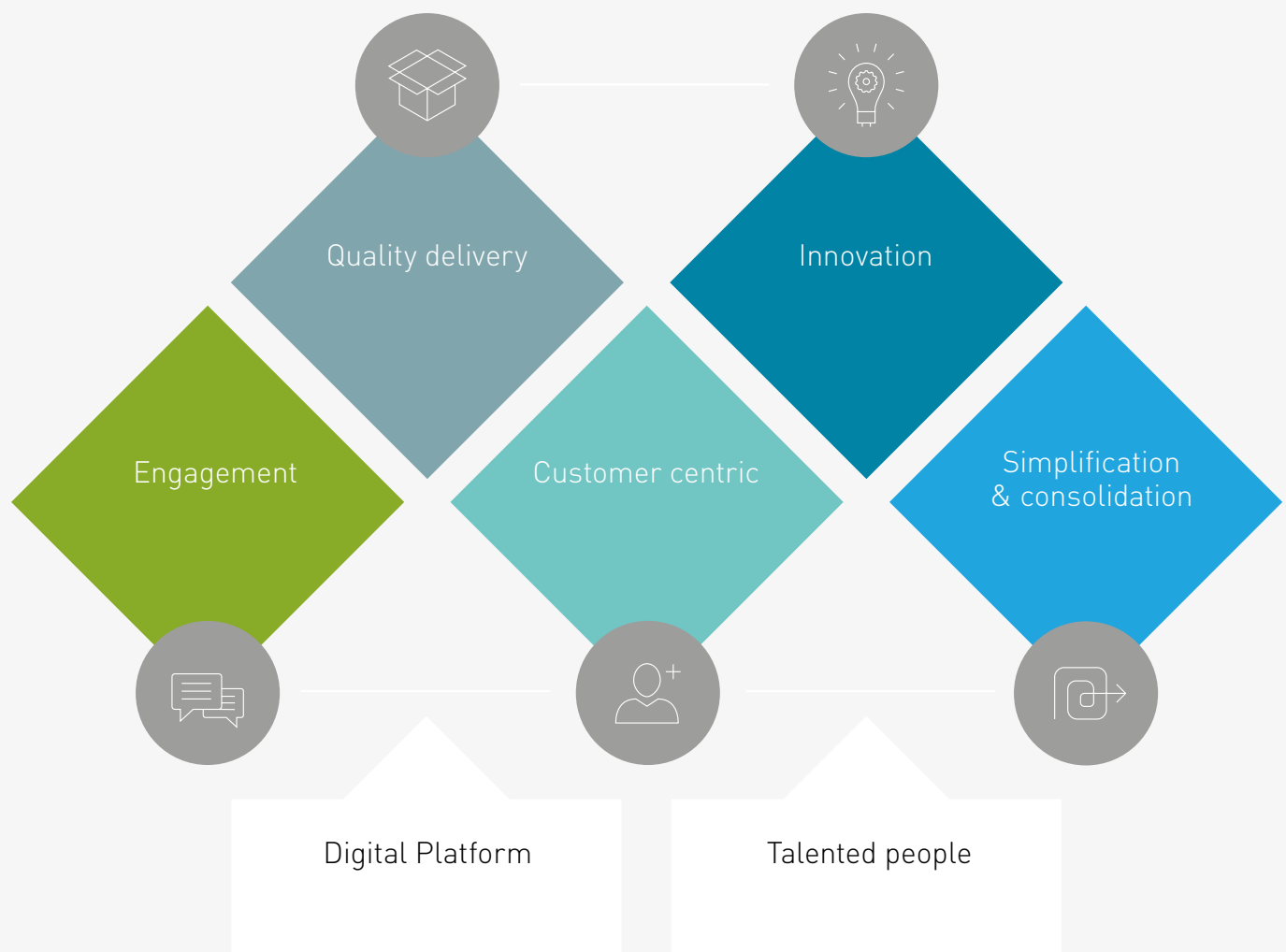
In light of the changing market landscape and priorities and to further build on our history as trusted, independent, reliable market experts, our corporate strategy for 2019/20 is summarised below:

With the support of our stakeholders and partners, simplify and consolidate complex and fragmented services, develop new market solutions and actively facilitate innovation for the benefit of GB energy markets and the UK economy.

Whereas last year we used Delivery, Improvement, Engagement, and Capability to describe our strategic activities; in 2019/20 we have explored our approach to focus on Quality Delivery, Innovation, Engagement, Customer Centric, Simplification and Consolidation, Digital Platform and Talented People.

The section on the next pages will provide details on the key contributions where ELEXON will focus its efforts in the coming year.

Strategic priorities for 2019/20



“We will focus on performing above your expectations to deliver the high levels of service you have come to expect from us.”





2019/20 Quality delivery: Actively managing our services to ensure that we deliver in a reliable, economic and efficient way

As well as business-as-usual, during 2019/20, we will continue to support the Government and Ofgem in their work to simplify and create consolidated, leaner and more agile market governance arrangements. The information below provides details on the key areas where we will focus in the coming year.

“We will always look at ways to simplify the BSC.”

Figure 07
Holistic business model



Code Management

- Industry rules management
- Trusted critical friend
- Dedicated customer support



Code operation

- Central data platform delivery
- 24/7 settlement
- Design/change implementation
- Assurance services



New policy support

- Impartial, expert advice/guidance
- Market scanning
- Providing support to deliver policy outcomes

We also collect and distribute payments to Contracts For Difference Generators and Capacity Market providers

01. Business-as-usual

You can be assured that throughout 2019/20 we will continue to focus on the day-to-day delivery of our BSC obligations to the highest standard you have come to expect from us. *See figure 07*

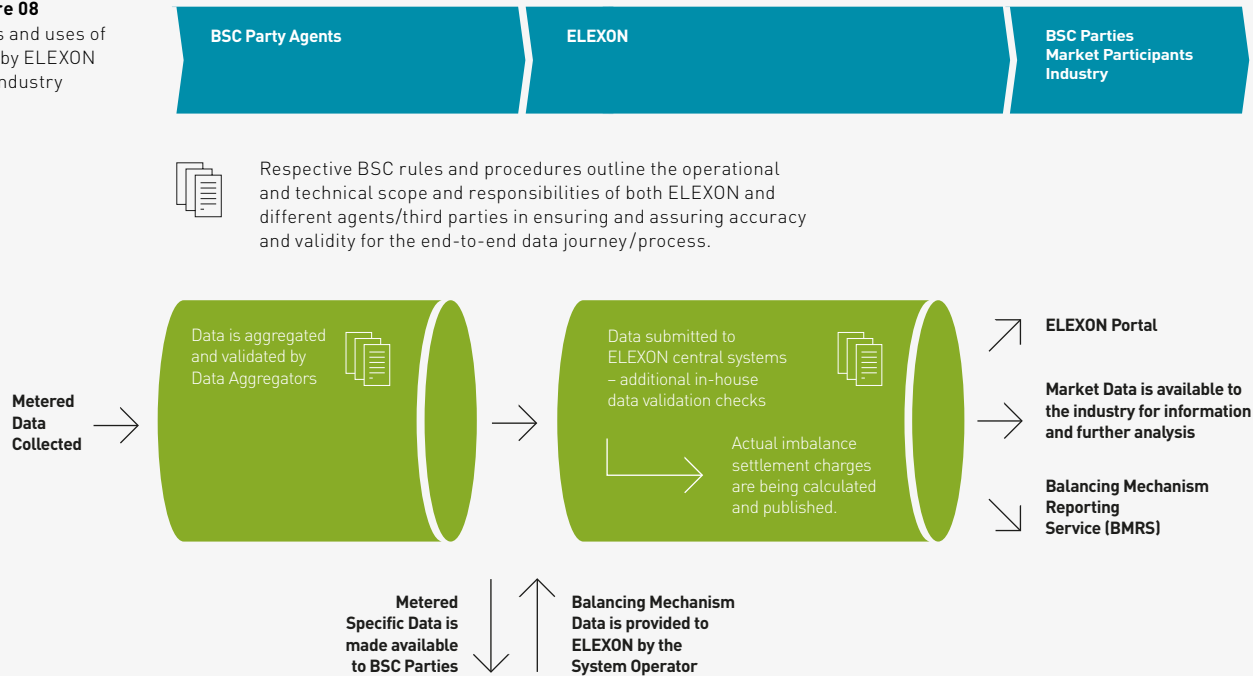
02. Delivering Change

We know that our BSC Change process is regarded as an industry leader for good governance and best practice, but as the market evolves, we will too.

