enea CONSULTING

Microgrid opportunities identification

1st July 2022

CITIPOWER Powercor AUSTRALIA C4NET Centre for New Energy Technologies GWMWater

Grid-connected microgrids and Donald microgrid

Opportunities assessment - Final Report

Executive Summary – Donald microgrid

Two concept microgrids were identified for Donald:

- 1.6 MW – concept microgrid in consultation with CPPAL and GWMWater, consisting of the GWMWater site and other residential and industrial loads
- 2 MW – sized according to the toolkit sizing principles as part of the comparative analysis across the Powercor network

Overall, societal benefits investigated included:

- the customer experience of reliability, based on customer experienced outages
- the full value that may be available from participating in energy markets and selling generated energy from microgrid assets.

The assessment results identified:

- The 1.6 MW microgrid was marginally viable when considering the above benefits at a societal level, while the 2 MW microgrid was not financially viable
- The 1.6MW microgrid is not financially viable when considering the reliability benefits from a regulated network perspective (assessing based on the service target performance incentive scheme, or STPIS framework), and the financial viability would also be impacted by the contractual relationships required across multiple parties to achieve both the reliability and energy market participation benefits
- Overall project costs will be slightly higher once microgrid ancillaries (for example switchboards and control systems) and operation and protection requirements are incorporated.
- External funding, such as the ARENA RAMPP funding, would be required to contribute to a microgrid project to achieve the identified societal benefits

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Collaborating with C4NET, CitiPower & Powercor has engaged Enea to identify microgrid and SAPS opportunities on the network

Phase 1 – SAPS opportunities identification[1]

- Enea's SAPS tool has been leveraged to identify opportunities for stand-alone power systems
- The tool assessed Powercor's single-wire earth return sections of the network for opportunities to off-grid customers at the fringe of the grid by converting to stand-alone power systems
- The tool evaluated the benefits from theoretically off-gridding customers and costs associated with SAPS components. (Note there are no current plans to do so)

Phase 2 – Microgrid opportunities identification – this document

- The Powercor network was scanned for potential opportunities for microgrids, based on 3 filters and suitable sites shortlisted
- Preliminary filtering of sites on the network has given priority to areas of reduced reliability and for deferring capital projects on the network
- Shortlisted sites were evaluated for network and market benefits, and costs with 3 key microgrid assets – PV, diesel gensets and battery

Phase 3 – Donald techno-economic assessment – this document

- C4NET is currently completing a feasibility study for microgrids in the towns of Donald and Tarnagulla
- Enea was engaged to identify a suitable microgrid concept within Donald, in line with stakeholder requirements
- A techno-economic assessment was conducted on the nominated location, including sizing of assets and selected sensitivities
- The opportunity in Donald compared was with other sites shortlisted and evaluated in Phase 2

Notes: [1] Results of Phase 1 have been delivered in a separate report

This report focuses on the identification and evaluation of opportunities for microgrids on Powercor's network

Project context

Citipower and Powercor (CPPAL) is interested in exploring opportunities for microgrids and/or standalone power systems (SAPS). CPPAL has partnered with C4NET and GWMWater to engage Enea to conduct an opportunities identification study for microgrids and SAPS within the Powercor network.

Reliability[1] is a key driver for CPPAL, with two key aspects:

- Improving customers' experience with reliability, and maintaining customer satisfaction
- Reducing outages and outage frequency and duration related to the service target performance incentive scheme (STPIS) that are directly driven by power outages

Stemming from this, there were two concurrent streams of work that were undertaken by Enea:

- Development of a tool to identify opportunities within the Powercor network for SAPS and microgrids (Phases 1[2] and 2, respectively)
- A techno-economic assessment of a grid-connected microgrid in Donald, to inform future feasibility studies for microgrids in Donald and Tarnagulla (Phase 3). The Donald microgrid concept was developed in close collaboration with GWMWater and CPPAL

Two tools were developed for identifying microgrid and SAPS opportunities:

- Identification of sites suitable for SAPS within the single-wire earth return (SWER) sections of the Powercor network (Phase 1)
- Identification of sites suitable for grid-connected microgrids within the Powercor network – the same tool used to evaluate the Donald microgrid site

This study has focused on the identification and evaluation of opportunities for microgrids within the Powercor network, and conducting a more detailed techno-economic study of a concept microgrid in Donald. A MS Word report detailing the calculation methods and key assumptions in the tool will be provided along with this report presentation.

Notes: [1] Analysis conducted in this scope is aimed at understanding societal benefits across all stakeholders
[2] Results of Phase 1 have been delivered in a separate report

Objectives

Phase 2 & 3 – project objectives

The objectives of this study were to:

