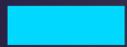




deX



# Consumer insights report

December 2019

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# Executive Summary

In the fourth quarter of 2019, GreenSync partnered with Enphase Energy Australia (Enphase) on a consumer-oriented campaign to encourage Enphase customers to register their solar and battery systems in deX.

Initially, a two-week pilot was conducted, where a selection of Enphase customers from South Australia and Victoria were invited to register their system with deX. Following the success of this first stage, which saw a 20 per cent participation rate, Enphase customers in Tasmania and Western Australia were also offered the opportunity to participate. The conversion rate in the second phase was equally high. The decision was made to exclude consumers in New South Wales and Queensland due to the severe bushfires impacting those states at the time and they will be included at a later date.

This pilot yielded many important lessons that both GreenSync and Enphase can learn from to inform deX as it scales, with an increasing volume of customer-owned DER registered on the platform. These lessons were prominent across understanding consumer motivations, identifying and engaging other key stakeholders in the process and the value of strategic collaboration with our deX partners.

Technical challenges also came to light, such as the changing nature of data and application programming interface (API)<sup>1</sup> limits as industry needs evolve, and the end-to-end management of data transfer and analytics between two systems.

One of the most important findings from the pilot, however, was that customers who own solar and/or battery systems are willing to be active participants in supporting grid reliability and helping more renewables to be connected. This was despite the absence of an immediate financial incentive to participate and suggests that consumer motivation is manifold and does not necessarily require an immediate financial reward.

Prior to the launch of this pilot, the Australian Energy Market Commission (AEMC) had released a paper titled *How Digitalisation is Changing the NEM: The Potential to Move to a Two-Sided Market*. The paper highlighted that digitalisation is a key element to building a digital two-sided marketplace which would bring both the demand side and supply side together. A part of this would include distributed energy resources (DER) being able to provide data to the market and respond dynamically to market signals. The AEMC noted that providing the Australian Energy Market Operator (AEMO) with more information and visibility over how these devices behave could help them to better coordinate the overall supply and demand of electricity across the grid.

In light of this, we also hope that these lessons learnt can be used by others to help inform and extend thinking and collaboration in this area.

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<sup>1</sup> An application programming interface (API) is a set of functions and procedures allowing the creation of applications that access the features or data of an operating system, application, or other service.

# Introduction

This report will focus on the technology vendor led approach to registering DER in deX and, specifically, on the insights gained from a recent customer enrolment campaign, in partnership with Enphase.

Enphase is a leading global manufacturer of solar microinverters and AC battery storage, with over fifty thousand systems installed across Australia.

This report will discuss the important insights gained from understanding the influence of messaging and the need to continuously optimise the customer journey, to the technical and communication challenges that had to be overcome. It also outlines the strategic partnership approach taken with Enphase and the future considerations for deX as it scales nationally.

As deX itself is not a consumer-facing brand, collaboration with strategic partners is key to engagement with DER owners. There are four different pathways that a consumer-owned DER may be registered in deX. These pathways are as follows and this report, as previously mentioned, will focus on the third:

- Network led - such as during a DER connection process
- Retailer led - through virtual power plants (VPPs) or innovative new offers to consumers
- Technology vendor led - such as through a technology vendor offer or campaign for their consumers
- Installer led - either as a connection requirement or as a value-add to customers.

A solar system, battery, electric vehicle or other DER that is registered with deX will be, with the customer's consent, visible to the local network operator. This DER can then, in future, be contracted for grid services such as supplying energy during peak demand, managing frequency or grid voltage, or taking action to reduce network constraints. It can also participate in VPPs which gives DER owners the chance to unlock new value streams from their assets.

For this to be possible, a consumer-owned DER must be deX-enabled. This means that the technology vendor, in this case Enphase, has been integrated with the deX API and the consumer's asset registered on the platform, with their consent.

Through this pilot, we were able to demonstrate the opportunities that a single integration with deX opens up; its ability to streamline DER registration nationally and provide near-real time visibility of system behaviour to distribution network operators.

