



The Battle for Britain's Energy Future

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Ways we are winning

Renewables provided
26.6% of UK electricity
generation in the first
quarter of this year!

 **Energy UK**
@EnergyUKcomms

Renewables' share of electricity generation was 26.6 per cent in 2017 Q1. According to the latest energy statistics from [@beisgovuk](#)

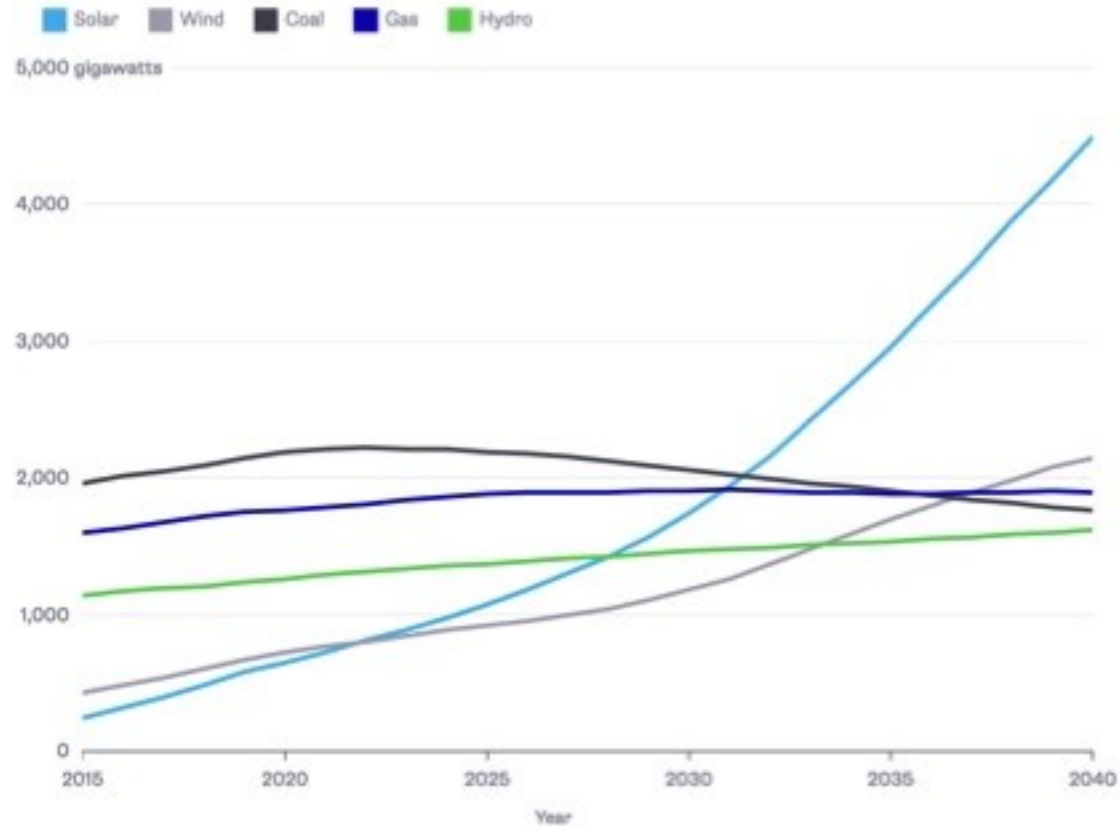


17 Jul 11:50

Ways we are winning

Solar Beats Coal in 2032 ...

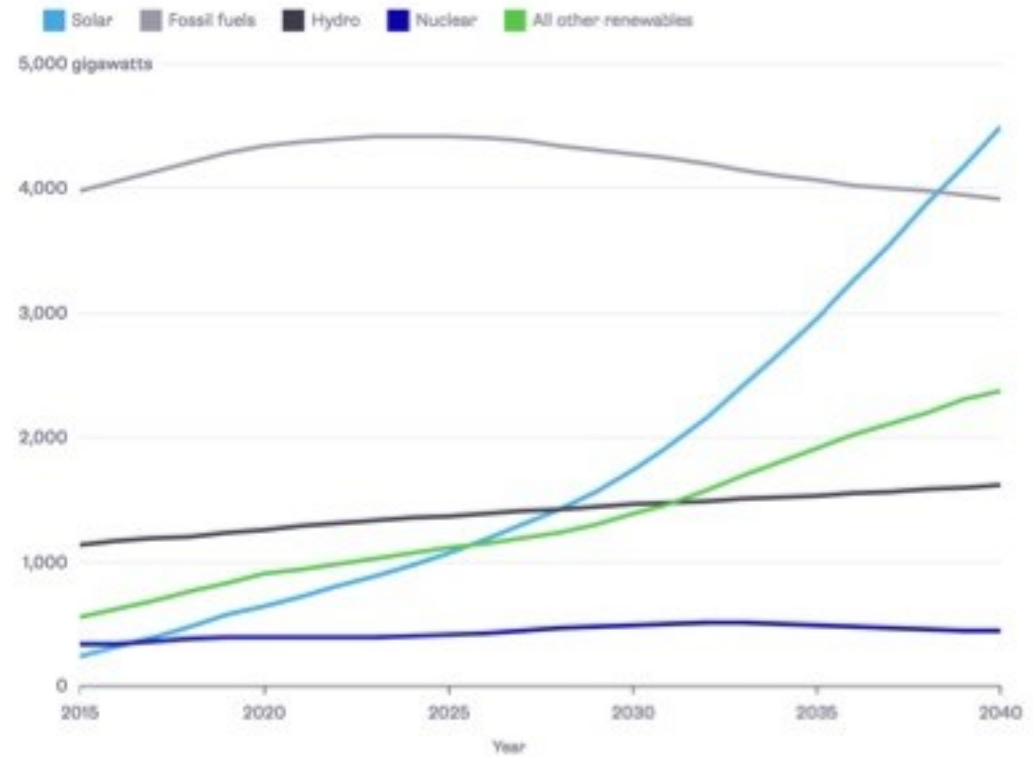
Cumulative installed power generation capacity by technology



Source: Bloomberg New Energy Finance New Energy Outlook 2017

... And All Fossil Fuels by 2039

Cumulative installed power generation capacity by technology



Source: Bloomberg New Energy Finance New Energy Outlook 2017

Note: "All other renewables" is wind, geothermal and biomass.

Ways we are winning

#ENVIRONMENT

JULY 17, 2017 / 8:08 PM / 16 HOURS AGO

Wind, solar do not harm power grid reliability: draft U.S. study



Michael Liebreich
@MLiebreich

Following

"The idea of large power stations for baseload is outdated". And that's the CEO of National Grid speaking.



Steve Holliday CEO National Grid: baseload is outdated

Steve Holliday, CEO of National Grid, believes the idea of large power stations as baseload is "outdated". "The solar on the roof will be the baseload."

energypost.eu

8:33 AM - 22 Jan 2017

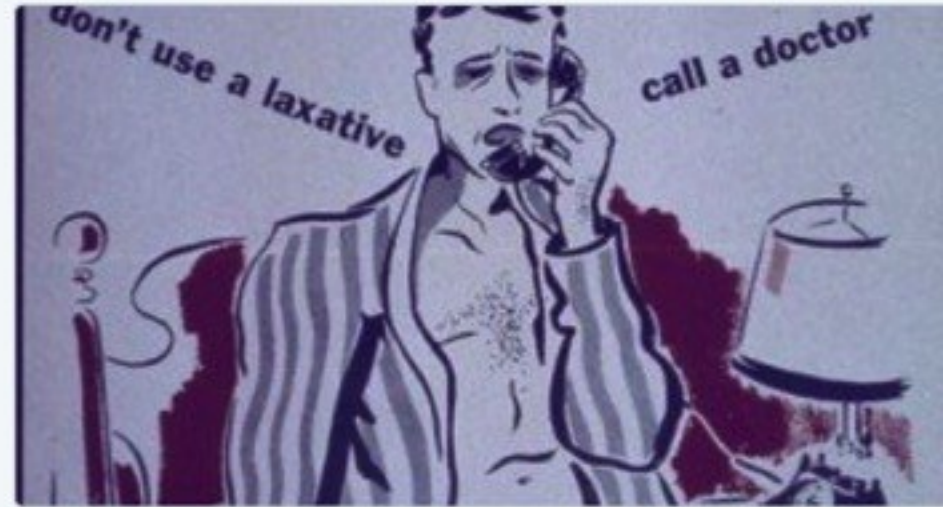
Replying to @NRDCEnergy and 1 other



NRDC Energy Team @NRDCEnergy

26

10/ The term "baseload" is like the human appendix: useless at best, but at worst, provides a vessel for disease



