Non Traditional Business Models: Supporting transformative change in the energy market

Response by Community Energy England, Regen SW, Community Energy Coalition and 10:10

SUMMARY

This is a collaborative response from Community Energy England, Regen SW, Community Energy Coalition and 10:10, and focuses on the role of the community energy sector in providing non-traditional business models (NTBMs).

This Consortium welcomes Ofgem's consultation on NTBMs and we look forward to working with Ofgem and others to help support the transformation of the energy market to deliver significant benefits for consumers.

Our recommendations include:

- Create an online platform with clear policy and regulatory advice specifically generated by and tailored for local supply stakeholders
- Establish a Local Supply Innovation Fund to allow local supply actors to experiment, innovate and learn from each other in the local electricity supply space
- As recommended by the DECC local supply working group, support the establishment of an independent organisation that takes on the responsibility to meet regulatory and code compliance and provides services for community energy groups as a mechanism to address high set up cost and industry code compliance
- Undertake a detailed review of the treatment of demand-reduction centred business models in regulation and policy
- Clarify the exemptions relating to license exempt supply and distribution of electricity
- Explore the creation of a local balancing unit
- Carry out further work to investigate how to measure and reward a reduction in electrical losses towards lowering the carbon footprint
- Provide additional support to community-led NTBMs that can help drive innovation in the energy system
- Ensure the regulatory arrangements are flexible and dynamic to accommodate and integrate the emerging localised business models that provide local benefits and value
- Enable a move from a DNO to Distribution System Operator (DSO) model to encourage DNOs to procure flexibility services from NTBMs
- Consider the creation of an alternative DUoS charging methodology for networks that are representative of local use
- Consider how to create a level playing field for community energy to connect projects to the network.

ABOUT US

The comments in this response represent the views and experiences of the organisations set out below and focuses on how NTBMs relate to community energy and the role community groups could play in the energy transition to meet the energy trilemma.

COMMUNITY ENERGY ENGLAND

Community Energy England (CEE) was established in May 2014 to provide a voice for the community energy sector primarily in England. Membership already totals over 170 organisations. The majority of the member organisations are from the community energy sector but the membership includes others that work with and support the community energy sector. Further details can be found on the CEE website at www.communityenergyengland.org.

REGEN SW

Regen SW is an independent, not-for-profit centre of expertise on sustainable energy with frontline experience of working in the renewable energy sector in the south west of England. It has over 260 member organisations including private sector, local authorities and community energy groups.

Regen SW has established a programme of activity to increase engagement and build capacity on community energy. As part of this work, a network of over 250 community energy groups has been established to share learning and create a stronger voice for community energy.

THE COMMUNITY ENERGY COALITION

The CEC is made up of 36 members from civil society and the community energy sector. The combined reach of the coalition with its members and supporters is several million people. The Community Energy Coalition (CEC) was formed in 2011 by some of the UK's most influential and trusted institutions and charities.

Our aim is to ignite an energy revolution which places communities at its heart and strives for a clean, affordable and secure energy system for all. We are achieving this by helping communities across the UK to own, generate and save energy together. Further information is available at www.ukcec.org .

10:10

10:10 is a charity that brings people together to take positive, practical action that helps solve climate change. Through our projects, we work with over 50,000 people to:

- Celebrate good things that are already happening, and help them spread
- Cut carbon at home, at work, and in our communities
- Light up our best-loved places with community-owned clean energy
- Convince people in power to make sure cutting carbon is never harder than it needs to be.

RESPONSES TO DISCUSSION QUESTIONS

CHAPTER: ONE

Question 1: What is your view on our definition of non-traditional business models?

'Business models offering new products or services, or new ways of delivering these, that are different to those traditionally provided in the existing energy market. Those offering such services have diverse motivations (technological, social and environmental as well as financial) and ownership arrangements, and operate at various

scales. Over time NTBMs have the potential to transform the existing energy system.'

The definition captures the emerging business models in the energy market and correctly recognises that NTBM's including community energy organisations have the potential to transform the existing energy system. In addition to the diverse motivations NTBM's also offer an alternative choice for consumers, which can perhaps be included in the definition. It is important that the definition remains wide to include demand management business models, such as providing building energy efficiency improvements.

We note however that in some more developed markets this type of model is emerging rapidly and may move to become the norm. The expression 'non-traditional' may create the impression that such business models are in some ways less valid, and would suggest you might consider adopting alternative nomenclature, such as 'emerging business models'.

Question 2: How we can engage with NTBMs more effectively in the future?