Further, we were able to demonstrate the sophisticated capabilities of Enphase technology integrated with deX. Specifically in the context of providing valuable system telemetry<sup>1</sup> to networks, who are grappling with the challenges associated with managing the growing number of rooftop solar systems connected to the grid across Australia.

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<sup>1</sup> Telemetry is the collection of measurements or other data, usually from remote or inaccessible points - in this case DER - and their automatic transmission to deX for monitoring. The word is derived from Greek the roots tele, "remote", and metron, "measure".

## Objectives, approach and results

The deX integration with Enphase and consumer enrolment pilot provided an opportunity for us to test the appetite of consumers who own solar and/or battery systems to participate in deX and provide valuable telemetry<sup>1</sup> to local network operators, without an immediate financial incentive.

Working strategically and collaboratively with the technology vendor can enable all parties to design a successful campaign. In our pilot, this included both GreenSync's deX team and Enphase playing an active role in developing the messaging, consumer journey, selecting appropriate customer segments, and identifying any supporting communications touchpoints that would need to be considered to ensure good results were achieved.

While this collaborative approach required more effort and time investment from both teams, the outcome of the campaign resulted in a detailed understanding of Enphase customers and their key drivers. In addition, it provided the ability to respond quickly to resolve issues, and the ability to monitor, tweak and evaluate the strategy throughout the pilot to maximise conversions.



### Messaging

Through multiple trials and projects – both in Australia and internationally – the team has found that, while financial incentives are a strong driver to encourage participation in deX, consumers are also motivated by other factors beyond those that are of a financial nature.

deX has a broad range of partners across all facets of the industry and across the globe. This provides us with a unique perspective but also a communication challenge when developing key messaging that can be applied to and understood by a wide cross section of audiences. By working closely with our partners, such as Enphase, we are able to get valuable insights into consumer motivations, curate messaging that resonates and delivers the right level of technical and background information depending on the audience.

Initial registration numbers from this pilot indicate that the messaging that we developed for the campaign resonated successfully with customers. It speaks to the following points:

- Highlights the sophisticated capabilities of the customer's DER
- Explains the purpose of deX to help the grid handle more renewables
- Outlines the grid challenges network operators are facing (at a high level) and the role that their DER can play in the solution
- Touches on how deX provides potential to unlock future value from their DER, while helping to support the reliability of the wider grid and supporting their local community/network
- Is transparent about how their data will be used and by who.

# Objectives, approach and results (cont).

## Optimising the customer journey

Optimising the customer journey (Figure 1) is the process of mapping customer interactions across multiple touchpoints in order to provide the best end-to-end experience. This helps to influence positive outcomes and provides customers with interactions that contribute to building loyalty with a brand.

To register a DER in deX, the DER owner needs to go through a number of steps. This means that there are a number of points that people can drop out throughout the process.

In this pilot, the deX and Enphase teams aimed to optimise the customer journey in order to minimise the drop out rate, maximise the number of solar and battery systems registered in deX and reduce friction for Enphase customers throughout each step. There were several opportunities identified by Enphase and deX to do this, which are discussed in the following sections and in the lessons learnt section of the report. In summary, they were:

1. Leading with the Enphase brand, rather than deX, across all touchpoints to reduce any disconnect and confusion.
2. Reducing the number of steps that the customer had to go through to complete the registration and as such reducing the number of points that they might drop out.
3. Identifying the right communication channel and time to connect with the audience.
4. Engaging with and providing information to the installers and Enphase support team early so that these customer touchpoints were also covered to further streamline the customer experience.

To reduce the number of steps that the customer needed to go through, from receiving the initial email to completing registration, we decided to skip the step of sending customers from the email to a campaign landing page and then to their Enphase Enlighten portal. Instead, the call-to-action button in the email sent them directly to their Enphase Enlighten portal login.

