AusNet Electricity Services Pty Ltd

Demand Management Innovation Allowance Annual Report 2017

Submitted: April 2018

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1 Introduction

This annual report has been prepared pursuant to the Demand Management Incentive Scheme (DMIS) scheme applied to AusNet Services by the AER in the 2016-20 Victorian Electricity Distribution Price Determination (the 2016-20 Price Determination). The DMIS provides revenue designed to encourage innovation in demand side participation and non-network solutions.

The DMIS requires AusNet Services to submit a report on expenditure attributed to the Demand Management Innovation Allowance (DMIA) for each regulatory year. This expenditure must fulfil the DMIA criteria set out in the DMIS.

This report details the DMIA projects undertaken by AusNet Services in the 2017 calendar year which satisfy the DMIA criteria. The two projects are the:

- **Mooroolbark Community Mini Grid:** A cluster of 18 interconnected residential customers, most of whom have solar power, a battery storage system and an advanced control platform, located in Mooroolbark, Melbourne.
- **Grid Energy Storage System Trial:** A 1MW/1MWh battery storage system combined in hybrid format with a 1MW diesel generator, located in Thomastown, Melbourne.

DMIA expenditure claims for 2017 (in nominal dollars) are summarised in the following table.

Table 1. DMIA expenditure in calendar year 2017

Name of project	Operational expenditure	Capital expenditure	Total expenditure
Mooroolbark Community Mini Grid		$600,100	**$600,100**
Grid Energy Storage System	$260,557	-	**$260,557**
Total	**$260,557**	**$600,100**	**$860,657**

2 Mooroolbark Community Mini Grid Trial

2.1 Project overview

The Community Mini Grid project in Mooroolbark is designed to test a future role for the distribution network, in an environment of widespread distributed energy resources (DER) that can be coordinated to deliver services and value to both customers and the network. This network role is aligned to the concept of the Distribution System Operator (DSO).

In particular, this innovation project will allow AusNet Services to:

- understand the full value potential of concentrated and controllable distributed energy resources (DER) in providing demand management and network support, as well as the techniques to achieve this;
- develop strategies to manage an increasing level of customer-driven DER; and,
- learn how to facilitate community driven energy initiatives such as renewable energy projects and micro grids in a way that is not only efficient, but is beneficial to the network.

The project encompasses the design, build and operation of a 18 house mini grid in Mooroolbark, a typical suburban community in Melbourne’s East, that will be monitored and controlled by a cloud based mini grid control system that can implement DSO control functions and algorithms. Melbourne-based energy technology company GreenSync is supplying the residential solar and battery storage systems, and is configuring their cloud-based control platform to AusNet Services requirements.

The project will also test the performance of DER systems in providing backup supply to individual customers in case of network outage, and also the ability for the mini grid as a whole to operate as an island (grid-separated mode) for short periods of time, with sharing of power between customers in order to maintain system stability and longevity. Both cases have undergone considerable investigation from the perspective of safety and protection system performance. In particular the intent to operate the whole mini grid as a 3-phase island with 100% inverter based supplies is a ground-breaking technical initiative.

Figure 1 a) Site layout and key components of the Mini Grid, b) Official opening of the Mini Grid

The development of the mini grid ‘stabiliser’ device to allow islanded operation constitutes a major innovation within the industry. Close collaboration between AusNet Services and Power Technology Engineered Solutions, a small local company supplying the device, has been instrumental in developing the device.

To date, the home solar-battery systems have been deployed, remote monitoring and limited control via the cloud-based control platform is available, and the central assets including the grid switch and stabiliser are installed and commissioned. An Incident Response Plan has been developed to facilitate the operation of the facility and allocation of responsibilities between the suppliers and various teams in AusNet Services.

The next phase of the project centres on the evolutionary development of control strategies on the home solar-storage system, the proprietary mini grid control system and the in-house DSO platform. This will subsequently enable a program of physical trials to be rolled out that test key technical and customer focussed scenarios.

