Application by Essential Energy to participate in the ARENA Plug and Play Electric Vehicle Charging Infrastructure funding trial.

Ring-fencing waiver application

20 April 2025

Essential Energy

essentialenergy.com.au

Contents

Overview

Essential Energy seeks a targeted, time-bound waiver from the Australian Energy Regulator's (AER) Ring-fencing Guideline to enable **third-party access to Electric Vehicle (EV) charging infrastructure installed within existing distribution assets**.

All costs for activities covered by this waiver application are fully funded by the Australian Renewable Energy Agency (ARENA) and Essential Energy using unregulated funds. It involves **no regulated expenditure and no recovery of costs from network customers**.

Trial design is supported by ARENA funding conditions, including requirements to prioritise underserved locations, support participation by multiple market providers, apply staged deployment, and publicly report outcomes. These conditions reinforce that the trial is structured as a controlled, evidence-based intervention to support market development – not a commercial expansion of Distribution Network Service Provider (DNSP) activities.

This application relates to **one service only**: facilitating third-party access to DNSP-installed EV charging infrastructure.

Essential Energy's role is **limited to infrastructure ownership, installation and maintenance**. All retail charging services – including pricing, billing, and customer engagement – remain fully contestable, to be delivered by Charge Point Operators (CPOs) and retailers. This application **does not seek to permit Essential Energy to retail electricity, set prices, manage customer accounts, or alter tariff or service classification frameworks** (see Box 1).

The trial addresses a **persistent gap in regional and thin markets**, where public EV charging infrastructure has not been delivered at scale. It is a **time-bound, reversible intervention** to:

- enable near-term deployment in underserved locations
- test whether shared infrastructure can unlock market participation
- generate evidence to inform future regulatory and policy decisions.

The trial positions Essential Energy strictly as a **market catalyst – not a competitor**. This trial tests a central hypothesis in thin regional markets: whether targeted infrastructure deployment can overcome the "chicken-and-egg" constraint between EV adoption and charging availability, thereby increasing EV uptake and crowding-in competitive market participation over time.

The trial:

- **crowds-in competition**, by making infrastructure available to all CPOs, including those who have to-date not invested in small markets at scale
- **does not reserve sites where CPOs have commercial plans**
- **does not receive preferred treatment** in the connection queue; all connections follow the NER-mandated process under standard contestable pathways
- **presents a novel charging solution** that is not available in the market currently
- enables **retail charging services through single-provider CPO access**, with the infrastructure designed to support multi-retailer arrangements as market and regulatory frameworks mature.

Box 1: We propose strict limitations on what Essential Energy can do if the waiver is granted

This waiver application **does not**:

- Request to allow Essential Energy to sell electricity, provide retail EV charging services, set prices, bill EV drivers, or manage customer accounts
- Enable managed charging, demand response, V2G mandates, dynamic network pricing, tariff experiments or network pricing signals
- Change the contestability framework, service classification outcomes, or create any pathway for regulated cost recovery
- Provide any CPO/eMobility Service Provider (eMSP) with exclusivity, preferential queue access, or privileged network information
- Lock CPOs out of future ownership or operation of the assets after the trial (see exit / transfer arrangements).

This model tests whether **shared DNSP-installed infrastructure** – meaning infrastructure owned, installed and maintained by the DNSP but operated commercially by third parties – can reduce deployment barriers, support competitive entry, and improve regional access without establishing or endorsing any ongoing DNSP role (see Boxes 2 and 3). It uses existing streetlight and pole infrastructure where Type 9 metering and composite pole designs eliminate auxiliary hardware, improve safety, and reduce vandalism risk.

The ARENA Plug and Play trial comprises two complementary streams designed to test different approaches to EV charging deployment in regional and remote areas:

- **Stream 1 (no waiver required):**
  enables third-party deployment by reducing site selection and connection barriers across approximately 1000 distribution pole locations
- **Stream 2 (subject of this waiver):**
  involves the deployment of approximately 300 DNSP-owned, in-asset chargers in locations where commercial deployment has not occurred.

This structure allows the trial to distinguish between:

- locations where the market can deliver outcomes with reduced barriers
- locations where targeted, time-bound infrastructure intervention is required.

This structure provides a controlled comparison to assess whether infrastructure enablement alone is sufficient, or whether targeted shared infrastructure is required to overcome coordination constraints in persistently thin markets. Further detail on the design and operation of each stream is provided in The Plug and Play trial will operate under a set of principles designed to ensure that the waiver is implemented in a manner that supports competition, protects consumers, and maintains the integrity of the Ring-fencing framework. These principles guide decision-making and operational behaviour throughout the trial, rather than prescribe rigid rules or impose additional regulatory burden. They are aligned with the objectives of the Ring-fencing Guideline and will be applied in a transparent and accountable manner.

Principles to guide the Plug and Play trial

1. **Targeting unmet need**
   Infrastructure deployment will be focused on locations where the contestable market is not currently delivering outcomes. Site selection will be informed by a structured market scan and engagement process with potential providers. Locations with active commercial intent will generally be excluded from trial deployment, and site selection decisions will be documented and capable of review.

2. **Enabling, not competing with, the market**
   Essential Energy will not participate in contestable EV charging markets and will not provide retail or customer-facing services. Access to infrastructure will be provided on a non-exclusive basis, and where a contestable provider demonstrates active commercial intent, Essential Energy will prioritise facilitating that connection rather than deploying shared infrastructure.

3. **Competitive neutrality**
   The trial will be implemented in a manner that does not confer an unfair advantage on any market participant. Access to infrastructure will be made available on consistent and transparent terms, with no preferential access provided to any affiliated or third-party provider.

4. **No cross-subsidisation**
   The trial will not result in costs being borne by regulated electricity customers. All costs associated with the trial will be funded through ARENA and Essential Energy shareholder funding, with cost allocation consistent with the AER-approved CAM.

5. **Transparency and accountability**
   The trial will be implemented in a manner that supports transparency and enables regulatory oversight. Key information on trial deployment and outcomes will be reported through ARENA's knowledge-sharing framework, and information will be provided to the AER as required under waiver conditions.

6. **Time-bound and reversible intervention**
   The trial is a temporary intervention to test market outcomes, not to establish an ongoing DNSP role. The waiver will apply only for the duration of the trial, and findings will inform future regulatory decisions, including whether the model should continue, change, or cease.

These principles provide a clear framework for how the trial will be implemented, while allowing sufficient flexibility to respond to local conditions and emerging market dynamics. They ensure that the waiver supports efficient market development without imposing unnecessary constraints or regulatory burden.

Addressing the risk of cross-subsidisation

Stream 2 of the Plug and Play trial has been specifically designed to ensure that regulated electricity customers do not bear any costs associated with the proposed activities. All costs associated with Stream 2 – including infrastructure deployment, operation, and evaluation – will be funded through a combination of ARENA grant funding and Essential Energy shareholder funding. No costs associated with Stream 2 will be recovered through regulated network charges, and no expenditure will be included in the RAB. This ensures that regulated customers are not exposed to the risks of trial activities, and there is no cross-subsidy from monopoly network services to contestable activities.

For clarity:

- **Stream 2 infrastructure is not included in the RAB**, and therefore revenues associated with this infrastructure are not subject to the AER's Shared Asset Guideline

- **Stream 1 activities**, where applicable, remain subject to the Shared Asset Guideline where regulated assets generate unregulated revenue.

This distinction reflects the different roles and regulatory treatment of each stream within the trial. While Stream 2 is financially ring-fenced, a waiver is required to permit the provision of access services using DNSP-owned infrastructure. The waiver does not alter the financial separation of activities, but rather enables the service to be provided within the existing regulatory framework.

Revenue from commercial arrangements contributes to maintenance and recovery of unregulated investment, without reliance on regulated revenues.

Managing discrimination risk and supporting competitive neutrality

The Plug and Play trial has been designed to support the development of competitive EV charging markets in regional areas, while ensuring that Essential Energy does not confer an unfair advantage on any market participant, including any current or potential related entity.

This is particularly important in the context of Stream 2, where Essential Energy installs and owns infrastructure that is made available for use by contestable providers.

The trial therefore includes measures to ensure that access to infrastructure is provided in a manner that is fair, transparent, and consistent with the objectives of the Ring-fencing Guideline.

CLEAR SEPARATION OF ROLES

Essential Energy's role in the Plug and Play trial is strictly limited to infrastructure ownership, installation, and maintenance. All contestable services – including pricing, billing, customer engagement, and operation of charging services – are undertaken by CPOs and retailers.

This clear separation ensures that Essential Energy does not participate in contestable markets, and that competitive outcomes are driven by market participants. The trial's design, including its time-bound nature and targeted deployment, provides a proportionate and practical approach to managing discrimination risk in thin markets, supporting competition where it is emerging while enabling targeted intervention where market delivery has not occurred.

NON-DISCRIMINATORY ACCESS TO INFRASTRUCTURE

Access to Stream 2 infrastructure will be provided on a **transparent and non-discriminatory basis**, with allocation of sites undertaken through an open and competitive process:

- Access to sites or site bundles will be offered to the market through a transparent procurement or tender process open to all eligible providers
- While individual sites (or site bundles) may be operated by a single CPO for the duration of a commercial agreement, this reflects current market practice and does not confer any structural advantage beyond that agreement
- Opportunities to participate in the trial will be made available to the market over time, including across multiple site groupings where relevant
- Access arrangements and allocation decisions will be documented and capable of review, ensuring consistency with the principles of competitive neutrality.