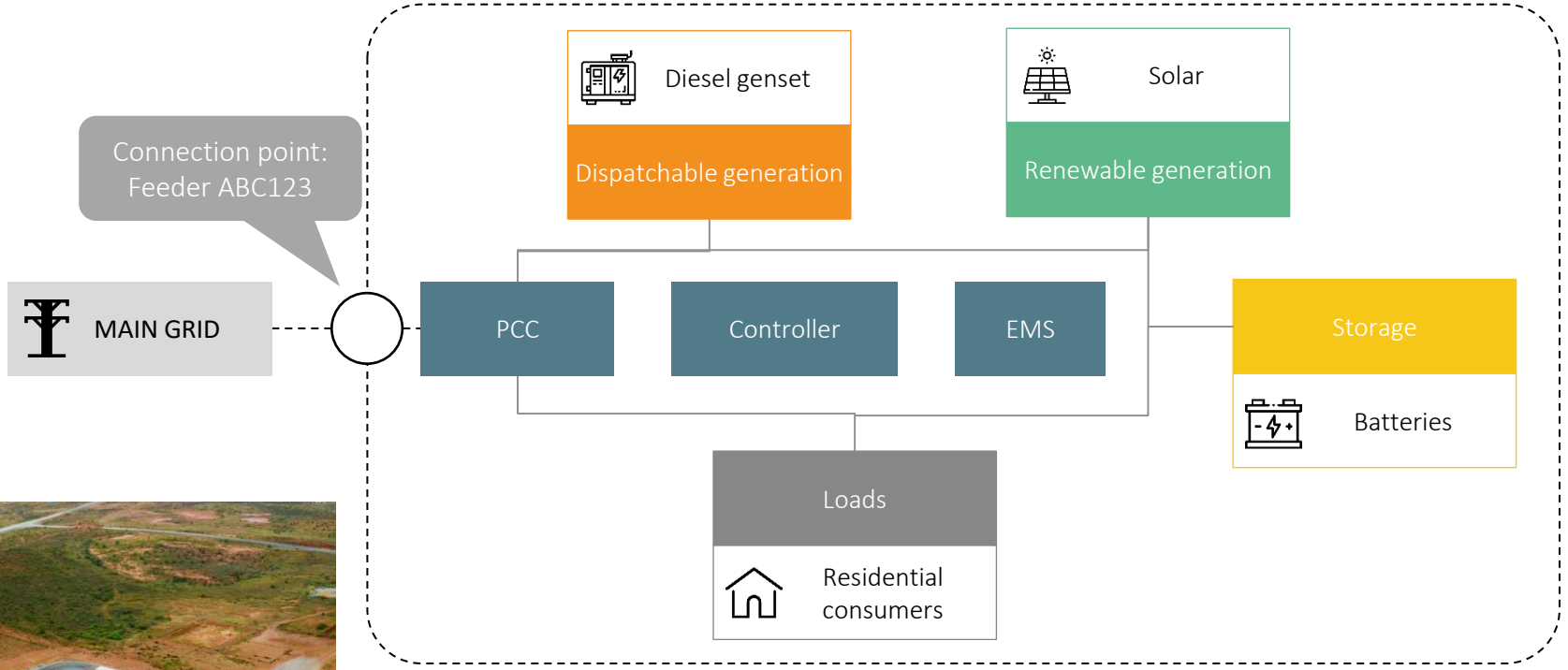
- Engage in stakeholder discussions to understand non-financial drivers of microgrid adoption in Donald
- Develop a suitable value stack to evaluate each identified site against
- Identify potential microgrid sites within the Powercor network
- Conduct an evaluation of potential microgrids and techno-economic assessment for Donald

Enea has previously developed a number of proprietary tools, including one focused on evaluating battery energy storage systems. These tools were used as the building blocks for the grid-connected microgrid toolkit, with additional features developed and the overall tool consolidated.

The tool was then used to evaluate a shortlist of potential microgrid sites, including Donald. Further sensitivity analyses was also conducted on Donald.

The outcomes of the tool were then qualitatively explored through additional non-financial lenses identified as key considerations and value drivers through the stakeholder engagement.

Microgrids considered range from 1 – 2 MW in capacity, and can have CAPEX up to ~$10M



Example microgrid from potential sites on Powercor network

Image: Kalbarri Microgrid

Example microgrid capacities and CAPEX				
	1.5MW	1.5MW	1.5MW 3 MWh	CAPEX $6.9M

Image source: Kalbarri Microgrid, 2021

Improving reliability and opportunities for microgrids are recurring themes identified from stakeholder engagement

Various project discussions with key stakeholders were conducted to identify business motivations, key environmental & community drivers and value drivers

CitiPower & Powercor
- Value drivers - reliability benefits, capital deferral
- Not just for Donald but also opportunities for across the network
- Focused on understanding commercial aspect of microgrids as part of early-stage feasibility assessment

ARENA
- Improving resilience and reliability are key drivers for ARENA
- Keen to identify and understand regulatory and technical barriers faced by microgrid developers

Donald 2000
- Three main drivers: power reliability, attracting industry and people, and decarbonization
- Reliability is a main concern for industrial consumers looking to sustain production

Oct 2021 — Nov 2021 — Dec 2021

GWMWater
- Exploring opportunities for clean energy and increasing power reliability for potable water plants, industrial parks and residential users
- Contribution to the state govt aspirations for net zero carbon emissions

Central Victoria Green Alliance (CVGA)
- Maintaining water supply during power outages and natural disasters was a key driver for the CVGA
- Exploring the potential for a MG template that could apply for other regional locations also

C4Net
- Project lead of overarching Donald & Tarnagulla study
- Ensuring proper coordination between D&T projects

In addition to stakeholder engagement, Enea also provided regular project updates, reporting and discussions with CPPAL, GWMWater and C4Net

Oct 2021 — Nov 2021 — Dec 2021 — Jan 2022 — Feb 2022 — March 2022

Key: CPPAL, GWMWater, C4Net

Common characteristics and interests in microgrids have been the foundation of the Donald microgrid project

Microgrid interest

CitiPower & Powercor are interested in microgrids, considering several factors:

- Understanding three key impacts:
  1. Beneficial network impacts
  2. Better power supply to communities
  3. Improving network reliability
- A capability-driven interest to leverage prior experience in network operation and optimisation, and battery operation through community battery projects connected to the distribution network
- Explore the replicability of microgrid technologies and business cases across other potential sites on the network

Project objectives

CPPAL objectives of this microgrids project include:

- Identifying and prioritising MG opportunities across the Powercor network
- Deepening relationships and understanding community needs through engagement with community groups and local stakeholders

Microgrid interest

GWMWater interest in microgrids is driven by:

- Improving reliability and resilience by creating sustainable power systems
- Reducing carbon emissions in line with Victorian Govt. net zero targets for 2050
- Being a facilitator of microgrid development in communities in north-western Victoria, given their community connections
- Utilising prior experience with operating PVs that have been installed across 60 GWMWater sites, and redundant water storage sites that could be reconfigured for microgrid placement

Project objectives

GWMWater objectives of this microgrids project include:

- Elaborating current understanding of the community need for a microgrid in Donald and microgrids in general
- Evaluating the opportunity in Donald and furthering the analysis towards a business case based on the outcomes of this study

Common project objectives and drivers

CPPAL and GWMWater have several common objectives of this microgrids project include:

- Building a relationship and creating a dialogue with each other and agreeing on a microgrid opportunity in Donald
- Developing a foundational understanding of ARENA RAMPP funding requirements and opportunities to take advantage of such funding options

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Potential sites were identified by pre-filtering distribution sub-stations (DSSs), primarily driven by reliability, and a prescribed max demand of 1 – 2 MW

