Ironbark Sustainability

Future Energy Planning
FINAL REPORT

NAGA NORTHERN ALLIANCE FOR GREENHOUSE ACTION

EAGA EASTERN ALLIANCE FOR GREENHOUSE ACTION

Funded By:

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About Ironbark Sustainability

Ironbark Sustainability is a specialist consultancy that works with government and business around Australia by assisting them to reduce energy and water usage through sustainable asset and data management and on-the-ground implementation.

Ironbark has been operating since 2005 and brings together a wealth of technical and financial analysis, maintenance and implementation experience in the areas of building energy and water efficiency, public lighting and data management.

Ironbark provides public lighting support nationally around technology advice and approvals, business cases and projects. Ironbark delivers strategic and specific advice and support for the establishment of effective environmental management systems for government and business clients. We pride ourselves on supporting our clients to achieve real action regarding the sustainable management of their operations.

Our Mission

Ironbark's mission is to facilitate progressive sustainability outcomes through practical and realistic support for council's and their communities.

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1 Glossary

AER	Australian Energy Regulator
Alliances	Greenhouse Alliances formed by local government (includes (CVGA, EAGA, NAGA, SECCCA and others)
CEG	Community Energy Group
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CVGA	Central Victorian Greenhouse Alliance
DAPR	Distribution Annual Planning Report
DELWP	Department of Environment, Land, Water and Planning
DM	Demand Management
DNSP	Distribution Network Service Provider
EAGA	Eastern Alliance for Greenhouse Action
ENA	Energy Networks Australia
ESD	Ecological Sustainable Design
EUA	Environmental Upgrade Agreement
GBGA	Goulburn Broken Greenhouse Alliance
Greenfields	Undeveloped land in a city or rural area
MAV	Municipal Association of Victoria
MOU	Memorandum of Understanding
MSS	Municipal Strategic Statement
NAGA	Northern Alliance for Greenhouse Action
NEM	National Energy Market
PIA	Planning Institute of Australia
PSP	Precinct Structure Plan
RIT-D	Regulatory Investment Test - Distribution
RIT-T	Regulatory Investment Test - Transmission
SECCCA	South East Councils Climate Change Alliance
UDP	Urban Development Program
VPA	Victorian Planning Authority

2 Executive Summary

The electricity market is changing at a rapid pace, becoming more complex, more distributed, more diverse. It is driving reactive and proactive responses from a larger and broader range of stakeholders. This change is highlighting a need for improvements to collaboration between key sector stakeholders to ensure the most optimal outcome for the community.

The Northern and Eastern Alliances for Greenhouse Action (NAGA and EAGA) have been working intensively in this space with their member councils. The alliances recognised the need to improve the collaboration between local councils (their constituency) and Distribution Network Service Providers (DNSPs). Energy Consumers Australia provided funding for NAGA and EAGA to deliver a project with respond to this issue based on the following objectives:

Timing	Objective
Short term	• *facilitate engagement between land use/strategic planners in the state and local government sectors and electricity distribution network planners*
Medium term	• *share data between parties to deliver improved forecasting and more efficient infrastructure planning* • *develop resources to assist in the identification of cross sector initiatives, particularly in areas of the network that are constrained; and* • *identify initiatives in each DNSP region that meet the needs of all parties and improve targeting of energy consumers for participation in energy programs (e.g. retail precincts, households)*
Long term	• *cross sector initiatives are effectively scaled and replicated across DNSP regions* • *households and small businesses are direct beneficiaries of more efficient network investment and play a greater role in collaborating on solutions to network constraints* • *households and small businesses have equitable access to new products and services across the network*

Carrying out this work involved investigating the changing energy landscape, current planning processes (Local Government and DNSPs), types of technologies and projects that are of interest to both parties and areas where short, medium and longer term reform is required to policies and processes. NAGA and EAGA engaged Ironbark Sustainability, a specialist local government sustainability consultancy with extensive experience in dealing with local DNSPs to support the delivery of the project.

The project process involved:

1. **Background research –** stakeholder engagement and desktop research to understand the context at a deeper level.
2. **Conference –** bringing 100 industry/sector stakeholders from local ,state government and DNSPs as well as other greenhouse alliance members to discuss current processes and projects, and identify areas for further detailed exploration in a workshop setting.

Figure 1: Future Energy Planning conference

3. **Webinars –** to further build capacity and knowledge around the land use and network planning process and how this can or could impact and or support each other.
4. **Workshops –** with each DNSP and council members from within their distribution area to discuss opportunities for collaboration and process/policy changes to improve the energy planning process and general and specifically with regard to new energy technologies.
5. **Outcomes Report –** defining a range of short, medium and long term actions arising out of the project.

Discussion of street lighting and street tree management was deliberately avoided during this project. This is because these topics have alternative processes for discussion between local government and DNSPs and are a significant area of collaboration currently.

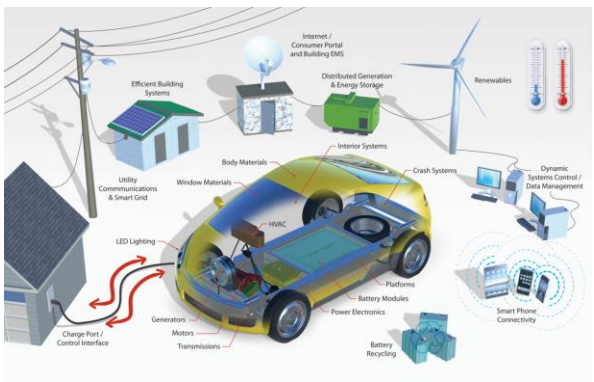
2.1 Key Findings

Key findings are that local government and DNSPs currently do not collaborate systematically in a wide range of areas. This lack of co-ordinated collaborating means that land use and network planning decisions are less efficient and effective than they could be.

There are effective processes and lessons that can be taken from the water sector on this cross sector collaboration including in the overall design of engagement, referrals and funding.

There are current barriers to effective planning decisions because of a lack of understanding of the processes and language utilised by land use and network planners. In addition the use of referrals between local government and DNSPs is commonly ad hoc and varies widely. Overall the powers within the planning system are poorly utilised to improve the outcomes for energy planning.

Within each DNSP and within councils there are highly variable approaches to utilising demand management practices and the piloting and use of future energy technologies. This varying level of sophistication and activity, combined with consistent agreement by DNSPs and local government to improve the way these are delivered, provides fertile ground for the design and implementation of effective and systematic approaches to the delivery of demand management and future energy technologies.



2.2 Key Actions

The project revealed multiple opportunities to achieve a more collaborative and integrated approach to the energy system between local and state government and electricity networks. The following actions range from simple process tweaks through to longer-term policy reforms for each key stakeholder:

State Government

- Work with MAV, DNSPs, PIA and DELWP (VPA) on developing an industry capacity building piece that covers:
    - Where statutory and strategic planners could better collaborate with DNSPs

  - Consult with DNSPs during the Growth Area Planning Process
  - Develop capacity building/training for council planners
  - Updates to the provisions of Section 66 (Referral and Notice Provisions) of the State Planning Provisions.
- Annual meeting between DNSPs and Victorian Planning Authority
- Update the State Planning Provisions and relevant Planning Guidelines and practice notes to better support the uptake of new energy technologies

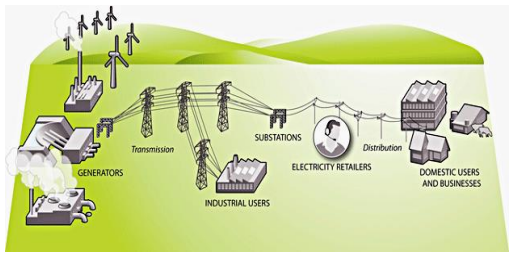
Local Government

1. Co-ordinate a statewide delivery model to deliver the recommendations in this report
2. Alliances to explore how councils can assist in delivering the recommendations of the CSIRO/ENA Energy Transformation Roadmap
3. Co-ordinate an annual showcase of collaborative processes/projects between local government and DNSPs to deliver an improved energy system
4. Within the land use planning system:
   - Support State Government actions within this report
   - Support improvements to council planners' energy literacy
   - Collaborate on modifying relevant practice notes and PSP Guidelines to better require consideration of new energy technologies and standards for developers
   - Consider options to incentivise new energy technologies within new developments (inc. removing relevant planning restrictions)
   - Confirm potential to leverage voluntary notification of certain development types under Section 52 of the Planning and Environment Act (as opposed to Section 55) and /or work with the VPA to update the provisions of Section 66 of the State Planning provisions to ensure certain development types are mandatorily referred under Section 55 of the Planning and Environment Act
   - Use Plan Melbourne Refresh as a basis to update Municipal Strategic Statements (MSS) from a sustainable energy and energy planning perspective

DNSPs and local government

1. Share information through workshop and forums as outlined in Section 4
2. Consider broader opportunities to recruit sites for identification and aggregation of demand management and future energy technologies
3. Develop a contact list of key points of contact from each stakeholder
4. Support improved community energy outcomes by:
   - Developing a collaborative process to engage with community energy groups
   - Map strategic goals of community organisations across the state
5. Discuss requirements to future proof new developments
6. Develop an ongoing process for sharing data in a suitable format with councils to inform respective planning processes.

DNSPs



7. Liaise (with councils) with VPA around consultation during the Growth Area Planning Process
8. Consider how to best present constraints map to drive effective planning
9. Develop more transparent and accessible information for local governments to understand network capacity at a local level (e.g. the UE and Jemena constraints maps)
10. Consider how to integrate new energy technology and network constraints for these different size and type developments in a consistent manner within and between DNSPs.

Roles, responsibilities and time frames for delivery of these actions have been defined within this document. All participants conveyed a strong desire to improve existing processes and develop new processes to enable better collaboration on energy planning and uptake of new energy technologies in a more streamlined and integrated manner.

Many of the outcomes and actions arising from the workshops are common across DNSP areas, with some being unique to only one area. Table 1 below outlines the proactive collaboration activities for each DNSP area.

Table 1: Proactive collaborative activities between local government and DNSPS (green cells means explicitly agreed to)

Areas of collaboration	Action item	Ausnet	CitiPower/ Powercor	Jemena	United Energy
Formal communication & collaboration processes	Contact lists				
	Forums	Annual Workshop (bi-annual Planning)	Quarterly Workshop (bi-annual Planning)	Annual Forum	Annual Showcase
	1:1 meetings				
	Agreed statement of collaboration				
	Nominee on Customer Committee				
	Project based MOU				
Planning system change	Data sharing				
	Shared advocacy platforms				
	Reciprocal forum attendance				
	Focus on growth councils				
	Review land use policies				
	Incentivise developers to provide network support solutions.				
	Increase in DNSP/Council annual / period planning and review processes				
	Review Doncaster Hill Process to ID improved energy outcomes for future projects				
Constraint management and future energy technology delivery	Large scale solar				
	Battery storage				
	Energy Upgrade Agreement (EUA)				
	Demand Management	Residential and business		Residential & business	Residential (Summer Saver)
	Street lighting/smart cities				
	Other pilot projects				
Community Energy Engagement	Map strategic goals				
	Develop process for support of Community Energy Groups				
	Plan Regionally on long term goals				

3 Introduction

The electricity market has been changing dramatically in recent times. Demand is growing in certain areas as greater Melbourne continues to expand at the fringe and existing urban areas are intensively redeveloped, while the evolution of energy efficient devices and measures is seeing overall demand drop in other areas. Coupled with this, rapid uptake of solar PV, introduction of electric vehicles and now the availability of battery storage has provided both local government and DNSPs with challenges and opportunities in how they approach their respective planning processes.

Under Victoria's planning system local councils and the State Government develop planning schemes to control land use and development. Similarly, electricity networks plan their electricity networks under the rules and regulations of the National Electricity Market (NEM). Currently, electricity network planning and land-use planning currently occur largely in isolation, meaning long term, viable and sustainable options for integrating demand and supply side opportunities are often missed. Whilst both land use planning schemes and the national energy market objectives intend to serve the long term interest of the community, they cannot do so whilst operating in isolation. Despite the implications land use planning has on local energy use and demand patterns, existing regulatory requirements do not require either sector to synchronise their respective planning processes.

Within this landscape, there is clear alignment between local government and DNSPs strategic objectives and a need for greater strategic cross-sector collaboration. The key cross over drivers between both is around community benefit and reliability of energy supply.

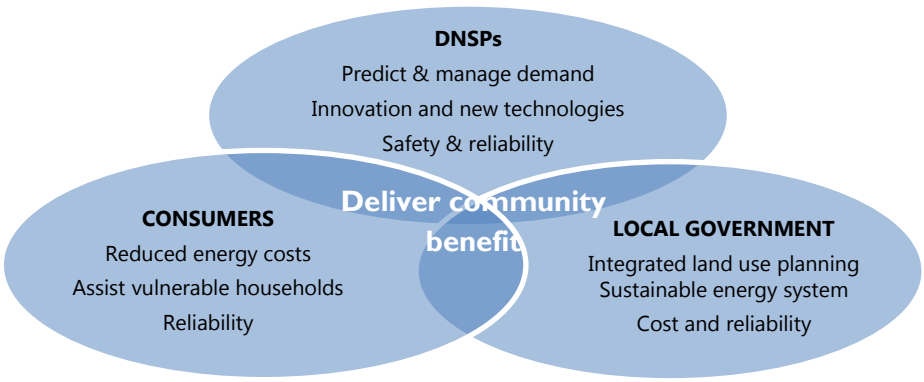


Figure 2: Stakeholder drivers in the energy system

Historically, misalignment has occurred through the DNSPs and local governments approvals processes. This point was unmistakably highlighted in the Planning Minister's Advisory Committee Report (July 2016) on the proposed upgrade to the Brunswick Terminal Station, which found that in relation to regulatory approvals for electricity networks:

> *"There is no clear link between the regulatory approval process for electricity infrastructure in Victoria, and the approval processes under the Planning and Environment Act 1987… Earlier engagement by the Proponent(s) in the land use planning process as opposed to the network regulatory process would very likely have produced a similar or better outcome in a more timely manner."*[1]

Moreover, DNSPs are largely required to demonstrate decisions that are considered efficient from an economic perspective, and are not required to consider significant social and environmental impacts in planning decisions. Although many networks go beyond what is required under regulation as part of their corporate social responsibility, local and state government planning by contrast is required to consider economic, environmental and social impacts.

3.1 Planning Framework

Victoria's population is expected to grow by 16 per cent per annum to 1.9 million people in 2031. This will add 774,000 dwellings in greater Melbourne and 205,000 for the regions over the next 15 years. Where this growth takes place is not evenly distributed and will be concentrated in the outer growth areas of Melbourne and the inner city. How land use planning is managed has strong implications for how energy use and demand patterns evolve over time across a network area.

