

Storm clouds but silver linings characterise CEF19

This weekend marks the end of the **Community Energy Fortnight (CEF19)**. Since the launch at Sheffield on 22 June, which coincided with the publication of **Community Energy England's (CEE) third *State of the Sector* report**, there have been many highs, reflecting the energy and enthusiasm of community groups across the country. But 2018 was the toughest year yet for the sector, reflecting an unsupportive political and regulatory environment and this has undoubtedly cast a shadow over events.

Nevertheless, in this piece Nigel Cornwall looks back at CEF19, introduces his new ***Smarter Norwich* project** and explains why he believes the outlook for community energy remains positive.

Mixed scorecard

The fortnight centred on theme *People Powered Futures* and kicked off on 22 June with CEE's annual conference at the Sheffield Hallam University, its third annual event. An important focus of the conference was the release of the 2019 sector report covering 2018.

To build up the report 167 community energy organisations responded to a survey, along with data previously provided by a further 108 organisations. In 2018, 275 community energy organisations were identified throughout England, Wales and Northern Ireland. Only three of these organisations were formed in 2018. Organisations that started new energy projects in 2018 were restricted to large metropolitan areas such as London, Brighton, Bournemouth, Bristol and Cardiff.

New capacity fell steeply over previous years, and some headline statistics are shown below.

The greatest challenge for projects in 2018 was the continued reductions to Feed-in Tariffs (FiTs).

Key points – community energy in 2018

- 168MW electricity generation capacity (7.9MW new capacity)
- 1.96MW heat generation capacity (144kW new capacity)
- 33 energy storage projects
- 29 low-carbon transport projects
- 92 communities improving local energy efficiency
- £978,000 Community Benefit spending

Other negative factors were a particularly restrictive planning environment, lack of land for development, lack of organisational capacity, time restraints, and reduced revenue streams.

Total project development funding in 2018 was reported to be £2.3mn, sourced from a diverse pool of funders. Meanwhile £40mn in project financing was raised. But 42% of respondents claimed that they had a stalled or failed project in 2018. There was an increasing trend towards the installation of small-scale solar and micro-hydro, but there were no new wind energy projects.

Despite continuing subsidy support for heat technologies (the Renewable Heat Incentive), just 144kW of community heat generation projects were installed in 2018. The bulk of these were biomass. Low uptake of heat projects was attributed to competition from low-cost gas and oil projects, complex stakeholder engagement, high installation costs and limited experience. But respondents noted an interest in community heat, and that it would most likely be a focus in 2019.

Also on a more positive note, there was an increasing trend towards innovation in 2018, with further significant reductions in technology costs. Increased use of behind-the-meter systems contributed to 33 community energy organisations being engaged in storage projects in 2018. But most successful projects, which tended to be 5-10kWh assets, were supported by innovation grants or as part of R&D projects.

29 community energy organisations were actively involved in low-carbon transport projects. These projects included electric vehicles, car clubs and hydrogen-based transport. And 92 organisations were reported to have undertaken energy efficiency projects, ranging from energy audits and insulation upgrades to education initiatives. Organisations engaged with over 128,000 local people through and serviced 17,600 local homes, schools and businesses.

Looking to the future, 69% of respondents said they felt negatively about prospects, although nearly three quarters stated they intended to continue with activities in 2019. New business models, relaxation of regulations around supply and demand-side response were thought to offer new opportunities.

At the conference Co-op Energy reported an increased appetite for renewable energy. Based on a survey conducted in 2019, support for community-controlled renewable energy projects increased from 66% in 2017 to 76% in 2019. It also showed a greater rate of increase in uptake



in its community power purchase agreements following closure of the feed-in tariff regime in March 2019.

There were also some interesting news around demand-side developments. Design and research consultancy Urbanism Environment Design spoke about its unique approach to delivering low-carbon retrofits. Brighton & Hove Energy Services also spoke about its BEIS funded project on the appetite for house retrofitting in the southern England, for which it has just received Phase 2 funding.

Learning by doing

As part of CEF19 I launched the *Smarter Norwich* project under my New Anglia Energy banner on 3 July, which is a side venture with colleagues at Pixie Energy.

The project has several facets and has already invested in PV at three sites and batteries at five others. It is looking to supplement this with output from existing local low-carbon assets and supply it through to local consumers. Ultimately the aim is to see if we can assemble a local “virtual power plant” based around engaged consumers.

To support the two-and-a-half-year project, a customer engagement group is being set up and, using VERV’s AI smart energy assistant “hub”, consumption data will be analysed. 50 first wave devices have been ordered and 40 of these have already been earmarked to a mix of domestic (owner occupied, social housing and private rental) properties and five small businesses. The data gathering will start in October 2019. From April 2020 we will be looking to install more smart technology and introduce information and price signals that should allow energy use to be reduced and savings to be made.

Need for further change

Looking further head we all remain hopeful that the adoption of the 2050 net zero target will lead to an early reappraisal of policy, and the role of community energy within it. There are good reasons why local energy projects require policy attention if we are to transition to a smart, flexible energy system.

Integrating consumers - smaller business, communities and householders - into an increasingly decentralised energy system can avoid significant costs for backup generation and balancing costs, which users would otherwise end up paying. It can also allow consumers to benefit from real-time changes in prices and to reduce costs through active participation in the market.

