Regional Approach to Electric Vehicle Charging Infrastructure

June 2023

Southern Sydney Regional Organisation of Councils Incorporated (SSROC)

ABN 54 485 603 535

Document Control Log

Approval Date:	6 July 2023
Approver:	SSROC CEOs /GMs Group
Next Review Date:	
Author:	Vincent Ogu, SSROC Program Manager
Document Details:	Regional Approach to Electric Charging Infrastructure. A report on EV charging infrastructure workshop held by SSROC member councils and representatives of NSROC, North Sydney and Ryde councils

Revision History

Name	Date	Reason for Revision
Version 1	May 2023	To incorporate internal reviews by SSROC
Version 2	June 2023	Revision after review by SSROC member councils

Distribution

This document has been distributed to:

Name	Organisation & Title	Date of Issue	Version	Distributed by
SSROC EV Working Group	Working group members - SSROC member councils, North Sydney and Ryde	15/05/23	1	V Ogu
SSROC CEOs /GMs Group	SSROC	1/6/23	2	V Ogu

TABLE OF CONTENT

1. EXECUTIVE SUMMARY /RECOMMENDATIONS

The growth in the take up of EVs in Australia is phenomenal, increasing by 86% in 2022 compared to 2021. The growth trajectory will continue for the foreseeable future. For example, in NSW, 52% of all new vehicles are expected to be EV by 2030-31. Councils, SSROC member councils inclusive, have found themselves in a situation that "do nothing" is not an option.

SSROC EV Working Group was established to provide insight on EV charging and related matters including policy and strategy response for SSROC region. This Report is based on the discussions at two SSROC EV Workshops held on 8 February at Randwick and on 16 February at Burwood. Over 60 representatives of SSROC council members, Northern Sydney Regional Organisation of Councils (NSROC) and North Sydney attended the workshops.

The section that follows identified regional priorities where SSROC member councils and other collaborating councils in Sydney can work together on EV charging infrastructure and related matters. Top priorities are presented here as recommendations for SSROC CEOs and General Managers' consideration. Full details of EV priorities for the region and councils are in the Regional EV Priorities section of this report.

SSROC is liaising with Resilient Sydney on the later's led efforts to engage with the Department of Planning and Environment on electrification of transport.

1.1 Recommendations

The recommendation are grouped under five broad headings.

- Planning, land use instruments and transport strategy
- Public domain, property strategy and management, and procurement strategy
- Evolving technologies and business models for EV charging
- Advocacy
- Community education and awareness

The recommendations are also categorised under what SSROC can do as a regional, what councils could on their own and others councils can advocate with NSW and Australian Governments.

1.1.1 Planning, land use instruments and strategy

SSROC and partner councils working as a region

1. Develop regional Electric Vehicle Charging Infrastructure Guidelines. Already, SSROC EV Working Group has developed initial draft Guidelines. The Guidelines will be completed and promoted as resource for SSROC councils. See Appendix A.

2. Develop develop model objectives and controls for incorporation into Council's DCPs to ensure best practice. Establish standard definitions and principles and consistency in technology options in liaison with NSW Government.

Council to lead

3. Develop EV strategy – that identify demographics, urban typology, role for council, transport needs, places and planning for EV charging in the region.

1.1.2 Public domain, property strategy and management, and procurement strategy

SSROC and partner councils working as a region

1. Develop Draft Regional EV policy for use by councils, flexible enough to adjust to particular local circumstances.

2. Engage and partner with Ausgrid on "fast charging regional masterplan" that identifies problem areas for increased charging infrastructure and fast charger locations and in consideration of electricity capacity and constraints.

3. Regional strategy for bulk procurement to lower the cost of EV installations by councils, including EV charging for council fleet and public use, and potentially procurement options for 3rd party installation, operation and maintainance.

1.1.3 Evolving technologies and business models

SSROC and partner councils working as a region

1. Develop model council policy /process for unsolicited approaches by EV charging infrastructure providers, example JOLT.

Council to lead

2. Develop approach to regulatory related matters:
   - leasing EV only parking spaces /fees
   - liabilities /insurances
   - enforcement / regulatory restrictions
   - Leverage on NSW guidelines for a uniform system of identification including wayfinding, charging space signage and marking

1.1.4 Advocacy

SSROC and partner councils working as a region

1. In collaboration with LG NSW, adopt policy on EV transitions and advocate with Australian and NSW Governments on regional approach to fleets and fast charging.

2. Advocate for clear definitions in SEPPs.

1.1.5 Community Education and Awareness

Council to lead

1. Undertake a regional community survey of attitudes and knowledge of EVs.

2. Identify community priorities and local needs and develop regional education materials (e.g. consistent information on council websites).

2. INTRODUCTION

2.1 SSROC and Emerging Response to EV Charging

In response to electric vehicles (EV) enquiries from the community and industry and the need to keep pace with emerging EV and support infrastructure, SSROC member councils are open to explore EV policies or guides for their areas. This was reinforced by the SSROC CEOs/GMs' Group at its meeting on 1 September 2022. The group raised EV charging infrastructure on council lands and concerns for possible ongoing maintenance costs for councils.

SSROC EV Working Group was subsequently established to provide insight to regional collaboration on EV charging and guidance on EV infrastructure policy. Membership of the working group includes strategic planning, transport, property management and environmental sustainability professionals.

The Working Group has expanded to include NSROC, North Sydney and Ryde. A coordinated regional approach to EV infrastructure implementation will help to ensure good outcomes for community, council and industry.

One of the first decisions by the EV Working Group was to develop issues and options paper, seek direction from the CEOs /GMs' Group and then progress to EV workshops on policy, legal and operational and enforcements matters. Issues and Options paper was developed in January 2023. See Appendix B.

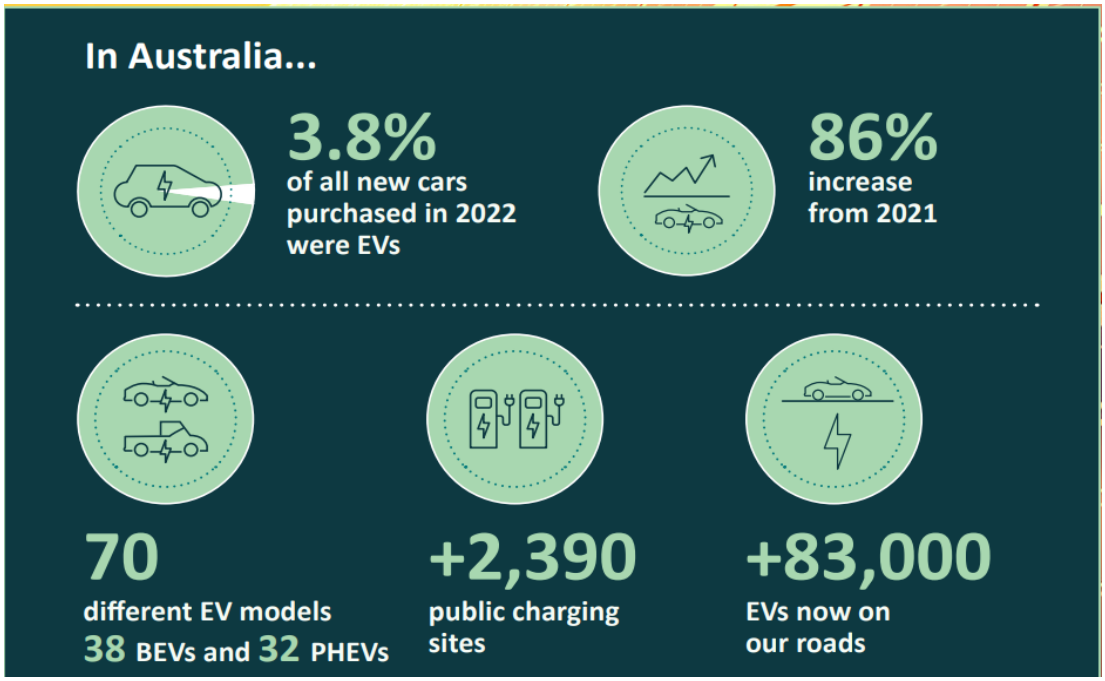
This Report is based on the deliberations and discussions held at two SSROC EV Workshops held on 8 February at Randwick and on 16 February at Burwood. Each workshop had three issues based discussion groups. Over 60 representatives of SSROC council members, Northern Sydney Regional Organisation of Councils (NSROC) and a few northern Sydney councils attended the workshops.