Currently, government land use planning and DNSP electricity network planning processes operate mostly in isolation from one another. As a result, long term, viable and sustainable options for integrating demand and supply side opportunities are lost, resulting in inefficient investment and higher energy prices. Despite the implications of land use planning for local energy use and demand patterns, existing regulatory requirements do not require either sector to consistently and effectively synchronise their respective planning processes.

DNSPs are currently required to undertake an annual planning review of their network and publish the results of their review in a "Distribution Annual Planning Report" (DAPR) prior to expanding their network. This involves conducting a public cost benefit assessment for projects over $5m, known as the RIT-T in transmission and RIT-D in distribution, to identify the investment option which maximises net public benefits. However, these existing processes have not typically fostered engagement between local governments and DNSP's, despite the potential for collaborative opportunities to deliver non-network solutions. Furthermore, a recent study by the Institute for Sustainable Futures (ISF) has demonstrated that the RIT-D process and associated electricity market rules biases solutions towards infrastructure spending over non-network solutions[2].

For the purpose of this project the energy planning framework is considered to involve all stakeholders who play a role in energy planning supply and consumption at what is known as the distribution level and does not include large-scale centralised generation and transmission of energy. In some instances, it may involve proponents and stakeholders associated with embedded generation at the commercial and "utility scale".

[1] See https://goo.gl/6GkaaU.
[2] See http://bit.ly/2oZZFmx

The key stakeholders of the energy planning process are outlined in Table 2 below.

Table 2: Key Energy Planning Stakeholders

Stakeholder	Description
Energy regulators	Federal and state government energy regulators such as the Australian Energy Regulator, the Clean Energy Regulator and the Essential Services Commission who set the rules and policies for the energy distribution system and participants.
State government land use planning authorities	The state government planning department involved in setting the strategic directions for the land use planning policies and also the land use planning legislation and process that underpin the system
Distribution network planning providers	Planning for the maintenance, upgrade and expansion of the energy distribution network
Local government land use planning authorities	Land use planning as it relates to incremental changes to existing developed areas high impact development in existing developed areas and greenfield development
Advocacy organisations	Organisations that represent community stakeholders around energy policy (e.g. social organisations like St Vincent de Paul Society, renewable energy organisations such as the Alternative Technology Association and business organisations such as the Business Council of Australia)
Project developers	Project developers includes proponents of new urban development, greenfield development, embedded generation projects and demand management projects (these can also be local governments themselves)
Community	The general community for whom which the energy planning process is intended to deliver the best possible outcomes from an economic social and environmental perspective

The opportunities for local government and DNSPs to collaborate are driven by project developers as outlined in **Figure 3**, Energy Planning Framework. These developers can be anything that has an impact on the electricity network and any local government strategic or statutory planning approaches.

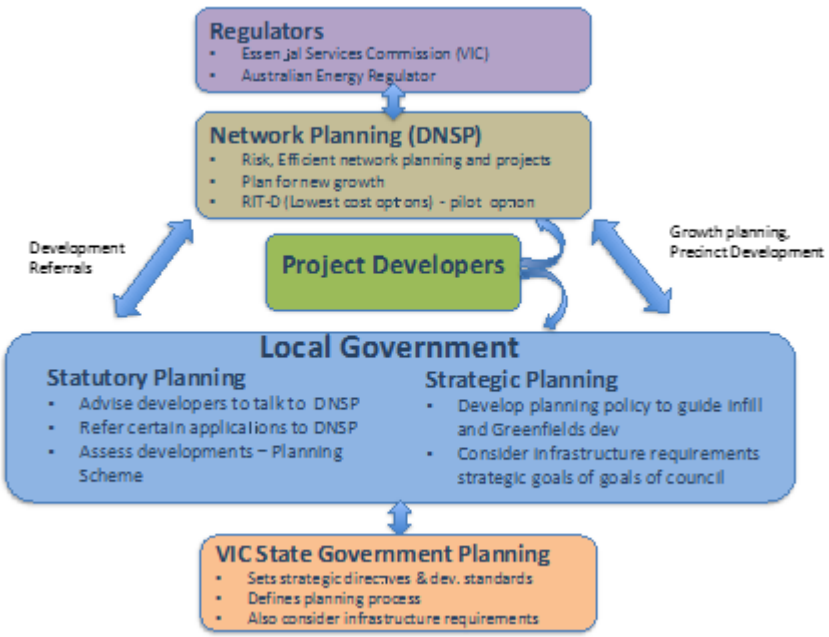


Figure 3: Energy Planning Framework

With the above framework and stakeholder roles in mind, there are three clear areas where it would be beneficial for DNSPs and local government to discuss improved communication channels and areas for collaboration as outlined in **Figure 4** below.

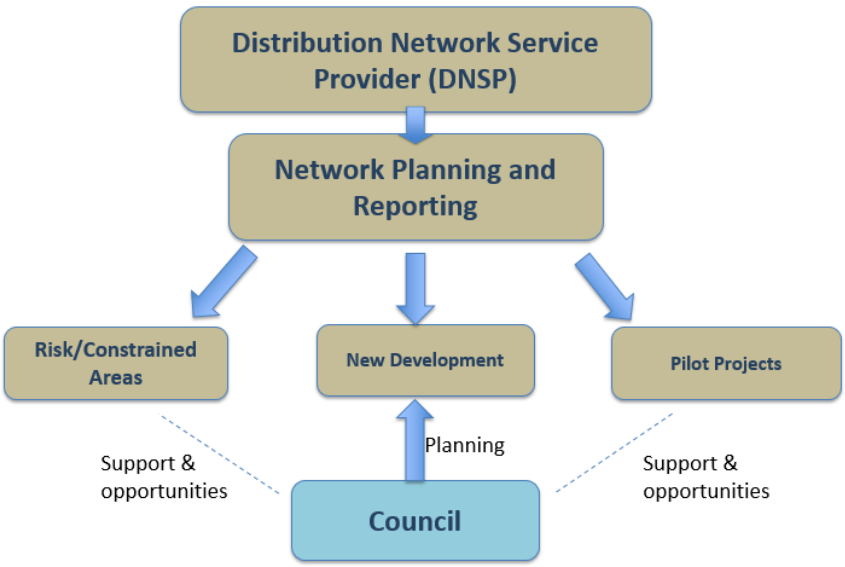


Figure 4: Collaboration Opportunity Areas

These areas are:

- **Pilot projects:** where are the opportunities for DNSPs and local government to collaborate in a changing energy landscape?
- **Network constraints:** what role can councils play in demand management to avert network augmentation and enhance community benefit?
- **Development though the planning process:** what information do councils/DNSPs process that could be beneficial to the other and when and how should this information be shared?

3.2 Future Energy Planning Project

In 2016, The Northern Alliance for Greenhouse Action (NAGA) and Eastern Alliance for Greenhouse Action (EAGA) gained funding from Energy Consumers Australia (ECA) to facilitate the project "Future Energy Planning". The objectives of the project are as follows:

The short-term objective of this project is to:

- *facilitate engagement between land use/strategic planners in the state and Local Government sectors and electricity distribution network planners.*

In the medium term the project seeks to:

- *share data between parties to deliver improved forecasting and more efficient infrastructure planning;*
- *develop resources to assist in the identification of cross sector initiatives, particularly in areas of the network that are constrained; and*
- *identify initiatives in each DNSP region that meet the needs of all parties and improve targeting of energy consumers for participation in energy programs (e.g. retail precincts, households)*

In the long term, the changes include:

- *effective cross sector initiatives are effectively scaled and replicated across DNSP regions; and*
- *households and small businesses are direct beneficiaries of more efficient network investment and play a greater role in collaborating on solutions to network constraints*
- *households and small businesses have equitable access to new products and services across the network"*

The project involved a series of information and workshop processes including a half day conference in October 2016, a background webinar in March 2017 and 5 half day workshops in each DNSP region in March 2017.

The focus of this report is to assess the outcomes from the project and provide recommendations for relevant stakeholders.

3.3 Other Relevant Activities

The following activities are of relevance to the overall scope of the work:

- ENA (Energy Networks Australia) has partnered with CSIRO to develop an Electricity Transformation Roadmap3. The road map aims to guide the transformation of Australia's electricity networks over the next decade from 2017-2027.
  The Roadmap Final Report identifies integrated measures, which can achieve a positive energy future for Australian energy customers enabling choice, lower emissions, lower costs and high security and reliability. Throughout the project it was recommended that the work outlined in this project be referred to ENA to provide a detailed summary of the local government-DNSP collaboration opportunities
- The Victorian Government has specific targets for renewable energy and demand management across the state. As part of this work specific activities to improve the outcomes from the distribution system for demand management, integration with renewables and for planning of the energy system are being actively pursued.
- The "Plan Melbourne Refresh", now "Plan Melbourne 2017 – 2050"[4] was released by the Victorian Planning Authority and included a number of specific references and policies to supporting energy efficiency and renewable energy technologies.
- The Victorian Government called for expressions of interested in delivering large scale energy storage solutions which is anticipated to be the next significant step towards integrated large scale energy storage into the energy network and that proponents will be looking at grid support as part of their proposal.
- The Institute for Sustainable Futures are currently working with electricity networks across the country to provide more transparent information and data on network constraints and opportunities for demand management. The "Network Opportunity"[5] maps although currently only at a higher resolution could nonetheless be useful to councils in understanding network issues in their regions in the absence of finer detailed constraint mapping.

[3] http://www.energynetworks.com.au/electricity-network-transformation-roadmap
[4] http://www.planmelbourne.vic.gov.au/
[5] http://nationalmap.gov.au/renewables/

4 Project Findings

The project process involved several opportunities to discuss and share ideas about the benefits and desire to collaborate in future. Importantly all parties were encouraged to reality check these ideas to whether these areas for collaboration are something they would have the time, interest and inclination to work on in future.

This section outlines the key findings from the project and have been summarised in the following key areas:

- Learnings from the water sector
- Relevant land use planning activities
- Variations in dealing with future energy technologies between DNSPs

4.1 Learnings From the Water Sector

During the half day Future Energy Planning conference in October 2016 feedback was provided around the successful collaboration between local government and water sector authorities in Victoria. This successful ongoing collaboration achieved increasingly improved outcomes with respect to sustainable or integrated water cycle management.

Through discussions with water authorities and local government representatives it was determined that a key driver that led to the current position involved the following:

- Long term capacity building activities with local government around water management solutions such as water sensitive urban design
- Water management attracting significant public and political attention because of long term drought
- The establishment of MOUs between water authorities and councils with regard to data sharing, key contacts, collaboration and roles and responsibilities etc.
- Changes to the States Planning Scheme and in some instances to Local Provisions
- Collaboration between water authorities on funding the delivery of critical water management projects such as storm water harvesting projects and community engagement programs)

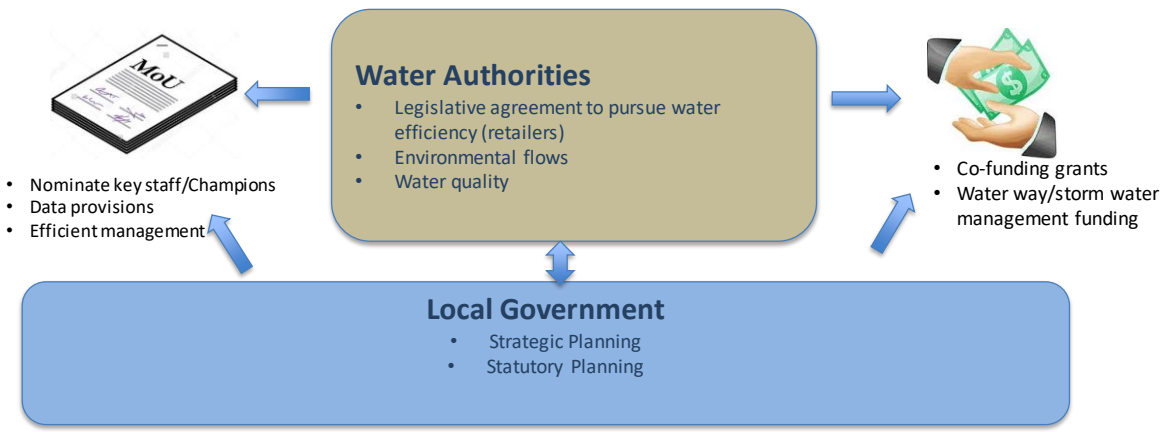


Figure 5: Lessons from the water sector overview

Whilst all of the drivers behind the collaboration are not identical (drought, finite resource etc.) there are clear approaches that can be transferred to the energy industry to improve future energy collaboration and outcomes. These include:

- Training and capacity building
- Clear points of contact
- MOUs and/or agreed areas of focus
- Provision of ongoing funding
- Improved policy settings
- Integrated solutions

4.2 Relevant Land Use Planning Activities

Discussions between Council Planners (Statutory and Strategic) and DNSP Planners were initiated during all workshops and the results were very interesting. These discussions consistently reinforced the preliminary understanding that there is a lack of alignment and collaboration between councils and DNSPs around energy planning.

Before alignment could be found (within the workshops) it was typically necessary to first break down the terminology and process barriers. Both network planners and land use planners have a complex vocabulary and process knowledge that rarely co-exists.

However, discussion for around 30 minutes in each workshop consistently resulted in enough understanding of the high level processes and basic languages of each party to discuss collaboration opportunities. Keys insights and outcomes from these discussions are summarised as follows:

Information sharing (also refer to Section 8)

- The value for sharing information was agreed and clear in all workshops
- Much data is already collected and could be used more effectively by both council and network planners
- What the priority areas for constraint management by DNSPs is poorly understood by councils. The information that is currently produced by DNSPs would require altering to be useful for council land use planning processes

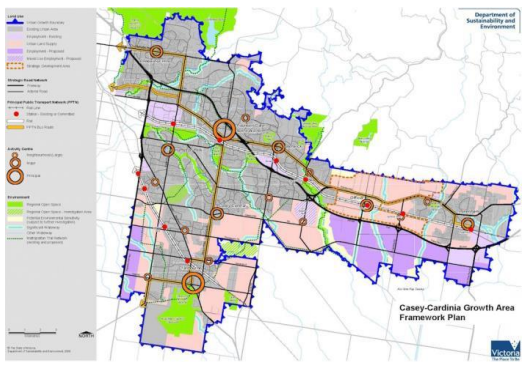


Figure 6 Growth Area Framework Plan

- There is much information that can be shared. Identifying the types of information that are high priority and the ease of collecting and communicating of this data is an obvious next step

Understanding

- Both councils and DNSPs indicated they would benefit from understanding the corresponding planning process and regulatory obligations of each organisation. This understanding was viewed as an obvious next step to being able to more effectively identify and trial better methods of collaboration.

