



Annual review
2019/20

regen 
transforming energy

We are all in this together



Last year saw the UK set a ground-breaking legislative commitment to net zero, driven by millions of people, from school children to pensioners, taking to the streets to campaign for our planet's future.

This year we expected to be focused on turning that ambition into action. Instead we have been faced with another global emergency: a pandemic that is far from over. An immediate crisis with tragic outcomes for many families and with far-reaching consequences for the economy and our ways of life.

In response, Regen has stepped up to work with you, our members, to shape public policy to unlock billions of pounds of investment in clean energy, creating the new jobs the economy needs. We are working with local authorities and utilities on setting out whole system pathways to zero carbon. We are leading pioneering projects to enable smart, local energy systems to address power, heat and transport.

The decisions we make in the coming year, as we invest to recover from the pandemic, will be critical. Our commitment is to work with you to ensure the UK 'builds back better' towards a smart, zero carbon energy system.

A handwritten signature in blue ink, appearing to read 'M. Hyman'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Merlin Hyman
Chief executive, Regen



As you emerge from Covid and get back to some form of business as usual (and I hope that is accelerated by a clean recovery) use your voice in every forum, and through your work with Regen, to understand and influence the pathway to net zero in your sector.

I challenge Regen to get all of your members to have publicly committed to their own net zero target by November 2020. Regen is in the business of industrial disruption and the energy transition, doing this would send a clear and easy signal to policy makers – everyone counts.

Nigel Topping, UK High Level Climate Action
Champion, COP26

Our mission

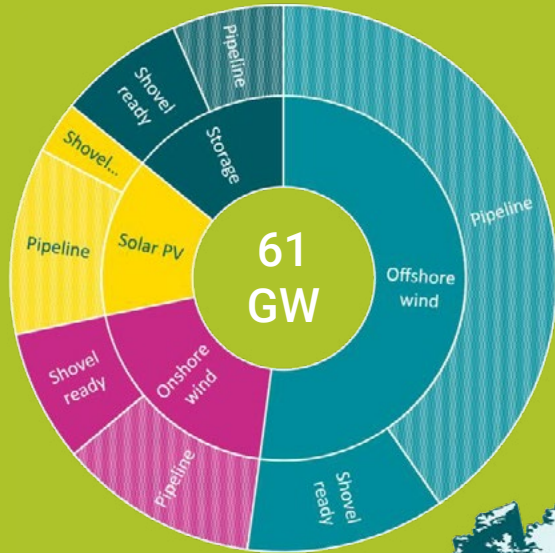
Regen is a not-for-profit centre of energy expertise and market insight whose mission is to transform the world's energy systems for a zero carbon future.

Energy is the beating heart of our communities, an unseen web that binds us together. Radical change in such a critical system is not going to be easy.

Our strategy is to accelerate the transition to a decarbonised, decentralised and democratic energy system by working in three ways:

-  Pioneering new energy models at the cutting edge of the energy transformation
-  Transforming policy and regulation
-  Championing a diverse, engaged and democratic renewable energy sector

We know we can't deliver this mission alone, so we want to work with you, our members, to be a strong, informed and independent force for change.

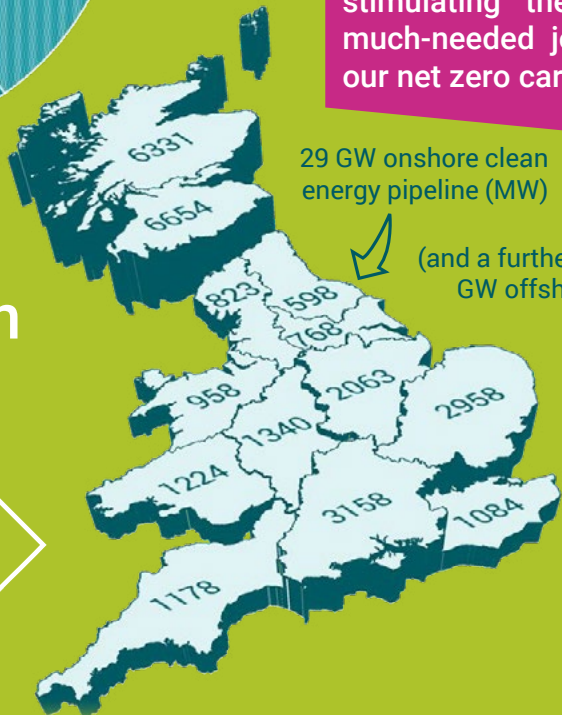


There is a **61 GW** pipeline of clean energy projects...

