ACCELERATING THE **NET ZERO JOURNEY**

Smart distributed energy infrastructure solutions

sse Energy Solutions | For a better world of energy

WE POWER CHANGE **FOR A BETTER WORLD OF ENERGY**

ACHIEVING NET ZERO **THE QUESTION IS 'HOW' NOT 'IF'**

Whilst the warnings are stark and the world is on a non-sustainable pathway, climate emergencies have been declared across the globe and net zero targets have been set. But targets alone don't drive progress.

Businesses, policy makers and growing numbers of citizens are responding to the challenge of accelerating the pace of change required to meet those targets. The risks of not acting are enormous, but the rewards of success are equally large scale – we must ensure our day-to-day life is healthier, we are able use resources more efficiently and therefore can adapt to a more sustainable way of living.

Smarter essential infrastructure

Essential agents for change are sustainable sources of energy, smart management of energy utilisation, gigabit connectivity speeds for data rich insights, and safe, efficient, decarbonised transport networks.

Across the public and private sectors conversations have shifted as we realise there are benefits to be gained from developing innovative solutions to how we generate, store, distribute and manage energy consumption at a more local level.

The energy landscape

The expansion of electric vehicle infrastructure, the uptake of renewable energy sources and the decarbonisation of heat requires smart management of the energy system to avoid grid constraints and ensure flexible capacity and delivery.

In short, the energy landscape is becoming increasingly complex.

Playing our part

SSE Energy Solutions is playing a major part in the emergence of a user-led energy system that allows energy users themselves to play an active role in maintaining a low carbon, secure and affordable power system.

Our Distributed Energy business teams adopt a Whole System approach by investing in, building and connecting your localised, flexible energy assets to accelerate your path to net zero and create a more resilient energy system for the long-term.

THE PATH TO NET ZERO

A foreword by Nathan Sanders

Distributed Energy for a Net Zero world

As someone who started with SSE over 30 years ago as an Apprentice Electrician, I've seen a huge amount of change in the way the energy sector works.

Today, the need to decarbonise our energy system has never been more pressing. So, I'm delighted that my company, SSE, has supported the COP26 climate change conference as a Principle Partner.

And as a group, SSE is certainly putting its money where its mouth is as it continues to deliver on its £12.5bn investment programme in low carbon assets which will help the UK and Ireland reach their target of net zero emissions by 2050.

I know that many local authorities and organisations have now declared their own climate emergencies. Perhaps having done so, some of them may be now puzzling out how best they can make the changes required to get them on the road to net zero. Well that's where my part of the SSE business – Distributed Energy – comes in.

The role of distributed energy in the green recovery

The way we consume and interact with energy is changing before our very eyes as we look to decarbonise our society – especially when it comes to heating and transport.

Energy generation is changing with participants rightly wanting to be more active with their assets and even utilise their potential to generate revenue.

Data is now king, as we move towards a society where smart cities and smart places become part of everyday life rather than an inventor's pipe dream.

Likewise, our society faces two unparalleled challenges: first, to bounce back from the ravages of the coronavirus epidemic and secondly, making our society carbon-neutral.

In June 2019, The UK was the first major economy to pass a legislation to become 'Net Zero carbon' by 2050. To achieve that, the electricity sector will need to expand capacity to enable electrification of transport, heat and parts of industry. This could see annual GB demand for electricity double to 600TWh or more by 2050.

The increasing electricity demand will put our energy system under significant pressure, and this is when the role of distributed energy becomes key in order to provide flexibility to the system and ensure a fair and efficient transition to a carbon-neutral economy.

It's time for some localised 'whole system thinking'

So, having a compelling sustainable vision is all very well, I hear you thinking, but why would my organisation or local authority want to partner with SSE Energy Solutions? Fair question. In short, our whole system approach accelerates your path to net zero.

SSE Energy Solutions provides innovative solutions to build, own, operate and maintain energy infrastructure in the UK and Ireland, covering both private and public sector across residential, commercial and industrial markets. That puts us in the unique position to offer our clients a local 'whole system thinking' approach, meaning we can bring together the multiple facets of all we do; combining EV charging, heat networks, solar and storage infrastructure, building energy management services and digital smart energy services.

Our approach creates a more resilient and sustainable energy system by investing in, building and connecting localised flexible infrastructure, using technology and data analytics to drive the long-term performance of your energy assets in the most cost-effective manner. I can think of no better example of that than our 'PIRI' project in Peterborough which has the potential to be the largest smart city-wide energy system in the UK.

Smartening up the energy system

Enabling existing energy assets to become 'smart' can hugely support cities as well as businesses to deliver substantial efficiencies, cost benefits and reduce emissions.

In partnership with a major technology company, we have developed SSE Enhance, an innovative 'Energy as a Service' platform that enables owners of energy assets and flexible energy load to generate revenue by allowing third party control of these at agreed times. We are also developing other digital platforms across cities, places and buildings which utilise smart sensors and devices to enhance knowledge and provide smarter environments, driving decarbonisation and improving experience. Illustrative capabilities include monitoring of weather, noise, flooding, traffic, footfall and air quality, street lighting control, and optimisation of building energy and comfort.

Since the 2050 Net Zero target was set, we have all experienced the impact of the global pandemic. Our Government is driving investment in infrastructure to both stimulate the economic recovery from Covid-19 and help address the climate emergency. Welcome measures to link the Government's net zero and levelling up ambitions include the Net Zero Strategy, the Heating and Buildings Strategy, and the Transport Decarbonisation Plan. The establishment of eight Freeports and the Public Sector Decarbonisation Scheme will both support regional economic and low carbon growth.

Other welcome measures include the establishment of the UK Infrastructure Bank which will provide financing support to private sector and local authority infrastructure projects across the UK. In addition to deploying £12 billion of equity and debt capital the bank will also be able to issue up to £10 billion of guarantees.

This is expected to support a further £40bn of private investment.

Time to accelerate the pace of change

So, the time is right to accelerate our pace in tackling the climate emergency. Navigating that pathway may not be straightforward but by working in partnership across the public and private sector to develop localised innovative energy solutions, I believe exciting opportunities will open up and the Net Zero goal will be within sight.

On the following pages you will find an overview of how we see opportunities in some key market sectors, as well as a brief glimpse into the distributed energy solutions that we can help you with.

What's more, we want to be fellow investors along the way, and we look forward to partnering with you on your particular journey to Net Zero.

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OUR APPROACH
THE WHOLE SYSTEM

SSE Energy Solutions' Whole System approach invests in, builds and controls localised, flexible energy assets to accelerate a path to net zero and create a more resilient energy system for the long-term.

Solutions to drive integration

Our distributed energy teams employ technological advances in flexible generation and storage, district heating, vehicle charging and electrical networks optimising generation and load using digital platforms. Combined with advanced data analytics, we give our clients the opportunity to visualize, control, and trade energy flexibly.

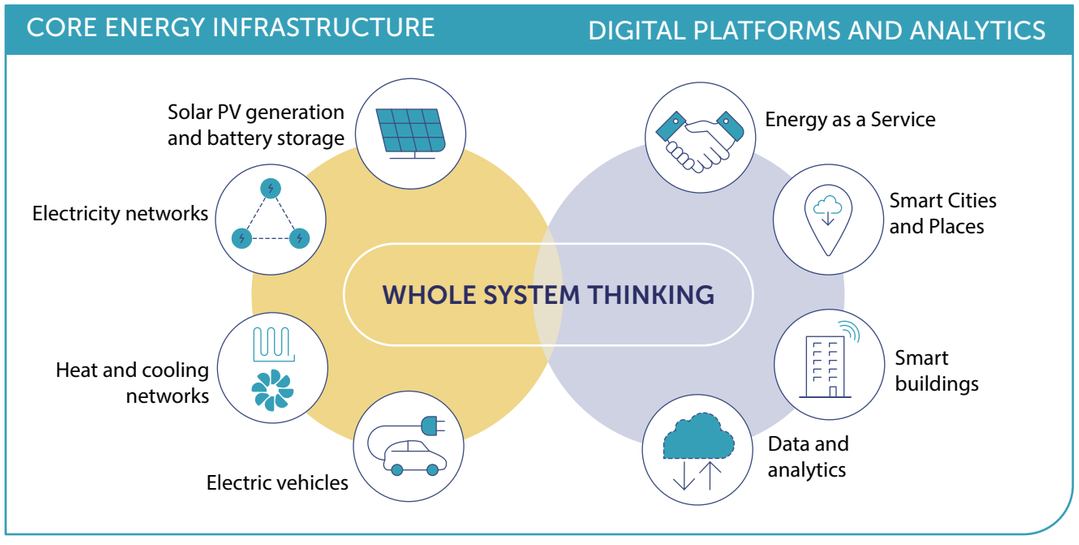
Emerging client partnerships

Just as we see the energy landscape transitioning from a centralised top down approach to a more local, distributed system, we also see a transition in the way public and private sector organisations are working together to tackle the big ticket climate issues.

In several parts of the UK and Ireland, progressive local authorities are joining together, collaborating with health trusts, local universities, local industry and also energy companies to move the dial on climate action. At SSE Energy Solutions we are at the forefront of such discussions as we seek out partnerships that are mutually beneficial to all involved.

Long term investment

Our long-term investment, asset ownership and stewardship models can take the financial challenge away from decarbonisation whilst ensuring security of sustainable energy supply, reducing risks for our clients and helping them achieve their economic, social and environmental goals.



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SMART ENERGY
SOLUTIONS

For the net zero journey.

FLEXIBLE GENERATION AND STORAGE

- PV (solar)
- CHP
- Battery storage
- PPA (power purchase agreement)
- Corporate PPA
- Private wire to load (i.e. buildings)

EV INFRASTRUCTURE

- Installation
- Operation, maintenance and management
- Fleet and taxi solutions
- Charge hubs
- Constraint management
- Charger agnostic (inc. rapid, smart)

ELECTRICAL INFRASTRUCTURE

- Private networks acquisition
- Upgrade, operation and maintenance
- Point-to-point private wire
- Smart grid control
- Networks, investment, D&B and operation

HEATING AND COOLING

- District heat networks, investment, D&B and operation
- Heat pumps and CHP
- Waste heat exploitation
- Optimisation
- As a Service options

SMART BUILDING ENERGY MANAGEMENT

- Building-connected energy assets
- Smart buildings platform for behind the meter energy asset services
- Energy optimisation
- BMS installation, support and maintenance
- Air purification systems
- ESOS audits
- Government RE:FIT framework contractor
- Remote and managed services

ENERGY DATA AND VISUALISATION

- Data Collection and Data Aggregation (DCDA)
- Energy analytics and insight
- Machine learning and artificial intelligence
- Automated monitoring and targeting
- Remote energy management
- Energy audits, including ESOS

SMART ENERGY ASSET SERVICES

- Carbon, energy cost and revenue optimisation
- Grid connection management
- Virtual power plant (trade your flexible energy)
- Market access
- Energy Services
- Asset service management

SMART CITIES AND PLACES

- Smart Cities, Places Platform
- IoT sensors and devices
- Smart street lighting
- Traffic/footfall monitoring and classification
- Air quality, flood and road temperature reporting

OUR VALUES FOR
A BETTER WORLD OF ENERGY

SSE is one of the UK and Ireland's largest energy companies and, as the leading renewable energy provider across these countries, it is committed to making a wider social impact throughout the energy transformation and beyond.