One of the key focuses of the workshops was identification of opportunities for regional collaboration on EV infrastructure.

2.2 EV Strategy and Trend in Australia

The uptake of EV is increasing rapidly across Australia.

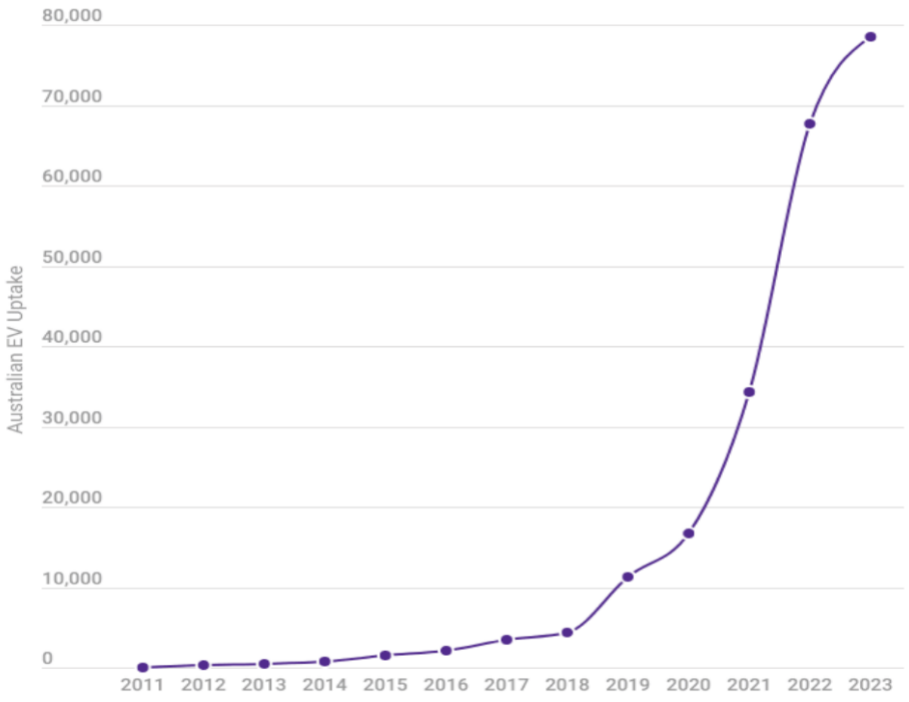
Though uptake of EVs is relatively low at 3.8% in 2022, compared to United Kingdom (15%) and European Union (17%), it represents increase of 86% compared to 2021.



Source: Commonwealth of Australia, 2023. National Electric Vehicle Strategy
https://www.energy.gov.au/news-media/news/australias-national-electric-vehicle-strategy

The increase in uptake is supported by new models becoming available in the Australian market, lower purchase costs and interventions by the Australian Government and State and Territory Governments.

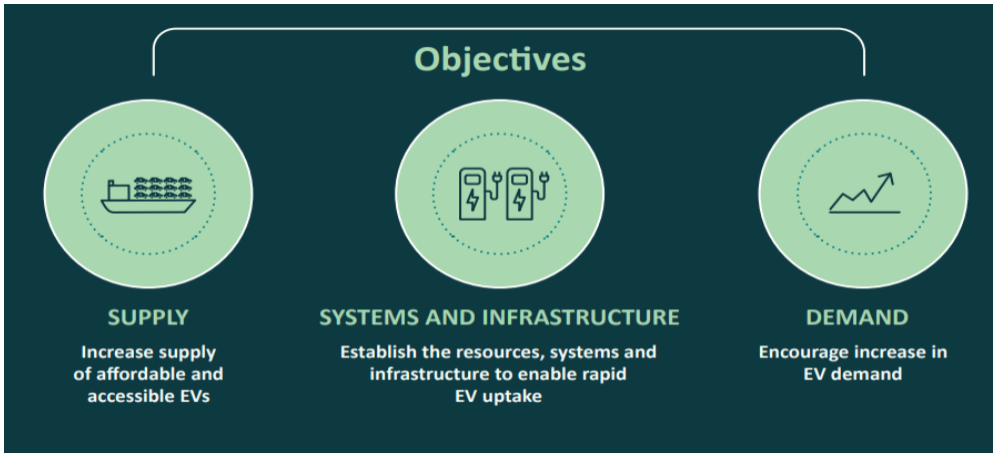
The rapid growth in EV vehicle in Australia is illustrated below. There are over 83,000 EVs on the road in Australia and this is expected to increase rapidly in the next few decades.



Source: vFacts. The Driven

2.3 Australia National EV Strategy

The National EV Strategy has three objectives – increase in EV supply, promoting EV demand and establishing EV infrastructure all have implications for the local government sector and EV charging infrastructure.



Source: Commonwealth of Australia, 2023. National Electric Vehicle Strategy

The Strategy's vision for increase in infrastructure includes:

- developing a national mapping tool to support optimal investment in, deployment of EV charging infrastructure;
- tools and guidance to enable EV uptake for residents of existing multi-residential buildings;
- State and territory EV infrastructure and charging investments;
- Commonwealth, state and territory collaboration to ready the electricity grid for EV uptake.

The Australian Federal Government is funding a trial of pole mounted EV chargers in 50 sites across nine local government areas in NSW including seven Sydney metropolitan councils[1].

The Australian Government has also embarked on studies to inform focus and strategy for EV roll out across the country. For a example, in a study[2] prepared for the Australia Renewable Energy Agency (ARENA) and the Clean Energy Finance Corps (CEFC), Energeia found that Plug-in Electric Vehicles (PEV) drivers prefer to charge in the most convenient way - at home and convenient public charging options such as trip destination locations (example work, shopping).

2.4 NSW and EV Response

The NSW Electric Vehicle Strategy (2021) projects that electric vehicle sales will increase to 52% of total new vehicle sales by 2030-31. This has implications for electric charging infrastructure /units across NSW.

[1] https://arena.gov.au/projects/intellihub-street-power-pole-ev-charger-with-grid-integration/

[2] Australian Electric Vehicle Market Study. Prepared by Energeia for Australia Renewal Energy Agency (ARENA) and Clean Energy Finance Corps (CEFC), Final Report 2018

As part of measures to respond to expected increase in demand for EV charging units and to facilitate the installation of EV charging infrastructure, NSW Government recently amended the State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP (T&I)).

The NSW Government is investing in EV Charging Infrastructure (via grants and co-funding) to support the transformation that is taking place from traditional internal combustion engine (ICE) cars and trucks to EV's[3].

Industry is also playing a key role in NSW. For example, Ausgrid in conjunction with JOLT is rolling out EV charging on their street-side kiosks. Ausgrid has also commenced a program to deliver 30,000 pole mounted chargers across the Ausgrid network by 2029.

2.5 Councils and EV

Councils are in an important position to impact on EV charging infrastructure in their areas. Through development control plans, policies, strategies, community engagement and information, councils can play key role to enable expansion of EV charging units for local communities and businesses. Councils develop local transport strategies, have key roles in local road infrastructure and car parking and many have set net zero emission targets.

SSROC member councils vary in the stages of developing strategies and policies to manage expansion of EV charging units in their areas, EV charging unit ownership and in developing enabling planning instruments to guide EV charging unit sites and installations (see next section). Some councils have been approached to facilitate approval of public place EV chargers on-street or in council carparks nominated by third-party providers, example Ausgrid /JOLT.

In the absence of adopted EV Charging Strategy, DCPs, policies, installation, enforcement and maintenance guidelines, negotiations between councils and third-party providers can put councils at a disadvantage and hence approval deferrals.

2.6 Electric Vehicle Charging and Approval Pathways

Under the SEPP (T&I), depending on the scale or location of the electric vehicle charging (EVC) unit, one of the three approval pathways will apply[4].

- Exempt development - Low impact development. If proposed EVC infrastructure /unit meets all development standards identified in the SEPP (Transport and Infrastructure) 2021, Council approval is not required.
- Development with consent - EVC unit will need approval from a consent authority such as a council (under Part 4 of the EP&A Act 1979) or the Minister for Planning.
- Development without consent - EVC installation done by councils, NSW Government departments or agencies, or private bodies deemed to be public authorities. Approval is normally after environmental impact assessment under Part 5 of EP&A Act.

