



# Introducing SSE Renewables

## We power change

**JANUARY 2025** 



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OUR CAPABILITIES AND SUPPLY
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SUSTAINABILITY
SAFETY



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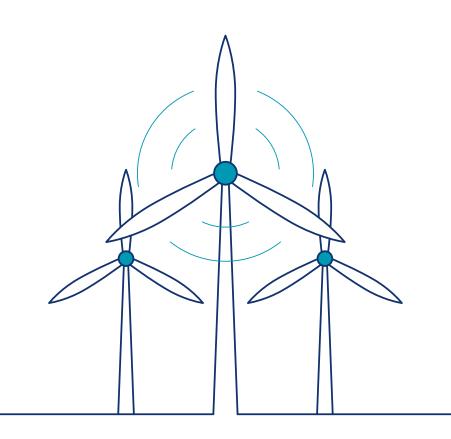


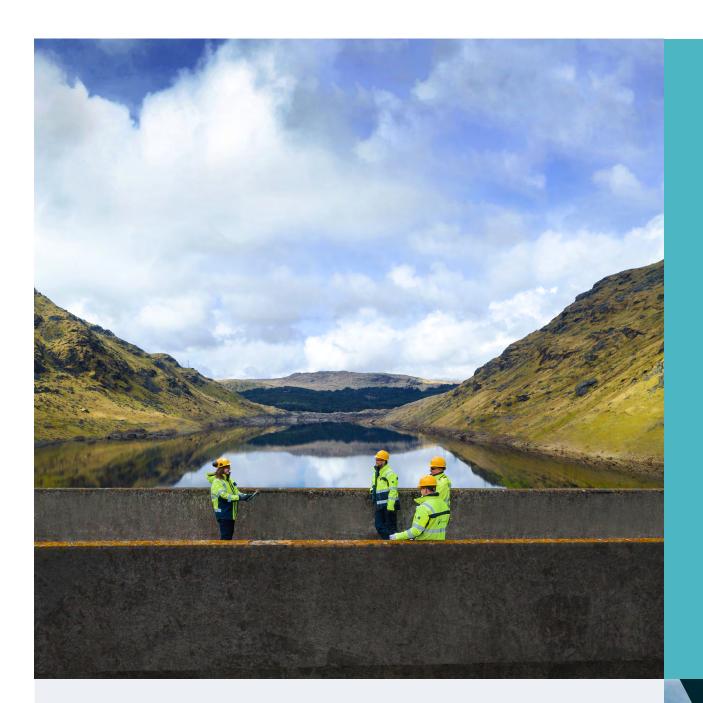
## **About SSE** Renewables

An overview of our business

### Our purpose

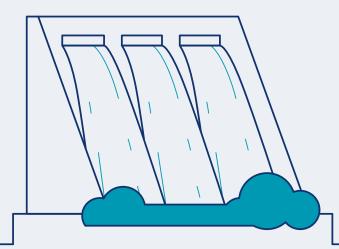
To lead the net zero transition through the world-class development, financing, construction, and operation of renewables





### **Our vision**

To be a leading provider of renewable energy in a net zero world



We're part of the **FTSE-listed SSE plc**, headquartered in the UK, with a growing presence internationally

We have an industry leading portfolio and pipeline of wind, hydro, solar and battery assets and projects across the UK, Ireland, Europe and Japan

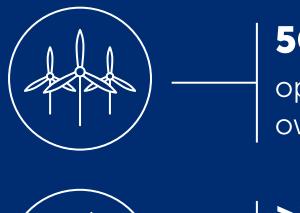
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We're a team of around 2,000 renewable energy professionals

**HEBNEDK** 





5GW operational/ owned



>19GW secured pipeline



supported in 2024/25

## **Decades of experience and a** pipeline to power change



16,000 jobs







## An overview of our business

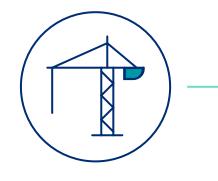
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## Our targets for the decade ahead

As we deliver on SSE's Net Zero Acceleration Programme (NZAP) Plus our strategy focuses on three core pillars:



