

FlexForum feedback on the draft publicly available specification for Smart Homes

The FlexForum is a cross-industry group

The FlexForum is a cross-industry group established in February 2022 to identify the practical, scalable and least-regret actions needed to integrate distributed energy resources (DER) into the electricity system and markets to maximise the benefits for Aotearoa New Zealand.

The draft publicly available specification (PAS) for Smart Homes is very relevant to the key FlexForum objectives, which are to:

1. identify the minimum specifications of the services that DER can provide, to who, when, where, how, and for how much
2. identify the practical, scalable, and no regrets steps to use the services that DER can provide
3. support ongoing learning and collaboration across the electricity sector on real world deployment of solutions to realise the benefits of DER, including identifying and resolving barriers.

More information on the FlexForum, it's goal, objectives and work to date, is available at: <https://www.araake.co.nz/services-projects/flexforum/>.

Two suggestions to help the Smart Homes PAS provide households with information that improves decision-making

The FlexForum is exploring how to maximise the benefits of DER for Aotearoa New Zealand and accelerating implementation of flexibility.

The challenge is that coordination and collaboration are hard. A multi-year effort will be needed across the electricity value chain to develop market services, change planning and operational practices, revise regulatory settings and engage with consumers to leverage the capability of DER.

In this context, the FlexForum has two suggestions:

- Common and standard terminology is critical - ensure the terminology and descriptions in the Smart Homes PAS aligns with the evolving flexibility lexicon

- Informed decisions to invest in Smart Home capability require information on commercial mechanisms - ensure the Smart Homes PAS points households and other users of the guideline to sources of information on the commercial mechanisms which underpin the value propositions and incentives to invest in Smart Home technologies.

The FlexForum is keen to collaborate further as Standards NZ finalises the PAS to support a coordinated approach which maximises the opportunities and benefits for consumers of DER, including that in Smart Homes.

Common and standard terminology is critical

Common and standard terminology is critical to distributed energy resources (DER) and flexibility – including from smart homes – playing a full role in the electricity system and markets and maximising the benefits for Aotearoa New Zealand.¹

The FlexForum suggests Standards NZ ensure the terminology and descriptions in the Smart Homes PAS align with the evolving flexibility lexicon.

Several of the definitions listed in the draft PAS unnecessarily diverge from the evolving flexibility lexicon, for example, *demand flexibility* (replace with flexibility) and *flexible demand service provider* (replace with flexibility provider).

The FlexForum is working to develop common and standard terminology to be used by all parties involved in transacting flexibility, ranging from the equipment manufacturers and retailers, flexibility providers, households and businesses to the flexibility users across the electricity value chain.

The FlexForum is building on the terminology adapted from Great Britain and refined by the Innovation and Participation Advisory Group² to create a glossary of common terms and descriptions. A user testing exercise is underway with consumers and practitioners who will need to use the terminology.

The FlexForum expects an initial glossary will be available by August 2022. This will be shared with Standards NZ to assist alignment on terminology and descriptions. However, the FlexForum expects the glossary to evolve over time as terms are used in practice.

¹ The benefits available to households and businesses from DER and flexibility over time should include lower energy costs, a more resilient power supply, and faster decarbonisation

² The Electricity Authority's Innovation and Participation Advisory Group focuses on issues related to new technologies and business models, and consumer participation. Refer <https://www.ea.govt.nz/development/advisory-technical-groups/ipag>

Informed decisions to invest in Smart Home capability require information on commercial mechanisms

Informed decisions by households to invest in Smart Home technologies and capability require information on the commercial mechanisms which underpin the opportunities and value drivers of flexibility.

The FlexForum fully appreciates that commercial mechanisms and practical uses for flexibility are not well developed.³ The FlexForum exists to help address this gap by identifying the scalable commercial mechanisms which align the specific capability of DER with the practical uses of flexibility.

The FlexForum suggests Standards NZ ensure the Smart Homes PAS points households and other users of the guideline to sources of information on the commercial mechanisms which underpin the value propositions and incentives to invest in Smart Home technologies.

The draft PAS provides a helpful overview of smart home technologies and their capabilities but does not account for the commercial mechanisms and practical use cases which will underpin the value proposition delivered by DER generally and Smart Homes specifically.

Recognising the interaction between commercial mechanisms and the capability of Smart Home technologies is critical if the '...PAS is intended to guide electricity consumers, appliance retailers, and suppliers of smart home equipment and services to adopt good practice...[and] is designed to contain all relevant general smart home information...'.³

Put simply, households, and DER owners in general, will be able to make more informed decisions about the type, and amount, of investment in Smart Home technologies when they have good information about the value proposition and the benefits they could get from the investment.

The FlexForum also appreciates the PAS may not be an appropriate primary source of information on commercial mechanisms which underpin the value propositions for Smart Homes technology. Particularly given this is an evolving space and things will change faster than the PAS can be updated. However, the PAS could point households and other users of the guideline to these primary information sources.

The FlexForum expects an initial survey of current and future commercial mechanisms for transacting flexibility will be available by August 2022. This will be shared with

³ The most mature use of flexibility is so-called 'ripple control' of household hot water heating in return for a discounted electricity rate. However, the FlexForum has noted that the evolution of a flexibility market requires distributors transitioning away from direct control of household hot water.

Standards NZ to assist development of the Smart Homes PAS. However, the FlexForum expects the glossary to evolve over time as commercial mechanisms are used in practice.