

Demand Side Engagement Strategy

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Glossary

CESS	Capital Efficiency Sharing Scheme
DAPR	Distribution Annual Planning Report
DMIA	Demand Management Innovation Allowance
DMIS	Demand Management Incentive Scheme
DNSP	Distribution Network Service Provider
DSE-RIP	Demand Side Engagement Register of Interested Parties
DSM	Demand Side Management
DSMP	Demand Side Management Planning
EBSS	Efficiency Benefit Sharing Scheme
DR	Demand Response
EOI	Expression of Interest
NER	National Electricity Rules
NPV	Net Present Value
PFC	Power Factor Correction
RDSE	Register of Demand Side Engagement
RIT-(D)	Regulatory Investment Test (Distribution)
TUOS	Transmission Use of System

Purpose

The purpose of this document is to outline Evoenergy's demand side engagement strategy for engaging with our customers and industry proponents to provide non-network options in addressing limitations on Evoenergy's network. This document describes the potential of Demand Side Management (DSM) and the opportunities that enable customers and non-network proponents to earn a revenue stream from reducing their electricity demand.

As the policy evolves in a changing operating environment this document will be revised.

Introduction

Evoenergy is obliged by its Distribution Network Service Provider (DNSP) licence conditions to ensure that its electrical distribution network meets designated reliability and performance standards and has sufficient capacity to meet electricity demand.

Evoenergy conducts an annual planning review in which it forecasts rates of peak demand and energy growth for its network for a 10 year period. Using these forecasts an analysis of the Evoenergy network capacity is conducted to identify specific areas that will become constrained over the forecast period. Preliminary investigations are then conducted to determine economically and technically feasible solutions to the specific identified constraints.

Options that may be available to solve a network constraint are:

1. A network solution (supply side option) or
2. A non-network solution (demand side option) or
3. A combination of both.

A network option may involve solutions such as increasing the supply capability into an area by constructing a new high voltage feeder, augmenting an existing high voltage feeder, constructing a new 132/11kV zone substation or similar capital projects. These projects are generally financed internally by Evoenergy.

A non-network option may involve reducing demand overall or at critical times in the particular geographic zone through DSM, including things such as Demand Response (DR) programs, peak shaving generation or energy storage connected at customers' premises or to the distribution network.

Evoenergy considers that DSM has a valuable role to play in maintaining reliable and cost effective electricity supply to customers. Our Peak Demand Reduction Strategy (22/8/2017) details our wider approach to demand management including DSM. As described in that strategy, customers and non-network proponents who are involved with effective DSM will be able to access a revenue stream developed through the deferring of costly network solutions. This approach reduces the overall cost to maintain the network and results in lower electricity costs to customers.

Evoenergy has planned to launch DSM including DR programs by actively engaging customers and third party service providers through the implementation of a demand side engagement strategy. The Evoenergy Annual Planning Report (APR), which is published on the Evoenergy website, provides information on expected network

performance criteria, the planning processes followed and summary planning information for forecasting network expansion requirements over the next 10 year period.

Demand Side Engagement Strategy

Evoenergy's demand side engagement strategy aims to create a co-operative and pro-active relationship with customers and proponents of non-network solutions and involve them with Evoenergy's network planning and expansion. Evoenergy will then encourage customers and potential non-network service providers to participate in the Evoenergy demand management activities in accordance with our Peak Demand Reduction Strategy, with the objective that future network problems can be met by a carefully selected range of solutions to achieve optimal economical and technical outcomes.

Evoenergy's demand side engagement strategy objectives are:

1. Embrace DSM and provide opportunities to our customers and non-network service proponents to participate in resolving network and customer supply limitations,
2. Develop and apply transparent Demand Side Management Planning (DSMP) for network planning and development,
3. Identify DSM options for individual & broad based demand management situations,
4. Provide proponents of non-network solutions with simple and effective mechanisms for obtaining information on network development proposals, and
5. Develop demand management tools and industry alliances to readily facilitate non-network options.

Evoenergy has developed a DSMP process, described here and illustrated in Attachment A, which describes how Evoenergy will investigate, assess, develop, implement, and report on non-network options. The DSMP process is integrated early into the overall network planning process to allow sufficient time for the development of non-network and DSM programs from conceptual to more detailed stages.