### Accelerate growth

**INTRODUCING SSE RENEWABLES** WE POWER CHANGE

Building out capacity up to 9GW by 2027, and towards 16GW in the early 2030s



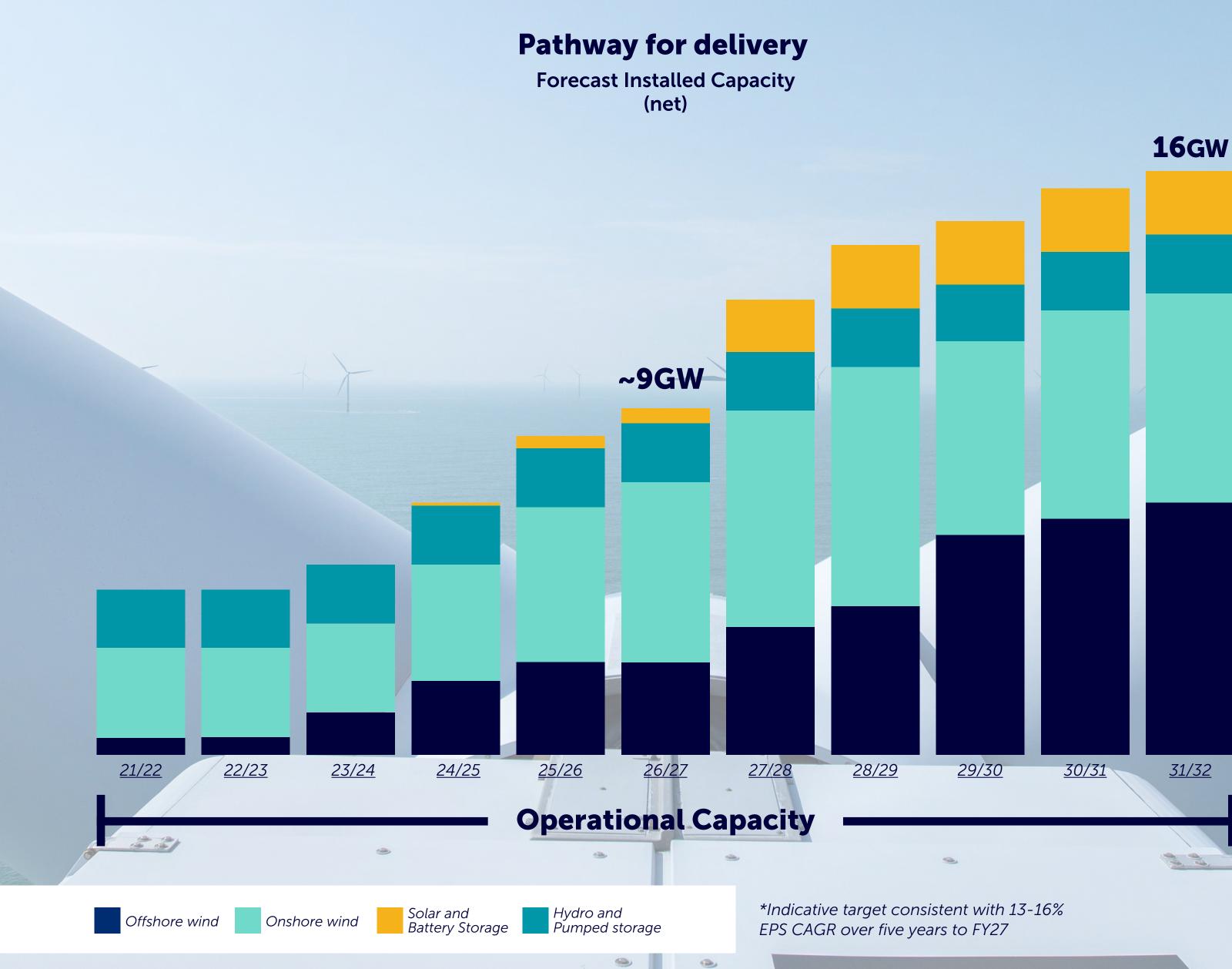
### **Optimise value**

Be part of SSE's c.£20bn investment to 2027 to grow capacity



### Long-term sustainability

Lead a just and nature positive transition to net zero





WHO WE ARE

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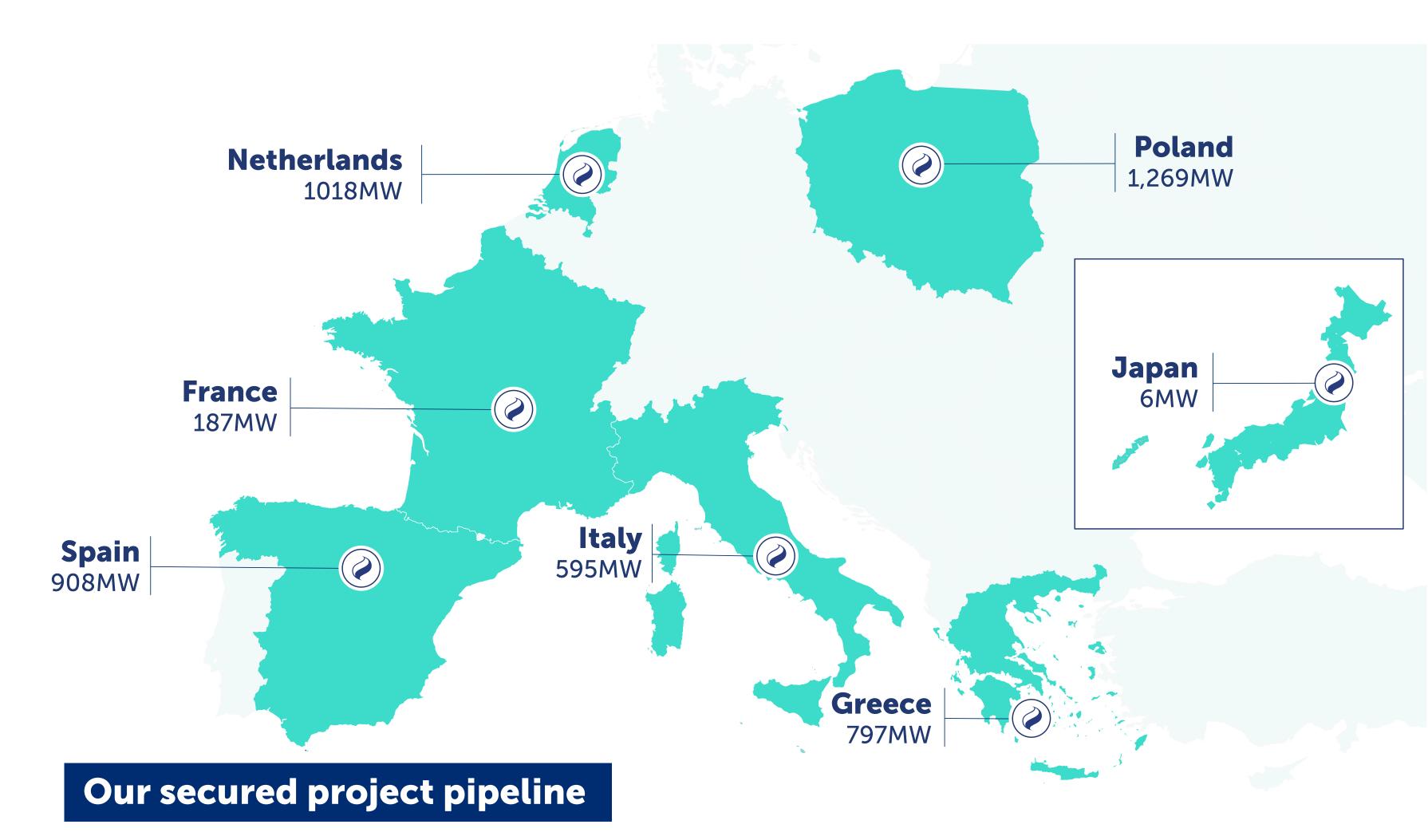


## Accelerating growth in international markets

### Building our business in Continental **Europe and Asia Pacific**

We're bringing our pioneering expertise to carefully selected markets in Continental Europe and Japan to deliver the cleaner, homegrown energy the world needs now.

