Creating energy we can all feel good about

Low Carbon Hub Joint AGM

Monday 7 October 2019, Oxford Town Hall, Oxford

low carbon hub

AGENDA

Monday 7 October,

Oxford Town Hall, Oxford

6.00	Welcome and introductions	Tim Sadler
6.15	Year in reflection	Dr Barbara Hammond
6.30	Accounts	Luke Marion
6.40	Delivering Community Benefit	Nina Alphey
6.50	Annual General Meeting of Low Carbon Hub IPS Limited (see below)	
7.10	Annual General Meeting for Low Carbon Hub CIC (see below)	
7.30	Looking ahead	Adriano Figueiredo
7.45	Questions for Directors	**Tim Sadler**

low carbon hub

Year in reflection

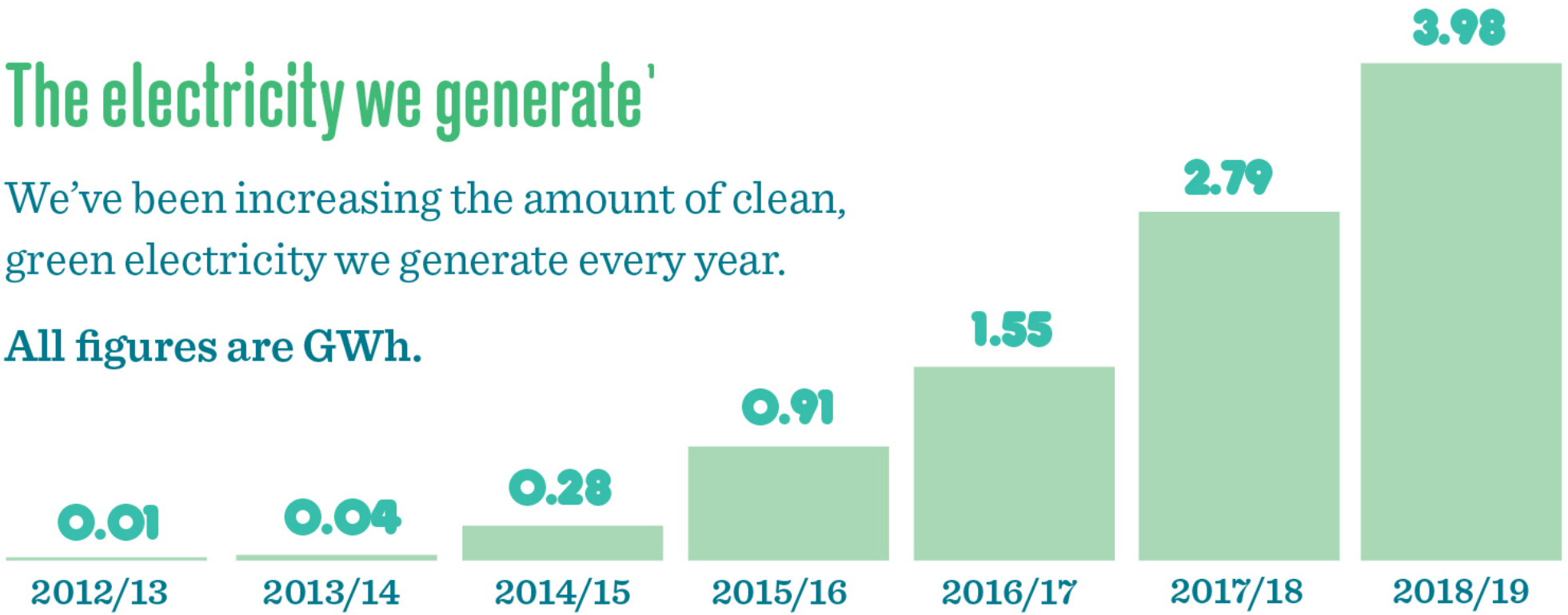
Dr Barbara Hammond MBE
CEO

PLANET

The electricity we generate'

We've been increasing the amount of clean, green electricity we generate every year.

All figures are GWh.



low carbon hub

Each year, our 43 renewable energy projects have the potential to...

GENERATE

4.4 GWH GREEN ELECTRICITY

+ 169,280kWh

SAVE

1,343 TONNES OF CO_2[2]

- 272

POWER

1,405 TYPICAL HOMES[3]

+ 55

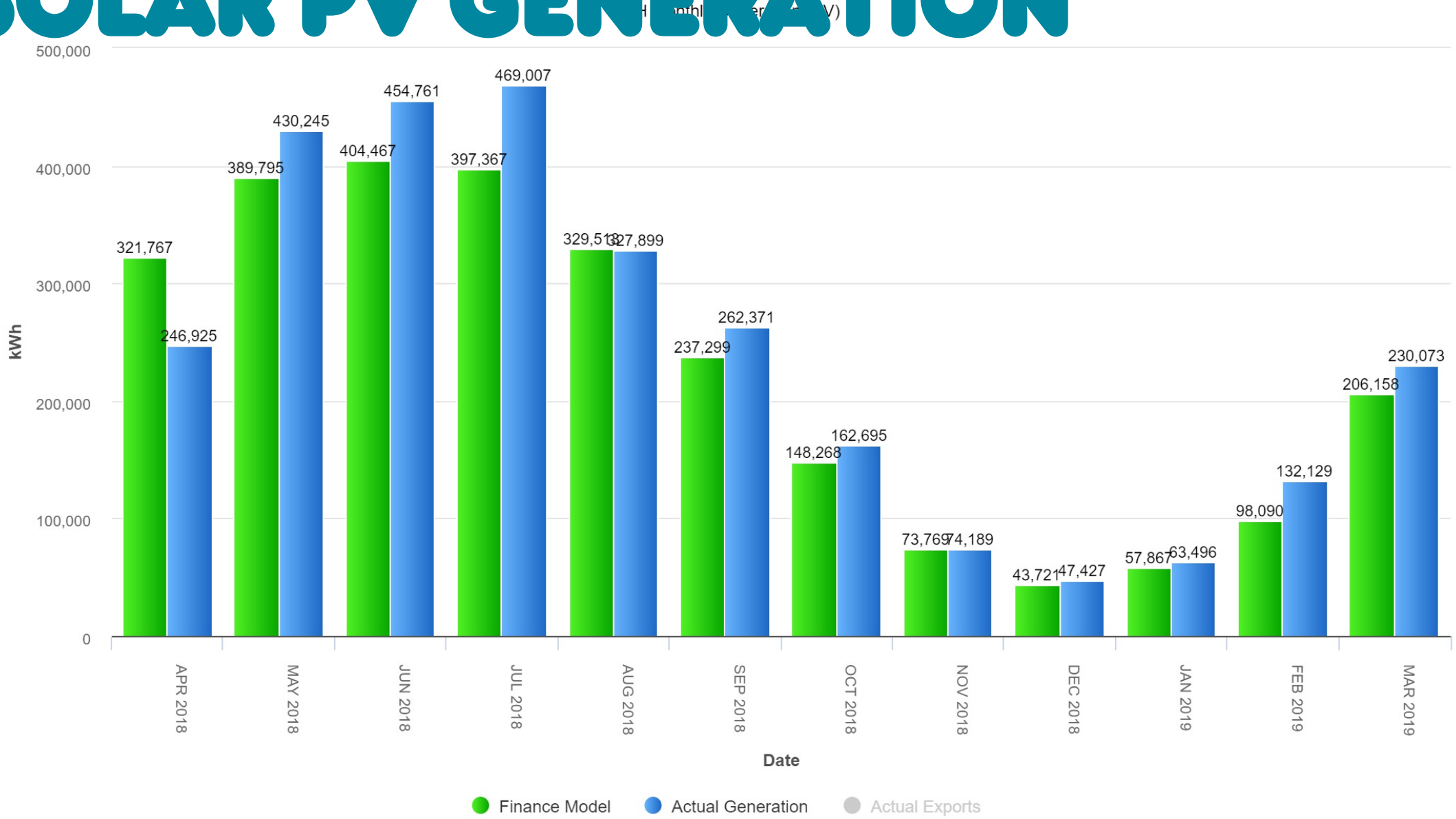
PROVIDE

274 PEOPLE'S SHARE OF OXFORDSHIRE'S DIRECT ENERGY NEEDS[4]

+ 11

+ Change from 2017/18

SOLAR PV GENERATION



Sandford hydro

- First full year of operation
- Modifications made to the screws and to our operating license with Environment Agency → 20% increase in average annual generation
- Actual generation for 2018/19 lower than expected due to dry summer and autumn and learning about our operating limit

PEOPLE

Launch of our Community Energy

1,036 INVESTOR MEMBERS + 228

Who help finance the upfront costs of our projects and whose investments bring energy into community ownership.