AVOIDING PREFERENTIAL TREATMENT

Access to Stream 2 infrastructure will be allocated through **a transparent and competitive process**:

- Essential Energy will make available defined sites or site bundles to the market, with information provided on location characteristics, expected utilisation and technical constraints
- Site bundling may be used to support deployment in more remote or lower-utilisation locations, ensuring that coverage objectives are met alongside commercial viability
- Selection of CPOs will be based on transparent and objective criteria, which may include capability, delivery approach, and alignment with trial objectives
- While high-level information on available sites and allocation processes will be made public, commercially sensitive bid information will remain confidential.

This approach ensures that access to infrastructure is contestable, while balancing transparency with the need to protect commercially sensitive information.

SUPPORTING MARKET ENTRY WITHOUT CROWDING OUT

The trial has been designed to support market entry in locations where commercial deployment has not occurred, while avoiding interference with emerging commercial activity:

- Locations where a contestable provider has demonstrated active commercial intent through a connection application will generally be excluded from Stream 2 deployment
- Essential Energy will prioritise facilitating third-party connections in these locations, rather than deploying shared infrastructure
- Connection enquiries or informal expressions of interest will not, on their own, be treated as evidence of committed deployment
- Reasonable timeframes will be applied to connection progression to ensure that capacity is not reserved indefinitely without development
- Where a connection application does not progress within a reasonable period, the location may be reconsidered for trial deployment.

The distinction between Stream 1 and Stream 2 further supports this approach. Stream 1 enables open, fully contestable deployment across approximately 1000 distribution pole locations, reflecting the standard commercial model used by CPOs. Stream 2 is limited to approximately 300 locations and is targeted only to sites where commercial deployment has not occurred. This ensures that the trial prioritises market-led outcomes wherever possible, with Stream 2 operating as a targeted intervention, as well as a scaled-up trial of in-asset infrastructure, in underserved locations.

SITE CHARACTERISTICS AND PRACTICAL CONSTRAINTS

Stream 2 infrastructure is primarily deployed within composite streetlight poles, supplied via underground connections and installed as part of an existing asset replacement programme. Deployment is limited to locations where poles are being replaced at end-of-life, rather than being broadly available across all potential sites. This results in a constrained and highly targeted set of deployment locations, reducing the likelihood of overlap with commercially attractive sites. This configuration differs from traditional pole-mounted charging infrastructure on overhead distribution networks, which represents the primary model currently used by contestable providers. These practical constraints mean that Stream 2 deployment is unlikely to displace existing or planned commercial investment.

Stakeholder engagement and collaborative site selection

Essential Energy already supports EV charging deployment through existing network services and engagement processes. This includes:

- a dedicated EV charging connection team to support site identification and connection processes
- established arrangements for pole access and infrastructure deployment, and
- experience from early in-asset charging trials and collaboration with market participants.

This experience informs the design of the Plug and Play trial and supports its practical implementation. Stakeholder engagement has been undertaken, and will continue throughout the trial, to inform design, validate assumptions, and support effective implementation in regional and remote areas. Further engagement will involve local councils, community representatives, CPOs, retailers, and relevant market bodies.

Engagement will focus on site selection, commercial design considerations, and the generation of evidence to support trial evaluation, while ensuring transparency and alignment with regulatory expectations.

Table 4: Objectives of stakeholder engagement

STRATEGIC OBJECTIVE	STAKEHOLDER ALIGNMENT
Support EV adoption in regional areas where infrastructure gaps persist	Engage councils, communities and users to identify priority locations where improved access to charging can increase EV uptake.
Address thin market conditions and regional inequity	Use site screening, local government input and community engagement to prioritise locations where commercial deployment has not occurred.
Generate evidence to inform future market development and regulatory decisions	Engage CPOs, retailers and stakeholders to test commercial models, identify barriers to entry and assess how demand evolves over time.

Engagement is focused on ensuring that the trial reflects practical market conditions and does not displace or distort emerging commercial activity.

Ongoing Engagement and Adaptive Approach

Engagement will continue throughout the duration of the trial to ensure that the design and implementation remain responsive to market and community conditions, with features of this approach including:

- Feedback from market participants and stakeholders will be considered as part of ongoing trial implementation
- Deployment and access approaches may be refined over time, consistent with the objectives of the trial
- Any changes will remain aligned with the principles of non-discrimination, transparency, and competitive neutrality.

This ensures that the trial remains adaptive while maintaining consistency with regulatory expectations.

6. Timing: Proposed waiver commencement and duration

The waiver is proposed to commence upon approval by the AER and remain in effect for a defined, time-bound period aligned with the Plug and Play trial. The proposed duration reflects the staged nature of the trial and the time required to generate meaningful operational, market, and consumer evidence.

Key timing details

Indicative timings, pending the outcome of this waiver application are:

- Initial installations are expected to commence from December 2026, following completion of technology testing, procurement, and site selection processes
- Deployment will occur progressively over approximately 12 months, with the majority of installations expected to be completed by December 2027
- The ARENA funding agreement includes a milestone extending to July 2028, allowing sufficient time for early operational performance, utilisation patterns, and market response to be observed.

Consistent with these timeframes, Essential Energy proposes that the waiver remain in place for a period sufficient to:

- support full deployment of trial infrastructure
- enable a meaningful period of operation and data collection
- allow for reporting and knowledge-sharing in accordance with ARENA requirements.

A seven-year waiver period (to 30 June 2033) is proposed to ensure that the trial can be completed, evaluated, and inform future regulatory processes without requiring multiple extensions or creating regulatory uncertainty.

TIME-BOUND AND REVERSIBLE INTERVENTION

The proposed waiver is explicitly time-bound and reversible, and does not directly establish an ongoing role for Essential Energy in EV charging markets. The trial will:

- test whether targeted infrastructure deployment can increase EV adoption in regional areas by addressing the coordination constraint between vehicle uptake and charging availability
- generate evidence on the relationship between infrastructure availability, utilisation, and EV adoption in thin markets
- assess whether increased utilisation and demand may, over time, support commercially sustainable market participation.

At the conclusion of the waiver period, Essential Energy will assess:

- the extent of EV adoption and utilisation of charging infrastructure in regional areas
- the performance and reliability of deployed infrastructure
- whether observed demand and utilisation levels support commercially viable market delivery or the availability of alternative delivery models.

Any transition away from DNSP involvement would be driven by demonstrated demand and utilisation outcomes, rather than assumed or theoretical market development.

ALIGNMENT WITH REGULATORY TIMEFRAMES

The proposed waiver duration has been determined having regard to relevant regulatory processes under the National Electricity Rules, including the timing of future Framework and Approach (F&A) processes.

While the next opportunity to formally consider service classification for this type of service arises during the 2029–34 regulatory period, the timing of the Plug and Play trial does not assume that operational deployment outcomes will directly inform that process.

Instead, the trial is expected to contribute to service classification considerations through a broader set of learnings generated across the end-to-end design and implementation of the model, including:

- development of the service definition and access model
- governance and operational arrangements for third-party access
- site selection principles and non-displacement safeguards
- stakeholder engagement and consultation processes
- early market signals and participant responses.

These elements are directly relevant to how the service is defined, understood and assessed within existing regulatory frameworks, and can inform classification considerations independently of full deployment or utilisation outcomes.

Installations and utilisation data, where available over time, will provide additional supporting evidence, but are not a prerequisite for informing future regulatory consideration.

The waiver period therefore ensures that:

- learnings from both the design and early implementation of the trial can be captured and assessed,
- engagement with stakeholders and the AER contributes to a clearer understanding of the service and its regulatory treatment
- any future regulatory consideration is informed by practical experience across the full service lifecycle, rather than relying solely on theoretical assumptions.

PROPORTIONATE REGULATORY APPROACH

The proposed timeframe represents a proportionate and practical regulatory response, balancing:

- the need for regulatory oversight
- the time required to test market outcomes in thin regional environments
- the importance of avoiding repeated or fragmented waiver applications.

Essential Energy remains open to reviewing the duration of the waiver in consultation with the AER if circumstances change..

This document provides supporting information relevant to the AER's assessment criteria, under clauses 5.2 and 5.3.2 of the Ring-fencing Guideline. This material demonstrates how the proposed waiver is consistent with the long-term interests of consumers, while maintaining appropriate protections against cross-subsidisation, discrimination and market distortion. To assist with the AER and stakeholders with their review of key matters, Box 2 provides links to each relevant section and page.

Box 2: Linking key matters for the AER consideration of a Ring-fencing waiver in this application

- Ring-fencing Guideline clauses to be waived (Section 2, p. 122)
- Why a waiver is required (Section 2, p. 12)
- 4. Expected learnings from the trial (Section 4, p. 20)
- Addressing the risk of cross-subsidisation (Section 5, p. 3)
- Proposed waiver commencement and duration (Section 7, p. 28)
- Potential costs if the waiver is not granted (Section 7, p.31)

Given the deliberately limited scope of the Plug and Play trial, the low levels of risks to consumers and the competitive market, and the urgency of measures to support EV uptake in regional areas, Essential Energy calls on the AER to **progress this waiver application through an expedited process**.