Referrals

- It is rare for a council to consistently and effectively refer development approvals to DNSPs. Identifying which developments to refer and when between the organisations was agreed as a key action

- In general the timing of referrals is as early as possible in the development process to ensure issues such as network limitations and requirements to connect are understood. This is also an appropriate time for planners to encourage developers to consider new energy technologies as part of their development. Consistently the DNSPs were all able to cite examples of where a developer had contacted them late in the planning and development process and even late into the construction process. This delay in referral had resulted in unfavourable outcomes for the developer, including unexpected and costly network upgrade requirements, installing network infrastructure in sub-optimal locations impacting on the amenity of the development and significant time delays
- DNSPs are not always equipped from a knowledge or resources perspective to effectively respond to local government planning referrals. Typically small development applications have templated processes and larger developments can be more nuanced in the implementation of network planning requirements. However, the approaches use dare not consistent and are impacted both by the DNSP processes and the local government processes (as discussed above). It is recommended that DNSPs consider how to integrate new energy technology and network constraints for these different size and type developments in a consistent manner within and between DNSPs.

Use of the planning system to improve energy system outcomes

- Council strategic planners are not currently maximizing opportunities to facilitate proactive and or innovative responses to energy planning for growth area and precinct development. Planners can better draw on the energy related sections of the Precinct Structure Plan Guidelines or more proactively engage with the DNSPs in these processes to explore mutually beneficial solutions
- Growth area councils could explore options for voluntary referral of larger development applications to DNSPs under Clause 52 of the Planning and Environment Act 1987 based on a set of pre-agreed criteria

DNSP communication

- DNSPs are interested in improving their DAPR reports to make them more accessible in terms of language and structure and also include information councils deem useful to their statutory and strategic planning processes. This includes indicated why a particular feeder is constrained as in some instances the feeder constraint is the result of activity that is geographically remote to the actual feeder

4.3 Variations in Dealing with Future Energy Technologies Between DNSPs

Throughout the project there were many technologies and approaches to managing network constraints discussed by councils and DNSPs. There was also strong interest from all councils and DNSPs to hear about what other networks are considering in this space. During the workshops it became evident that there were variations between DNSPs in their approach to new energy technologies and innovation. Below is a summary of the areas of interest discussed in the workshops, it should be noted that where an area is not indicated as an "Area of collaboration" this is because it was not identified by the workshop participants as such (i.e. it has not been specifically ruled out or rejected, in some cases it was simply not discussed).

Areas of collaboration for all DNSPs and councils

- Large Scale Solar
- Battery Storage

Areas of collaboration for most DNSPs and councils (i.e. 3 out of 4)

- Demand Management (including opportunities for leveraging Environmental Upgrade Agreements)
- Supporting community energy groups
- Identifying community led energy goals and targets and supporting their implementation

In addition it was clear that each DNSP and several councils and council regions are involved in very interesting projects with the potential to improve the energy system. These include:

The United Energy Summer Savers Program is a program that works with residents to reduce their energy use on days of high peak demand. This successful program has included collaboration with councils and a similar program is being developed by Jemena.

A program to manage voltage levels to the customer is being trialed. This program has the potential to significantly reduce energy usage by customers. Interestingly UE have indicated there is no direct incentive for this activity (in policy or regulation), however, there is clearly business drivers to support this.

Street lighting management (although not discussed in this project, is an area that includes significant areas of technical innovation (LEDs, smart controls etc.) and whereby all DNSPs are undertaking collaboration pilots and projects around new technologies. In addition there are centralised innovation processes where information across DNSPs is shared.

5 Project Outcomes

The series of consultations have resulted in agreed areas for collaboration and action in each of the DNSP areas. Many of these outcomes are common amongst DNSP Areas, with some being unique to only one area. Table 3 below outlines the proactive collaboration activities within each DNSP area. Those DNSPs/councils who have agreed to the collaboration activity are shaded green, those that are shaded red either did not agree on collaboration or it was not discussed at the workshop.

The areas of interest have been grouped as follows:
1. Formal communication & collaboration processes
2. Planning system changes
3. Network constraint management and future energy technology delivery
4. Community energy engagement

Table 3: Proactive collaborative activities within each DNSP Area

Areas of collaboration	Action item	Ausnet	CitiPower/ Powercor	Jemena	United Energy
Formal communication & collaboration processes	Contact lists				
	Forums	Annual Workshop (bi-annual Planning)	Quarterly Workshop (bi-annual Planning)	Annual Forum	Annual Showcase
	1:1 meetings				
	Agreed statement of collaboration				
	Nominee on Customer Committee				
	Project based MOU				
Planning system change	Data sharing				
	Shared advocacy platforms				
	Reciprocal forum attendance				
	Focus on growth councils				
	Review land use policies				
	Incentivise developers to provide network support solutions.				
	Increase in DNSP/Council annual / period planning and review processes				
	Review Doncaster Hill Process to ID improved energy outcomes for future projects				
Constraint management and future energy technology delivery	Large scale solar				
	Battery storage				
	Energy Upgrade Agreement (EUA)				
	Demand Management	Residential and business		Residential & business	Residential (Summer Saver)
	Street lighting/smart cities				
	Other pilot projects				
Community Energy Engagement	Map strategic goals				
	Develop process for support of Community Energy Groups				
	Plan Regionally on long term goals				

The following sub-sections provide a summary for each DNSP. In addition further detail can be found in the appendices that cover each workshop.

For each of these sections the high level comments on the outcomes are made as well as a summary table of the specific actions within each DNSP area developed during the workshop series by the Local Government, DNSP and State Government attendees. This "Agreed Actions" table also provides a summary of the suggested priority and timeline for the actions. These suggestions have been made during the development of this report based on the importance in improving the collaboration between Local Governments and DNSPs.

Table 4: Priority Scoring System

		Ease		
		High(3)	Medium (2)	Low(1)
Priority	High(3)	6	5	4
	Medium(2)	5	4	3
	Low(1)	4	3	2

The priority levels have been developed based on two elements, a) Priority and the b) Ease of implementation. The scoring system provides each action with a mark of "High" (3 points), "Medium" (2 points) or "Low" (1 point) for each of these elements. These are then added together to provide a priority score, with a possible range of 2 (lowest priority) to 6 (highest priority) as outlined in Table 4 above.

5.1 Key Outcomes: AusNet Services and Local Government

During the workshop process there were many areas of collaboration agreed upon. The tone of the workshop shifted from exploratory to surprise and then through to clear understanding of the range of opportunities to work together. Important outcomes to highlight include:

- Coordinated communication between community, council and AusNet Services with Alliances to provide a key role in grouping councils (NAGA, EAGA, SECCCA, GBGA. Etc.)
- Annual workshops (in regions) for information sharing and project identification
    - Energy planning (July/August)
    - Vegetation management
    - Street lighting
- Coordinated communication between AusNet Services and councils in regards to:
    - Types and timing of referrals
    - Growth area planning
    - Re-zoning
    - Structure planning
- Recommendation that an annual meeting between DNSPs and Victorian Planning Authority which can cover:
    - Implications of regulatory change
    - Challenges and opportunities of new energy generation
    - Storage management technologies

The specific actions agreed to are outlined in Table 5 below. The columns with headings shaded brown were not discussed in depth within the workshops and should be ***considered indicative only***.

Table 5: Ausnet Services and Local Government agreed actions from workshop

Ausnet	What	Specific Action	Time	Responsibility	Priority	Ease	Combined Priority
Communication	1. Communicate effectively between Ausnet and LG's	a) Alliance and Ausnet to develop contact list	Mid 2017	Alliances & Ausnet	H	H	6
		b) Plan annual workshops for information sharing	Annual	Councils & Ausnet	H	M	5
		c) Partners to prioritise and plan key information exchange	Annual	Councils & Ausnet	H	M	5
Planning	1. Confirm referral process between DNSPs and Councils	a) Council and DNSPs to confirm voluntary referrals under Section 52 of Planning and Environment Act 1987 (as well as mandatory referrals in Section 55)	2017	Councils	H	M	5
		b) Work with Victorian Planning Authority to update the provisions of Section 66 (Referral and Notice Provisions) of the State Planning Provisions.	TBC	Councils	M	L	3
	2. Growth Area Planning	Alliances and Councils to liaise with DELWP (VPA) around consultation with DNSPs during the Growth Area Planning Process	2017/18	Alliances & Councils	M	M	4
	3. New developments	DNSPs and councils to discuss requirements to future proof new developments to enable easy integration of new energy technology	Ongoing	Councils & Ausnet	H	M	5
Pilot Projects & Constraints	1. Collaboration to recruit sites for: • Large scale solar • Battery storage • Energy Upgrade Agreements (EUAs) • Demand Management	a) Nillumbik to work with Ausnet on Pilot for Battery Storage and SME engagement.	2017-18	Nillumbik & Ausnet	M	M	4
		b) Consider broader opportunity to recruit sites for aggregation of demand management	Annual	Councils & Ausnet	H	M	5
		c) Specific large scale solar projects to engage with Ausnet (4 councils listed at the workshop)	2017 then annual	Listed Councils	M	M	4
	2. Community Energy	a) Map regionally around long term goals/groups	2017/18	Councils & Ausnet	M	H	5
		b) Develop collaborative process to engage with community energy groups	2017	Councils & Ausnet	H	H	6

5.2 Key Outcomes: United Energy and Local Government

United Energy and Local Government have previously worked together to share information on demand management and network constraints. The level of discussion within the workshop quickly moved to discuss areas for collaboration and updates/next steps to prior discussions. Important outcomes to highlight include:

- Communication activities included contact exchange and an annual showcase of the programs targeted at recruiting new councils and informing them of how the collaborative process is operating. In addition, it was clear that there was a strong interest from UE in as much one-one-one interaction as possible to identify specific projects for scoping and delivery
- An MOU will be developed which includes:
    - Key Objectives
    - Key Activities (including those identified in the workshop)
- United Energy to engage with councils on Summer Savers Program by July of each year
    - Consider the use of the annual DELWP development survey (completed by all councils) to be used as a data set to assist UE and all DNSPs with network planning

The specific actions agreed to are in Table 6 below. The columns with headings shaded brown were not discussed in depth within the workshops and should be ***considered indicative only***.

Table 6: United Energy and local government agreed actions from works

Area	What	Specific Action	Time	Responsibility	Priority	Ease	Combined Priority
Communication	1. Communicate effectively between UE and LG's	a) Develop contact list (EAGA + UE)	Mid 2017	UE & Alliances	H	H	6
		b) Develop MOU for specific projects/programs	2017 and ongoing	UE & Alliances	H	M	5
		c) Deliver annual showcase of programs/projects	Annual	UE & Alliances	H	M	5
Planning	1. Network planning data sharing	Consider the use of DELWP collected data to assist UE and all DNSPs with network planning. Investigate other data sets available and appropriate/common formats.	2017/18	Councils and UE	H	M	5
	2. MOU and Process Review	Review the Doncaster Hill Process and recommend improvements for future precinct planning processes	2017/18	Manningham and UE	M	M	4
	3. MSS in planning schemes to be updated	Council Municipal Strategic Statements to be updated to reflect local carbon reductions plans, changes to Plan Melbourne and the need for land use planning to support the energy network planning processes	2020	Alliances and Councils	M	M	4
Pilot Projects & Constraints	1. Collaboration to recruit sites for: • Large scale solar • Battery storage • Energy Upgrade Agreements (EUAs) • Demand Management • Summer Savers	Annual Collaborative Process to ID/recruit Council and Community sites.	Annual	Councils and UE	H	M	5
	2. Community Energy	d) Identify any needs by councils of UE in providing community energy data to councils across the region	?	Council	M	M	4
		e) Plan regionally around long term goals	2017/18	Councils & UE	M	H	5
		f) Develop collaborative process to engage with Community Energy Groups	2017	Councils & UE	H	H	6
	3. Summer Savers	a) EAGA to send example MOU to UE	Mid 2017	EAGA	M	H	5
		b) Information development	Mid 2017	UE	M	H	5
		c) UE to attend at EAGA/SECCCA /NAGA meetings	Mid 2017	UE	M	H	5

5.3 Key Outcomes: CitiPower/Powercor and Local Government

Two workshops were held in the Citipower/Powercor network, in Melbourne and Bendigo. The results of these workshops varied significantly due to the personnel in the room. The Bendigo meeting involved network planners whilst the Melbourne meeting included a range of DNSP participants from communications, innovation and technology projects as well as network planners. However, both workshops had similar outcomes in terms of planning and as such this summary combines the outcomes of both workshops.

Important outcomes to highlight include:

- Communications to include quarterly workshops to be held (similar to the successful CitiPower/Powercor Street Light Customer Forums) and exchange of key contacts
- Agreement to collaborate on a range of technologies including large scale solar and battery storage
- Modification of relevant practice notes and Precinct Structure Plan Guidelines to integrate new energy technologies and standards into new developments

The specific actions agreed to are outlined in Table 7 below. The columns with headings shaded brown were not discussed in depth within the workshops and should be ***considered indicative only***.

Table 7: CitiPower/Power agreed actions from workshop

Area	What	Specific Action	Time	Responsibility	Priority	Ease	Combined Priority
Communication	1. Communicate effectively between CitiPower/Powercor and LG's	a) Centrally collate information and communicate regularly to all parties. Quarterly meetings	2017 and ongoing	Councils & Powercor	H	M	5
		b) Identify long term goals/groups	2017	Councils & Powercor	H	H	6
		c) Develop collaborative process to engage with Community Energy Groups	2017	Councils & Powercor	H	H	6
		d) Develop contact list (local government and DNSP)	2017	Councils & Powercor	H	H	6
		e) DNSP to develop simple guide to costs/timing/process for developing different scale solar (e.g. >30kW>100kW>)	2017	Powercor	L	H	4
Planning	1. Practice notes and PSPs	a) Collaborate on modifying the relevant practice notes and PSP Guidelines to better require consideration of new energy technologies and standards for developers	By 2020	Councils, DNSPs and DELWP(VPA)	H	H	6
	2. Councils energy literacy	b) Improve Council Planners energy literacy through training courses run by the PIA and/or DELWP(VPA)	By 2020	Alliances (with DELWP/PIA)	H	M	5
	3. Mandatory standards	c) Define network side benefits for higher mandatory standards in certain developments	By 2019	DNSP (with Councils/DELWP(VPA))	M	M	4
Pilot Projects & Constraints	1. Battery Storage	a) DNSP interested in Battery Storage at any scale	Ongoing	Powercor	M	M	4
	2. Large Scale Renewables	b) Councils to provide summary of activities. DNSP to support process.	Annual	Councils	M	M	4
	3. Building Programs	c) Council buildings. Parties variously interested in pilots and projects including battery storage,	Annual	Councils	M	M	4
		d) Community programs from councils (include solar on rooftops, business and residential programs, EUAs etc.)	Annual	Councils	M	M	4

5.4 Key Outcomes: Jemena and Local Government

There was a high level of positive discussion and agreement reached by the stakeholders. As well as exploring the normal planning, constraints and technology issues, Jemena were interested in this forum as an avenue to increase the participation of local government in its regular community engagement processes.