26 COMMUNITY SHAREHOLDERS − 1 (due to ONCORE merge)

Low carbon community groups who share our aims and have a stake in us.

low carbon hub

PEOPLE

37 HOST ORGANISATIONS +4

The schools, businesses and community organisations that host our energy projects.

29 SCHOOLS +4

5 BUSINESSES +0

3 COMMUNITY ORGANISATIONS +0

> "It's helped us to save money on our energy bills, but also the students in our school have learnt more about the environment now that the solar panels are installed."

Jason, teacher, Low Carbon Hub Solar School

low carbon hub

Capital at risk. Returns not guaranteed. Read the Share Offer Document for full details.

low carbon hub

PEOPLE

114 + 25

ACTIVE PARTNERS

462 + 67

FACEBOOK FOLLOWERS

3,159 + 374

TWITTER FOLLOWERS

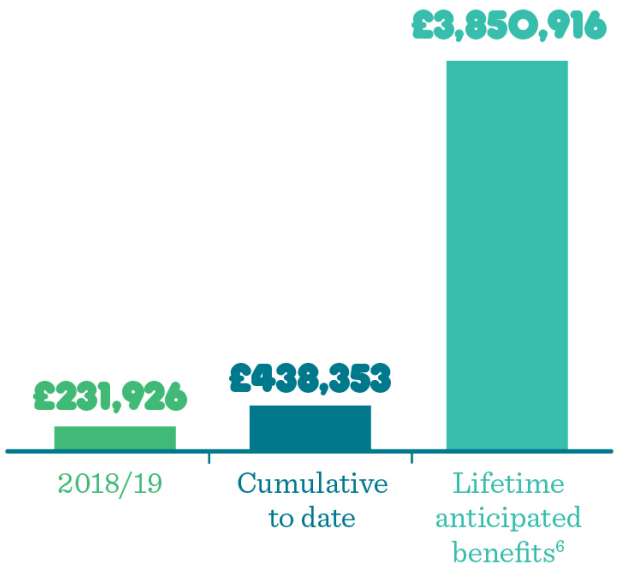
1,217 − 1,670

NEWSLETTER RECIPIENTS[5]

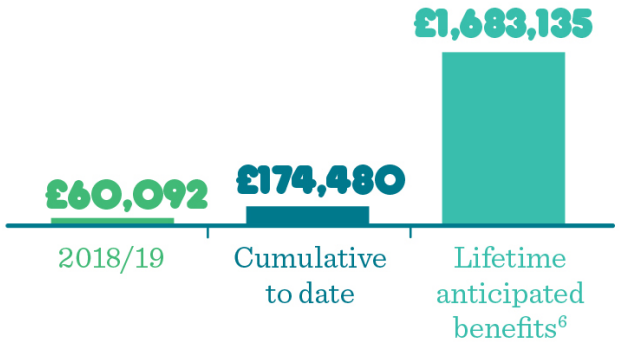
low carbon hub

PROSPERITY

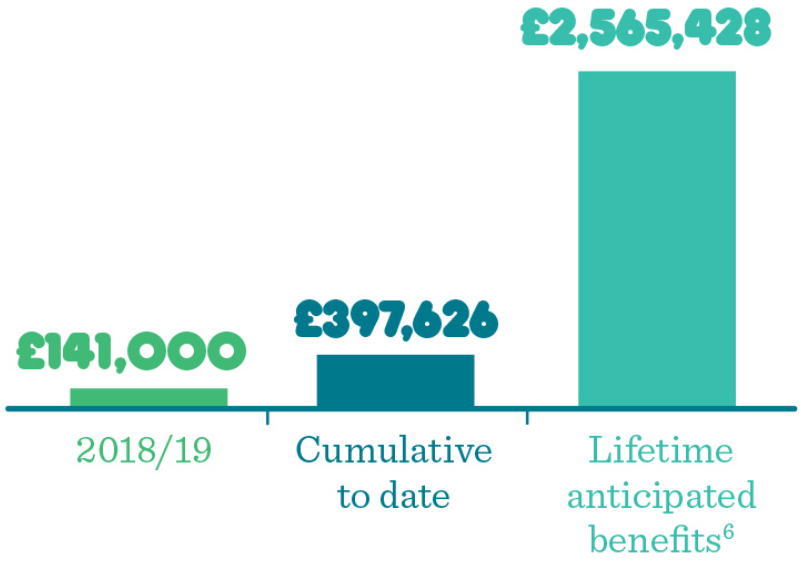
INTEREST TO INVESTORS



SAVINGS ON ELECTRICITY BILLS BY HOSTS



COMMUNITY BENEFIT INCOME[7]



low carbon hub

COMMUNITY BENEFIT & LEVERAGE

2018/19

£536,947

low carbon hub

66 energy audits for:

- **48** small businesses
- **10** schools
- **8** community organisations

296 hours of helpdesk support

Advice and support to **70** individuals and organisations

19 schools signed up for energy efficiency workshops

Through the Ashden LESS CO_2 school energy efficiency programme

Financial support:

- **17** community grants
- **14** small business energy efficiency grants
- **6** small business innovation grants