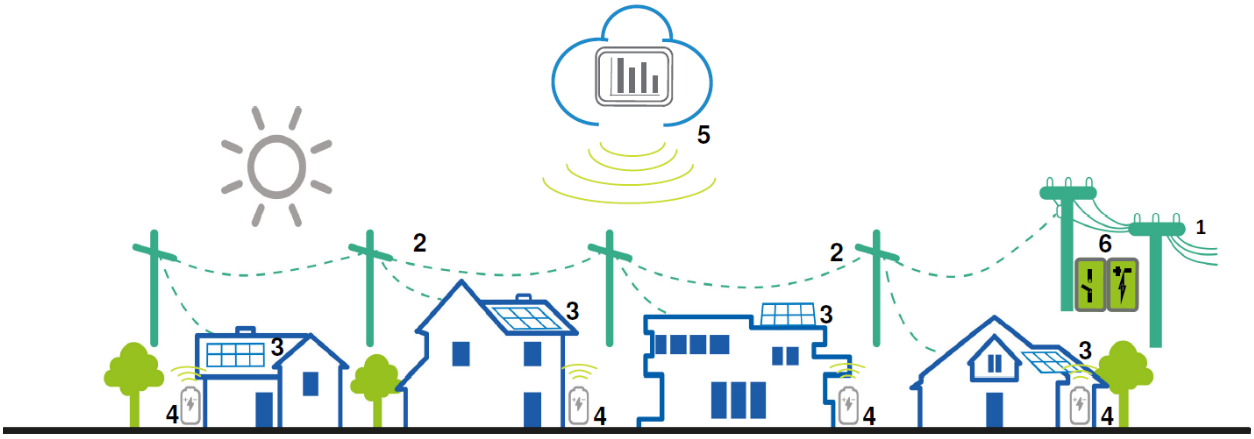
Key learnings to date have clearly highlighted:

1. Complexities associated with site preparation for installation, including the need to perform several upgrades to customer supplies to comply with the Service Installation Rules.
2. Intricacies associated with working with small supplier companies that do not possess the same levels of documentation and process than typical AusNet Services delivery partners.
3. Procurement under a high level functional specification supports innovation through capturing the diversity of technical solutions in the marketplace and allowing an agile approach to system design, but necessitates significant technical and project management resource during project delivery.
4. The current lack of technical interface, design and performance standards for inverters and battery storage systems.
5. Protection issues are significant for inverter based supplies that have relatively low fault currents and thorough scenario analysis and modelling is required to ensure system safety.

DMIA capital expenditure of **$600,100** is claimed for this project in 2017. Further DMIA costs, are expected to be incurred in 2018 for finalisation of the project.

2.2 Nature and scope

For this project a location was chosen by AusNet Services, and the local customers were engaged on the basis of recruiting them into the project. In this regard the community engagement process is quite different to cases where a community self-organises, initiates a project and seeks for AusNet Services to support the project. Maintaining the goodwill of participants through personal relationship building and interaction is of paramount importance to the success of the trial and requires an ongoing commitment.



1. AusNet Services main power grid. 2. Mini Grid powerlines and poles. (Existing infrastructure). 3. Solar panels.
4. Storage batteries with control, communications and safety systems. 5. Cloud-based mini grid control system.
6. Mini grid stabiliser and switching equipment.

Figure 2 Pictograph of mini grid components

The project involves the development, deployment, safe operation and extensive testing of the following mini grid components:

- integrated rooftop solar PV and battery storage systems at 14 of 18 houses on a single street. The mini grid originally comprised 16 houses, but has since seen two subdivisions.
- central network devices including a grid switch, power meter, and mini grid stabiliser unit at the low voltage grid connection point to allow the mini grid to operate in islanded mode
- a centralised mini grid control system with a 3G communications, that can optimise power flows within the mini grid and perform various control functions while grid connected or while islanded, and which feeds into a network level "Distribution System Operator" platform
- a customer web portal to allow customers to monitor and configure their energy systems
- potential to add air conditioner load-control at one home

Due to the extremely broad application potential of this live mini grid environment, a trial period once fully operational of more than 12 months is anticipated.

2.3 Aims and expectations

The objectives of the mini grid project are aligned to the following main areas.

1. **Technical:** To understand the technical benefits to the network that can be delivered from a controllable cluster of DER, and the challenges in establishing and operating a mini grid that consists of purely inverter based supply sources.
2. **Community:** To understand community appetite and concerns around the use of local renewable generation and storage to become more self-sufficient, to interact with neighbouring energy systems and to provide services back to the network.
3. **Business:** To understand the economic viability and value in establishing mini grids and in establishing a level of DSO capability. The project allows AusNet Services to be more fully prepared for the expected future of high customer uptake of DER.