EVC units are exempt development if installed in certain locations, including:

- private homes

[3] https://www.nsw.gov.au/initiative/nsw-governments-electric-vehicle-strategy/infrastructure-funding

[4] New South Wales Government State Environmental Planning Policy (Transport and Infrastructure) Amendment (Electric Vehicles) 2023

- car parks (commercial, public or private)
- bus depots
- road maintenance depots
- service stations
- highway service centres
- car washing facilities
- on public administration buildings.

Electricity supply authority or a public authority may under the SEPP (T&I) install an EVC unit as exempt development on existing electricity poles or lighting poles.

Similarly, a public authority can install an EVC unit as exempt development on existing street infrastructure such as:

- parking meters
- telephone booths
- rubbish bins or recycling bins
- planter boxes
- street signs
- benches
- bollards

Some of the exempt developments are likely concerns for councils, particularly where EVC installations in public domain create parking space issues and enforcement and ongoing maintenance costs.

It is timely for councils and regional group of councils, such as SSROC, to work together and forge common guiding approach to EV charging infrastructure in the interest of local residents and businesses.

3. EV CHARGING STATUS IN SSROC REGION

The roll-out of EV infrastructure, particularly in public domain, is moving faster than the development of strategies, policies or guidelines to inform optimal management oversight by councils. Councils in the SSROC region have responded at differing paces and in the extent of involvement so far.

A summary of EV charging infrastructure status in the SSROC region and North Sydney are presented below.

Councils that have developed EV strategy

Council	EV facilities
City of Sydney	Draft Strategy
City of Canada Bay	Draft EV Strategy & Action Plan
Inner West	EV Encouragement Strategy adopted (May 2023)
North Sydney	DCP being developed
Randwick	EV Infrastructure Strategy (June 2023) + draft DCP for new housing areas
Sutherland	Public Domain Strategy
Waverley	EV Infrastructure Strategy (June 2023)
Woollahra	EV Infrastructure Strategy (June 2023)

Council EV Chargers

Councils that have installed EV charging – council led/owned

Council	EV charging facilities
Caterbury Bankstown	2 charging facilities + fleet transition initiative
City of Sydney	Charger facilities in car parks
Inner West	12 public chargers (private property). Tendering for public chargers (August 2023)
North Sydney	5 sites, 10 chargers at council car parks
Strathfield	2 charging facilities
Sutherland	1 (fleet)
Waverley	5 new streetpoles (additional to below)
Waverley, Woollahra, Randwick	15 public charging sites Fast charging hub with 4 chargers (Randwick)

Councils with EV Policy

Councils that have EV policy, including with terms and conditions for proposals and proponents for EV charging seeking to install on public land and council property

Council	EV Policy
City of Sydney	Part of DCP /DA process
Inner West	Will be in DCP

North Sydney	Under development
Randwick	Council resolution only
Waverley	Adopted
Woollahra	Adopted

Private Charging EV Infrastructure

Councils that have private charging stations installed or about to be installed on council/public land – with or without council formal approvals

Council	Private EV facility
Burwood	5 JOLT
Canada Bay	1 JOLT
City of Sydney	100+
Inner West – 8 mixed	8 mixed providers
Randwick	2 JOLT
Strathfield	1 JOLT
Waverley	Tesla (6 x ultra fast) Evie (2 x fast)
Waverley, Woollahra, Randwick	21 to 30 Streetpole (August 2023)
Woollahra	Evie (2 x fast)

An SSROC regional approach will provide opportunity to work together, learn from councils within and outside the region and have region guides and policy that will that encourage consistency and minimise duplication of efforts.

Regional approach will also offer industry useful framework for approaching EV charging infrastructure in the regions.

4. EV POLICY AND STRATEGY ISSUES

The SSROC EV Workshop explored EV charging infrastructure policy and strategy issues for councils. Discussions were focused on:

- Strategic planning, statutory planning, transport strategy and considerations for strategic plans, land use planning instruments and development control.
- Public domain and property strategy and management, proponent management, procurement strategy and use of public domain and council property for EV charging services.
- Evolving technologies and business models for EV charging.

The summary of the key matters are presented below.

4.1 Planning and Related Instruments and EV Charging Considerations

The participants identified the key highlights below.

1. Strategic and statutory planning and planning instruments for local development can enable EV infrastructure, example local environmental plans (LEP) and development control plan (DCP) in both private or public domain.

2. There are divergent views within council business units and among elected councillors. These relate to for example: transport, property, sustainability concerns around electricity supply (demand on “grid”) and types of charging infrastructure.

3. Different approaches by Ausgrid:
   - JOLT chargers (Ausgrid seen as supporting preferential treatment)
   - Streetpole rollout (Ausgrid’s own business support)
   - Demand management on electricity grid – spatial distribution of demand could be at odds within energy provider market interests.

4. Issues of single unit developments (SUDs), multi-unit developments (MUDs) and public spaces:
   - How to enable MUDs EV charging and related infrastructure
   - Ease of in-house SUD EV charging infrastructure
   - Planning and managing different EV charging infrastructure on other non-council public land areas in a local government area, such as car parks owned by state agencies, et cetera
   - New developments versus existing housing developments and EV charging infrastructure
   - Managing electricity charging demand /load vs electricity supply capacity responsibilities of private owners /strata managers and related legal issues for strata, owners and energy providers.

5. Road user heirachy issues
   - car share policies could feed into EV policies/strategies
   - Inadequate integration of EV take-up with other transportation policies, for example active transportation initiatives

6. Role of Council – Regional
   - Engage with Ausgrid for “fast charging regional masterplan” and identify problem areas for increased charging infrastructure

- Establish definitions to govern consistency in EV charging terminology, options and technology
- Advice on planning pathways to include EV charging infrastructure in:
    - new developments
    - established areas
    - other land use types
- Establish Regional Priorities:
    - Share strategies and develop framework
    - Include standard definitions, principles
- Identify community priorities and local needs
- Advocacy Federal and State Governments on fleet and fast transition.

4.2 Public domain, property strategy and management and EV charging services

The first EV Workshop deliberated on public domain and property strategy and management, proponent management, procurement strategy. The council representatives also discussed issues of terms and conditions for use of public domain and council property for use as EV charging services.

The issues below were identified.

- Community has expectations of EV charging on public land. This is particularly necessary for residents who have no access to off-street parking for EV charging and residents of existing multi-unit apartments with no provision for EV charging, and little likelihood of strata retro-fitting EV charging infrastructure.
- There is limited off-street capacity, particularly in the City and Eastern suburbs
- Councils could advocate for commercial and private charging
- Councils' role with fast chargers varies depending on the spectrum of involvement in EV charging infrastructure
- SSROC councils have differing regulations regarding advertising (i.e. JOLT model)
- Recognition of TfNSW guidelines on EV charging parking requirements and restriction
- There are urban typologies in the SSROC Region and even within council areas. EV charging needs vary within the typologies and so need to be recognised and considered in EV strategy and policy.
- Bus shelters and poles may provide opportunities for EV charging in the public domain.
- Risk is associated with cables running from private property to road reserve. This raises public safety and liability issues. Who would be responsible if there is an incident?
- Use of smart lighting poles and parking meters.
- Template Licence Agreements to cover the use of car charging spaces.
- Councils are interested in access to data collected on usage of EV charging facilities in their areas.

4.3 Electric Vehicle Charging and Approval Pathways

Under the State Environmental Planning Policy (Transport and Infrastructure) 2021, depending on the scale or location of the electric vehicle charging (EVC) unit, one of the three approval pathways - Exempt development, Development with consent or Development without consent, will apply. See Section 2.6 [5].

[5] New South Wales Government State Environmental Planning Policy (Transport and Infrastructure) Amendment (Electric Vehicles) 2023

Some of the exempt developments are likely concerns for councils, particularly where EVC installations in public domain create parking space issues and enforcement and ongoing maintenance costs.

4.4 NSW EV Charging Planning Controls versus Council EV DCP

The EV charging regulations and controls in the amended SEPP (T&I) to facilitate expected expansion in EV charging units and infrastructure are helpful but do not take the place or need for EV Development Control Plans (DCPs).

The DCP is helpful to regulate provision of EV chargers in buildings. It can provide clarity on controls and requirements that suit localities, urban typologies and regions. For example, a person is allowed under the SEPP (T&I) to install an EV charging unit with development consent on land adjoining a public road and adjacent to residential premises. Two criteria that would need to be met are:

a) that the EV charging unit must be installed adjacent to a legal parking area, and
b) cables must be retractable underground when not in use.