12

14

Replying to @NRDCEnergy and 1 other



NRDC Energy Team @NRDCEnergy

26

11/ Those afflicted with "baseload" disorder experience an unnecessary desire to prop up these plants that is unconnected to their value



11

11

Replying to @NRDCEnergy and 1 other



NRDC Energy Team @NRDCEnergy

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12/ Symptoms include increased costs for customers, and lack of innovation in the power sector



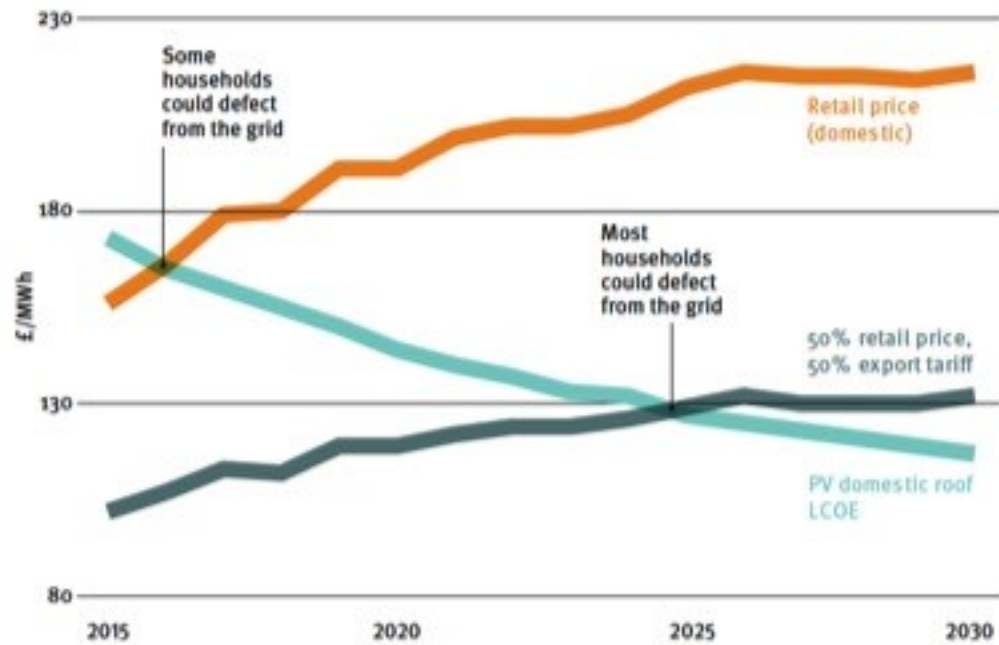
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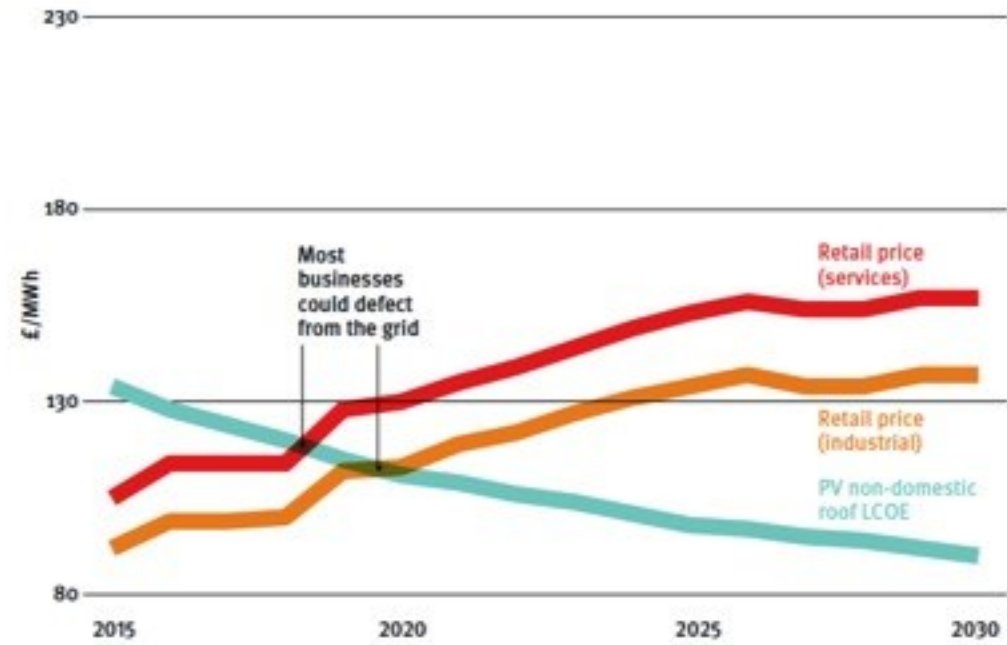
Ways we are winning

Levelised cost of electricity (LCOE) for domestic and non-domestic PV versus retail electricity prices¹⁰

Comparison of domestic PV LCOE and electricity tariffs



Comparison of non-domestic PV LCOE and electricity tariffs



Ways we are winning

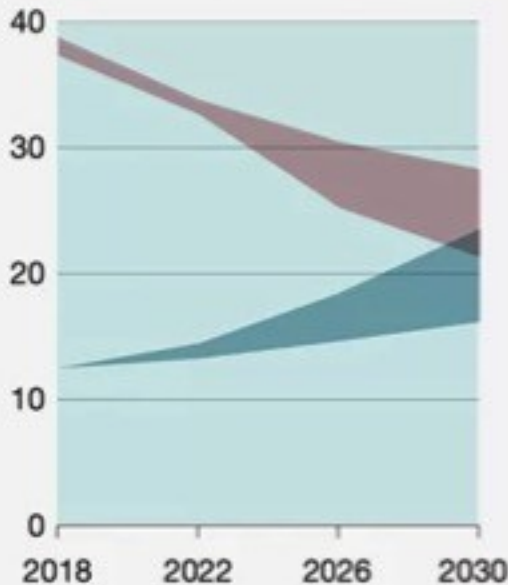
Rise of energy storage set to drive down energy prices, McKinsey says

18 July 2017 | Consultancy.uk

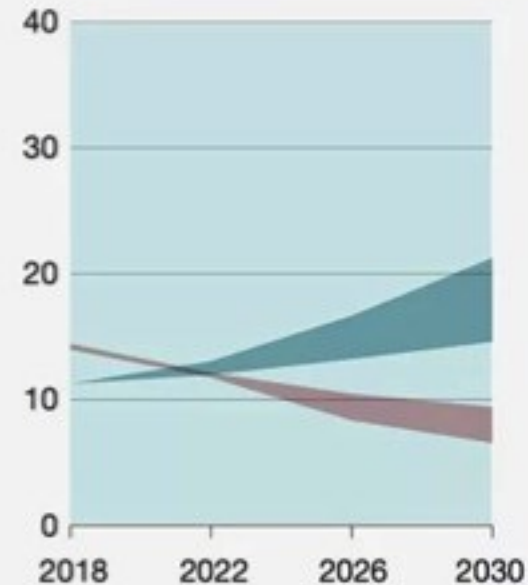
In some cases, grid defection is beginning to make economic sense.