While continuing to provide industry-leading customer service and expertise that we know you expect, we will always look at ways to simplify the BSC. We will also try to make it easier for you to get involved in changes and to keep you informed. We will look to:

- make Workgroup materials and their available on our public website
- use video conferencing facilities so that it is easier for you to join and participate in meetings
- make it easier for you to follow the progress of changes from ‘raise to implement’, by providing more visual information on our website and smarter information and a notification subscription service

Figure 08
Types and uses of Data by ELEXON and Industry



Your expectations are changing and we believe these improvements will make sure that the BSC Change process remains the ‘go-to’ model and fit for the future.

03. Data and Reporting

We know that data openness and transparency is currently top of the industry agenda and is being explored by many industries, including our sector.

And we are aware that we maintain critical processes for the wholesale market data collection, verification and reporting, so through a range of continuous improvements at every level we will deliver a better and faster service to the industry.

In fact, we see our business model evolving to include more data services.

BMRS

Publishing data is one of our key functions and delivering a high quality service continues to be our top priority. During the year, we will improve the BMRS platform in terms of accessibility, openness, consistency, so it can become your one-stop-shop for electricity market data e.g. expanding the number of APIs.

We will work closely with you to determine the scope of data that should be reported, while ensuring that any new initiatives to publish data fall within this scope.

Market report and insights

We will continue to improve and enhance our market reports and insights that you value so they provide you with the information you need.

Licencing/Open Data

ELEXON embraces the open data culture and we will work in line with Ofgem’s efforts to create a new paradigm of shareable industry data that can be queried and passed on to provide a collective benefit.

We aim to make use the rapidly growing estate of open data for your benefit by:

- Removing barriers for our smaller/ potential customers so that you can access information and direct your trials prior to joining the market.
- Opening up certain files (e.g. SAA-I014) so it is no necessary to have specially designed software to interpret the data.

See figure 08

04. Performance Assurance Framework (PAF) Review

We know performance assurance is a highly visible element of the service we provide you.

We have a dedicated page on our website that gives you with more information on the *PAF Review and Issue 69*.

While the approved recommendations from workstreams 1 and 2, around the Performance Assurance Framework (PAF), move into routine operations, we will continue to work on the remaining two work streams:

Workstream 3 – Review of the Performance Assurance Techniques (PATs)

This will produce a set of recommendations to enhance the risk mitigation ‘toolkit’ of efficient and cost effective assurance techniques that have sufficient preventative elements, and provide robust and flexible audits, performance monitoring and escalation.

Workstream 4 – Data Provision

Here we will create proofs of concepts to test the viability of alternative methods of data provision that place less burden on you to provide data and supports more accurate risk appraisal. *See figure 09 & 10*

05. European developments

We are working with other Code Administrators and engaging with Ofgem and BEIS to ensure we are as prepared as possible for Brexit. Regardless of the UK’s relationship with the EU after the planned withdrawal, we will update the BSC accordingly. Throughout the year, we will implement, where necessary, any further changes needed due to European developments like the European Electricity Balancing Guideline (EB GL), Harmonisation of Imbalance Settlement, Project MARI (Manually Activated Reserves Initiative) and the Clean Energy Package. We will provide you with timely information as soon as we can. *See figure 11*

06. Review of Section D Charges (BSC Cost Recovery and Participation Charges)

We are reviewing BSC Section D Charges to make sure that they are appropriately set and fit for purpose. The Issue Group, initiated in 2018/19, is assessing what behaviours are driving the costs, whether the current charging structure is fit for purpose and, if not, what alternative approach BSC Parties would prefer.

The Panel has encouraged the Issue Group to focus on simplicity and cost reflectivity, with a particular focus on charges that have not changed since pre-NETA Go-Live.

Figure 09
Timeline for the PAF Review

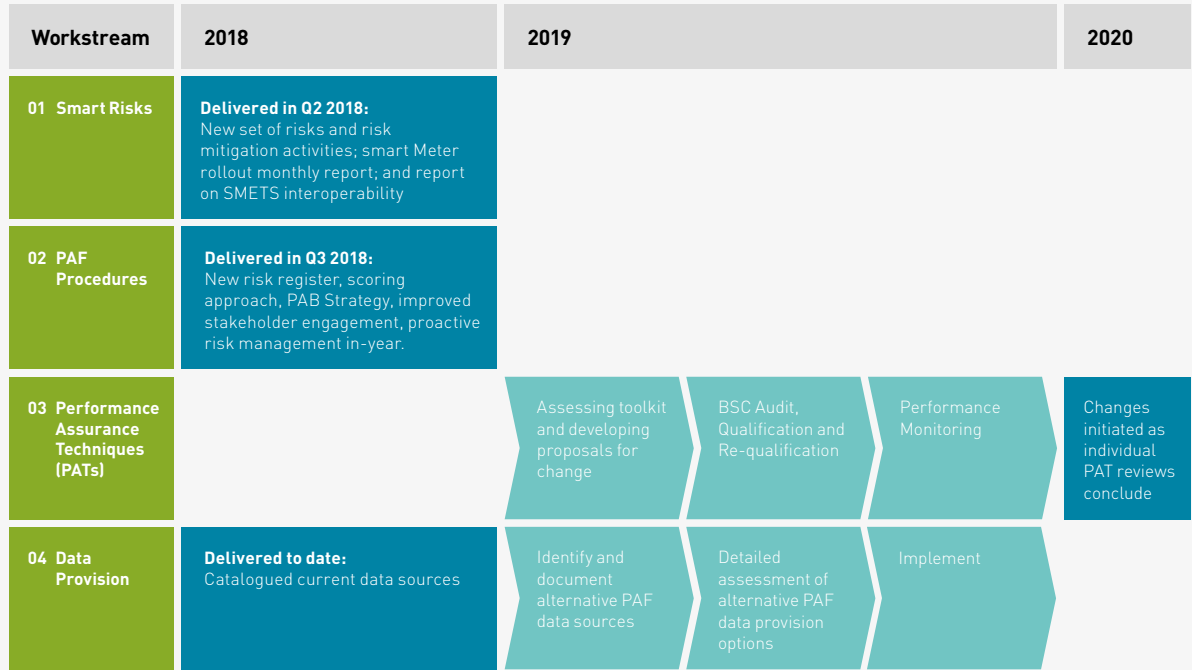
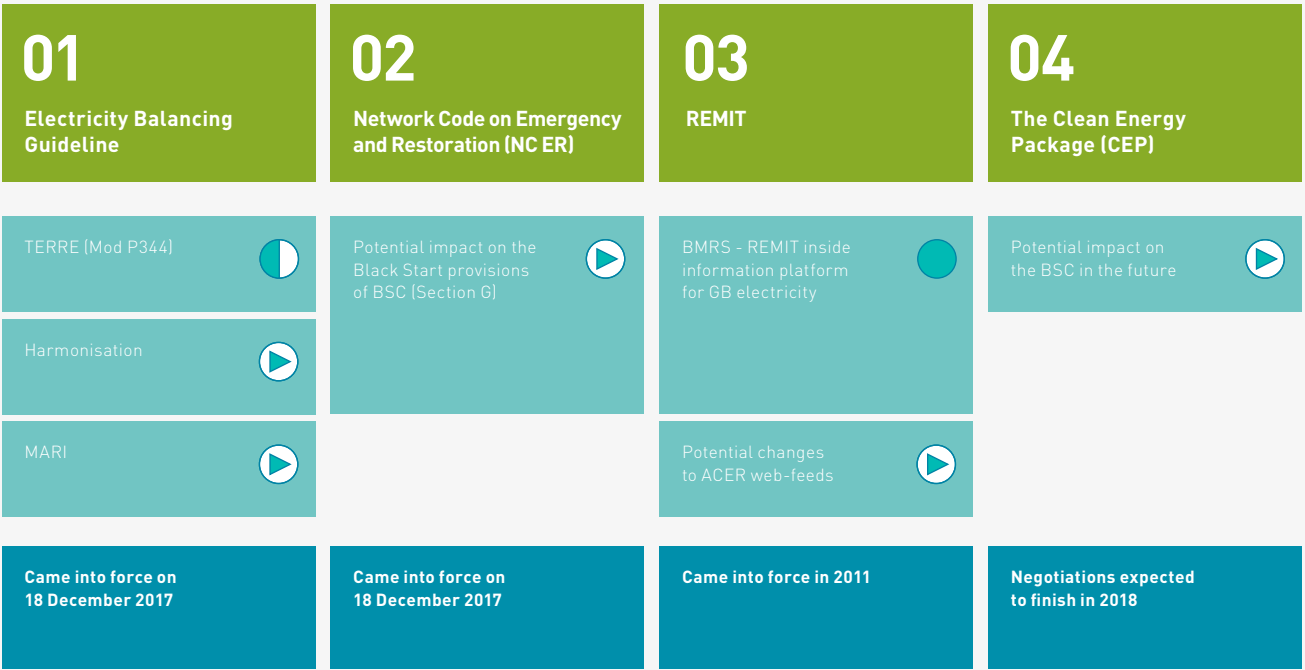