SSE has a clear vision, purpose and strategy focused on Net Zero.

PURPOSE, VISION AND STRATEGY

Our purpose

To provide energy needed today while building a better world of energy for tomorrow.

Our vision

To be a leading energy company in a net-zero world.

Our strategy

To create value for shareholders and society in a sustainable way through successful development, efficient operation and responsible ownership of energy infrastructure and businesses.

Strategic importance of SSE Energy Solutions

Our energy solutions businesses are providing greater access to green energy solutions and breaking down traditional barriers to access for customers. Set apart by our ability to innovate and our partnership development skills, we will provide a growing suite of energy products and distributed energy solutions to support customers' net zero needs.

A key role of Energy Solutions within the SSE Group is to seek out new opportunities in areas that complement the Group's core energy portfolio – with a focus on distributed energy.

Our people

We know that the way we do things has an impact on people, whether its energy customers, those who work for us or those who live in the communities that we operate in. In recognition that SSE has a deeply interconnected relationship with the society it relies on to operate and make a profit, we aim to conduct our business in a way that contributes positively and shares value. This means creating a fair and inclusive place to work and giving back to our local communities.

Fairness at work

SSE has been a proud real Living Wage accredited employer since 2013, meaning our employees, and those working regularly on our behalf, earn an hourly rate that exceeds the national living wage.

SSE has been rolling out the real Living Wage across its supply chain since 2014 through the inclusion of a Living Wage Clause in all relevant contracts. In 2017, we extended the clause to go beyond the requirements of the Living Wage Foundation. SSE has committed to championing the real Living Wage through its 2030 Goals.

SSE was also the first FTSE 100 company to be awarded the Fair Tax mark and has maintained this for seven consecutive years. SSE also supports the Fair Tax Foundation's efforts to establish a voluntary framework for good multinational businesses to demonstrate that they play fair with tax, paying the right amount, in the right place and at the right time.

Our responsible business culture

With ever increasing scrutiny on corporate conduct, stakeholders rightly expect SSE to demonstrate how it is embedding a responsible business culture and ensuring no harm arises as a result of its activities. That is why SSE's 2030 Goals are built on a foundation of doing no harm to people or planet. For SSE, this goes beyond complying with legal requirements – it is about doing the right thing to keep people safe, ensure their wellbeing, and make sure people feel they can speak up when wrongdoing occurs.

As SSE employees we support and value our colleagues and enjoy working together in an open and honest way.

SSE's just transition

SSE has published its Just Transition strategy which aims to help to protect workers and communities as the UK and Ireland transition out of a high-carbon world and towards net zero. The strategy consists of SSE's 20 principles for a Just Transition, which outline SSE's approach to address the social implications of delivering net zero; from jobs and training, to working with communities and ensuring no one is left behind.

SSE'S 20 PRINCIPLES FOR A JUST TRANSITION

TRANSITIONING INTO A NET-ZERO WORLD			TRANSITIONING OUT OF A HIGH-CARBON WORLD	
SSE'S PRINCIPLES FOR GOOD, GREEN JOBS	SSE'S PRINCIPLES FOR CONSUMER FAIRNESS	SSE'S PRINCIPLES FOR BUILDING AND OPERATING NEW ASSETS	SSE'S PRINCIPLES FOR PEOPLE IN HIGH-CARBON JOBS	SSE'S PRINCIPLES FOR SUPPORTING COMMUNITIES
1. Guarantee fair and decent work	5. Co-create with stakeholders	9. Support competitive domestic supply chains	13. Re-purpose thermal generators for a net-zero world	17. Deliver robust stakeholder consultation
2. Attract and grow talent	6. Factor-in whole-system costs and benefits	10. Set social safeguards	14. Establish and maintain trust	18. Form partnerships across sectors
3. Value employee voice	7. Make transparent, evidence-based decisions	11. Share value with communities	15. Provide forward notice of change	19. Promote further industrial development
4. Boost inclusion and diversity	8. Advocate for fairness	12. Implement responsible developer standards	16. Prioritise retraining and redeployment	20. Respect and record cultural heritage

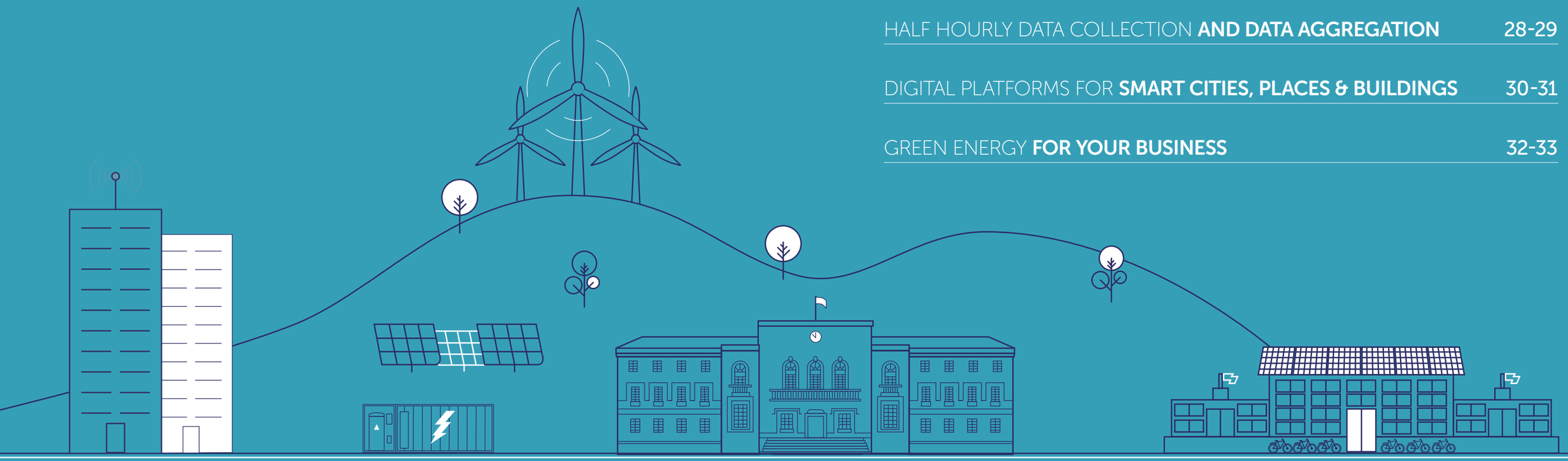
Working for Business Customers

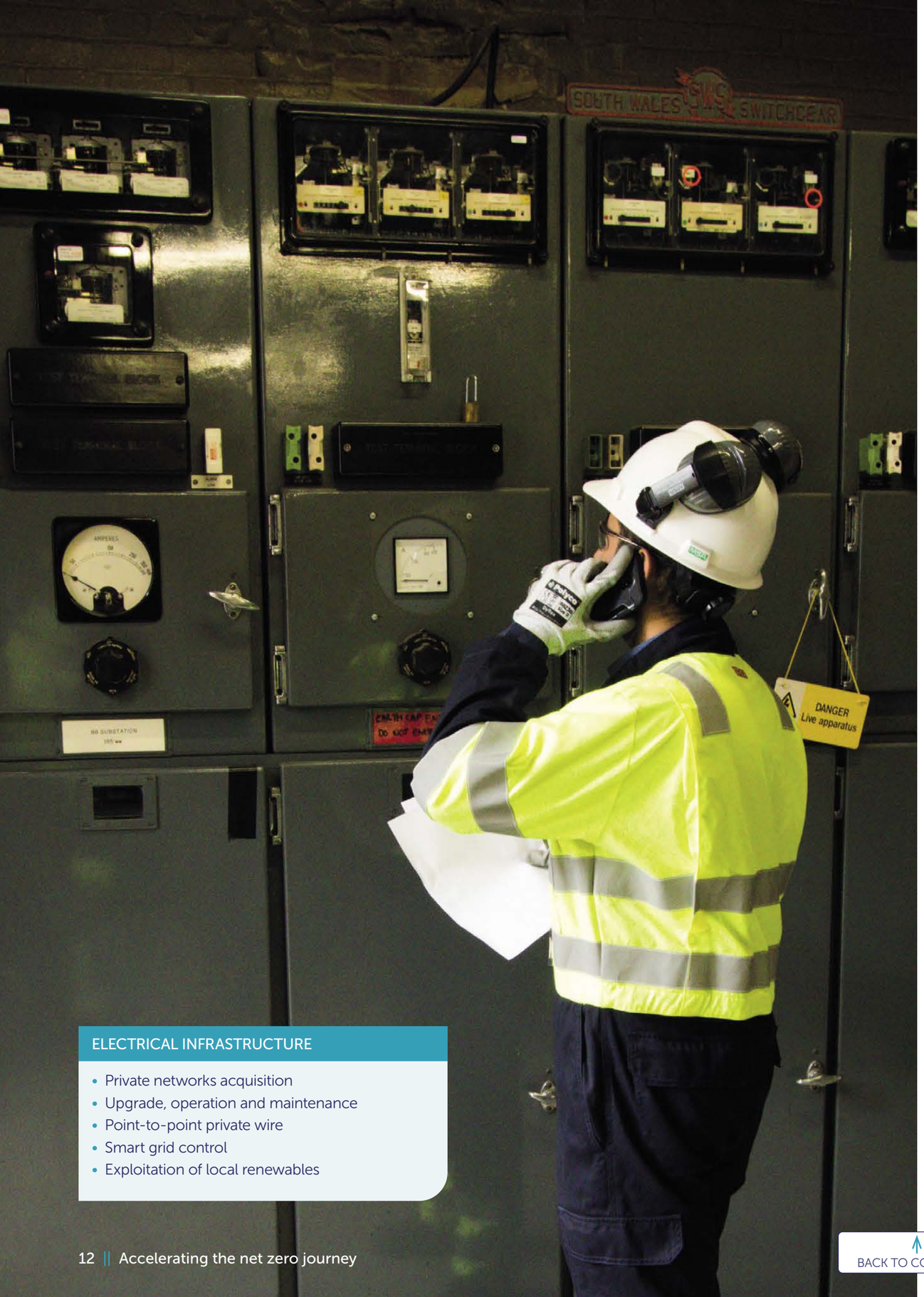
We believe green energy solutions and business success go hand in hand, and we're uniquely placed to show you how. As the UK and Ireland's largest renewable electricity generator, SSE can provide traceable renewable energy from our own assets, combined with the tools and technology to help your business succeed.