The project is expected to inform a wide range of groups and teams across the business regarding the management and leverage of customer uptake of DER. It also aligns to the central theme of network optimisation in the ENA/CSIRO Electricity Network Transformation Roadmap.

2.4 Process of project selection

In preparing for the 2016-2020 EDPR, AusNet Services had identified a number of priority demand management innovation projects to undertake utilising the DMIA. The investigation of mini grids was one of these projects and built upon previous technical projects and trials such as the Mallacoota Sustainable Energy Study, the Grid Energy Storage System and the Residential Battery Storage Trial.

The mini grid project was selected as an opportunity to build on this prior work and respond to a set of relevant business drivers:

1. Increasing levels of deployment of distributed energy resources (such as solar PV, battery storage and home energy management), increasing maturity of DER technology, and decreasing costs. Residential rooftop solar penetration in Australia is amongst the highest internationally, and the residential storage market is one of the most active.
2. Customer and community trends prioritising energy self-sufficiency, reduced reliance of the grid-delivered energy, adoption of renewable resources and an expectation that network businesses will play an active role in community energy projects.
3. Availability of control technology and platforms that can coordinate large fleets of DER in combination with big-data analytics
4. The need to run the network more efficiently and deliver on customer expectations in a way that optimises the value of distributed energy resources to all stakeholders

As well as providing the ability to deliver direct benefits to the operational efficiency of the network (e.g. through demand management and improved asset utilisation) the mini grid construct was identified as a suitable test-bed environment to investigate the functionality that could be achieved by a future DSO capability.

AusNet Services needs to prepare for near to mid-term future scenarios (5 to 10 year horizon) in a fast evolving energy ecosystem by undertaking a real-world trial of the DSO concept that can test multiple operating configurations. The changing customer and distributed energy environment heralds significant implications for the efficient scale and operation of the networks. The distribution network may become a platform for energy and energy services trading. A DSO capability provides the additional network controls that are needed to facilitate these new markets, manage the variability of DER generation and extract value from the diversity of connected devices.

2.5 Project implementation

One of the first challenges for project implementation was finding a suitable site and community. Although initially focussing of more remote communities, it became clear that a more urban location would serve better as a test facility. Towards the end of 2015, the project team identified a number of locations with 3-phase overhead supply, relatively small distribution transformers, good coverage of smart meter data, no sensitive customers, high occupancy rates and evidence of average or above average take-up of solar power. A site in Mooroolbark was selected, and the community was engaged to understand their needs and their level of interest in participating in such a trial.

Since the approval of the project, the specification, design and construction of all the hardware systems, as well as the integration into a remote monitoring system, have been the dominant focus. An EOI and RFQ process was conducted with potential suppliers in late 2015, and equipment delivery started in early 2016.

Participant engagement remained intensive throughout each phase of installation and testing at the 14 homes, which was completed in October 2016. Since then, the central monitoring system, GreenSync's proprietary MicroEM™ platform, has been operational, allowing visibility and basic remote control of the integrated home solar-storage systems.

The stabiliser and LV switching cabinet were installed and energised in February 2017. The mini grid is currently remotely monitored and operated according to a comprehensive 24/7 incident response plan.

As part of the technical specification phase, a comprehensive network protection analysis was undertaken with all the hardware providers to ensure that the protection risk profile of the mini grid was not increased.

To model the future potential DSO environment, AusNet Services has developed a cloud-based control software layer called the Distributed Energy Network Optimisation Platform (DENOP). The software architecture for the DENOP that links to GreenSync's control platform was designed in mid-2016, with development continuing across 2017.

The bulk of 2017 has focussed on the evolutionary development of the remote control capabilities in the two platforms to allow an ongoing series of physical trials to be conducted. These trials have worked through the list of use cases and value streams that clustered DER can provide to customers and the network.

2.6 Implementation costs

A large portion of the project cost to date is associated with the installed hardware, and much of this was delivered during 2016 with a capital expenditure of $1.42m.

Capital expenditure in 2017 amounted to **$600,100** and comprised:

- Delivery of the proprietary mini grid monitoring system;
- Design, development and delivery of functions within the AusNet Services DENOP control platform.
- Enhancements to the functions and user-interface of the Stabiliser.
- Labour costs for project development, project management, and the design and delivery of use-case testing

The final phase of the project is expected to see a relatively modest expenditure for completion of operational function development & trials, data analysis and reporting.