GAME CHANGER

STEP CHANGE

cosy homes oxfordshire

OXFORDSHIRE GREENTECH

OxFutures

LEO Local Energy Oxfordshire

Energy efficiency for business premises

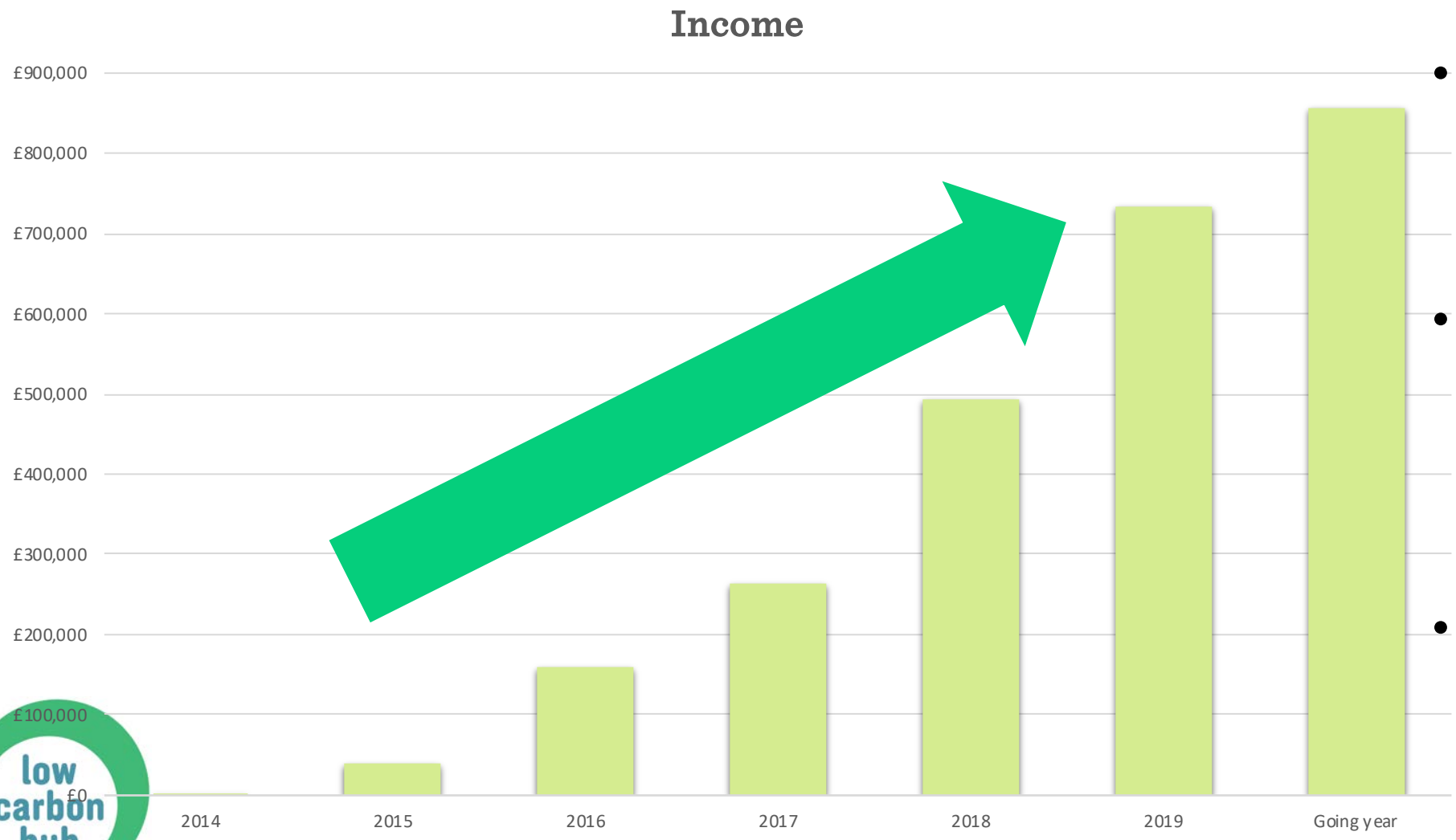
low carbon hub

ACCOUNTS

Luke Marion, Treasurer

LOW CARBON HUB IPS LIMITED

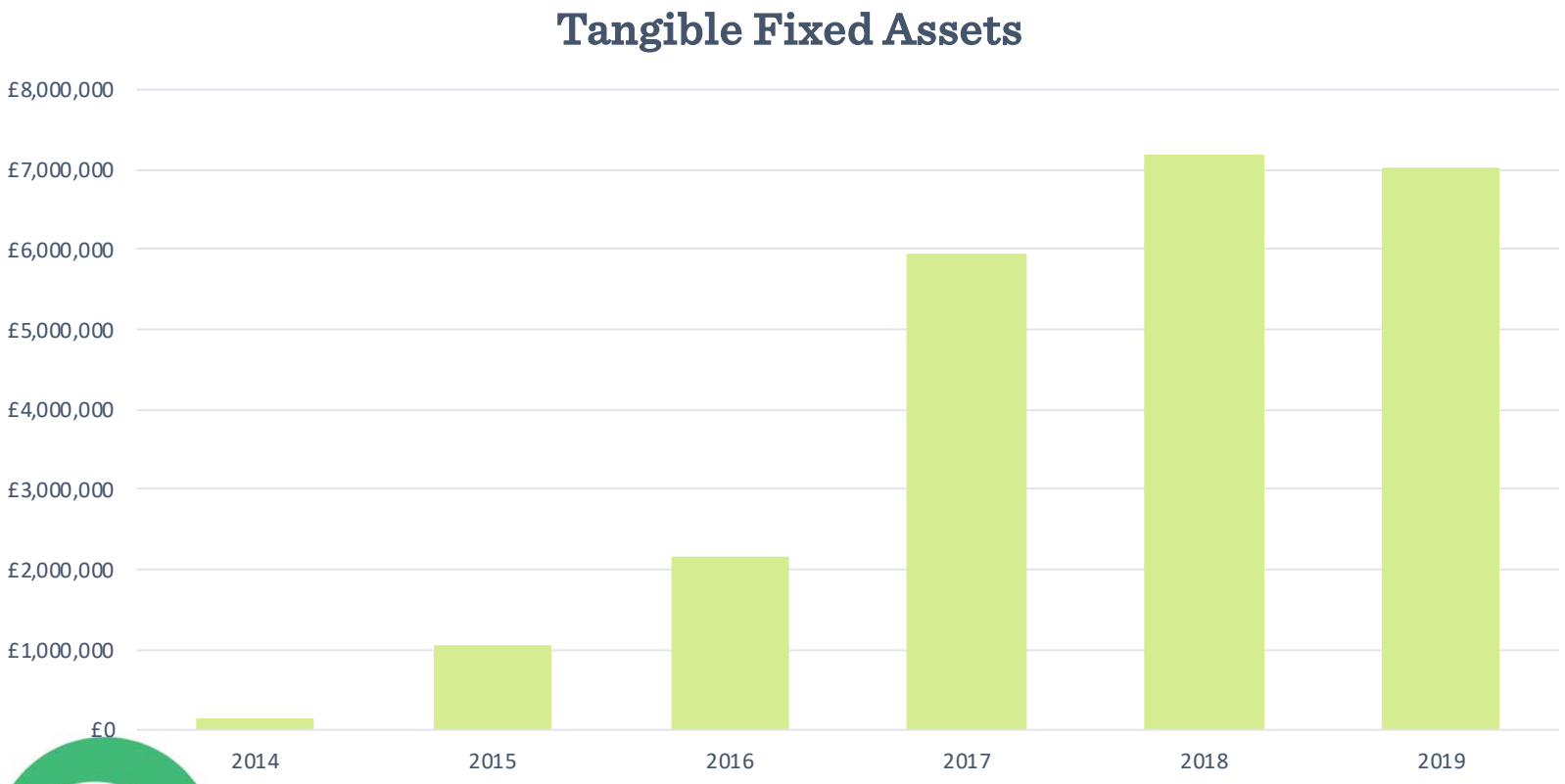
BUILDING OUR SCALE - INCOME



- Turnover grew 48% this year and reached £733k
- In a going average year, installations expected to produce income of c.£850k
- Income from FIT and Electricity sales indexes with inflation