Together with the design, development, and delivery of connected local, energy infrastructure and the technology to turn flexible energy use or generation into an exploitable asset, SSE Energy Solutions can help you to power ahead in a new sustainable world.

DISTRIBUTED ENERGY **INFRASTRUCTURE SOLUTIONS**

SSE Energy Solutions' Whole System approach invests in, builds and connects your localised, flexible energy assets to accelerate path to net zero and create a more resilient energy system for the long-term.





ELECTRICAL INFRASTRUCTURE

- Private networks acquisition
- Upgrade, operation and maintenance
- Point-to-point private wire
- Smart grid control
- Exploitation of local renewables

RELIABLE LOCAL **ELECTRICITY NETWORKS**

Electricity Infrastructure forms the core energy backbone for any organisation. Having a private electricity network can bring significant business advantages.

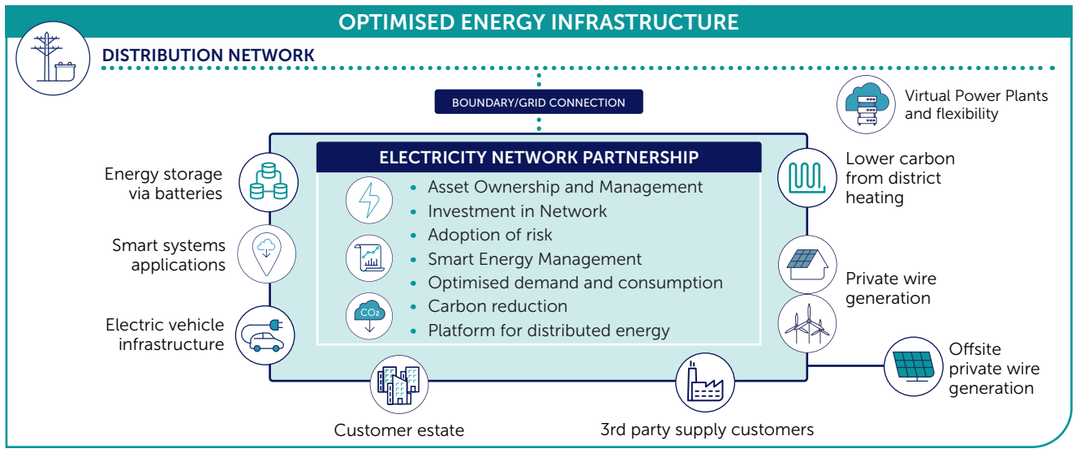
Delivering and managing networks is core to our business and is how we make a difference to our business. By applying this expertise we can deliver significant benefits to our customers. We have an excellent track record of delivering electricity networks for new and existing developments in all principal sectors of the construction market.

For clients who own and operate their own private electrical network, SSE Energy Solutions can become an invested stakeholder managing your private electricity network and taking responsibility for its resilience, balancing investment and risk mitigation, improving its energy efficiency whilst providing a sustainable platform for decarbonization.

For developers, clients and consultants seeking to deliver significant mixed-use, commercial and industrial construction projects, we have the track record and capability to deliver energy infrastructure projects from initial strategy and design through to the ongoing operation and management of the installed infrastructure assets over their lifetime.

SSE's Independent Distribution Network Operator (IDNO) business can adopt, own and operate distribution networks. Clients connected to our networks benefit from regulated charges, freedom of choice of supplier and guaranteed performance standards.

We invest in our customers' non-core electrical infrastructure, offering security and adopting risk. Through Whole Systems thinking we drive energy savings, cost certainty and security of supply and in doing so provide the ability to optimise both carbon and energy costs in order to provide a net zero pathway most suited to your needs as well as providing you with the power to control how your energy is procured, generate, managed and secured.



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FINANCING GREEN
SOLAR PV ENERGY

If your organisation is energy-conscious and you seek energy price stability, reduced energy costs with a lower carbon footprint, we can provide you with fully-funded, fully-maintained Solar PV solutions that can help improve your bottom line.

For clients interested in increasing renewable energy use, SSE Energy Solutions offers fully-financed solar solutions where we develop, build, own, operate and maintain solar systems. Zero carbon energy is then provided to you at no upfront cost – simply charged under a fixed term Power Purchase Agreement (PPA).

We utilise onsite space such as car park canopies, vacant ground space, or roof-tops to deploy Solar PV and create value from underutilised assets. If you don't have available onsite space, we can secure offsite land, delivering energy through a private wire or from a remote solar facility via the grid.

Our whole system capability means we can integrate solar generation with a wider range of complementary distributed energy solutions, bespoke to your site requirements and ensuring your energy resources are fully optimised for cost, efficiency and carbon reduction.

Our typical PPA structure is a fixed, inflation-linked tariff for the energy generated over a 15-25 year term. However, as we understand that each customer's needs are unique, we are open to a range of contract structures and seek to find the optimal solution for you.

SSE Energy Solutions is constantly exploring opportunities to grow our solar PV portfolio, offering partners opportunities to work with an experienced and trusted company that holds sustainability and safety at its core. If you are an organisation, landowner, or developer who would like to learn more about partnering please contact us.

ONSITE SOLAR

- SSE will develop a proposal for a solar system to unlock value from unused space such as roof tops, parking lots, or ground spaces.
- We will provide a full site desktop assessment to outline an optimal Solar PV solution based on your energy consumption and site constraints.
- We will assess opportunities to integrate the solar system with other energy solutions that may further benefit you.

OFFSITE SOLAR

- Offsite systems can be preferable to allow for increased generation capacity.
- SSE will build, own, operate, and maintain generation facilities between 1-50 MW on nearby land, connecting the Solar PV system to the premises via a private wire connection.
- SSE will source, secure, and develop suitable sites nearby – undertaking all risks and the costs associated with doing so.

VIRTUAL AND SLEEVED PPAS

- Offsite PPAs enable customers to purchase large volumes of renewable power directly from remote solar PV facilities when on-site or local solutions are not available.
- SSE offers physical (sleeved) and virtual CPPAs and can manage all aspects of the process including generation, sleeving, imbalance, load management and additional flexible supply.

FLEXIBLE GENERATION AND STORAGE

- PV (solar)
- Battery storage
- PPA (power purchase agreement)
- Corporate PPA
- Private wire to load (i.e. buildings)

WORCESTERSHIRE SOLAR FARM

SSE is committed to deploying renewable energy technologies and has purchased the project development rights for a solar project in England from developers Stark.

The 30MW, 77-acre solar farm in Worcestershire will be capable of powering some 9,400 homes when complete late 2023.

"SSE has a strong track record of constructing and operating renewable energy projects and we are delighted to be working with them on our Littleton project. We look forward to supporting SSE through the construction process and seeing the project through to its connection."

Anthony Brindle || Managing Director of Stark Energy

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50MW BATTERY STORAGE PROJECT

SSE has an ambitious capital investment plan to accelerate progress to net zero in its role as the UK and Ireland's clean energy champion and has purchased the project development rights for its first 50MW battery storage asset on a consented site in Wiltshire, from Harmony Energy Limited.

The battery storage facility at Salisbury is expected to be energised in the summer of 2023. Once built, this battery will benefit from the remote monitoring and trading services we now offer in distributed energy through the SSE Enhance platform. The platform will integrate with the site control and monitoring systems and also allow smart trading to maximise the value of these assets.

REPURPOSING LAND TO BENEFIT FROM **GRID-SCALE ENERGY SOLUTIONS**

Battery storage and solar PV technologies will play a vital role in decarbonising the power grid across the UK and Ireland.

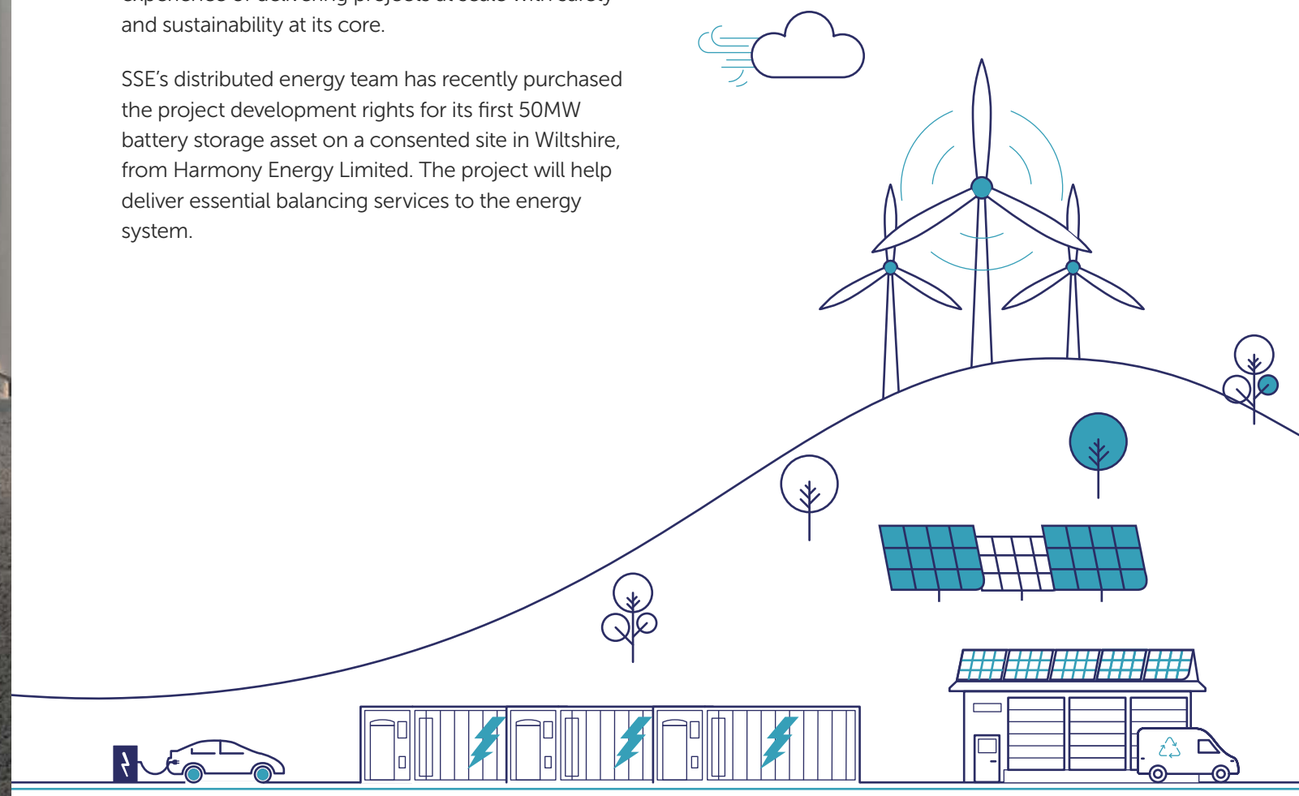
Our distributed energy team in SSE Energy Solutions are working with landowners and developers to identify new sites and grid connections to grow its battery storage and solar PV pipeline.