...of which **18 GW** are 'shovel ready'

The pipeline of renewable energy and battery storage projects can be developed quickly through private sector investment, stimulating the economy and creating much-needed jobs whilst helping deliver our net zero carbon goal.

Developing these projects could add over **£125 billion** of value to the UK economy across the entire country



29 GW onshore clean energy pipeline (MW)
(and a further 32 GW offshore)

Providing over **200,000 jobs** in areas such as development, construction and operation

Leading the energy transition

We have the technologies, expertise and innovation to decarbonise our energy system. We have investors ready to deploy capital at speed and scale. Increasingly, we have public support and recognition of the need for radical change.

However, we know that we are moving too slowly to address the scale of the challenge.

Regen has been working tirelessly with its members and in partnership with key players in the energy system to accelerate progress by addressing the critical challenges to decarbonisation:

- We are pioneering innovative approaches to a decarbonised, decentralised and democratic energy system and sharing learning with policy and decision makers.
- We are using our expertise to work with local government, devolved administrations and key energy utilities to chart a bottom-up path to zero carbon power, heat and transport.
- And we are bringing industry, policy makers and communities together to enable us all to rise to the net zero challenge by sharing ideas and building partnerships.

Future energy infrastructure

Our energy infrastructure, the pipes and wires, is critical to a zero carbon future. Regen has developed a bottom-up, stakeholder-led approach to future energy scenarios at a regional level to provide robust, evidence-based data that can be used for network planning and inform investment appraisal and business planning. This is especially critical as network operators develop business plans for the next price control, RII0-2, which will determine spending for a five-year period.

This year, we worked with Western Power Distribution and Wales & West Utilities to produce a first-of-its-kind joint electricity and gas future energy scenario for South Wales. The **Net Zero South Wales 2050** innovation project developed a new methodology for conducting cross-vector scenario forecasting at a regional level to provide insights into how South Wales might transition to a net zero future under three net zero scenario pathways: High Electrification, Core Hydrogen and High Hydrogen, along with a hybrid heat sensitivity.





Innovation

Finding new and better ways to decarbonise our energy system is a key area of our work. We have explored opportunities and challenges from the growth of the EV market, the potential benefits of open energy data for communities, different supply models and how a community aggregator service could work, to name a few.

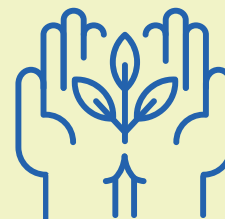
We also worked with the gas and electricity network operators to update and refresh the **Energy Network Innovation Strategies**. This involved an extensive stakeholder engagement process to identify the key principles and themes for network innovation, which will help determine how innovation funding is spent and what our future critical infrastructure looks like.



A decade to make a difference

2020 marks the first year of a decade to the all important deadline of 2030, identified by the IPCC. We have a decade to make a difference, and we need radical action if we are to achieve it. A key theme for our work this year has been one of urgency. We published our first thought leadership paper on the **Decarbonisation of heat**, which called on policy makers to act now to shift heat onto the right path to meet our 2050 net zero obligation.

Our second paper on **Local leadership to transform our energy system** identified many roles for local authorities to drive the energy transition and stimulate the green recovery. It also identified specific recommendations for central government to provide much greater powers, funding and resources to local leaders.



Local energy leadership

To revolutionise the energy system, we believe we need to turn it on its head and think bottom-up. By early this year, two-thirds of local authorities had declared a climate emergency. We have been supporting the development of local net zero strategies by providing analysis, such as carbon baselines and trajectories, as well as action planning support, such as identifying interventions. We have worked with the Isle of Wight Council, South Gloucestershire Council, Bristol City Council and West of England Combined Authority in the last year.