Recent statements by Federal Minister Chris Bowen and NSW Premier Chris Minns have underscored the critical need to accelerate EV charging infrastructure deployment, particularly in regional and remote areas. Both have highlighted the importance of resilient transport networks in the face of rising global oil prices and geopolitical tensions, which threaten to exacerbate cost pressures and supply risks for Australian motorists.[1] These calls are echoed by industry bodies and local government leaders, who have emphasised that rapid expansion of EV charging infrastructure is essential to meet national and state targets for EV uptake, reduce reliance on imported fuels, and support economic resilience in regional communities.[2]

The NSW Government's newly released Electric Vehicle Strategy further underscores this urgency, noting:

> *"As a next step, we will publicly consult on new strategic directions for the rollout of public EV charging infrastructure. Triggered by a proposal from the three NSW Distribution Network Service Providers to support EV charging more actively, we have reconsidered the NSW Government's role in supporting the rollout of public EV charging infrastructure, particularly for areas where installing and operating public chargers is not necessarily commercially viable. Feedback from stakeholders will help us shape the next phase of supporting a public EV charging network that is equitable and commensurate with EV uptake, and address questions around barriers faced by key actors in the deployment of EV charging infrastructure."*[3]

Given this increased urgency, Essential Energy strongly considers that this application meets all the criteria for a streamlined waiver that the AER designed for community batteries namely:

- Addressing the risk of cross-subsidisation through no allocation of costs of the trial to the Regulatory Asset Base (RAB)
- Market testing and third-party engagement

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[1] For example see: Joint media release: $40 million to expand Australia's EV charging network | Ministers, NSW powers up Electric Vehicle access | NSW Government NSW premier calls for more sovereignty on national energy supply as petrol prices rise - ABC News, NSW Powers Up Electric Vehicle Access | The National Tribune

[2] For example see: NSW powers up Electric Vehicle access | NSW Government; 2026 Tesla Expansion: Bridging Australia's EV Charging Gap – Cyber Metals Australia

[3] https://www.energy.nsw.gov.au/nsw-plans-and-progress/government-strategies-and-frameworks/nsw-electric-vehicle-strategy

- Non-discrimination – Essential Energy treats all charging entities equally regardless of ownership
- Transparency and reporting obligations.

As a result, the AER could consider applying this framework to expedite the waiver assessment process to deliver EV charging outcomes that are urgently needed in regional and remote communities. Essential Energy believes that regional Australians should not be the last to benefit from lower transport costs, cleaner travel and the economic opportunities EVs bring, and on that basis calls on the AER to grant this waiver as a critical step in ensuring the regions do not fall further behind in the development of EV charging infrastructure.

1. Introduction

Essential Energy builds, operates and maintains one of Australia's largest electricity distribution networks, supplying over 900,000 customers across regional, rural and remote communities. Our network spans 95 per cent of New South Wales and parts of southern Queensland, serving towns, villages and regional centres where customer density, geography and cost profiles frequently limit commercial investment in energy infrastructure.

Essential Energy's vision is to empower communities to share and use energy for a better tomorrow, and our strategy reflects a growing expectation from regional communities that DNSPs play a proactive role in supporting electrification. Customers across our Essential People's Panel, Customer Advocacy Group and other engagement forums have consistently indicated that they expect Essential Energy to help NSW regional, rural and remote areas participate in the benefits of the energy transition, particularly where commercial markets are not yet viable. Survey results from Essential Energy's two in-asset charger trial sites also reflect this customer sentiment.[4]

This expectation aligns with Essential Energy's responsibility to ensure equitable access to safe, reliable and efficient electricity services, and is reflected in our strategic pillar focused on facilitating electric vehicle adoption.

To meet these expectations, Essential Energy has:

- electrified its own fleet and collaborated with CPOs on innovative trial sites
- established a dedicated EV charging connection team
- provided favourable pole access rental agreements
- commenced delivery of Stream 1 of the ARENA funding grant to enable 1000 distribution poles to host pole-mounted EV charging infrastructure[5].

The Plug and Play initiative builds on these efforts, testing whether leveraging existing DNSP assets can reduce costs and enable market participation in locations where private investment has been constrained. The trial aims to facilitate reliable public charging infrastructure in remote, rural and regional areas, supporting EV adoption and regional tourism.

Essential Energy delivers this trial using core DNSP capabilities – engineering, safety, procurement, asset management, and network planning – while ensuring the commercial and customer interface remains contestable. The application demonstrates alignment with the AER's Ring-fencing Guideline, delivers consumer benefit, and supports the long-term interests of rural and regional NSW consumers.

Regional consumer equity and the National Electricity Objective

Regional and remote communities within Essential Energy's network continue to experience lower levels of EV adoption and reduced access to public charging infrastructure compared to metropolitan areas. This disparity is driven by structural market conditions: lower population density, higher deployment and operating costs, and greater distances between population centres. As a result, commercial investment in public EV charging infrastructure has not occurred at scale in many regional locations.

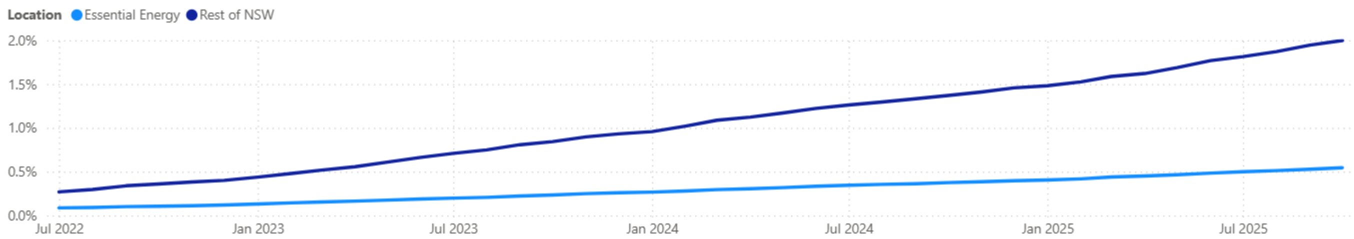
This creates a risk that regional consumers are unable to participate equitably in the transition to electrification. As Figure 1 shows, EV adoption within Essential Energy's network remains significantly lower

[4] Essential Energy, Streetlight EV Charger Trial Survey Results, Port Macquarie, June 2024, also see https://engage.essentialenergy.com.au/100797/widgets/466576/documents/320790.

[5] The pole-enablement program is aimed at facilitating the connection of contestable EV chargers on Essential Energy's network – see further detail on Stream 1 of the Plug and Play trial in the next section.

than in metropolitan areas, and the gap is widening. Without targeted intervention, this dynamic is likely to persist.

Figure 1: Electric Vehicle adoption rates – regional vs metropolitan NSW



Source: Essential Energy analysis of NSW registration data.

The Plug and Play trial addresses this challenge by enabling infrastructure deployment in locations where commercial investment has not emerged, while preserving full contestability of retail services. The trial is expected to support consumer outcomes by:

- improving access to public EV charging in underserved regional communities
- reducing barriers to EV adoption
- enabling participation in electrification and emissions reduction.

These outcomes are consistent with the National Electricity Objective (NEO), including efficient investment in electricity services, consumer equity, and emissions reduction.

The Plug and Play trial is backed by ARENA

The Plug and Play trial is co-funded by ARENA under its Driving the Nation program[6], alongside Essential Energy shareholder funds. ARENA selected Essential Energy's Plug and Play project to test whether DNSP-led initiatives, including DNSP-owned and installed infrastructure, can produce benefits aligned with the public interest, including:

- accelerating public EV charging in underserved regions
- reducing enablement and installation costs
- improving safety and reliability
- supporting competitive access models
- delivering aesthetically pleasing charging facilities.

The trial aims to increase the availability of charging facilities by enabling distribution poles for third-party installed charging infrastructure and incorporating chargers into existing DNSP-owned infrastructure. ARENA's grant requires transparent public reporting, economic assessment, and evidence on market effects, in addition to meeting technical performance levels. Installations will occur progressively, allowing operational experience to accumulate and enabling the trial to observe market response, utilisation patterns, and performance across different locations.

[6] https://arena.gov.au/funding/driving-the-nation-program-2/

Distinguishing kerbside EV charging from other public charging segments

The waiver application relates only to kerbside public charging infrastructure and does not extend to highway fast charging or destination charging markets. This section also introduces the two trial streams at a high level, to explain why Stream 1 and Stream 2 are both relevant to the market context, even though only Stream 2 is subject to this waiver request. This framing is important because the waiver application is limited to addressing this specific segment and does not extend to markets where commercial deployment is already materially occurring.

Table 1: A narrow and underserved sub-market

SEGMENT	TYPICAL PROVIDER	COMMERCIAL MATURITY	ESSENTIAL ENERGY ROLE
Home charging	Consumers	Mature	Connection only
Destination charging	Hotels, retail centres	Growing	Connection only
Highway fast/ultra-fast charging	Commercial CPOs	Growing through grant funding	Connection only
Kerbside/pole-mounted charging	**CPOs + councils**	**Immature**	**Shared infrastructure access model** (this waiver application) and Connections

Box 3: A time-bound, reversible intervention – not a permanent DNSP role

The Plug and Play trial is a targeted, time-bound intervention designed to test whether shared infrastructure can unlock market participation in locations where commercial deployment has not occurred. It does not establish, assume, or seek endorsement of a permanent DNSP role in EV charging infrastructure or services.

The trial is deliberately reversible. Where commercial deployment becomes viable, Essential Energy's role can reduce, transition, or cease. Any future role for DNSPs would be subject to separate regulatory consideration, informed by evidence rather than assumed through this trial.

Distinction between Streams 1 and 2 of the Plug and Play trial

The Plug and Play trial comprises two distinct but complementary streams, each designed to test different aspects of EV charging market development in regional areas.

Stream 1 (no waiver required) enables third-party deployment by reducing site selection and connection barriers across approximately 1000 distribution pole locations. Essential Energy's role is limited to facilitating connections and enabling access to suitable locations. Charging infrastructure is owned and operated by contestable providers, and any revenues associated with shared network assets are subject to the AER's Shared Asset Guideline

This will remove often cited reasons for CPO deployment barriers, being:

- cost to supply and prepare a pole to support EV charging infrastructure
- adequate sites with network capacity
- council engagement and site agreement.

Stream 2 (subject to this waiver application) involves the deployment of approximately 300 DNSP-owned, in-asset chargers in locations where commercial deployment has not occurred. Essential Energy installs, owns, and maintains the physical charging infrastructure, while contestable providers (CPOs and retailers) deliver all customer-facing services. The service being provided is an infrastructure access service, enabling third-party operation. Stream 2 is financially ring-fenced from regulated network activities, with all costs funded through ARENA grant funding and Essential Energy shareholder funding.