SSE is a leading renewable developer in the UK and Ireland and, as such, we understand the challenges landowners and developers face in this rapidly changing sector. You'll be partnering with a low carbon energy FTSE100 company with the proven experience of delivering projects at scale with safety and sustainability at its core.

SSE's distributed energy team has recently purchased the project development rights for its first 50MW battery storage asset on a consented site in Wiltshire, from Harmony Energy Limited. The project will help deliver essential balancing services to the energy system.

We have a team of developers, engineers, and energy service professionals actively growing our battery storage pipeline with around 500MW of early stage opportunities in the pipeline.

If you are a landowner or a developer who would like to learn more about partnering with us, please contact us.



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THE FUTURE OF **HEATING AND COOLING**

We deliver resilient and reliable low carbon heating and cooling networks for public and private sector clients.

HEATING AND COOLING

- District heat networks
- Heat pumps and CHP
- Waste heat exploitation
- Optimisation
- As a Service options

The heating challenge

Heating accounts for over a third of the nation's carbon emissions across all sectors and is a key decarbonisation challenge. Heat Networks play a major role in the government's zero carbon strategy, providing "no regrets" infrastructure in urban environments making use of waste and/or recoverable heating and cooling, sometimes in combination with heat pumps, to deliver ever lower carbon heat and cooling.

How SSE Energy Solutions can help

SSE has a portfolio of low carbon heat networks serving residential and commercial customers across the country including electrified heat networks fed by a mix of heat pumps and CHP.

We have a strong focus on innovation and a culture of continuous improvement across design, technology, commercial and customer service models. Being technology and manufacturer agnostic allows us to select the right technology choice for each project.

Our flexible commercial models, developed over a decade of experience in the UK, mean we offer long term asset ownership and investment for heat and cooling networks. With optimal design, delivery and commissioning our clients and end users are supported by round the clock industry leading customer care.

Our focus is to provide low carbon, affordable heating and cooling. As we can provide capital investment into projects, SSE's balance sheet strength and brand credentials make it an ideal long-term partner to our clients.

We are a founder member of Heat Trust, the independent heat customer protection scheme. As members of the scheme, we are independently audited and our performance is captured by the necessary feedback loops needed to maintain and improve standards

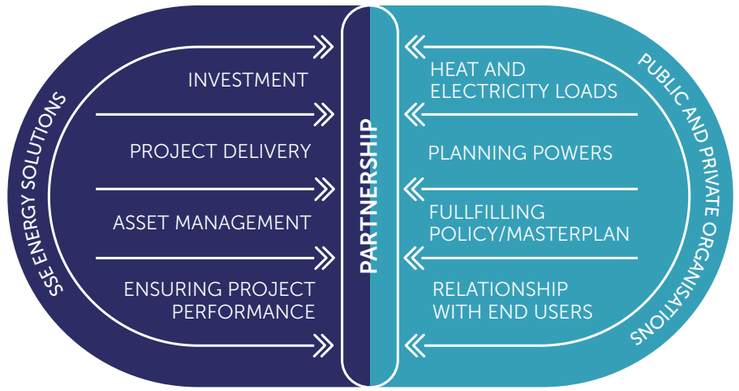
We are closely involved in a number of government advisory groups helping to design the forthcoming regulatory regime for heat networks. This ideally places us to help our clients ensure their system and operational design is "future proofed" for formal regulation when it arrives.

Our expertise, experience, investment approach and customer service makes SSE Energy Solutions an ideal heating and cooling partner, bringing stability that reduces risk for clients and provides long-lasting benefits for network customers.

With wide ranging experience across the distributed energy infrastructure spectrum, we can ensure that to ensure that your heat/cooling network benefits from an integrated approach to generation, storage and supply of energy. So get in touch today so see how we can help you.

How a public/private partnership works

Successful partnerships bring together the skills and experience from all parties into a single and effective delivery mechanism.



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DECARBONISING **TRANSPORT**

Decarbonising transport is a formidable challenge, and the deployment of electric vehicle infrastructure must rapidly grow to meet this challenge and deliver the UK Government's ambitious plans.

Providing reliable and efficient Electric Vehicle infrastructure is one of the cornerstones of SSE Energy Solutions' portfolio. Working in partnership with fleet and bus operators, we invest in and deliver rapid charging facilities to help UK and Ireland businesses and local authorities meet their climate change targets.

Ultra-rapid Community EV Hubs

We are investing in a scalable, strategic network of EV ultra-rapid community charging hubs across the UK, providing a different range of charging points. Located predominantly in urban areas, these Community Hubs will be in clusters of between 10 and 20 bays, serving fleets who need reliable infrastructure close to their business routes as well as residents without off-street parking.

To maximise the comfort of the drivers, where possible, we will provide refreshment and restroom facilities, along with Wi-Fi connectivity. Our chargers are supplied with renewably sourced electricity and will incorporate solar pv generation on canopies, and potential private electricity networks when required.

Fleet depots

SSE Energy Solutions offers a full end-to-end charging transition program for local authorities and large corporate organisations that have their own depots requiring EV charge points on site.

We can assist public and private fleet operators in all the key steps of the process, from initial consulting, to design and installation, to maintenance and operations.

Electrifying bus infrastructure

We provide a turnkey solution to electrify bus depots across UK and Ireland. Our expertise builds on our development of the electrical infrastructure in London, where we worked in partnership with operators, transport authorities and bus companies, across six London depots.

To optimise use of the infrastructure, we are also developing options for fleet charging during the day when buses are predominantly out on the road.

Researching Vehicle-to-Grid potential

Our EV teams have been leading on an innovative project delivered by an industry and academic partnership. The Bus2Grid project will deliver the UK's first e-bus to grid multi-megawatt demonstration at commercial scale.

Developing a bi-directional charging infrastructure that allows batteries to both take through and feed to the grid will deliver a significant boost to energy system stability by supporting the system flexibility needed to help the UK meet its vital climate change targets in a cost-effective manner.

Utilising our Whole System Thinking methodology, we will take you on your electrification journey from initial feasibility studies through to design and installation. We'll work with you to ensure that your solution stays optimal, delivers against your energy and sustainability objectives and is future proofed.

EV INFRASTRUCTURE

- Investment
- Installation and operation
- Fleet and bus solutions
- Community and fleet charge hubs
- Constraint management
- Rapid and ultra-rapid chargers

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USING SMART ENERGY SYSTEMS
TO DRIVE YOUR ENERGY TRANSITION

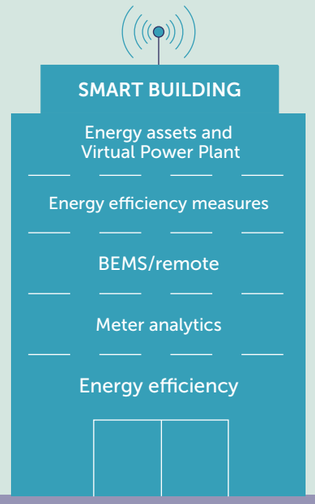
Utilising digital technology to leverage information and provide integrated control across local energy infrastructure enables carbon and costs to be minimised whilst maximising commercial potential of energy flexibility.

Energy infrastructure and smart platforms
Increased connectivity and technology can make our day-to-day life more efficient, sustainable and safe, delivering 'smart services' that drive down cost and improve efficiency. 'Smart', to SSE, means connecting assets together to enable the gathering of large data and providing insights to help deliver customer outcomes.

Utilising these tools, we can work in partnership with you to develop, fund, own and operate innovative, sustainable and smart solutions for cities and places – understanding your challenges and goals, building the commercial models and the required delivery teams, bringing in funding and partners where appropriate.