The key outcomes include:

- NAGA to formally nominate a relevant attendee for the Jemena Customer Council
- An agreement to regular and formal communication between all stakeholders including
    - 1:1 sessions to identify relevant projects and planning processes
    - An annual forum to showcase projects
    - Work to develop agreed land use planning referral processes

The specific actions agreed to are outlined in Table 8 below. The columns with headings shaded brown were not discussed in depth within the workshops and should be ***considered indicative only***.

Table 8: Jemena and local government agreed actions from workshop

Area	What	Specific Action	Time	Responsibility	Priority	Ease	Combined Priority
Communications	1. Communicate effectively between Jemena and LG's	a) Jemena to circulate minutes and discuss with NAGA becoming member of Jemena Customer Forum	Mid 2017	Jemena & NAGA	H	H	6
		b) Develop contact list	Mid 2017	Councils & Jemena	H	H	6
		c) Agree to program for collaboration	2017	Councils & Jemena	H	H	6
		d) Deliver annual showcase of programs/projects	Annual	Councils & Jemena	H	M	5
	2. Data Sharing	Councils and DNSPS to share data in a suitable format to inform their respective planning processes and demand forecasting	Annual	Councils & DNSPs	H	M	5
		DNSPs to consider how to best present constraints map to signal where changes in demand can be tangibly effected	1 year	DNSPs	M	M	4
Planning	1. Planning changes	Consider options to incentivise future energy technology in new developments (inc. removing planning restrictions)	3 years	Councils & DNSPs	L	M	3
	2. Confirm referral process	Confirm voluntary notification opportunities under Section 52 of the Planning and Environment Act (as opposed to mandatory referrals under Section 55)	1 year	Councils (with DNSPs and DELWP(VPA)(VPA))	H	M	5
	3. Update Referrals Process	Work with DELWP to update the provisions of Section 66 of the State Planning provisions	3 years	Councils (with DNSPs and DELWP (VPA))	M	M	5
Pilot Projects and Constraints	1. Large Scale Solar a) Dedicated sites b) residential programs	a) EAGA to discuss with Jemena Network Planning b) Standard connections process	Mid 2017	EAGA and Jemena	H	M	5
	2. Micro Grids.	Investigate further during annual project scoping process	Annual	Councils and Jemena	L	M	3
	3. Battery Storage	Councils to provide details of current sites with battery storage. Consider future project collaboration	Annual	Councils	M	H	5
	4. Street lighting and smart cities	Jemena to provide offer to Councils	2017	Jemena	M	M	4
	5. Connections problems.	Hume to discuss with Jemena Networks Team maximum demand issues	Mid 2017	Hume and Jemena	L	H	4
	6. Electric Vehicles	Investigate trial/collaborating on relevant projects	Annual	Councils & Jemena	L	L	2

6 Potential Land Use Planning Changes

The project identified a number of land use planning process changes that would improve the alignment with the network planning processes undertaken by DNSPs. The purpose of this section is to collate these changes in one spot of ease of future reference.

These changes and actions are relevant to councils, DNSPS and the Victorian Planning Authority and is discussed using the following categories:

1. Improve existing processes
2. Improving knowledge

6.1 Development Approval Process

Figure 7 below summarises the suggested changes to the local government development approval process.

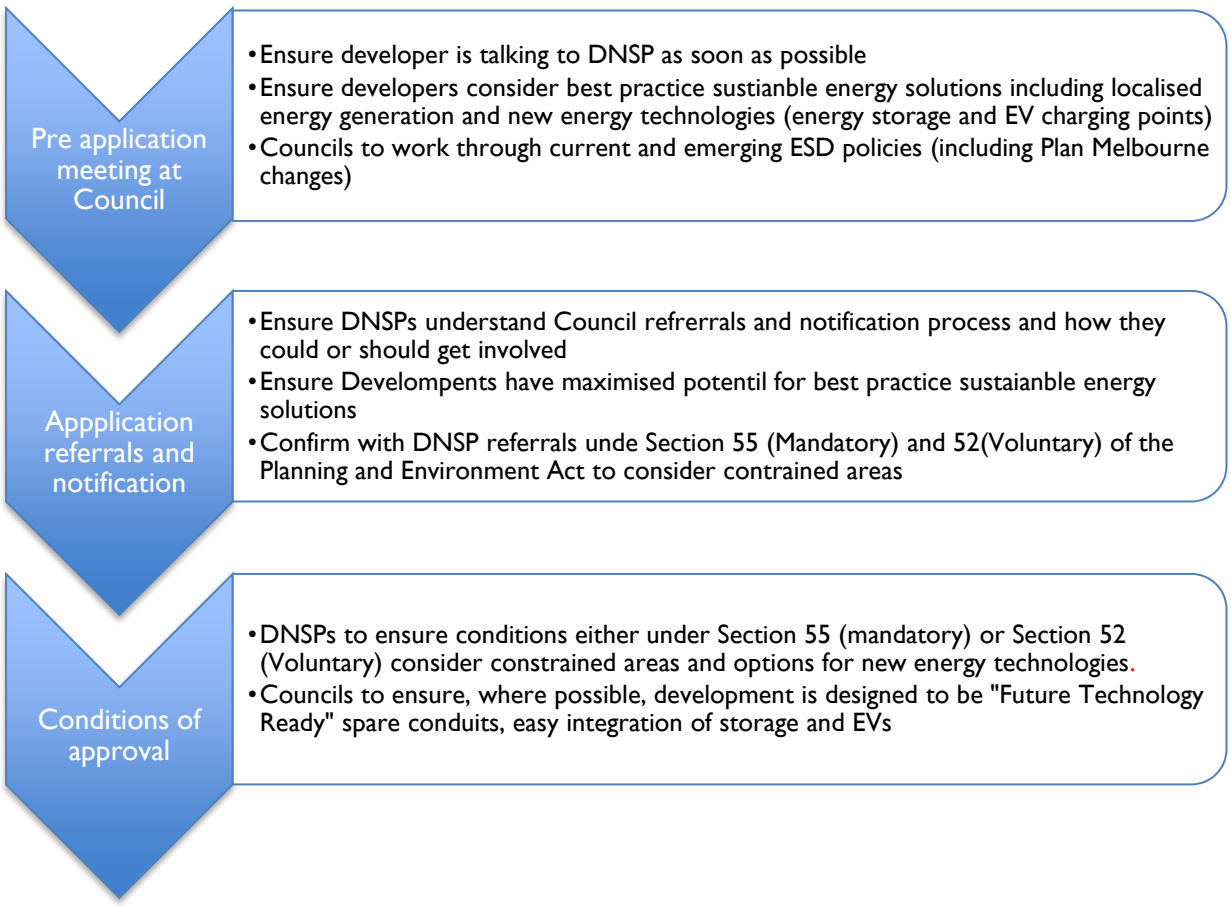


Figure 7: Suggested changes to the development approval process

6.2 Strategic Planning Process for Growth Areas and Precincts

Figure 8 below summarises the suggested changes to the Strategic Planning Process for Growth Areas and Precincts.

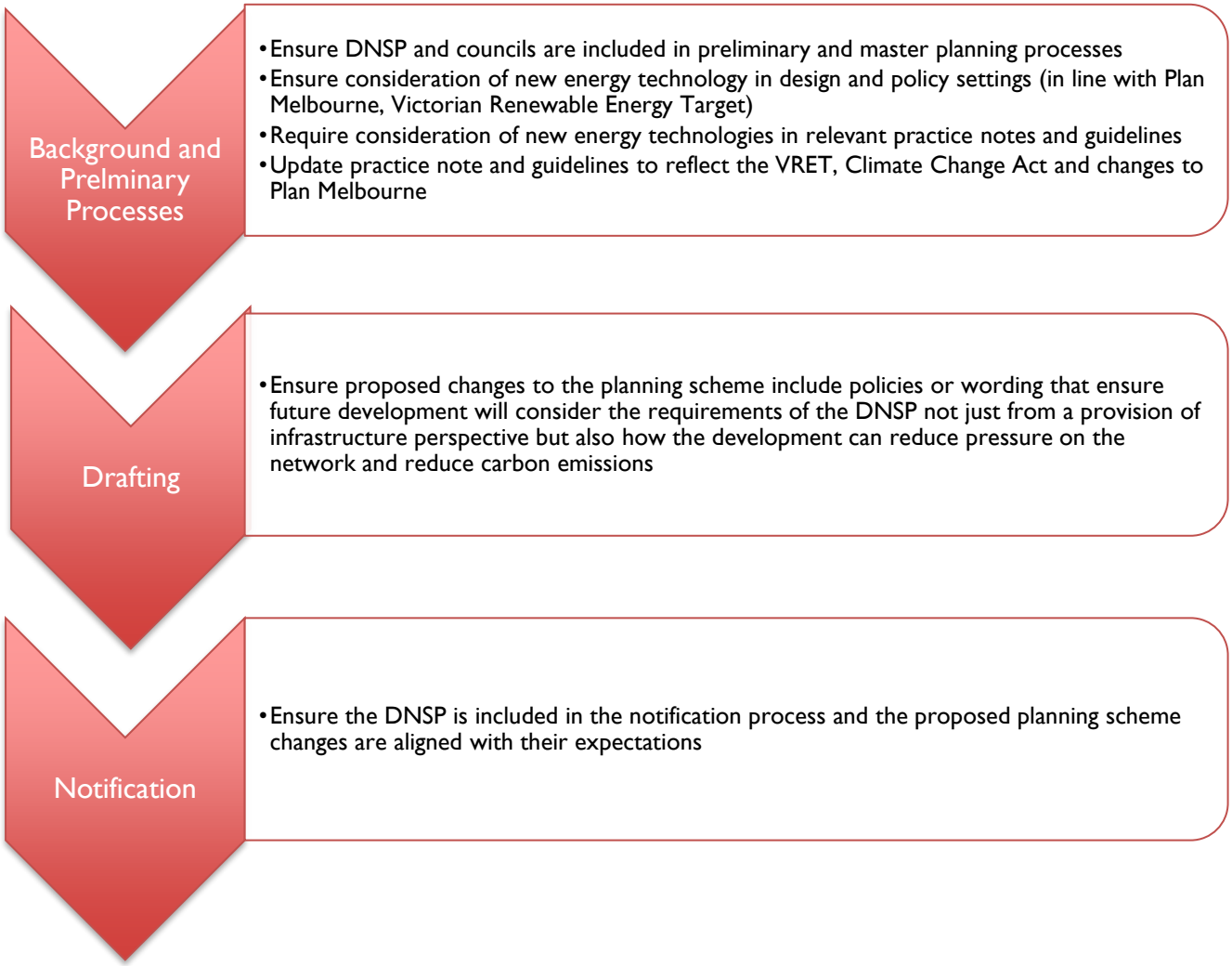


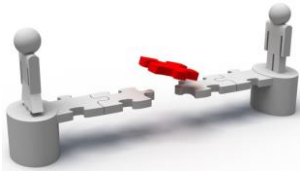
Figure 8: suggested changes to the Strategic Planning Process for Growth Areas and Precincts.

6.3 Improved Knowledge

The project revealed a clear lack of knowledge at the council planning level around energy planning and new energy technologies and how land use planning can impact on these. Similarly DNSPs were largely unaware of the processes local governments utilise in land use planning. Improving this knowledge is expected to significantly improve collaboration and deliver better integrated and mutually beneficial energy planning outcomes. The desire and need to improve this knowledge was recognised by all stakeholders throughout the project and reflected in proposed actions arising out of the workshops and reflected in the recommendations immediately in Section 7.

7 Recommendations

Arising from the work within this program are a number of specific recommendations for State Government, Local Government and DNSPs. These are outlined below.



7.1 Recommendations for State Government

1. Work with MAV, DNSPs, PIA and DELWP (VPA) on developing an industry capacity building piece that covers:
   a. Where statutory and strategic planners could better collaborate with DNSPs on an ongoing basis and at strategic points such as the DAPR reporting process and the four-yearly review of planning schemes
   b. How local planning policies in planning schemes could be updated to better facilitate new energy technology deployment and alignment with council carbon reduction strategies where relevant
   c. Consult with DNSPs during the Growth Area Planning Process
   d. Develop capacity building/training for council planners to ensure effective liaison during the planning process with DNSPs to ensure development design that integrates future energy solutions
2. Annual meeting between DNSPs and Victorian Planning Authority which can cover:
   a. Implications of implementation of RIT-D regulatory processes
   b. Challenges and opportunities of new energy generation
   c. Storage management technologies
3. Update the State Planning Provisions and relevant Planning Guidelines and practice notes to better support the uptake of new energy technologies and align with the State Government Climate Change Act, Renewable Energy Target and Plan Melbourne Refresh
4. Ensure Plan Melbourne Refresh is used as a basis to update councils' MSS calling for lower carbon outcomes in new development and better collaboration with DNSPs
5. Victorian Planning Authority to work with councils and DNSPs update the provisions of Section 66 (Referral and Notice Provisions) of the State Planning Provisions. Currently this clause does not require the mandatory referral (under Section 55 of the Planning and Environment Act 1987) of large developments such as apartment towers or development that will have a significant impact on the network to the DNSP. Improving this referral section would mean better mandatory collaboration between councils and DNSPs in general

7.2 Recommendations for Local Government

This section provides a summary of the key next steps for Local Government as agreed during the workshops.

1. Review the actions outlined in Section 4 of this report for each region and consider which actions can be delivered across the state
2. Consider which agreed/discussed approaches make sense to replicate through a common framework for engagement on future energy planning between local government and DNSPs
3. Ensure there is annual central collation and analysis of approaches for each DNSP area in order to ensure best practice is captured and replicated across areas
4. Within the land use planning system:

   a. Collaborate on modifying the relevant practice notes and PSP Guidelines to better require consideration of new energy technologies and standards for developers
   b. Improve council planners' energy literacy through training courses run by the PIA and/or DELWP
   c. Define network side benefits for higher mandatory standards in certain development
   d. Consider options to incentivise new energy technologies within new developments (inc. removing relevant planning restrictions)
   e. Confirm potential to leverage voluntary notification of certain development types under Section 52 of the Planning and Environment Act (as opposed to Section 55). And /or work with the VPA to update the provisions of Section 66 of the State Planning provisions to ensure certain development types are mandatorily referred under Section 55 of the Planning and Environment Act.
   f. Share land use planning data in a suitable format with DNSPs to inform respective planning processes
   g. Liaise with VPA regarding the consistency and efficacy of consultation with DNSPs during the growth area planning process
   h. DNSPs and councils to discuss and agree requirements to future proof new developments
5. NAGA and EAGA to explore the CSIRO/ENA Energy Transformation Roadmap and process and consider how councils can be involved going forward to ensure the implementation considers opportunities to leverage land use planning policies and plans in local government.
6. DNSP and councils to share information through a range of workshops as outlined in Section 4.
7. DNSPs and councils to consider broader opportunities to recruit sites for identification and aggregation of demand management and future energy technologies
8. Alliances and DNSPs to develop a contact list of key points of contact from each stakeholder
9. Councils and DNSPs to collaborate on community energy by:
   - Developing a collaborative process to engage with community energy groups
   - Map strategic goals of community organisations across the state

7.3 Recommendations for DNSPs

This section provides a summary of the key next steps for DNSPs as agreed during the workshops.