This structure allows the trial to distinguish between:

- locations where the market can deliver outcomes by reducing barriers
- locations where targeted, time-bound infrastructure intervention may be required.

This approach will provide a controlled comparison to assess whether infrastructure enablement alone is sufficient, or whether targeted shared infrastructure is required to overcome coordination constraints in persistently thin markets.

Why the kerbside segment is underserved in regional areas

Kerbside EV charging in regional and remote areas faces structural challenges that limit commercial deployment, even where broader charging markets are developing:

- Low utilisation and uncertain demand weaken the commercial case for stand-alone investment
- Site due diligence, approvals, street furniture constraints, and connection complexity can be disproportionately costly
- Dispersed locations increase maintenance and fault response costs, affecting reliability and commercial viability.

These factors persist even as EV adoption grows, resulting in fragmented and delayed infrastructure rollout. Market-led deployment across Essential Energy's footprint is typically slower and less coordinated than in metropolitan areas—particularly for emerging infrastructure such as public kerbside charging.

In regional and remote areas, EV adoption and charging infrastructure deployment are interdependent. Low EV uptake reduces utilisation and revenue certainty for charging providers, while limited availability of public charging infrastructure constrains consumer confidence and willingness to adopt EVs. This creates a coordination challenge—often described as a "chicken-and-egg" problem—where neither EV adoption nor charging infrastructure deployment progresses at scale without intervention.

The relevant question is not whether a fully commercial market could emerge over time, but whether targeted, time-bound intervention can accelerate both EV uptake and market participation, while improving long-term consumer access and choice.

2. Why a waiver is required

The Ring-fencing Guideline is designed to promote a level playing field for contestable electricity services by preventing monopoly network businesses from leveraging their position to gain an unfair competitive advantage. At the same time, the Guideline recognises that there are circumstances where DNSP participation in activities outside strict distribution services may be in the long-term interests of consumers. Waivers are an intentional mechanism within the framework to enable this, where appropriate safeguards are in place.

Essential Energy requires a waiver to facilitate third-party access to EV charging infrastructure installed within its network assets, as this service is not currently classified as a distribution service under the Ring-fencing Guideline. The waiver is sought solely to enable this access service and does not expand, re-classify, or otherwise alter existing regulatory frameworks. The relevant constraint arises from the Ring-fencing Guideline's treatment of third-party access services as "other services."

Scope and clauses to be waived

Essential Energy seeks a targeted, time-bound waiver from clauses 3.1(b), 4.2.1, 4.2.2, and 4.2.3 of the AER's Ring-fencing Guideline to enable the service provided by Stream 2 of the Plug and Play trial. The waiver is strictly limited to enabling Essential Energy to provide access to EV charging infrastructure it owns, installs, and maintains. It does not permit Essential Energy to provide retail charging services, set prices or tariffs, bill customers or manage customer accounts, or alter service classification frameworks.

Table 2: Mapping the application to AER assessment criteria

RING-FENCING GUIDELINE CLAUSE(S)	AER ASSESSMENT CRITERION	SECTION(S) ADDRESSED
5.2 (a)(c) reference to: 3.1(b), 4.2.1, 4.2.2, 4.2.3	the obligation in respect of which the DNSP is applying for a waiver; Clear identification of service/waiver	Overview, Scope and clauses to be waived
5.3.2 (a)i,ii,iii, 3.1(b)	Consumer benefit & NEO alignment	**Error! Reference source not found.**
5.2(b)(h), 3.1(b), 4.2.1, 4.2.2, 4.2.3	Related obligations, reasons why a waiver is being sought	**Error! Reference source not found.**, Scope of the waiver
5.2(e), 5.3.2(a)iii	Costs if waiver is refused	**Error! Reference source not found.**
5.3.2(a)ii, 3.2.2, 4.2.3	Cross-subsidisation & cost allocation	**Error! Reference source not found.**
5.3.2(a)ii, 4.1	Discrimination & competitive neutrality	Managing discrimination risk and supporting competitive neutrality
5.2(g), 4.1, 3.2.2	Additional measures: transparency & assurance	Managing discrimination risk and supporting competitive neutrality, Stakeholder engagement and collaborative site selection, Site characteristics and practical constraints

RING-FENCING GUIDELINE CLAUSE(S)	AER ASSESSMENT CRITERION	SECTION(S) ADDRESSED
5.2(d),(f) 3.1(b)	Commencement and Expiry dates – Regulatory control period (Time-boundedness & exit strategy)	Timing: Proposed waiver commencement and duration
5.3.2(b)i	Other matters the AER may consider relevant	**Error! Reference source not found.**, **Error! Reference source not found.**, Attachment B: Market scan

Service definition and regulatory constraint

The Plug and Play trial tests whether targeted infrastructure deployment can address coordination constraints in thin regional markets. Essential Energy seeks a waiver to provide a specific service: facilitating third-party access to EV charging infrastructure that Essential Energy installs and maintains within its network assets. Under the trial, Essential Energy's role is limited to infrastructure ownership, installation, and maintenance. CPOs and retailers remain responsible for all retail, pricing, billing, branding, and customer-facing services. The waiver is sought because this access service is not currently classified as a distribution service under the Ring-fencing Guideline. The waiver is sought solely to enable this access service and does not expand, re-classify, or otherwise alter existing regulatory frameworks.

Box 4: The service being assessed under this waiver application

This waiver application relates to **one service only**: facilitating third-party access to EV charging infrastructure that Essential Energy installs and maintains within its network assets.

Under the trial, Essential Energy's role is limited to infrastructure ownership, installation and maintenance. Charge-point operators and retailers remain responsible for all retail, pricing, billing, branding and customer-facing services.

The waiver is sought because this access service is not currently classified as a distribution service under the Ring-fencing Guideline. The waiver is sought solely to enable this access service and does not expand, re-classify, or otherwise alter existing regulatory frameworks.

Regulatory constraint under the Ring-fencing Guideline

Under clause 3.1(b) of the Ring-fencing Guideline, a Distribution Network Service Provider (DNSP) may provide distribution services but must not provide "other services" unless a waiver is granted.

Access services that enable third-party operation of EV charging infrastructure installed within DNSP assets are not currently classified by the AER as distribution services. As a result, they fall within the category of "other services" for the purposes of the Guideline.

A waiver is therefore required to permit Essential Energy to provide third-party access to EV charging infrastructure installed within its network assets.

Why a Ring-fencing waiver - not a sandbox trial

The National Electricity Rules do not prohibit DNSP ownership or installation of EV charging infrastructure. The relevant constraint arises from the Ring-fencing Guideline's treatment of third-party access services as "other services".

Accordingly, a Ring-fencing waiver – rather than a sandbox exemption from the Rules – is the appropriate regulatory mechanism.

Scope of the waiver

The waiver is strictly limited to enabling Essential Energy to provide access to EV charging infrastructure it owns, installs and maintains. It does not permit Essential Energy to:

- provide retail charging services
- set prices or tariffs
- bill customers or manage customer account
- alter service classification frameworks.

All retail and customer-facing services remain fully contestable. These limitations are consistent with Box 1 and ensure that Essential Energy does not participate in contestable market activities.

How a waiver will be used

If granted, the waiver will be used to enable services provided by Stream 2 of the Plug and Play trial. The waiver is strictly limited to enabling Essential Energy to provide access to EV charging infrastructure it owns, installs, and maintains. Table 3 provides a high-level summary of the activities that will take place under the waiver provisions.

Table 3: Summary of Ring-fencing obligations requested to be waived – and the intent of use

CLAUSE	LIMITED PURPOSE OF WAIVER
3.1(b) Legal Separation	To permit Essential Energy to provide a limited access service (currently an 'other service') for access to DNSP-installed charging assets to third-party CPOs/eMSPs, while not providing any retail charging services.
4.2.1 Physical Separation	To allow the use of Essential Energy depots and facilities for installation, commissioning and maintenance of charging infrastructure located within DNSP assets.
4.2.2 Staff Sharing	To enable Essential Energy field and asset management crews to undertake installation and maintenance activities required to ensure electrical safety, reliability and integrity of DNSP-owned hardware.
4.2.3 Branding and Cross Promotion	To permit limited Essential Energy branding on the charging hardware for the purpose of asset ownership and safety accountability, not retail charging promotion or marketing.

The relationship between these clauses and the AER's assessment criteria is summarised in Table 2.

Framing the regulatory question

The question for the AER is whether regional consumers should wait for market-led outcomes where persistent barriers to deployment remain, or whether a time-bound, ring-fencing-compliant intervention should be permitted to accelerate access and generate evidence. This application is therefore focused on a narrower regulatory question:

> **Should Essential Energy be permitted, on a time-bound and ring-fenced basis, to facilitate third-party access to EV charging infrastructure in locations where the contestable market has not yet delivered coordinated outcomes between charging availability and EV adoption? Can a targeted time-bound intervention accelerate both market participation and consumer uptake in a manner consistent with the NEO?**

REGULATORY TREATMENT OF IN-ASSET INFRASTRUCTURE

EV chargers installed within DNSP-owned composite distribution or lighting poles are delivered as in-asset infrastructure and are subject to standard network safety, access, and operational requirements. Installation and maintenance of the physical chargers therefore occur under established network arrangements and do not, of themselves, constitute participation in electricity markets.

Under the National Electricity Rules, market roles – including the Financially Responsible Market Participant (FRMP) and Metering Coordinator (MC) – are only required once a metering installation is activated for market settlement. Consistent with a plug-and-play deployment model, DNSPs may install in-asset EV charging hardware in a dormant or non-market-active state. The charger becomes operational for billing and settlement purposes only when a CPO or retailer elects to activate the associated NMI and assumes the FRMP role, at which point the MC and other metering roles are appointed in the usual way.
This approach enables safe, scalable deployment of public EV charging infrastructure within network assets while fully preserving contestability and the existing allocation of market responsibilities.