low carbon hub

BUILDING OUR SCALE – ASSET BASE

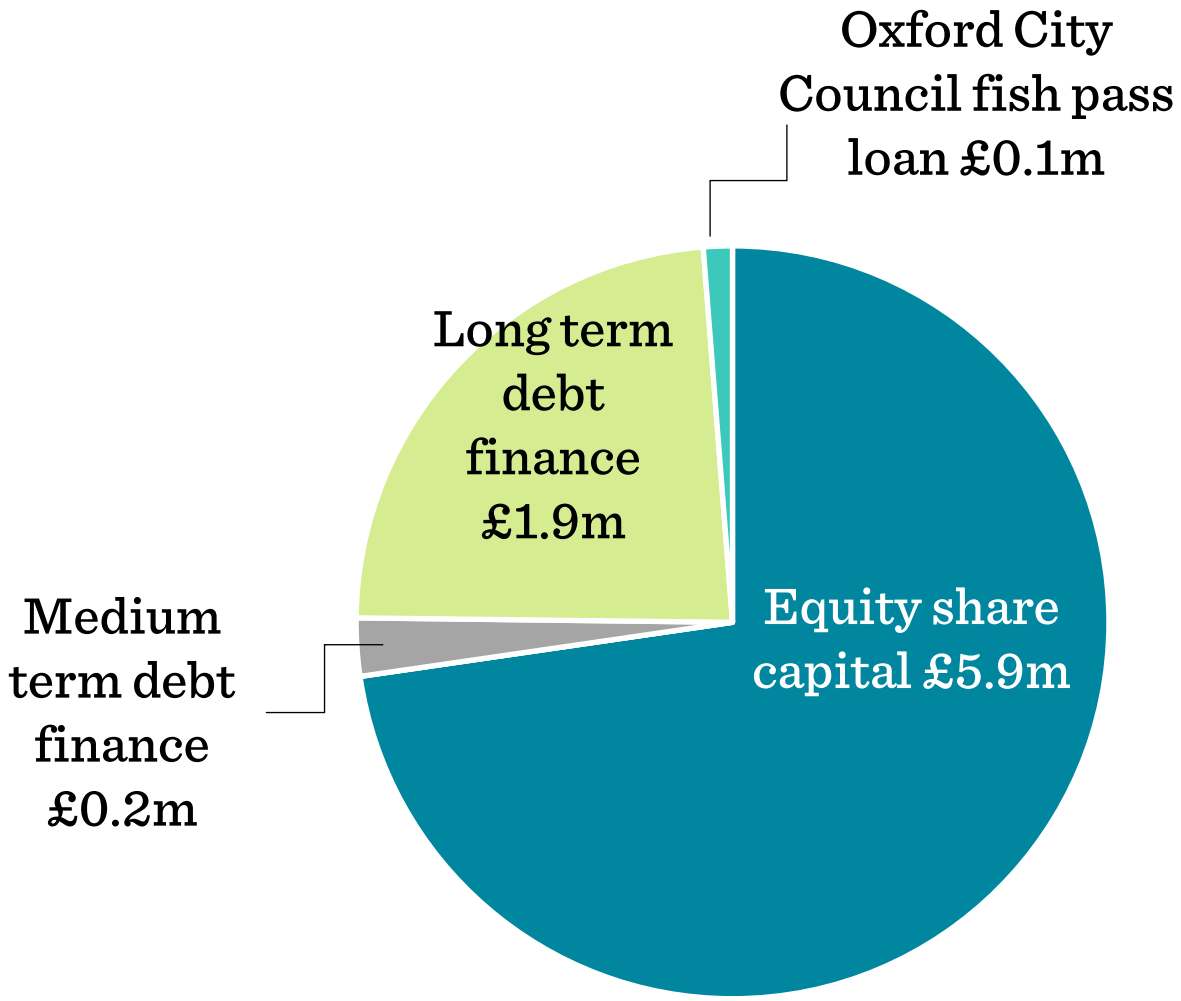


- Fixed asset value reduced by £169k this year (cost £7,881k, depreciation to date £865k)
- 2 new installations completed on schools and 3 mid-life PV arrays in transferred from ONCORE.
- Sandford asset cost reduced by £56k following successful resolution of outstanding construction contract items.

HOW IS THE IPS FUNDED?

As at year end – total £8.0m capital

- Increased by £0.4m from PY
- Additional £1.5m share equity raised from Community Energy Fund
- £0.2m equity added from ONCORE transfer of engagements
- £1.3m medium term debt repaid
- Charity bank long term debt reduced by £0.1m in year, in accordance with facility terms



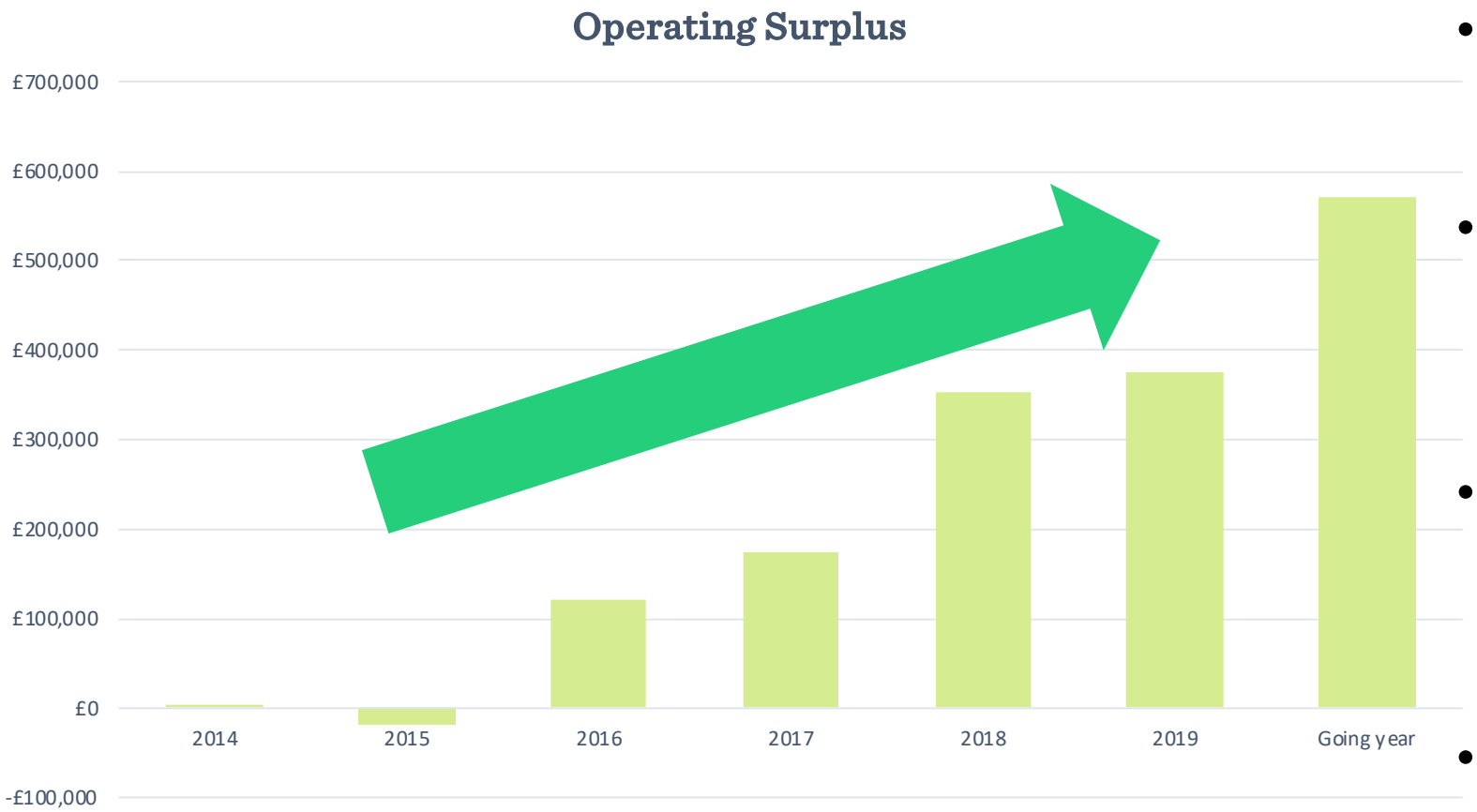
low carbon hub

OUR FUNDING POLICY

- Aim over time to eliminate all debt (other than Charity Bank debt in Sandford Hydro)
- New debt or bonds if required should be at less than 5%
- The debt:equity ratio should not be more than 50:50