1. DNSP and councils to share information through a range of workshops as outlined in Section 4
2. DNSPs and councils to consider broader opportunities to recruit sites for identification and aggregation of demand management and future energy technologies
3. Alliances and DNSPs to developed a contact list of key points of contact from each stakeholder
4. Councils and DNSPs to collaborate on community energy by:
   - Developing a collaborative process to engage with community energy groups
   - Map strategic goals of community organisations across the state
5. Consider how to best present constraints map to drive effective planning
6. Liaise (with councils) with VPA around consultation during the Growth Area Planning Process
7. With councils discuss requirements to future proof new developments
8. DNSPs work to develop more transparent and accessible information for local governments to understand network capacity at a local level (e.g. the UE and Jemena constraints maps)
9. DNSPs to consider how to integrate new energy technology and network constraints for these different size and type developments in a consistent manner within and between DNSPs.

8 Data and Information Sharing

This section of the report will focus on the sharing of specific information and data types. Agreed upon processes for how this data is shared can be found in 5 Project Outcomes and the relevant DNSP appendices.

In 2015, a United Energy, EAGA and local government strategic planning workshop was held. Data collected through this workshop informed the development of an interactive constraints map tailored for local government and energy distribution sectors. Throughout the duration of the Future Energy Planning project, there was an attempt to get all DNSPs to develop and release a similar map. Of the three DNSPs who had yet to release a network constraints map, only Jemena (along with United Energy) had a map ready for the workshops. AusNet Services attempted to produce a map which was not ready in time for the workshop, while CitiPower/Powercor saw no value in developing a network constraints map in detail greater than what is available through the Institute of Sustainable Futures Network Opportunity Map[6]. This map does not record constraints down to the individual feeder level.

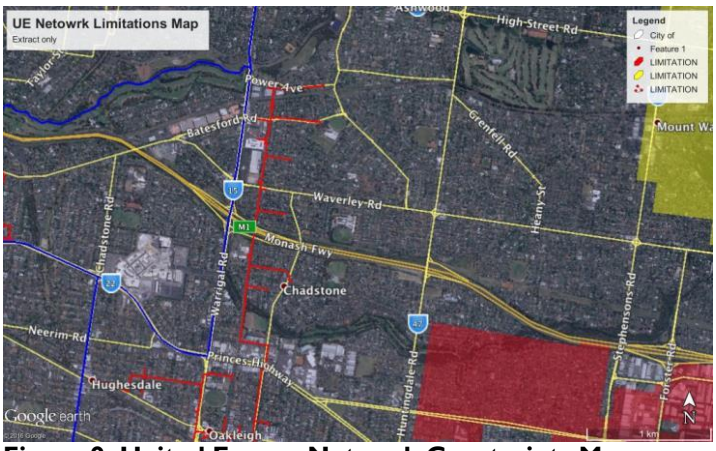


Figure 9: United Energy Network Constraints Map

It is the authors opinion, after consultation with representatives from local government, that network constraint maps including constraints down to the feeder level are far more useful to local government planners than the ISF Map for the following reasons:

- Despite all information on constraints provided in the yearly DAPR reports, maps provide information in a format similar to or the same as local government planning data and is easier to understand than the information dense DAPRs
- Statutory planners assess developments and sub-divisions on a street level which may have implications on feeder constraints
- More detailed maps can be combined with local and state government data on current and approved development. These can more readily identify emerging impacts on constrained areas of the grid and provide lead times for councils and DNSPs to collaborate on supporting non-network solutions.

The objectives of the project included sharing data between parties to deliver improved forecasting and more efficient infrastructure planning. While data such as the network constraint maps were identified prior to the workshops, the workshops themselves provided an opportunity to discuss what types of data each stakeholder processes and what types of data would provide benefits to each stakeholder if shared. In some of the workshops, the format of the data was also discussed. It was clear that a two way flow of information combining current and emerging network issues and development trends would provide a very useful basis for more efficient infrastructure planning.

Table 9 below provides a summary of the key data that the stakeholders agreed to share and the benefits to each stakeholder.

[6] https://www.uts.edu.au/research-and-teaching/our-research/institute-sustainable-futures/our-research/energy-and-climate-1

Table 9: Data types

Type	Agreement to Share	Benefit to DNSP	Benefit to Council
Network Constraints Map (including feeder constraints) A GIS map which highlights network constraints at sub-transmission, zone substation and distribution feeder levels	Ausnet Services United Energy Jemena	• Enables local government to identify development which may impact on capacity of the network	• Easy to digest information • Similar/same format to existing growth plans • Can be integrated into referrals process
Urban Develop Program (UDP) residential and industrial land supply data[7] Utilisation of maps and GIS data, inc. development timelines on: • major residential redevelopment projects in established areas • supply of residential land in Growth Areas • industrial land supply	All DNSP areas *Note: This in publicly available information*	• Improve the accuracy of demand forecasts • Integrating data with network constraint map will highlight areas of proposed development in constrained areas	• Efficient use of resource (i.e. information exchange without additional work for councils)
High level mapping on cumulative approval of small developments Some councils have maps of this data		• More fine grain information on risk to constrained areas from cumulative development	• Improved relationship with DNSP and insight on when to start collaborating with them on non-network solutions
Council GIS Planning/Trend Data Some councils will produce studies aimed at projecting trends for development and generate maps that can shared	AusNet Services Jemena CitiPower/Powercor	• Improve the accuracy of demand forecasts • Highlight areas of proposed development in constrained areas. • Supplementation to UDP data	• Improves energy planning and demand management prioritisation
Contacts A list of key contacts from each stakeholder	All DNSP areas	• Simplifies communication and consultation processes	• Simplifies communication and consultation processes
Community Energy Targets	AusNet Services United Energy CitiPower/Powercor	• Improve the accuracy of demand forecasting	• Collaborate in supporting communities to deliver on sustainable energy goals

[7] https://www.planning.vic.gov.au/land-use-and-population-research/urban-development-program

Existing and new data sets need to be curated in a form that meets the requirements of the respective organisation and its partners. For example, United Energy advised that they can determine what era a house was built by its general location and energy profile. This kind of insight might prove valuable to a council looking to efficiently and effective target community energy projects. Citipower advised they are starting to work with the City of Melbourne on building a spatial database of proposed major retrofits and energy efficiency and renewable energy projects across the CBD so that Citipower can further tailor their network planning actions.

More detailed information is provided in the sections below regarding specific discussions and issues raised relating to sharing data.

8.1 Planning

Improving integrated planning through the use of spatial data is becoming more effective as more data is available and being shared. It enables the managers and planners to better understand relationships and influences within a given spatial area and make more targeted and efficient planning decisions.

In the case of this project it specifically enables managers and planners to see the current and emerging relationships and influence of urban development on the energy network and provide awareness of where new energy technologies could be adopted or integrated as a solution to both emerging network pressure and for community energy goals.

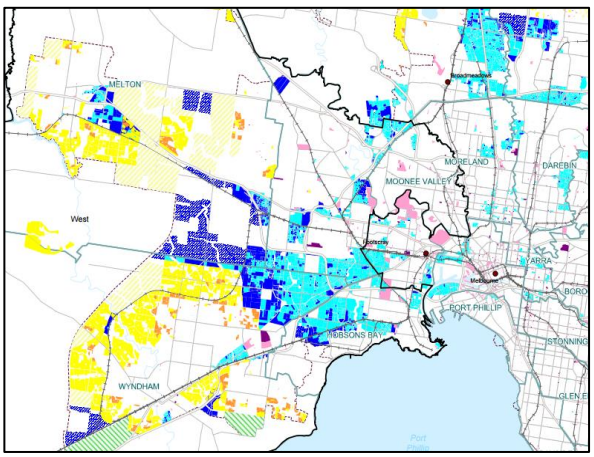


Figure 10:UDP residential and industrial land supply data

Network Constraint Maps

- There is a potential to further develop network constraint maps to improve its value to councils. An example would be to indicate where constraints are and if the constraint has potential to be addressed through demand management solutions or similar, or is related to a broader contextual issue in the network. Importantly the utilisation of these maps for planning referrals and decisions is expected to emerge in a more consistent manner as the data sets are shared and considered.

UPD and council GIS Data

- There is existing data available from councils on development and strategic planning at a state level. Over time as these data sets are used by DNSPs it will be possible to determine if the UDP data is adequate or needs further supplementation by council.

8.2 Constraints and Pilot Projects

Additional data for pilot projects and in demand management programs (to address network constraints) that it was agreed would be useful to share can be broadly categorised as identifying community targets and goals or for identifying specific technology and project opportunities.

Community Energy Targets

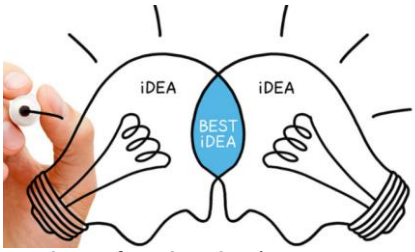
- An understanding of community energy targets and goals was indicated as very useful for DNSP network planners. This information can assist the planners to prioritise different investment decisions when considering network augmentation or deferral projects. It was identified that these targets can be driven from a national, state or local government level goals as well as targets from community energy groups and other key community stakeholders. In particular local and community ked goals were poorly understood and communicated and the data sharing was to be focused on these areas. For local government targets for their own operations as well as broader community targets are of relevance

Future Energy Technology and Demand Management Projects

- All DNSPs expressed interest in understanding the community and corporate projects councils were undertaking. For some of these project types DNSPs already have a process in place that can be delivered to assist in the project scoping and delivery (e.g. large and small scale solar). For some DNSPs the strategic interest was only when projects were above a certain scale (e.g. above 100kW of solar) whilst for other technologies (such as battery storage) then several DNSP s were interested in projects of any scale.
- In terms of demand management different DNSPs were proactive in identifying opportunities to reduce demand (e.g. UE voltage control project) whilst others focused largely on regulatory triggers before embarking on these programs. At this stage there are a small number of specific pilots where councils and DNSPs will work together on and that over time can be expanded to more sophisticated and widespread offerings in both the demand management and technology space.

9 Conclusion

The project revealed the overwhelming and shared desire for councils and DNSPs to improve collaboration on energy planning and future energy technology projects. The energy sector is indeed going through rapid change and all parties are keen to maximise the benefits of this change for their ultimate client – the community.



Maximising the benefits will come about through a better understanding of each other's processes and regulatory obligations, ongoing information and data sharing activities, partnering on new energy technology projects and programs and through policy change, locally where possible or through advocacy to the State Government.

In the short term the key actions will involve simply ensuring relevant contacts and roles and responsibilities are known and currently held data sets are shared. It will also involve reciprocal attendance and presentations at workshops and forums to start the capacity building process.

In the medium term it will involve process and policy improvement to better facilitate an integrated approach to energy planning. It will also involve partnerships to systematically deliver pilots and trials for new energy technologies.

In the long term it will involve working with the State Government, energy regulators and the Energy Networks Association to drive policy change and to ensure the opportunity to improve the future energy planning process and contributions from all stakeholders is fully understood. Long term the projects will move beyond pilots and will support and drive large scale change to the energy sector in alignment with community goals.

To achieve this all parties will need to be proactive and play their part in facilitating actions to bring about the desired changes, partnerships and projects. NAGA and EAGA, with support from Energy Consumers Australia, have been the catalyst for bringing a holistic lense to the current issues and opportunities around Future Energy Planning. To ensure an aligned and integrated approach to future energy planning moves beyond this scoping phase will require the ongoing support and commitment of DNSPs, local and State Government.

Appendix 1 AusNet Services Workshop

On the 7th March 2017, a cross-sector workshop was held between representatives from AusNet Services (the local DNSP) and local government within the distribution area. This workshop included introductory information on the energy system and the roles of local government and the DNSP.

The Agenda for the workshop is as follows:

Agenda

Future Energy Planning
AusNet Service Distribution Area

Date:	Tuesday 7th March	**Time: 9:30-12:30**	
Chairperson:	Paul Brown and Shane Melotte		
Location:	CPA Building, Room 2, Level 20, 28 Freshwater Place, Southbank		

Items

No.	Topic	Presented by	For	Time
1	Welcome • Around the table (who + position) **Recap on conference outcomes and feedback** Outlining Objectives 1. To align stakeholders planning processes to meet their own and support the others objectives	Ironbark	30mins	9:30-10:00
2	**Energy Planning Process Review** • AusNet Service's planning process • Council planning process	Ironbark	10mins	10:00-10:10
3	**Energy Planning Process Opportunities** 3 Groups consisting of Planning, Constraints and Pilot Projects • What specifically do we want to collaborate on • Report Back • Who is it that shares this information and how often is it shared?	 Discussion	**50mins** 20mins 10mins 20mins	**10:10-11:00**
4	Break		15mins	11:00-11:15
5	**Information Sharing** The same 3 groups working through real life projects using outcomes from above discussion	Discussion	60mins	11:15-12:15
6	**Actions and Next Steps**	Discussion	20mins	12:45-12:30
7	**Close Meeting**			12:30

Figure 11: AusNet Services workshop agenda

During Items 3 and 5 workshops on three tables were undertaken for the 25 attendees. The tables discussed collaboration opportunities on the following topics:

1. Planning
2. Pilot Projects
3. Network Constraints

Each group had a facilitator that directed the conversation through:

1. What information (plans, projects and constraints) is there that may be relevant to the overall objective of the workshop?
2. Is there an opportunity for collaboration between AusNet Services and local government regarding the information or project?
3. Who would be involved in the collaboration and what frequency of communication is needed?
4. What are the bigger picture things that need to happen to encourage better communication and collaboration?

At intervals throughout this process, each table was asked to provide a summary report of the discussions back to the whole group.

Below are the results of the table discussions based on the three groups of planning, constraints and pilot projects.

a) Discussions Notes

- Each stakeholder at the table outlined the active programs currently underway around demand management and future energy system activities.
- Ausnet indicated that overall electricity demand in declining and constraints within the AusNet Services distribution area are dynamic and can quickly move. Therefore, *any collaboration based on a particular constraint should not be dependent on long term plans.*
- AusNet Services stated they do have demand management contracts with industrial users, however these contracts have a minimum of 100kW's of demand management. For local government to play a role in contracts such as this, they have the potential to play the role of aggregator or supporter of these programs to create scale.
- Distributed energy sources are only useful to AusNet Services if they can be controlled by the network
- There is an interest in education for local government of the changing energy landscape and the effects on the network
- Customer engagement team is the best point of contact within AusNet Services, they will funnel the request/query to the correct team/individual.