SMART CITIES AND PLACES

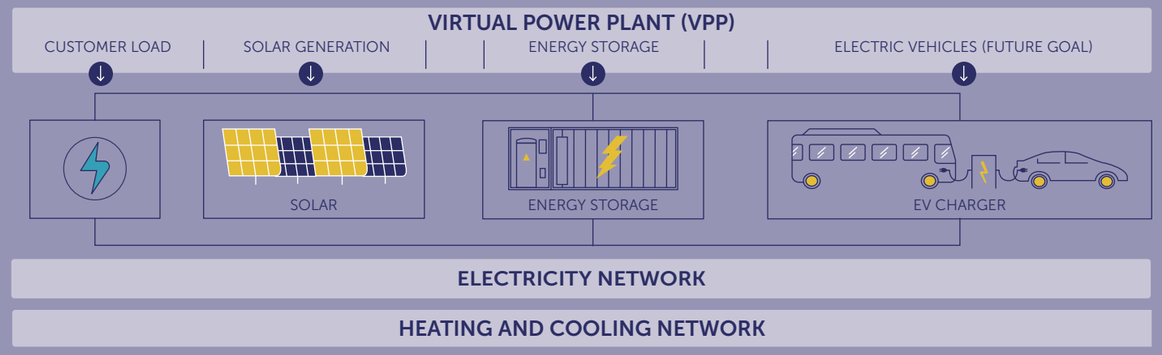
ANALYTICS, CONTROL AND OPTIMISATION



SMART ENERGY BUILDINGS

- **Data Collection and Aggregation** | collect and aggregate robust energy data
- **Business Energy Intelligence** | analyse a business' metered energy data
- **BEMS** | Building Energy Management Systems to manage and optimise a building's energy assets
- **Smart Buildings Platform** | combine meter and BEMS data with additional sensor data to provide a truly smart and optimised building
- **SSE Enhance** –generate revenue, minimise cost and carbon, using smart building data to trade energy flexibility from connected assets (solar, storage, EV, HP, CHP, etc) and energy load

SMART ENERGY INFRASTRUCTURE



- **Data Collection and Data Aggregation** delivering robust data
- **Business Energy Intelligence** for analytical insights
- **Smart Grid** for dynamic management
- **SSE Enhance** for trading energy assets and flexibility

- **Smart Cities, Places and Building Platform** | combine energy assets and load data, both standalone and connected in buildings; optimise energy usage and maximise local renewable energy generation potential; extend over time to include other smart, connected devices to drive net zero
- **Mayflower Smart Lighting** | drive decarbonisation of key city and place energy usage through targeted dimming of street lighting
- **SSE Sentinel** | deploy vehicle and footfall classification and counting to provide insight for air quality improvement and optimised EV charger point planning
- **SSE Enhance virtual power plant** | generate revenue, minimise cost and carbon across entire energy systems encompassing smart energy infrastructure, connected energy assets and smart energy buildings

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DELIVERING VALUE
SSE ENHANCE

ENERGY AS A SERVICE

- Energy management to lower carbon
- Virtual Power Plant - to trade your energy flexibility
- Smart Grid Management - to minimise the impact of network constraints
- Funded behind-the-meter asset deployment – maximising local use of local renewables
- Energy Optimisation – aligning carbon, cost and energy flexibility revenue aspirations

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VIRTUAL POWER PLANT
AND SMART GRID

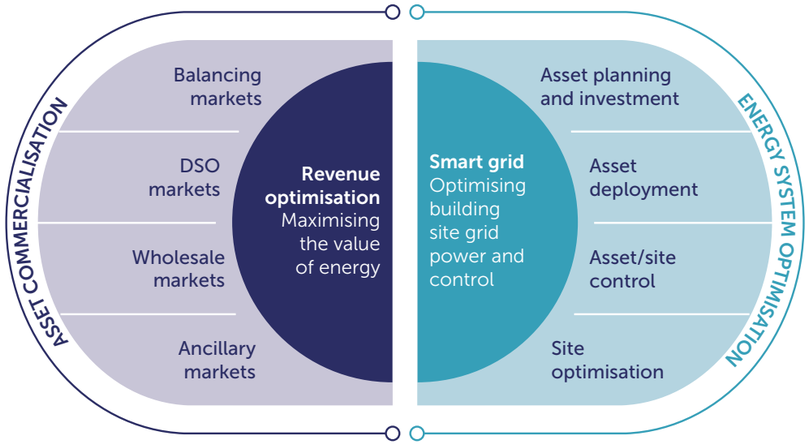
Combining virtual power plant and smart grid technology, our unique platform, SSE Enhance, dynamically optimises a clients energy estate, drives decarbonisation and maximises revenue from energy flexibility.

SSE Enhance is an innovative platform that combines both Virtual Power Plant and Smart Grid technology. The former enables large energy users in the public and private sectors such as process industries, manufacturing, local authorities and facilities management to generate income from their energy assets and/or load flexibility. Whilst the latter manages constraints in a client's underlying network, allowing it to maximise security of supply and the associated potential for energy asset deployment. SSE Enhance forms the basis of our Energy as a Service proposition and supports clients in their drive to Net Zero whilst unlocking the financial benefits of existing assets.

SSE Enhance Energy will enable customers to be paid for reducing their electricity demand or increasing the power output of assets such as combined heat and power units and energy storage during peak periods. Output of solar and wind can be blended with energy storage and load management to improve demand certainty and potentially reduce associated energy tariffs or improve PPA prices for front of meter assets. This is all supported by the expertise of SSE's energy trading team.

SSE Enhance Grid can dynamically manage site power to improve security of supply and power quality. It will also enable additional energy assets to be added to a customer's constrained network without the need for further investment by dynamically balancing generation, storage and load.

SSE's Energy-as-a-Service proposition couples these solutions with power asset development, adoption or asset stewardship (where SSE invests to upgrade a client's power infrastructure and operates it as a service). In doing so, SSE's customers can outsource the risks and complexities of the energy markets and the zero-carbon transition, releasing much needed finance locked up in their assets.



SMART BUILDINGS ENABLING **THE TRANSITION TO NET ZERO**

Innovative, integrated Building Energy Management solutions.

SSE Energy Solutions' Smart Buildings team provide Building Energy Management System (BEMS) design, operation and maintenance services for new buildings, major refurbishments, or retrofitting into existing buildings. The system controls and monitors all the essential power, heating, ventilation and cooling (HVAC) plant and equipment that ensure the building continues to run efficiently, safely and comfortably.

Moreover, sensor technology is moving apace and with wireless connection of additional IoT devices, it's now possible to have even smarter dynamic estate monitoring and control, based on real-time building occupancy and other usage and performance metrics to improve energy and cost efficiency, whilst also improving staff well-being.

Our breadth of technical expertise covers all the main BEMS platforms in the UK, including Siemens, Trend, Johnsons, and Tridium systems – all of which can be controlled remotely from our state-of-the-art Energy Management Centre. We also have a national network of local offices ready to respond should you ever need an engineer to visit your site.

Our Remote Optimal service is a precision energy management solution for all types of built environments. This innovative platform is comprised of three key parts – Insight, Assist, and Control – and is available as a fully managed service which gives you peace or mind that your built estate energy use is being proactively optimised and managed.

Optimal Insight is a complete cloud-based energy optimisation package, designed to give you a real understanding of how your energy is consumed and then empower you to fully engage in close monitoring and intervention targeting which reduces the risk of expensive failures and downtime.

Optimal Assist is a remote alert-and-assist service designed to be the most effective way of avoiding or fixing critical problems with the equipment in your buildings to give you peace of mind.

Optimal Control uses detailed site analysis to indicate how each of your BEMS controls is performing and fine tunes the system to improve the overall performance, creating a perfected built environment.

Enhanced business intelligence

Your BEMS generates the information you need to plan even more savings through equipment upgrades, improved working practices and longer equipment life cycles. Early diagnosis of faults reduces the risk of expensive failures and downtime. Data analysis improves awareness of the performance of plant, machinery and network connected devices, including where appropriate, solar generation and behind the meter battery storage.

Whether you're a BEMS expert designing systems for your clients, you're involved in system or service procurement or you're a client looking for a complete solution, our expert team is here to help.

AIR PURIFICATION

We also offer a complementary smart building service which uses innovative air purification technology.

ionair's® air quality system has shown to reduce odours by around 50%, germs, bacteria, fungi and pollen by more than 95%, fine particles by 30% to 50%, and several other airborne pathogens by more than 90%.

It can be easily retrofitted into a building's existing air handling unit, continuously monitoring and improving air quality. It is also cost-effective, requiring very low maintenance. Complementing SSE's Smart Building Platform, SSE can offer a fully funded solution which can combine significant air quality improvements with a suite of smart building energy management services.

BUILDING ENERGY MANAGEMENT

- BMS installation
- Building energy optimisation
- Behind the meter asset optimisation and management
- Air purification systems
- Support and maintenance
- ESOS audits
- Refits
- Remote and managed services

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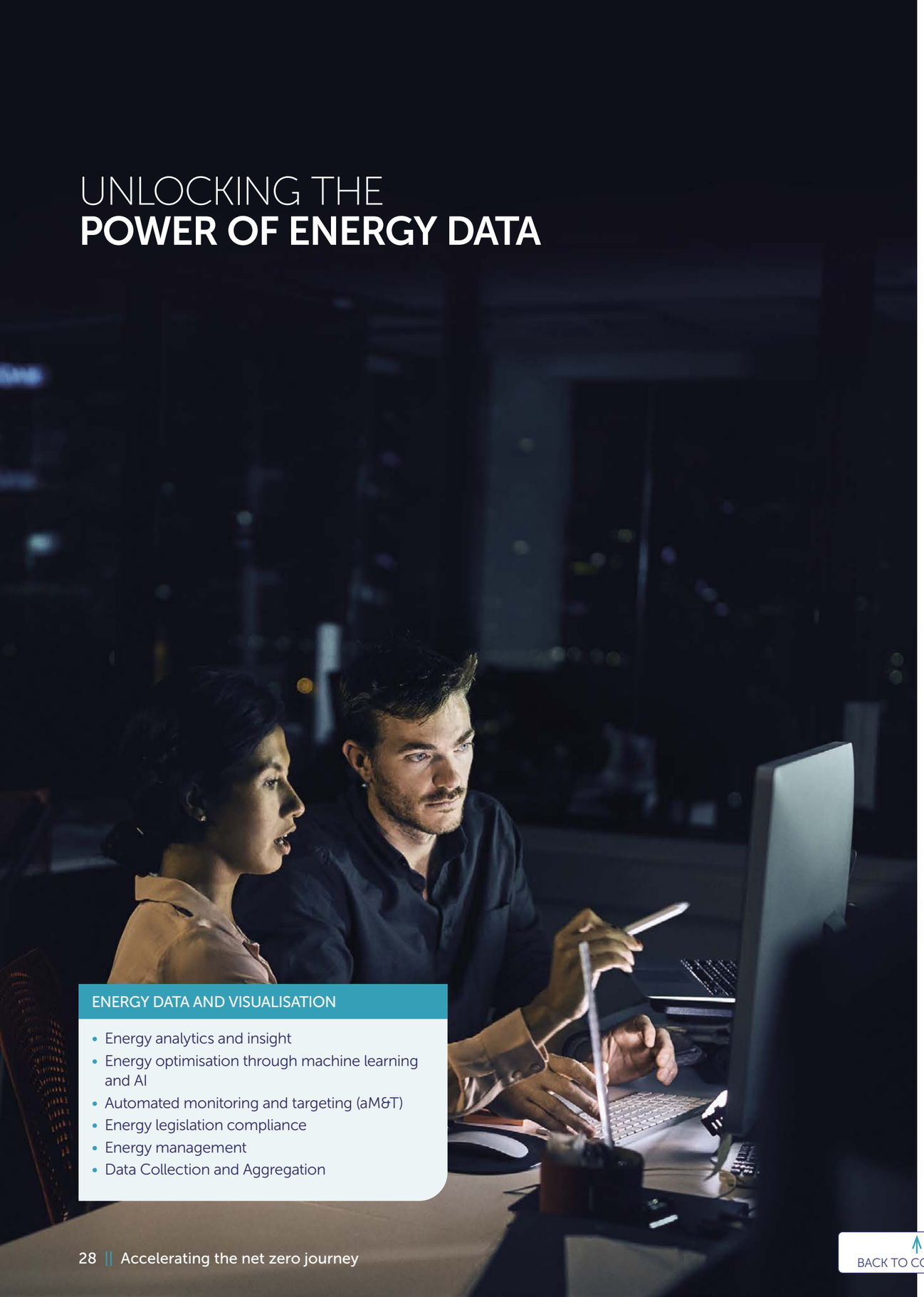
UNLOCKING THE **POWER OF ENERGY DATA**



ENERGY DATA AND VISUALISATION

- Energy analytics and insight
- Energy optimisation through machine learning and AI
- Automated monitoring and targeting (aM&T)
- Energy legislation compliance
- Energy management
- Data Collection and Aggregation

HALF HOURLY DATA COLLECTION **AND DATA AGGREGATION**

Providing insight into your energy usage enabling you to take full control of your energy strategy and accelerate your journey to net zero.