Figure 10
Figure of the PAF

1. What is PAF?
- Framework that allows BSC Parties to have confidence in the accuracy of the allocations of energy and charges
2. Why review it?
- Challenge and change
- Smart metering
 - New business models
 - Number and nature of risks
 - Re-assessing the current risks
 - Engaging Performance Assurance Parties
3. Outcomes
- Ensure the PAF
- Continues to meet the challenges of a rapidly changing market
 - Is flexible enough to identify and address current and future settlement risks and issues
 - Provides values to its stakeholders
4. Benefit
- Assures accuracy of settlement and that the cost is attributed to those causing risk



Figure 11
European Developements:
Future impact of key EU legislation





2019/20 Innovation: enhancing and evolving our services to support industry changes and development of the energy market

We are keen to ensure the BSC is an enabler to innovation, be it new services or business models that deliver benefits to our customers and end consumers. We do this through a mixture of evolving our services and working in close cooperation with a number of leading regulatory and industry bodies and initiatives.



In 2019/20, core modifications will aim to make BSC arrangements more inclusive for a wider range of market participants.

01. Opening up Balancing Mechanism for new market participants

BSC Modification P344 'Project TERRE' aligns the BSC with the European Balancing Project TERRE (Trans European Replacement Reserves Exchange) requirements. 'Project TERRE' is a pan-European balancing product implementation project, developed by some of the European Transmission

System Operators (TSOs), including the GB TSO National Grid.

This project will provide new opportunities for independent aggregators and customers to participate in markets that weren't previously open to such participants, hence promoting competition.

The P344 solution also widens access to independent aggregators participating in the BM market, thus opening up the balancing mechanism and other balancing services to a wider and more diverse set of market participants. *See figure 12*

'All very helpful for me. Going to the event not knowing much about project TERRE the introduction to project before going into more detail was useful to set the scene.'

Customer feedback from TERRE Industry Day, January 2018.

02. Leadership on future markets and settlement design

We are proud to have been at the forefront of the work on Half-Hourly Settlement since 2010. We see it as a key enabler for new innovations, including Demand Side Flexibility (DSF) as the data, which will be available through the smart meter roll-out will enable more companies, existing and new, to participate in flexibility markets and therefore deliver benefits to the end consumer.

We will continue to lead on Market-wide Half-Hourly Settlement with the Design Working Group (DWG), working closely with Ofgem to deliver our completed design work on the Target Operating Model towards the end of 2019.

Pre-requisites from integrating EVs into the energy system: smart meter roll out and Half-Hourly Settlement.

Looking at the transition to EVs from the electricity market's perspective, we believe that a whole-system approach will be critical to enable the Government's ambition on the roll out of EVs.

An accurate measurement and attribution of metered volumes and energy imbalances between different service providers will be key to assuring settlement accuracy.

03. Enabling new paradigms in the energy sector

Multiple Providers White Paper

We believe our white paper 'Enabling Customers to Buy Power from Multiple Providers' offers a practical proposal to enable new business models.

During 2019/20 we will continue to champion this opportunity, working on a technical solution, which could potentially be implemented in 2020.

'Behind the meter' resources

As the proportion of renewable generation increases and demand becomes more volatile due to 'Behind the Meter' generation and demand response, the need for increased systems flexibility becomes crucial. We will use the benefits that the P344 Project TERRE and Foundation programme will bring to the industry to support our customers in these enhanced services.

04. DNO to DSO transition

We believe that the transition from Distribution Network Operator (DNO) to Distribution System Operator (DSO) is a key enabler for further innovation in the electricity markets. We will continue to provide our knowledge and expertise to the ENA's Open Networks Project and other initiatives putting our customers' and stakeholders' needs first.

Figure 12
344 Implementation
timeline

Stage 1: February 2019

Changes to the Central Registration Agent (CRA), Energy Contract Volume Allocation Agent (ECVAA) and Supplier Volume Allocation Agent (SVAA) software to allow Virtual Lead Parties (VLP) to accede to the BSC and allow BSC Parties and VLPs to register Secondary Balancing Mechanism Units (SBMU).

Stage 2: November 2019

GB TERRE Go Live Date, which will be determined by ELEXON and the ESO:

Changes to the Supplier Volume Allocation Agent (SVAA), Settlement Administration Agent (SAA), Balancing Mechanism Report Agent (BMRA), Funds Administration Agent (FAA) and BSC Portal software to give full effect to the TERRE arrangements.



2019/20 Simplification and consolidation: Reducing complexity and fragmentation

We know that the use of electricity and the administration of energy services are radically changing, with the UK Government's commitment to the decarbonisation of the economy and considerable advances in technology means that end consumers are being presented with a growing number of new energy services.



To date the industry has operated within the limits of established rules and regulations set out in legislation, licences and the industry codes and we believe these established rules and systems are not changing quickly enough to keep up with the pace of innovation across the energy market.