Engagement & Consultation with Non-Network Proponents

Evoenergy considers that effective engagement and consultation plays an important role in achieving the success of the demand side engagement strategy. Through engagement and consultation Evoenergy will seek to identify potential cost effective and customer driven DSM options that may defer the supply side investment.

To facilitate this process Evoenergy will maintain the following:

Contact Points for Demand Management Team

Evoenergy has centralised email and telephone contact points for demand management initiatives and issues. Emails to **demandmanagement@**

evoenergy.com.au or telephone calls to 02 6293 5152 will reach the core demand management team within the company.

Register of Demand Side Engagement

Individuals, private companies and government departments may register online through our Demand Side Engagement Register of Interested Parties (DSE-RIP) to receive information on the progress of Evoenergy's non-network activities. The DSE-RIP is intended to facilitate public consultation on network constraints in a timely fashion and to inform stakeholders and other interested parties about potential non-network opportunities.

Registered parties will also be informed when a new request for proposal under the Regulatory Investment Test (Distribution) (RIT-D) has been posted on Evoenergy's website. Registered parties will also be informed of specific projects that are below the RIT-D threshold that are judged by the network augmentation team to have high potential for a demand side solution.

Expression of Interest

In addition to the above, Evoenergy intends issuing requests for information or initiating public consultations on the DSM options being investigated. The aim of a request for information or public consultation is to obtain customer and third party suggestions, inputs and support for the proposed options that will assist in the technical feasibility evaluation and economic benefit analysis of the proposed DSM options.

Information on Evoenergy Website

Evoenergy produces a variety of information and reports that may be useful for customers and proponents of non-network solutions. The following are some examples of the types of report and information that may be made available on our website:

1. Distribution Annual Planning Report,
2. Publications and requests for information,
3. Case studies on non-network proposals,
4. Avoided customer Transmission Use Of System (TUOS) charges and methodology to determine charges,
5. Investigation reports for network augmentation requirements including RIT-D submissions,
6. Information to be included in a non-network proposal and a sample of non-network proposals,
7. Embedded Generator Connection Code, and
8. Details of embedded generation connection application and agreement.

Demand Side Management Options

Evoenergy's demand side engagement strategy aims to identify DSM options and assess their potential to solve network limitations and constraints for broad based and more specific local situations.

DSM options may be to reduce demand or supply the increasing demand from alternative sources. Some practical DSM options have been identified and categorised into the following groups. This is not a complete listing and new options may become available in the future.

Demand Reduction

The following DSM options are examples of schemes that aim to reduce demand and may be applicable to residential, commercial and industrial situations.

1. Demand response programs,
2. Power factor correction,
3. Pool pump controls,
4. Water heating load controls,
5. Air conditioning controls,
6. Automated feeder load sharing,
7. Interruptible load controls and pricing,
8. Critical load reduction controls and pricing,
9. Tariff realignment.

Alternative Supply

The following DSM options are examples of where demand may be shifted by using alternative sources of supply.

1. Use of stored energy – e.g. battery banks, fuel cells, thermal storage, and
2. On-site generation – e.g. gas microturbine, photovoltaic cells, micro-wind turbines, diesel generators.

It is anticipated that customers and non-network proponents will be able to respond to DSM options and programs, or propose new innovative DSM options, by participating in the demand side management process. We may include actual worked examples of cost-benefits for implementing DSM options on our web site.

When to make a Demand Side Engagement Submission

Evoenergy will periodically publish updates on network constraints and regulatory investment tests, but interested parties can submit a demand side proposal at any time. There is no need to wait for a new request. It should be noted though that proposals will only be considered if they address a current or future identified network constraint.

Please note that making a demand side engagement submission does not form a contract. At this stage Evoenergy reserves the right to use the information supplied in a submission as it sees fit and to pursue demand side options proposed with other suppliers if appropriate.

How to make a Demand Side Engagement Submission

Initial submissions should be sent via email to demandmanagement@evoenergy.com.au.

Requirements of a Demand Side Engagement Submission

Basic requirements of any demand side project are as follows:

- It must be technically sound;
- It must be financially sound;
- It must be dependable; and
- It must reduce maximum demand on the network at times of peak load on the system.

