

# HELPING BRITAIN ACHIEVE NET ZERO

Together we can live, work and grow sustainably and responsibly.



### TOGETHER WE CAN BEAT THE CLIMATE CRISIS.

Funny, isn't it, a big energy company talking about saving the planet?

Everyone's talking the talk these days. As Britain's biggest generator of zero carbon electricity\*, we're not just talking about it, we're doing something about it.

That's the EDF difference.

From our customer service agents to our engineers, our scientists to our smart meter installers, every single one of us is 100% committed to reducing the UK's carbon emissions to nothing.

We're generating the right mix of low carbon electricity to power the nation today and build the low carbon infrastructure Britain will need tomorrow.

From turbines to tariffs, electric cars to electric heating, we're busy doing everything we can to help Britain achieve Net Zero.

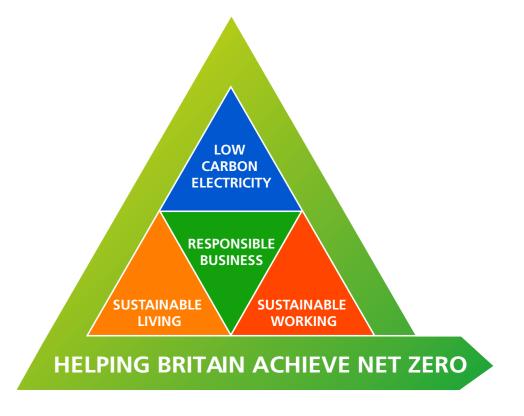
UK Fuel Mix disclosure information, published by BEIS, acknowledges electricity from wind, solar and nuclear fuel produces zero carbon dioxide emissions at the point of generation.

Of course, we're starting with the changes we need to make ourselves.

We're implementing actions across our organisation to ensure the electricity we generate, and supply, is lower in carbon than ever before. It's part of our commitment to help the UK achieve Net Zero emissions by 2050 and limit the rise in global temperatures to less than 1.5°C. And we're doing it in a way that's responsible, safe and sustainable for our customers, our people, the communities we're a part of and the environment we all share.

But we also believe that producing electricity isn't just about power. It's about the power to transform the future. So, we're driving initiatives to empower our people and our customers to change the way we all live, work and grow.

#### Here's how our story is unfolding ...



#### FOUR WAYS WE'RE HELPING TO DRIVE CHANGE

- Low Carbon Electricity

  To accelerate the UK's shift to low carbon nuclear and renewable energy and storage.
- 2 Sustainable Living
  To help households switch to low carbon lifestyles through smarter innovative solutions.

- Sustainable Working
  To empower our business customers to switch to low carbon growth.
- Responsible Business

  To bring everyone with us as our business transforms towards a Net Zero environmental impact.



First UK energy

company to launch

Climate Commitments

Acquired

2008

British Energy

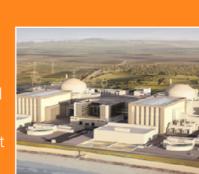
 All HPC construction milestones met

Residential supply: No.2 for customer service (Citizens Advice); No.1 cost-efficient large supplier

 HPC operating; 25,000 job

- Renewable capacity doubled
- remaining output nuclear fleet

2025



<50

investment in c12GW wind, nuclear (HPC; Sizewell B and C)

EDF in the UK has helped:

• To enable c£50bn of

and solar

2035

• With our existing nuclear fleet, to avoid 170MtCO2e since 2019

 Our household customers cut emissions by >70% of their 2019 elec and gas GHG emissions

 Our business customers cut emissions by >80% of their 2019 elec GHG emissions



2007

# OUR ROADMAP TOWARDS HELPING BRITAIN ACHIEVE NET ZERO

2016

Industry-leading,

Acquired Imtech

injury rate

record-low lost time

2017

Record 65TWh nuclear output

 Go-ahead for Hinkley Point C (HPC): First UK nuclear construction since privatisation

2018

- 5 of 8 nuclear stations operate beyond original lifetimes
- Major storage battery online at West Burton
- Powershift flexibility aggregator 1st contract

2020

 c1GW renewables online: >600MW under construction

2019

 Acquired majority in Pod Point, a leading UK electric vehicle (EV) charging company

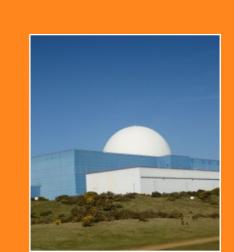
Early 2020s

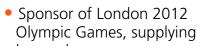
- UK market leader in EV infrastructure
- One-stop shop for lower-carbon heat
- Coal stations closed: West Burton B CCGT and large batteries

2030

• EDF's UK fleet switched to EVs











2012

# LOW CARBON ELECTRICITY

To accelerate the UK's shift to low carbon nuclear and renewable energy and storage.