We have been advocating for a number of years that changes across market governance arrangements are needed to ensure the GB energy system as a whole remains flexible, responsive and rapidly evolving to support a range of new business models. We will continue our close cooperation with BEIS/Ofgem on smart and flexible energy systems work, Ofgem's Innovation Link (regulatory sandbox), InnovateUK, Energy Systems Catapult and other key industry players and initiatives to support innovative businesses into the market arrangements.

01. Simplification

We understand that navigating the industry governance landscape can be extremely challenging for new (and indeed existing) market entrants, with numerous licence conditions and codes governing the wholesale and retail operations in gas and electricity markets. We have been highlighting a number of steps that should significantly improve the landscape of code services in a timely manner. These proposals range from amending code panel and code manager/delivery body objectives to appropriate empowerment of code managers to raise changes that are beneficial to competition and consumers.

We will continue to support and contribute to the Energy Codes Review, launched by BEIS and Ofgem in 2018 advocating change for the benefit of our customers and end consumers.

We have highlighted an opportunity arising from the Retail Energy Code (REC) to look beyond the retail part of the market. There could be an opportunity to align the wholesale/settlement aspects of the gas and electricity code governance framework and administration further; something that would reduce the complexity and cost burden for market participants and consumers respectively.

02. Consolidation

We have been fully involved in shaping and delivering a number of Ofgem's Significant Code Review (SCR) programmes to bring the electricity industry's central arrangements in line with changes in generation and consumption of electricity. Under its Faster Switching programme, Ofgem plans to consolidate the retail market code provisions under a newly introduced Retail Energy Code (REC).

We believe that greater alignment and even consolidation of central code services is possible, bringing the 'whole systems' approach to life across the gas and electricity codes.

End customer-facing business models such as peer-to-peer trading, small-scale electricity storage (residential and small to medium commercial), smart tariffs (time-of-use tariffs) and a number of other new services rely on changes to the wholesale/settlement market arrangements specified under the BSC. That is why we firmly believe that a closer alignment between retail and wholesale markets is a much needed first step to allow for further alignment between electricity and gas, energy and transport, energy and heat networks.

“We believe that greater alignment and even consolidation of central code services is possible, bringing the ‘whole systems’ approach to life across the gas and electricity codes.”



2019/20 Customer centric: Improving the customer experience and develop richer customer relationships

We are proud that our programme of comprehensive training and bespoke advice, tailored to every BSC signatory’s needs, is well regarded in the industry. Our high levels of service have been independently verified through Ofgem’s code administrators’ performance survey for 2017 and 2018 coming top two years running, in addition to ELEXON’s own independent annual customer survey.

‘Really impressed with the knowledge of the speakers regarding the Imbalance Settlement, Imbalance Prices and SVA presentations... All presenters were friendly and welcoming.’

Customer feedback on Introducing ELEXON seminar 2018

01. Delivering the highest standard of services to BSC Parties

Industry days, educational sessions and webinars

We will continue to organise industry days and training sessions that are of interest to you and your business.

We will always make sure that the agenda is updated to reflect market trends and your business needs.

We will also increase the number of webinar topic-led, bespoke training sessions, making them available on our website to all.

During the year, we will monitor your training needs and look to add more specialised training to ensure that ‘supplier in a box’ entrants are aware of their obligations under the BSC and can deliver those successfully.

New ways to support BSC Parties

Through your feedback and as part of the renovation of the website, you have inspired us to improve the user experience for market entrants, including a more interactive and informative website with forms and tracking tools to increase engagement and usability. We will, through the implementation of the new Party Management Platform, reduce the amount of forms required by market entrants.

02. Helping new market entrants to navigate industry processes

We understand that the landscape of industry codes is complex for a new entrant, so we will identify further opportunities to help new and existing BSC Parties overcome this complexity by sharing information on the BSC through our continued efforts to drive better coordination between code administrators. See figure 13



Figure 13
ELEXON’s Programme
of Training



*Key module and topics are outlined. On-going support is available from the time of first meeting.



2019/20 Engagement: Working in partnership to enable ‘whole-system’ approach and industry convergence

As a major industry code manager we know that a whole-system approach to the fundamental changes in the GB energy industry structure requires close collaboration between all parties, if the vision of the Clean Growth Plan and Industrial Strategy and the Smart Systems and Flexibility Plan are to be delivered and implemented on time. To this end, we will continue our work with the industry, key government departments and Ofgem with an aim to identify practical solutions to the numerous challenges.



01. Enabling whole-system approach to industry changes

Over years of operation, we have developed deep in-house expertise which the industry, Ofgem and government rely upon in bringing changes and new arrangements to the energy industry.

During 2019/20, we will use our expertise to proactively support change management, workgroups with guidance and advice in technical solutions, and sound legal advice so we continue to play a key role in the timely completion of the major industry change initiatives.

“It is always useful to stay up to date with developments and a positive sign to see two Ofgem colleagues at the event. The subject matter doesn’t directly impact my company at present, however, the white paper created good debate.”

Feedback from Half-Hourly Settlement
design stakeholder event, 15 May 2018





2019/20 Digital platform: Creating a digital platform to meet the changing energy market

In 2018/19 we embarked on a multi-year programme to re-architect our central systems, which have served the industry well since their introduction in 2001 under the NETA programme. The first release will deliver P344 (TERRE) on hybrid architecture. The programme has been designed as a phased approach to leverage the BSC change investment to minimise the overall cost and risk to Parties and to spread the cost across financial years to reduce the financial impact of BSC costs. Upon completion the Foundation architecture will deliver a flexible, scalable and open platform to provide market entry, settlement and data insight services to meet the future needs of a changing energy market.

01. Foundation architecture: Data and services platform

Our new services and open data platform will provide enhanced capabilities to the electricity market. The modernised technical architecture of the BSC systems will be more flexible, making them easier and quicker to adapt to the needs of the future market and customers.

Specifically, the new data processing framework and settlement micro-services will enable us to more quickly and clearly define new and improved services facilitating requests for smaller changes economically and new services more rapidly.

Intelligent auto-provisioning of computer resources allows for truly elastic scaling in response to data growth with no impact on settlement performance and on-demand.

The new data platform provides the foundation on which to build new capabilities, providing options for developing services that use different technologies while leveraging common governance and security services. It aims to help foster innovation by providing common data related services and governance capabilities, freeing new service designs from non-value-add overheads.

In 2019/20 we will be completing the Data and Services Platform built for TERRE, adding Analytics capability and migrating further Legacy Agent services in line with our technology route map. See figure 14