As member organisations, Community Energy England, Regen SW and the Community Energy Coalition can support your engagement with the community energy sector. We can promote future workshops or events and other relevant information through our regular newsletters.

The DECC local supply working group was an effective way to engage with the community energy sector on local electricity supply. We recommend that this group continues to work with DECC and Ofgem and community energy stakeholders. CEE would like to continue its membership on the Working Group in its second phase of development.

The DECC Community Energy Contact Group itself offers an important avenue to engage representatives from the community energy sector already integrated within the energy policy process..

On energy efficiency NTBMs, the Community Energy Contact Group recommended to DECC officials and the Secretary of State that a Working Group on community-based energy efficiency is also established to aid engagement and support for this sector.

Recommendation: Ofgem to engage with community energy groups through membership organisations and government working groups.

CHAPTER: TWO

We would like to hear your views on the drivers for market entry. Do you think there are other important drivers?

We agree with the four important drivers included in your discussion paper but we would recommend adding:

- **Local economic development:** The current energy system that is dominated by large multinational corporations leads to a great proportion of profits leaving the local area where the work is done and bills are paid. Community Energy organisations are driven by the need to stop this leakage by developing an energy system that creates value for the local economy through local investment, income, jobs and employment.
- **Enabling distributed generation connections:** The distribution network has become increasingly constrained across the country over the last few years, which could prevent community energy generation schemes from going ahead. NTBMs could help community energy by enabling greater local balancing and supply and therefore put less pressure on the distribution network. For example, a trial in Cornwall is looking at the potential for an 'offset connection agreement' combined with a 'sunshine tariff' to incentivise the local community to shift demand to times when the local solar farm is generating.

In 2.5 the driver 'A greater focus on affordability and supporting vulnerable Consumers' is equally important for driving the actors named to innovate energy efficiency based NTBMs as they are for energy generation. This is a key finding from research in progress by Forum for the Future and the Energy Saving Trust sponsored by DECC.

CHAPTER: THREE

Have we accurately described the NTBM environment? Have we missed something?

The different emerging business models are well captured. We have nothing further to add.

CHAPTER: FOUR

Our main focus in this paper is on regulatory issues arising from future energy market transformation, but we recognise that there are relevant issues within current regulation. Please let us know if there are any other issues?

Community Energy organisations are challenged by a constantly changing policy landscape and regulatory barriers that range from the changes in the financial regulation regime, planning consent and grid connections related to energy generation. This is particularly problematic for community energy enterprises with typically restricted financial flexibility and limited administrative capacity. Furthermore current community energy propositions of local electricity supply require working with established licenced suppliers who have the ability to meet industry regulations and code compliance.

We would like to highlight the following issues:

- There is the lack of provision for geographically defined energy systems and markets. Current trading arrangements assume that contractual balance will be achieved at a national level, which doesn't exclude local operators per se but puts them in a weak position, compared to national operators
- Partnerships require a third party licensed supplier to deliver services on behalf of local suppliers, even if on a very small scale.
- The lack of replicable and tested business models is a significant barrier to local energy supply, especially for approaches including demand side response or demand reduction (such as Energy Service Companies)
- We welcome the introduction of half hourly settlements to both small and medium sized businesses. However, this option is still not open to domestic customers who are settled on profile unless they are aggregated.
- Very little is being done to explore the potential of demand response and participation. Community energy groups with strong links to the community can help reduce imbalances in the network and provide services to DNO's to manage the network better.
- There is a great deal of uncertainty over how sufficient revenue could be generated to cover the costs in small scale operations matched against local needs, which are not designed to grow. This is a particular problem for business models that aim to reduce demand.
- The current regulatory system for gaining a grid connection to export electricity is complex to navigate for community groups, often results in an unaffordable connection offer and favours commercial developers who have the resources and experience to take actions to skew the grid connection costs in their favour. Two of the manifestations as examples are that commercial organisations often place many speculative connection applications in areas that clog up the queue for local community energy groups; community groups can often not affordably raise upfront capital to pay the grid connection (and reinforcement) costs, whereas commercial developers with a portfolio of projects and deeper pockets can. Commercial developers also have the ability to locate projects to take advantage of available grid capacity whereas, by definition, local energy projects have little scope for geographic re-location. These issues were flagged in Ofgem's report to DECC from the Community Energy Grid Working Group. The report flagged several transformative recommendations including staging grid connection payments beyond commissioning and reserving capacity for community energy projects as part of

major grid upgrades. Beyond these important process details, the UK needs to invest in a grid that is suitable for greater amounts of DG and build a regulatory model, which makes costs affordable for independent generators.