Private use of public space in situations like this has implications for the Roads Act (section 138) and public roads. A public road starts at the front boundary of a private lot. Lindsay Taylor Lawyers in their analysis of the amended SEPP (T&I) argued that:

> "The installation of a private EVC Unit on land adjacent to residential premises will effectively result in the same private user occupying, or seeking to occupy, the same space on a public road for extended periods of time"[6].

This could have impact on availability of street parking and councils or other consent authority would carefully weigh this before granting consent under the Roads Act.

There are many unresolved issues and situational contexts that a model DCP could address, especially where there are many competing needs to be resolved on a kerbside. Councils will be concerned about rectification of footpaths and public services disturbed by the installation of chargers on the kerbside. DCPs can address potential problems arising when public footpaths are disturbed or dug up as individual owners decide to install chargers unrestricted by local controls. Councils will need to have a process of assessing applications and maintaining details of insurance cover. Also issues of maintenance of the EV charging equipment and eventual removal if the owner sells the property.

4.5 Development controls and privately owned EV chargers

Private installation of EV charging as exempt development could create safety (trip and electrocution) risks, particularly for pedestrians (including those with disabilities and the elderly). This would incur public and private liabilities for current and future property owners now responsible for maintaining a roadside or MUD charging unit.

[6] New planning controls to encourage the installation of electric vehicle charging units in NSW. Lindsay Taylor Lawyers. https://www.lindsaytaylorlawyers.com.au/in_focus/new-planning-controls-to-encourage-the-installation-of-electric-vehicle-charging-units-in-nsw/

Consideration needs to be given to the visual impacts of kerbside charging and also whether advertising should be permitted on EV charging facilities.

Consideration would need to be given to public safety and ability of private owners to get adequate ongoing public liability insurance. What happens when private owners are unable to obtain insurance? What happens if owners without insurance need to remove/disconnect their street-based charging unit or their insurance lapses. Will there be a system of inspections and fees for owners?

Recognising the need to engage with NSW Government, particularly the Department of Planning and Environment, the Working Group is liaising with Resilient Sydney in relation to their work in this area. There may even be need to further government regulation outside the planning system, example NSW Fair Trading working in tandem with councils and other consent authorities on planning approvals.

4.6 Evolving technologies and business models for EV Charging

EV technology is evolving at a fast pace. EV infrastructure installed in in 2013 in the United Kingdom is already being replaced with higher capacity charging units[7]. There are different types of EV charging units, varying charging capacities and supply chain issues.

A regional electric vehicles charging infrastructure blue print would assist to clarify technologies and business model typologies.

The workshop identified issues for councils in SSROC and parts of northern Sydney.

1. Grid supply constraints on zone substations and streets
2. Technology rapidly changing and entering the market makes any technical guidance outdated
3. Low number of EVs on road and general lack of familiarity with EV intricacies in the community means there is need for education on benefits and ease of using EV amongst staff and the community
4. EV charging is ultimately a land use issue and hence the need to understand and appreciate the surrounding land use and competing land use claims
5. Aesthetics /street scape are a factor in determining the type of chargers. Level 3 Fast chargers are large units 2m x 1m and aren't designed for the streetscape
6. Equity – multi-unit dwelling and renters are once again likely to be locked out of this transition to EV because a) strata decision making paralysis, cost, electrical constraints in strata buildings. Need chargers to provide strata residents with the confidence to buy and use an EV.
7. Dynamic pricing for EV charging by retailers (amber electric – incentivise daytime charging – cheaper, when NEM is flooded with renewables, minimises grid overload
8. Engage with ZEN on dynamic pricing for EV charging.

[7] Simon Swan, Arcadis Global Solution Director for New Mobility. Presentation at Committee for Sydney event. Accelerating Sydney's EV Infrastructure.

5. EV CHARGING OPERATIONAL MATTERS AND BUSINESS MODELS FOR COUNCILS

SSROC EV Workshop deliberated on:

- EV charging infrastructure ownership models and risks for local government,
- Design considerations for EV charging infrastructure,
- Regional interoperability of EV charging infrastructure.

The assessment provided below assumes that safety will always be a priority and that the charging providers will be responsible for ensuring the power grid has sufficient capacity to accommodate the proposed charging upgrades.

5.1 Scenario 1 – Council EV Charging Infrastructure Ownership

Council ownership – possibly with a future transition to one or more private charging company once demand has been established. Council could address market gap in early stages of the EV transition.

Risks for Council
1. High capital outlay and responsibility for maintenance and replacement
2. Council to keep up with rapidly changing technologies
3. Council's reputation linked to the success of its EV charging
4. Council Liability - all issues associated with EV charging
5. Ongoing maintenance and upkeep. Requires both funds and resources
6. Requires a high level of internal expertise which is generally beyond the expertise of some member Councils at this time
7. Less competitive environment if council is the dominant charging operator.
8. Council priorities may alter dependent on local political demands however once the charging infrastructure is installed it is expensive to remove though can be upgraded to newer models.

Opportunities
1. Easy to administer and manage as Council has the sole responsibility for all aspects of charging
2. All profit goes to Council
3. Council has control over the choice of locations (car parks or on street)

4.	Council can capitalise on branding opportunities and provide crucial service
5.	Ability to control the type of technology being deployed
6.	Can initiate early adoption
7.	Council monopoly on provision gives Council a competitive advantage
8.	Easy access to data for Council use
9.	Council has control of the look and type of the charging units deployed
10.	Chargers can be accesed by council fleet and council lease back EV's

5.2 Scenario 2 – Engagement /Enablement

This is an approach where councils do not embark on ownerhip of EV charging infrastructure. Council rather takes steps and measures to engage with relevant key players, including private providers and state agencies and develop relevant tools and instruments to enable EV infrastructure in its area and localities.

Council establishes pathways for EV charging sites approval and could host these sites in partnership with charging providers.

There are some risks councils should be aware and take steps to address if it considers to adopt this approach.

Risks for Council
1. Significant care should be taken in selecting the charging partners
2. Uncertainty over partners' business models and what this means for Council in terms of control and revenue
3. Some business models may rely on advertising and limit Council's control over the advertising provided
4. Selective tendering could undermine opportunities for diversity and result in delays in responding to changing technologies and circumstances
5. It is essential to carefully establish the correct Key Performance Indicators , duration of contracts and provision of data
6. Council may not have internal expertise/resources to manage issues
7. Compliance with TfNSW guidelines re leasing of roadway.
8. Need for EV parking enforcement
9. Large charging units and bransing create visual clutter

The opportunities that this scenario could generate are highlighted below.

Opportunities for Council
1. Could be managed in a way that encourages diversity of charging types, operators and locations.
2. Council has control over the guidelines for the deployment of charging infrastructure.
3. Low cost of implementation and maintenance to Council – Contracts should clearly allocate this to the charging providers.
4. Opportunities to guide geographic distribution of charging.
5. Opportunities to capitalise on the availability of government funding – such funding is not currently available to Councils but is available to private charging companies.
6. Access to data may be available via contractual agreement with partners.
7. Potential fees to council for leasing of car spaces

5.3 Scenario 3 – Non-Proactive /Acceptance of safe EV charging proposals

This is a scenario where council has no active involvement in EV charging infrastructure and and only limited control in the process, for example, only Traffic Committee approval or acceptance of Ausgrid / Jolt proposals.

There are likely more risks than opportunities under this option. Some of these are listed below.

Risks for Council
1. Limited control over EV sites /locations
2. Potential for numerous competing networks and EV charging infrastructure models within a Local Government Area (LGA)
3. May not support Councils emissions profile or net zero targets
4. Poor performance by charging companies could jeopardise communities' perception of Council's reputation
5. May lead to legal challenges – competition over locations and liabilities
6. No control over visual impacts/design of charging units
7. Potential for locational clustering as each provider competes for premium locations
8. No guarantee of access to data for Council

9. "Council may end up getting ripped off" - no control, no management, no revenue
10. Council may not have internal expertise to manage issues if they arise
11. Council may have to accept responsibility fo managing EV parking compliance.

The opportunities that this scenario could generate are highlighted below.