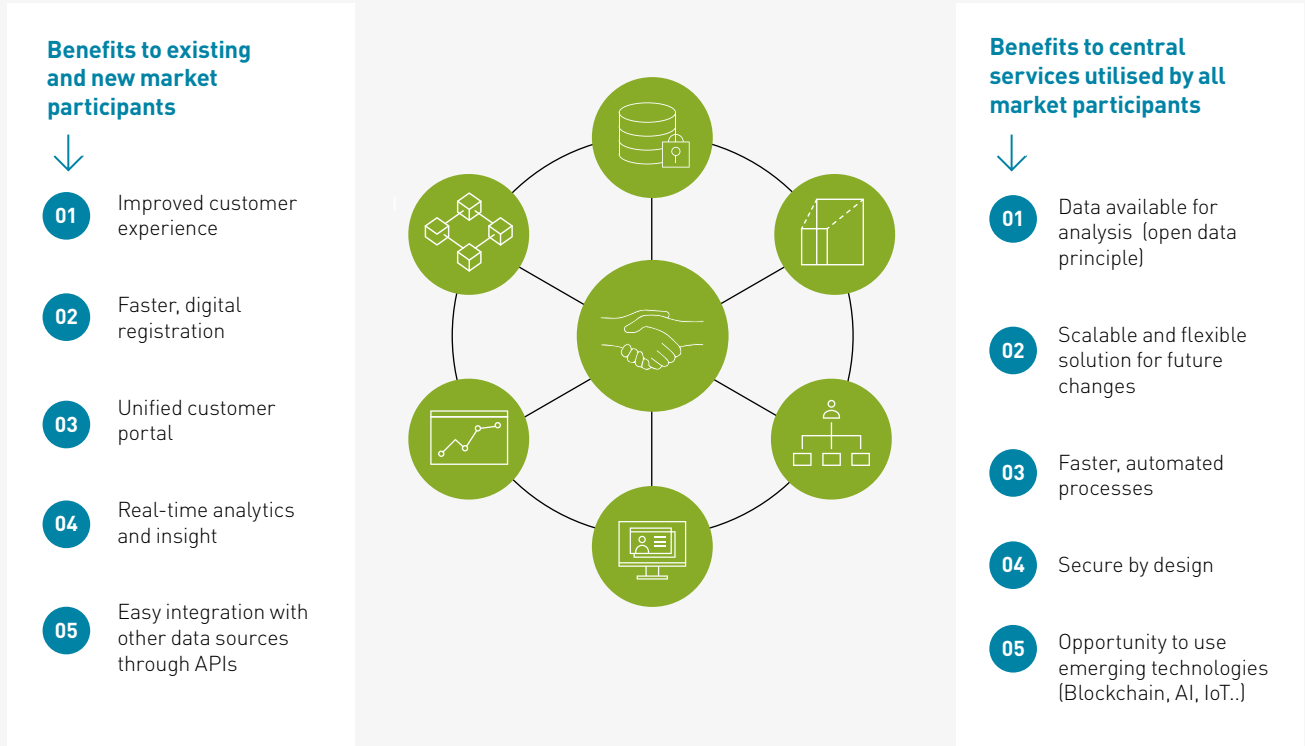
02. Foundation architecture: Party Management Platform

Our new Digital Party Platform will digitise the existing process of submitting paper forms for the Market Entry, Exit, Balancing Mechanism (BM) Units, Authorised Signatories and other central registration data through a modernised digital platform. The benefits of having this 'self-service' gateway for submission and management of central registration data are:

- Reduce the risk of manual error and rework through automated data validation
 - Three-way visibility of status and progress in terms of where potential Participants are in the Registration Process (Customer, ELEXON, our Service Providers)
 - Guidance in respect to BSC obligations and processes compliance
 - Support to P344 Modification for registration of Virtual Lead Parties and an increase in new entrants will be accommodated and facilitated effectively.
 - Improved customer engagement – more streamlined end-to-end customer journey.
- In 2019/20 we will build on the Digital Party Platform to include more of the market entry and registration services to enhance customer experience focusing on CDCA (Central Data Collection Agent) and MDD (Market Domain Data) processes.



Figure 14
Foundation architecture





2019/20 Talented people: Developing our end-to-end service capabilities to enable industry to benefit from our experience

We recognise the importance of developing our people's skills to continue delivering our value-adding services in code management, central systems delivery and policy support.

01. Building on our end-to-end service capabilities

We are proud that our remit extends beyond basic code administration. We are responsible for managing and delivering the end-to-end services set out in the BSC and aiding the development of industry change proposals and parties' understanding.

We will continue to focus on developing our peoples' expertise in order to build capability in the business as we gain a better understanding of the skills needed to perform in a rapidly changing energy market.

This is particularly important in our Foundation Programme delivery where we have and will bring in people with new skills and experience as the programme requires.

02. Developing and retaining talent

Internally, the evolving programme of manager's training, coaching and mentoring will ensure we achieve the right balance between a high degree of flexibility and the robust, predictable service delivery for which ELEXON is recognised.

03. Maintaining our investor in people status

We are extremely proud to earn the Silver Investor in People accreditation in recognition of our efforts to develop our people. We are committed to maintaining this status and reaching the next level.

04. Knowledge sharing and transfer

We will maintain our focus on knowledge sharing and transfer to enable our experts of tomorrow. We will continue to build on our process of mentoring, whereby we will identify individuals within ELEXON who are willing to take on the role of trusted advisor, teacher and wise counsel to another person or group of people, to ensure that tacit knowledge is transferred between long standing and new ELEXON employees. This will also present a new opportunity for our staff in developing their mentoring skills as well.



EMR Settlement Services Provider

BSC Parties will be aware that ELEXON calculates, collects and distributes the payments to EMR Contracts For Difference (CFD) generators and Capacity Market (CM) providers. We do this via our wholly owned, separate subsidiary EMR Settlement Ltd (EMRS) under a contract with the Low Carbon Contracts Company (LCCC) and the Electricity Settlements Company (ESC).

Under the EMR contract ELEXON:

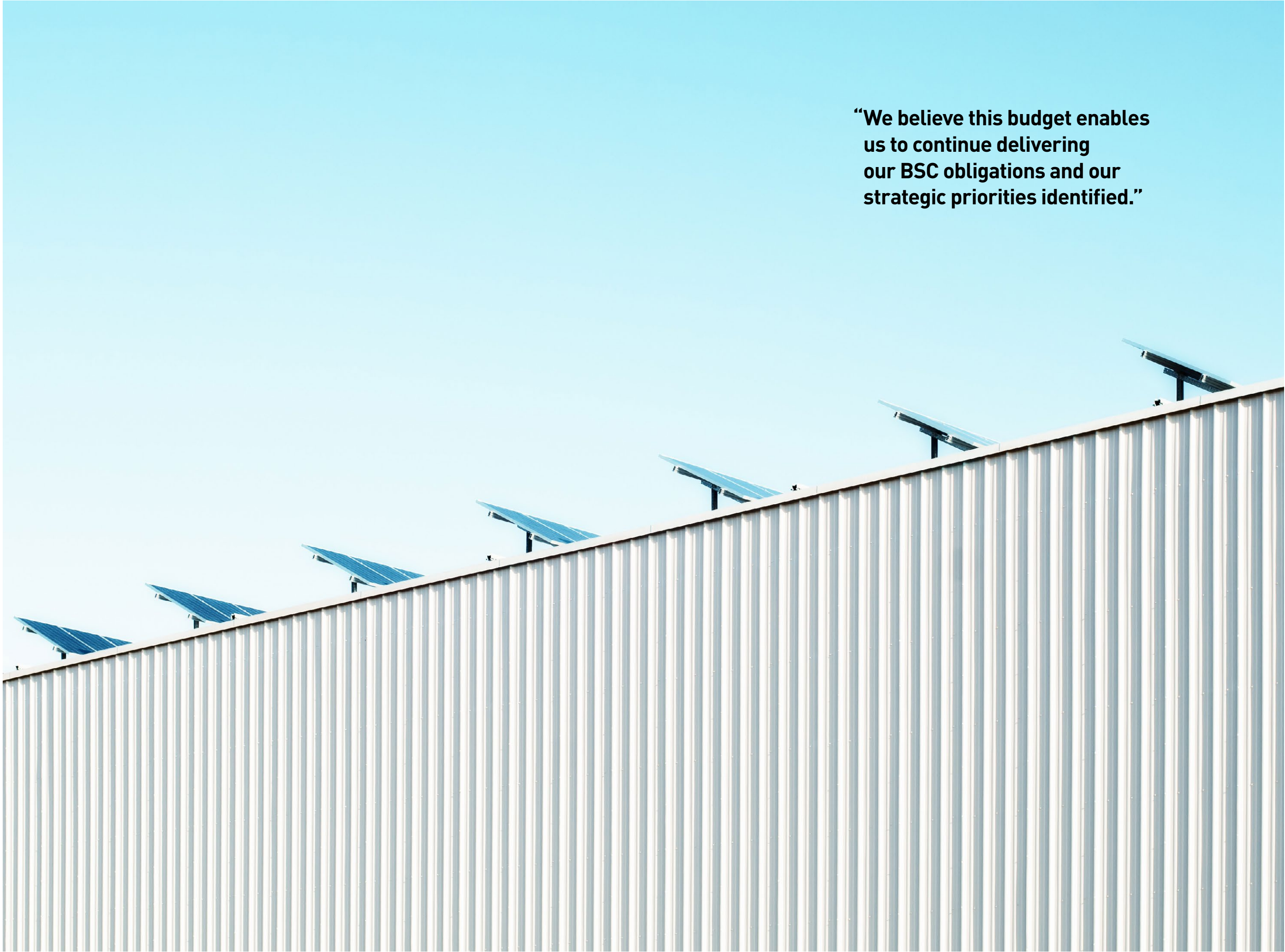
- collects meter data for Contracts For Difference (CFD) generators and Capacity Market (CM) providers
- maintains systems to collect, securely store and transmit data
- manages settlement of payments
- holds and manages reserve funds
- calculates and collects payments.