We're progressing a 10GW development pipeline of offshore and onshore wind, solar and battery storage projects in these international markets of which around 4.8GW is secured.







## Our technologies

COLLETER





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## **Onshore Wind, Solar & Battery**

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We're the leading owner, operator and developer of onshore wind farms across the UK and Ireland

We own 2.5GW of operational onshore wind capacity in the UK and Ireland with a secured pipeline of 1.7GW in development. This includes:

### - Viking Wind Farm (443MW)

One of the UK's most productive wind farms

### - Galway Wind Park (174MW)

One of Ireland's largest onshore wind farms

We are also progressing a 2.1GW secured pipeline of utility-scale solar and battery projects. This includes:

### - Salisbury (50MW)

Our first operational battery energy storage system (BESS) project

### - Littleton (31MW)

We are in construction with our first solar project







Littleton Solar





## **Offshore Wind**

We are a world-leading developer, operator and owner of offshore wind energy and, in 2023, we celebrated 20 years of offshore wind delivery

- Our operation sites include Beatrice, Greater Gabbard and Seagreen Offshore Wind Farm
- We have the largest secured offshore wind development pipeline in the UK and Ireland at over 9GW
- We own Scotland's largest operational offshore wind farm\*, Seagreen, which generates enough power for up to 1.6 million homes annually
- We're currently developing the 4.1GW offshore wind super project, Berwick Bank

- In Ireland, we're progressing the development of Phase 2 of Arklow Bank Wind Park, an 800MW offshore wind farm off the coast of County Wicklow
- In the Netherlands we're progressing the pre-developed and fully consented 2GW (SSE share 50%) Alpha offshore wind project in the IJmuiden Ver Wind Farm Zone in Dutch North Sea waters.



We're currently constructing the world's largest offshore wind energy project, the 3.6GW Dogger Bank Wind Farm in the North Sea which is a joint venture with Equinor and Vårgrønn.

**Dogger Bank Wind Farm** 

^ Homes powered per annum quoted based on Typical Domestic Consumption Values (Medium Electricity Profile Class 1, 2,900kWh per household; OFGEM, January 2021), typical wind load factors, and installed capacities.



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## Hydro and Pumped Storage

## We operate the largest fleet of hydro-electric power assets across Scotland

- We operate Britain's biggest natural battery comprising 79 hydro power station units at sites across Scotland
- Our 1,459MW hydro portfolio includes 300MW of pumped storage and 750MW of flexible hydro
- We're investing millions into the future of hydro power power including new pumped storage capacity
- We plan to double Britain's flexible electricity storage capacity with our

30GWh pumped hydro storage scheme at <u>Coire Glas</u> in the Scottish Highlands

- We've invested almost £50m to repower Tummel Bridge Hydro-Electric Power Station, extending its operational life by at least 40 years
- We're also actively seeking
  additional investment opportunities,
  including adding pumping
  capabilities to existing stations
  including <u>Sloy</u>



If approved for final delivery, Coire Glas would be capable of providing 30GWh of long duration storage - making it Britain's biggest natural battery capable of powering over 3 millions homes for up to 24 hours **Pitlochry Hydro Power Station** 

Britain's current flexible electricity storage capacity confirmed as less than 30GWh at the end of 2021, of which 94% is from pumped hydro storage (25.8GWh), in 'Future Energy Scenarios', published by National Grid, July 2022.









## In-house project design and optimisation



## Auction strategy and bid management

### Phase 1:

• Technical and constraints assessment (environmental constraints, landscape/ visual analysis)

### Phase 2:

• Technical and constraints refinement (site constraints mapping, policy review, cable routing analysis, initial LCOE ground assessments)

### Phase 3:

• Financial modelling and competitor analysis (economics, competitor analysis, auction modelling)

### **Development team:**

- Technical analysis/resource assessment
- Onshore and Offshore engineering
- Project management/project controls

### Key capabilities:

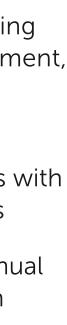
- Site selection and turbine layout design
- Wind and metocean measurements (LiDAR)
- Wind and wake modelling
- Computational Fluid Dynamics (CFD)
- GIS and CAD (mapping, site layouts)
- Project cost modelling
- Energy yield estimates



- Track record of constructive relationships with governments, environmental organisations, and statutory bodies
- Decades of experience in mitigating project risks and successfully navigating consenting process for wind farms
- One of few developers and operators to manage and administer its own funds, creating close bonds to communities and trusted relationships for the future

- Sector-leading project financing expertise, securing debt finance for wind farm projects
- Strong experience of multi-contracting strategy and multi-contract management, including >20 major contracts on Dogger Bank
- Valuable executive-level relationships with a broad range of supply chain players
- SSE Renewables can leverage the annual SSE plc procurement spend of >£3bn