Box 5: Infrastructure installation by DNSPs is subject to regulatory frameworks

EV chargers installed within DNSP-owned composite distribution or lighting poles are delivered as in-asset infrastructure and are subject to standard network safety, access and operational requirements.

Installation and maintenance of the physical charger therefore occur under established network arrangements and do not, of themselves, constitute participation in electricity markets.

Under the National Electricity Rules, market roles – including the FRMP and MC – are only required once a metering installation is activated for market settlement.

Consistent with a *plug-and-play* deployment model, DNSPs may install in-asset EV charging hardware in a dormant or non-market-active state. The charger becomes operational for billing and settlement purposes only when a charge-point operator or retailer elects to activate the associated NMI and assumes the FRMP role, at which point the MC and other metering roles are appointed in the usual way.

This approach enables safe, scalable deployment of public EV charging infrastructure within network assets while fully preserving contestability and the existing allocation of market responsibilities.

SAFETY, RELIABILITY AND OPERATIONAL INTEGRITY

Essential Energy's role in the installation and maintenance of in-asset charging infrastructure reflects its responsibility for electrical safety, asset integrity and network reliability.

In regional, rural and remote areas, where fault response times, asset access and service continuity may have disproportionately material impacts on customer outcomes compared to metropolitan areas, this capability is critical to ensuring that public charging infrastructure operates safely and reliably.

Under the Plug and Play model for this waiver:

- Essential Energy is responsible for safe installation, asset maintenance and fault response, ensuring high availability and operational integrity of charging infrastructure
- Contestable providers retain responsibility for all customer-facing and commercial functions, including pricing, billing, branding and customer engagement.

This delineation ensures that infrastructure is delivered and maintained to network safety and reliability standards, while preserving full contestability of charging services.

3. Justification for seeking a waiver

The Plug and Play trial is a targeted, time-bound initiative designed to address a well-recognised coordination challenge in thin regional EV charging markets. In these markets, low EV adoption and limited charging infrastructure are interdependent, resulting in conditions where neither investment nor uptake occurs at scale without intervention.

Purpose and hypothesis of the trial

The trial will test whether targeted infrastructure deployment can improve EV driver access to charging services, reduce range anxiety, and support increased EV adoption in regional communities. The waiver sought is limited to enabling a single, clearly defined service: facilitating third-party access to EV charging infrastructure installed, owned, and maintained by Essential Energy within its network assets. This service does not involve participation in contestable markets. In particular:

- Essential Energy will not provide retail charging services
- Essential Energy will not set prices or tariffs
- Essential Energy will not bill customers or manage customer accounts
- All customer-facing and commercial services will remain fully contestable.

The trial has been deliberately designed to minimise potential impacts on competition and to ensure alignment with the objectives of the Ring-fencing Guideline. Key safeguards include:

- targeting deployment to locations where commercial investment has not emerged
- recognising and preserving locations where there is active commercial intent
- applying consistent, transparent site selection principles
- ensuring open and non-discriminatory access to infrastructure
- maintaining clear Cost Allocation Methodology (CAM) separation between regulated and unregulated activities.

All costs associated with Stream 2 of the trial are funded through ARENA grant funding and Essential Energy shareholder funding. No EV charging hardware, installation, or maintenance costs will be recovered from regulated network charges, and none of the related expenditure will be included in the Regulatory Asset Base. This ensures that regulated customers are not exposed to financial risk and that there is no cross-subsidisation of contestable activities.

The trial will generate practical insights into EV adoption, infrastructure utilisation, and the conditions required for commercially viable market delivery in regional areas. Importantly, any increase in market participation is expected to occur as a result of improved utilisation and demand, rather than as a primary objective of the trial.

The waiver is sought on a time-bound basis and does not establish any ongoing or enduring role for Essential Energy beyond the duration of the trial. At the conclusion of the waiver period, the outcomes of the trial will inform one of the following outcomes:

- the role is no longer required
- delivery can transition to contestable providers
- any future involvement should be considered through established regulatory processes.

The waiver therefore represents a proportionate and appropriate regulatory mechanism to enable a controlled, evidence-based trial that supports improved consumer outcomes in regional communities, while maintaining the integrity of competitive electricity markets.

CUSTOMER EXPECTATIONS AND REGIONAL EQUITY

Customer engagement undertaken by Essential Energy indicates a strong expectation that regional communities should be able to participate in the benefits of electrification and the energy transition.

Feedback from forums such as the Essential People's Panel and Customer Advocacy Group highlights that customers in regional, rural and remote areas expect Essential Energy to play a role in enabling access to emerging technologies, particularly where commercial markets are not yet viable.

Insights from early trial deployments of in-asset EV charging infrastructure also reflect this sentiment, with customers indicating that access to public charging is a key enabler of EV adoption.

This reinforces the importance of addressing disparities in access to charging infrastructure between metropolitan and regional areas.

In this context, the relevant regulatory question is not whether the contestable market may eventually deliver these outcomes, but whether regional consumers should wait for that outcome where persistent barriers remain. The proposed waiver enables this question to be tested in a controlled and evidence-based manner.

ADDRESSING UNMET NEED IN THIN REGIONAL MARKETS

Public EV charging infrastructure in regional and remote areas remains underdeveloped, particularly in the kerbside segment. Low utilisation, high enablement costs and operational challenges mean that commercial deployment has not occurred at scale.

As a result, regional consumers face reduced access to charging infrastructure, which constrains EV adoption and limits participation in the energy transition.

The Plug and Play trial addresses this gap by enabling shared infrastructure in locations where commercial investment has not emerged, while preserving full contestability of retail services.

ENABLING MARKET PARTICIPATION, NOT REPLACING IT

The waiver supports a model in which Essential Energy provides infrastructure only, while all contestable services – including pricing, billing and customer engagement – remain the responsibility of CPOs and retailers. This approach reduces barriers to entry for market participants by lowering upfront capital costs and enabling access to infrastructure in locations that would otherwise remain unserved. The trial is therefore intended to crowd-in competitive participation over time, rather than displace or replace the contestable market.

SUPPORTING CONSUMER OUTCOMES AND EQUITY

The trial is expected to deliver consumer benefits through:

- improved access to public EV charging in underserved regional communities
- increased confidence in EV adoption due to greater availability of charging infrastructure
- enhanced reliability and safety through DNSP installation and maintenance
- support for regional participation in electrification and emissions reduction.

These outcomes are consistent with the NEO, including recent amendments recognising the importance of emissions reduction and consumer equity.

Box 6: Trial objective – addressing coverage and adoption in thin markets

The Plug and Play trial is designed to enable public EV charging infrastructure in locations where stand-alone commercial deployment has not occurred, particularly in regional and remote communities.

The primary objective of the trial is to address the coordination constraint between EV adoption and charging availability by improving access to reliable public charging infrastructure.

In this context, the trial will assess:

- whether targeted infrastructure deployment increases EV adoption in underserved regional areas
- whether improved availability of charging infrastructure reduces barriers to uptake, including range anxiety
- how utilisation and demand evolve over time in thin market conditions.

The trial is not designed to compete with, displace or replicate commercially viable charging markets. Deployment is limited to locations where commercial investment has not emerged.

Any increase in participation by CPOs or retailers – above that which occurs as part of the trial – is expected to occur as a secondary outcome of increased utilisation and demand, rather than as a direct objective of the trial.

4. Expected learnings from the trial

The Plug and Play trial will generate practical insights into whether targeted, time-bound infrastructure deployment can address coordination challenges in thin regional markets. The primary focus of the trial is to test whether improving access to charging infrastructure in underserved locations contributes to increased EV adoption, by reducing range anxiety and improving consumer confidence in the availability of charging services.

A secondary objective is to observe whether, as EV uptake increases, market conditions evolve in a way that supports greater participation by contestable providers over time. Any increase in competitive market activity is therefore a downstream effect of improved utilisation and demand, rather than a direct objective of the trial.

Consistent with this purpose, the trial will generate learnings across a range of qualitative and quantitative dimensions, including:

- consumer and demand insights (changes in EV adoption trends, usage patterns, range anxiety indicators)
- infrastructure performance and utilisation (utilisation trends, operational performance, maintenance outcomes)
- market response and participation (extent and nature of participation by CPOs and retailers, evidence of emerging commercial interest)
- delivery model and coordination effectiveness (effectiveness of shared infrastructure, site selection, access arrangements, governance)
- regulatory and policy insights (implications for service definition and classification, competitive neutrality, interaction with regulatory frameworks).

The trial does not seek to establish prescriptive performance benchmarks or success thresholds. Outcomes will be assessed holistically, recognising the early-stage nature of EV adoption in regional areas and the role of infrastructure as an enabling service rather than a revenue-maximising activity.

Reporting and knowledge sharing will occur in accordance with the ARENA funding framework. The Ring-fencing waiver is not contingent on additional reporting obligations beyond those required for the purposes of the waiver assessment.

Metering configuration and future flexibility

The Plug and Play trial operates within the existing metering and market framework. Under current arrangements, each charging site is expected to operate under a single FRMP model, consistent with existing metering rules and market structures. This reflects current industry practice, where a single CPO or associated retailer manages metering, settlement, and customer transactions at a given site.

At the same time, the trial has been designed to remain adaptable to potential future changes in market arrangements. If regulatory reforms enable alternative models—such as multiple FRMPs or greater contestability at the site level—the trial framework can evolve to accommodate these changes.