Levelized cost of customer-sited energy Cost of avoided electricity

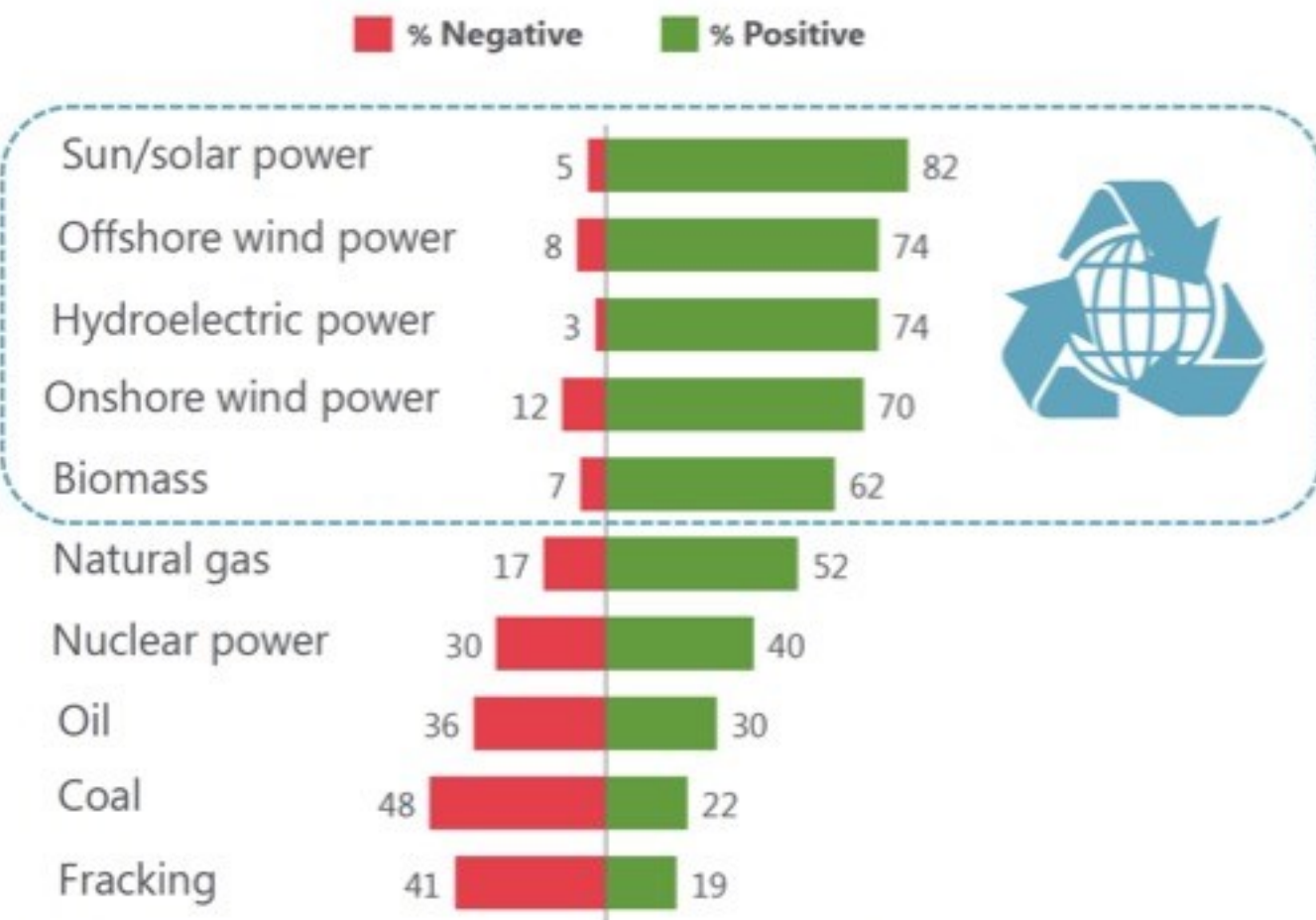
Full grid-defection scenario,
cents per kilowatt-hour



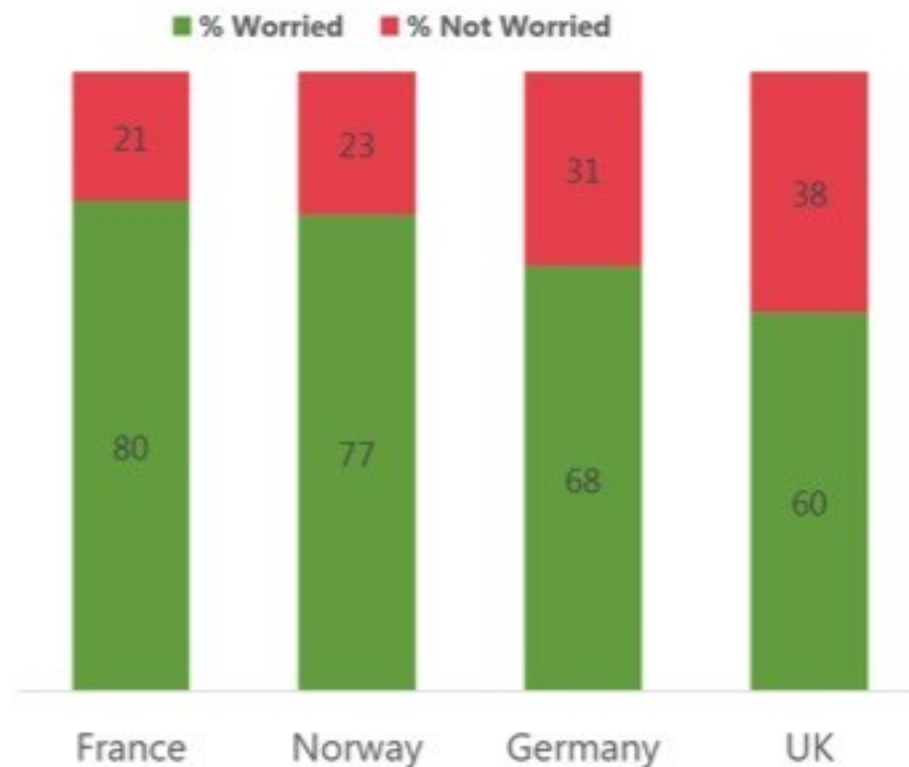
Partial grid-defection scenario,
cents per kilowatt-hour