Opportunities for Council
1. Low cost to Council
2. Access to government funding for private charging companies
3. Lack of strategic approach or plan for EV charging units in LGA

5.4 EV Design Considerations

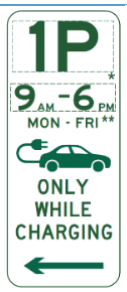
The SSROC EV Workshop examined charging unit design considerations under the three broad scenarios identified above. Design considerations and related operational scenarios are highlighted below.

Design Consideration	Scenario 1	Scenario 2	Scenario 3
Location specific design Design of charging units should be best fit for the location including consideration of safety, frontage uses, visual amenity, streetscape, heritage, pedestrian and cycle activity etc Charging units design and location needs to be suitable for drivers with mobility disability.	X	X	-
Safety All sites subject to a traffic assessment including impacts on pedestrians and cyclists	X	X	X
Uniformity of network apps Wherever possible the apps should provide potential users with diversity of choice including different levels of charging, locations and ideally all networks within the LGA or region	X	Possible	-
Interactive apps The app should be fully interactive providing information on availability, serviceability and the ability to book spaces in advance	X	Possible	?
Charging cord management Charging cords should be self-retracting, should not result in a trip hazard and should be brightly coloured (yellow) /high visibility	X	X	?

Automatic enforcement The charging units and software should not require Council to enforce use or overstay. Mechanisms could include fee structures which penalise overstay or parking without charging, numberplate recognition identifies non-EVs parked in the charging spaces	X	X	-
Visual impact Should be minimal – EV charging units should not reduce the amenity of the surrounding environment /neighbourhood	X	X	-
Identification of the charging units The units and associated spaces, including wayfinding and space marking, should be uniform across all networks in the LGA/region	X	X	Possible
Dynamic pricing Be included to encourage use of the chargers outside peak demand periods	X	X	-
Economics All sites should be subject to an agreed fee structure	X	X	-
Community consultation All proposals should include appropriate community consultation	X	X	X

5.5 EV Charger on Council land – Issues for consideration

The SSROC EV Workshop examined key consideration and requirements for installing EV charger on Council land. These are highlighted below.

EV CHARGER	SITE Suitability /Access	SIGNAGE
Charger Size (kWh) Medium/fast/ultra-fast	Site selection / Location space availability	TfNSW Signage Guides Regulatory Signs
Installation/Maintenance Operation /Removal	Grid capacity connection at preferred site	Pole sign TfNSW guidelines for sign colour only while charging or time periods for charging
Safety of cords (length) Not a trip hazard	Site selection compatible with master plan for area (if available)	 
Parking configuration	Compliant with disability access (parking space width,	Road marking for dedicated space – TfNSW guidelines,

Parallel to curb or 90^{o} parking	easy access to charger, curb/no curb and height of plugs etc).	size, angle, colour, handicapped access etc
Bollards **Bollards and kerb may limit access to charger for drivers with mobililty disability (e.g. wheelchair access)**	Footpath access requirement 0.6 metres back from the curbside	
Placement safety guards or bollards	Lighting – 24 hr	TfNSW stencils could provide consistency across the region
Usage data available to Councils	Requirement of 1.5 metre for wheelchair access on footpath	Lease EV charging spaces. Roads Act may have a limit of 5 year lease
Handling complaints to council	Public liability insurance	Randwick choice to Licence EV only parking spaces (10+5 years)
Advertising - DA requirement or not DCP or LEP	Public consultation – local community	

6. REGIONAL EV CHARGING PRIORITIES

The representatives of SSROC member councils, North Sydney and NSROC (first Workshop), discussed what councils can do together as a region to better position councils and the region for rapid growth in EVs. This included deliberations on relevant tools, policies and guidelines to promote and regulate growth for increased EVs and EV charging infrastructure both now and the coming years.

Details of highlights of EV charging matters and aspects that councils in our region can work together are presented below. These are grouped under the following broad headings.

- Planning, land use instruments and transport strategy
- Public domain, property strategy and management, and procurement strategy
- Evolving technologies and business models for EV charging
- Advocacy
- Community education and awareness

6.1 Planning, land use instruments and strategy

The SSROC EV Workshop identified the strategic and statutory planning and related priorities below for the SSROC and participating councils region.

1. Develop regional Electric Vehicle Charging Infrastructure Guidelines (SSROC region plus interested councils such as North Sydney, Ryde and any other). The Guidelines to be reviewed and updated regularly for changes or updates to NSW and Australian Acts, changes to Australian Standards and Regulations.

2. Develop a regional development control plan (DCP) template for use by SSROC member councils, similar to SSROC Childcare DCP and develop model clauses in the DCP. This will lead to common model or process for EV infrastructure and related proposals to councils in the region.

3. Related to the above, develop planning pathways for EV charging infrastructure in new developments, established areas and other land use types (including multi-unit dwellings, single dwelling units, commercial development). This will identify requirements and checklist to consider in approval process for EV related development applications under the different pathways.

4. Develop regional EV strategy – that identify demographics, urban typology, role for council, transport needs, places and planning for EV charging in the region [potential to engage consultant]. Establish standard definitions and principles and consistency in technology options.

5. Develop a regional map of suitable sites for EV charging – helpful to identify locations approximately every 5km along Sydney's major commuter corridors, in line with NSW Government EV strategy objective. Strategic approach to mapping on- and off-street parking within the region and council areas.

6.2 Public domain, property strategy and management, and procurement strategy

The key higlights below were identified as EV charging related public domain, property and procurement priorities.

1. Develop Draft regional EV policy for use by councils, flexible enough to adjust to particular local circumstances.

2. Engage and partner with Ausgrid on “fast charging regional masterplan” that identifies problem areas for increased charging infrastructure and potential fast charger locations.

3. Regional procurement strategy to promote bulk procurement and lower the cost of EV installations by council - EV charging units, monitoring and payment platforms and Ausgrid pole rental fees. It will better position the region for supply chain issues and changing technologies.

4. Develop common regulatory framework:
- Leasing EV only parking spaces /fees
- Signage /liabilities /insurances
- Enforcement /regulatory restrictions.

4.6 Evolving technologies and business models for EV charging

1. EV business model for council should be essentially EV charging Encouragement /Enablement scenario or approach. While some SSROC member councils are currently considering this position and also edging towards limited EV ownership (purchase of a small number of EV chargers), some other councils may opt to maintain flexibility for new proposals by private charging companies.

   SSROC could commission an independent EV charging expert to provide an assessment of the preferred approach and to set the parameters for SSROC member councils to establish an International best practise operational scenario.

2. Shared regional data and mapping (traffic, energy supply, off street parking).

3. Develop common approach to regulatory related matters:
   - leasing EV only parking spaces /fees
   - liabilities /insurances
   - enforcement / regulatory restrictions
   - Establish a uniform system of identification including wayfinding, charging space signage and marking, across SSROC.

4. Develop model council policy /process for unsolicited approaches by EV charging infrastructure providers, example JOLT.

5. Explore opportunities for an expression of interest to partner with external providers.

6. Establish acceptable business models for partnerships with EV charging providers.

6.4 Advocacy

The details below were identified as areas that SSROC member councils and other collaborating councils in Sydney can work together on EV charging infrastructure advocacy and related matters.

1. Advocacy with Australian and NSW Governments on fleets and fast transition.

2. Advocate for clear definitions in SEPPs

3. Collaborate with Electric Vehicle Council and EV sales companies such as the Good Car company for bulk buys[8] or other opportunities.

6.5 Community Education and Awareness

There are a number of possible priorities that councils can work together on to assist local residents in their EV transition and awareness.

1. Regional EV education program and identify community priorities and local needs.

2. Undertake a community survey of attitudes and knowledge of EVs.

3. Community information regarding EV's charging (particularly strata dwelling residents). Council-run webinars on EVs for apartment residents in Waverley, Randwick and Woollahra was success with 130 participants and 5000+ view of the webinar.

4. Engagement with community on EVs – charging locations and expectations. Familiarise local residents with EV vehicles through open days – across SSROC.

5. Dedicate page on EV on councils' website with model for EV awareness information for community and education for new vehicle owners.

6. Incorporate learnings from SSROC Streetlighting upgrades.

[8] https://www.goodcar.co/

APPENDIX A

DRAFT ELECTRIC VEHICLE CHARGING INFRASTRUCTURE GUIDELINES

1. Purpose

The purpose of these guidelines is to provide conditions for the provision, installation, management, maintenance and removal of Electric Vehicle (EV) charging infrastructure on public land in the [Council] LGA.