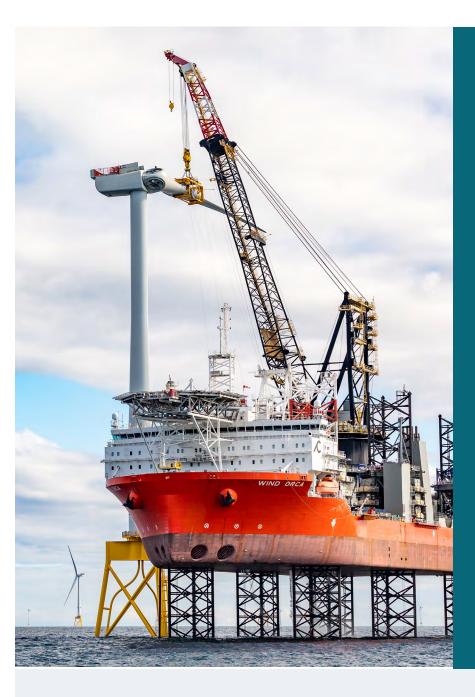






## Our supply chain strategy

Generating local jobs and investment



## The O&M base in Port of Tyne, is the operations hub for the Dogger **Bank project, and home to over 200 direct employees**

With safety, sustainability and **responsibility** at the heart of our strategy, we establish strong relationships with our suppliers because we know how critical they are to our business

## **Supporting local skilled jobs**

Seagreen supported up to 141 skilled jobs at Global Energy Group's Port of Nigg near Inverness, Scotland associated with the marshalling, storage and logistics for 114 wind turbine foundations destined for the Scottish Highlands. offshore wind farm.

These include 93 permanent roles already on-site as well as the creation of an additional 48 new roles which were recruited at the port, delivering a areen jobs boost to the

We are committed to maximising the use of local suppliers across the construction and operational phases of our renewables developments

**Viking Wind Farm** brings direct benefits to the local community. **During construction**, around 400 jobs were created with multiple supply and sub-contract opportunities for local businesses.

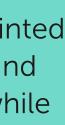
Scottish firm RJ McLeod was appointed principal contractor in July 2020, and supported the local supply chain while also directly recruiting locally.

Viking Wind Farm has created around 35 direct new jobs during the operational lifetime of the wind farm and is committed to the training of local people and apprentices and supporting local schools and colleges to encourage STEM careers.

In 2021 turbine supplier Vestas recruited four local apprentices to join their apprenticeship programme.













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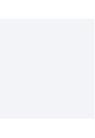
## Our partnerships

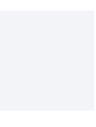
Trusted relationships with strategic and financial investors and supply chain partners

		Status	SSER Role	Gross Capacity	SSER Ownership	P	artners
	Greater Gabbard	Operational	Led Development Led Construction Leading Operation	0.5GW	50%		SME
	Beatrice	Operational	Led Development Led Construction Leading Operation	0.6GW	40%		ock Power Limited
SdIH	Seagreen 1 Seagreen 1A	Operational In Development	Led Development Leading Construction Leading Operation	1.1GW 0.36GW	49%	TotalEnergies	PTTEP
RTNERSI	Dogger Bank	In Construction	Led Development Leading Construction	3.6GW	40%	equinor	s vårgrønn
JECT PA	IJmuiden Vers Alpha	In Development	Leading Development	2GW	50%	😽 ap	g ABP
PROJ	North Falls	In Development	Development Partner	0.5GW	50%		SME
L	Ossian	In Development	Leading Development	3.6GW	40%	Copenhagen Infrastructure Part	Maruben
	Onshore Wind	Operational	Led Development Led Construction Leading Operation	c1.8GW	25-51%		urEnergy Bord na
SUPPLY CHAIN	Vessels	Τι	urbines	Foundations	Subs	station	Subsea Cablin
			estas.	subsea 7	ABB	SIEMENS COCIGY	Nexans
	seaway	• <b>7</b>	E Renewable Energy ENS Gamesa ENEWABLE ENERGY	<b>Sif</b>	🔞 Hita	achi Energy	SIEM
	DEADER DEADER Dredging, Environmental & Marine Engineering		<b>■</b> NORDEX		aibel	Petrofac 抱	













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## **A renewable** energy pioneer

The UK and Ireland's clean energy champion

Our 5GW operational renewables fleet is the largest in the UK and Ireland, with onshore wind, solar and battery (2.5GW), offshore wind (1GW), and hydro power (1.5GW).

Our industry-leading **19GW secured pipeline** in the UK and Ireland includes:

- 4.1GW Berwick Bank offshore wind super project
- 2GW IJmuiden Ver Alpha offshore wind project in the Netherlands
- 0.8GW Arklow Bank offshore wind project in Ireland
- 1.8GW onshore wind pipeline across the UK and Ireland
- Up to 1.5GW Coire Glas pumped hydro storage project