Strong preference for renewables



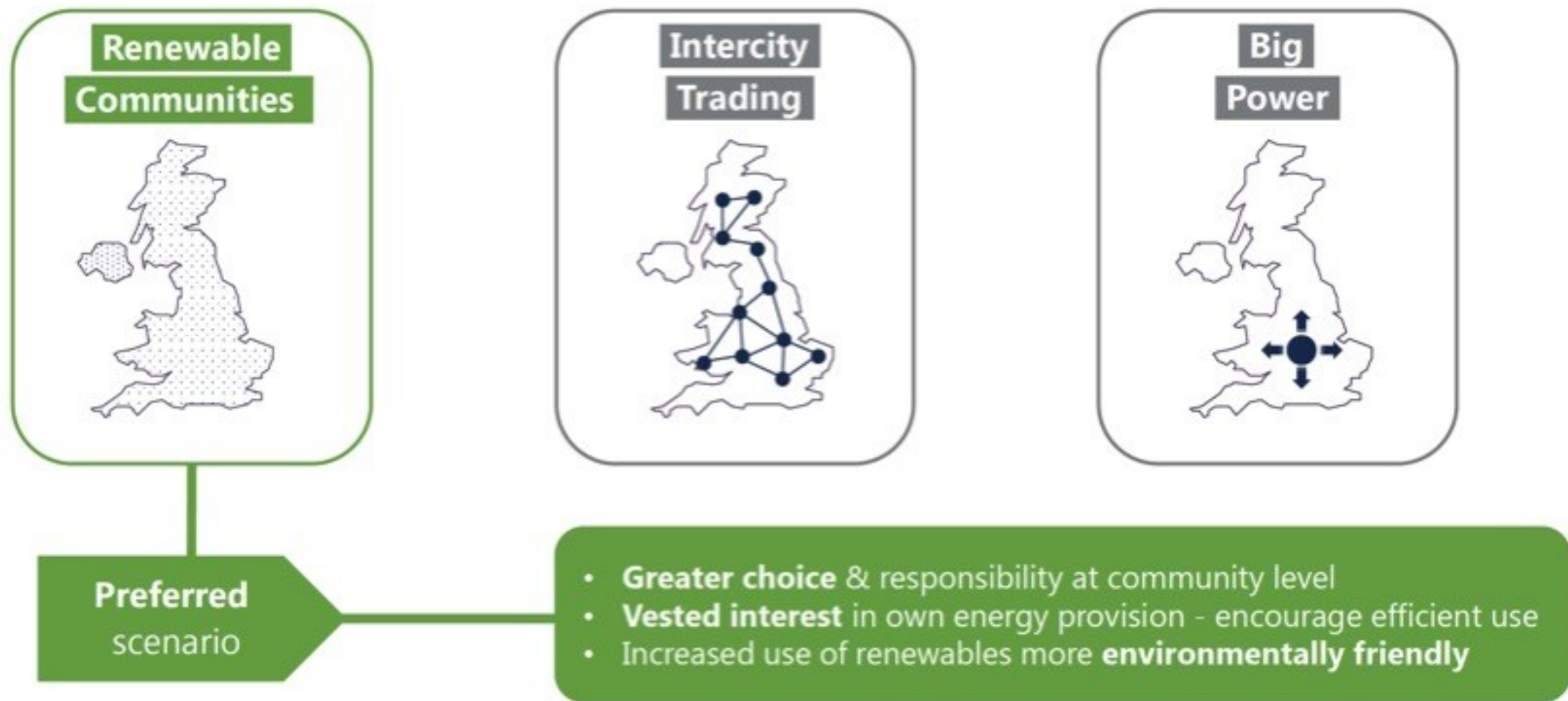
What is your general **opinion** about the following methods of **energy generation**? (UK)



How **worried**, if at all, are you about **climate change**?

Aspirations for a more local future

Consumers presented with 3 scenarios for the future UK energy system



“It’s change – or die in a ditch”

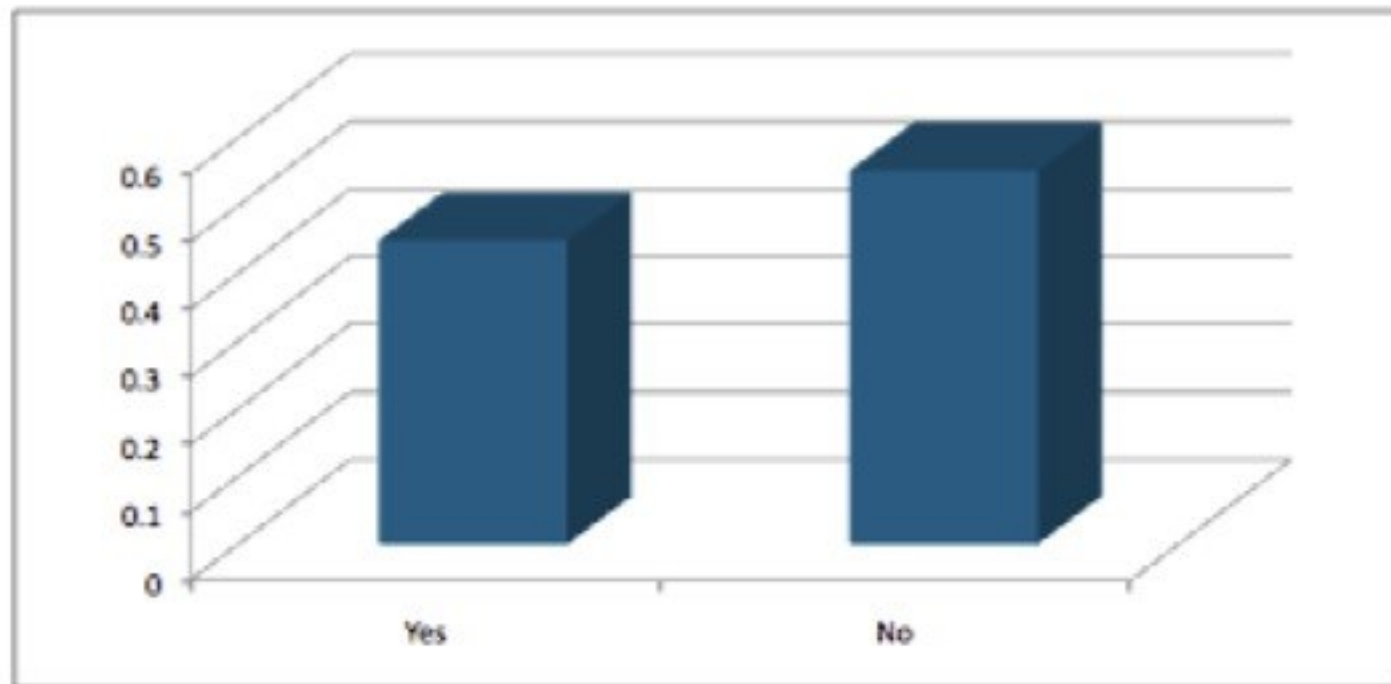
- private conversation with senior executive at one of Germany’s Big Four suppliers



Landscape shift

Q6) Will the current energy supplier model survive the next decade? (Multiple Choice)

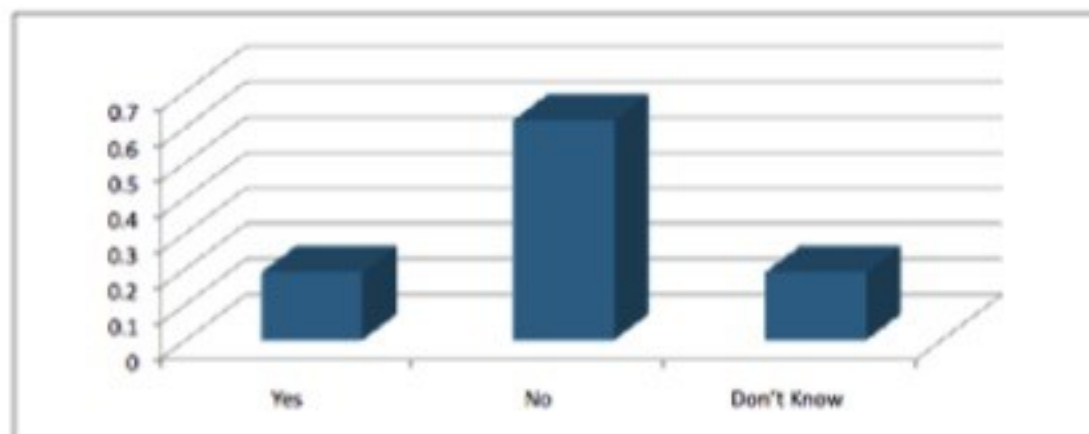
	Responses	
	Percent	Count
Yes	44.87%	35
No	55.13%	43
Totals	100%	78



Landscape shift

Q5) Some commentators expect to see "as much innovation in the next eight years, as we have seen in the last 25". Will markets and policy-makers cope with the pace of change? (Multiple Choice)

	Responses	
	Percent	Count
Yes	19.05%	16
No	61.90%	52
Don't Know	19.05%	16
Totals	100%	84