This is to allow for consistency in approach and execution by member councils and ensure that the providers are aware of Councils requirements and expectations. The Guideline outlines the principles for planning EV charging infrastructure on public land and to support the selection of the correct type of infrastructure at the right location.

The Guideline applies to all publicly accessible EV Charging Infrastructure installed on Council land, whether installed by Council or Third-Party Private operators.

2. Context

A major global transformation is taking place in transport from internal combustion engines (ICE) to EVs. Manufacturers and charging providers are rapidly developing EV technologies to prepare for this transition and to be well positioned for future market growth in passenger and freight mobility.

EVs are expected to become more established in the Australian market in the coming decades. Research shows that the main barriers currently preventing greater uptake of EVs in Australia are the high cost of the vehicles, inadequate incentives, inadequate supporting policy and the lack of public charging infrastructure away from home. The installation of local EV charging infrastructure will support our community to transition away from ICE vehicles to EVs and achieve a reduction in greenhouse gas emissions. It will also support residents who don’t have access to off-street parking for home charging.

The preparation of these guidelines has been informed by industry best practice, legislation and relevant state and local plans and strategies. The NSW government has several initiatives aimed to facilitate the uptake of EVs in NSW. These include

- NSW Electric Vehicle Strategy 2021
- Future Transport 2056 - NSW Electric and Hybrid Vehicle Plan
- State Infrastructure Strategy 2018 - 2038
- NSW Government Future Fuels Fund

Development of these guidelines builds on the work undertaken by a number of NSW Councils including Parramatta City Council, Shellharbour City Council and Hornsby Shire Council.

3. Principles

This guideline will:

- Support the delivery of EV charging infrastructure on public land that integrates effectively with the transport network and local environment
- Consider all electric transport charging infrastructure
- Ensure a fair and equitable selection of providers that supports current EVs and all charging types where possible
- Increase the availability of EV charging infrastructure to support growth in the uptake of EVs, locally and nationally
- Provide direction for providers of EV infrastructure in the allocation of suitable locations on public land and Council requirements.
- Be reviewed and endorsed by Council yearly or biennially to ensure relevant industry standards and regulations are addressed.

4. Scope

This document applies to all publicly accessible EV charging infrastructure installed on public land, whether installed by Council or Third-Party Private operators. It provides the overriding direction for the provision of Public Electric Vehicle Charging Infrastructure across the [Council] LGA for residents, businesses and visitors.

5. Design Considerations

5.1 Site Selection

A site may be considered suitable for EV charging infrastructure where the proposal demonstrates to Council's satisfaction that:

a) The land is 'public land' or 'public road', as defined in the Local Government Act 1993 and Roads Act 1993 respectively.
b) The land classification has been considered; land classified as operational land is preferred, however community land may be considered suitable where the proposal is in accordance with the Local Government Act 1993, Crown Land Management Act 2016, applicable land category core objectives and is expressly authorised in the relevant Plan of Management for that land.
c) Electric Vehicle charging stations are permissible under the relevant legislation at the proposed location. This includes, but is not limited to:
    - [Council] Local Environmental Plan 20XX
    - State Environmental Planning Policy (Transport and Infrastructure) 2021
    - The Roads Act 1993
    - Local Government Act 1993
    - Crown Land Management Act 2016
    - Disability Discrimination Act 1992

    Note: the provider is responsible for securing development consent or approval, where applicable from the [Council].
d) Environmental constraints, characteristics and amenity have been considered
e) The electricity supply infrastructure capacity of the existing supply network is suitable (or can be reasonably upgraded).
    Note: Council will bear no cost or responsibility for the provision of, or upgrade to, electrical supply infrastructure to service an EV charging site, unless by prior agreement.
f) The land has reasonable connection to the wider road network.

g) The facility and its operation will not adversely impact upon the amenity of surrounding development or access to an enjoyment of the public domain.
h) The facility is safe with adequate lighting, and pedestrian, vehicle and bicycle access available at all times of the day and night.
i) The facility is compliant with the relevant Australian Standards and Regulations for workplace health and safety. Charging station hardware must be located a safe distance away from hazards (e.g. dangerous goods and fuels).
j) Consultation with the local community and relevant stakeholders is satisfactorily undertaken in conjunction with site selection.

5.2 Visibility and Identification

The facility and all ancillary infrastructure (including signage, parking bays and charging infrastructure) shall be easily visible and accessible for users to find, with consideration of the following:

- All EV charging bays shall be clearly marked with the words 'EV Charging Only' painted on the ground. Note: Non-compliance with this provision may be considered in areas where it is inappropriate, provided sufficient alternative identification can be provided to the satisfaction of Council or where the infrastructure is provided in a manner that allows for more widespread charging including the use of 'Smart Poles' or other similar infrastructure.
- Appropriate signage must be installed to indicate the parking spaces are allocated for EV charging only. Signage shall be provided in accordance with Transport Roads and Maritime Service Sign No. R5-41-5 or equivalent.
- Adequate lighting must be provided for the safety and security of drivers, passengers, vehicles and associated infrastructure. Lighting must be sufficient to easily read associated signs, instructions, controls on vehicles / EV infrastructure and identify all possible EV charging inlet locations and for charging cable visibility.
- Parking spaces shall be located to ensure safe sight distances for pedestrians, vehicles, and bicycles are provided.
- The use of advertising by any provider is to be disclosed to Council in the initial application process and disclosed as part of the community engagement process. Separate planning approvals may be required for the presence of advertising. Advertising must comply with the relevant standards. Advertising that contains tobacco, nicotine, alcohol and gambling will be prohibited on any EV charging infrastructure.

Note: That liability of on-street charging infrastructure is the responsibility of the provider and Council will not be held liable under any circumstances.

5.3 Parking Configuration

The following must be considered at a minimum:

- All aspects of EV charging bays are to be designed and constructed in accordance with the relevant Australian Standards.
- All new EV carparking spaces / charging bay pavements shall be constructed to Council's specifications including sealing, kerb and guttering, pram ramps, signage and line marking.
- Preference is given to the provision of EV charging infrastructure at a minimum of two related (example adjoining / adjacent) carparking spaces in any given location.

- All EV charging bays are to be compliant with the Disability Discrimination Act 1992 which includes compliance with current standards for access (AS2890.5/AS2890.6).

5.4 Electric Vehicle Charging Technology

Council's objective is to facilitate the provision of EV charging infrastructure in an efficient, inclusive and accessible manner.

The installation of EV charging on Public Land within the [Council] LGA shall be consistent with the State Government Policy Future Transport 2056 – NSW Electric and Hybrid Vehicle Plan and at a minimum include:

- Consistent standards for charging connections based on European CCS2 and CHAdeMo for DC fast chargers, and Type 2 for AC charging.
- Preference for connected and smart chargers, to allow the most efficient energy use for both consumers and network operators.
- Public access and open payment options platforms (credit/debit cards).
- Preference for all EV charging infrastructure to have a minimum input power capacity of 25kW.
- The charging cable shall have the capacity to reach all points of the carparking space, to cater for EVs with front, rear or side charging points where possible and in accordance with current industry practices and guidelines. Cables should not be a hazard for pedestrians or other vehicles at any given time.
- The provision of cloud-based monitoring system software to allow regular monitoring and reporting of usage of the EV charging infrastructure by users over time, preferably free of charge to Council.
- Anti-vandalism solutions to protect EV chargers and their components, particularly charging leads and screens.
- Load management smart system to manage power supply and demand per location as appropriate.

The provider may be required to upgrade existing EV charging infrastructure to meet the industry standards and requirements. Council will bear no cost or responsibility for this upgrade.

Provisions and requirements under this item may be altered where future EV charging infrastructure supersedes that which is written in this Guideline, particularly if smarter and more sustainable alternatives are demonstrated to be suitable, to the satisfaction of Council.

5.5 Environmental

Many EV users aim to reduce their carbon emissions from driving. Council will preference EV charging infrastructure that uses renewable energy such as accredited GreenPower, solar panels/battery storage, et cetera, where practical.

Preference will be given for applications from third party providers proposing to use renewable energy sources to power EV Chargers on public land or alternative arrangements to purchase accredited GeenPower. Demonstration of this ongoing power or offset registration is required to be submitted to Council annually and include total tonnes of CO2 equivalent.