low carbon hub

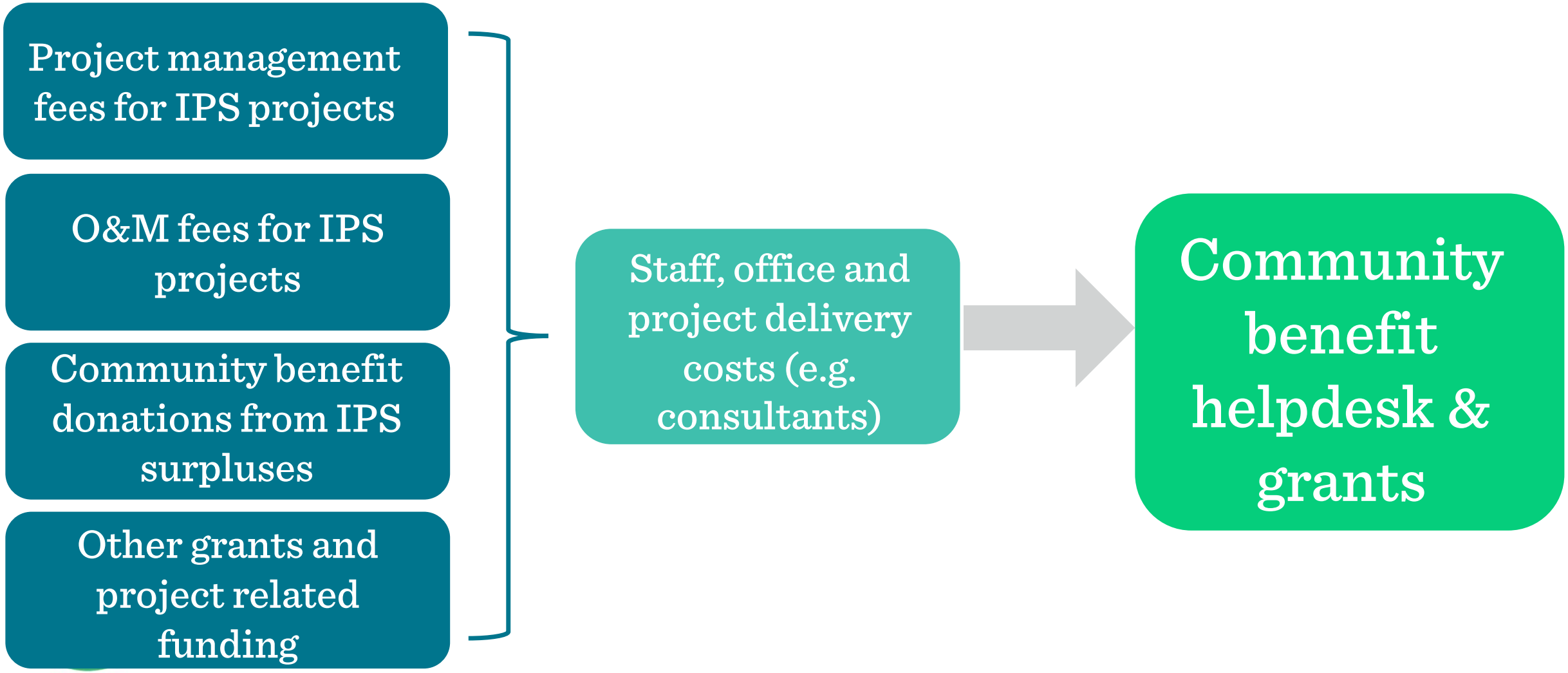
BUILDING OUR SCALE – OPERATING SURPLUS



- Operating surplus increased 6% this year to £375k
- In a going average year installations expected to produce cash surpluses of c.£570k
- Surpluses used to pay interest to debt providers and investors and to fund community benefit
- We record accounting losses due to depreciation on our installations – this is based on the accounting principle of businesses needing to replace assets

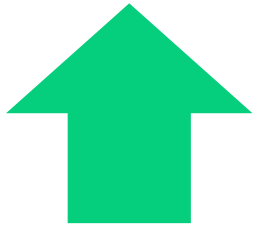
THE LOW CARBON HUB CIC

HOW IS THE CIC FUNDED?



CIC FINANCIAL RESULTS 2018/19

Turnover £717k



+104%

- £304k IPS project related, of which £65k deferred to 2019/20 (PY £236k with £20k deferred)
- £308k OxFutures ERDF income (PY £123k)
- £140k other grants (PY £5k)

Costs £704k

+98%

- Community benefit funding £537k (up from £199k in PY)
  - OxFutures - £341k
  - Community grants - £39k
  - BEIS retrofit 'Cosy Homes' - £115k

Profit £13k

PY loss (£3k)

- Retained profit funds £137k at year end

Community Benefit

Nina Alphey
Communities Director

low carbon hub

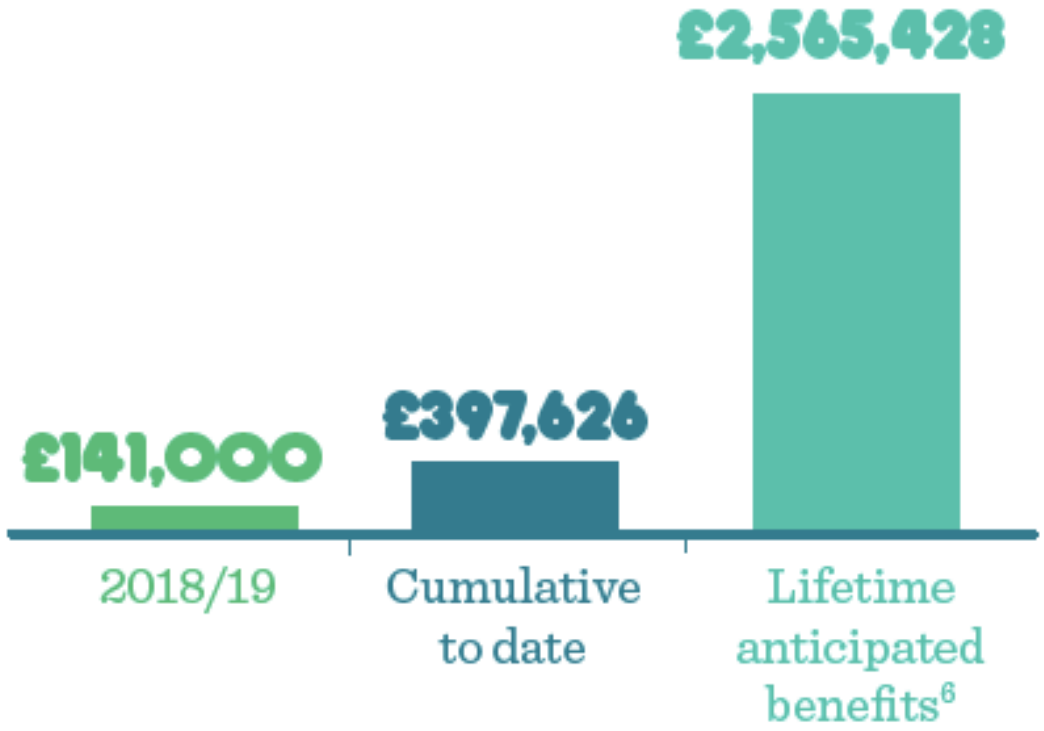
IPS COMMUNITY BENEFIT DONATION

2018/19 donation was **£141,000**

Used to support low carbon community energy activity that:

- cuts Oxfordshire's carbon footprint
- contributes to the creation of a decentralised and locally owned renewable energy system.

COMMUNITY BENEFIT INCOME[7]



low carbon hub

COMMUNITY BENEFIT SPEND

2018/19

£536,947

Community grant programme - **£38,788**

Local energy programme - **£495,259**

- Helpdesk service - £11,186
- Next generation funding - £13,347
- Community building grant audit scheme - £4,970
- LESS CO2 school energy efficiency programme - £8,551
- OxFutures project to support SMEs - £341,193
- BEIS retrofit 'Cosy Homes Oxfordshire' - £115,461
- People's Power Station - £550

Community benefit management - **£2,900**

low carbon hub

INSPIRED BY COMMUNITIES

Pre-AGM event:

Energy policy & housing in Oxfordshire

low carbon hub

COMMUNITY GRANTS PROGRAMME

Sustainable Kirtlington - funding for a feasibility study on installing solar panels on village hall and to support the installation of a battery for the Kirtlington Village Hall Clean energy project.

Low Carbon West Oxford, Rose Hill & Iffley Low Carbon, Local Environment Action Florence Park received a grant to support **Our Kids Climate Action Network** supporting children to take action and understand climate change

low carbon hub

LOCAL ENERGY SUPPORT

66 energy audits for:

48 small businesses

10 schools

8 community organisations

296 hours of helpdesk support

Advice and support to **70** individuals and organisations

low carbon hub

LOCAL ENERGY INNOVATION

EcoSync are aiming, through innovative technology, to reduce the energy consumption and carbon footprint of buildings by 40%.

low carbon hub

European Union
European Regional Development Fund

OxFutures

LOOKING AHEAD

NEXT GRANT DEADLINES:

Small grants: now apply all year round

Large grants deadlines:

- Outline proposals: 16 Dec 2019
- Detailed applications: 13 Feb 2020

COMMUNITIES DIRECTOR

Would you like to join the Board of the Low Carbon Hub CIC?

This role is up for re-election next year. If you are a member of a CIC group you can stand.

Contact Nina or Cathy to find out more.

Annual General Meeting of Low Carbon Hub IPS Limited

Annual General Meeting of Low Carbon Hub CIC

SPECIAL RESOLUTION - IPS

The purpose of these special resolutions is to:

- Highlight our charitable purpose in the Rules
- Allow children under 16 to own shares
- Allow people to leave shares to the Low Carbon Hub CIC in their wills
- Remove the £10 m borrowing limit

SPECIAL RESOLUTION - CIC

The purpose of these special resolutions is to:

- Change the article to mirror the changes made in the IPS charitable status
- Approve the extension of the Communities Director from 2 to 3 years

low carbon hub

ANNUAL GENERAL MEETING – LOW CARBON HUB IPS LIMITED

Resolution 1: to approve the minutes for 2018/19
Resolution 2: to approve the accounts and the auditor's report
Resolution 3: to approve the special resolution to change the Rules
Resolution 4: to approve Critchleys as auditors for the coming year
Resolution 5: to re-elect Dr Barbara Hammond as Director
Resolution 6: to re-elect Adriano Figueriedo as Director

low carbon hub

ANNUAL GENERAL MEETING OF THE LOW CARBON HUB CIC

Resolution 1: to approve the minutes for 2018/19

Resolution 2: to approve the special resolution for the changes of articles.