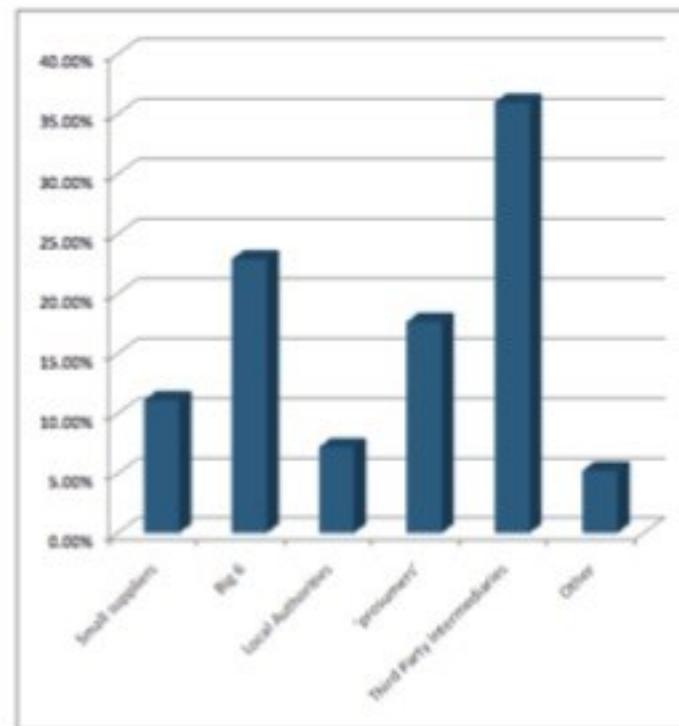
Landscape shift

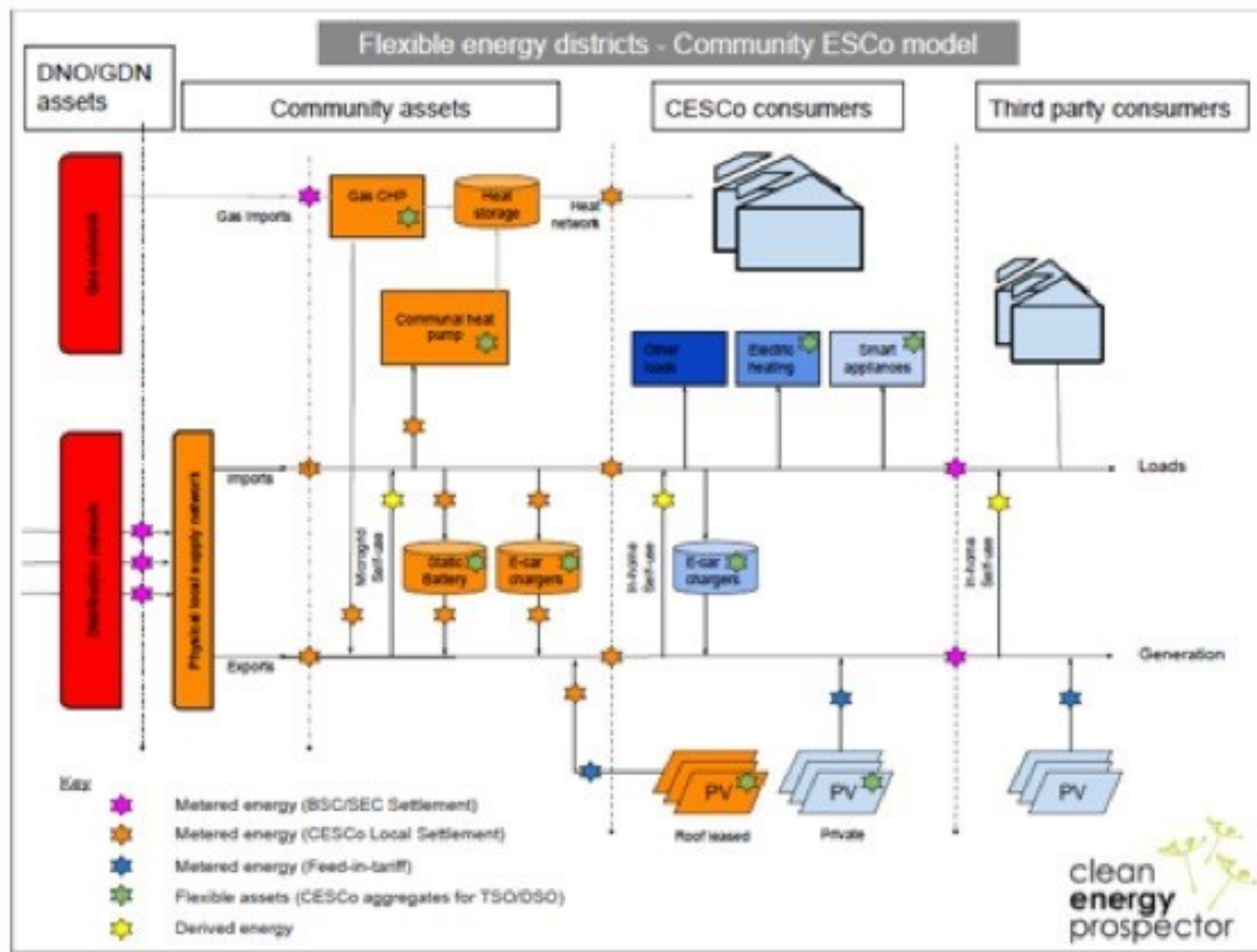
Q2) Who will be the most powerful players in the GB retail energy market in 10 years' time? (Multiple Choice - Multiple Response)

	Responses		Count
	Percent by total votes	Percent by total voters	
Small suppliers	11.11%	19.54%	17
Big 6	22.88%	40.23%	35
Local Authorities	7.19%	12.64%	11
'prosumers'	17.65%	31.03%	27
Third Party Intermediaries	35.56%	63.22%	55
Other	5.23%	9.20%	8
Totals	100%	87	153

TOTAL VOTERS

TOTAL VOTES





One of these sorts of slides.

Local energy has the potential to:

- **Facilitate subsidy-free renewables**
- **Reward communities for hosting renewables with lower energy bills**
- **Relocalise the economic benefits of energy generation and supply**
- **Enable new energy company business models**
- **Integrate storage, low carbon heat and transport solutions**
- **Secure better outcomes for domestic consumers in general**



“Wadebridge generated its own electricity until 1928, when the local company was sold into successively bigger organisations, culminating in the Big 6 today. Wadebridge Energy Company will reverse that. It will generate green energy locally and create income to benefit people in the Wadebridge area, not the overseas shareholders of energy multinationals.”

- Jerry Clark, WREN technical director



Local Heat!

The heat sector faces a “completely different” situation to the power sector, where decarbonisation has so far had relatively little direct impact on the lives of customers.

“We said last year that we thought decarbonisation of heat was probably the biggest challenge in energy policy that we face,” said Ofgem senior partner for improving regulation Martin Crouch.

Speaking at a Westminster Energy, Environment and Transport Forum event this week, he told delegates: “That’s largely not for technical reasons; not so much for difficult issues with the system and so on... It’s the consumer impact.”



Local Energy Efficiency!

Paul Bramwell of Citizens Advice and lead co-ordinator of Warmth For Wellbeing, said that “the project has clearly reached some of the most vulnerable people across Brighton & Hove and it is pleasing that we have been able to help people who need it.”

BHESCo were acknowledged by clients and project partners alike as being a cornerstone of the project's success, and were recognised as demonstrating a level of 'care' from an energy service provider that stood out as being in distinct contrast with how people are 'normally treated' by energy companies.