Recommendations to address the current market failures:

- An online platform with clear policy and regulatory advice specifically generated by and tailored for local supply stakeholders. There is an opportunity here to also provide clear market intelligence around margins, distribution, transmission charges and how to maximise local economic value from selling locally generated electricity into the market.
- A Local Supply Innovation Fund to allow local supply actors to experiment, innovate and learn from each other in the local electricity supply space.
- As recommended by the DECC local supply working group, support the establishment of an independent organisation that takes on the responsibility to meet regulatory and code compliance and provides services for community energy groups as a mechanism to address high set up cost and industry code compliance.
- Undertake a detailed review of the treatment of demand-reduction centred business models in regulation and policy.
- Clarify the exemptions relating to license exempt supply and distribution of electricity.
- Local energy generation and demand side response management requires a local balancing mechanism that is currently lacking. We recommend the creation of a local balancing unit to enable local business models such as aggregators and local electricity suppliers.
- Generation of energy locally and use of that energy locally, should lead to a reduction in electrical losses, and as such a lower carbon footprint. This reduction in carbon footprint is not currently measured or recognised. We recommend that further work is done to investigate how to measure and reward this contribution towards lowering the carbon footprint.

CHAPTER: FIVE

What are the benefits of different NTBMs to energy consumers?

NTBMs have the potential to enable local balancing and supply of new distributed generation and therefore will reduce grid connection costs for both connecting customers and all bill payers.

Even beyond the cost reductions that local supply could enable, community groups already bring economic benefits to local and wider energy consumers by lowering the cost of power projects by lower cost of consent by creating local support for projects, lower bills in future if you look at example of German where there is far greater plurality of ownership of generation and lower renewable prices.[1]

At the core of this is the huge potential for market transformation through NTBMs focussing on local energy supply, bringing increased competition and so lower costs for all consumers.

Are these benefits experienced by all energy consumers or only those directly receiving the NTBM's services?

We expect to see more NTBMs in the future that help balance local demand and supply, reduce pressure on the distribution network and therefore reduce the need for expensive reinforcement. The cost of reinforcement is paid in part by all electricity consumers and so the benefit of these types of NTBMs could be felt by all.

Improvements in competition by enabling a significant increase in market entrants will benefit all energy consumers.

[1] http://energytransition.de/2015/04/why-is-uk-wind-power-so-expensive/

Are there additional wider benefits to the energy system and beyond it?

ESCO type business models that structurally incentivise energy demand reduction amongst customers would imply significant benefits to almost all other participants in the energy supply chain, from final consumers, through DNOs via reduced pressure on distribution infrastructure, right up to national emissions reduction targets under the Climate Act.

Functional local energy systems could also serve to reverse the leakage of financial value created in the energy supply chain, to the benefit of local and regional economies.

Community energy models enable a wide range of very important benefits to the energy system and beyond:

- Improving rural economies and increasing the resilience of farms thereby helping to protect food production by giving farmers a long term secure income stream
- Enhancing eco-system services, for example, planting wild flower meadows around solar farms to increase biodiversity
- Increasing support for vulnerable and fuel poor members of communities as community groups link and support generation and energy saving activities, in part through recycling of surplus profits from energy generation into fuel poverty projects.
- Helping to build stronger communities with greater cohesion
- Engaging people actively and positively with a new kind of energy system that increases public support for the energy transition required. This is manifested in associated energy saving behaviours from people engaged in community energy generation projects and increased support for renewables projects when they are community-owned and for the benefit of the community.

Which of these benefits should be taken account of in regulatory policy-making and decision taking and why?

All of them in regards to regulation that could affect the viability of community energy organisations, because they are providing real benefits to current and future energy consumers.

Demand reduction is a critical component of plans to manage carbon emissions from energy, but is structurally incompatible with standard throughput-oriented utility business models. Alternative business models for meeting consumers' energy needs will be necessary to meet these challenging national climate goals.

Are there energy system costs or risks from any of the NTBMs? How might these be addressed?

As mentioned above community energy models of electricity supply are yet to be tested.

Recommendation: We strongly support DECC's Local Supply Working Group recommendation to establish a 'Local Supply Innovation Fund' to pilot projects and identify true costs and risks.

How will NTBMs help to drive innovation within the energy system?

Community energy has developed and grown despite a changing and challenging policy landscape. This has only been possible due to dynamic leaders and organisations that have led the way through innovation. The full potential of community energy is yet to be harnessed with the support of strong and consistent policy alongside technological advancement such as storage and smart meters.