80,000+ distribution sub-stations on the network are aggregated to isolatable sections

- Aggregated DSS clusters are filtered to have a **maximum demand of 1 – 2 MW**

Clusters of 1 – 2 MW are ranked based on their reliability

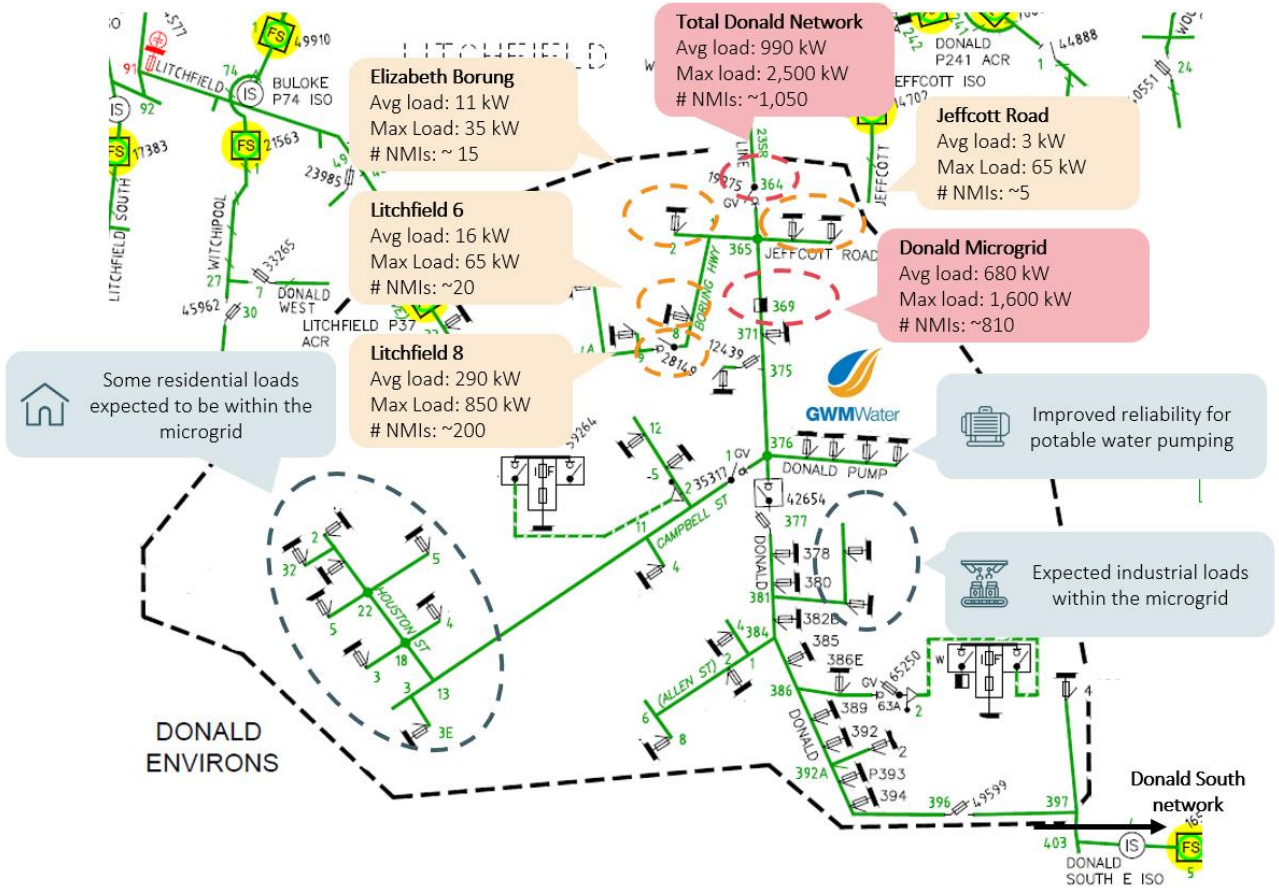
- Unserved energy due to reliability[1] events is calculated for each isolatable area using duration of outage and average load
- Ratio of HV lines: total network length of microgrid[2] is used to identify proportion of outages that can be addressed by a microgrid[3]

Planned network augmentation projects are used to manually prioritise key sites

- Secondary driver of network CAPEX deferral is used to identify projects on the fringes of the shortlist based on reliability and include those sites in the shortlist
- Sites shortlisted using the primary driver of reliability are also prioritised based on planned network CAPEX

Note: [1] is should be noted here that reliability is considered at the societal level, realisable STPIS benefits are a smaller subset of this figure
[2] ratio of upstream HV length/(upstream HV length + microgrid HV length)
[3] outages within the LV network (downstream of the microgrid) cannot be prevented or addressed by the microgrid

Two potential microgrids were identified for Donald – a 1.6 MW concept MG and a larger 2 MW MG



Identification of 1.6 MW concept microgrid based on clusters of loads and key consumers (e.g., GWMWater Donald pump station)

Discussion

- A concept microgrid of 1.6 MW was identified within the Donald environs, that is in line with the ARENA RAMPP funding requirements
- This was then validated with CPPAL and GWMWater
- This concept microgrid would require some retrofitting at the nominated surge protector (369) to be suitable for microgrid isolation (costs not included in this analysis)
- Sizing the microgrid according to the sizing method applied across the network would result in a 2 MW microgrid, which was also evaluated through the toolkit
- Microgrid components were identified by understanding GWMWater's capabilities and strengths, the Donald environment, and network landscape, and other considerations, as detailed in this report

Note: the 2MW microgrid utilises the same network infrastructure and services the same local loads as the 1.6MW microgrid. Analysis was conducted to understand if there were any additional benefits in having a larger microgrid in the Donald area