Local energy has the potential to:

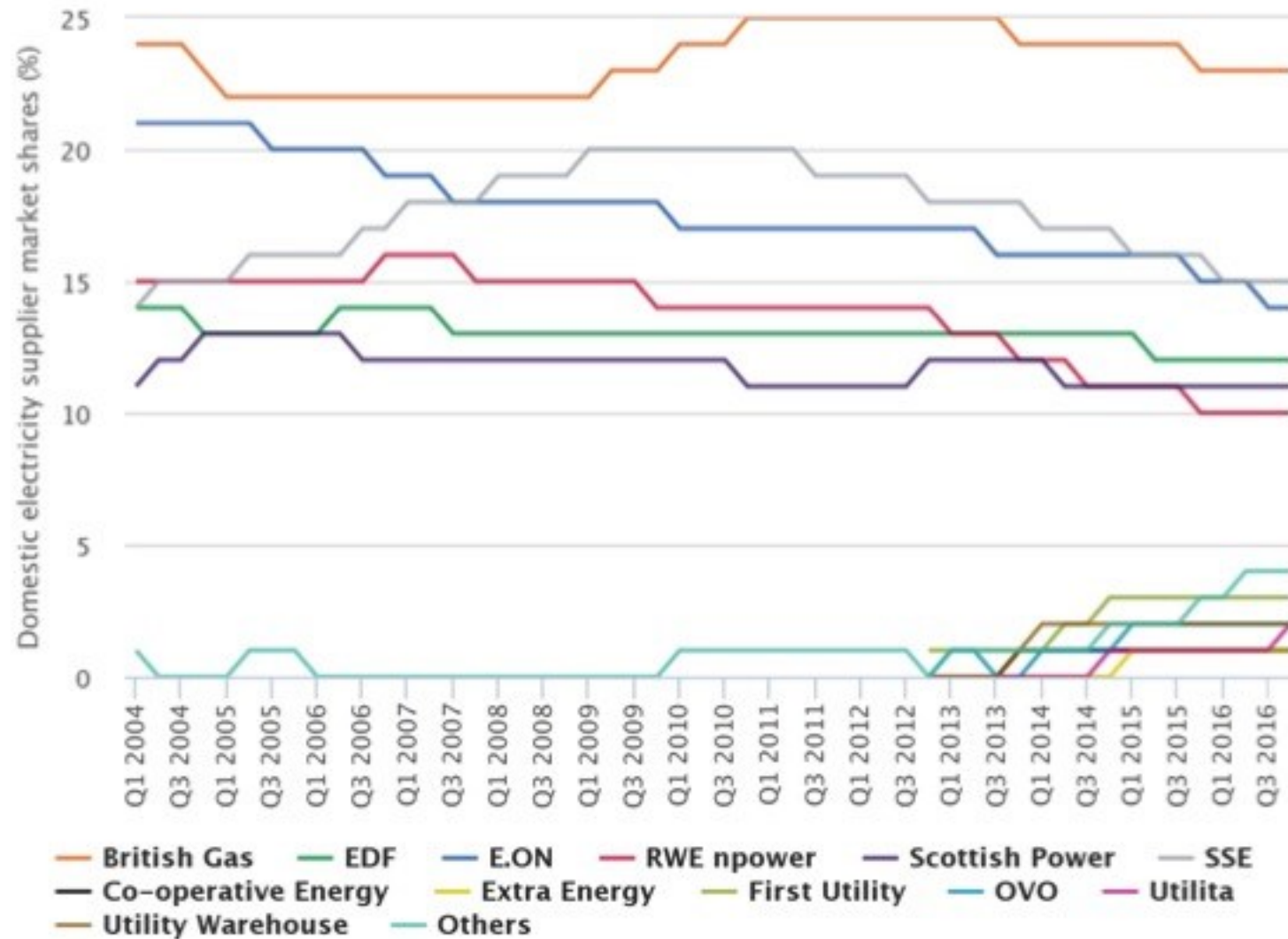
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PEOPLE DON'T SWITCH

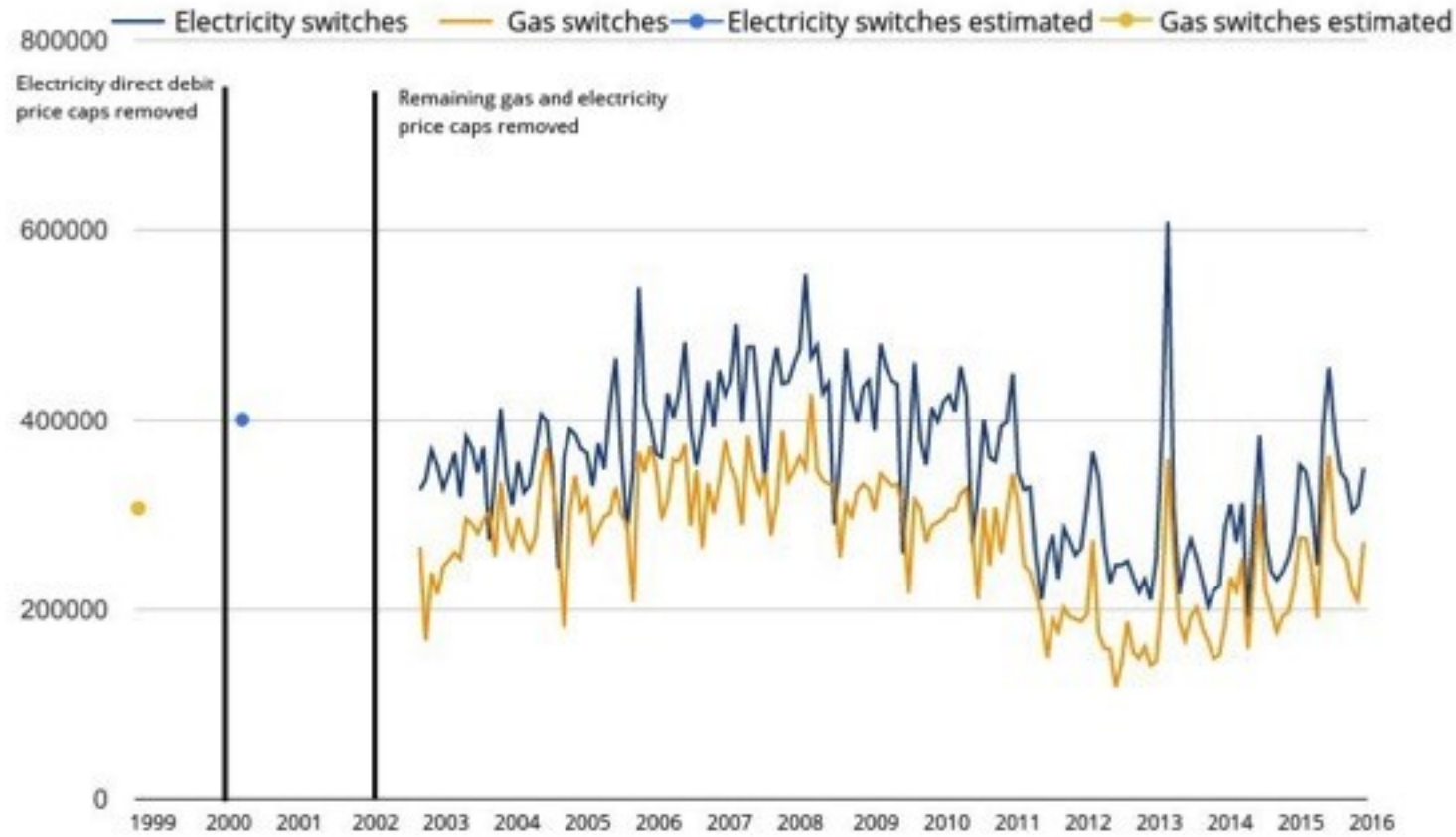


Electricity supply market shares by company: Domestic (GB)