2.7 Benefits

In practical terms, mini grids (or sub-elements of mini grids) offer the potential for the following benefits to AusNet Services under a DSO framework.

a. Coordinate distributed energy resources to provide network peak demand reduction, reduce energy at risk and potentially defer asset augmentation

b. Increase asset utilisation through shifting peak loads and peak generation into off-peak times, and balancing loads across phases

c. Increase electricity system resilience and flexibility by utilising fast response of DER assets in the event of network contingencies or major events

d. Increase supply reliability by providing islanded supply to customers during outages

e. Bushfire risk reduction by enabling overhead lines to be de-energised when customers are supplied in island mode

f. Deliver on customer expectations for increasing self-reliance, reducing energy costs, and utilisation of renewable energy for personal use or to access emergent markets.

g. Enable local infrastructure to support community-driven energy initiatives, including reliable supply capacity that avoids the need to sub-optimally oversize DER systems.

h. Facilitate higher penetration of distributed generation by using smart inverters and battery storage to controlling thermal loads and network voltage.

This trial project will test the technical viability of the mini grid to demonstrate these benefits, test the customer appetite and acceptance, and evaluate the economic viability of different structures of mini grids and community energy projects.

The learning of the project will ultimately help build AusNet Services' toolkit for delivery of non-network and demand-side solutions.

2.8 External communications undertaken

During 2017, AusNet Services continued to communicate to public industry forums on the experience and learnings to date from the project.

- EECON (EESA conference), Melbourne
- Energy Networks Australia Grid Edge Seminar, Sydney
- Transformation and the Energy Industry, Sydney
- All Energy Conference & Exhibition, Melbourne
- Australian Utility Week (Expert advisor role), Melbourne

These presentations build on earlier events across 2016 that included:

- Australian Institute of Energy seminar, Melbourne
- Electrical Engineering Society of Australia conference, Melbourne
- Electricity Network Transformation Roadmap workshop, Sydney

In early 2017 a dedicated web-page on AusNet Services' corporate web site was created for the Mooroolbark Mini Grid. This page will be updated as the trial progresses and will ultimately serve as a repository of documentation and information about the project.

2.9 Next Steps

The trial is nearing completion and next steps in early 2018 will focus on testing the remainder of identified use-cases in practice. This will require design and development of control algorithms and operational tests to gather data.

In mid 2018 the project will move into analysis and reporting phase, as well as formation of a strategy to build on the learnings from the project. Key lessons have already been leveraged into other projects, but there may be some specific opportunities at Mooroolbark to expand on the current trial via deployment of different control equipment.

3 Grid Energy Storage System Trial

3.1 Project overview

In 2012 AusNet Services initiated a Grid-scale Energy Storage System (GESS) project to trial the use of a large battery storage system to manage peak demand on the distribution network and explore other benefits to network management such as power quality improvement and providing supply to an islanded group of customers as a mini grid. Large battery systems offer demand levelling and voltage support services which can not only defer asset investment but also improve the quality of supply to customers.

The GESS is able to shift demand on a particular feeder from peak to off-peak times by discharging during feeder peaks and re-charging overnight when the feeder demand is low. In practice, the GESS is suited to addressing a specific network constraint, and is containerised to allow relocation to areas of network need.

When the GESS trial was initiated, large scale battery storage was not yet cost competitive, but the decision was made to trial this innovative technology in anticipation of reductions in battery prices in future. Now, the gap between costs and benefits has reduced significantly, and large scale battery storage is not far off being economic.

The GESS was commissioned by the end of 2014 and a trial was conducted during 2014-15 summer using batteries only for peak lopping along with voltage support/power factor improvement. A power quality recorder was also installed to monitor harmonics, negative sequence voltage and flicker under varying operating conditions.

The GESS initially had only a “local peak lopping” set point capability, i.e. it was programmed to provide demand management of downstream loads only. Soon after, a “feeder peak lopping” set point functionality was added in order to also support upstream loads. An upgrade was also performed to the neutral earth switch to enable “bumpless” transition between grid connected mode to island mode. This along with several other outstanding items was resolved before achieving practical completion in May 2015.

In order to address noise emissions from the diesel generator and achieve EPA compliance, a fan attenuator box was installed and a temporary noise barrier was deployed in the form of a mobile bill board. These measures allowed use of the generator in conjunction with the batteries across the 2015-16 summer trial period.