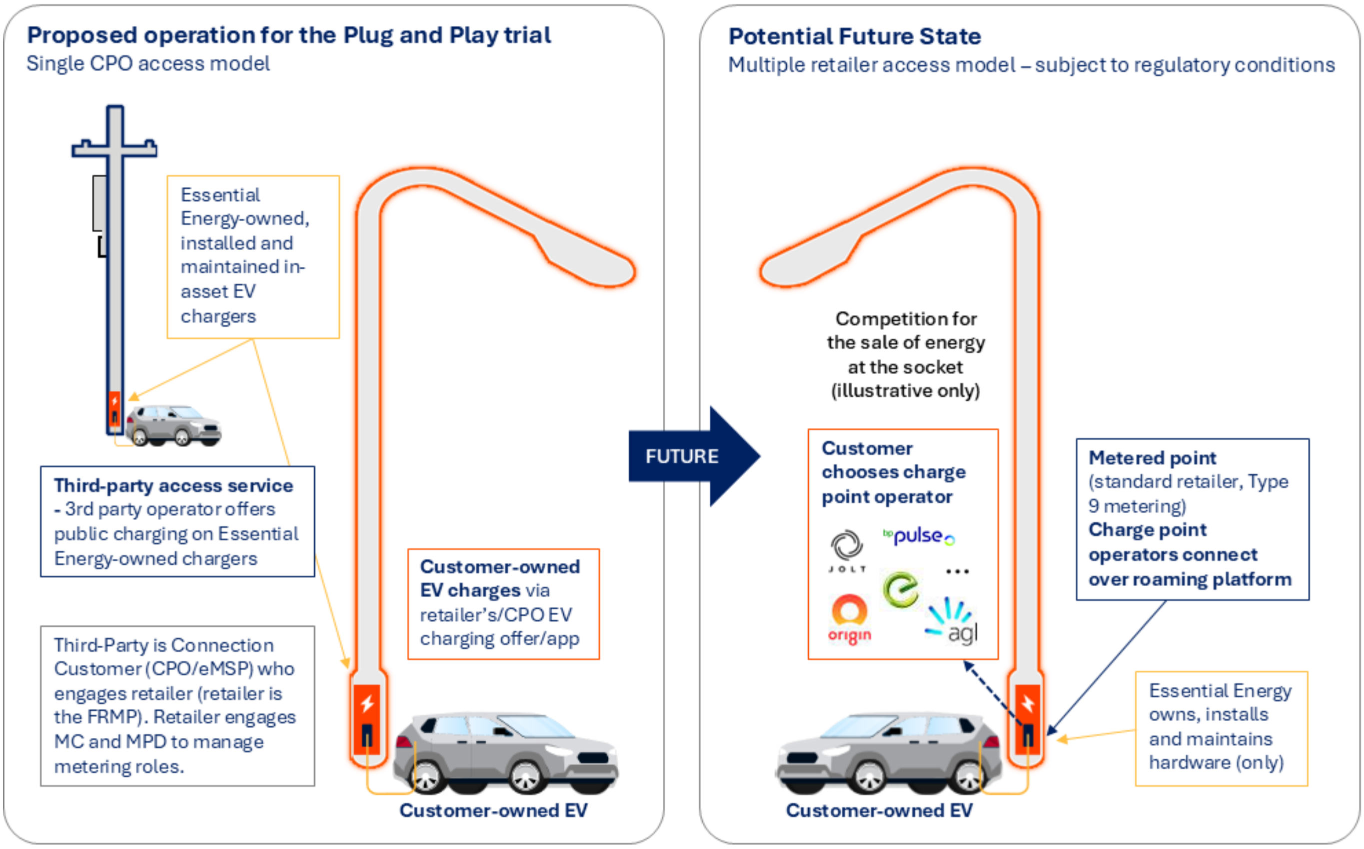
The proposed trial includes some important limitations:

- The trial does not assume, depend on, or seek to drive any changes to the existing metering or market framework

- All deployment and operation will occur within the rules as they apply at the time
- Any future evolution would occur only if and when regulatory changes are implemented—and deployment is able to respond to those changes.

Figure 2 illustrates the current metering configuration and a potential future state, noting that the trial will operate under existing arrangements unless and until regulatory changes occur.

Figure 2: Metering configuration – the single-FRMP model proposed for the trial and potential future multi-FRMP model



5. Operation of the trial and management of risks

The Plug and Play trial will operate under a set of principles designed to ensure that the waiver is implemented in a manner that supports competition, protects consumers, and maintains the integrity of the Ring-fencing framework. These principles guide decision-making and operational behaviour throughout the trial, rather than prescribe rigid rules or impose additional regulatory burden. They are aligned with the objectives of the Ring-fencing Guideline and will be applied in a transparent and accountable manner.

Principles to guide the Plug and Play trial

7. **Targeting unmet need**
   Infrastructure deployment will be focused on locations where the contestable market is not currently delivering outcomes. Site selection will be informed by a structured market scan and engagement process with potential providers. Locations with active commercial intent will generally be excluded from trial deployment, and site selection decisions will be documented and capable of review.

8. **Enabling, not competing with, the market**
   Essential Energy will not participate in contestable EV charging markets and will not provide retail or customer-facing services. Access to infrastructure will be provided on a non-exclusive basis, and where a contestable provider demonstrates active commercial intent, Essential Energy will prioritise facilitating that connection rather than deploying shared infrastructure.

9. **Competitive neutrality**
   The trial will be implemented in a manner that does not confer an unfair advantage on any market participant. Access to infrastructure will be made available on consistent and transparent terms, with no preferential access provided to any affiliated or third-party provider.

10. **No cross-subsidisation**
    The trial will not result in costs being borne by regulated electricity customers. All costs associated with the trial will be funded through ARENA and Essential Energy shareholder funding, with cost allocation consistent with the AER-approved CAM.

11. **Transparency and accountability**
    The trial will be implemented in a manner that supports transparency and enables regulatory oversight. Key information on trial deployment and outcomes will be reported through ARENA's knowledge-sharing framework, and information will be provided to the AER as required under waiver conditions.

12. **Time-bound and reversible intervention**
    The trial is a temporary intervention to test market outcomes, not to establish an ongoing DNSP role. The waiver will apply only for the duration of the trial, and findings will inform future regulatory decisions, including whether the model should continue, change, or cease.

These principles provide a clear framework for how the trial will be implemented, while allowing sufficient flexibility to respond to local conditions and emerging market dynamics. They ensure that the waiver supports efficient market development without imposing unnecessary constraints or regulatory burden.

Box 7: A proportionate and controlled regulatory response

The waiver is limited in scope, time-bound, and supported by clear guardrails to ensure:

- no participation by Essential Energy in contestable retail markets
- no recovery of costs from regulated customers
- no preferential treatment of any market participant
- transparency, auditability and regulatory oversight.

This ensures that the trial can proceed in a manner that manages risks to competition while enabling innovation in thin markets.

Addressing the risk of cross-subsidisation

Stream 2 of the Plug and Play trial has been specifically designed to ensure that regulated electricity customers do not bear any costs associated with the proposed activities. All costs associated with Stream 2 – including infrastructure deployment, operation, and evaluation – will be funded through a combination of ARENA grant funding and Essential Energy shareholder funding. No costs associated with Stream 2 will be recovered through regulated network charges, and no expenditure will be included in the RAB. This ensures that regulated customers are not exposed to the risks of trial activities, and there is no cross-subsidy from monopoly network services to contestable activities.

For clarity:

- **Stream 2 infrastructure is not included in the RAB**, and therefore revenues associated with this infrastructure are not subject to the AER's Shared Asset Guideline
- **Stream 1 activities**, where applicable, remain subject to the Shared Asset Guideline where regulated assets generate unregulated revenue.

This distinction reflects the different roles and regulatory treatment of each stream within the trial. While Stream 2 is financially ring-fenced, a waiver is required to permit the provision of access services using DNSP-owned infrastructure. The waiver does not alter the financial separation of activities, but rather enables the service to be provided within the existing regulatory framework.

Revenue from commercial arrangements contributes to maintenance and recovery of unregulated investment, without reliance on regulated revenues.

Box 8: Why two streams?

The Plug and Play trial deliberately separates two distinct approaches to market development.

Stream 1 tests whether reducing barriers to third-party owned installation, connection and maintenance of traditional pole-mounted kerbside charging increases market participation to deliver outcomes independently.

Stream 2 tests whether innovative charging solutions directly owned, installed and maintained by Essential Energy in selected regional and remote locations will address the public kerbside charging gap in less commercially attractive locations to facilitate increased EV adoption.

This structure ensures that intervention is only applied where necessary and allows a clear comparison between market-led and supported deployment pathways.

Managing discrimination risk and supporting competitive neutrality

The Plug and Play trial has been designed to support the development of competitive EV charging markets in regional areas, while ensuring that Essential Energy does not confer an unfair advantage on any market participant, including any current or potential related entity.

This is particularly important in the context of Stream 2, where Essential Energy installs and owns infrastructure that is made available for use by contestable providers.

The trial therefore includes measures to ensure that access to infrastructure is provided in a manner that is fair, transparent, and consistent with the objectives of the Ring-fencing Guideline.

CLEAR SEPARATION OF ROLES

Essential Energy's role in the Plug and Play trial is strictly limited to infrastructure ownership, installation, and maintenance. All contestable services – including pricing, billing, customer engagement, and operation of charging services – are undertaken by CPOs and retailers.

This clear separation ensures that Essential Energy does not participate in contestable markets, and that competitive outcomes are driven by market participants. The trial's design, including its time-bound nature and targeted deployment, provides a proportionate and practical approach to managing discrimination risk in thin markets, supporting competition where it is emerging while enabling targeted intervention where market delivery has not occurred.