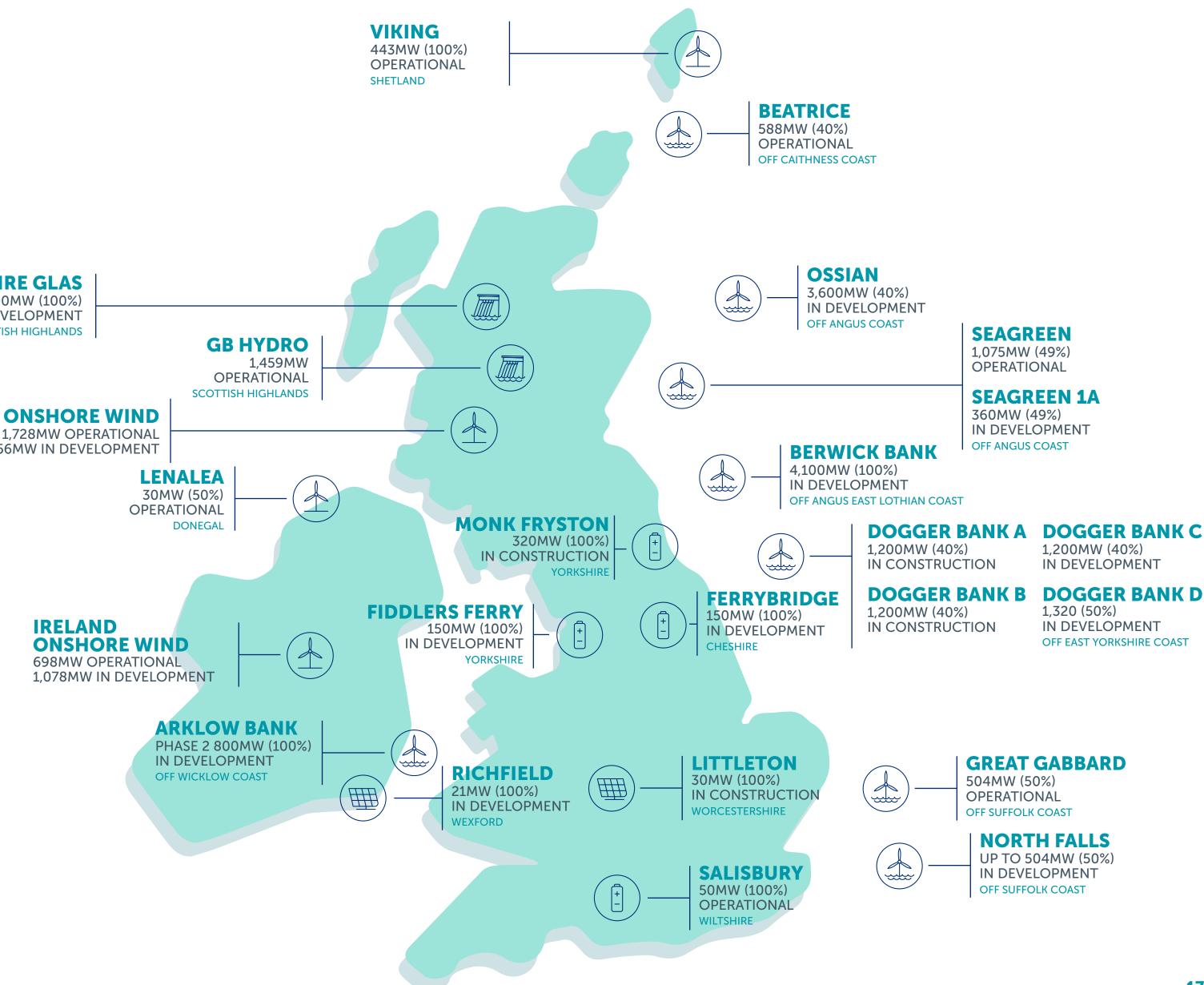
Find out more about our sites: www.sserenewables.com/our-sites