We are also working on two Innovate UK-funded projects that are developing smart, local energy systems: **Zero Carbon Rugeley** and **Greater Manchester Local Energy Market**. Both projects are part of the Prospering from the Energy Revolution programme, designed to create new systems that will provide cleaner, cheaper energy, while creating high-value jobs for the UK.

We continue to make sure the voice of community energy groups is heard as an important and unique local stakeholder. For example, we have worked with network operators across the whole of the UK to run community events, such as the **Communities and the smart energy revolution** series with WPD, and develop engagement strategies, such as the **Northern Powergrid Community Energy Engagement Strategy**.



Shaping public policy

Regen, along with our Electricity Storage Network arm, works with our 160 business, local authority and community energy members to shape public policy and create a framework that can release the extraordinary innovation and investment needed to transform our energy system.

In the coming decade we need markets and system operators to send clear signals as to where there is value in the energy system. We need the enabling planning, infrastructure and tax policies. And we need decarbonisation to be at the heart of every policy and regulation.

Our **Decade to Make a Difference** insight papers take a detailed, evidence-based look at the challenges and solutions to putting us on the pathway to zero carbon.

In times of rapid change, like those we face now, our mission becomes even more important. We are looking forward to working with you, our members, to transform energy to build a decarbonised, decentralised and democratic future.

We have identified five policy priorities

- 1 Local energy planning and investment
- 2 Creating a fair regulatory framework for low carbon generation and technologies
- 3 Decarbonisation of heat and energy efficiency
- 4 Electricity markets for a net zero electricity system
- 5 EV charging and its impacts on the electricity network

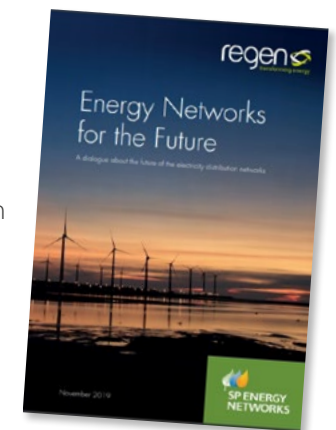
1 Local energy planning and investment

Aim: We need a new model for local governance of energy which allows local bodies to plan for and invest in energy policies which can deliver their ambitious climate goals.

Our delivery projects and advisory work with devolved government members, local authorities, and DNOs, have helped us identify where the barriers to delivering low carbon energy are, and how such barriers can be addressed. Actions might include a new body to oversee local energy plans, better reflection of local priorities in the price control and investment process, and support for co-investment and risk sharing models. Our recent paper, **Energy Networks for the Future**, transforms our research and input from members into recommendations to improve the regional authority and DNO relationship.

Our **'Local Energy Leadership to Transform our Energy System'** paper provides a sound evidence base and recommendations to support local energy planning and investment.

Regen sits on the RIIO-2 Decarbonisation and Environment Working Group, representing our members.



② Creating a fair regulatory framework for low carbon generation and technologies

Aim: A better defined, statutory remit for Ofgem to consider decarbonisation, including thorough analysis and prioritisation of decarbonisation in network charging reforms and the RIIO-2 process.

Through our work on network charging, our involvement in the RIIO-2 working groups, and feedback from members on REGOs and access to markets, we have seen the consequences of Ofgem's lack of statutory remit to consider decarbonisation. Our efforts last year to push this issue forward resulted in politicians raising this in parliament, and Ofgem addressing the issue directly as part of their network charging reforms and releasing their Decarbonisation Action Plan.

Our paper, **Energy Networks for the Future**, provides research and evidence on the RIIO process and recommendations for its improvement.

Regen represents members sitting on the network charging reform Challenge Group, the RIIO-2 Decarbonisation and Environment Working Group and the Smart Systems Forum where these issues can be raised further.

③ Decarbonisation of heat and energy efficiency

Aim: Tangible, ambitious action on the decarbonisation of heat and the roll out of new and retrofit energy efficiency measures.

As a result of our delivery projects such as the **Zero Energy Building Catalyst** and **Ready for Retrofit**, and our advisory work for gas and electricity DNOs as well as detailed feedback and engagement from members, we have a practical and in-depth understanding of how the most challenging area of decarbonisation can be carried out.