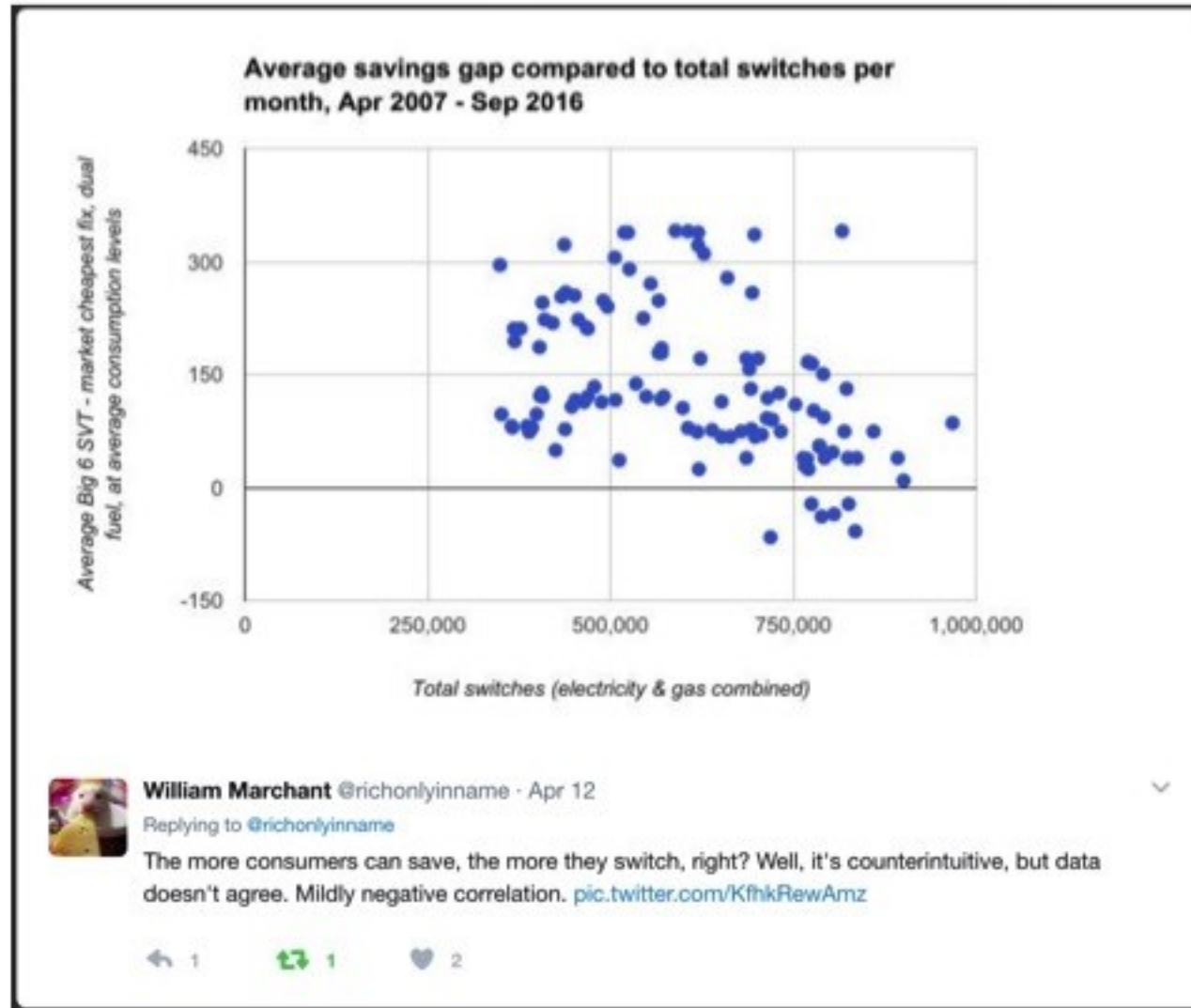
Switching situation is not improving

Number of electricity and gas switches, monthly, 1999-2016



Sources: Department for Business, Energy & Industrial Strategy. Transfer statistics in the domestic gas and electricity markets in Great Britain. Pre-2003 estimates from the National Audit Office.

The more you save, the more you switch?



Switching the switchers



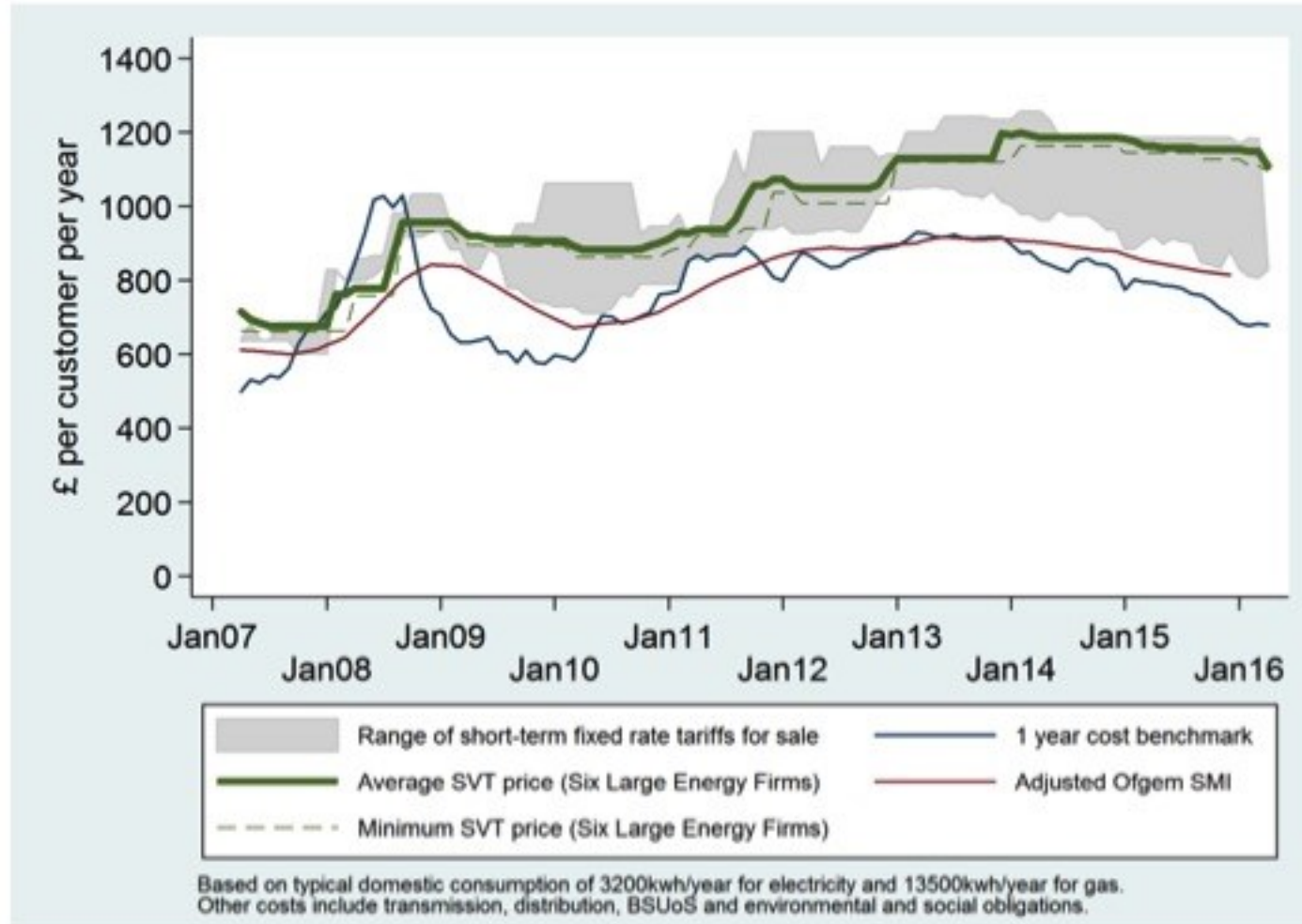
One of Robert Buckley's slides from Cornwall Energy, compiled from Energy UK switching data and Cornwall's domestic supply market share survey .