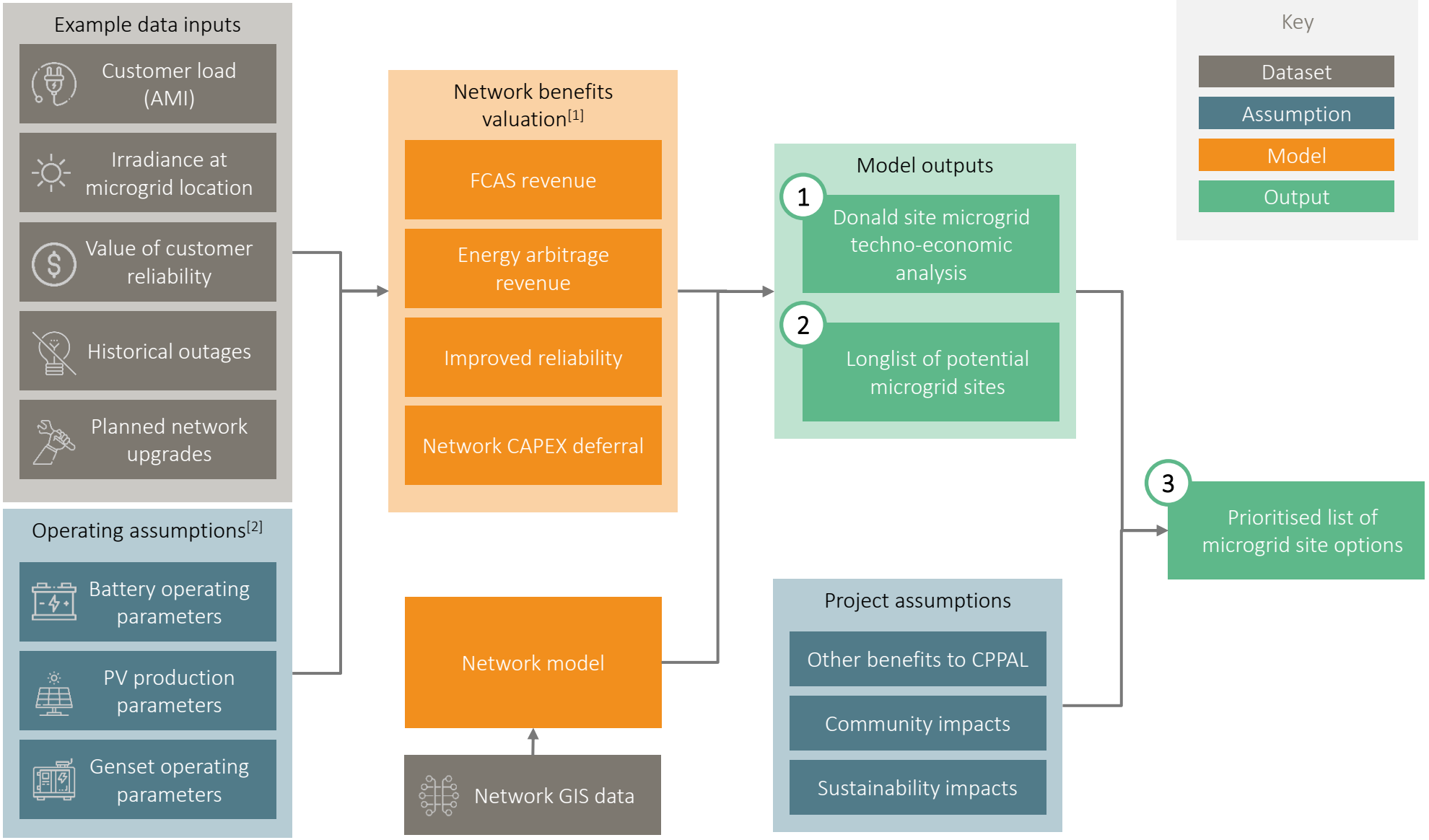
Solar PV systems, diesel generators and batteries are favourable for the Donald site based on several deciding factors

	Time to implement	Technology maturity	Experience with technology use	Geographical suitability
Solar PV	Rapid implementation. CPPAL and GWMWater prefer turnkey solutions	Mature technology with established supply chain and support systems	GWMWater and CPPAL have experience in operating and maintaining PV systems	Moderate-high amount of solar irradiance and existing infrastructure
Diesel generator	Very quick timeline to implement	Very mature technology with established supply chains	Widely used across CPPAL and GWMWater sites	Suitable for most geographies
Battery	Relatively short timeline to implement	Mature technology with established supply chain and support systems	Widely implemented technology with many operational services available	Suitable for most geographies
Wind turbine	Moderate time to implement. Would require earthwork	Mature technology with established supply chain and support systems	Not widely used in CPPAL or GWMWater operation – minimal experience	Low-moderate wind speeds in Donald area
Biogas	Significant time to implement. No existing supporting infrastructure	Mature technology with developed supply chain	Not widely used in CPPAL or GWMWater operation – minimal experience	GWMWater do not operate a wastewater treatment plant – minimal synergistic opportunities
H_2 storage	Significant time to implement. No existing supporting infrastructure	Small-scale technology at embryonic stage	Little to no experience – not widely used in CPPAL or GWMWater operations	Suitable for most geographies at small-scale
Hydropower	Very long time to implement with significant earthwork required	Very mature technology	Not widely used in CPPAL or GWMWater operation – minimal experience	Not suitable for Donald site due to its flat topography

Sources: Solargis, EcoCitizen

Key: Suitable for Donald site | Somewhat suitable for Donald site | Not suitable for Donald site

The Enea toolkit evaluates the aggregated financial benefits of a microgrid across the shortlisted sites



Note: [1] annualised network benefits will be summed to identify total network benefit at each DSS
[2] site specific costs associated with network connection, site preparation and logistics & installation are excluded from this analysis and would need to be considered during the feasibility assessment