- DNSP Planning process is in transition due to changes in regulations and also moving to deliver more "accessible" reports. Opportunity to ensure the new process addresses improving collaboration with councils planning teams and alliances.

b) Key areas of high level collaboration:

There are a wide number of areas for collaboration. Some of these are high level and strategic and some involve specific projects and actions. To assist in shaping this the following key outcomes were agreed upon:

- A contact list from Ausnet Services and councils of all relevant staff for the different areas to be compiled

6. Coordinated communication between community, council and AusNet Services with alliances to provide a key role in grouping councils (NAGA, EAGA, SECCCA, GBGA)
7. Annual/Bi-annual workshops (in regions) for information sharing and project identification
   a. Energy planning (July/August)
   b. Vegetation management
   c. Street lighting
   d. Update contacts
   e. Regulatory/policy change
   f. Improved engagement
   g. Future ready development
8. Data sharing –
   a. GIS planning
   b. DELWP(VPA)
   c. Constraints data
9. Shared advocacy platforms
10. Reciprocal forum attendance

c) Detailed areas for Collaboration:

Table 10: AusNet Services and local government agreed actions

Area	What	Specific Action
Planning	1. Confirm referral process between DNSPs and councils	Confirm referral process under Section 52 of the Planning and Environment Act 1987 (in addition to mandatory referrals under Section 55)
		Work with Victorian Planning Authority to update the provisions of Section 66 (Referral and Notice Provisions) of the State Planning Provisions
	2. Growth area planning	Alliances and councils to liaise with DELWP(VPA) around consultation with DNSPs during the growth area planning process

	3. New developments	DNSPs and councils to discuss requirements to future proof new developments to enable easy integration of new energy technology
Pilot Projects & Constraints	1. Information sharing	Partners to prioritise and plan
	2. Collaboration to recruit sites for demand management outcomes Future energy technology delivery, including • Large scale solar • Battery storage • Energy Upgrade Agreements (EUAs) • Demand Management	Nillumbik to work with Ausnet Services on pilot for battery storage and SME engagement. Specific large scale solar projects to engage with Ausnet Services (4 councils listed at the workshop)
	3. Community energy	c) Map regionally around long term goals/groups d) Develop collaborative process to engage with community energy groups
	4. Communicate effectively between Ausnet Services and local governments	1. Alliance and Ausnet Services to develop contact list 2. Plan annual workshops for information sharing

Below in a collation of the discussions held at the AusNet Services workshop grouped into communication, planning, constraints, and pilot projects.

d) Communication Opportunities

Table 11 Areas for improved communication/collaboration table during discussions

What	Collaboration
Data sharing • DNSP would like council to appoint key contact to act as triage/conduit	Yes. Yearly/half yearly meetings? Include alliances
Referrals • Councils to ensure that developers are being referred to the DNSP as earlier as possible in the development lifecycle so that the energy supply needs and network impacts can be understood. This also presents an opportunity for the developer to be educated about new energy technology opportunities for their development.	

• Voluntary referrals Councils and DNSP to discuss what the tipping points are for voluntary referral of applications under Section 52 of the Planning and Environmental Act rather than mandatory referrals under Section 55.	Councils and DNSP could explore the triggers for notification and referral and also ensure that requirements being inserted into strategic planning document and planning permits ensure adequate consideration of network implications and new energy technology opportunities
Planning process • Alliances and potentially MAV/PIA to liaise with Victorian Planning Authority of the consistency in consultation with DNSPs during the growth area planning process • Councils and DNSPs to discuss what requirements can be imposed on new developments to ensure they are future ready. This could range from spare conduits in new development projects to specification of electrical infrastructure to enable the future low barrier integration of embedded generation or storage capacity to quarantining land for network infrastructure. • As part of the rezoning, structure planning, and growth area planning process council could require the developer to prepare network feasibility study for the DNSP which outlines which is the anticipated upgrades and changes to the network that will be necessary of what approximate time horizon to service the development enabled by the planning scheme change.	
Annual meetings • DNSPs to ensure an annual meeting is held with the Victorian Planning Authority to discuss the implication of regulatory change, challenges in the network and challenges and opportunity of new energy generation, storage and management technologies and VPA can share emerging strategic directions from a planning perspective such as the introduction of a state wide ESD policy. • DNSPs could get in touch and present at CASBE on their general planning process but also specific Future Energy Planning Projects they are working on • DNSPs to explore holding forums for developers on their general planning process but also specific future energy planning projects they are working on and opportunities for partnerships.	
CSIRO/ENA project • There is an opportunity for councils to get more involved in communicating the potential impacts on and by land use planning	Alliances and MAV can open up this dialogue and determine a process for local government involvement going forward
New developments	

• Councils and DNSPs to discuss what requirements can be imposed on new developments to ensure they are future ready. This could range from spare conduits in new development projects to specification of electrical infrastructure to enable the future low barrier integration of embedded generation or storage capacity to quarantining land for network infrastructure.	
DNSP Planning process • In transition due to changes in regulations and also moving to deliver more "accessible" reports.	Opportunity to ensure the new process addresses improving collaboration with councils planning teams and alliances.

e) Planning

1) DNSP and Council both interested in more consistent engagement with regards to normal planning process and sharing data. DNSP would like council to consider appointing a key point of contact to act as a triage point and conduit. This is considered to be particularly relevant to larger regional Councils and those experiencing significant growth. Meetings could include:
   a) Alliances
   b) Council statutory and strategic planners, economic development managers and capital works team members
   c) DNSP planners and referrals team members
2) Councils to ensure that developers are being referred to the DNSP as earlier as possible in the development lifecycle so that the energy supply needs and network impacts can be understood. This also presents an opportunity for the developer to be educated about new energy technology opportunities for their development.
3) Alliances and potentially MAV/PIA to liaise with Victorian Planning Authority of the consistency in consultation with DNSPs during the growth area planning process.
4) Councils and DNSP to discuss what the tipping points are for voluntary referral of applications under Section 52 of the Planning and Environmental Act rather than mandatory referrals under Section 55. Councils and DNSP could explore the triggers for notification and referral and also ensure that requirements being inserted into Strategic planning document and planning permits ensure adequate consideration of network implications and new energy technology opportunities
5) DNSPs to ensure an annual meeting is held with the Victorian Planning Authority to discuss the implication of regulatory change, challenges in the network and challenges and opportunity of new energy generation, storage and management technologies and VPA can share emerging strategic directions from a planning perspective such as the introduction of a state wide ESD policy.
6) DNSP planning process is in transition due to changes in regulations and also moving to deliver more "accessible" reports. Opportunity to ensure the new process addresses improving collaboration with councils planning teams and alliances.
7) CSIRO ENA Project presents an opportunity for councils to get more involved in communicating the potential impacts on and by land use planning. Alliances and MAV can open up this dialogue and determine a process for local government involvement going forward.
8) DNSPs could get in touch and present at CASBE on their general planning process but also specific future energy planning projects they are working on.

9) DNSPs to explore holding forums for developers on their general planning process but also specific future energy planning projects they are working on and opportunities for partnerships.
10) As part of the rezoning, structure planning, and growth area planning process councils could require the developer to prepare network feasibility study for the DNSP which outlines which is the anticipated upgrades and changes to the network that will be necessary of what approximate time horizon to service the development enabled by the planning scheme change.
11) Councils and DNSPs to discuss what requirements can be imposed on new developments to ensure they are future ready. This could range from spare conduits in new development projects to specification of electrical infrastructure to enable the future low barrier integration of embedded generation or storage capacity to quarantining land for network infrastructure.

f) Constraints

Table 12: AusNet Services collaboration opportunities to ease constraints

<table>
<tr><th>What</th><th>Collaboration</th></tr>
<tr><td>1. Information sharing
• Prioritise information to share (on mapping systems) based on ease and importance
• Dynamic data sharing including development projects and constraints
• Static data sharing including strategic plans and renewable energy planning</td><td>Yes</td></tr>
<tr><td>2. Councils as aggregators of community demand management
• Council facilities to add solar + storage
• Annual process (ID areas (councils to ID opportunities and help recruit)
• Council to ID business case for collaboration with Ausnet Services
<table>
<tr><th>Type</th><th>AusNet Services</th><th>Council</th></tr>
<tr><td>Large energy users</td><td>AusNet Services currently get a 30-40% uptake on their Critical Peak Demand Tariff, which is a demand management program tailored toward users of 160MWh per annum. This program utilises behavior changes and generators.</td><td>Could add EUA to the program (environmental upgrade agreement) to add solar + storage and other offers onto the program.</td></tr>
<tr><td>Small energy users</td><td>Minimum 100kW for AusNet Services to sign up as demand management</td><td>Potential for councils to aggregate businesses</td></tr>
<tr><td>Precincts</td><td colspan="2">Need to identify specific areas (e.g. Doncaster Hill example. Only relevant for specific sites)</td></tr>
</table></td><td>Yes, especially constrained areas.</td></tr>
<tr><td>3. Community energy</td><td></td></tr>
<tr><td colspan="2">3a. Community energy target programs
• Action: Councils to map targets
3b. Community energy groups
Develop collaborative process for working with these groups (detail of proposed process below)
<table>
<tr><th>Process</th><th>AusNet Services</th><th>Council</th></tr>
</table></td></tr>
</table>

Needs community support	Community engagement team	Confirm community support through documentation
Learn about system	Network study	Refer
Scope how to implement		
Implement	Connections team	Celebrate

g) Pilot Projects

Table 13: AusNet Services pilot project opportunities for collaboration

What	Who	Details	Collaboration
Solar projects	Manningham	considering large 450kW solar with battery	
	Banyule	194kW solar	
	Cardinia	In industrial areas	
	Kingston	Solar on landfill	
Demand management	AusNet services	Residential demand response	Site specific
		Air conditioner load control	
Electric vehicles	No current projects but AusNet Services has interest		Possibly

Community energy projects		
Process	**AusNet Services**	**Council**
Pre-approval	Advice and guidance for local government. Development of fact/guidance sheet	
Installation contractor	Advice on tender specs and network requirements	Contract with installer
Note: AusNet Services interested in community energy projects that are of scale and Council has control over the energy distribution (ie: batteries).		

Residential demand response		
Process	**AusNet Services**	**Council**
Community uptake	Provider of program	Advocacy. Co-branding of documentation
Merging of programs	Explore potential to merge AusNet Services residential demand response with existing Council programs	

Appendix 2: CitiPower/Powercor Workshop

On the 14th and 31st of March 2017, cross-sector workshops were held between representatives from CitiPower/Powercor and local government in Bendigo and Melbourne respectively.

The workshops included introductory information on the energy system and the roles of local government and the DNSP.

The Agenda for the workshop was as follows:

Agenda

Future Energy Planning
CitiPower/Powercor Metro Distribution Area

Date:	Friday 31st March	**Time: 9:00-12:00**
Chairperson:	Paul Brown and Shane Melotte	
Location:	Room G4 & G5, CitiPower/Powercor Building, 40 Market St, Melbourne	
Objectives:	To align stakeholders planning processes to meet their own and support the others objectives by: 1. Scope when communications occur between parties within the planning framework (What and When) 2. Scope who communicates to who 3. Discuss other areas of collaboration	

Items

No.	Topic	Presented by	For	Time
1	**Welcome** • Around the table **Recap on conference outcomes and feedback**	Ironbark	20mins	9:00-9:20
2	**Energy Planning Process Review** • CitiPower/Powercor's planning process • Council planning process	Ironbark	20mins	9:20-9:40
3	**Energy Planning Process Opportunities** Three groups consisting of Planning, Constraints and Pilot Projects. • What specifically do we want to collaborate on? • Who is it that shares this information and how often is it shared?	Discussion	**50mins**	**9:40-10:30**
4	Break		15mins	10:30-10:45
5	**Detail** The same groups working through real life projects using outcomes from above discussion	Discussion	55mins	10:45-11:40
6	**Actions and Next Steps**	Discussion	20mins	11:40-12:00
7	**Close Meeting**			12:00

Figure 12: CitiPower/Powercor agenda

During Items 3 and 5 workshops on two tables were delivered[8]. The tables discussed collaboration opportunities on the following topics:

4. Planning
5. Pilot Projects and
6. Network Constraints

Each group had a facilitator that directed the conversation through:

5. What information (plans, projects and constraints) is there that may be relevant to the overall objective of the workshop?
6. Is there an opportunity for collaboration between the DNSP and local government regarding the information or project?
7. Who would be involved in the collaboration and what frequency of communication is needed?
8. What are the bigger picture things that need to happen to encourage collaboration?

At intervals throughout this process, each table was asked to provide a summary report of the discussions back to the whole group.