6. Leasing Arrangements

- Provision of EV charging stations on public land will be subject to licensing / leasing arrangements, or similar, with Council and where appropriate, the relevant Minister as it relates to Crown Land.
- License and/or lease terms shall be in accordance with Council's Property Lease and License Policy, and where appropriate, those terms and conditions required by the relevant Minister as it relates Crown Land.
- Council reserves the right to require appropriate remuneration for use of Public Land for the purposes of EV charging stations. This may be in the form of a lease / license fee, apportionment of user fees, or other. This is to be determined on a case-by-case basis as part of any license / lease (or other) agreement.
- A maintenance schedule including regular inspections shall be implemented by the Provider. All maintenance and works are to be carried out in a timely manner to avoid delays to service. Information on the maintenance response times is to be provided to Council to demonstrate compliance. Further requirements will be specified as part of any license / lease agreement.
- Information on the levels of use of the car spaces and charging are to be provided to Council every 6 months to assist Council in determining the demand for such parking spaces.
- Entering into a lease or license agreement with Council to utilise public land for installation and operation of an EV charging station in no way guarantees development consent or approval. All risk, public safety and legal liability issues will be specified via any condition of any development consent and where applicable, the license / lease agreement. Costs associated with the negotiation and finalisation of any lease or license agreement will be at the cost of the Provider.
- Non-compliance with the Policy may lead to the termination of any agreement between the provider and Council and may result in the forced removal of EV charging and ancillary infrastructure, at the cost and responsibility of the provider. The specific terms are to be determined as part of any license / lease agreement.

7. Public / Private Partnership

Council may consider entering a Public/Private Partnership with relevant providers to deliver EV charging stations on Public Land. This will be subject to negotiation on a case-by-case basis.

APPENDIX B

SSROC EV Working Group

Electric Vehicle Charging Issues and Strategic Options

Prepared for SSROC CEOs/GMs' February 2023 meeting

1. SUMMARY

The SSROC EV Working Group is:

- working on situational analysis and issues and opportunities of EV in the SSROC region;
- preparing to develop SSROC policy on EV charging with flexibility for member councils to set their own role in EV charging within a continuum of roles for member councils, ranging from those that want least involvement to councils that may be more involved and invest in EV charging infrastructure;
- developing SSROC regional guidelines for private sector and residents wanting to install EV chargers in the SSROC area. This will ensure common understanding of terminology and issues categories such as leasing and licensing on public land, planning approvals, plans of management, advertising approvals, traffic implications and approvals and maintenance of EV chargers;
- developing EV guidelines based on workshops and professional and operational experience of SSROC member councils' strategic planners, transport managers, sustainability managers and property managers (represented in EV Working Group) and on work already done by councils in SSROC and elsewhere in Australia;
- organising EV workshops in February 2023 to unpack policy and strategy, operational and enforcement issues in the SSROC region, to inform revisions to draft guidelines;
- collaborating with North Sydney and Ryde Councils through their representatives in the Working Group;
- open to collaborating with Resilient Sydney and other councils in Sydney metro for a city-wide approach to EV.

2. BACKGROUND

2.1 Context

In response to electric vehicles (EV) enquiries from the community and industry and the need to keep pace with emerging EV and support infrastructure, SSROC member councils are keen to have EV policies or guides for their areas. This was reinforced by the SSROC CEOs/GMs' Group at its meeting on 1 September 2022. The group raised EV charging infrastructure on council lands and concerns for possible ongoing maintenance costs for councils.

SSROC EV Working Group was subsequently established to provide insight to regional collaboration on EV charging and guidance on EV infrastructure policy. Membership of the working group includes strategic planning, transport, property management and environmental sustainability professionals. The Working Group has expanded to include North

Sydney and Ryde. A coordinated regional approach to EV infrastructure implementation will help to ensure good outcomes for community, council and industry.

One of the first decisions by the EV Working Group was to develop issues and options paper, seek direction from the CEOs /GMs' Group and then progress to EV workshops on policy, legal and operational and enforcements matters.

2.2 Current Situation of EV Charging

The uptake of EV is increasing rapidly and will continue to accelerate significantly over the next few years. This is supported by new models becoming available in the Australian market, lower purchase costs, NSW Government rebates and phasing out of stamp duty.

The NSW Government is investing in EV Charging Infrastructure (via grants and co-funding) to support the transformation that is taking place from traditional internal combustion engine (ICE) cars and trucks to EV's[9].

The Australian Federal Government is funding a trial of pole mounted EV chargers in 50 sites across nine local government areas in NSW including seven Sydney metropolitan councils[10].

Ausgrid in conjunction with Jolt are rolling out EV charging on their street-side kiosks[11]. Ausgrid have also commenced a program to deliver 30,000 pole mounted chargers across the Ausgrid network by 2029[12].

For local councils the pressure for the role out of EV infrastructure, particularly in public places, is moving faster than the development of strategies, policies or guidelines to inform optimal management and governance oversight.

3. LOCAL GOVERNMENT AND EV CHARGING

3.1 Role of Local Government in EV Charging

Councils through development control plans, policies, strategies, community engagement and information can play a proactive and/or supportive role to make EV's a viable choice for their community and businesses. Local council transport strategies are common and some refer to EV's or low emission vehicles and actions to support them. Councils have key responsibilities related to the local road infrastructure and car parking, as well as local environmental amenity.

With State and Federal Government rapid roll-out of funding, a number of SSROC councils have been approached to act cooperatively to approve public place EV chargers at sites (on-street or in council carparks) nominated by third-party providers. For example,

- Ausgrid can approve EV chargers on kiosk locations (compatible with network capacity) with third-party commercial operator – JOLT.
- Jolt's commercial business model requires 24-hour advertising and dedicated EV parking spaces.
- Tesla requesting dedicated parking for their 'Tesla' only EV chargers at council carparks.

[9] https://www.nsw.gov.au/initiative/nsw-governments-electric-vehicle-strategy/infrastructure-funding
[10] https://arena.gov.au/projects/intellihub-street-power-pole-ev-charger-with-grid-integration/
[11] https://www.ausgrid.com.au/In-your-community/JOLT-Electric-Vehicle-Charging
[12] https://www.ausgrid.com.au/About-Us/News/Pole-mounted-EV-charger

- Site choices for ARENA or Ausgrid funded pole EV charging trials may or may not be negotiated with councils.

Without an adopted EV Charging Strategy, DCP's, policies or installation and maintenance guidelines, negotiations between councils and third-party providers, has proved challenging or has been deferred.

3.2 Issues for Councils

Many councils through their Local Strategic Planning Statements and/or Net Zero emission plans, have identified the need for EV-ready or EV capable multi-residential developments and non-residential developments. Issues for councils include but are not limited to the following:

- Amendments to the National Construction Code to include EV charging are expected in 2023. Some councils have commenced work on new DCP's to specifying conditions under which new developments are required to install EV charging stations and/or electrical infrastructure for future provision in new residential and commercial developments.
- It is estimated that 30 percent of vehicle owners live in dwellings where parking is not provided or where parking spaces lack access to power. There is a growing need for on-street public place EV charging[13].
- The majority of councils have not yet identified where off-street EV charging should be a priority, example in areas of high-density MUD's or limited off-street parking.
- There are significant challenges ahead for current multi-residential strata developments considering retrospectively implementing EV charging for residents. There is potential for local councils to assist strata managers with information on the challenges, opportunities, standards and guidelines for retrofitting EV charging into their buildings.
- The Electric Vehicle Council estimates that 80% of EV charging will take place at home providing maximum convenience with minimum cost for most[14]. Studies have found that at home charging spiked in the middle of the day, corresponding with self-consumption of solar and the middle of the night, corresponding with off-peak electricity pricing.
- Equity issues were raised by SSROC in their submission to Energy Security Board – Response to EV Smart Charging Issues Paper Aug 2022[15]. The uptake of EVs and introduction of fast and ultra-fast AC chargers will have grid and infrastructure upgrade implications. If the cost of upgrading infrastructure is recouped through shared network tariffs, it could lead to equity and access issues and concerns in local communities. There will be equity implications for energy consumers who do not have the opportunity or the means to install EV charging at home and for small local businesses.
- Some councils are currently trialling and testing approaches to deploying EV charging infrastructure and electric fleets. Others have developed and adopted guidelines for EV charging on public land, however most are yet to develop and publish their strategies.
- There are also issues of fee structure of public charger providers, booking apps and location selection, measures to maximise utilisation, and use of 100% renewable energy source that could be the preference SSROC and other councils.