Emissions from energy supply still make up almost a quarter of the UK's total greenhouse gases.

Looking to the mid-2030s, we're enabling the investment of around £50 billion to help ensure there's a ready supply of affordable, reliable, low carbon electricity. Between 2019 and 2035, the electricity from our existing nuclear stations is expected to avoid around 170 million tonnes of greenhouse gas emissions, almost 3 times the emissions from the UK's power sector in 2019. Together, this will help reduce the carbon intensity of our operated generation from 72g CO<sub>2</sub>e / kWh in 2019 to less than 10g in 2035.

#### What we're doing

As the biggest producer of zero carbon electricity\*, we plan to carry on leading the UK's transition away from carbon-intensive fossil fuels to low carbon energy.

Here's how.

- We're ramping up our renewable energy generation to more than quadruple our capacity in the UK by 2035.
  - We're enabling investment in building new nuclear at Hinkley Point C and Sizewell C to replace outgoing stations with a low carbon option.
  - We closed one of our two coal power stations in September 2019 and the other is only run when needed to balance peaks in the energy system. It will close by 2024.
  - We're investing in the development of emerging low carbon energy sources like our Hydrogen-to-Heysham project. We will produce low carbon, low-cost hydrogen for local communities.
  - We've acquired a majority stake in Pod Point,
     a leading provider of charging infrastructure for EVs
     which has rolled out over 62,000 charging points in the
     UK. Our data suggests that a low carbon grid and
     switching the 32 million petrol and diesel cars on UK
     roads to electric would avoid 65 million tonnes of CO2
     and shrink Britain's carbon footprint by more than 10%.



#### By **2035** we aim to:

Enable the investment in 12GW of low carbon nuclear and renewable electricity capacity to meet around **one fifth** of Britain's demand.



## **LOW-CARBON ELECTRICITY**

We're doing everything we can to take carbon out of the national energy mix.

Here are just three examples.



# We are rapidly growing our renewable energy and energy storage capacity.

EDF is one of the UK's largest investors in renewables. Today we've got just under 1GW of renewable energy capacity in play from 33 onshore and two offshore windfarms and one battery storage unit. We're already constructing 600MW and are in planning and development to add almost 4GW across a range of technologies including onshore and offshore wind, solar and battery storage by 2035.

We've invested to make Pivot Power, a British start-up specialising in battery storage and infrastructure for electric vehicle charging, a part of EDF in the UK. There are plans to install batteries connected directly to the high-voltage transmission system - with a total capacity of up to 2GW.

# We're investing to secure a baseload of low carbon nuclear energy.

It's vital that along with the growth in renewable energy, we have a steady supply of low carbon power that's always available.

That's why we're investing in building the first new nuclear power stations to be built in the UK in over 20 years. Hinkley Point C and Sizewell C will each provide low carbon electricity for around 6 million homes and bring thousands of jobs and investment to the local and national economy. The electricity generated by each station will offset 9 million tonnes of CO<sub>2</sub> emissions a year or 540 million tonnes over their 60 year lifespans.





#### Making the most of what we have.

Many of our stations were reaching the end of their expected lifespan. So, rather than rely on fossil fuels to fill the gap, we've worked hard to extend the lifespan of existing nuclear stations by up to eight years.

The result?

A reduction in carbon emissions that's the equivalent of taking all the UK's cars off the road for over two years. We continue to invest in them to ensure they keep producing low carbon electricity as long as it is safe to do so.

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# SUSTAINABLE LIVING

To help households switch to low carbon lifestyles through smarter innovative solutions.

Today, around 30% of the UK's greenhouse gases are produced merely from us living in our homes and driving our cars. So, we're continuously investing in R&D and innovating smart new solutions to help us all power full, enjoyable lifestyles while reducing our emissions. Our aim? To help create Net Zero households by 2050.