Below are the results of the table discussions based on these workshops.

a) Discussion Notes

- Powercor see some benefit in 20mWh demand management contracts
- Powercor have, in the past had difficulties in gaining land for electricity infrastructure in big subdivisions

b) Key areas of high level collaboration:

There are a wide number of areas for collaboration and strong interest from both parties to drive the actions that were outlined in the workshops. Some of these are high level and Strategic and some involve specific projects and actions. To assist in shaping this the following key outcomes were agreed upon:

- Quarterly workshops to be held (similar to the successful CitiPower/Powercor Street Light Customer Forums)
- A contact list from CitiPower/Powercor and Councils of all relevant staff for the different areas to be compiled
- Data sharing
    - GIS planning
    - DELWP(VPA)
    - Constraints data
- Work together on reviewing land use policies
- Bi-annual planning meetings
    - Reciprocal capacity building and processes refinement

[8] Part way through the facilitated session topic 2 and 3 (Pilot Projects and Network Constraint) the discussion was combined, after originally being on separate tables.

c) Detailed areas of collaboration

Table 14: CitiPower/Powercor and local government agreed actions from workshop

Area	What	Specific Action
Planning	1. Practice notes and PSPs	Collaborate on modifying the relevant practice notes and PSP Guidelines to better require consideration of new energy technologies and standards for developers
	2. Councils energy literacy	Improve council planners energy literacy through training courses run by the PIA and/or DELWP(VPA)
	3. Mandatory standards	Define network side benefits for higher mandatory standards in certain developments
Pilot Projects & Constraints	1. Communication. Areas to communicate include contacts of relevant staff, engagement process for community, constrains maps and specific projects of interest (see further comment below).	5. Centrally collate information and communicate regularly to all parties. Quarterly meetings 6. Identify long term goals/groups 7. Develop collaborative process to engage with community energy groups 8. Develop contact list (local government and DNSP) 9. DNSP interested in battery storage at any scale 10. DNSP to develop simple guide to costs/timing/process for developing different scale solar (e.g. >30kW>100kW>)
	7. Community energy (see summary table below for more detail)	a) Strategic community goals (e.g. some councils are transitioning from gas to electric, other have 100% renewable goals. These are of interest to the DNSP as it will impact on network planning b) Engagement with community energy groups
	8. Large scale renewable energy. Councils are involved in project scoping.	Councils to provide summary of activities. DNSP to support process.
	9. Energy efficiency and renewables	a) Council buildings. Parties variously interested in pilots and projects including battery storage, b) Community programs from councils (include solar on rooftops, business and residential programs, EUAs etc.)

d) Planning

1) DNSP and Council to engage with each other more consistently engagement with regards to normal planning process and sharing data. DNSP would like council to consider appointing a key

point of contact to act as a conduit, especially for larger regional councils and those experiencing significant growth. Meetings could include:
   a) Alliances
   b) Council statutory and strategic planners, economic development managers and capital works team members
   c) DNSP Planners and referrals team members
2) Councils could work with alliances and DNSP to function as an aggregator or facilitator for demand management projects in partnership with private entities providing this service such as Greensync. This would enable the scale required to have a genuine impact on addressing grid constraints.
3) DNSP is interested in working with councils and/or DELWP to help define the network side benefits of higher mandatory standards with regard to energy efficiency, renewable energy and energy storage in new developments and targeting of these standards in specific parts of the network.
4) Councils, DNSPs and DELWP(VPA) to collaborate on modifying the relevant practice notes and Precinct Structure Plan Guidelines to better require the consideration of new energy technologies and standards being imposed on developers.
5) DNSP to explore presenting at relevant regional forums to talk about regulatory changes affecting network managers, technology changes and the nexus with land use ad development planning. This could be done in partnership with alliances and councils. Forums could include but not be limited to:
   a) Regional Planning Forums run by DELWP(VPA)
   b) MAV conferences and forums
   c) PIA conferences and forums

6) Alliances to carry forward advocacy for changes to the State Planning Policy Framework to better facilitate energy planning and the uptake of new energy technologies
7) Alliances to seek improvements to planners energy literacy through training courses run by the Planning Institute of Australia and/or DELWP(VPA) and part of their ongoing professional development requirements and points.

e) Pilot Projects and Constraints

Table 15: CitiPower/Powercor community energy groups notes

What	Collaboration
Regular meetings • DNSP and Council both interested in more consistent engagement with regards to normal planning process and sharing data. DNSP would like council to consider appointing a key point of contact to act as a triage point and conduit. • DNSP to explore presenting at relevant regional forums to talk about regulatory changes affecting network managers, technology changes and the nexus with land use ad development planning.	Meetings could include: a) Alliances b) Council statutory and strategic planners, economic development mangagers and captial works team members c) DNSP planners and referrals team members a) Regional planning forums run by DELWP(VPA) b) MAV conferences and forums c) PIA conferences and forums
Demand management • Scale required for collaboration	Council as aggregator/facilitator
Mandatory standards in new developments • Define the network side benefits of higher mandatory standards with regard to energy efficiency, renewable energy and energy storage in new developments and targeting of these standards in specific parts of the network	DNSP work with Council/DELWP(VPA)
Council Planning process • Councils, DNSPs and DELWP(VPA) to collaborate on modifying the relevant practice notes and Precinct Structure Plan Guidelines to better require the consideration of new energy technologies and standards being imposed on developers.	
Advocacy • Changes to the State Planning Policy Framework to better facilitate energy planning and the uptake of new energy technologies	Alliances
3b. Community energy groups Develop collaborative process for working with these groups (detail of proposed process below)	

Process	CitiPower/Powercor	Council
ID Legitimacy		Council to support consistent process for legitimacy
IG opportunities/support CEGs	Network Planning	Refer
Scope how to implement		
Implement	Connections team	Celebrate

Appendix 3: United Energy Workshop

On the 21th March 2017, a cross-sector workshop was held between representatives from United Energy (the local DNSP) and local government within the distribution area. This workshop included introductory information on the energy system and the roles of local government and the DNSP.

The Agenda for the workshop was as follows:

Agenda

Future Energy Planning
United Energy Distribution Area

Date:	Thursday 23rd March	**Time: 9:00-12:30**
Chairperson:	Paul Brown and Shane Melotte	
Location:	Mulgrave Country Club, Corner Welling Rd and Jells Rd, Wheelers Hill	
Objectives:	To align stakeholders planning processes to meet their own and support the others objectives by: 2. Scope when communications occur between parties within the planning framework (What and When) 2. Scope who communicates to who 3. Discuss other areas of collaboration	

Items

No.	Topic	Presented by	For	Time
1	**Welcome** • Around the table **Recap on conference outcomes and feedback**	Ironbark	30mins	9:00-9:30
2	**Energy Planning Process Review** • United Energy's planning process • Council planning process	Ironbark	10mins	9:30-9:40
3	**Energy Planning Process Opportunities** Three groups consisting of Planning, Constraints (including Summer Savers) and Pilot Projects. • What specifically do we want to collaborate on? • Who is it that shares this information and how often is it shared?	Discussion	**50mins**	**9:40-10:30**
4	Break		15mins	10:30-10:45
5	**Detail** The same groups working through real life projects using outcomes from above discussion	Discussion	60mins	10:45-11:45
6	**Actions and Next Steps**	Discussion	20mins	11:45-12:00
7	**Lunch and Close Meeting**			12:00 - 12:30

Figure 13: United Energy workshop agenda

During Items 3 and 5 workshops on three tables were delivered. The tables discussed collaboration opportunities on the following topics:

1. Planning
2. Pilot Projects
3. Network Constraints

Each group had a facilitator that directed the conversation through:

1. What information (plans, projects and constraints) is there that may be relevant to the overall objective of the workshop?
2. Is there an opportunity for collaboration between the DNSP and local government regarding the information or project?
3. Who would be involved in the collaboration and what frequency of communication is needed?
4. What are the bigger picture things that need to happen to encourage collaboration?

At intervals throughout this process, each table was asked to provide a summary report of the discussions back to the whole group.
Below are the results of the table discussions based on these workshops.

a) Discussion Notes

Each stakeholder at the table outlined the active programs currently underway around demand management and future energy system activities. There was strong cross over in a number of areas and councils and UE were already collaborating on targeted programs such as the Mornington demand management program and Summer Savers.
A number of other interesting activities of United Energy were discussed including:

- Voltage reduction pilot program to manage voltage levels in the network (include to control voltage and thus reduce energy at sites)
- 2,000 household development on Knox City Council land in that include solar, battery storage and electric vehicle charging for all houses
- Doncaster Hill Development that looked at precinct water and energy solutions, the many successes and some failures of this project and who were the key people at each organisation that drove the project.

b) Key areas of high level collaboration:

There are a wide number of areas for collaboration. Some of these are high level and strategic and some involve specific projects and actions. To assist in shaping this the following key outcomes were agreed upon:

- A contact list from UE and councils of all relevant staff for the different areas to be compiled
- United Energy will engage with councils on Summer Savers program by July of each year
- An MOU will be developed which includes:
    - Key objectives
    - Key activities (including those identified in the workshop)
- An annual showcase of the projects underway targeted at recruiting new councils to programs and informing them of how the collaborative process is operating
- Review Doncaster Hill process and MOU for opportunities to improve future energy planning outcomes.

In addition, it was clear that there was a strong interest from UE in as much 1:1 interaction as possible to identify specific and real projects for scoping and delivery.

- The development survey that is undertaken by DELWP each year that can be used as a data set to assist UE and all DNSPs with network planning and more strategically working with councils on new energy projects
- Councils could work with DNSP to determine what format they would like development data and trend data in to assist them with their planning processes OR potentially determine if the DELWP(VPA) data is adequate or simply needs supplementation by councils.
- Councils, DNSPs and the State Government could collaborate more on trials of new technologies or integrated low carbon solutions to meet the objectives of all stakeholders.
- PIA, MAV and DELWP(VPA) to undertake some capacity building/training with council planners so they encourage developers to liaise with DNSPs at appropriate times in the development approval and delivery lifecycle
- Plan Melbourne Refresh provides a basis to update the MSS in councils Planning Scheme calling for lower carbon outcomes in new development and better collaboration with DNSPs

c) Detailed areas for Collaboration

Table 16: United Energy and local government agreed actions

Area	What	Specific Action
Planning	1. Network planning data sharing	Consider the use of DELWP collected data to assist UE and all DNSPs with network planning Look at what other data sets could be shared and what form and format they need to be in to useful to the other organisations.
	2. MOU and Process Review	Manningham and United Energy to review the Doncaster Hill MOU and Process and make recommendations for future precinct planning processes and also a broader MOU between councils and the DNSP that could be replicated across all councils in the United Energy Distribution Areas. MOUs could cover data sharing and define when and how to engage in a collaborative planning process with regard to energy.
	3. MSS in planning schemes to be updated	Councils to ensure the Municipal Strategic Statements in their planning documents are updated to reflect any local carbon

		reductions plans, changes to Plan Melbourne and the need to support the energy network planning process through the statutory and strategic planning processes.
Pilot Projects & Constraints	2. Collaboration to recruit sites for future energy technology delivery, including • Large scale solar • Battery storage • Energy Upgrade Agreements (EUAs) • Demand Management • Solar Savers	Annual collaborative process to ID/recruit Council and community sites.
	3. Community energy	11. Identify any specific needs by councils of UE in providing community energy data to councils across the region 12. Plan regionally around long term goals 13. Develop collaborative process to engage with community energy groups
	4. Summer Savers	3. EAGA to send example MOU to UE 4. Information development 5. UE to attend/present at EAGA/SECCCA/NAGA meetings
	5. Communicate effectively between UE and local government	6. Develop contact list (EAGA + UE) 7. Develop MOU for specific projects/programs 8. Deliver annual showcase of programs/projects

d) Planning

Table 17: United Energy planning notes

What	Collaboration
MOU for a district energy solution • 1000 appartments Havent' been able to engage Westfield (another client) • Council and UE pushed harder No visibility over timing of construction of part of precinct so hard to invest	Coordinator – senior ESD officer, water engagement, place management, strategic and statutory – briefing first
MOU with Yarra Valley Water • Water – every new apartment must connect to purple pipe Cost factor was an easy sell for water (offsetting water tanks etc)	

• Mandating in the Manningham plan scheme	
Referrals – clause 66 – at Doncaster hill not going to UE	
Large customers are good to target in the planning process	
Plan Melbourne Document where development is going to occur. DELWP(VPA) does a survey each year	
Basic MOU would be good • Development types • Share data • Annual/ bi annual planning meetings	
All amendments are sent to the public authorities currently (Whitehorse, Vanessa) Requirement to notify parties who would be affected	
DELWP to mandate a list of public authorities	
MSS could be updated	
ESD New sustainable development trialling new tech to work out what is going to be best for the customer Maximum solar PV penetration is an issue DNSP can't offer solar PV or storage as solution	
Statutory planners don't tell developers to talk to DNSP	
MOU with UE to provide alternative options for electricity infrastructure and supply	

	Council	UE
Step 1. Data	MOU for data sharing	
	Planning managers Place managers ESD coordinators	Rodney Bray
		Biannual/annual planning meetings 3 months prior to DARP report
	Manningham to do it	UE has a template MOU for data
Step 2. MOU for when to engage on specific projects		
SETUP	Working Scoping paper	Stakeholder engagement
Executive	Council brief Prepare MOU	Stakeholder engagement
	Put to executive	Public exhibition
	Put to council	

Incentives for developers	
Better understanding of each others processes and languages	Training and capacity building

Constrained area triggers an MOU??
Currently reactive
LG pro special interest meetings – good for UE to go along to the next meeting
DELWP regional planning forum – UE to come along and present

DAPR presentation on high level constraints another forum targeted for councils	
Corporate strategy could be updated	
Combination of mandating and projects such as summer savers • Energy is not visible which means it's less front of mind • App for customers shows impacts of behaviour and incentives • Needs to be ramped up	
Plan Melbourne Refresh 30 year infrastructure plan	NAGA/EAGA/CASBE to draft a doc on what these mean for council planning processes

e) Pilot Projects

Table 18: United Energy pilot project notes

What	Collaboration
1. Large scale solar • Eg: Kingston 5MW	Yes
2. Battery storage • Council facilities to add solar • Annual process to ID areas (council ID opportunities and help recruit)	Yes, especially constrained areas. UE find it hard to recruit customers (MOU then share)
3. EUAs • Identify all councils who are involved in the EUA program • Understand opportunities for collaboration with DNSP demand management program • Pilot program to assess the effectiveness of the combined approach	Council marketing and UE engage with constrained areas. SECCCA – Potential strategic regional
4. Demand Management • BMS's • Greensync "comm grids" Mornington ○ Demand management ○ Distributed energy ○ Battery storage	LG- marketing and site for trials (location specific)
5. EV Charging • Planning • Eco development approach • Commercial models	?
6. Community energy	

6a. Community energy data/intensity	
UE - To create baseline: • Standard format • Annual process, across region	Action: • Ironbark to send summary • ID formats (inc. existing e.gs)
6b. Community energy target programs (e.g. SECCCA zero net emissions (covers 70% of UE))	
• Action: Planning process with UE (Rodney), councils and alliances • Also need to include AEMO and stakeholders • This strategic direction impacts on network planning	
6c. Community energy groups Develop collaborative process for working with these groups (detail of proposed process below)	

Enquiry Stage	UE	Council	Notes
General enquiry		Standardised approach	Action: simple process summary/advice
Connection enquiry	Preliminary advice • Money from UE if constrained • ID Preferred sites and solutions		Passive currently UE strategic direction = proactive

f) Constraints and summer savers

Table 19: United Energy constraints and summer savers notes

What	Collaboration
1.Summer Savers Moving to Business as usual (no longer trial) UE aims: • More participants • Leveraging trusted brand of councils • Cost saving, emissions etc 16-17: • 3 rounds of marketing with 10,000 customers Council benefits • Residents UE reporting to council • Can be done- council need to report to councillors • Include savings • High level and council specific • Link in savings on augmentation Risk: • Backlash from the targeted nature of the program Notes: • Constraints and therefore targeted households change • Over 6 years, roughly 70% of customers stay the same	Joint Marketing • Key message=benefit whole community • Link with positive charge Coordination through alliances • James Wong/Scott m/ Dom LF Action: James to share 16/17 findings with Scott
2. Solar and storage • UE planned trial of 100 households in each area: ○ Monash (wheeler hill) ○ Boorandarah ○ Mt Martha • UE controls and owns asset (funding most of it) $4K for the resident • UE need a critical mass per site for it to work • 4.1kw solar and 6.4 kwh battery in greenfields (arena funded)	Council support (Summer Savers first)