With the two summer trial periods complete, the project has since moved into the analysis and reporting phase, and has also seen planning towards a potential relocation of the facility to an area of the network where it can provide improved reliability of electricity supplies to customers as well as support power quality. To maximise benefits in providing supply reliability a series of innovative functional enhancement have also been designed.

DMIA expenditure during 2012 to 2016 has been approved for this project and AusNet Services is claiming an additional **$260,557** of costs as compliant with the DMIA criteria for 2017. Further DMIA costs may be incurred for this project during 2018.

Benefits of undertaking the trial include quantifying the system performance potential and gaining experience in the practical considerations of deployment and grid-integration of large-scale battery systems, such as protection settings and supporting infrastructure requirements. Significant experience has already been gained in this area through the process of implementing the system within the AusNet Services network operations environment.

3.2 Nature and scope

The project involves installing a large (1 MW / 1 MWh) battery system including four-quadrant inverter to support the peak load on a 22kV distribution feeder that exhibits a mix of residential and commercial customers. The trial is providing operational data to verify performance of the battery, inverter and control system to support the grid for peak demand, voltage and power factor. The system has been designed to provide a full 1 MWh of storage capacity after 10 years of service therefore the initial installed capacity is in excess of the nominal 1 MWh rating.

The system includes a 1 MW diesel generator set to extend the MWh rating of the battery system to provide full coverage of the peak demand period. This has been done in order to keep the costs of the entire system down while fully simulating a larger capacity battery system. Battery prices are expected to continue declining in the medium term offering good potential for an efficient low emission solution for grid support.

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3.3 Aims and expectations

AusNet Services is exploring grid connected storage as a means of managing network demand, improving reliability and deferring augmentation in areas of forecast capacity constraint. The benefits of additional functions such as voltage support, power factor correction and phase imbalance are also being explored.

Ongoing development of batteries and smart controllers has made battery storage an attractive technical option. AusNet Services intends to gain knowledge and experience in this technology by conducting this trial project. It is expected that if the trial is successful, the grid storage solution will have potential for wider deployment subject to sufficient reduction in battery prices in the medium term.

3.4 Process of project selection

In 2012 AusNet Services conducted a feasibility study into a trial of large scale energy storage in terms of the costs and the availability of the technology and suppliers. It was found that the technology was available and that there were adequate numbers of experienced suppliers in the market to implement such a trial.

Six potential locations for the trial were considered: Euroa (BN1), Clyde North (CLN21), Ringwood North (RWN26), Thomastown (both TT7 and WT12) and Watsonia (WT13). These locations were evaluated based upon the peak demand levels, voltage support requirements, islanding potential and demand growth forecasts.

Thomastown WT12 was chosen as a preferred location to conduct the trial based upon the evaluation results and because it offered flexibility to conduct experimentation, which is an important part of the trial. After the initial trial, it is expected that the system will be relocated to a more critical location. All units are containerised so that they can be moved to alternative locations once the trial period is complete.

3.5 Project implementation

In March 2013 a Request for Proposal was issued which closed on 21st June 2013. Twelve tender submissions were received. The submissions indicated that there were sufficient reputable and experienced suppliers with proven equipment at comparable prices to ensure that the probability of a successful trial was high.

After a formal and competitive tendering and assessment process, a contract was awarded to ABB Australia Pty. Ltd. (consortium of ABB Australia as lead party, and Samsung Korea) for the design and construction of the GESS.

By the end of 2014, the GESS hardware had been delivered and installed, and commissioning tests were underway to allow the trial phase to begin during the summer of 2014/15. Delays were experienced during project design, delivery and testing as a result of the complexity and uniqueness of the system, with new approaches required to be developed to implement the system within the AusNet Services network operations environment.

The site layout and a view inside one of the battery containers are shown in the figures below.

Figure 3 The GESS, installed and operational. Battery containers are in the background, with the inverter, transformer and switchgear containers in the foreground.

Figure 4 Battery container view from inside.

A two year trial plan was developed for the summer peak periods of 2014/15 and 2015/16. The trial plan comprised a comprehensive range of tests including: peak demand lopping, power factor correction, voltage support, voltage waveform harmonics, current waveform harmonics, negative sequence voltages, phase load balance, flicker and islanded operation including transitions to and from islanded supply.

An example of the performance of the system under peak demand lopping is shown in the following figure.