#### Tomorrow starts here, now.

Millions of customers support a low carbon future just by buying from EDF, as Britain's biggest zero carbon generator\*. But they can also access a host of smart, innovative solutions.

With smart meters, we're helping customers see when they use their energy, so they can manage their consumption. Our new Smart+ programme provides personalised support to help them further reduce waste and lower the emissions from their home energy use.

With our Smart Home Store we're bringing customers the latest smart tech to make their homes more efficient, safe and enjoyable.

We're innovating to decarbonise the way they heat their homes, too. Customers who rely on oil or liquid gas for their heating can test a new hybrid system that uses an air-source heat-pump with their existing boiler.

We're committed to delivering our Energy Company Obligation (ECO) to help eligible customers make energy efficiency improvements by insulating their homes and providing more efficient ways of heating them. And also our well-established network of installers means we can deliver other companies' ECO obligations as a service, which enables us to help more households with carbon saving measures than our regulatory requirements.

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# Since start Avg. 1.8 mi/kWh Consumption P Wood per By 89 mi

#### By **2035** we aim to:

Help our household customers reduce their collective emissions by the equivalent of more than **70**% of that arising from their 2019 electricity and gas use.



## **SUSTAINABLE LIVING**

We're doing everything we can to help customers remove carbon from their everyday lives.

Here are just three examples.



# Helping customers get smart with their energy usage.

Smart meters give us all more control over when and how much energy we consume. EDF engineers fitted more than a million smart meters in the last two years. Latest government estimates forecast that on average households with a smart meter would have a net benefit of £36 per year by 2034 through energy efficiencies due to lower and reduced cost consumption compared to 2012 usage.

Next up? We are working on a new digital service to turn our customers' meter data into tips for saving more energy, whilst lowering carbon and costs.

#### Taking carbon out of car journeys.

To support our customers in making the switch to Electric Vehicles (EVs), we've developed a total EV package. Making it super-easy to get on the road, this complete package includes a car, a personal charging point and a special tariff too.

Working with Pod Point, EDF will be able to offer quality installations of charging solutions at homes across the UK, which are compatible with all plug-in vehicle brands.

We are also working on initiatives like using smart meters to control EV chargers; using data loggers to assess driving patterns and indicate whether there is an electric car on the market to suit your needs; testing solar car parks and supporting the on-street EV charging V2Street project.





# Empowering local communities to benefit from the move to low carbon.

We are part of the Local Energy Oxford Project (LEO) which aims to demonstrate the benefits of creating a local energy market; enable local generation of renewable energy to be distributed across Oxfordshire; and develop flexible energy systems for heat, transport and electricity uses.

We are part of Project CommUNITY which enables social housing residents at a block of flats in Brixton to trade solar energy that has been generated on the roof and stored in a battery, using an app and blockchain technology. This is just the start of small communities in dense urban areas benefitting from low-carbon, local energy systems in a new and transformative way.

# SUSTAINABLE WORKING

To empower our business customers to switch to low carbon growth

Some of the biggest contributions to slowing climate change lie in the plant rooms, offices and shop floors in which we all work. In fact, emissions from private and public companies make up 17% of all the UK's greenhouse gases.

The challenge of knowing where to start reducing carbon emissions in our businesses can often seem too big. But our recent data shows that even starting with small, simple changes can make a significant impact. And, by working with these companies, we can help to make a difference.

Analysing the energy consumption of 4,150 businesses including offices, schools, universities, hotels, hospitals and police stations across the UK, we found the common places where these simple savings can be made

In total, the potential energy savings we discovered could prevent over 113,000 tonnes of CO<sub>2</sub> per year from entering the atmosphere. To put that into perspective, that is the equivalent amount of CO<sub>2</sub> that would be offset by more than 2.8 million square metres of woodland.

#### What we're doing

We are finding new ways to put emerging technology to work to support businesses. We're helping them reduce their energy consumption with cuts to both their emissions and bills.

The national energy system needs innovative ways to balance supply and demand so it can bring more renewable energy on board. Part of the answer lies with businesses, and with delivering new solutions that enable our customers to better manage their energy.



#### By **2035** we aim to:

Help our business electricity customers reduce their collective emissions by more than **80**% compared to their 2019 electricity footprint.



## **SUSTAINABLE WORKING**

We're doing everything we can to help business customers power more sustainable growth.

Here are just three examples.