Our business separation ensures that any risk or liabilities from EMR settlement cannot impact ELEXON. This separation ensures risks and liabilities from EMR settlement activities cannot impact ELEXON. Whilst some of our people are full-time on this EMR activity, other of our experts are part-time but regardless, all record their time to ensure their cost is allocated appropriately to BSC or EMR activities. This enables us to allocate a proportionate share of the ELEXON overheads such as office costs etc. To date nearly £3.5m of such costs have been borne by EMRS, meaning that without the EMR activities, BSC Parties would have had to bear an additional £3.5m.

The contract with LCCC and ESC provides for five yearly extensions and they are currently considering whether to extend or tender the services afresh. Based on our excellent track record of service delivery and system implementation, our not-for-profit charging model (like the BSC) and the synergies enjoyed from swift access to ELEXON's settlement experts, we would hope LCCC/ESC extend the contract. However, we must also be able to participate in any tender. Fortunately, the changes to the BSC which enabled ELEXON to provide the EMR settlement services anticipated this and provide for the cost of our participation in such a tender to be treated as BSC costs.

Budget

“We believe this budget enables us to continue delivering our BSC obligations and our strategic priorities identified.”



Budget overview

This part of the document details the budgeted costs for 2019/20 in support of our strategy as laid out earlier in this Business Plan. We believe this budget enables us to continue delivering our BSC obligations, particularly by implementing leading technology platforms, increasing our engagement with our stakeholders and focusing on developing our people capabilities to deliver structural solutions to the changes facing the energy industry.

This will be the fifth year that ELEXON, in its role as Settlement Services Provider for EMR, delivers its services via its subsidiary EMR Settlement Limited (EMRS) to Low Carbon Contracts Company Limited (LCCC) and Electricity Settlements Company Limited (ESC). All EMR related costs are fully funded by LCCC and ESC and the total costs of LCCC and ESC (which include those of EMRS) are consulted on separately by BEIS. Our participation also enables us to offset some of our overheads which would otherwise have been borne by BSC Parties (2017/18: £763k); £3.5m to date.

The budget to deliver BSC activity in 2019/20 including the detailed breakdown of work streams described in this Business Plan is £53.2m. This represents an increase of £10.6m (24.9%) against

the current year’s forecast. Whilst this budget is substantially more than previous ELEXON budgets, it will ensure we are able to design, test and deliver our new systems, address the changes coming from industry while maintaining our support to BSC Parties. We have had 140 new BSC Parties since April 2015, which represents a 44% increase. There is evidence we do more to support them:

- In 2015/16 our OSMs were in contact with BSC parties through either a teleconference or a customer visit 33 instances per month on average. We are already at 89 instances per month on average in 2018/19 and expect continued growth
- The number of trading disputes raised have also increased by 52% across the same period, a trend we anticipate being sustained
- We managed 171 more credit defaults in 2017/18 than in 2015/16 (475% increase) and the 2018/19 statistics show this is continuing
- Modifications and changes raised are becoming more complex and require an average of 10 workgroup meetings now

against 2.5 in 2015, which increases the effort needed and the average time taken to progress change (it now takes 214 days for a Modification to be approved on average, 52 days more compared to 2015/16)

- The consultations that have required attention have increased by 127%.

We have also proactively introduced the electricity market sandbox as means of supporting innovative business models and facilitating new technologies in the electricity market. We will move from the design to implementation phase of Market-wide Half Hourly Settlement, and as explained in our white paper (subject to a Modification), design the arrangements to enable consumers to have multiple providers.

In addition to the significant increase in our Business as Usual range of activities, as explained above, there are a number of industry-wide taskforces and reviews ELEXON has been invited to. As detailed earlier, these include the Energy Data Taskforce, EV Energy Taskforce, the BEIS/Ofgem review of codes and code governance, and actions arising from the Smart Systems and Flexibility Plan. This budget includes resources to allow us to effectively contribute to those joint BEIS/Ofgem projects.

As outlined in 2018/19 ELEXON started the Architecture Strategy project which allowed us to establish a better understanding of the significant market

changes that ELEXON is facing, and define how ELEXON’s processes and systems would need to evolve to address them. While we have continually been improving our processes, our core systems have been in place and served the industry well since the NETA arrangements came into force in 2001. The Architecture Strategy Project proposed a Foundation programme, which recommends moving to flexible and scalable platforms that will enable faster and more efficient delivery of change while building the capabilities required to capture future market opportunities and benefits to industry.

The increased cost anticipated in the coming year is driven by the impact of our Foundation programme on our regular costs. The first release will be implemented and its first effects are reflected in this budget, as before efficiencies can take place it will increase our operational and contracted costs while we run two systems in parallel and work on delivering future releases to our Foundation Architecture.

ELEXON is a not-for-profit entity, funded by electricity market participants. We do not carry any reserves or retained capital and any underspend against budget is always returned to parties. In light of this, budgeting for uncertainties in advance of any new financial year, with no other access to working capital, requires careful consideration. We need to address contingencies mindful of this constraint, while also endeavouring to set challenging financial targets for the business, which

ensure we deliver the best possible value for money to the industry.

In addition, due to ELEXON’s funding model and the absence of retained capital, after consultation with our auditors and exploring financing options, we are proposing, in accordance with allowable accounting treatment under accounting standard FRS102, not to capitalise this investment. Due to the phased nature of this transformation, we do not believe that this will materially impact the profile of our charges to industry compared to a “big bang” approach.

Table 02 below details the total costs of ELEXON regular activity net of staff and overhead costs for EMR activities (which are fully funded by LCCC/ESC) since NETA go-live in 2001/02 in real terms (in 2018/19 money after applying April RPI of each year).