Resolution 3: to approve Critchleys as auditors for the coming year.

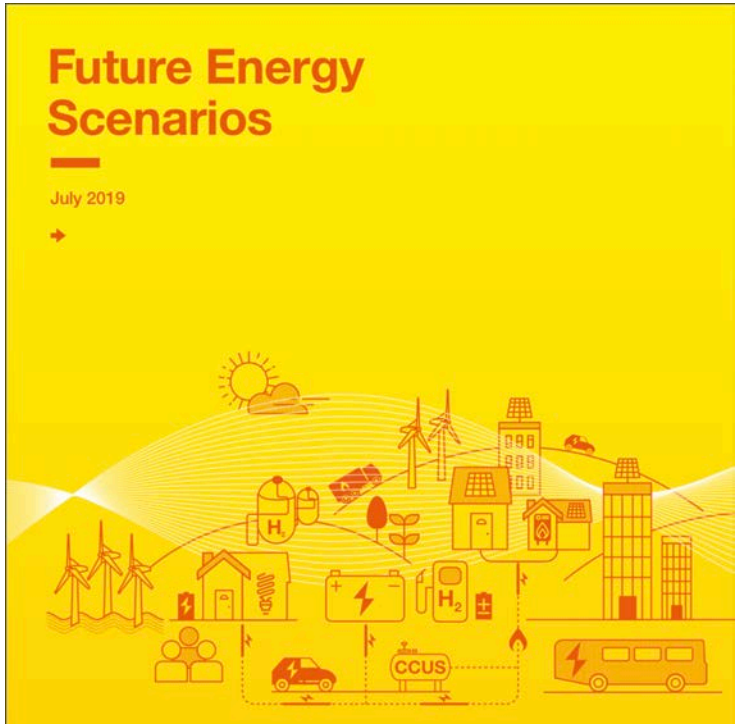
Looking ahead

Adriano Figueiredo
Innovation Director

Zero Carbon

low carbon hub

Zero Carbon

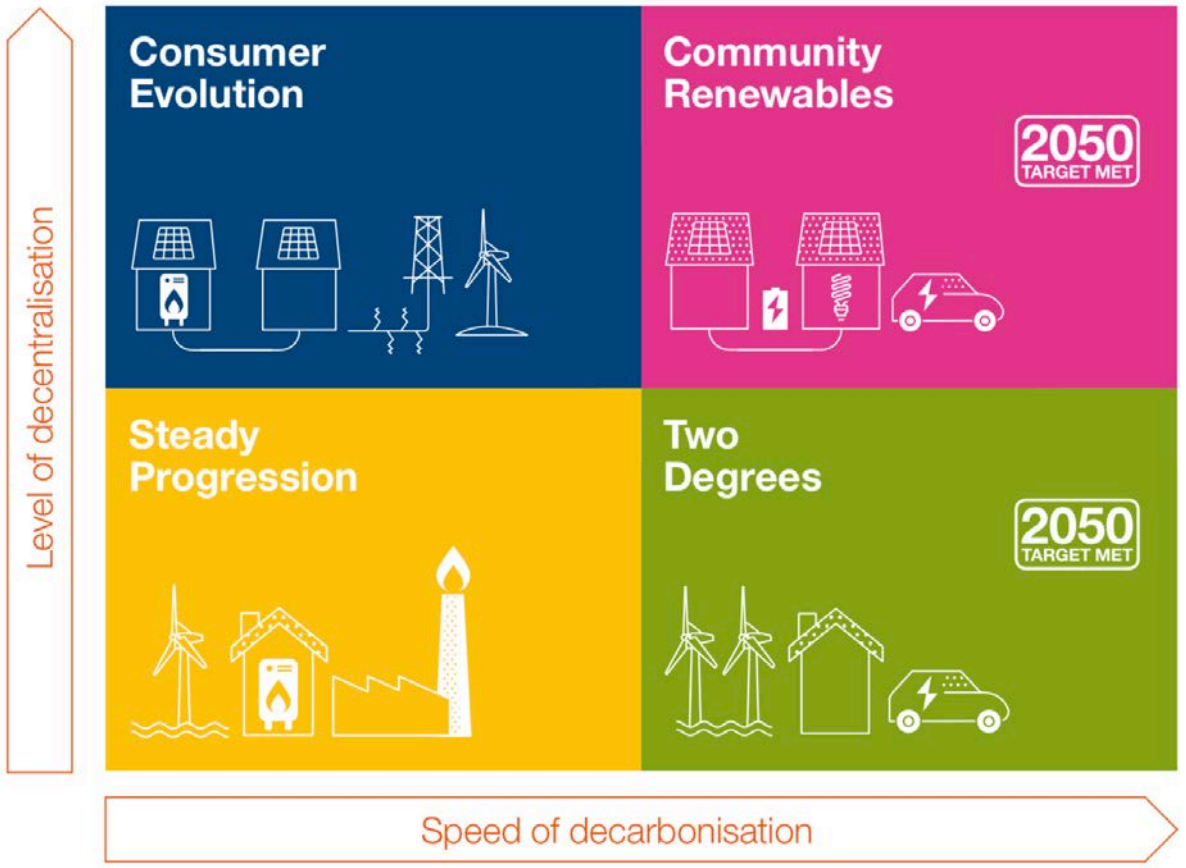


http://fes.nationalgrid.com/media/1409/fes-2019.pdf

Reaching net zero carbon emissions by 2050 is achievable. However, this requires immediate action across all key technologies and policy areas.

low carbon hub

Zero Carbon Pathways

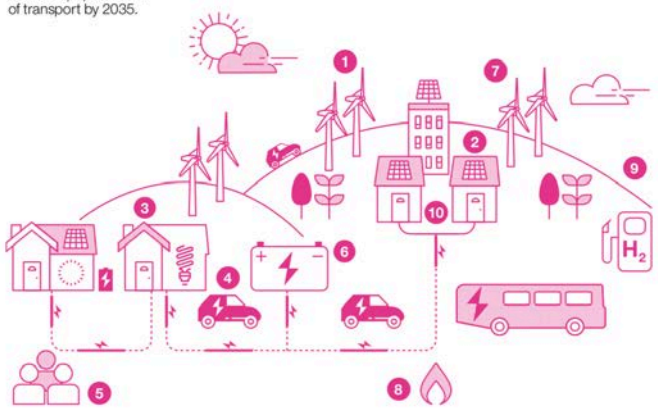


low carbon hub

Pathways Description

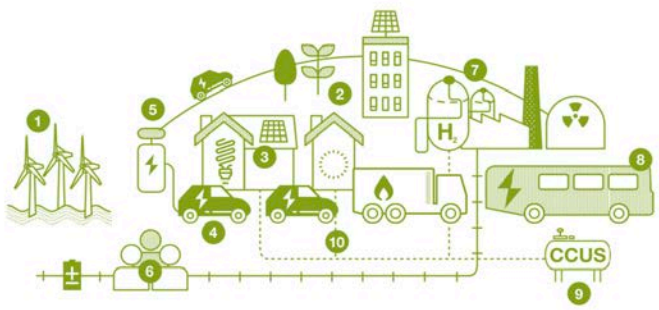
Community Renewables pathway

1. By 2050, 58 per cent of total generation capacity is decentralised i.e. not transmission connected.
2. Over 80 per cent uptake of low-carbon heat solutions in homes by 2050, including electric heat pumps, hybrid heat pumps, district heat and biofuels.
3. High appliance and thermal efficiency in new and existing homes have supported a 26 per cent drop in residential heat demand.
4. Electric vehicles are the most popular form of transport by 2035.
5. Over 75 per cent of electric vehicle owners engage in smart vehicle charging (e.g. off peak) by 2050.
6. Rapid growth in storage capacity from the early 2030s with the highest installation of residential battery systems by 2050.
7. Decentralised wind generation grows to over four times 2018 levels.
8. Green gas is 46 per cent of the total natural gas supply by 2050.
9. Multiple onshore renewable energy schemes support other energy production (e.g. hydrogen from electrolysis for commercial vehicles).
10. Lowest total annual energy demand scenario by 2050, approximately two thirds of 2018 levels.