It is no surprise that delivering a new deal for smaller energy consumers and stimulating local

markets are key commitments of both European and GB policy makers. In or out of the single energy market, the regulatory agenda is now set. But current market rules in GB do not allow smaller consumers to benefit from these new opportunities, and presently consumers have little or no incentive to change their consumption in response to changing market prices.

This situation arises because real-time price signals are not passed on to them. In GB for instance - despite high levels of interest - few suppliers are as yet offering time-of-use (ToU) tariffs. Octopus Energy and Bulb currently offer ToU tariffs for all smart meter customers; a third Green Energy UK used to but withdrew its TIDE tariff earlier this year. Electric vehicle (EV)-only ToU tariffs are on the rise, with Octopus Energy, British Gas, Scottish Power and most recently EDF Energy all now offering these to EV owners, but they are the exception not the rule.

This low availability should not come as a surprise. Under current rules, it is the supplier who takes the risk if consumers don’t consume as expected in a marketplace where unexpected deviations can increase exposure to peak network charges and volatile energy imbalance prices.

Shifting from heavily averaged profiles to half-hourly settlement (HHS) should be transformative. But even with in excess of 13mn smart meters already deployed in the domestic sector, bills are still calculated based on flat daily charges. Only a few thousand domestic consumers are facing half hourly reconciliation, despite sustained regulatory support for change. Moreover, transitioning to market-wide HHS is taking longer than expected and now is not expected to be available before 2023 if it happens.

Reasons to be cheerful

Setting aside the problems of reform, the market is changing fast. In the near-term, demand-side response is more likely to be commoditised through the sale directly or indirectly through aggregators into flexibility markets.

Besides offering great energy saving potential for households, technological developments mean that appliances and systems, such as smart white electronics, EVs, electric heating, air conditioning and heat pumps can automatically follow price fluctuations. There is no reason why an appliance manufacturer such as Hotpoint cannot alter its fridges and freezers and sell the ability to decrease or increase load to a retailer for its own use or sale into the wholesale market. The increased deployment of EV charging points and the ability to use these also as “vehicle to grid” offers similar but game-changing opportunities.



Capturing such techniques at scale can also facilitate the integration of electricity from renewables and provide network operators and suppliers with more options to avoid costs. This will create a virtuous spiral as in turn this will increase the value of local flexibility, especially in constrained parts of the system. Local network operators are already buying more flexibility from nascent local markets.

Rapidly falling technology costs mean that more “prosumers” are able to reduce their energy bills by using rooftop solar panels and batteries. The removal of FiT incentives and the replacement from January 2020 by a rather weak purchase requirement on suppliers in the form of the Smart Export Guarantee will hamper early progress. But the Solar Trade Association is saying that build rates could recover to around 1-1.5GW by 2023 as delivered electricity prices continue to increase the value of energy produced behind the meter.

A push and a shove

Whatever the prognosis here in GB, prosumers are ascendant in the European Commission (EC)’s latest thinking. The proposed Directive and the “recast” regulation currently being progressed by the EC was recently approved in plenary and will be formally adopted in law in January 2020.

The community energy offer is now high in the commission’s thinking. The regulation defines a framework for “local energy communities. It provides an inclusive option for all consumers to have a direct stake in producing, consuming or sharing energy between each other within a geographically confined community network that “may operate in an isolated mode or be connected to the public distribution network”.

In the supporting narrative, the EC explains how “by directly engaging with consumers, community energy initiatives are demonstrating their potential in facilitating the up-take of new technologies and consumption patterns, including smart distribution grids and demand response, in an integrated manner”. It notes that community energy can also advance energy efficiency and help fight energy poverty through reduced consumption and lower supply tariffs. Such initiatives have delivered economic, social and environmental value to the community that “goes beyond the mere benefits derived from the provision of energy services”. It also recognises there can be an increase in local grid resilience as well as offering other less tangible benefits associated with social capital.

The EC also has a joined-up view of how local energy communities can be an efficient way of managing energy by consuming the electricity they generate either directly for power or for

heating and cooling. To ensure that such initiatives can freely develop, the new market design provided for in the recast directive requires Member States to put in place appropriate legal frameworks to enable their activities. Crucially, Article 16 provides that Member States shall ensure that local energy communities: are entitled to own, establish, or lease community networks and to autonomously manage them.

The beginning, not the end

Interim energy minister Chris Skidmore stated confidently in his first ministerial pronouncement that “the future of energy is local”. I agree. But thought now needs to be directed at how this can be made a reality.

There are some obvious steps. HHS needs to be pushed through as quickly as possible and suppliers encouraged to offer time-differentiated tariffs. And we now need to consider how other elements of the directive, especially giving communities the right to lease their networks, can be progressed here once we have left the EU. I will develop these and other proposals in future articles.

This article is a reworked version of much fuller coverage of recent local market developments from *Energy:2030*, Pixie Energy’s monthly publication on energy market reform and regulatory change both here and overseas. More details [here](#).

Details on Smarter Norwich are on the [New Anglia Energy website](#), and I regularly tweet about progress on [@newangliaenergy](#), which I invite you to follow.