Information that must be supplied with any submission

1. Outline of the Demand Side Option:
A short description of the option to give reviewers a basic understanding of what they are looking at.
2. What constrained network region this option will assist with:
Identify where the constraint is in the network, and what portion of it the idea will address.
3. What the up front and operating costs will be:
An estimate of costs to allow for the first pass evaluation. It is understood that at this stage these costs may be indicative only, but they should be as accurate as possible to allow for efficient first pass evaluation.
4. When it will operate, and how well this coincides with peak loads:
Timing of the operation – for example, a pure solar system will operate during daylight hours, where a wind generator will operate when the wind is within a certain range and a battery storage option would be dispatchable as required. This is relevant because if the times of operation are different to the times of the peak load then the option is unlikely, on its own, to give a significant network benefit.
5. What the lifetime of the project will be:
Is this a single year event, a new generator with a 20 year expected life, or an efficiency project that is forecast to provide benefit until the houses in the area are replaced in 50 years?

It is understood that these will be preliminary proposals and the detail supplied will be indicative rather than exact.

Evaluation Phase

The main objective of the evaluation phase is to identify the non-network options and DSM opportunities that may address identified network constraints and evaluate their potential for development as DSM programs.

Initially the potential to alleviate any broad based network constraints using current broad based DSM programs will be evaluated. A broad based DSM capability study is undertaken and then current DSM programs will be updated if the potential to further alleviate constraints is identified.

The second step is to carry out detailed DSM capability studies involving customer cohort research to address the remaining peak and broad based network constraints identified through the 10 year demand forecasts which were developed as a part of the annual distribution system planning review. The customer cohort research is a critical part of studying DSM capability and is aimed at identifying customers' priorities and the drivers that engage them in demand side management. The DSM capability studies may recommend potential options and provide details such as participants' willingness to participate in the identified DSM options.

The next step is to customise the options identified by evaluating their potential in terms of demand reduction (MVA) and duration (hrs) on an annual basis. To further develop confidence that a customised DSM option will alleviate a network constraint an initial test will be carried out on the requirements of the constraint.

The requirements may be based on:

1. Project Size (Capacity –MVA),
2. Upstream available network capacity,
3. Forecast year that solution is required,
4. Seasonal, time of day and duration variations,
5. Projected growth rates, and
6. Predominant load type.

The initial test will involve an analysis of the main requirements behind the emerging constraint, determination of the extent to which demand is driving investment (including the amount of supply side investment that could be deferred) and the demand reduction required to resolve the constraint.

Criteria against which we will evaluate any submission

1. Impact of the connection on our network – safety, reliability and quality of supply
2. Potential savings through deferment or avoidance of network investment
3. Initial investment versus long term maintenance implications
4. Any other criteria

Consultation process

Initial public consultation is aimed at gathering additional information to determine the level of incentives which should be offered to the participants to make DSM schemes attractive. Evoenergy and proponents will co-operatively conduct technical studies to determine the suitability and effectiveness of the solutions. The financial benefits for all parties will be calculated at this stage to determine financial viability.

Assessment Phase

The assessment phase aims to select credible DSM programs for economic evaluation (based on Net Present Value (NPV)) alongside feasible network supply side solutions or to implement as broad based solutions. The assessment phase recommends feasible DSM programs which have been validated and developed to a specification driven by the specific network constraint.

Evoenergy will assess all viable options from evaluation phase in relation to all applicable costs and benefits and select the options that maximises the economic and market benefits. All DSM options are summarised and analysed according to size (MVA), cost (both NPV and \$/kVA), time of day, seasonality, time frames of delivery (anticipated plan approved date & anticipated completed by date) and reliability/risk. The technical studies will be based on published Evoenergy guidelines.

This investigation is considered to be a feasibility study and the accuracy of data and cost estimates must be commensurate with this level of analysis. We will use commercial & industrial alliances and a variety of analysis tools at this stage. Public consultation and a Request For Information/Proposal (RFI/RFP) or Expression of Interest (EOI) may be carried out at this stage to confirm the demand reduction product offers under these DSM programs and the level of commitment by participants. If required a pilot scheme will be developed and implemented to assess the performance of the selected DSM program and test the effectiveness of applied tariffs and financial incentives. Any procurement would be in line with Evoenergy's procurement management policies. If the DSM programs prove to be technically and commercially feasible then they may be approved in principle as standard future demand management solutions. Then they would be procured in accordance with our Procurement Management Policies.