Working with members, together we launched a paper on the **Decarbonisation of Heat**. The paper gives clear recommendations and includes proposals for the financial frameworks necessary to achieve ambitious change.

Regen sits on the National Grid's Future of Gas Forum and we would welcome input from members.

④ Electricity markets for a net zero electricity system

Aim: Better valuation of carbon in electricity markets, including clear carbon reporting on all markets and services, and setting emissions limits where feasible/appropriate.

Our work on markets over the years includes our insight papers on **storage** and **local flexibility**, regular community engagement work with DNOs on their local flex offerings, engagement with BEIS and Ofgem to improve the Capacity Market, and working with the ESO to improve markets for storage. This has given us a practical understanding of how markets need to change to enable net zero. Members have actively shaped our thinking, feeding into our regular meeting with the ESO and our Electricity Storage Network Markets and Revenues working group.

⑤ EV charging and its impacts on the electricity network

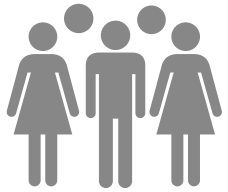
Aim: Understanding, analysing and communicating the impacts of EV charging on the electricity network.

Our analytical work with producing future energy scenarios, our extensive engagement with the EV industry and DNOs, and our work with local authorities has given us an in-depth understanding of the impacts of the EV network and how DNOs need to take this into account as they plan for the future.

Our paper, **Harnessing the EV Revolution**, set out the opportunities and challenges for the EV and energy industries; we have built on that expertise with member engagement through our **EV and Electricity System forum**.

Member input

We can't do this alone. We need our members to input the issues you are facing, guiding us influence our voice in the key forums we sit on. Keep an eye on the member newsletter for upcoming chances to input and engage with us on events, meetings with government and the regulator or ESO.



3,925 DELEGATES

15 THOUGHT LEADERSHIP PAPERS



40

MENTEES
MATCHED WITH
MENTORS EWIRE



THOUGHT LEADERSHIP BLOGS
SHAPING THE DEBATE ON
THE ENERGY TRANSFORMATION

THE ELECTRICITY STORAGE
NETWORK

As a result of the evidence given by the ESN informed by our planning working group, consultation responses and multiple discussions with BEIS, in addition to the recommendations in Regen's report for the RTPI, BEIS has made the significant decision to exempt storage from the national planning regime.



**NET
ZERO**

The **Decade to make a difference** series

The decarbonisation of heat, thought leadership paper



MEMBER OF THE task force, using knowledge and evidence to produce an evidence-led Devon Carbon Plan



4 POLICY RESPONSES

58 MEMBER NEWSLETTERS
AND MEMBER UPDATES



**WEBINARS
& EVENTS**

Priority areas for 2020/21

In 2020/21 we will focus our work on shaping public policy on net zero energy, supporting devolved and local government to put in place net zero action plans, and transforming our critical energy system infrastructure so that these action plans can be delivered. We will do this by engaging closely with our membership, using Regen's detailed knowledge of the whole energy system and our evidence-backed approach.

Shape zero carbon policy

Between the government's net zero commitment, the Green Recovery and UK hosting COP26, there is an opportunity for Regen to increase its influence on public policy.

Whole system thinking

Focusing on one technology or one energy vector won't address systemic challenges. We will champion a whole system approach by policy makers, system operators and industry.

Zero carbon smart power

We will press for policy, regulation and system operation to support a decentralised and flexible power system, with very high levels of renewables.

The UK desperately needs to tackle the decarbonisation of buildings and the provision of low-cost, efficient homes. We will focus on radical rather than incremental improvements to the building stock.

Smart and local

Develop smart local energy concepts into tangible business models, engaging communities and exploiting digital technology.

Democratic and diverse clean energy sector

Working to make the clean energy sector diverse, engaged with local communities, and part of a broader movement for change.



Great analysis, cracking infographics, clear message and strong argument. Nice work Jonty Haynes. A clear example of why Roadnight Taylor Ltd is a Regen member.

Roadnight Taylor



Coming from Wales, we are very pleased with the work that Regen is doing to look at our local energy systems and I'm sure that Regen's work across the whole clean energy space is welcomed by many of us.