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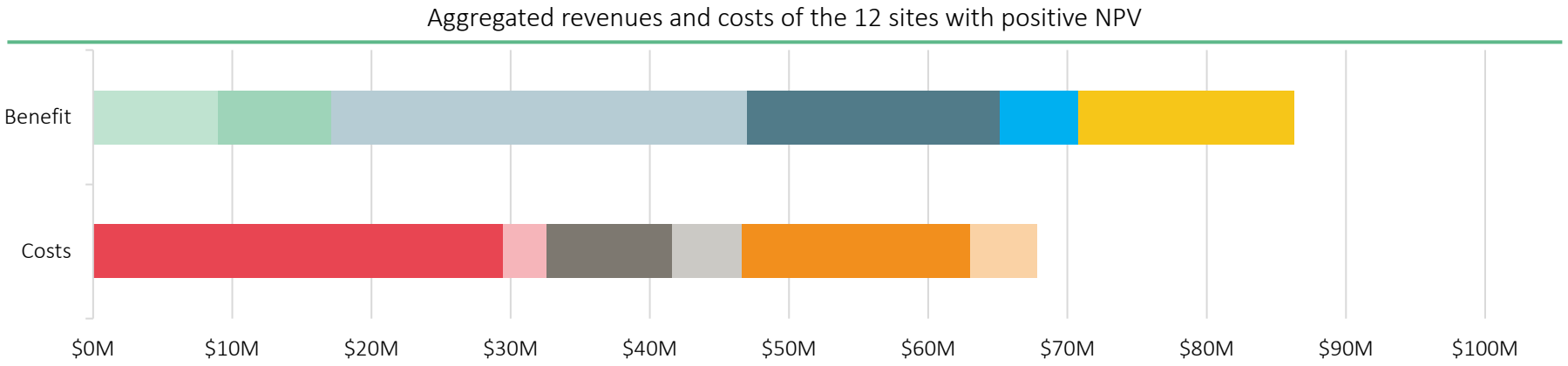
The model has provided us with 12 prospective sites rendering a positive median NPV when microgrids are installed



Discussion

- The graph summarises the aggregate value of costs and revenue streams for the 12 sites with the highest potential viability based on a 12 year operating life. The Donald 1.6MW microgrid was the 11th highest potential viability.
- Across the 12 sites an estimated total NPV would be $18.5 million could be achieved, while noting an expected reduction in NPV when translating to realisable reliability benefits from a network perspective
- BESS CAPEX represents the most significant cost, accounting for around 45% of total cost among the five sites. Decreasing battery costs are likely to improve the financial viability of marginally viable microgrids
- On the other hand, gensets are a very reliable and a cheap source of generation capacity. However, its dependence on fossil fuels and resulting carbon emissions are likely to impact its suitability for government funded microgrids that focus heavily on renewable energy enablement
- Whilst ownership models were not investigated in this scope, consideration must be given to potential third-party participation (e.g., VPP operators) to fully take advantage of various revenue streams within the current regulatory environment. Additionally, it should be noted that costs refer to CAPEX only, and further, site specific, installation requirements need to be considered
- Regulation FCAS has been omitted as it is not suitable for smaller grid-scale batteries and those within a VPP

Key

BESS CAPEX | BESS OPEX | Genset CAPEX | Genset OPEX | PV CAPEX | PV OPEX | Net revenue

Arbitrage | Cont. FCAS | Storage reliability | Genset reliability | Genset generation | PV generation | CAPEX deferral

Flux in reliability benefits and battery CAPEX are likely to be the main deciding factor for microgrid viability across the network

Reliability

- As seen in the previous slides, reliability is a key driver of benefits gained from a microgrid and this is mainly driven by severe weather events, rather than by planned outages.
- These events, as seen recently in QLD and NSW, have significant impact and low forecast certainty
- Storm events are excluded when considering network reliability benefits, so the realizable network benefit will be considerably lower than the calculated customer reliability benefit, as seen in the alternative results
- Changing weather and climate change resulting in more severe weather events could make the for a more viable business case for microgrids

Aftermath of severe storms in Trentham, 2021

Note: microgrids involving aboveground infrastructure are still vulnerable to extreme weather events should damage occur within the microgrid itself

Battery CAPEX

- Battery CAPEX is a significant contributor to overall CAPEX, mainly driven by the fixed cost of batteries
- Between prospective sites there is very little difference in battery and overall CAPEX, due to the limitations placed on the microgrid sizes during the screening process

Genset

- Gensets are a relatively low-cost and source of electricity and provide a range of benefits
- However, the carbon emissions and noise from operating the genset may make it unsuitable to projects where net zero emissions are a key consideration. Renewable energy microgrids have been emphasized by both ARENA and GWMWater
- Battery costs would need to decrease further to become a preferred option over gensets, so that completely renewable and zero-emission microgrids can be developed

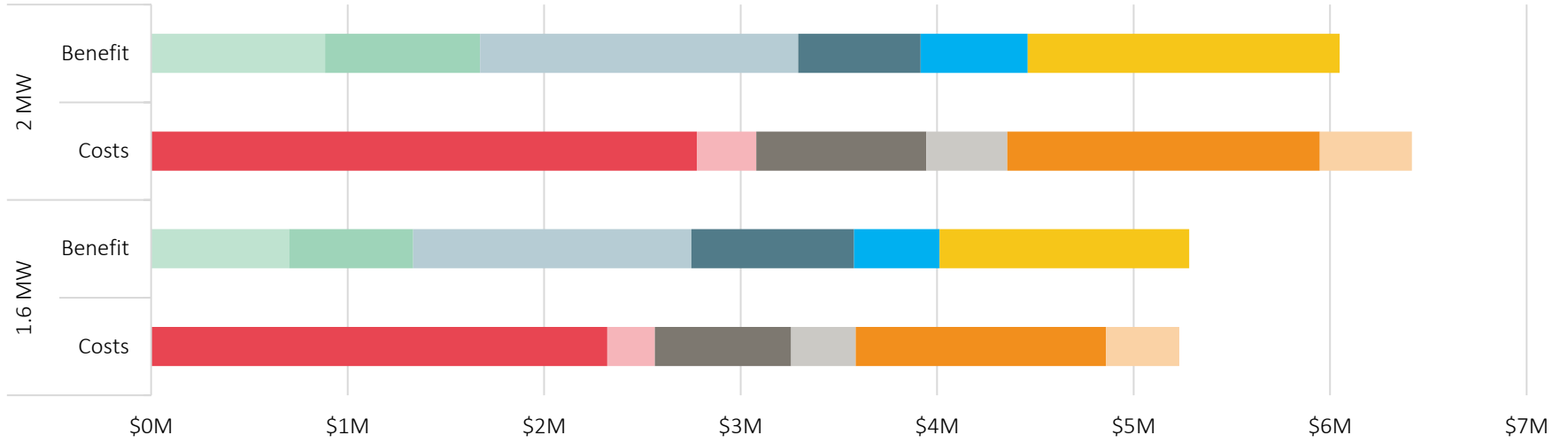
CAPEX deferral

- The aggregated revenue and costs graph shows that CAPEX deferral has minimal impact on the viability of a microgrid project
- More notable is that none of the viable sites have any attributable CAPEX deferral
- While CAPEX deferral is a beneficial contribution from microgrids to the network and DNSPs, other factors must also align for microgrid sites to be viable