Communities have the capacity to address our energy challenges in different ways to government or the private sector, such as working through local volunteer networks or using social enterprise to deliver social returns or raising funding for non-commercial activity. Communities can mobilise and engage people more effectively by tailoring their

engagement to an audience they understand well, using their existing presence and networks to good effect. They could have more freedom to develop creative solutions that meet local needs and spot gaps in the markets to gain advantage. Community groups could act as innovators, catalysers and incubators for testing new approaches.

Community groups can also help deliver the roll out of smart meters and smart trials by providing unbiased information and education to local people on how to maximise the benefits for the local community. They can also help to increase acceptance of the technology by showing what it can do and demonstrating that it is technology that empowers people rather than disenfranchises them.

With regards to increasing the uptake of energy efficiency and helping reach vulnerable households, community groups have shown greater uptake levels than commercial organisations (research in progress by Forum for the Future and Energy Saving Trust).

Recommendation: Government to provide additional support to community-led NTBMs that can help drive innovation in the energy system.

How could NTBMs potentially transform the energy market and what fundamental challenges to regulatory arrangements could this entail?

Energy will be generated, managed, traded and balanced at a local level. These approaches will require the regulator to be nimble and dynamic.

Community energy groups are well placed to provide flexibility services, such as demand side response (DSR), storage, load limiting technology and permanent demand reduction. They are often better at engaging with their local community than suppliers and DNO's; they understand the local context and needs of the people living there. They are also more likely to be trusted to provide independent, unbiased advice.

Currently, there are very few mechanisms for community energy groups to benefit from or be paid for these services. A number of challenges are set out below:

- Under the current model, DNOs do not incentivise flexibility services. The market for both DSR and storage is not yet established. It is clear that DNOs will require more flexibility services in the future as penetration of non-synchronous distributed generation increase, in order to manage their networks. However, as there is not an established local flexibility market it is not clear how a DNO would indicate to the local network that such services are required. Flexibility services tend to be procured on the transmission system level, as opposed to locally by DNOs
- Use of system charges do not currently reflect the actual cost of transporting power in a local area when generation and demand are being actively controlled and balanced. Arguments can be made that the community should only pay for the portion of the network it uses, but:
  - It is unlikely that a community will be able to be entirely self-sufficient in energy and would be likely to need to "import" energy. This import would use the extended network and the DUoS charge would need to reflect this
  - Where consumers or communities go entirely "off-grid" then the cost of running the network falls on fewer consumers and the cost may rise to those consumers remaining
  - DUoS charges do not just cover the use of the wire network (and all the necessary sub-stations and equipment). It also covers the cost of keeping the network stable and supporting recovery after a fault. So some proportion of these DNO-provided services would still need to be paid for by the community.
- Bespoke commercial arrangements are required to enable the transfer of value from generators to demand customers when DSR enables generation to be connected in areas where the network is constrained

- The high cost of entering domestic customers into half hourly settlement prevents both the netting off of local generation and realising the benefits of optimising the demand profile for the supplier
- Private wire networks, which enable local generation to be used and balanced locally, are expensive
- As included above, the grid connection regulatory regime is biased against community energy groups and other independent generators.

How could regulatory arrangements change to accommodate NTBMs?

The current regulatory arrangements are onerous and burdensome for small-scale businesses, as they have been established for a national centralised energy system where trading and asset management takes place on a national scale. We agree with the need to protect the needs and interests of customers particularly the vulnerable.

The move from a DNO to Distribution System Operator (DSO) model would encourage DNOs to procure flexibility services from NTBMs. If the DNO transitioned to a DSO, which would then have a balancing role, energy services would be required and a local balancing market would need to develop to support the requirement to balance. It is worth noting that EU codes will soon require all renewable generators, above a certain size, to provide balancing and ancillary services. This may further drive the need for local markets.

Recommendations:

- The regulatory arrangements are made flexible and dynamic to accommodate and integrate the emerging localised business models that provide local benefits and value.
- The government enable a move from a DNO to Distribution System Operator (DSO) model to encourage DNOs to procure flexibility services from NTBMs
- Government to consider the creation of an alternative DUoS charging methodology for networks that are representative of local use.
- Government to consider how to create a level playing field for community energy to connect projects to the network.

What role do NTBMs and other parties have in managing energy market transformation and regulatory change?

It is important for community energy organisations and other NTBM's to have representation on the DECC Local Supply Working Group and the community subgroup of the Smart Grid Forum Work Stream 6 so that there is a collective understanding of the potential transformation and its impact on regulations. This process can be further supported by talking to community energy groups with an interest in local supply with the support of CEE and Regen SW.