Historically, only the largest business energy consumers would be required to have half hourly meters recording electricity consumption at 48 half hour intervals. However, programmes such as P272 and the current Smart Meter Implementation Programme (SMIP) are enabling more consumers to have access to their half hourly data. Ofgem are working on transitioning the whole electricity market into half hourly settlement which will allow businesses to consolidate all their meters under a single half hourly Data Collection and Data Aggregation (DC/DA).

SSE has brought together a specialist team of half hourly market experts to help overcome the hidden cost of data aggregation your supplier appoints you by default. Our new Data Collection and Aggregation (DC/DA) service will manage the secure collection of Half Hourly data whilst providing accurate data to both customers and energy suppliers.

This Elexon-approved service guarantees the accuracy of energy consumption measurement through data validation hence eliminating any potential invoicing or consumption discrepancies.

Many customers with half hourly supplies are unaware that they can choose their own provider for Data Collection and Data Aggregation services, in place of using their supplier's default agent. By choosing your own agent, you can make significant savings, as well as access to our wider analytics services, as detailed below, to help you better understand and manage your energy consumption. You'll also have the assurance that our personalised service will provide bespoke and independent consumption reports making your reconciliation process more efficient and accurate.

By choosing SSE as your half hourly Data Collector and Data Aggregation, we can support your journey to net zero carbon emissions by ensuring the secure collection of accurate consumption data from your electricity meter and complementing this with analysis and insights that enable you to take full control of your energy strategy.

Business Energy Intelligence

To supplement our DC/DA service, our Business Energy Intelligence online energy management platform allows you to better understand and hence optimise your energy usage. Through remote data monitoring and access to a wide range of easy-to-navigate energy insight reports, you are able to drill down into the data, leading to quick identification of ways to improve carbon efficiencies and cost-effectiveness.

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ENERGY DATA AND VISUALISATIONS

- Energy analytics and insight
- Machine learning and AI
- Automated monitoring and targeting platform
- Energy management
- Smart grid
- Virtual power plants
- Smart energy platforms
- Energy optimisation

DIGITAL PLATFORMS FOR **SMART CITIES, PLACES & BUILDINGS**

Catalyse the net-zero carbon transition by using digital platforms to enable smart energy systems, buildings and places.

Reduction in technology costs and the increasing prevalence of IoT connectivity has resulted in exponential growth in smart sensors and devices. Exploitation of these can allow businesses and local authorities to improve existing processes or re-engineer them entirely, subsequently enhancing service levels and driving down costs.

Our popular Mayflower smart street lighting system allows carbon reducing dimming regimes, and we have now enhanced this to provide a subsidised pan-authority communication canopy, which radically increases the potential for cost-effective innovation in smart city solutions to support our clients in the transition into a smart, low carbon environment. This is achieved by exploiting the Zigbee, LoRa and Bluetooth connectivity inherent in the underlying Mayflower Smart Lighting Network to allow the low-cost connection of additional sensors and devices.

Gain real-time data for informed decisions

Organisations need to continually make informed decisions and gain funding or community support for road infrastructure, traffic and pedestrian management and, increasingly, electric vehicle charging options. But finding real-time, flexible, cost-effective smart city solutions that address data protection and privacy has been challenging, until now.

We've developed a smart city solution in partnership with Intel and AAEON Technology that is truly flexible, lightweight and easy to deploy: Mayflower Insite Sentinel optical sensor (Sentinel). A complementary Smart City App Hub provides opportunities for third party apps and hence maximises depth, breadth, and innovation.

Our smart city and smart building platforms are components of the same underlying digital platform, so this means we can provide seamless support for large areas, whether city or campus environments, right down to individual building level.

Users have extensive functionality available within their drill-down dashboards, to maximise value in the information obtained from sensors and devices. A single user interface provides a comprehensive city view.

A smart energy system

By looking at the whole energy system it is possible to move towards developing a Net Zero Carbon city or place. This could include:

- Zero carbon power, zero carbon heat and zero carbon transport
- Significant capacity increase in the underlying power network and increased local power generation
- Utilising smart building management systems and business energy intelligence
- Low carbon heat adoption to be maximised with a combination of local heat pumps, local heat networks and district wide schemes
- Heat and power storage to minimise the impact of electrified heat on electricity demand at peak times
- A control scheme that manages key energy assets connected to the system in order to ensure security of supply whilst minimising investment needed in the underlying energy infrastructure
- The ability to generate revenues through trading generation, storage and/or demand flexibility in all available markets

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GREEN ENERGY FOR **YOUR BUSINESS**

Report zero carbon emissions with 100% renewable electricity from SSE's own UK wind farms and hydro plants plus solar generation.[1]

Switching to renewable energy is essential to make your business more sustainable on the road to net zero, whether you buy electricity from an energy supplier or generate it on site. SSE has a range of solutions to help transition your energy supply. Our REGO-backed fixed and flexible plans guarantee renewable power for your business[1]. Our EV chargers and heat pumps are similarly net zero driven.

Not all green energy is equal

We're different because all our 100% renewable electricity comes from SSE's own UK wind farms and hydro plants[1]. As the UK and Ireland's largest renewable electricity generator, the SSE Group plans a fivefold increase in renewables output to 50TWh p.a. by 2031, investing £12.5bn in renewables to 2026.

By switching to our green electricity you can cut your carbon footprint overnight. Certified 100% renewable and independently verified by EcoAct, our green electricity makes it easy to report zero emissions for the power you use.

Cut carbon with gas

Reduce carbon further and make your business stand out with renewable gas.

Produced from sources like agricultural materials, food waste and wastewater, renewable gas results in lower greenhouse gas emissions than the gas derived from the fossil fuels it replaces. Choose SSE Green Gas Plus – 100% certified renewable gas – and report reduced carbon emissions for gas.[2]

Show your commitment to sustainability

Whatever SSE Green energy options you choose, you'll get specially designed certificates and logos to show customers, employees and stakeholders you're serious about cutting carbon.

1 With SSE green electricity, all renewable electricity is sourced from wind and hydro assets wholly or partly owned by SSE Renewables, our sister company in the SSE Group. You'll continue to get your electricity through the national grid as normal, and we'll match your consumption to REGOs from the SSE Group's generating assets.
2 Scope 1 emissions can be reported using appropriate "Biogas" and "Outside of Scopes" emissions factors.
3 With SSE Green Gas, you'll continue to get your gas through the national grid as normal, and we'll match 25% of your consumption to an RGGO or BMC. The remaining 75% is backed by carbon offset projects abroad.
4 With SSE Green Gas Plus, you'll continue to get your gas through the national grid as normal, and we'll match all your gas consumption to an RGGO or BMC.

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SSE GREEN ELECTRICITY

- 100% renewable electricity from our UK wind farms and hydro plants[1].
- Certified 100% renewable backed by Renewable Energy Guarantees of Origin (REGOs).
- Easy to report zero carbon emissions for electricity with independent verification by EcoAct, an Atos company.
- Trace your power to a specific UK wind farm with SSE Next Generation or SSE Corporate Power Purchase Agreement.
- Use a combination of named resources, dedicated assets and load control to ensure 100% renewable alignment

SSE GREEN GAS

A choice of products to suit your budget and carbon targets:

SSE Green Gas: 25% certified renewable gas backed by Renewable Gas Guarantees of Origin (RGGOs) or Biomethane Certificates (BMCs) and 75% carbon-neutral gas backed by carbon offsets[3]. We also pledge to plant one tree in the UK for every SSE Green Gas customer.

SSE Green Gas Plus: 100% certified renewable gas backed by RGGOs or BMCs with independent verification by EcoAct[4].

ASSET-BACKED SUPPLY SOLUTIONS

As pressure grows to deliver genuine sustainability, businesses need to go further towards net zero.

SSE's Corporate PPAs can provide renewable electricity from dedicated SSE-owned assets whether in front of or behind your meter.