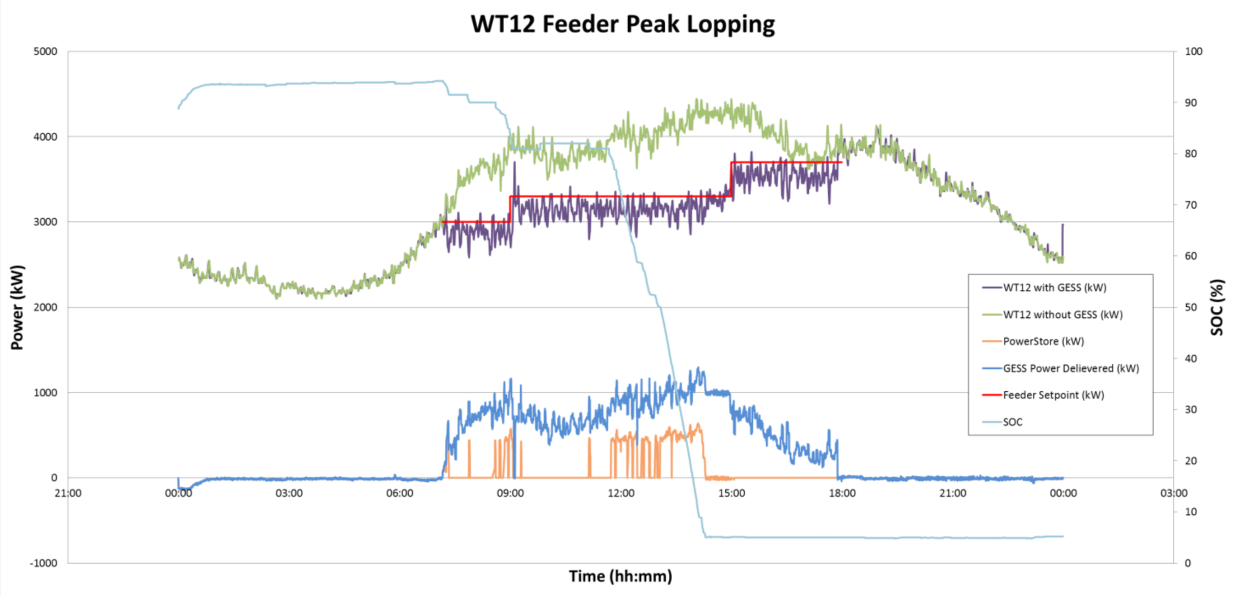

Figure 5 Example of a feeder peak lopping test. GESS output power (blue) utilises both battery (orange) and generator to bring the feeder demand (green) down to a setpoint (red).

During 2017, the following key activities were completed:

1. Finalised scoping of a series of innovative enhancement works to improve the performance and value of the system, and awarded contract to ABB
2. Development of a project concept to relocate the GESS to a site on the distribution network where it can deliver both reliability improvement as well as power quality support

The supplier has continued to support AusNet Services with ongoing service and maintenance across 2017.

3.6 Implementation costs

In 2017 the **$260,557** of DMIA costs were related to ongoing operation of the facility while the potential relocation project was being developed and while the suite of functional enhancements was being delivered:

- Site maintenance
- Site office rental
- Fuel and energy charges
- Project management and engineering costs including appropriate labour charges.

3.7 Benefits

The expected benefits of using large-scale storage connected at grid-level include the ability to defer asset augmentation, reduce the risk of asset overloads, improve power quality and mitigate the risk of customer outages. A key output of the GESS project will be an ability to quantify these benefits.

Specifically, the trial will provide AusNet Services practical experience to better understand and assess the level of network value that grid-scale energy storage offers in:

- managing peak demand;

- reducing levels of network energy-at-risk;
- deferring asset augmentation;
- offsetting operational costs such as hire of temporary generators;
- improving power factor, voltage and other power quality parameters; and
- supplying customers in islanded mode.

Benefits of undertaking the trial also include gaining experience in the practical considerations of deployment and grid-integration of large-scale battery systems such as protection settings and supporting infrastructure requirements. A volume of experience has already been gained in this area through the process of implementing the system within the AusNet Services network operations environment.

The trial will inform future innovation and applications of grid-scale energy storage in other areas of the distribution network. This trial will help to establish whether battery storage is a credible non-network solution to manage demand and set the parameters around when it can be economically deployed for the benefit of energy consumers.

