

1. About PassivSystems

- PassivSystems is a home energy management technology company based in Newbury, Berkshire, and formed in 2008.
- Our mission is to unlock energy system value for households, enabling them to support the transition to Net Zero.
- The company has won numerous awards and was the first to market globally with a smart thermostat. PassivSystems is now recognised as one of the world’s leading companies in developing and providing whole home energy management services.
- Our “grid aware” Low Carbon Technology (LCT) service has been demonstrated to significantly reduce lifetime operating costs to UK households worth hundreds of pounds a year.
- PassivSystems’ existing customer base includes energy suppliers, home improvement providers, large service and contracting companies, asset managers, network utilities and social landlords.
- We also have extensive experience delivering services for owners of domestic solar panels. Arto.energy, a wholly-owned subsidiary of PassivSystems, is a licenced energy supplier which provides Feed-in-Tariff (FiT) Licensee services and monitoring for over 50,000 domestic solar installations.
- A key focus for our business now is on rolling out intelligent controls and smart platform technology to support the decarbonisation of domestic heating.
- Our 2018 Freedom project work demonstrated the potential of hybrid heating systems, and we have now built commercial partnerships with EDF Energy and Shell to support the installation of hybrid heat pump systems in homes.
- We are currently also playing an active role in supporting most of the leading energy suppliers and manufacturers involved in the 2020/21 BEIS Electrification of Heat trial.

2. High Level Comments

- We fully support the aims of the Open Networks Project. The development of flexibility services enabled through digitised networks is critical if heat and transport are to be decarbonised cost effectively.
- The UK’s power system architecture needs to evolve to accommodate stackable revenues across national and local markets to ensure the costs of the energy transition are manageable for households. This is particularly important in a post COVID world when new policy interventions will be needed to decarbonise homes.
- The necessary innovation is, however, still being hampered by the code modification process and standard setting.
- For instance, the Smart Energy Code Modification Request (SECMPO046) and the associated DCUSA change proposal DCP371, as well as proposals to use network owned assets such as substations to provide system flexibility (i.e. Customer Load Active System Service – CLASS) all sit in tension with the strategic objectives of the ONP.
- If the code Governance regime is not brought into strategic alignment with the objectives of projects like ONP, then we risk foreclosure of the market to independent providers of flexibility.

PassivSystems response to ENA Flexibility Consultation 2020

- Similar risks arise with standard setting elsewhere. The BSI PAS 1878 draft standard risks foreclosing the home energy management market through effectively mandating intelligence at the appliance level. This stands to significantly limit the scope for behind the meter optimisation of Demand Side Response (DSR) offers across multiple assets.
- As well as ensuring consistency across all policy making and standard setting, we believe it is equally important that all markets should be designed to provide equal access for domestic consumers.
- Networks should work to the principle that rules, incentives and/or penalties must exist for network operators for any periods where emergency control is exercised, ensuring this is time limited and there are no incentives to use direct network management in lieu of flexibility.

Question Specific Comments

We have specific comments in relation to two of the consultation questions, detailed below.

Question 1

We would encourage the ENA to widen its evidence base when building an evidence base to assess the benefits of flexibility. We note that Imperial college is currently revising its existing work to value the contribution of flexibility when compared to other options such as network reinforcement and/or building out new generation.

We also note that Frontier Economics completed work for SSEN in July of this year specifically focused on evaluating flexibility as an alternative to network reinforcement.¹

Question 17

We have concerns about the level of asset re-assurance aggregators are required to provide for different services (at household) level. We note, for instance, that the administrative burden placed on aggregators of domestic DSR assets is disproportionate and is acting as a disincentive for participation in ancillary services, such as monthly and weekly dynamic Firm Frequency Response (dFFR) auctions.

With the launch of new products, including the Dynamic Containment product, expected shortly, it is important that participation requirements are not based on existing standards and proportionate requirements are set to enable the participation of domestic flexibility.

Alternative, more proportionate approaches exist for domestic DSR, for example:

- Asset data can be shared at the aggregator level, including undertakings about reliability and availability.
- “Type testing” of assets could be introduced to avoid the administrative burden of testing assets in-situ (i.e. in the home).

¹ Frontier Economics and SSEN, *Evaluating Flexibility as an alternative to traditional network reinforcement*, July 2020

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We also consider that heating devices (i.e. heat pumps) should have an open API to allow 3rd parties to more effectively interface smart devices with their own services to ensure they can operate flexibly and actually make a contribution to new services.

On that basis, we believe that smart, grid-aware controls must be mandated for low carbon heating to ensure the value of flexibility can be unlocked for customers.

**PassivSystems
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