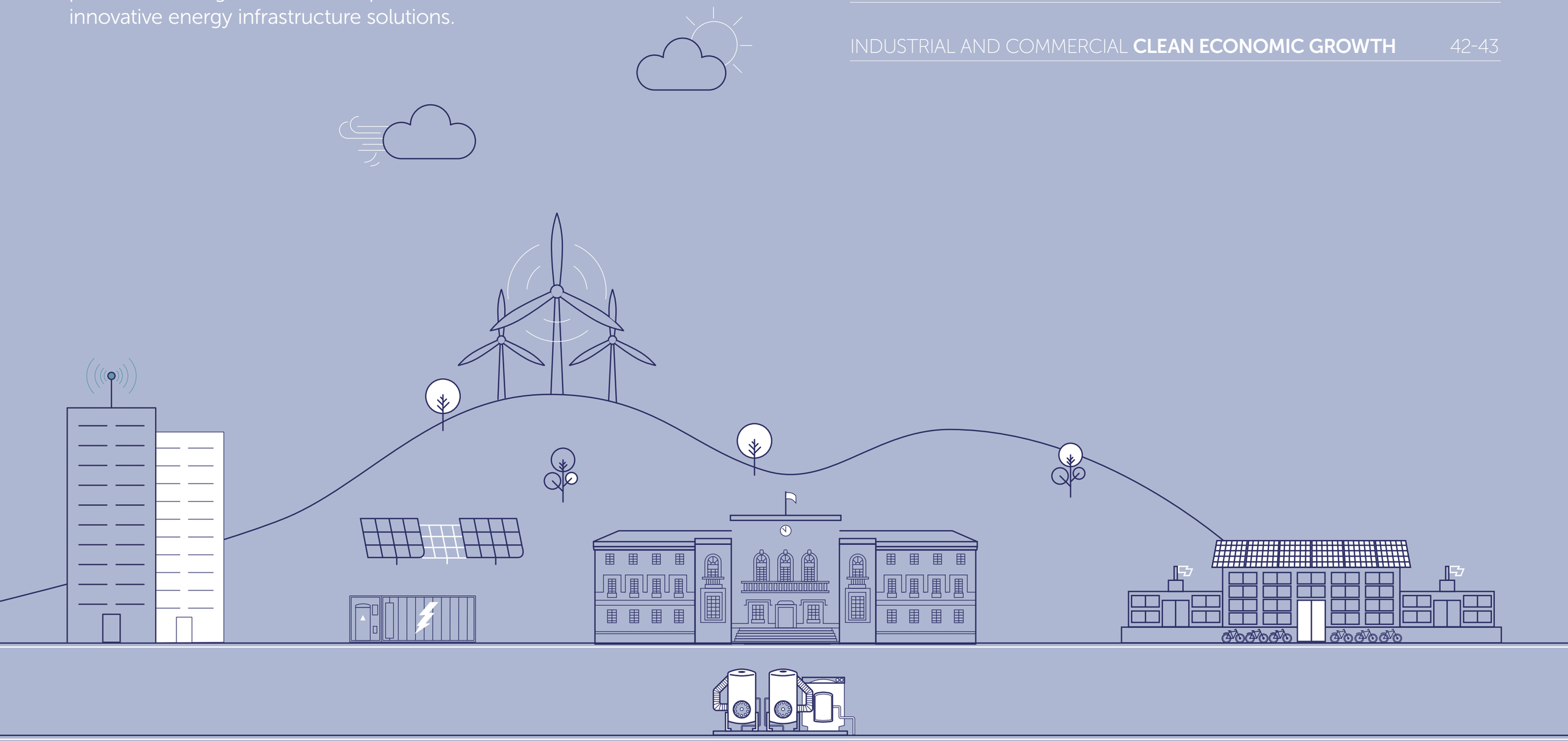
We know the wind doesn't always blow or the sun might not shine when you need power. Battery storage can help align renewable profile with your load profile to maximise use of identified renewable sources.

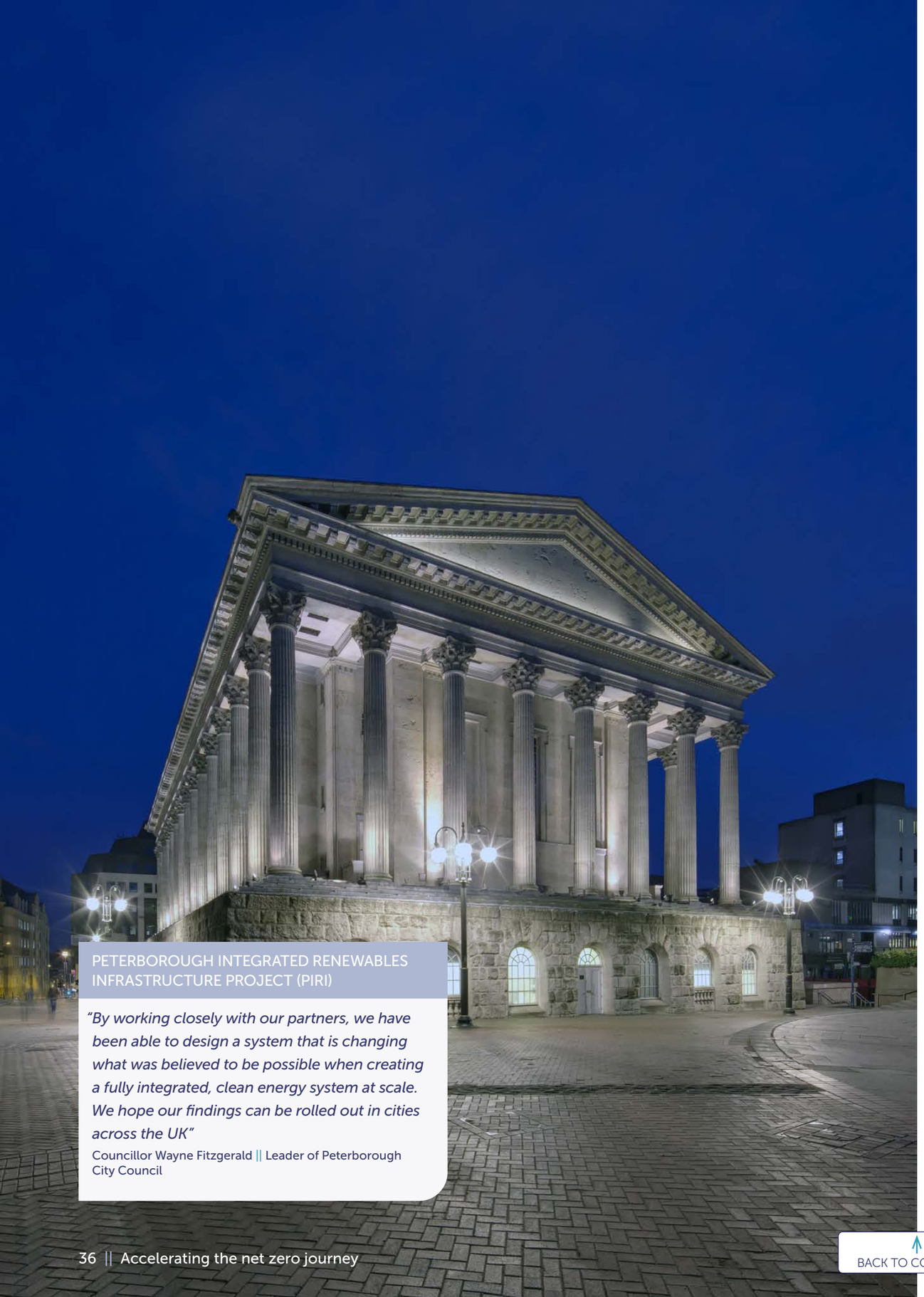
To ensure 100% alignment every half hour, we're developing models that combine multiple customers into renewable communities which benefit from a diversity of load profiles.

These communities will utilise shared solar and storage assets – whether behind the meter or elsewhere – which together with load control will ensure supply is 100% renewable from identified generation sources for every half hour of the day. So you can prove your commitment to action on climate change.

OUR CLIENTS
ENERGY PARTNERS

SSE Energy Solutions works with private businesses, public sector organisations, and partners to deliver innovative energy infrastructure solutions.





PETERBOROUGH INTEGRATED RENEWABLES INFRASTRUCTURE PROJECT (PIRI)

"By working closely with our partners, we have been able to design a system that is changing what was believed to be possible when creating a fully integrated, clean energy system at scale. We hope our findings can be rolled out in cities across the UK"

Councillor Wayne Fitzgerald || Leader of Peterborough City Council

PUBLIC SECTOR
BUILDING BACK BETTER

Local authorities have a major role to play in helping the UK meet its commitments under the Paris Agreement. COP26 has focused minds on upcoming climate deadlines – 70% have already declared a climate emergency.

Local authorities are democratically accountable so regional and local leaders who develop strong relationships with local businesses are in a unique position to drive the behavioural changes needed at a localised level to achieve the UK's target of net zero by 2050.

Grass roots understanding

Equally, local leaders have the best understanding of the unique economic needs of their regions. They have the potential to look across the whole local energy system to help coordinate the divergent streams - from heat networks to electric vehicles - that need to be integrated to build a truly smart energy system.

Pressure on local authorities

However, there is pressure on the public sector, local authorities in particular, to deliver for their communities on all fronts: to reduce carbon emissions whilst reviving the economy, to cut pollution whilst attracting business and new residents. But the green agenda is not opposed to economic prosperity.

Addressing key challenges

By investing in smart energy infrastructure that integrates whole systems thinking, councils can offer attractive work and life benefits. Residents, businesses and investors who see a local area is decarbonising – investing in renewables, working with industry partners to deliver innovative energy solutions, deploying EV infrastructure at pace - will make the move to take their own low carbon actions.

For many local authorities, housing, buildings, waste and transport are the biggest carbon emitters - and will become priorities for activity. Electric vehicles and their charging infrastructure are essential - both at council owned locations but also more widely for private charging facilities.

Low carbon district heating systems are also a consideration to be explored and with the latest moves into heat pumps , hydrogen and green gas development, it's predicted that connected heating systems will increase significantly in coming years.

How SSE Energy Solutions can help

Our experience shows there are many barriers to progress, such as siloed procurement, disparate time lines within authorities, lack of funds, skills and capacity – and in some cases restriction by regulation. Taking a broader approach to local area energy planning facilitates the introduction of integrated, low carbon energy infrastructure that delivers smart data insights - benefiting local service provision and accelerating the journey to net zero.

To help facilitate this step change SSE Energy Solutions can provide the expertise and skills, the innovative thinking for looking at energy 'in the round' and also the financial investment designed to benefit your communities and local economies for the long term.

Our Smart Cities and Places proposition provides a seamless integration of assets, control systems, data and processes to enable the transition to zero carbon.