Sources: ABC News, TL News. Image source: TL News

At the Donald site, the 2 MW microgrid shows negative NPV with the 1.6 MW concept microgrid is proving to marginally viable

Cost and revenue comparison of 2 MW and 1.6 MW microgrids for Donald



Discussion

- The 1.6 MW concept microgrid identified for Donald shows a positive NPV of ~$50,000 while a 2 MW microgrid in Donald would yield total losses of ~$370k. However, the 1.6 MW result is only marginally positive across the 12 year lifespan
- If reliability issues were to become more prevalent in the Donald area, the business case for the 1.6 MW microgrid would likely become more favourable
- Donald does not have any planned projects to defer expenditure on, which further limits the opportunities for the microgrids to provide network benefits at that location
- This assessment has not considered any lower cost solutions that may be planned to improve reliability, with focus purely on a microgrid solution

Key

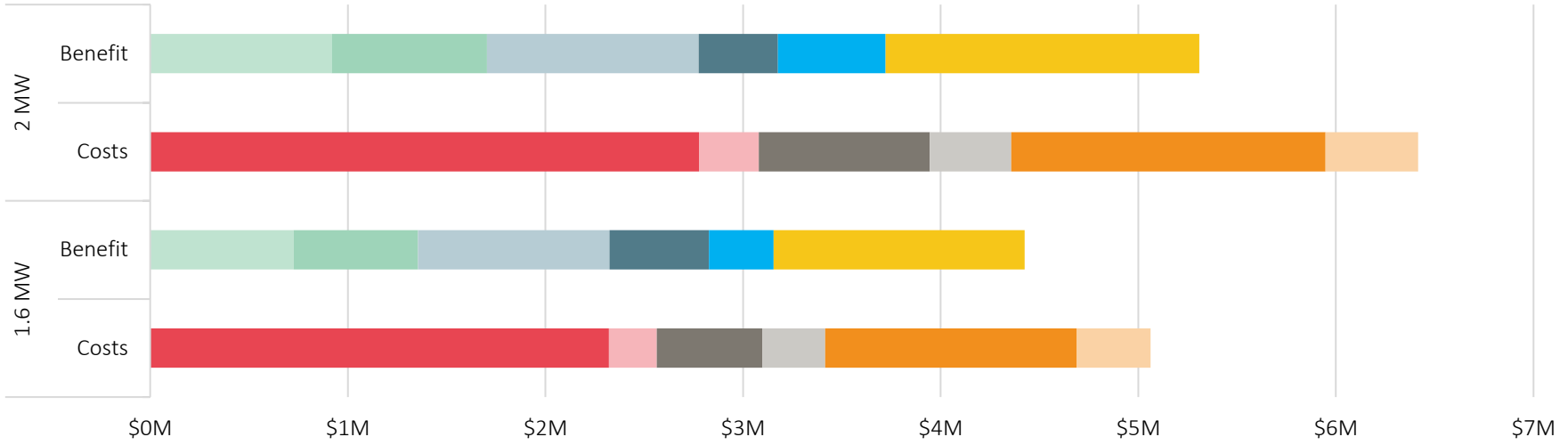
BESS CAPEX | BESS OPEX | Genset CAPEX | Genset OPEX | PV CAPEX | PV OPEX | Net revenue

Arbitrage | Cont. FCAS | Storage reliability | Genset reliability | Genset generation | PV generation | CAPEX deferral

Non-STPIS events removed

Updated reliability data results in negative NPV for both microgrids, with the magnitude of negative NPV equivalent to the reduction in reliability benefits

Cost and revenue comparison of 2 MW and 1.6 MW microgrids for Donald



Discussion

- Removing STPIS-excluded reliability events has reduced the overall benefits of the Donald microgrids by 10 – 15%
- This assumes an automatic change over from the main grid to microgrid operation, to achieve all potential reliability benefits
- Previous results show the 2 MW microgrid to be negative NPV while the 1.6 MW microgrid was marginally positive NPV at $50,000.
- The updated results show both the 1.6 MW concept and 2 MW microgrids at the Donald site show negative NPV, though the concept microgrid is marginally less negative at -$640k compared to -$1.1M, driven by the reduction in reliability benefits across the 12 year lifespan

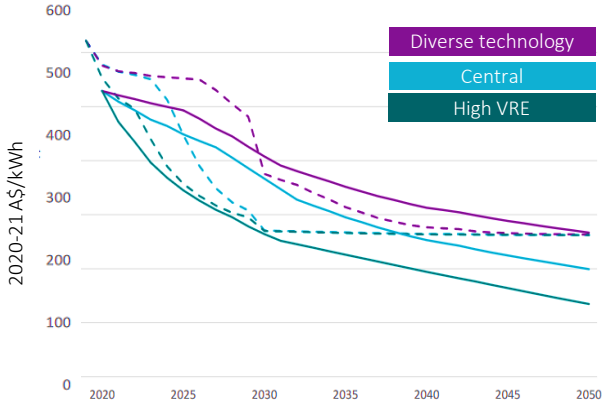
Key

BESS CAPEX | BESS OPEX | Genset CAPEX | Genset OPEX | PV CAPEX | PV OPEX | Net revenue