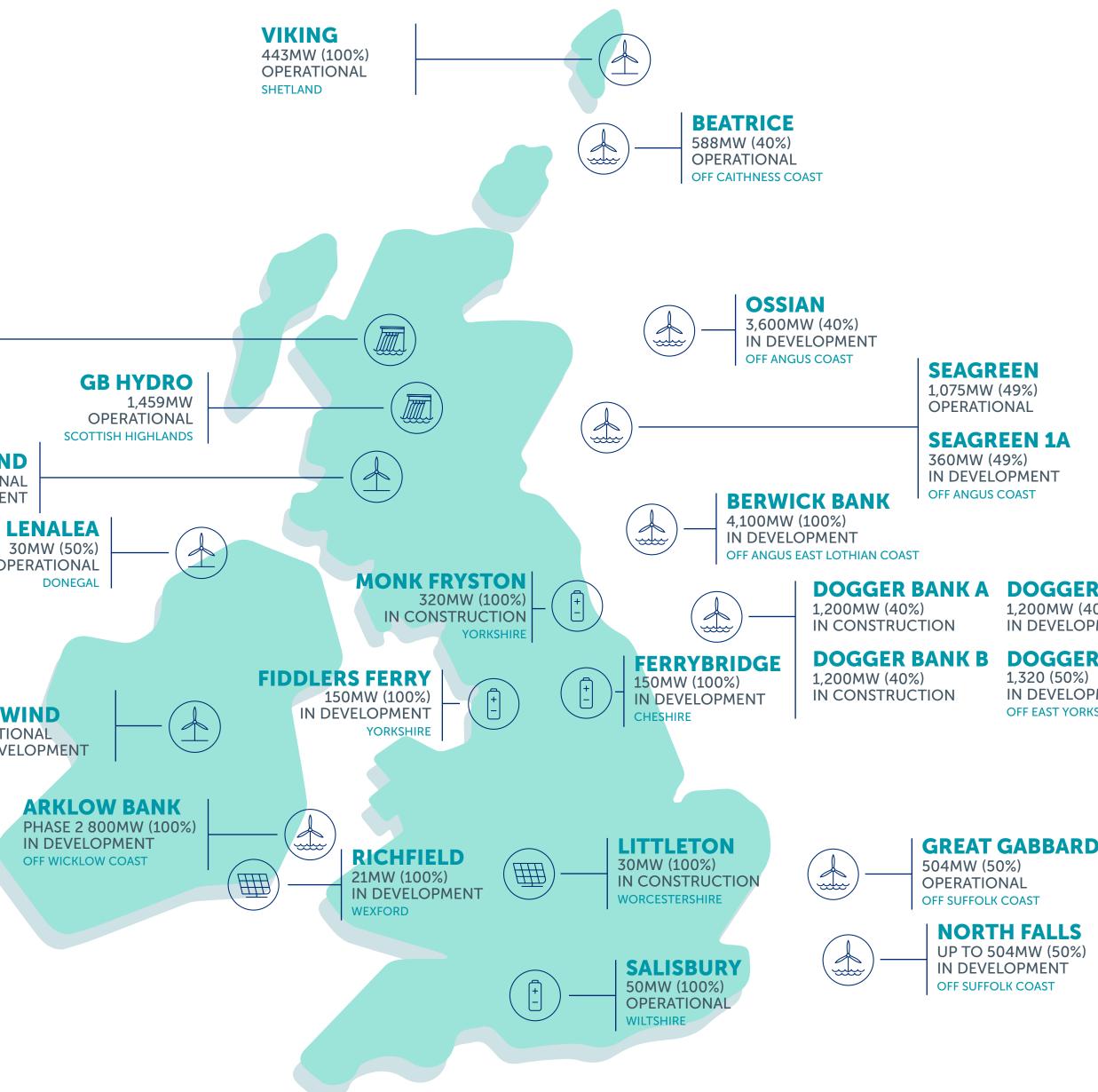
OUR TECHNOLOGIES WHO WE ARE

> **COIRE GLAS** 1,500MW (100%) IN DEVELOPMENT SCOTTISH HIGHLANDS

**GB ONSHORE WIND** 

**556MW IN DEVELOPMENT** 





OUR CAPABILITIES AND SUPPLY CHAIN | OUR SITES |

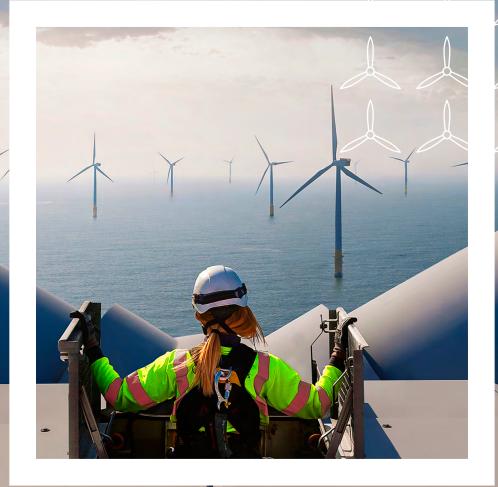
INNOVATION







# Innovation







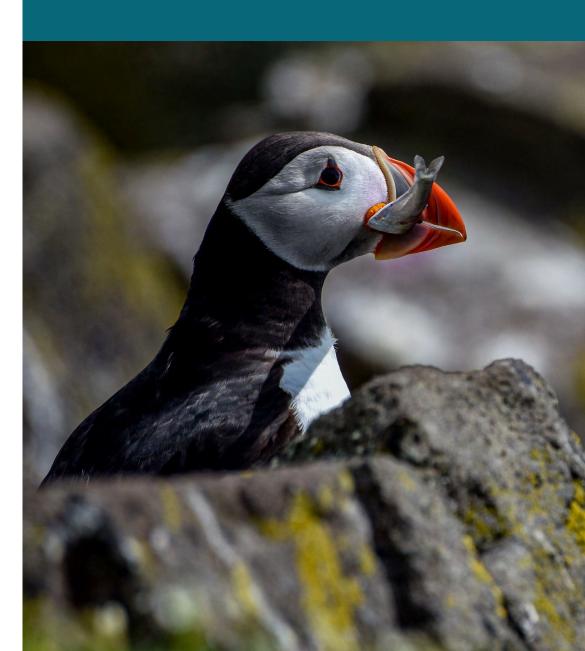
## Innovation

Leading in digital innovation to protect nature while delivering net zero and pioneering in offshore wind technologies

## **Partnership with Microsoft and Avanade**

SSE Renewables has teamed up with technology leaders Microsoft and Avanade on a series of digital innovation projects which could support greater sustainability in the development, construction and operation of renewable energy.

The partnership has implemented a species monitoring technique using artificial intelligence (AI). As part of a planning condition for its operational Beatrice offshore



wind farm off the north-east coast of Scotland, SSE Renewables is required to monitor local puffin colonies.

SSE Renewables, Microsoft and Avanade have also been testing the use of technologies including LIDAR, Sonar and hydrophones within a North Sea aquarium. These trials have indicated highly promising results for practical use in species recognition, abundance monitoring and distribution analysis.

We deliver world-leading projects and innovation is at the heart of our approach. Through our in-house work and strategic partnerships, we lead on innovation within the renewables industry.

At the world's largest offshore wind farm Dogger Bank, we are partnering with innovative companies to improve construction in the offshore space:

### **Granada Material Handling**

**Welding improvements** 

**4 cameras installed** to monitor puffin populations with artificial intelligence (AI)











4 cameras installed to monitor puffin populations with artificial intelligence (AI)





## Sustainability





## Our sustainable approach

People positive, climate positive, nature positive

For the main sustainability content, refer to our 2024 sustainability report here



Awarded an **'A' on climate change** by CDP

Carbon targets approved by the **Science Based Targets** Initiative

Part of UN's 'Race to Zero' and a Principal Partner to COP26





First company worldwide to launch a Just Transition Strategy

**No.1** in Benchmarking Alliance's just transition benchmark

1 in 3 employees have transitioned from high-carbon jobs



Fair Tax accredited and a Living Wage and Living Hours employer

Modern Slavery Action Plan for 2021-23

**Sustainable Procurement Code to** ensure sustainable supply chains





First FTSE company to publish its Gender Pay Gap

Included in Bloomberg's **Gender Equality Index** 

'IN, ON, UP' strategy to **recruit** and develop diverse talent





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## Committing to **Biodiversity Net Gain**

Our ultimate goal at SSE Renewables is to achieve Biodiversity Net Gain across all of our operations, from new developments to operational sites, and across all technologies and geographies.

However, we know that the methodologies, policies and approaches to quantifying and creating BNG are rapidly evolving. To support collaboration and encourage transparent decision making, SSE Renewables published comprehensive user guides in its 'Positive for the Planet' report. In this report launched at COP27, SSE Renewables outlined its 10-point plan for Biodiversity Net Gain (BNG).