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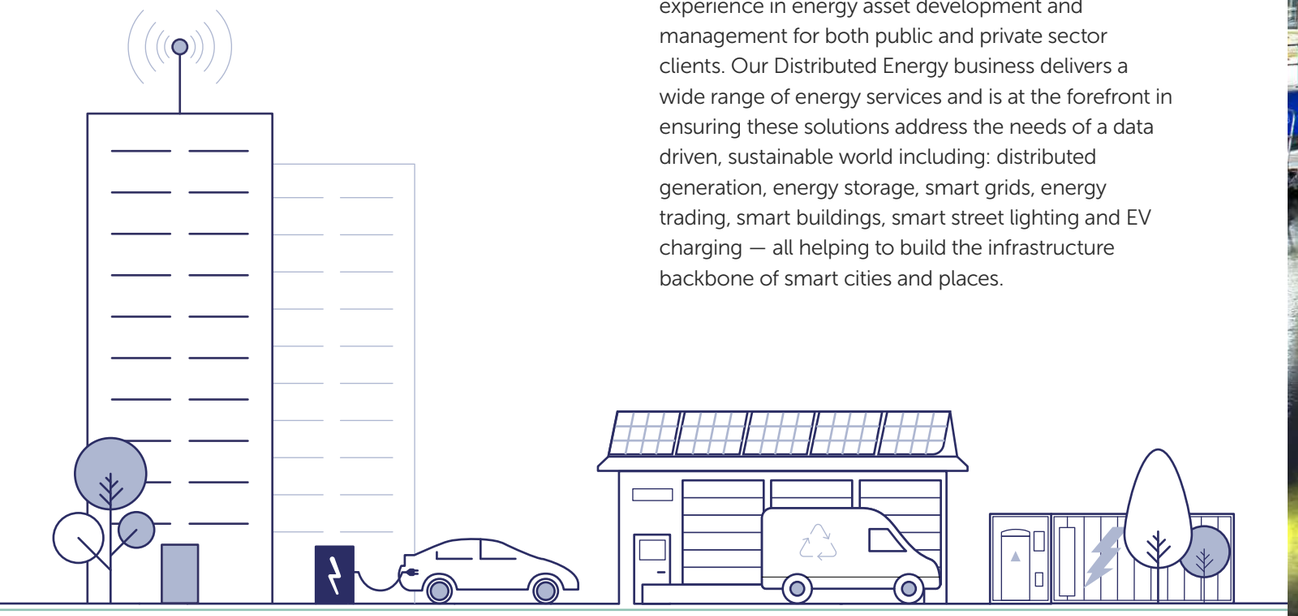
REGENERATION AND **DEVELOPMENT**

Technology and data drive the long-term performance of energy assets and deliver sustainable foundations that contributes to regional economic growth.

The need for power infrastructure development never stops. Now with the focus firmly on low carbon development, working with energy partners experienced in overcoming grid constraints and with knowledge of emerging low carbon technologies is a key consideration for public sector planners and private developers alike.

We see two common scenarios. Firstly, building a new development with a net zero infrastructure, and secondly decarbonising an existing high-value operation, and evolving it to become a net-zero one.



How SSE Energy Solutions can help

At SSE Energy Solutions we invest in, build, own, operate and connect localised flexible infrastructure, and our whole system approach means, we can help at every stage of a development. Getting a new development project off the ground, whether its brownfield, greenfield or more industrial sites, can be a challenge if the site faces grid constraints even before construction can begin. Our expertise in localised grid systems and our private networks experience helps to plan for and secure resilient low-carbon power network.

And that's just the start. SSE has over 40 years' experience in energy asset development and management for both public and private sector clients. Our Distributed Energy business delivers a wide range of energy services and is at the forefront in ensuring these solutions address the needs of a data driven, sustainable world including: distributed generation, energy storage, smart grids, energy trading, smart buildings, smart street lighting and EV charging — all helping to build the infrastructure backbone of smart cities and places.

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BECKETWELL SCHEME, CITY OF DERBY

"We are committed to sustainability and are delighted to be working with SSE Energy Solutions to deliver a site wide electricity infrastructure throughout the Becketwell scheme, which is a key regeneration project for the City of Derby."

Dan Murray || Construction Director at St James Securities

GOLDSMITHS, UNIVERSITY OF LONDON

"We are excited to begin this journey with SSE as they support us in our goals to deliver our PLAN25 strategy and achieve a completely carbon neutral campus by 2025. We have already made significant strides in this area with our investment in solar PV panels, but this new partnership will see us fully embracing a 'whole systems' approach by adopting and integrating other low-carbon technologies."

Everton Williams || Deputy Director Estates at Goldsmiths

HIGHER EDUCATION **FOR THE FUTURE**

Universities are advancing toward the goal of full carbon neutrality by 2050 at varying speeds, with some institutions pledging to be carbon neutral within the next ten years.

We understand that Higher Education organisations are caught in a dichotomy. They face increasing financial pressure; alongside simultaneous calls from students, and others, to invest in reducing carbon and achieving net-zero.

The scenario is exacerbated by significant property costs for almost all Higher Education (H.E.) establishments - with energy costs averaging around 20% of property costs. Compounding this are ageing buildings and energy assets and infrastructure management, which in the sector represent 30% of energy infrastructure bills.

Many Universities have seized the nettle, making net zero target commitments and are exploring ways to cut carbon and increase efficiencies.

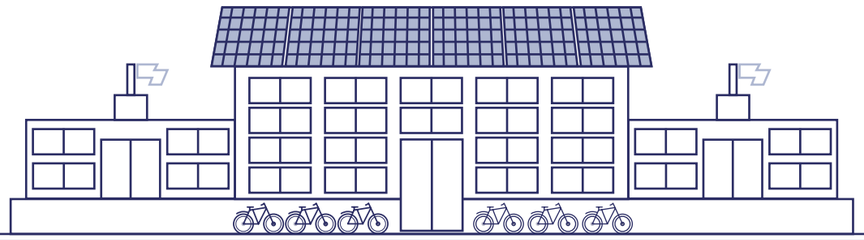
How SSE Energy Solutions can help

There is significant room to accelerate both cost and carbon cutting in a Higher Education campus. Taking a joined-up approach and developing an integrated energy management strategy, we advocate a whole system approach encompassing three key pillars of action:

- Reduce the carbon intensity of electricity consumed
- Decarbonise heat
- Increase efficiencies in buildings to reduce consumption.

Tackling these smooths the path to net zero, and improves wellbeing for students and staff.

With SSE as a partner you will benefit from our extensive resources, expertise and investment potential.



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INDUSTRIAL AND COMMERCIAL
CLEAN ECONOMIC GROWTH

We will bring long term investment to propel Industrial and Commercial clients on their net zero journey.

Government modelling shows industry will need to decarbonise by two thirds by 2035 and by 90% to reach 2050 net zero goals. We also know energy costs are increasingly becoming a tense boardroom issue. Industrial and commercial businesses are caught between seemingly contradictory demands; growing, expanding, modernising and increasing output – while cutting operational costs and reducing carbon output or de-carbonising totally. And to do it in a way that negates 'brown out' power restrictions that can cost millions.

How SSE Energy Solutions can help

Our experience shows it's possible. And using our whole system approach to take a united view of your portfolio, and implement digital platforms to optimise all energy across your site, or sites, means going green and cutting costs go hand in hand.

This whole system approach takes both a macro and micro view of your scenario and allows for a modular approach to old and new technology. But what it also sometimes finds is that solutions can go beyond a specific company, and into the local area. In these cases, we can work with businesses to increase collaboration within and between industry to create geographic clusters that put in place plans that allow change at scale - with shared risk and resources.

Any and all change though needs funding from somewhere. And we're able to provide a capital injection by acquiring ageing assets and infrastructure from businesses, and then investing in new infrastructure for you. Or by offering Corporate Power Purchase Agreements (CPPAs). Whatever it takes to help you get your journey moving on the right path.

OUTCOMES THAT DELIVER BENEFITS

- Lower your energy costs through developing and implementing comprehensive energy reduction programmes
- Improve your supply resilience by investing in and installing improved and upgraded technology
- Reduce your supply risk by adopting and managing your network safely and to an agreed programme
- Improve stability of your long-term energy needs through agreed value for money indices
- Reduce your energy-related costs by simplifying your supply chain
- Provide end-to-end asset management and network planning to reduce your non-core operational costs
- Optimise your energy consumption by implementing portfolio aggregation and optimisation using unique analysis tools through our technology platform
- Implement SMART controls with self-healing to improve energy control and network resilience
- Invest in new on-site generation and distributed energy solutions to drive towards carbon neutrality.

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SSE'S COP 26 Road to Renewables visit to Peterborough

PETERBOROUGH CITY COUNCIL (PIRI)

We're working with Peterborough Council on the integrated renewables infrastructure (PIRI) project which brings together energy generation, demand and storage, thereby unlocking efficiencies not deliverable under our existing, traditional energy systems. It is envisaged to be especially effective in areas where the electricity network is constrained; as well serving as a blueprint for urban locations across the UK and Ireland.

HELPING COMMUNITIES **ON THE ROAD TO NET ZERO**

FRASERS PROPERTY DEVELOPMENT

Wandsworth Riverside Quarter, one of our innovative landmark district heating schemes, comprises 550 residential units together which consists of six blocks and a further 2,773 m^2 of commercial space.

SSE worked in partnership with a geothermal/heat extraction expert to design an Aquifier Thermal Energy System (ATES). This is a highly innovative, integrated energy system which combines open loop ground source heat pumps in combination with gas CHP to provide low carbon heat, hot water, cooling and electricity all under the control of SSE's ESCo team.

GOLDSMITHS UNIVERSITY OF LONDON

We have signed a joint development agreement with Goldsmiths, University of London to design and deliver a low carbon campus infrastructure in pursuit of the university's ambitious net zero targets.

Our distributed energy team will look to consolidate all of Goldsmiths' significant energy consuming buildings onto a centralised campus-wide heat and power network. Estimated savings in the first phase of the project are an average of 1,375 tonnes of CO2 per year – the equivalent annual energy use of 144 homes.

UKRI BUS TO GRID

We are leading the first of a kind Innovate UK funded Bus2Grid project which, working alongside Go-Ahead, Transport for London, BYD and other partners, will enable one of Europe's largest EV Bus depots with almost 100 bi-directional chargers.

REDUCING CARBON IN DUBLIN

Local air quality monitoring devices can provide pollutant levels for both high-risk and densely populated areas. By connecting devices to Mayflower Smart Cities and Places, Dublin City Council can collate data for more detailed analysis, identify and classify areas of concern, provide base evidence around which to build an air quality improvement strategy and use variable message signs to drive behavioural change. Through continual monitoring, the effectiveness of environmental strategies and initiatives can be evaluated.

MOUNTPARK LOGISTICS

We are delighted to be working with Mountpark Logistics in the provision of energy infrastructure for the Bristol XL development in Avonmouth, Bristol. The electricity infrastructure will have a capacity of up to 8MVA.

GRID-SCALE SOLUTIONS

A 50MW battery storage project in Wiltshire and a 30MW solar farm in Worcestershire are two major projects in development that demonstrate our ambitions to help deliver essential balancing services to the energy system, and help accelerate the net zero journey.

SMART DISTRIBUTED ENERGY **INFRASTRUCTURE SOLUTIONS**

Designed to meet local energy needs and drive Net Zero.

FOR A BETTER WORLD OF ENERGY

Get in touch with our team to find out how we can help you

distributedenergy@sse.com || 0345 070 2019 || sseenergysolutions.co.uk

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