The decision not to include a campaign landing page initially meant that we needed to include more detailed information in the email itself. This generally isn't considered best-practice in email marketing and we were unsure if it would be effective. In absence of a landing page, we did provide a link to a Frequently Asked Questions (FAQ) document so people could easily access more information if required. 40 percent of people clicked the link to the FAQ, proving the value of including it.

Before stage two of the pilot, we discussed introducing the landing page, however, given the high numbers of registrations that we were already seeing, the decision was made not to alter the process. It should be noted that we will explore different customer journeys in future to compare success rates but deemed it not required for this pilot.

## Objectives, approach and results (cont).

Another important part of optimising the customer journey was identifying the best channel to communicate with customers. Enphase already had an established email marketing program, with a focus on quality, informative content and a good customer open rate. As such, this made email the natural channel choice for our pilot.

Two email send times were tested to identify the optimal one for this campaign. The two times chosen – 6pm Wednesday and 8am Sunday – were based on historical data from Enphase customer emails. We found that, while 6pm Wednesday generated a higher unique open rate, 8am Sunday generated the higher percentage of registrations.

### Results:

- 6pm Wednesday: unique opens ~ 71%, registrations 22–25%
- 8am Sunday: unique opens 50–68%, registrations ~ 40%

Given that people were required to enter information about their system in order to complete the deX asset enrolment form, we believed that it was important to reach them at a time when they could access their electricity bill and complete the registration, uninterrupted. As the objective of this campaign was to maximise the number of systems in deX, the 8am time was deemed the more optimal of the two, however both times still far exceeded that benchmark for average open rates of 17.92%<sup>1</sup>.

The successful pilot with Enphase highlighted some key factors that will be important for us to assess when prioritising deX integration partners, particularly in the early stages of the deX platform. Partners such as Enphase, who already have established lines of communication with end customers (DER owners), can help us to quickly scale the number of DER registered in deX.



Figure 1: Enphase pilot customer journey illustration

<sup>1</sup> Campaign Monitor's annual benchmark report, 2020

# Lessons learnt

This technology vendor-led pilot yielded many important lessons that both GreenSync and Enphase can learn from to inform deX as it scales, with an increasing volume of customer-owned DER registered on the platform. These lessons were prominent across understanding consumer motivations, identifying key stakeholders in the process, and practicing transparency especially in regards to the use of consumer data. Some highlights from the pilot are as follows:

1. Customers who own solar and/or battery systems are willing to be active participants in supporting grid reliability and helping more renewables be connected, despite the absence of an immediate financial incentive to participate. This suggests that consumer motivation is manifold and does not necessarily require an immediate financial reward.
2. Working closely with our deX integrated technology partners helps to optimise engagement outcomes, resulting in higher rates of DER being registered in deX.
3. In the current growth stages of deX, educating stakeholders and increasing the volume of DER in deX, working with partners that have strong, established brand trust and an open communication channel to customers will be key to the success of the platform.

The lessons learnt are reported in more detail in the following sections.

## 1) Consumer motivation to participate

The most significant lesson learned to date is that consumers who own solar and battery systems have the appetite to participate in deX, and more broadly to provide support to the grid, without promise of an immediate financial benefit. From the Enphase customers who were invited to participate, twenty per cent opted-in to register their systems in deX. Interestingly, this opt-in ratio was relatively consistent across the four states that we targeted in the pilot.

This finding is important not only to deX but also in the context of wider industry work that's being done on the future design of Australia's energy market and how to better facilitate the participation of consumer-owned DER.

## 2) Identifying stakeholders and leveraging established partner brand equity

By leading with our partner's brand in consumer-facing communications, it allows us to leverage their brand equity, while positioning deX as a value-add to their offering.

We learnt that early engagement with installers is important and appreciated, which can result in better industry advocacy for deX long-term, while delivering a more seamless experience for customers and increasing respect and loyalty for Enphase.

Installers are vital to deX's long-term success as they have the direct relationship with customers, even in scenarios where our integration partners do not. Installers can help to explain deX and provide context to customers, as more and more DER technology becomes deX-enabled.