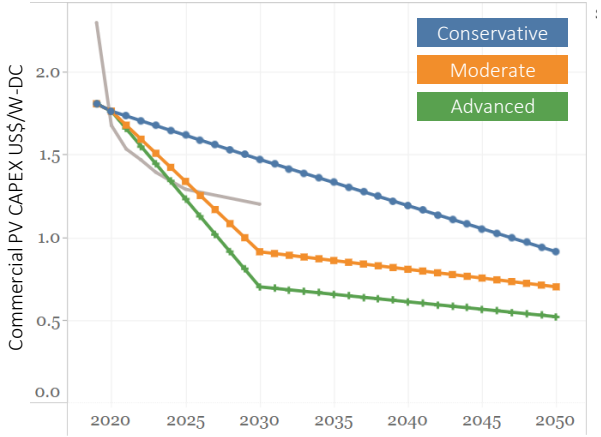
Arbitrage | Cont. FCAS | Storage reliability | Genset reliability | Genset generation | PV generation | CAPEX deferral

Costs are expected to evolve in time and a sensitivity analysis has been carried out to quantify its potential impact on project viability

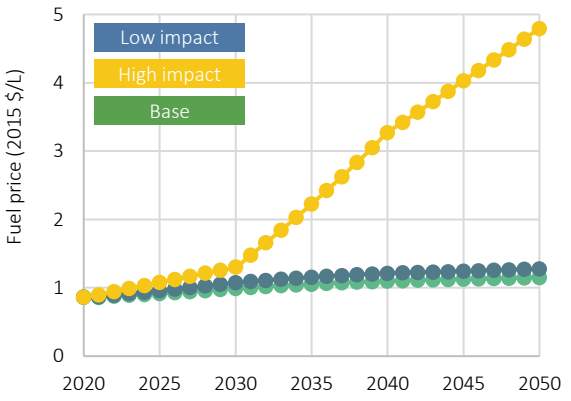
CAPEX[1]		OPEX
Decreasing battery costs	Decreasing PV costs	Fuel price variation (genset OPEX)
We assess the impact of decreasing costs of battery in our sensitivity analysis because: ▸ Battery CAPEX is expected to decrease[2] in the following years under several scenarios ▸ It is currently the most significant CAPEX cost incurred, hence if reductions materialise, the NPV of the Donald site may improve ▸ A risk to this forecast is the increase in raw material cost yet to be observe in current unit cost predictions	PV cost variability is also considered because: ▸ PV CAPEX is highly likely to decrease further in the following decades as shown below ▸ This drop in costs would entail higher profitability of PV installation hence benefiting the business case for microgrids	Fuel price variation sensitivity is assessed because: ▸ Fossil fuel price variations are likely to increase due to supply chain constraints ▸ Genset OPEX is primarily driven by fuel price, and will be used as a proxy variable



Battery cost projections in Australia based on R&D scenarios (CSIRO, 2021)



Commercial PV cost projections in the US based on R&D scenarios (NREL, 2020)

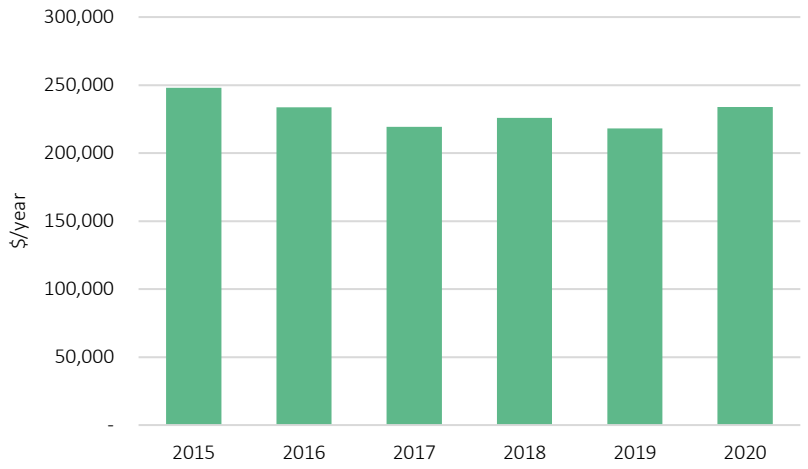


Fuel price trends 2020 – 2050 under 3 scenarios defined by Enerdata

Note: [1] due to the pre-feasibility nature of this study, ancillaries (e.g., switchboards, transformers) have not been studied [2] excepting fixed costs
Sources: CSIRO, NREL, Enerdata

Given microgrid's usefulness with respect to network reliability it is important to further explore the model's sensitivity to this

Network benefits[1]



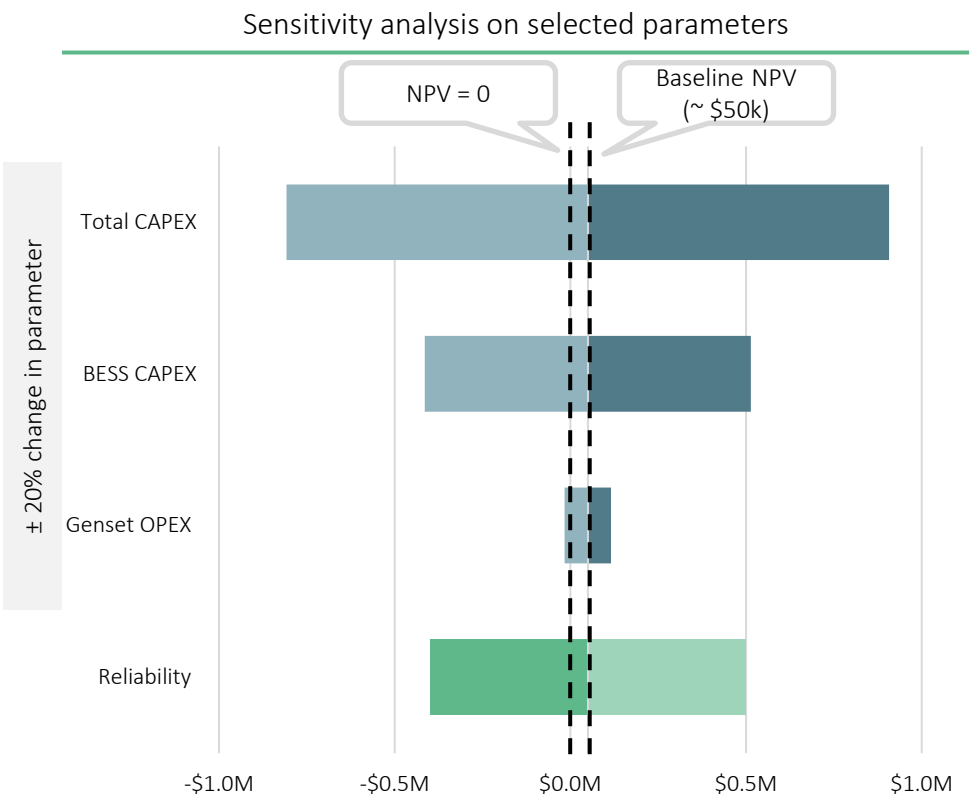
Variation in reliability benefits for 2 MW Donald microgrid across 6 years (from Enea toolkit)