• Positive Change and Summer Savers alignment	
3.Mid-large scale solar • Manningham 450kw solar on edge of constrained area within one year • UE to supply battery????	Clayton/Faye to talk to James
4. Network support agreements • Standby generation from commercial businesses.	
5. Data sharing: • More communication needed around use and different types of constraints • How does this data impact planning	

Table 20: United Energy summer savers notes

Summer Savers who/frequency		
	Process	

1	Communication:
	• Fact sheet
	• Benefits to:
	  ○ Council
	  ○ UE
	  ○ Residents
		Stakeholders:
		• Environmental staff
		• Planners
		• Communications staff

2	Environmental advisory committee • UE to attend and present (test waters) ACTION: James to run through presentation with Scott	
3	Consolidate contact list among councils/UE ACTION: James/Scott to consolidate ACTION: James email to suggest presentation at enviro advisory committee	
	NOTE: UE planning process for Summer Savers starts June/July for material send out early November. Program runs December-March	
4.	MOUs • Monash only needs CEO sign off for MOUs running up to one year (doesn't go to council) • Roles and responsibilities ACTION: Scott to provide example MOU to James	
5.	Sign up and communication channels • Co-branding of material ACTION: UE to create a couple of mock-up options (some councils will have differing views) Note: Community queries may go to Council: Manningham Positive Change only received 5-10 queries (not much) some good some "why is council partnering with private sector?"	
6.	Annual briefing sessions in July-August to gain momentum from year to year.	
	BIG PICTURE: UE to attend SECCA or EAGA or NAGA meetings	

Appendix 4: Jemena Workshop

On the 21th March 2017, a cross-sector workshop was held between representatives from Jemena (the local DNSP) and local government within the distribution area. This workshop included introductory information on the energy system and the roles of local government and the DNSP. The Agenda for the workshop was as follows:

Agenda

Future Energy Planning
Jemena Distribution Area

Date:	Thursday 23rd March	**Time: 9:30-12:30**
Chairperson:	Paul Brown and Shane Melotte	
Location:	Jemena, Level 16, 567 Collins St.	
Objectives:	To align stakeholders planning processes to meet their own and support the others objectives by: 3. Scope when communications occur between parties within the planning framework (What and When) 2. Scope who communicates to who 3. Discuss other areas of collaboration	

Items

No.	Topic	Presented by	For	Time
1	**Welcome** • Around the table **Recap on conference outcomes and feedback**	Ironbark	30mins	9:30-10:00
2	**Energy Planning Process Review** • Jemena's planning process • Council planning process	Ironbark	10mins	10:00-10:10
3	**Energy Planning Process Opportunities** Three groups consisting of Planning, Constraints and Pilot Projects. • What specifically do we want to collaborate on? • Who is it that shares this information and how often is it shared?	Discussion	**50mins**	**10:10-11:00**
4	Break		15mins	11:00-11:15
5	**Detail** The same groups working through real life projects using outcomes from above discussion	Discussion	60mins	11:15-12:15
6	**Actions and Next Steps**	Discussion	20mins	12:15-12:30
7	**Close Meeting**			12:30

Figure 14: Jemena workshop agenda

During Items 3 and 5 workshops on two tables were delivered. The tables discussed collaboration opportunities on the following topics:

1. Planning

2. Pilot projects and network constraints

Each group had a facilitator that directed the conversation through:

1. What information (plans, projects and constraints) is there that may be relevant to the overall objective of the workshop?
2. Is there an opportunity for collaboration between the DNSP and local government regarding the information or project?
3. Who would be involved in the collaboration and what frequency of communication is needed?
4. What are the bigger picture things that need to happen to encourage collaboration?

At intervals throughout this process, each table was asked to provide a summary report of the discussions back to the whole group.

Below are the results of the table discussions based on these workshops.

a) Discussion Notes

- Council strategic planners noted Jemena have traditionally not been great at engaging when developing precinct plans – Jemena very keen to improve the level of engagement.
- Jemena network planning team and development referrals team relatively good cross organisational understanding of what is happening in each others areas and across the network due to the network size.

b) Key areas of high level collaboration

There are a wide number of areas for collaboration. Some of these are high level and strategic and some involve specific projects and actions. To assist in shaping this the following key outcomes were agreed upon:

- NAGA to nominate a relevant attendee for the Jemena Customer Council
- An agreed statement of the areas of interest for both parties (and collaboration opportunities). Note the draft of this forms the notes to this workshop
- A contact list from Jemena and councils of all relevant staff for the different areas to be compiled. Noting that specific projects through to networks team.
- Information collection process from councils
    - 1:1 with councils (May-June)
        - Planning, energy projects, etc.
    - Standardised systems and feedback

11. Annual forum (informed by 1:1 sessions above) that includes:
    a. Regional collation of information and programs
    b. Showcase of successful projects (and recruitment of further stakeholders/projects) including:
        i. Large scale solar
        ii. Battery storage
        iii. Business engagement
        iv. Residential engagement
        v. Other (inc. EV's, micro grids, street lighting and smart cities)
    c. Consider new issues/goals for the relationship
12. Jemena to look at further developing their constraints map to improve its value to council users. Jemena to seek feedback from Councils on what information would be useful to statutory and strategic planners. An example is indicating where constraints are and if the constraint has

potential to be addressed through demand management solutions or similar, or is related to a broader contextual issue in the network.

13. NAGA and EAGA to look explore the CSIRO/ENA Energy Transformation Roadmap and process and look at how councils can participate or contribute post implementation of the roadmap to ensure this process considers opportunities to leverage land use planning policies and plans in local government.
14. Jemena to contact councils strategic and statutory planning departments to discuss which planning permit application and which planning scheme amendments are being referred to them and under what circumstances to establish a shared understanding of
    a. What is mandatorily required to be referred to them under Section 55 of the Planning and Environment Act
    b. What could be forwarded to them voluntarily under Section 52 of the Planning and Environment Act
15. Alliances to work with MAV, PIA and DELWP on developing a industry capacity building piece that covers
    a. where statutory and strategic planners could better collaborate with DNSPs in an ongoing basis and at strategic points such as the DAPR reporting process and 4 year annual review of planning schemes
    b. how planning schemes could be updated to better facilitate new energy technology deployment and alignment with council carbon strategies where relevant
16. Advocate to DELWP to update the State Planning Provisions and relevant planning guidelines and practice notes to better support the uptake of new energy technologies and align with the State Government Climate Change Act, Renewable Energy Target and Plan Melbourne Refresh

c) Detailed areas of Collaboration

Specific agreed upon actions are outlined below in Table 21 below.

Table 21: Jemena and local government agreed actions from workshop

Area	What	Specific Action
Planning	1. Allow developers to go over certain height restrictions in exchange for contribution to community good such as delivering a project that is highly efficient and has extra renewables to minimise the impact on the network or includes battery storage etc.	Councils and DNSP to work together to identify locations where incentivising certain development would be mutually beneficial.
	2. Data sharing GIS planning, DELWP(VPA), Constraints data	Councils and DNSPS to share data in a suitable format inform their respective planning processes.
	3. Constraint map doesn't necessarily reflect all the drivers that are causing the constraint. 17. Airport impacting on demand rather than nearby residents	DNSPs to consider how they can best present their constraints map to signal where changes in demand could tangibly impact on the feeder.

	4. Allow developers to go over certain height restrictions in exchange for contribution to community good such as delivering a project that is highly efficient and has extra renewables to minimise the impact on the network or includes battery storage etc.	Councils and DNSP to work together to identify locations where incentivising certain development would be mutually beneficial.
	5. 6,000 referrals per year • Multiple dwellings • 2 lots	DNSPs to work with councils to better understand what kinds of development they would be interested in and why. Potential for Council to refer these applications for comment under Section 52 of the Planning and Environment Act rather than Section 55 or work with DELWP to update the provisions of Section 66 of the State Planning provisions.
	6. Rezoning isn't referred	DNSP to work with councils to ensure that rezoning's are being referred for comment. Alliances could work with MAV, PIA and DELWP on developing a industry capacity building piece that covers this and a range of other issues where statutory and strategic planners could better collaborate with DNSPs
Pilot Projects & Constraints	7. Business demand management, solar and energy. Councils are delivering solar roll outs on some areas. Could target areas of constraints. Hume and Darebin (and others) are delivering EUAs. Makes sense to integrate this in business program	Investigate further during annual project scoping process
	8. Residential. Jemena trial (Similar to UE Summer Savers). Opportunity to include local government as project partners – project learning from UE to increase uptake	NAGA to discuss with Jemena
	9. Large scale solar. a) Councils are investigating large sites in Northern growth corridor. b) Councils are also delivering large scale, multi-site residential programs (up to 40MW)	c) EAGA to discuss with Jemena network planning d) Standard connections process
	10. Micro grids.	Investigate further during annual project scoping process
	11. Battery storage	Councils to provide details of current sites with battery

		storage. Consider future collaboration for projects to understand impacts.
	12. Street lighting and smart cities	Jemena to provide offer to Councils
	13. Jemena Customer Council	Jemena to circulate minutes and discuss with NAGA becoming member of forum
	14. Connections problems. Hume had issue with maximum demand on site and getting it changed with Jemena.	Hume to discuss with Jemena networks team
	15. EV's. Interest in a trial/collaborating on relevant projects	
	16. Communicate effectively between Jemena and LG's	9. Develop contact list (local government and Jemena) 10. Agree to program for collaboration 11. Deliver annual showcase of programs/projects

Below is a collation of the workshop notes separated into planning and pilot projects/constraints

d) Planning

Table 22: Areas of collaboration

What	Collaboration
PSPs • DNSPs are effectively a referral authority • Could be used as a mechanism	
Amcor • Redevelopment of the Amcor site in Fairfield to multiple high-rise residential and office buildings • Jemena have had early involvement in the planning process and looking to use this project as a basis to improve collaboration	DNSP and Council collaborating over live project (Amcor site redevelopment) and using this understand opportunities for future information sharing and collaboration.
Ring fencing • Limits DNSPs • DNSPs contract a 3rd party to provide the demand management as a service	
Open space/developer contributions	Council to make the solar PV/storage etc
Allow developers to go over certain height in exchange for contribution to community good such as delivering a project that is highly efficiency has extra renewables and minimising the impact on the network or includes battery storage etc.	Clean energy porecinct Councils and DNSP to work together on locations where incentivising certain development would be mutually beneficial.

Growth area planning can be challenging as the process is highly dynamic and local context for a given development can change significantly from year to year • Construct and not a promise • Years later developer is proposing outcomes that are very different to masterplan	• Talk MPA • What do you need? • Locations for network infrastructure •
How do we make the most of infill opportunities? • Jemena still reactive but looking to change this • Cumulative impact of developments can definitely have an impact	Focus on Hume and development in western suburbs
Jemena has different reps for councils, public lighting	
Demand management agreements often aren't inspiring from Jemena perspective that is the financial return for effort has not really been there for them in the past and with the new rules they would need to setup a separate entity to do this work.	
Policy needed in the planning scheme re: best practise sustainability • Controls they can propose on structure plan	Councils and DNSP can work with DELWP to confirm their support for higher ESD standards for new development and consideration of the interaction with the grid
Plan Melbourne refresh • Clean energy • Update PSP guidelines	Councils and DNSPs can work with DELWP to look at changes to practice notes and the PSPs to better consider clean energy solutions, grid impacts and liaise with DNSPs
Share data	Councils and DNSPS to share data in a suitable format inform their respective planning processes.
DNSPs need to know what is happening in these suburbs	Data share
Add to the constraints map to show which customers can impact on the constrained feeder	See above

Who Frequency	
Process manufacturing need advanced warnings to participate in demand management otherwise they lose the day	
Constraint map doesn't necessarily reflect all the drivers that are causing the constraint • Airport impacting on demand rather than nearby residents	DNSPs to consider how they can best present their constraints map to signal where changes in demand could tangibly impact on the feeder.
March a good time of year to be getting the stakeholders together	DNSPs to liaise with Councils at the start of the DAPR reporting

• Fits in with DAPR reporting process	process to gather supporting data about emerging development trends and impacts on the network and understand how the findings can be presented to assist councils with their statutory and strategic planning processes
Database of contacts at each of the stakeholder would be useful	
4 year planning scheme review • More happening with transport and water efficiency	Councils to collaborate more during the four year planning scheme review to make sure long term strategic directives from a DNSP perspective are being integrated into the respective planning schemes in the appropriate way and to add weight to council and DNSPs ability to impose requirements on
Annual gathering with all DBs and councils to discuss what is working and what isn't	
MOUs – Maybe • Jemena have a proforma around data sharing	
1:1 meetings with constituent councils	Contacts • Who are the right people? • Discuss MOUs
Forum attendance by DBs	
Advocacy points	• Rezoning process to require referrals • Growth area update PSPs • Translating community carbon policies into local planning policy
Have Council reps at the meetings with VPA or CCing minutes	
Jemena currently monitor changes to planning guidelines that impacts on development.	Opportunity to for DNSP to meet with councils and discuss changes planning policy settings at the state and local level and ensure their understanding of these changes are correct
6,000 referrals per year • Multiple dwellings • 2 lots	DNSPs to work with councils to better understand what kinds of development they would be interested in and why. Potential for Council for council to refer these applications for comment under Section 52 of the Planning and Environment Act rather than Section 55 or work with DELWP to update the

	provisions of Section 66 of the State Planning provisions.
Categories of development that is happening	
Rezoning isn't referred	DNSP to work with councils to ensure that rezoning's are being referred for comment. Alliances could work with MAV, PIA and DELWP on developing a industry capacity building piece that covers this and a range of other issues where statutory and strategic planners could better collaborate with DNSPs

e) Pilot Projects and Constraints

	What	Collaboration
1.	Constraints (Need to know opportunities now and collaborate for constraints become present) a) Business efficiency b) Residential (Jemena trial) similar to UE's Summer Savers	Hume and Jemena to meet regarding business efficiency and engagement Alliances to talk to Jemena re: residential trial
2.	Solar a) Council - Residential PV b) Council plans on sites for large scale PV (eg: north growth corridor)	2a. standard process (Scott talk to Enica) 2b. Planning
1.	EUAs (commercial) a) Hume and Darebin (School in Darebin)	See 1a
4.	Micro Grids	Connection
5.	Battery storage (looking, not commercial yet)	Connection, number's and sites
6.	Jemena Customer Council Action – Benjy to circulate customer council minutes	Council rep to attend (who?) David to talk to Benjy
7.	Street lighting/smart cities Jemena offer service	
8.	Connections (as a customer) • Hume (max demand on site) • Jemena – pilot a change to this Action: Michelle to speak with Ashley/Enica	
9.	Large Scale Solar (Councils) Connection enquiry (size issue)	See 2a/b
10.	EV • Buses • Charging ○ Residential ○ Apartments	Jemena Trial