# Championing low carbon electricity supply.

A simple but significant change can be made in the type of electricity businesses consume. We allow our customers to choose to be supplied with zero carbon electricity\* at no additional cost.

With the need to introduce more renewables into our energy system, we also enable our customers to select electricity contracts backed by renewable sources of generation. We've even connected some customers directly to wind farms, meaning they not only use renewable electricity, but produce it too.

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# Fleets that balance the grid and earn money too.

Our Research and Development team are one of only a handful of specialists developing and testing new Vehicle-to-Grid (V2G) technology. The aim is for the batteries of EVs to take on a second life as energy storage units, which can share their unneeded energy during periods of peak demand. That's good for the grid. And, of course, the rewards are good for the company owners' bottom line too.

Working with Pod Point, EDF will also help to accelerate the installation of charge points in public and private organisations across the UK.





# Innovating new opportunities to balance supply and demand.

We need smarter, cleaner ways to balance the grid, so we can rely less on fossil fuels like coal to do this job.

We're actively exploring, testing and delivering new solutions to do just that.

From large-scale battery installations that help balance local grids, to flexible solutions that allow businesses to get more out of these assets, ensuring they charge and discharge in line with demand.

We're innovating to help create a more sustainable, future-ready energy system.

# RESPONSIBLE BUSINESS

To bring everyone with us as our business transforms towards a Net Zero impact.

The way we achieve Net Zero emissions in our business is just as important to us as playing our role in decarbonising the UK's energy.

As we innovate our business to further reduce our emissions, it's vital to us that our transition is safe, just and positive for our people, the communities we are a part of and the land we care for.

#### What we're doing

We have cultivated a safety-first culture to help ensure we continue to meet the highest global standards for the safety of our people as we strive to remove even more carbon from the power we generate.

As our business evolves, we are investing in jobs and skills development for the future, so our people can do their part to help power a Net Zero energy sector.

We want to be sure technology-led sectors, like our

own, are a great place for people to feel welcome to step up and innovate tomorrow's solutions for smarter energy.

So, we are working to close the equality gaps in careers that rely on Science, Technology, Engineering and Maths (STEM) education.

And we're evolving and improving our plans to make our business an inclusive, safe place for our people to work, innovate and grow.

We want to have a Net Zero environmental impact. This means staying within permitted limits for operations, using best available techniques to tackle our environmental impacts, and prioritising new development projects where we can make the most difference. We're also implementing circular economy principles into the way we work, reducing waste, avoiding pollution and achieving greater resource value and productivity.



#### Our THREE commitments:

- 1. To demonstrate real progress towards a Net Zero environmental impact by reducing our carbon emissions, waste, water use and effect on biodiversity.
- 2. To create a great workplace for our people by supporting their health and safety, diversity and inclusion and skills development.
- 3. To make a positive social contribution by supporting vulnerable customers, local economies and the STEM skills of tomorrow's energy innovators.



## **RESPONSIBLE BUSINESS**

We're doing everything we can to transform EDF into a Net Zero business.

#### Here are just three examples.



#### Switching to an electric fleet.

We're making the switch to low carbon transport ourselves. As part of the EDF Group, EDF in the UK has signed up to the EV100 initiative with the goal to change our fleet of vehicles to be 100% electric by 2030. And we are investing in EV charging infrastructure that our people can plug into when they arrive at work.

# Expanding our safety culture to support mental health and wellbeing.

We're innovating our business-wide "zero harm to people" programme that has delivered global best-practice levels of safety. In addition, we now have the resources, processes and skills in place to support our people's mental health and wellbeing. As part of our growing Mental Health Network, our people are being trained as mental health first aiders to offer support to their colleagues.





#### Creating a culture of positive change.

We're creating a culture of positive environmental action amongst our 13,000 strong community of people.

In 2019, we rolled out a programme of pledges, for everyone to commit to making a change towards being more sustainable at work or at home.

In addition, we've launched our "no excuse for single-use" staff engagement programme which has already taken 1 million disposable cups out of circulation.

Together, we can do this.

We can beat the climate crisis.

You've seen the changes we're making to our business.

As we keep changing, we'll keep sharing our story, our challenges and our learnings.

We also welcome the opportunity to help you make changes too.

After all, the science is clear. The Net Zero target has been set.

It's time to accelerate our progress to help Britain achieve Net Zero.