### **Our 10-point plan for Biodiversity Net Gain**

**Deliver Biodiversity No Net** Loss on major onshore projects consented from 2023

**Deliver Biodiversity Net Gain** on major onshore projects consented from 2025\*

Embed BNG ambitions in decision-making at each stage of all new project developments from 2023

Use our BNG Toolkit and collaborate with partners to identify biodiversity improvements on operational sites

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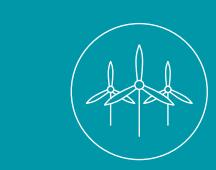
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Evolve our BNG Toolkit and approach to enable use in all geographies







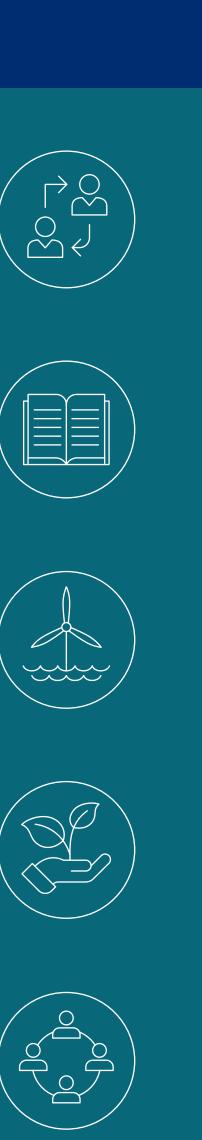
Actively participate in industry 6 forums to support the development of BNG across all renewable technologies

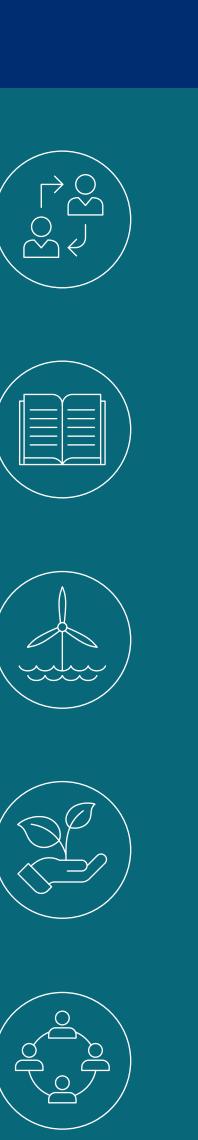
Contribute to research projects and the creation of knowledge around BNG in the renewables sector

Trial new approaches for BNG on offshore projects, including digital innovations

Develop the concept of 'Habitat Banks' with a transparent methodology for applying BNG credits

Lead the BNG working group 10 of the Powering Net Zero Pact, a collaboration of global power sector companies











## **Sustainability** performance

2023/24

2023/24 total renewable output (including pumped storage and GB constrained-off wind)

2023/24 total renewable capacity (including pumped

storage) in operation **4.5GW** 

**SSE Renewables economic contribution in the** UK and Ireland 2023/24

UK

**Contribution to GDP £1.840bn** 

(2022/23: £1.5bn)

**Jobs supported** (2022/23: 9,850)

Ireland

**Contribution to GDP** E185m (2022/23: €88m)

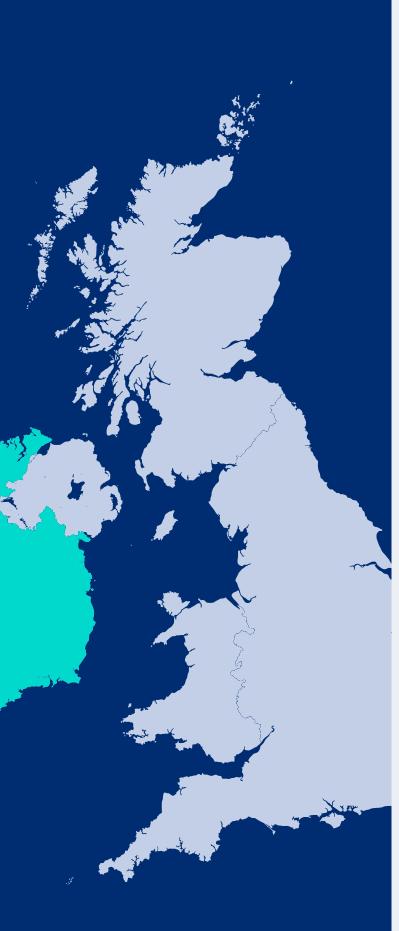
**Jobs supported** (2022/23: 430)

2023/24 total renewable capacity (including pumped storage) in construction

**2.8GW** 

Renewable capacity which reached financial investment decision in 2023/24

**600MW** 



### **Our sustainability** strategy

Our mission in SSE Renewables is to fight climate change and accelerate progress to net zero through the generation of renewable

electricity. At the same time, we are committed to doing this in a sustainable way by generating positive impacts for people, nature and climate. This means supporting good jobs and thriving communities in the places where we live and work; protecting, restoring and, when possible, enhancing ecosystems; reducing our own reliance on fossil fuels through our operations and supply chains; and minimising the creation and disposal of waste.