Two Degrees pathway

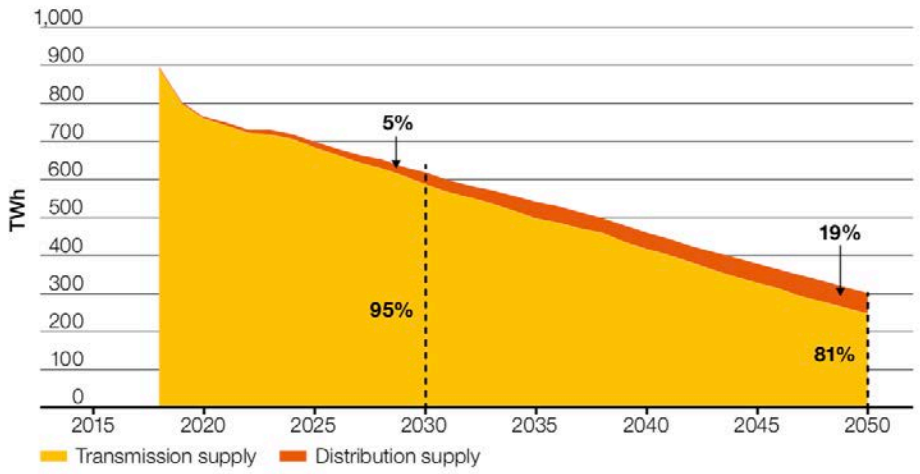
1. Strong growth in renewables and other centralised technologies, with offshore wind generation growing to over six times 2018 levels.
2. Regional roll-out of hydrogen for heat, with over a third of homes heated by hydrogen by 2050.
3. Appliance and thermal efficiency improves in new and existing homes.
4. Electric vehicles are the most popular form of transport by 2035.
5. Public vehicle charging points become more popular, leading to less smart vehicle charging (e.g. peak avoidance).
6. Growing storage capacity and interconnection provide flexibility.
7. 312TWh annual hydrogen demand by 2050, mostly produced via methane reforming supported by carbon capture, usage and storage.
8. Over 1m hydrogen or natural gas vehicles by 2050.
9. Carbon capture, usage and storage is commercialised, having developed at scale from 2030.
10. Total energy demand has reduced slightly from 2018 levels. Around a 50 per cent increase for electricity, with about 30 per cent less gas than today.



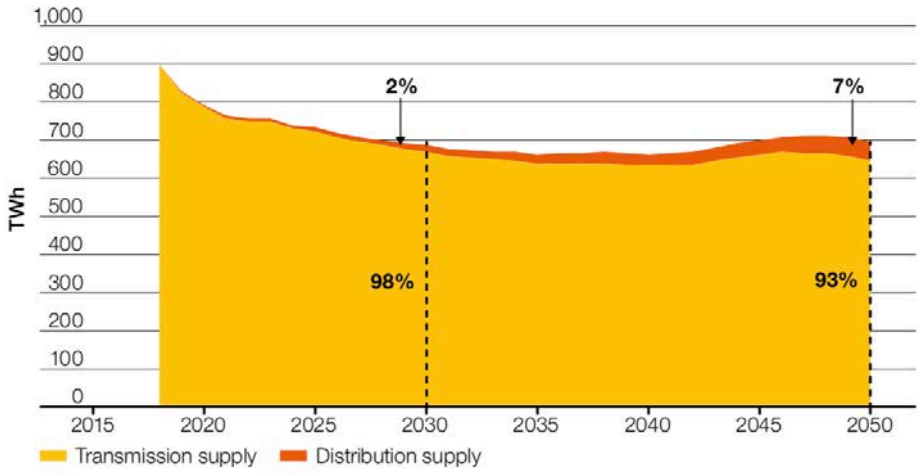
low carbon hub

Energy Efficiency

Community Renewables



Two Degrees



low carbon hub

Energy Efficiency

Homes in 2050 will
need to use at least one third less energy for heating than today.

By 2050[2], up to 85%
of homes need to be very thermally efficient (at EPC class C or higher).

low carbon hub

Energy Efficiency

Homes in 2050 will
need to use at least one third less energy for heating than today.

cosy homes oxfordshire

By 2050[2], up to 85%
of homes need to be very thermally efficient (at EPC class C or higher).

low carbon hub

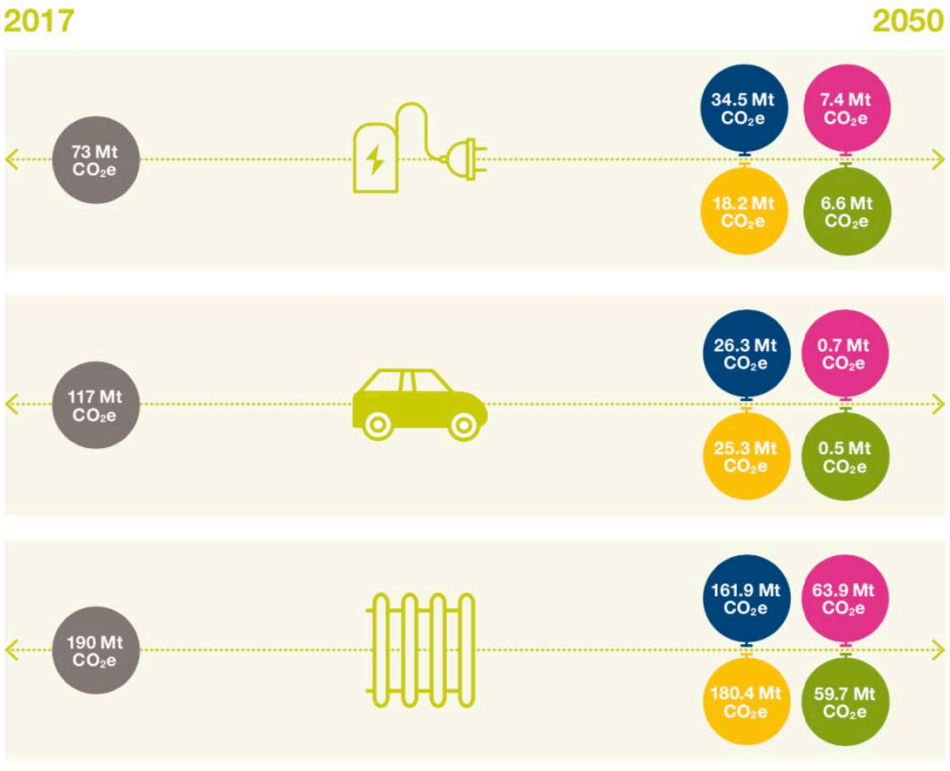
NATIONAL ENERGY FOUNDATION

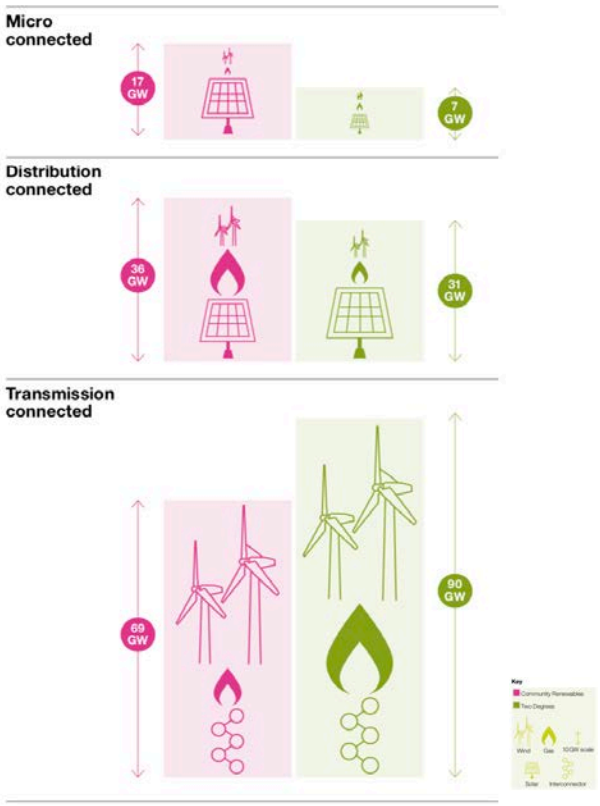
RETROFIT WORKS
BUILDING EFFICIENCY TOGETHER