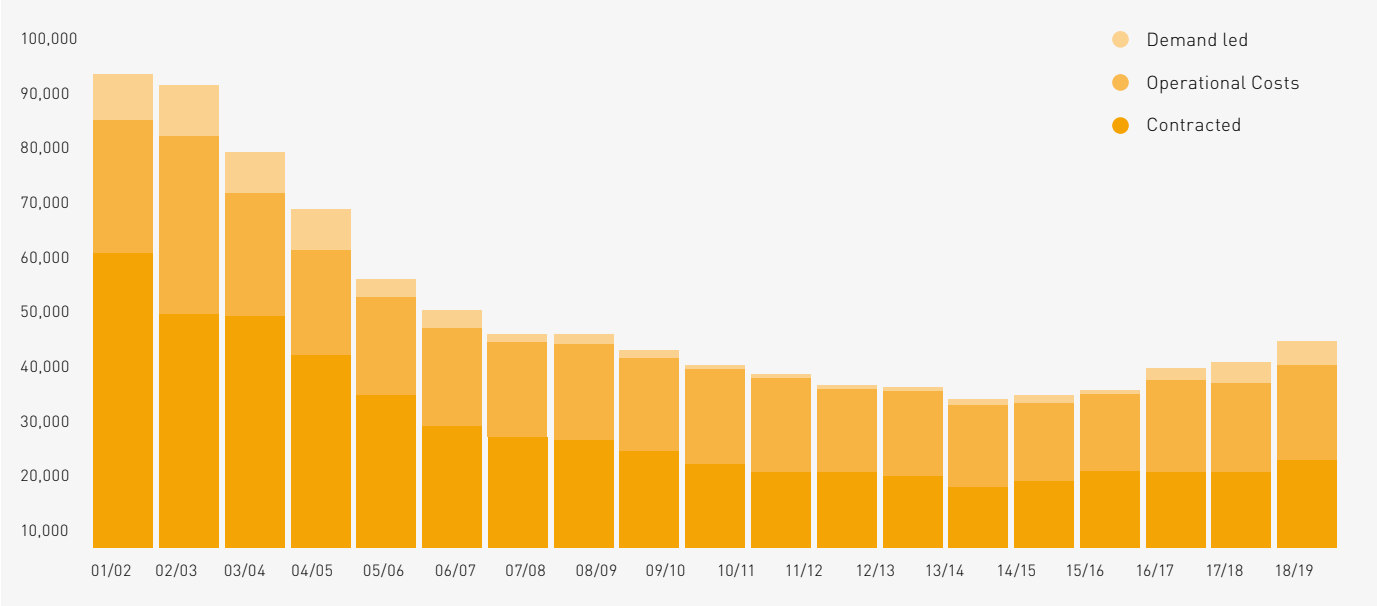
It shows our success over the years in bringing costs down but also reflects in recent years our investment in future proofing our central systems, as well as the increased activity in a growing sector.



Table 01
Budget Summary

Item	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
ELEXON Operational	21.5	20.8	23.2	(2.4)	(11.5)	23.0	23.3
EMR Contribution	(3.3)	(3.0)	(3.3)	0.3	10.0	(3.1)	(3.1)
Subtotal	18.2	17.8	19.9	(2.1)	(11.8)	19.9	20.2
Contracted Costs	15.3	15.1	18.0	(2.9)	(19.2)	17.0	17.8
Total Regular Activity	33.5	32.9	37.9	(5.0)	(15.2)	36.9	38.0
Demand Led Costs	4.2	4.1	4.9	(0.8)	(19.5)	3.7	3.7
System Strategy	5.4	5.3	9.9	(4.6)	(86.8)	11.5	11.5
Market Development	0.5	0.3	0.5	(0.2)	(66.7)	0.5	0.5
Total Projects	10.1	9.7	15.3	(5.6)	(57.7)	15.7	15.7
OVERALL TOTAL	43.6	42.6	53.2	(10.6)	(24.9)	52.6	53.7

Table 02
Total costs of ELEXON regular activity





ELEXON operational

The budget for our operational costs for 2019/20 is £19.9m, 12.1% more than the current year forecast, and includes costs such as people, occupancy, staff related and administrative expenses, consultancy and legal support. This also includes income from EMR activities as a result of providing resources to our EMR subsidiary EMR Settlement Ltd for which it recompenses ELEXON. See table 03 below for operational costs budget.

Table 03
ELEXON Operational

Item	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
People Costs	14,198	13,931	15,548	(1,617)	(11.6)	14,965	15,240
Other operational overheads	7,349	6,842	7,590	(748)	(10.9)	7,995	8,014
EMR Contribution	(3,335)	(3,043)	(3,262)	219	7.2	(3,098)	(3,098)
Operational Total	18,212	17,730	19,876	(2,146)	(12.1)	19,866	20,156

People costs

People (employee and contractor) costs is expected to increase by £1,617k (11.6%) as a result of a higher average headcount necessary to deliver this Business Plan. The headcount illustrated in Table 04 is an average for the year and does not represent the actual number of persons, but a full time equivalent of those engaged, and therefore representative of the costs.

To fulfil our role as the EMR Settlement Service Provider, via ELEXON’s 100% owned subsidiary EMRS, we have contracted with LCCC and ESC to provide the services on day rates for those personnel working on EMR. Those rates fully recover our management overheads, office overheads and occupancy costs on a not for profit basis. We have budgeted 29.5 FTEs to deliver the EMR services. The £3.3m EMRS Contribution

represents the income from LCCC and ESC to pay for EMRS, which is made up of people costs for those directly or partially utilised to deliver EMR services, as well as a share of fixed overheads apportioned on a per person basis. The fixed overheads element of the contribution defrays the fixed overheads that BSC Parties are currently paying, for example occupancy and the IT infrastructure, and is budgeted to be £0.9m for 2019/20.

Table 04
ELEXON People Costs and Average Headcount

Headcount	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to March 2018/19 Forecast £'000	Variance to March 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
Average Employee Headcount	176.9	167.3	189.2	(21.9)	(13.1)	185.6	184.6
Average Contractor Headcount	12.7	12.6	11.5	1.1	8.7	10.9	10.4
Average Total Headcount	189.6	179.9	200.7	(20.8)	(11.6)	196.5	195.0
EMR Contribution	(30.5)	(23.6)	(29.5)	5.9	25.0	(28.5)	(28.5)
BSC BAU Headcount	159.1	156.3	171.2	(14.9)	(9.5)	168.0	166.5

“With the support of our stakeholders and partners, simplify and consolidate complex and fragmented services, and actively facilitate innovation for the benefit of GB energy markets and the UK economy.”

ELEXON’s Coporate Stategy

Contracted

A significant proportion of our costs of delivering the BSC arrangements come from contracted expenditure for the BSC Agents and contracted service providers. These are predominantly fixed costs, linked to indexation.

To reduce risk in the Foundation architecture we are running legacy systems in parallel with the new technology platforms until such time as we can retire these legacy systems. We are focusing on upgrading and enhancing our current underlying infrastructure of the central

systems in 2019/20 to future-proof the infrastructure and technology for the coming years.

The main drivers of our £2.9m (19.4%) increase are as follows:

- Central Systems – during the transition period to the new platform, to reduce risk, an approach has been adopted to continue to run the legacy systems for some BSC Agent processes for a transition period. This risk mitigation approach gives rise to a £1.701m increase, but avoids a “big-bang”

implementation and increases the opportunity for a stabilisation period and ensuring that the new platform does not introduce any unintended consequences or risk

- Increased Data Transfer Service (DTS) costs of £575k directly relating to an estimated, increase in usage, and announced price increase from Electralink.
- We have built in a contingency of £250k for this transitional period, which will be returned to Parties if unutilised.

Table 05
Contracted Costs

Item	Year to March 2018/19 Budget £'000	Year t March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
TOTAL CONTRACTED	15,282	15,098	18,026	(2,928)	(19.4)	17,044	17,755

Demand led

This area of our budget is entirely demand driven, and is set to ensure that we are appropriately funded in order to be able to implement changes requested by industry.