NON-DISCRIMINATORY ACCESS TO INFRASTRUCTURE

Access to Stream 2 infrastructure will be provided on a **transparent and non-discriminatory basis**, with allocation of sites undertaken through an open and competitive process:

- Access to sites or site bundles will be offered to the market through a transparent procurement or tender process open to all eligible providers
- While individual sites (or site bundles) may be operated by a single CPO for the duration of a commercial agreement, this reflects current market practice and does not confer any structural advantage beyond that agreement
- Opportunities to participate in the trial will be made available to the market over time, including across multiple site groupings where relevant

- Access arrangements and allocation decisions will be documented and capable of review, ensuring consistency with the principles of competitive neutrality.

AVOIDING PREFERENTIAL TREATMENT

Access to Stream 2 infrastructure will be allocated through **a transparent and competitive process**:

- Essential Energy will make available defined sites or site bundles to the market, with information provided on location characteristics, expected utilisation and technical constraints
- Site bundling may be used to support deployment in more remote or lower-utilisation locations, ensuring that coverage objectives are met alongside commercial viability
- Selection of CPOs will be based on transparent and objective criteria, which may include capability, delivery approach, and alignment with trial objectives
- While high-level information on available sites and allocation processes will be made public, commercially sensitive bid information will remain confidential.

This approach ensures that access to infrastructure is contestable, while balancing transparency with the need to protect commercially sensitive information.

SUPPORTING MARKET ENTRY WITHOUT CROWDING OUT

The trial has been designed to support market entry in locations where commercial deployment has not occurred, while avoiding interference with emerging commercial activity:

- Locations where a contestable provider has demonstrated active commercial intent through a connection application will generally be excluded from Stream 2 deployment
- Essential Energy will prioritise facilitating third-party connections in these locations, rather than deploying shared infrastructure
- Connection enquiries or informal expressions of interest will not, on their own, be treated as evidence of committed deployment
- Reasonable timeframes will be applied to connection progression to ensure that capacity is not reserved indefinitely without development
- Where a connection application does not progress within a reasonable period, the location may be reconsidered for trial deployment.

The distinction between Stream 1 and Stream 2 further supports this approach. Stream 1 enables open, fully contestable deployment across approximately 1000 distribution pole locations, reflecting the standard commercial model used by CPOs. Stream 2 is limited to approximately 300 locations and is targeted only to sites where commercial deployment has not occurred. This ensures that the trial prioritises market-led outcomes wherever possible, with Stream 2 operating as a targeted intervention, as well as a scaled-up trial of in-asset infrastructure, in underserved locations.

SITE CHARACTERISTICS AND PRACTICAL CONSTRAINTS

Stream 2 infrastructure is primarily deployed within composite streetlight poles, supplied via underground connections and installed as part of an existing asset replacement programme. Deployment is limited to locations where poles are being replaced at end-of-life, rather than being broadly available across all potential sites. This results in a constrained and highly targeted set of deployment locations, reducing the likelihood of overlap with commercially attractive sites. This configuration differs from traditional pole-mounted charging infrastructure on overhead distribution networks, which represents the primary model currently used by contestable providers. These practical constraints mean that Stream 2 deployment is unlikely to displace existing or planned commercial investment.

Box 9: Alignment with ARENA funding objectives

The trial design aligns with ARENA's objectives to accelerate the deployment of renewable energy technologies and support market development through targeted, evidence-based interventions.

In particular, the trial:

- targets underserved regional locations;
- supports diverse participation by market operators;
- applies site bundling to enable deployment in lower-utilisation areas;; and
- incorporates knowledge sharing to inform future market development.

These elements ensure that the trial contributes to both immediate deployment outcomes and broader industry learning.

These conditions act as external governance constraints on the trial, ensuring that deployment, participation and reporting remain aligned with market development objectives rather than commercial expansion.

Stakeholder engagement and collaborative site selection

Essential Energy already supports EV charging deployment through existing network services and engagement processes. This includes:

- a dedicated EV charging connection team to support site identification and connection processes
- established arrangements for pole access and infrastructure deployment, and
- experience from early in-asset charging trials and collaboration with market participants.

This experience informs the design of the Plug and Play trial and supports its practical implementation. Stakeholder engagement has been undertaken, and will continue throughout the trial, to inform design, validate assumptions, and support effective implementation in regional and remote areas. Further engagement will involve local councils, community representatives, CPOs, retailers, and relevant market bodies.

Engagement will focus on site selection, commercial design considerations, and the generation of evidence to support trial evaluation, while ensuring transparency and alignment with regulatory expectations.

Table 4: Objectives of stakeholder engagement

STRATEGIC OBJECTIVE	STAKEHOLDER ALIGNMENT
Support EV adoption in regional areas where infrastructure gaps persist	Engage councils, communities and users to identify priority locations where improved access to charging can increase EV uptake.
Address thin market conditions and regional inequity	Use site screening, local government input and community engagement to prioritise locations where commercial deployment has not occurred.
Generate evidence to inform future market development and regulatory decisions	Engage CPOs, retailers and stakeholders to test commercial models, identify barriers to entry and assess how demand evolves over time.

Engagement is focused on ensuring that the trial reflects practical market conditions and does not displace or distort emerging commercial activity.

Ongoing Engagement and Adaptive Approach

Engagement will continue throughout the duration of the trial to ensure that the design and implementation remain responsive to market and community conditions, with features of this approach including:

- Feedback from market participants and stakeholders will be considered as part of ongoing trial implementation
- Deployment and access approaches may be refined over time, consistent with the objectives of the trial
- Any changes will remain aligned with the principles of non-discrimination, transparency, and competitive neutrality.

This ensures that the trial remains adaptive while maintaining consistency with regulatory expectations.

Box 10: Safeguards to enable – not displace – contestable providers

The Plug and Play trial has been designed to support market development in thin regional areas without displacing or distorting competitive outcomes.

Key safeguards include:

- Deployment is limited to locations where commercial charging infrastructure has not been delivered and where there is no demonstrable active commercial intent to proceed through a formal connection application.
- Access to shared infrastructure is allocated through transparent, non-discriminatory processes, with opportunities made available to all eligible market participants.
- Individual sites or site bundles may be operated by a single CPO under commercial agreement, consistent with current market practice, without conferring any structural or ongoing exclusivity.
- Essential Energy does not provide retail charging services or customer-facing products; all pricing, billing, branding and customer engagement remain fully contestable.
- Cost allocation and commercial arrangements are structured to prevent cross-subsidisation and are subject to audit and reporting under established regulatory frameworks. These safeguards ensure that the trial operates as a targeted, time-bound intervention to enable infrastructure deployment in underserved areas, while preserving the integrity and evolution of competitive market outcomes.

6. Timing: Proposed waiver commencement and duration

The waiver is proposed to commence upon approval by the AER and remain in effect for a defined, time-bound period aligned with the Plug and Play trial. The proposed duration reflects the staged nature of the trial and the time required to generate meaningful operational, market, and consumer evidence.

Key timing details

Indicative timings, pending the outcome of this waiver application are:

- Initial installations are expected to commence from December 2026, following completion of technology testing, procurement, and site selection processes
- Deployment will occur progressively over approximately 12 months, with the majority of installations expected to be completed by December 2027
- The ARENA funding agreement includes a milestone extending to July 2028, allowing sufficient time for early operational performance, utilisation patterns, and market response to be observed.

Consistent with these timeframes, Essential Energy proposes that the waiver remain in place for a period sufficient to:

- support full deployment of trial infrastructure
- enable a meaningful period of operation and data collection
- allow for reporting and knowledge-sharing in accordance with ARENA requirements.

A seven-year waiver period (to 30 June 2033) is proposed to ensure that the trial can be completed, evaluated, and inform future regulatory processes without requiring multiple extensions or creating regulatory uncertainty.

TIME-BOUND AND REVERSIBLE INTERVENTION

The proposed waiver is explicitly time-bound and reversible, and does not directly establish an ongoing role for Essential Energy in EV charging markets. The trial will:

- test whether targeted infrastructure deployment can increase EV adoption in regional areas by addressing the coordination constraint between vehicle uptake and charging availability
- generate evidence on the relationship between infrastructure availability, utilisation, and EV adoption in thin markets
- assess whether increased utilisation and demand may, over time, support commercially sustainable market participation.

At the conclusion of the waiver period, Essential Energy will assess:

- the extent of EV adoption and utilisation of charging infrastructure in regional areas
- the performance and reliability of deployed infrastructure
- whether observed demand and utilisation levels support commercially viable market delivery or the availability of alternative delivery models.

Any transition away from DNSP involvement would be driven by demonstrated demand and utilisation outcomes, rather than assumed or theoretical market development.

ALIGNMENT WITH REGULATORY TIMEFRAMES

The proposed waiver duration has been determined having regard to relevant regulatory processes under the National Electricity Rules, including the timing of future Framework and Approach (F&A) processes.

While the next opportunity to formally consider service classification for this type of service arises during the 2029–34 regulatory period, the timing of the Plug and Play trial does not assume that operational deployment outcomes will directly inform that process.

Instead, the trial is expected to contribute to service classification considerations through a broader set of learnings generated across the end-to-end design and implementation of the model, including:

- development of the service definition and access model
- governance and operational arrangements for third-party access
- site selection principles and non-displacement safeguards
- stakeholder engagement and consultation processes
- early market signals and participant responses.

These elements are directly relevant to how the service is defined, understood and assessed within existing regulatory frameworks, and can inform classification considerations independently of full deployment or utilisation outcomes.

Installations and utilisation data, where available over time, will provide additional supporting evidence, but are not a prerequisite for informing future regulatory consideration.

The waiver period therefore ensures that:

- learnings from both the design and early implementation of the trial can be captured and assessed,
- engagement with stakeholders and the AER contributes to a clearer understanding of the service and its regulatory treatment
- any future regulatory consideration is informed by practical experience across the full service lifecycle, rather than relying solely on theoretical assumptions.