For the Enphase pilot, we targeted customers from a small pool of quality Clean Energy Council accredited installers who were also loyal users of Enphase technology. We ensured installers were fully consulted prior to the campaign launch and prior to engaging directly with their customers. This approach resulted in a surprising appreciation from installers and made them advocates from the start. In addition, they were fully informed should any customers reach out to them with questions about deX, thus closing the customer touch point loop.

Where possible this is an approach that we will take moving forward with deX, particularly in these early phases while we are still building scale and awareness.

## (3) Customer data usage and privacy

Using analytics, we were able to identify where people dropped out during the customer journey and then refine the strategy or messaging accordingly. For example, initially we had a number of questions coming through in regards to how the customer's data would be used. As such, we added this information into the body of the email and after that we only received one more question on this subject.

## Lessons learnt (cont.)

In the pilot we led with the Enphase brand – instead of deX – through every step of the customer journey. While this streamlined the customer experience, it increased the complexity when managing data across two companies systems. This included having to manage the secure transfer of personally identifiable information (PII) and also the ability to comprehensively track analytics. Both of these are important factors in being able to optimise and make more successful campaigns as deX scales.

### (4) Addressing the consumer knowledge gap

Many consumers only have basic knowledge of their solar and/or battery system and this has implications for the collection of information. With this understanding, we made sure to include clear instructions that would help customers complete the deX registration process, such as where to find their National Meter Identifier (NMI). We also provided a link to a Frequently Asked Questions document from the email.

As such, only about 6 submissions came through incomplete and Enphase was able to follow up with these customers to resolve. In future however, as deX scales, we will need to consider how to make this information even more obvious, as directly contacting customers will be less viable.

We acknowledge that this consumer knowledge gap poses less of a problem when enrolling DER through other pathways into deX, for example a network-led approach, when consent can be provided during the connection process. Therefore, the direct-to-consumer pathway gaps will need to be considered as we scale up to additional consumer registrations. This is a problem not only for deX and is something for the industry to solve more broadly.

### Spotlight: API limits

Throughout the pilot we had to increase the API call limits multiple times due to the positive response exceeding our expectations. On one Sunday during the second phase, the API call limits for Enphase system maxed out, resulting in customers receiving an error message after attempting to register their system.

Due to the monitoring we had put in place, we quickly identified the issue. Consumers affected were sent an email follow-up apologising and asking them to retry, with over half of them subsequently completing the registration process for a second time. This highlighted the need to review API call processes to handle the scale of connections and data calls required for deX. From our side, we were also able to resolve an error in the way that API calls were being made and improve the efficiency of the system. There is also a broader challenge for technology vendors as evolving market needs are changing the requirements of API calls for new data streams. This is an area that we will continue to work with industry on to ensure we are able to deliver a seamless customer experience and the best value back to all stakeholders.

## Future considerations

From GreenSync's experience to date, requirements and tactics for tech-vendor led consumer registration programs are likely to vary. Variations will be influenced by such factors as the level of brand recognition or loyalty the company has with both the consumer and installer, the sophistication of the tech vendor's backend processes and marketing capability, and their capability to segment and target different consumer groups.

These factors will have an impact on the success of vendor-led deX enrolment campaigns. The relative alignment for this type of enrolment approach should be reviewed on a partner by partner basis and may be specific to a particular campaign or consumer group.

As this was the first technology-vendor led deX registration campaign, it should be expected that the consumer engagement and performance outcomes may be different at larger scales. We expect that the potential access to value streams coming in will drive a higher uptake rate and interest from additional consumer groups and types.

As we scale deX nationally and internationally, we will continue to gain consumer insights and learn from each of the registration pathways. This will provide us with a greater understanding of what the drivers are for different customers segments. We anticipate these will be regarding aspects such as how conversion rates tie to particular messaging and value propositions including financial incentives, the channels that are most effective, and the appetite of consumers who own DER to actively participate in the energy system as we move towards a two-sided, digital market and provision of services from smart DER.