In the final stage of the assessment phase the feasible non-network or DSM programs developed for specific network constraints will be financially assessed against supply side options. If the estimated cost of the most expensive credible option exceeds \$5 million then the RIT-D process and guidelines must be applied to the assessment.

Negotiation Process

Negotiations may be necessary during the development of non-network options. Any non-negotiable conditions are to be identified and agreed upon early in the engagement and consultation stage. Our process for negotiation will adhere to the following principles:

1. Provide fair and reasonable conditions and requirements for the non-network options to be developed and connected into the Evoenergy network,

2. Ensure all legal, licence and regulatory conditions are complied with in addition to all applicable industry and other relevant standards. These requirements are non-negotiable, and
3. Ensure that the non-network options can be developed as sound and robust solutions to meet the specific requirements of the Evoenergy network.

Implementation Phase

The implementation of a non-network option is subject to the approval of Evoenergy and other necessary planning authorities. If a non-network option is selected as a preferred solution for the alleviation of a specific network constraint then Evoenergy will request the detailed design and an implementation plan with clearly defined deliverables, schedule and cost estimates. Evoenergy technical guidelines will be made available for the non-network proponent or the appointed engineering consultants for the design of the solution.

The broad based options will be implemented across the Evoenergy network with tariff based financial incentives to customers.

Principles of Incentive Payments Schemes

The main principle that will be considered in a Demand Side Engagement pricing proposal is that the costs and benefits will need to jointly accrue to all parties.

This may be achieved by:

1. An incentive scheme that distributes a proportion of avoided Evoenergy distribution costs towards funding of the demand management initiatives and allows Evoenergy and/or the proponent to retain a share of the net value created. This provides a positive financial incentive for the proponent to pursue cost effective demand management alternatives, and
2. A cost recovery mechanism that distributes the implementation cost and avoided distribution costs to the customer through new tariffs.

Existing Applicable Payment Schemes

DMIA and DMIS

The Demand Management Innovation Allowance (DMIA) and Demand Management Incentive Scheme (DMIS) are currently under review. It is likely that there will be a significant revision in the next regulatory period. At the moment there is a capped amount available for innovative projects from the DMIA.

Avoided Transmission Use of System (TUOS) charges

Projects can also get payment from their impact on TUOS costs. Calculation methodology for these costs can be obtained from our demand management team by contacting them at demandmanagement@evoenergy.com.au.