[13] https://www.future.transport.nsw.gov.au/sites/default/files/2022-07/nsw_electric_hybrid_vehicle_plan.pdf
[14] https://electricvehiclecouncil.com.au/wp-content/uploads/2022/08/Home-EV-charging-2030.pdf
[15] https://ssroc.nsw.gov.au/2022/08/18/10628/

3.3 Role of Councils as landholders with the potential to host EV Charging sites on public land

The type of location, how it should be accessed, and who should own and operate the EV charging infrastructure are among the first decisions that a council is required to make. For example, models include council owned, owned by a third party or a Public-Private Partnership.

The Institute for Sustainable Futures undertook a case study of Lake Macquarie and examined business models for councils to consider for the successful deployment of EV charging infrastructure[16]. They found that the business models most relevant to Councils were "semi-public" patrons of business premises or "public" access (on-street access).

3.4 Risks for Council

Multiple risks exist for local government regarding charging networks due to high initial investment costs, revenue uncertainty, electricity tariffs and peak capacity contracts, and the involvements of multiple stakeholders. An agile approach to refining a business model, while future-proofing any choice of technology or platform, will be needed if councils are to have a role in the deployment of EV infrastructure in Australia.

4. REGIONAL APPROACH

4.1 Benefits of a Regional EV Charging Strategy

A regional strategy can provide the framework for the consistent deployment of charging infrastructure by private enterprise, residents and councils, supporting the placement of EV charging infrastructure that serves the local community. It can also provide guidance and support to businesses, community sectors and residents installing their own chargers.

Interoperability is one of the strengths of a metro, regional or jurisdictional approach to EV charging infrastructure. It offers flexibility for residents and customers to widen their charging options, at home, work, shopping centres, public park, off street charging and not encumbered by varying systems in different council areas or regions.

Metro or regional organisation of councils such as SSROC, working collaboratively are in a strong position to achieve regional consistency and develop an EV charging strategy that prepares our councils and communities for the transition to EVs. An integrated regional approach provides some consistency, while allowing for unique local circumstances.

4.2 Principles of a Regional EV Charging Strategy

The SSROC EV Working group has yet to define the principles of a Regional EV Charging Strategy. However, a good example is provided by Lake Macquarie City Council who have developed their EV Charging Strategy and Action Plan[17].

Lake Macquarie has defined the principles for an EV charging network as including:

[16] https://www.mdpi.com/2071-1050/13/12/6590

[17] https://www.lakemac.com.au/Our-Council/City-strategies-plans-and-reporting/Electric-Vehicle-Charging-Strategy

- Access for all - Providing equitable access to affordable, convenient charging infrastructure aligned with community needs. Chargers are easy for the community to find via consistent wayfinding signage and digital platforms like Google Maps and Plug Share.
- Fit for purpose - The right chargers are installed in the right places by the right organisations to ensure a fit-for-purpose network. Council will play their part to enable the network and support residents and private enterprise to expand the network in line with demand.
- Support the transport hierarchy - Chargers are designed and located in a way that supports Lake Macquarie's transport hierarchy and network.
- Leverage economic opportunities - Council will make the most of economic opportunities provided by EV charging, such as increased visitation to tourist locations and shopping districts, while not over-capitalising.

5. GUIDELINES STRATEGY OPTION

A strategy option for a council is to develop guidelines that apply in its area. When councils work together, as is the case with SSROC-member councils, North Sydney and Ryde working together, regional guidelines could be developed and apply in their region, subject to individual councils endorsing the guidelines. As the EV technology is evolving, the guidelines would be subject to review over time.

In the case of SSROC, the guidelines should also be flexible enough to allow for Sydney metro-wide guideline as necessary, in collaboration with Resilient Sydney and possibly other regional organisation of councils (ROCs).

5.1 What to include in Guidelines for EV charging infrastructure

There are several EV charger models in the market. There is need for state and local councils to regulate operating standards and alignments across their regions and jurisdictions. Public carparks, shopping centre carparks, recreational, entertainment, civic, large business premises and manufacturing and logistic complexes provide opportunities for options for EV charges – ranging from slow, fast to ultra-fast charging ports and AC chargers.

The Draft EV Charging Infrastructure Guidelines were developed with close reference to work undertaken by Shellharbour City Council[18], City of Parramatta[19] and Hornsby Shire Council[20]. It applies to EV Chargers on council lands and offers opportunity to promote applicability for EV charging on non-council lands within LGAs.

This Draft Guideline offers opportunity for collaboration in future reviews to better keep pace with the evolving industry and applicable state regulations.

[18] https://www.shellharbour.nsw.gov.au/environment/action-on-climate-change/electric-vehicle-charging-infrastructure-guidelines
[19] https://participate.cityofparramatta.nsw.gov.au/electric-vehicle-charging
[20] https://www.hornsby.nsw.gov.au/environment/sustainability/electric-vehicles

APPENDIX C

Electric Vehicle (EV) Charging Working Group

Workshop 1

Agenda

Date: Wednesday, 8 February 2023
Time: 10.00 am – 12.30pm

Venue: Randwick Community Centre, 27 Munda Street RANDWICK
Meeting is at the *Classroom* across the village 'green' from the car park, and is not part of the main building.

1.	**Welcome and introduction** • Welcome • Background to workshop • Introduction of Facilitator and Workshop participants	Vincent Ogu	10 min
2.	**Overview of regional approach to EV infrastructure**	Helene Forsythe	15 min
3.	**Steps to developing EV strategy – lessons learnt from councils**	Facilitator All	30 min
4.	**Group Discussions** Group 1: Strategic planning, statutory planning, transport strategy. Considerations for strategic plans, land use planning instruments, development control. Role of council in EV charging services Group 2: Public domain and property strategy and management, proponent management, procurement strategy. Considerations, terms and conditions for use of public domain and council property for use as EV charging services. Group 3: Agile and adaptive council. Dealing with rapidly evolving technologies and business models. EV infrastructure and pace of technological change and how councils can avoid being blind-sided by the range of proponents and locations/technologies for EV charging. Promoting EV aware council	Facilitator and Group Leads	60 min

	staff and community - home chargers, strata building charging, smart poles, Jolt/Ausgrid substation chargers, kerb chargers, public chargers on private property e.g. shopping centres, commercial premises, Ampol		
5.	**Report back by Groups – Key issues and opportunities for councils /region**	Facilitator & Group Leads	30 min
6.	**What next?**	Vincent Ogu	5 min

APPENDIX D

Electric Vehicle (EV) Charging Working Group

Workshop 2

Agenda

Date: Thursday, 16 February 2023
Time: 12.30 pm – 3.30pm (lunch provided)
Venue: Burwood Council Conference Room
Level 1, 2 Conder Street, Burwood

1.	**Welcome and introduction** • Welcome • Background to Workshop 2 • Introduction of Facilitator and Workshop participants	Vincent Ogu	10 min
2.	**Highlights of Workshop 1 – possible regional EV infrastructure matters**	Vincent Ogu	15 min
3.	**Developing EV guidelines – lessons learnt from councils**	Facilitator All	30 min
4.	**Group Discussions** **Group 1:** **EV and DCP infrastructure, Strata dwellings and EV infrastructure** • EV charging infrastructure and DCP matters in new residential and commercial developments • Issues that face existing multi-residential strata developments in installing EV charging infrastructure for residents • Can councils assist strata managers with information on the challenges, opportunities, standards and guidelines for retrofitting EV charging into their buildings? How? • Identifying locations for off-street EV charging in areas of high-density MUD's or limited off-street parking and public lands. **Group 2:** **Design considerations, risks for council, regional interoperability**	Facilitator and Group Leads Rita Vella Ken Welsh	60 min

	• Design considerations - location selection, visibility and identification, parking considerations • EV infrastructure risks for local government • Approach to metro /regional booking apps; EV charger models; consistent standards for charging connections • Regional interoperability of EV charging infrastructure **Group 3**: **Guidelines, enforcements and managing non-compliance** • EV guidelines – key issues for regional guidelines for both council and non-council lands • Lease or license agreement with Council to utilise public land for installation and operation of an EV charging station. Managing negotiations with private service providers. • Signage and Enforcement for Designated EV Only Parking • Disability parking and EV charging facilities.	Helene Forsythe	
5.	**Report back by Groups – key issues and opportunities for councils /region**	Facilitator & Group Leads	30 min
6.	**What next?**	Vincent Ogu	5 min