3.8 External communications undertaken

In early 2017 the Demand Management Case Study that serves as the public report for the GESS project was updated. A presentation was also made at the NEM Future Forum in Sydney.

These follow a series of presentations made in 2016 on the operational results of the GESS trial, covering Australian Energy Week, All Energy Australia and Energy Storage Australia.

3.9 Next steps

Steps to be completed for the GESS project in 2018 include completion of system performance enhancements and pending preliminary design work, confirmation of a project to relocate the facility to an area of network need that can benefit AusNet Service's customers.

After the experience of the GESS trial to date, confidence has been gained within the business regarding system operability and reliability. The project to relocate the facility has been initiated within the 'business as usual' environment and is now serving to embed the learning from the innovation trial into the network engineering and field engineering functions of the business.

The GESS project team is continuing to collaborate with relevant teams within AusNet Services to further the transfer of knowledge into BAU. This includes the assessment of energy storage within the network planning function as well as the creation of standards and procedures to enable more efficient deployment of energy storage technology on the network in the future.

4 Certification of costs

Appendix-1 of this report contains a statement signed by a director of AusNet Services confirming that the costs of the above demand management projects:

a. are not recoverable under any other jurisdictional incentive scheme,
b. are not recoverable under any other state or Commonwealth government scheme, and
c. are not included in the forecast capex or opex approved in the AER's distribution determination for the regulatory control period under which the DMIS applies, or under any other incentive scheme in that determination.

5 Developments in previous DMIS projects

The project to manage peak demand at Mallacoota (manage hot water peak) claimed against the DMIA in 2011 was completed in the same year and resulted in the net peak reduction of 0.5MW as reported. There are no further developments from this project to report.

The project to improve solar uptake forecasting claimed against the DMIA in 2013 was completed in the same year and resulted in updates to the forecasting model that continues to be used by AusNet Services. There are no further developments from this project to report.

The Mallacoota Sustainable Energy Study claimed against the DMIA in 2013 and 2014, and was completed in 2014. This study has put AusNet Services on a better footing to capture the benefits that mini-grids offer in improving customer reliability, both for Mallacoota and other locations, through:

- Increased technical and commercial knowledge of options to locally supply remote communities through local embedded generation and islanded mini-grids.
- Increased corporate awareness of the potential reliability benefits of non-network alternatives to remote power supplies.

The project and the feasibility study have served as a point of engagement with several stakeholders including non-network providers. Options to improve supply at Mallacoota are still being investigated and the Feasibility Study is being leveraged in these investigations.

The Residential Battery Storage Trial has come to a formal conclusion after the publication of the public version final report. Eight of the ten storage systems were removed from service in 2015. The two remaining units are still in operation for general observation. The running costs of the two additional units have been absorbed by AusNet Services over 2016. Further DMIA funded expenditure for this project is not currently planned.

6 The DMIA criteria

The expenditure recoverable under the DMIA must satisfy the following DMIA criteria:

1. Demand management projects or programs are measures undertaken by a DNSP to meet customer demand by shifting or reducing demand for standard control services through non-network alternatives, or the management of demand in some other way, rather than increasing supply through network augmentation.
2. Demand management projects or programs may be:
    a. broad-based demand management projects or programs—which aim to reduce demand for standard control services across a DNSP's network, rather than at a specific point on the network. These may be projects targeted at particular network users, such as residential or commercial customers, and may include energy efficiency programs and/or
    b. peak demand management projects or programs—which aim to address specific network constraints by reducing demand on the network at the location and time of the constraint.
3. Demand management projects or programs may be innovative, designed to build demand management capability and capacity and explore potentially efficient demand management mechanisms, including but not limited to new or original concepts.
4. Recoverable projects and programs may be tariff or non-tariff based.
5. Costs recovered under the DMIS:
    a. must not be recoverable under any other jurisdictional incentive scheme

b. must not be recoverable under any other Commonwealth or State/Territory Government scheme and

c. must not be included in forecast capital or operating expenditure approved in the distribution determination for the regulatory control period under which the DMIS applies, or under any other incentive scheme in that determination.

Expenditure under the DMIA can be in the nature of capital or operating expenditure. Capex made under the DMIA has been excluded from the regulated capex reported in the Regulatory Accounts and has not been rolled into the Regulatory Asset Base.