Dr Ron Loveland, Energy Advisor to the Welsh Government, Welsh Government



Thanks again to you and the team for a terrific session on Tuesday – a very well organised and impactful day.

Ben Irons, co-founder, Habitat Energy

Key partners

We would like to thank all our members, partners and clients.



Join us

Get plugged into the transformation of the energy system through our policy and market insights, sector knowledge and extensive network developed through ground-breaking research and pioneering projects.

Membership benefits

Have influence

- ▶ Opportunities to engage in our influencing and policy work, and contribute to thought leadership papers and consultation responses. Input from our members helps us to influence government to set the right policies for the industry.
- ▶ Set the agenda by joining our forums and working to address barriers to change such as outdated policy and regulation, working closely with BEIS, Ofgem, National Grid, DNOs and local authorities.

Get connected

- ▶ Showcase your business with exhibition space and network at our events with our 200 members, innovators, influencers, potential partners and customers. Our forthcoming events are listed on our **website**.
- ▶ Be listed **online** as a member; this is a frequently used resource and encourages business relationships between our members.
- ▶ Reach industry talent by posting your job vacancies on our networks and **website** for free.
- ▶ Access to our **Entrepreneurial Women in Renewables network**.
- ▶ Free use of the **Engine Shed Business Lounge** in Bristol.

Stay informed

- ▶ Receive timely policy and regulatory updates from our unique and talented team, along with expert market insights through online articles, webinars and regular email bulletins.
- ▶ Discounted exhibition space at **Renewable Futures**, our major conference and exhibition. **Smart Energy Marketplace**, the biggest smart energy technology and renewable energy generation show in the south west, to raise your profile and generate new business.

If you aren't yet a member please contact Rachel Hayes, head of networks and development, Regen rhayes@regen.co.uk



Our members

5D Group Ltd
Alfen
AMP Clean Energy
Andigestion Ltd
Anesco Ltd
Argand Solutions Ltd
Ashfords
Association of Decentralised Energy (ADE)
Aura Power
Awel Aman Tawe
Banks Renewables
Bath & North East Somerset Council (B&NES)
Bath and West Community Energy (BWCE)
Brendon Hill Tree Services Ltd
Bristol City Council
Bristol Energy
Bristol Energy Coop
BSR Group
Burges Salmon LLP
Cenin Renewables Ltd
Chelwood Community Energy

Clean Energy Prospector
Communities for Renewables CIC
Community Energy England
Community Energy Scotland
Community Power Cornwall
Cooks Plumbing and Heating Ltd (Cooks Energy)
Cornwall Insight
Delta Energy & Environment
Denchi Group
Devon County Council
Devon Energy Collective
DNV GL
Dorset Community Energy Ltd
Duchy of Cornwall
Dunster Biomass Heating
Dunster Heat Ltd
Eco Nrg Ltd
Ecodyn Ltd
Ecotricity Generation Ltd
Eden Geothermal Ltd
EDEN Sustainable Ltd
EDF Energy

EDF Energy Renewables
ElectraLink
Electric Land
Electricity North West Ltd
Empire Engineering Ltd
Energy & Power Tech
Energy Saving Trust
Energy Systems Catapult
Energy4All Ltd
Energymyway (UK) Ltd
Energy-Tec Ltd
Engie
Enso Energy
Envirotech Energy Solutions Ltd
ESB Energy
EV Parts UK
Exeter Community Energy
Federation of Master Builders (FMB)
Fluence Energy
Foot Anstey
Freeths
G2 Energy
GA Solicitors

Gemserv
Geneco
GJ Renewables Ltd
GoBe Consultants Ltd
Good Energy Ltd
Green Nation
Greenshop Solar Ltd
GridIMP
GRIDSERVE
Habitat Energy
Harrison Clark Rickerbys
Highview Power
Immersa Ltd
Infinergy Ltd
Innogy Renewables UK Ltd
International Jack-Up Barge Owners Association
Jonathan Packer & Associates
Keynvor Morlift Ltd
Langage Solar Park Ltd
Laurence Associates
Low Carbon Alliance
Low Carbon Contracts Company