Department for Business, Energy & Industrial Strategy

Technology and Innovation

Carbon emissions from the electricity, transport and heat sectors by scenario





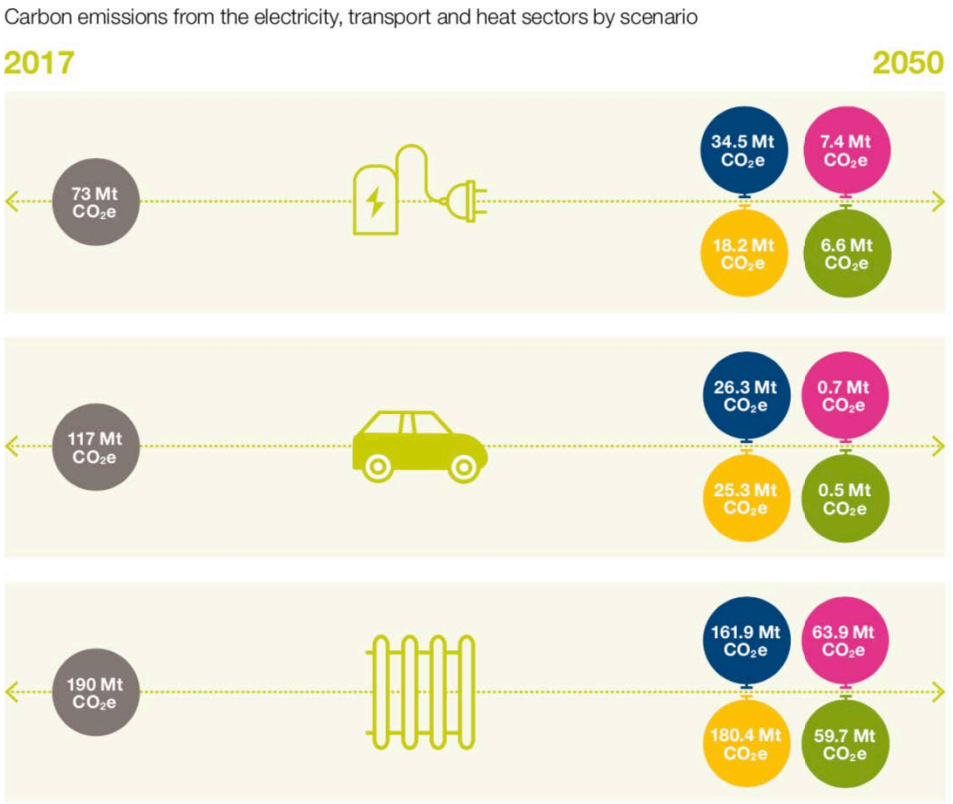
Over 75% of EVs could be using smart charging by 2050.

Well over 2.8 trillion data points will be collected in 2050 to understand where EVs are charging on the electricity system.

Over seven million hybrid heat pumps could be installed by 2050 with gas providing continued flexibility.

low carbon hub

Technology and Innovation



European Union
European Regional Development Fund

OxFutures

low carbon hub

Cherwell District Council North Oxfordshire

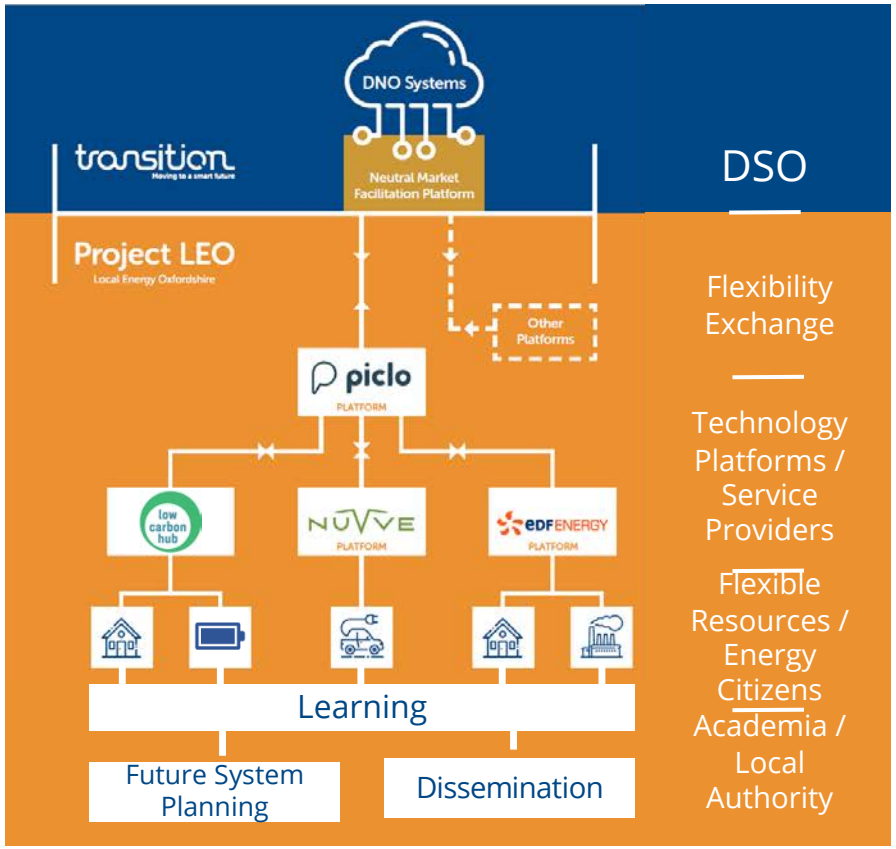
Oxford Brookes University

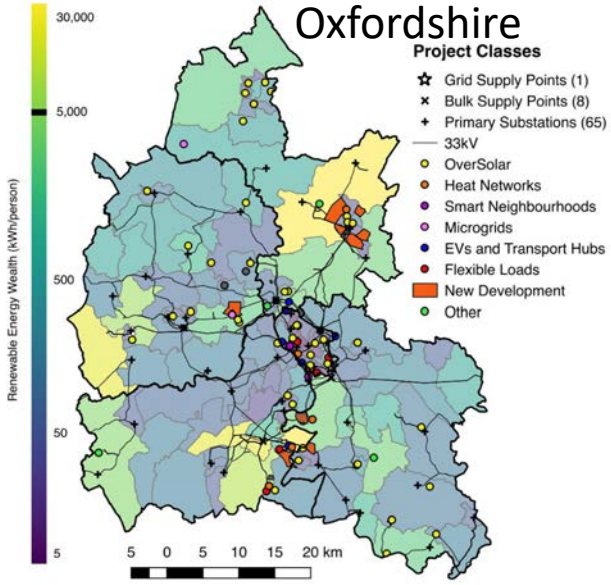
Bioregional

University of Oxford

www.oxford.gov.uk
Oxford City Council

Smart Networks





Develop new local flexibility and energy markets which maximise asset utilisation and enable innovative business models for investment in a low-carbon energy future.

low carbon hub

LEO Local Energy Oxfordshire

Project LEO is one of the most ambitious, wide-ranging, innovative, and holistic smart grid trials ever conducted in the UK.

University of Oxford · Oxford Brookes University · low carbon hub · Oxford City Council · Oxfordshire County Council · Scottish & Southern Electricity Networks · piclo · EDF Energy · NUVVE · Industrial Strategy

low carbon hub

Community Energy

OxFutures

cosy homes
oxfordshire

LEO Local Energy Oxfordshire

low carbon hub

low carbon hub

QUESTIONS?

low carbon hub


THANK YOU!
CHANGE STARTS WITH PEOPLE—
IS THERE ENERGY IN YOUR NETWORK?