CMA investigation: consumers' engagement

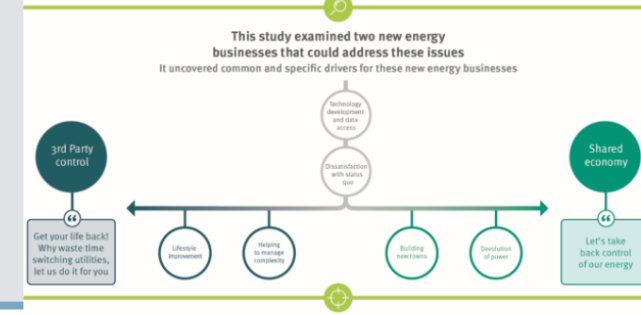
- A **lack of engagement in the markets on the part of many customers**, which suppliers are able to exploit by charging high prices;
- 34% of 7000 respondents said they had never considered switching supplier
- 56% said they had never switched supplier, did not know if it was possible or did not know if they had done so.
- around 70% of the customers of the Big 6 on Standard Variable Tariff could have saved of around £330 if they had switched to another tariff or supplier.

The active market vs passive market

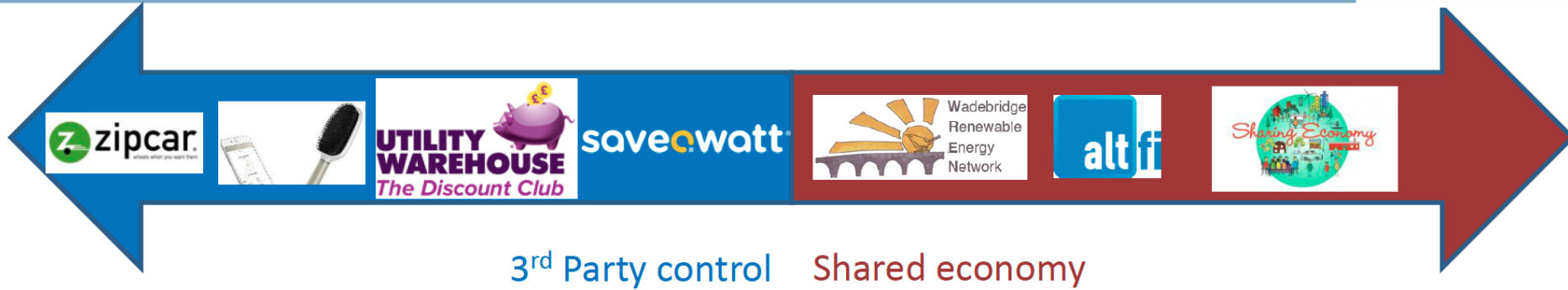


Source: Competition and Markets Authority.

Introducing the business models



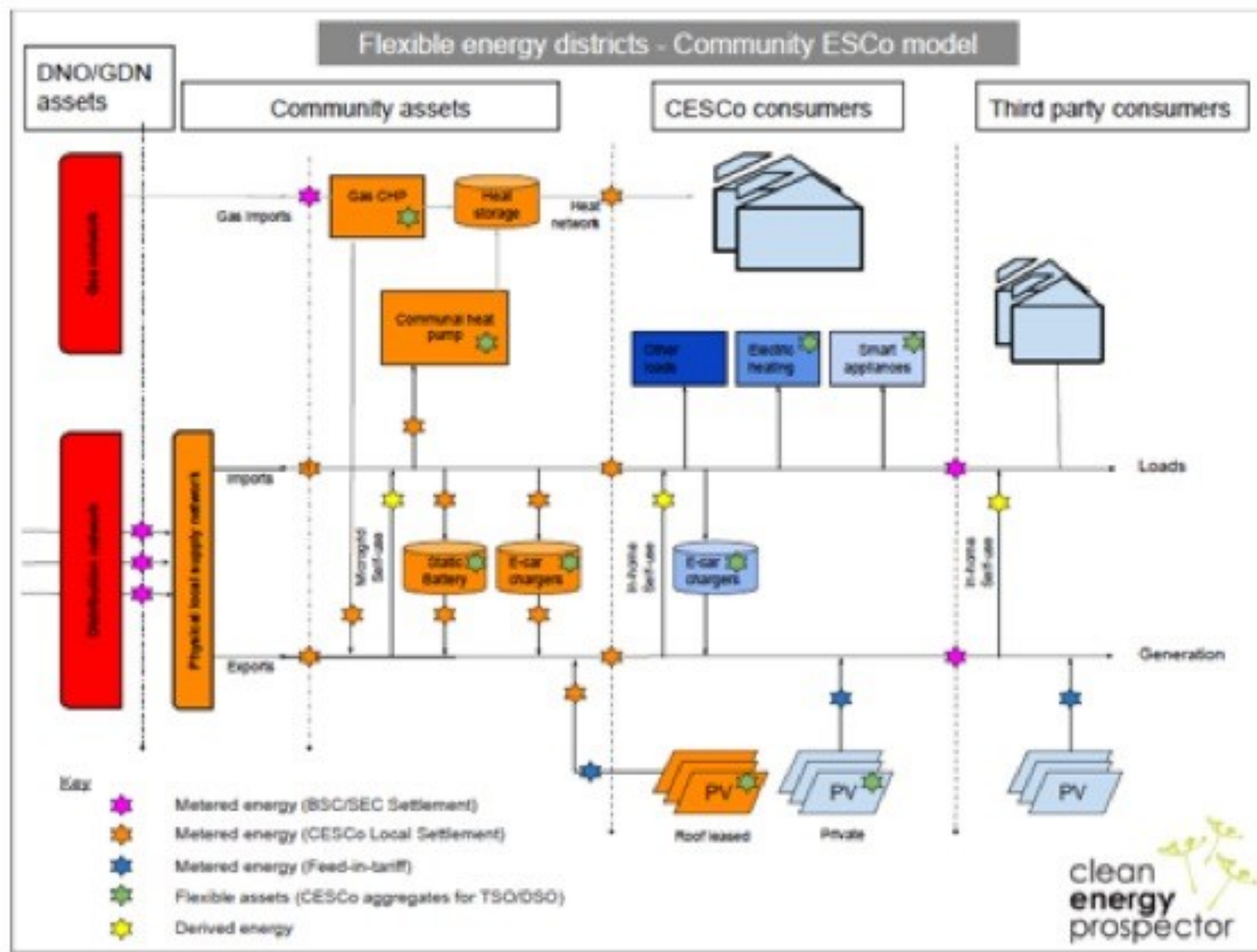
‘Disengaged’,
engaged
consumer



Engaged
consumer

The new business ‘Lifeback’ took the market by storm in 2017 with the slogan “Our mission is to make your life better”. Its simple model was to remove hassle from switching utilities by doing on its customers behalf. It rapidly established a dominant market share. Over time, informed by user data (including smart meters), it and competitor companies added new services, such as smart products, home energy efficiency improvements, micro-generation, energy storage and own brand entertainment. The company then moved into mobility, rolling out a shared autonomous vehicle service, reducing car ownership. Combining these unlocked automated domestic demand side flexibility. In time, 80% of domestic consumers moved to a 3rd party control business.

Taking back control became the mantra of 2017. One community took this to an extreme and took control of their local energy system. They developed a local energy company based on sharing economy principles. The whole community invested for the long-term in energy infrastructure (electricity generation, heat networks, energy storage and eventually shared autonomous vehicles). Underpinned by smart data, monitoring and control, each resident was allocated an energy allowance which they could use or trade for energy, money or something else, like time or skills. Benefits were shared locally, and often reinvested in projects such as home energy efficiency measures or local amenities. The model worked and gained national interest. It was also replicable. Seeing the benefits other communities followed suit. Local inter-community trading soon followed. Soon this became the dominant route to building new energy infrastructure and supplying energy. In time, 50% of domestic consumers moved to a local energy model.



Back to this slide. Everyone loves this sort of slide.





thank you

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