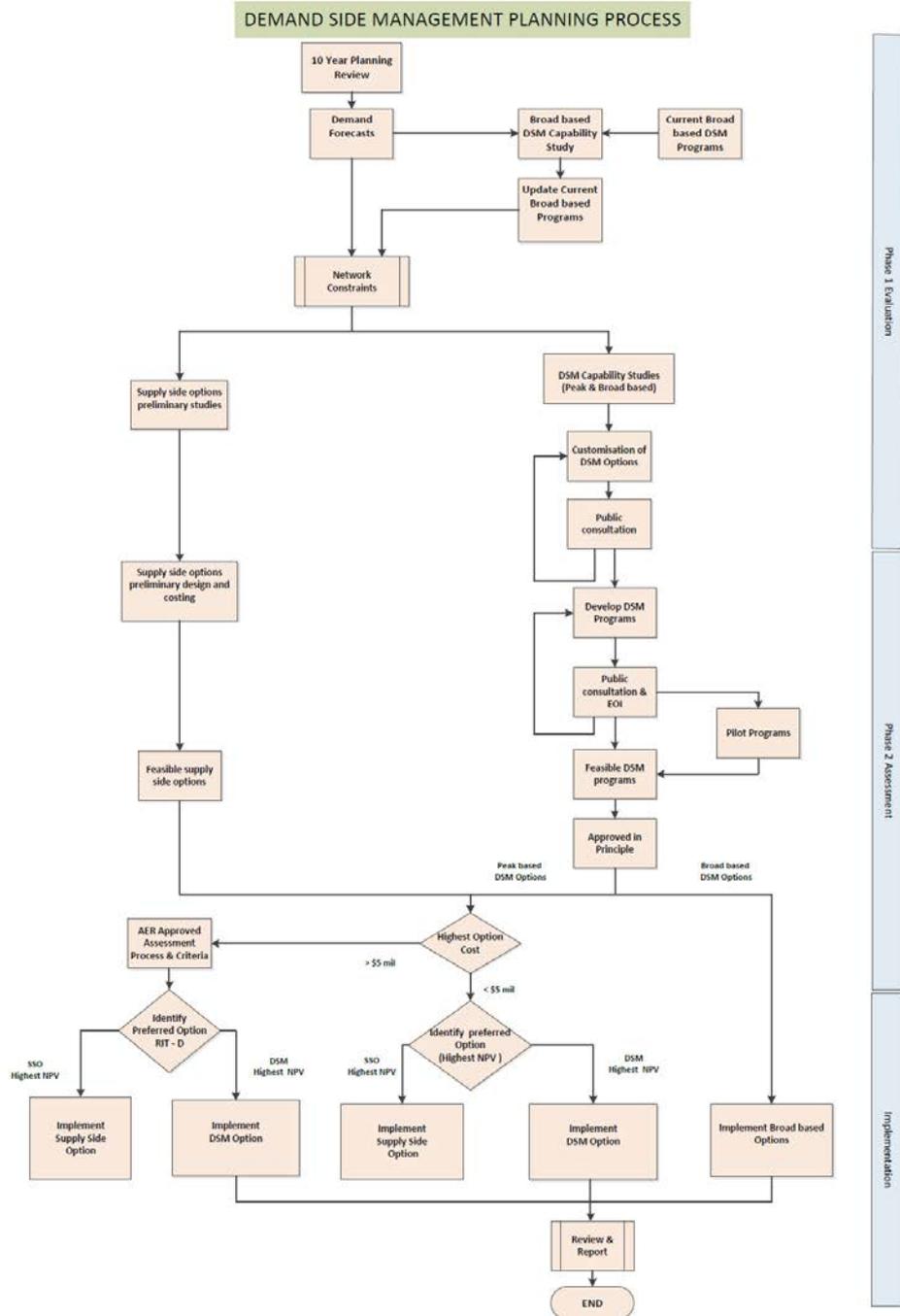
CESS and EBSS

The Capital Efficiency Sharing Scheme (CESS) and the Efficiency Benefit Sharing Scheme (EBSS) are incentive schemes allowing Evoenergy to retain a portion underspend on capex and opex respectively. Some portion of these savings will be available for demand management.

Appendix A – Demand Side Management Planning Process

Figure 1 shows Evoenergy’s DSMP process for any given network constraint scenario.

Figure 1. Evoenergy Demand Side Management Planning Process



Appendix B – Requirements for Embedded Generation

The factors the *Distribution Network Service Provider* takes into account when negotiating *connection agreements* with *Embedded Generators* can be found in full on our website, but the following is a brief list:

1. Connection Work and Generator Connection Work
2. Configuration of the Connection Assets or Network Assets
3. Approvals
4. Program of Works
5. Generator's Obligations
6. Title and risk
7. Defects
8. Completion of the Facility for final commissioning
9. Construction Completion / Final Completion Procedures
10. Delay caused by an Excepted Risk
11. Generator Insurance
12. Inspection of Generator Insurance Policy Documentation
13. Compliance Testing and Commissioning
14. Execution of Operating Protocol
15. Finalisation of Generator Performance Standards
16. Scope of routine management and maintenance obligation
17. Limit on operation and maintenance obligation
18. Land and Equipment Access Rules
19. Maintenance Obligation
20. Inspection and Testing under the National Electricity Rules (NER)
21. Generator's Obligation to Pay Charges
22. Metering Data
23. Indemnities and Limitations on Liability
24. Compliance with Applicable Laws

Charges associated with embedded generating unions are summarised as:

1. Connection enquiry processing charge
2. Network technical study services
3. System augmentation charges
4. Contract administration charges, testing and commissioning and SCADA equipment charges.

An *application to connect* for an *embedded generating unit* requires submission of a Special Connection Request form (available on the Evoenergy website) and the key factors taken into account by the *Distribution Network Service Provider* when assessing such applications include:

1. Site location
2. Generation capacity – nominal output
3. Customer details
4. Generation System Information (e.g. inverters if solar).
5. Certified Installer details

6. Site plan
7. Single line diagram