Reliability

Reliability impacts on the Donald MG concept's financial viability will be evaluated because:

- Reliability was the key differentiator between financially viable sites and those with negative NPV, and was flagged as an issue within the GWMWater site
- Large variations in reliability benefits across the microgrid project lifetime could impact the financial viability of the Donald microgrid
- It is not certain how climate change and server weather events will impact network reliability in the future

Changes in CAPEX could result in the largest impact on NPV, while reliability benefits would also play a role in microgrid viability



Discussion

- When assessing the impact of cost and benefit variability, we observe that a 20% decrease in total CAPEX could result in a significantly positive NPV for the 1.6 MW Donald MG, mainly driven by BESS CAPEX reduction
  - This is expected as the CAPEX of the BESS is 40 – 45% of the total CAPEX
- CAPEX reductions are expected in future, as detailed in the prior conversation, driven by the falling costs of batteries and associated ancillaries
- On the other hand, genset OPEX variations, driven by the change in fuel price, do not significantly impact the NPV
- Change in reliability benefits would result in an 9x change in NPV, from a low base ~$50k, with decreases in reliability reducing the viability of the microgrid proportionally
- To best understand the commercial viability of the 1.6MW microgrid concept, further detailed analysis of cost and benefit, appropriate for a feasibility assessment, should be undertaken – this scope aims to qualify options using pre-feasibility assessment methods

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Reliability issues on the network appear as a key driver for viability of microgrid opportunities on the Powercor network

The shortlisting process identified 55 sites that were suitable for microgrids, shortlisted based on:

- Maximum load at each DSS or cluster of DSSs
- Prevalence of reliability issues
- Planned network AUGEX projects

These sites were evaluated using the Enea toolkit for grid-connected microgrids, which also calculated microgrid component sizes based on the maximum load at the cluster of DSSs. The costs of the microgrid were then calculated based on the size. Of these shortlisted sites only 12 showed potential for financial viability, with ~$18.5M of aggregate net value to be gained, based on overall societal benefits that may be achievable.

Some key observations were made based on the results:

- Reliability issues on the network appear as the key driver of the positive NPV at the top viable sites identified, and more generally across all NPV positive sites, too
- As reliability was assessed based on a relatively short historical record, it is likely the top sites are emphasised due to recent weather events, and a more thorough probabilistic analysis would be required to identify which sites are most susceptible to experience severe storms
- CAPEX deferral has a marginal impact and was absent in the viable sites identified. It can still provide some value to a microgrid opportunistically (up to $1.5M NPV across sites modelled)

The concept 1.6 MW microgrid seems more promising than the 2 MW microgrid, and could be improved further by funding from ARENA

Two microgrids were identified for Donald:

- 1.6 MW – concept microgrid in consultation with CPPAL and GWMWater, consisting of the GWMWater site and other residential and industrial loads
- 2 MW – sized according to the toolkit sizing principles to meet the max load of 1.6 MW from the concept microgrid

The 1.6 MW microgrid was marginally positive, at ~$50k, while the 2 MW microgrid had an NPV of ~ -$370k, however excluding non-STPIS events results in both microgrid opportunities being financially unviable.

An objective of the project was to explore and understand ARENA RAMPP opportunities and requirements

- Funding is based on the total project CAPEX, and significant contribution through ARENA would be required to achieve the societal benefits shown in the NPV values
- RAMPP funding guidelines have stated that a project can be considered financially feasible even if some grant funding is required for it to be viable
- Additionally, the program is likely to offer funding of $1M – $5M, and it can be assumed that a microgrid requiring less funding from ARENA with a strong community and other benefits detailed would be preferred
- Given the marginally positive NPV of the 1.6 MW, the case for funding maybe more favourable for the concept microgrid however additional project costs would need to be considered.

A sensitivity analysis was conducted on the 1.6 MW microgrid to understand the impacts of changing CAPEX, fuel prices (i.e., genset OPEX), and changes in network requirements

- The results show that CAPEX variation results in a major shift in NPV. A ±20% change in total CAPEX led to a greater than 10x change in NPV, however this is due to the low baseline NPV of ~$50k. Improvements in BESS CAPEX also see similar results, though to a lesser extent
- Additional financial modelling of the 1.6 MW microgrid cost and benefits would be required to ascertain the more detailed understanding of the financial viability

Note: All discussion is related to results from a customer reliability perspective, unless stated otherwise.

Potential next steps include a detailed financial analysis of the 5 viable sites, and understanding RAMPP funding opportunities

Undertake feasibility assessments and detailed financial modelling of the 1.6 MW concept microgrid for Donald to further understand the opportunities for available RAMPP funding or other government schemes

Engage in discussions with project collaborators to:

- Explore the risk and investment appetite of the players regarding microgrids
- Identify any potential factors that may improve the business case for the Donald microgrid

Explore further the financially viable microgrid opportunities by:

- Conducting detailed financial modelling of the opportunities that takes into account the fact that microgrids identified are a result of variable weather events and that projects may need to be justified through other economic lenses
- Engaging with any local stakeholders, community groups or other utilities to identify potential project collaborators

Study in more detail the marginally viable or unviable sites, as they may have non-financial benefits which would create a strong case for ARENA RAMPP funding.

Engage with CPPAL's regulatory team to consider the strategic aspects of microgrids, which may include recent AEMC rule changes on microgrids, and upcoming regulatory reset which is likely to include network resilience as a key theme.

Explore the impacts and frequency of severe weather events, and the benefits a microgrid can bring through improved reliability and resilience

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