## >2m tCO,e

displaced by our operational output in 2023/24

## ~4 million

Estimated number of homes powered based on renewable generation output from 2023/24

## +15%

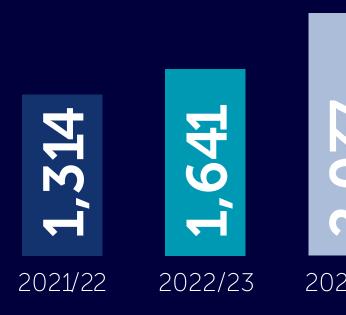
increase in renewable energy capacity this year

## +330GWh

increase in renewable energy generated this year

## 9GW

Targeted renewable energy capacity in 2027



### **Employee headcount**



5  $\bigcirc$ 2023/24

## Community





## Our commitment to communities

Making a difference for local people

We have provided over **£88m** to 11,000 local community organisations through our renewable energy assets to date

The current **lifetime value** of our community funds is **£320m** 

We manage and administer our own community funds, creating close bonds to communities and trusted relationships in our project areas for the future







### **Our funding process**



## **1.** Planning

At an early stage and separate to the planning process, we share our community investment policy with the local wind farm liaison group



## 4. Construction

On the start of a major construction, we organise a fund launch event and invite initial applications

### **Case study: SSE and Highland Council** support those facing extreme fuel poverty

We have joined forces with the Highland Council to help Highland households facing extreme fuel poverty make energy saving adaptations to their homes. The SSE Renewables Highland Sustainable Develop Fund have invested **£1m** to help Highland households.



Once a project receives planning consent, we consult with local stakeholders to agree the area of benefit and fund delivery arrangements



Applications undergo an assessment. Funding decisions are made by the panel or trust at meetings throughout the year



We work with the local community to either set up a decision-making panel or enter into an agreement with a nominated community organisation, such as a development trust



A final evaluation report is submitted by the applicant on the project and its outcomes





## Safety





## We all get Home Šafe

If it's not safe, we don't do it

## **Our goals**

We have **no life** changing injuries or major **safety**, **health** and environmental incidents



( ig )

We are **healthy and** happy at work



## We power change

Our strong communities make things better for people and nature

### We focus on our 3 priorities

We choose partners that share our commitment that we all get home safe, jointly setting high standards

We understand our risks, have rigour in our approach and keep checking our controls

We make it really easy for people to do the right thing



### **Our Safety Family**



We take pride in our work and environment



We take care of ourselves, each other and our environment



We see it, sort it, report it

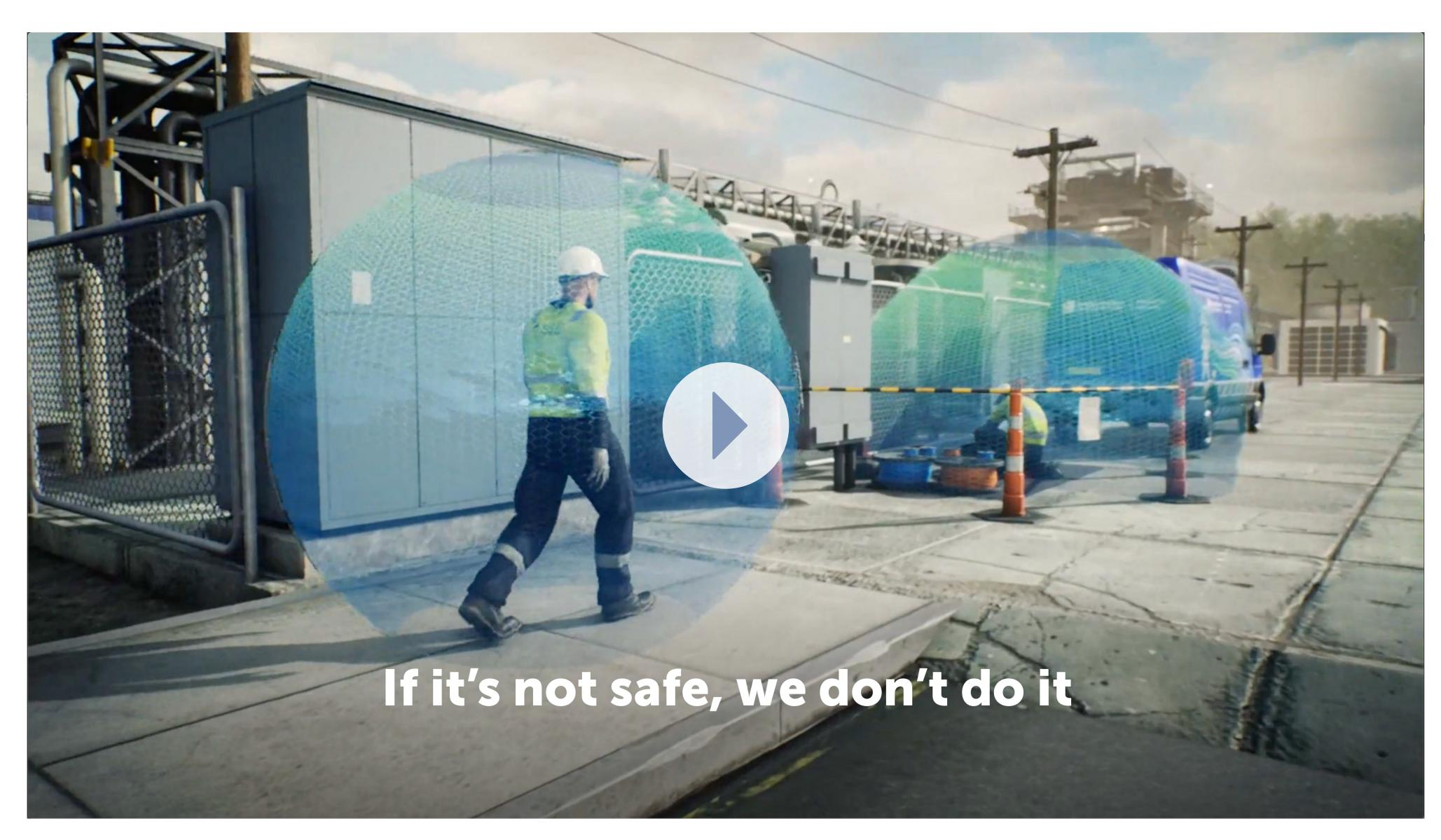


We plan, scan and **adapt** 













# Get in touch