Low Carbon Estates
 Low Carbon Gordano
 Michelmores LLP
 Mida Group
 Modo Energy
 Moixa
 Mypower
 National Grid ESO
 Naturesave Insurance and The
 Naturesave Trust
 New Generation Energy Ltd
 Newcastle University
 OM-3
 Opus Energy
 Osborne Clarke
 Ove Arup & Partners International Ltd
 Pegasus Planning Group
 Plymouth Energy Community
 Portland Harbour Authority
 Powervault
 Prevera
 Public Power Solutions
 Pure Energy Professionals Ltd
 Pure Planet Ltd

Renew Legal
 Renewable Energy Association
 Renewable Exchange
 Renewables First Ltd
 Royds Withy King
 RNA Energy Ltd
 Roadnight Taylor
 Scottish and Southern Electricity
 Networks
 Scottish Power Renewables
 Siemens Energy
 Simon Annear Plumbing & Heating
 Ltd
 Solar PV Tech
 Solar South West Ltd
 Solar Trade Association
 Solarsense UK Ltd
 Somerset County Council
 South Brent Community Energy
 Society
 South Dartmoor Community Energy
 South Gloucestershire Council
 South West Water
 Stephens Scown

Storelectric Ltd
 StorTera
 Sungift Energy Ltd
 Sustainability Practice
 Swanbarton Energy Storage
 Consultants
 Tamar Energy Community
 Teign Energy Communities
 The Co-operative Energy
 The Holme Estate
 The Landmark Practice
 The Microgrid Foundry
 The Quarry Battery Company Ltd
 Thrive Renewables
 TLT LLP
 TRESOC
 Triodos Bank
 V2G EVSE
 Valda Energy Ltd
 Voltalia UK
 Wales & West Utilities Ltd
 West Solent Solar Cooperative
 Wind Cluster 2000 Ltd
 Womble Bond Dickinson LLP

Yealm Energy Community
 Zenobe Energy
 Zero Carbon Marine Ltd
 Zero West
 ZLC Energy

THE ELECTRICITY STORAGE
NETWORK

member
regen
 transforming energy

Regen accounts summary

Profit and loss account for the year ended 31 December 2019		
	2019	2018
	£	£
Turnover	1,474,368	1,265,501
Cost of sales	(824,220)	(827,963)
Gross profit	650,148	437,538
Administrative expenses	(494,655)	(400,366)
Exceptional item	0	55,000
Operating surplus	155,493	92,172
Interest receivable and similar income	2,452	1,691
Surplus on ordinary activities before taxation	157,945	93,863
Tax on ordinary activities	(29,813)	(19,277)
Surplus on financial year after taxation	128,132	74,586

Balance Sheet for the year ended 31 December 2019		
	2019	2018
	£	£
Fixed assets		
Tangible assets	59,425	54,830
Current assets		
Debtors	490,061	417,209
Cash at bank	611,217	477,368
	1,101,278	894,577
Creditors		
Amounts falling due within one year	(291,673)	(209,080)
Provisions for liabilities	(11,184)	(10,613)
Net assets	857,846	729,714
Capital and reserves		
Profit and loss reserves	857,846	729,714

The information on this page has been taken from the company's financial statements for the year ended 31 December 2019, audited by Old Mill and approved by the Regen board in May 2020. Full copies of the accounts can be obtained from Regen.

Regen team

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Olly Frankland	project manager ofrankland@regen.co.uk
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Merlin Hyman	chief executive mhyman@regen.co.uk
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Hannah Stanley	events manager hstanley@regen.co.uk
Joel Venn	head analyst jvenn@regen.co.uk
Hazel Williams	head of delivery hwilliams@regen.co.uk

Board of directors

Sonya Bedford	partner, Stephens Scown Solicitors
Johnny Gowdy	Regen
Michael Huntingford	chairman, Regen; Director, Zero Carbon Marine Ltd
Merlin Hyman	Regen
Alan John	partner, Osborne Clarke
Jonathan Johns	director and principal, Climatechangematters Ltd
Cathy McClay	director of Strategy, Policy and Regulation, Sembcorp Energy UK
James Vaccaro	associate director, Cambridge Institute for Sustainable Leadership; senior advisor, Triodos Bank

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Regen is a trading name of the company Regen SW registered number: 04554636