The budget for BSC systems releases has been set at £4.7m. This is an increase on the previous year’s budget, as well as our current forecast for 2018/19, due to the increasing amount of change we are

seeing within the industry – in particular the Project TERRE implementation into GB market arrangements which is budgeted to cost approximately £2.1m. The remainder of the £2.6m budget is attributed to scheduled BSC changes based on the impact assessment of known modifications with estimates based on historic change costs.

Table 06
Demand Led

Item	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
IA - Modification Proposals	100	50	105	(55)	(110.0)	105	105
BSC Systems Releases	3,900	3,900	4,732	(832)	(21.3)	3,500	3,500
Panel Committee Projects	129	70	50	20	28.6	50	50
PAF Review	99	89	37	52	58.4	-	-
Total Demand Led	4,228	4,109	4,924	(815)	(19.8)	3,655	3,655



“Pursuing our strategic priorities and cover any non BAU activities regarding the developments within the GB energy market.”

System strategy

The Architecture Strategy was approved and endorsed by the ELEXON Board in 2016/17 and discussed with the BSC Panel. In the next few years, we are committed to transform and transition (Foundation Programme) the current ageing BSC Central Systems to a platform using modern technologies, which will be easier to maintain, mitigate the risks of failure and deliver better value for money to BSC parties, as well as greater flexibility for future market arrangements.

Phase 1 was successfully completed, and in May 2018 the Board approved further investment over the next two

years to deliver Phase 2 of the Foundation Programme.

In 2018/19 we are developing a new party management platform and a new data and calculations platform. We are also delivering the BSC changes (P344) required to support the TERRE solution.

This has enabled us to use a stable, hybrid architecture in legacy and new foundation that we will further develop and enhance. We have included a budget of £9m in 2019/20 for provision of the Foundation programme.

Table 07
System Strategy

Item	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
System Strategy	5.4	5.3	9.9	(4.6)	(86.8)	11.5	11.5

Market development

The budget for Market Development has been set at £0.5m to allow us to cover any non business-as-usual activities regarding the developments within the GB energy market.

There remain a number of industry developments that require ELEXON to continue to monitor, engage and informally assess impacts outside of the formal change process. These include developments from European network codes (particularly assignment of our

existing roles), review of codes and code governance , closer cross-code collaboration to improve the customer experience, Brexit and its impacts on the BSC and the potential for discussions on the future role of the independent system operator (especially its new responsibilities as proposed by Ofgem). In particular, the recently announced joint BEIS and Ofgem review of codes and code governance is unknown in scope or duration, but ELEXON will participate in and support this review.

In addition, we will continue to engage with new market entrants and their proposed business models, seeking to ensure the BSC enables innovation and will further explore providing data to our customers accompanied by insightful analysis. Furthermore, we need to understand the potential impact upon the BSC of the proposed new Retail Energy Code (REC). We have again budgeted for these market developments should we require to backfill or seek additional support, expert advice or guidance.

Table 08
Market Development

Item	Year to March 2018/19 Budget £'000	Year to March 2018/19 Forecast £'000	Year to March 2019/20 Budget £'000	Variance to 2018/19 Forecast £'000	Variance to 2018/19 Forecast %	Year to March 2020/21 Projection £'000	Year to March 2021/22 Projection £'000
Market Development	0.5	0.3	0.5	(0.2)	(66.7)	0.5	0.5

Charging analysis

This section outlines how we expect to charge the budget to BSC Trading Parties. Table 8 contains charging proposals from Section D of the BSC. All of the charges presented in Table 9 exclude Value Added Tax (VAT). *See table 09 Section D – Charging **

The BSC Panel has endorsed a review of Section D Charges (BSC Cost Recovery and Participation Charges) to ensure that they are appropriately set and fit for purpose. It has instructed ELEXON to engage an Issue Group in assessing what behaviours are driving the costs, whether the current charging structure is fit for purpose and, if not, what alternative approach BSC Parties would prefer. The Panel has encouraged the Issue Group to focus on simplicity and cost reflectivity, with a particular emphasis on charges that are currently without drivers and those that have not changed since pre-NETA Go-Live.

Table 09

Charging*
<div><div><div>– £500 Application Fee</div><div>– Membership fee of £250 per month</div><div>– CVA Metering System Monthly Charge of £50 per month. CVA BM Unit Monthly Charge (other than for Supplier BM Unit) of £100 per month (this charge is levied on each pair of BM units in the case of an exempt generator)</div><div>– For communication line and TIBCO charges, please refer to the ELEXON website</div><div>– Notified Volume Charge per Gross Contract MWh at a rate of £0.0005/MWh</div><div>– For all Base SVA BM Units a charge of £100 per month</div><div>– For all Additional SVA BM Units a charge of £60 per month</div></div><div><div>– SVA costs split:</div><div>– 50 percent of costs are paid by generators on basis of metered energy volumes</div><div>– A fixed fee of £0.00632 per SVA Metering System per month</div><div>– Remainder allocated on Suppliers Non Half Hourly MWh market share.</div><div>– All remaining costs split on basis of metered energy volumes.</div></div></div>
<div>* These are based on the current charges. They are subject to change following a periodic review approved by the Panel. Please refer to the BSC website for current rates.</div>

01

Based on the information in Table 8 examples of charges to BSC Parties are provided.

02

Firstly, the 2019/20 Annual Budget is set out in Table 10.

03

Secondly, various assumptions about the size of the market are made. These are presented in Table 11.

Thirdly, the charging regime from Section D of the BSC in Table 11 is then applied to costs in Table 12 based on the assumptions in Table 13. This gives the estimated charges (either specified charges or £/MWh fees) as shown in Table 12.

Table 10
Assumed split of costs

Item	2018/19 Budget	2018/19 Forecast	2019/20 Budget
SVA Costs	4.4	4.8	5.6
Other Costs	39.2	37.7	47.5
System Strategy	43.6	42.5	53.2

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Table 11

Market assumptions

Market Assumptions	2018/19 Budget	2018/19 Forecast	2019/20 Budget
Number of Trading Parties	443	460	477
Sales - Notified Contract Volumes	917	810	840
Purchases - Notified Contract Volumes	917	810	840
Generation	251	245	254
Supply	248	242	251
NHH Supply	132	125	130
HH Supply	126	126	130
CVA BM Units	765	76	793
SVA Base BM Units	180	205	213
SVA Base BM Units	4	140	145
Data Line	72	72	75
Comms Software (5 users)	28	28	29
Comms Software (additional user)			0
CVA Metering Systems (MSIDs)	898	903	936
HH Supply (MSIDs)	30,701,514	30,906,459	31,049,998

Table 12

Expected charges

Charge Item	2018/19 Budget	2018/19 Forecast	2019/20 Budget
Specified Charges			
CVA BM Units (£/month)	100	100	100
SVA Base BM Units (£/month)	100	100	100
SVA Additional BM Units (£/month)	100	60	60
Data Line - estimated average (£/month)	700	700	700
Comms Software - average quad2 processor (£/month)	1,080	1,080	1,080
Comms Software (additional user) (£/month)	22	22	22
Contract Traded (£/MWh)	0.0005	0.0005	0.0005
CVA Metering Systems (£/month)	50	50	50
Base Monthly Charge (£/month)	250	250	250
SVA			
HH SVA Ops (£/msid/month)	0.01	0.006320	0.00632
NHH SVA Ops (£/NHH MWh)	-	-	-
Gen Energy SVA (£/MWh)	0.009	0.010	0.011
Main Charges			
Energy fee (£/MWh)	0.06870	0.06745	0.08498

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