PROPORTIONATE REGULATORY APPROACH

The proposed timeframe represents a proportionate and practical regulatory response, balancing:

- the need for regulatory oversight
- the time required to test market outcomes in thin regional environments
- the importance of avoiding repeated or fragmented waiver applications.

Essential Energy remains open to reviewing the duration of the waiver in consultation with the AER if circumstances change.

7. Potential impacts if the waiver application is not granted

If the waiver is not granted, the Plug and Play trial cannot proceed in its current form. This would limit the ability to test whether shared infrastructure can enable market participation in thin regional markets. In the absence of the trial:

- Deployment of kerbside charging infrastructure in regional areas is likely to remain slow and fragmented
- Commercial investment is expected to continue to concentrate in higher-utilisation metropolitan and highway locations
- Regional consumers will continue to face reduced access to public charging infrastructure.

This has broader implications for:

- EV adoption in regional communities
- equitable participation in electrification
- the ability to generate real-world evidence to inform future regulatory decisions.

In practical terms, this means that the coordination constraint in thin regional markets will remain untested in a real-world setting, delaying both infrastructure deployment and the evidence required to inform future regulatory decisions. Without a waiver, the AER and industry would be required to rely on theoretical or partial evidence when considering future service classification, DNSP roles, and market development pathways.

The evidence generated through the trial will inform future service classification processes and regulatory decision-making, including potential consideration during the 2029–34 regulatory period. Without the waiver, this evidence cannot be generated in a real-world setting.

Attachment A: Why in-asset chargers?

In-asset chargers: a safe, low-impact model for public kerbside charging

Currently, kerbside chargers – provided by the contestable market – are typically bolted externally onto poles or mounted on separate plinths, requiring external metering, external wiring, external equipment boxes and additional street furniture. While common in metropolitan settings, these external chargers introduce challenges in regional deployment, including increased visual impact, vulnerability to vandalism, climbability/asset safety risks, higher installation costs, and the need for additional enclosures to protect live equipment. Their required access points also increase the number of separate parties who must interact with live or near-live assets, presenting safety and operational complexities. Conventional installations are also mounted on timber poles.

Not all timber distribution poles are suitable for the hosting of EV charging equipment. In a recent pole audit, Essential Energy found that of its 1.4 million poles, only 80,000 are suitable – for a variety of reasons – to host EV charging infrastructure. Also, timber poles naturally degrade over time. Once a timber pole reaches the end of its serviceable life the pole must be replaced along with any other attachments and all the attached charging hardware. Whereas Essential Energy's composite solutions do not degrade over time in any meaningful fashion, outperforming timber poles and are inherently nonconductive thereby presenting a superior alternative to conventional pole-mounted charging solutions.

By contrast, Essential Energy's Plug and Play trial will test chargers fully embedded within streetlighting and distribution poles, using a recessed charging port rather than surface-mounted equipment. The charger and metering components sit inside the network asset, producing a low-impact, increased visual amenity design that reduces costs, removes street clutter, and eliminates vandalism exposure. No external meter housing is required, enabling aesthetic, safe, cost-effective kerbside deployment tailored to small towns and regional streetscapes.

Furthermore, there are no commercial solutions that leverage existing streetlighting infrastructure in an affordable and safe manner that is suitable for the Australian context. Essential Energy's in-streetlight column charger represents a world-leading uniquely Australian designed solution that can be deployed at scale to leverage untapped network capacity. Streetlight circuits are not utilised during daylight hours and present a significant amount of available under-utilised network capacity. Even during night hours there is significant capacity as existing streetlight circuits were designed for higher power luminaires, which with the transition to LED public lighting, are now underutilised.

Table 5: Safety, design and cost advantages

TRADITIONAL EXTERNAL POLE-MOUNTED CHARGERS	PLUG & PLAY IN-ASSET CHARGERS
External housing creates climbable bulk	Charger fully recessed within pole
Vulnerable to vandalism, graffiti, tampering	Significantly reduced tampering risk
Requires external meter enclosure	Type 9 metering avoids additional metering hardware and permits smaller solutions
Multiple parties require access to equipment	Access restricted to DNSP-approved technicians only
Adds visual clutter to streetscape	No new street furniture; retains existing pole profile
Uses timber poles which degrade over time	Uses composite technology significantly enhancing the safety and longevity of the solution

TRADITIONAL EXTERNAL POLE-MOUNTED CHARGERS	PLUG & PLAY IN-ASSET CHARGERS
Requires significant time to replace failed charger hardware	Replacement of failed chargers is a 30-minute exercise
Sustains existing solutions without advancing innovation	Enhances Australian innovation and manufacturing, building a holistic solution for export markets
More costly installations requiring electrical isolation, plinths, protection	Uses existing network and pole footprint; no additional street hardware

Leveraging composite pole innovation

This approach is enabled by Essential Energy's composite streetlight column and distribution pole technology, which offers, increased electrical withstand capability[7], superior resilience in bushfire-prone regions, avoids corrosion and termite impacts, and supports internal housing of safe electrical equipment. Essential Energy along with its composite technology partner Wagner's CFT have designed, prototyped, tested and trialled composite poles and streetlight columns that house EV chargers.

Essential Energy is the recognised industry leader in the development and adoption of composite technology products for utilisation in network distribution applications. With a service history spanning over 20 years without a single composite asset failure due to the product, or any signs of degradation that would affect mechanical or electrical performance, Essential Energy has full confidence in its composite products. This is supported by ongoing extensive accelerated aging and mechanical testing at Essential Energy's industry-leading test facility. These products represent the pinnacle of network resilience solutions and can be value stacked for the benefit of customers in regional NSW.

This project is an example of Australian ingenuity and innovation. The composite poles and columns are designed and manufactured in Australia in regional Queensland by Wagners Composite Fibre Technologies (CFT). Essential Energy conceived the idea and has developed all the solutions at its test facility in partnership with Wagners, with testing in a controlled environment, before trialling in a public arena. The two trial examples of in asset EV chargers, the streetlight column and distribution pole are future proofed by design to enable modular upgrades such as CCTV, sensors, traffic counters, lighting control systems and emergency communications, broadening their community value as shared infrastructure.[8]

Lessons learnt from each trial phase have been incorporated into the product line development such that the most recent trial with the in-distribution pole charger has an assessed Technical Readiness Level of 8.[9] A successful large-scale trial as per the ARENA Plug and Play has both national and international implications for Australian manufacturers to expand operations as first movers.

Because these composite streetlight columns and poles are part of the regulated distribution network, access must remain restricted to DNSP-accredited personnel for safety and system security. This is directly analogous to arrangements used for public streetlights, where councils procure the service, but Essential Energy maintains the asset.

The trial therefore mirrors a familiar and trusted model:

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[7] Withstand capability is the ability of an electrical component, device, cable, transformer, switchgear, insulator, or entire system to withstand a specified high voltage applied across its insulation without breaking down for a defined period of time.

[8] Essential Energy, Risk Based Proactive Pole Replacement Program RIT-D Draft Project Assessment Report, 2025.

[9] Technical Readiness Level is a standardised scale, from 1 to 9, used worldwide to assess how mature a technology is, from concept to a fully proven commercially deployed system. A rating of 8 means that the full system has been built, extensively tested, and proven to meet performance requirements in its final form and under expected conditions.

- DNSP installs and maintains shared infrastructure
- contestable retailers/CPOs deliver customer charging services.

Figures 3 and 4 illustrate DNSP-installed kerbside chargers embedded in Essential Energy's existing composite poles and streetlight infrastructure.

Figure 3: Composite streetlight in-asset charger – First of its kind 7kW AC charger

The composite column fully houses the charger, protection assets and will house a Type 9 metering solution complaint with National Metering Identifier metrology rule and the AEMC rule change for Type 9 metering for public EV chargers.[10]

Figure 4: Composite distribution pole in-asset charger – First of its kind 22kW AC charger

In this technical trail, the pole fully incorporates the revenue grade market ready type 4 metering, protection and charger within the pole. At the same time the pole provides LV overhead conductor support, streetlight

[10] AEMC, Final Determination, National Electricity Amendment (Unlocking CER benefits through flexible trading) Rule 2024

and residential service functions all in one asset. The installation is non-conductive providing superior safety outcomes, visually appealing, accessible, and vandalism resistant.

Enabling metering innovation through Type 9 metering systems

The charger within the streetlight column will utilise a Type 9 metering system either within the charger itself, or via a small footprint NMI pattern approved Type 9 system meter housed within the column.[11] This avoids installation of external meter boxes and associated external wiring and distribution board work. Where required, Type 4 metering can also be installed internally in composite poles due to their greater internal diameter.

This model supports future roaming and multi-provider competition under evolving market frameworks identified by the AEMC in its *Unlocking CER Benefits Through Flexible Trading* reforms.[12]

Potential cost advantages of in-asset chargers (to be tested)

A key objective of the Plug and Play Trial is to test whether embedding chargers in existing streetlight and distribution poles can reduce total deployment and lifecycle costs compared with conventional externally mounted chargers. Traditional pole-mounted chargers typically require new street furniture, additional meter enclosures, separate foundations or plinths, and more extensive civil works (including bollards, trenching and pavement reinstatement). These factors can be material drivers of project cost in regional locations, particularly where civil and metering work is a large share of the overall installation budget. In pedestrian frequented areas, which is where most of these conventional installations are occurring, externally mounted boxes can introduce additional hazards such as collision and reduced clear space on pathways. This also reduces the number of viable sites for conventional externally mounted chargers as if sufficient clear space cannot be maintained or the externally mounted boxes cannot be mounted to provide clearance, then the site should be discarded.

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[11] Electric vehicle supply equipment | Department of Industry Science and Resources

[12] AEMC, Unlocking CER benefits rule change, Final Determination, August 2024, p.15.

Attachment B: Market scan

Introduction and purpose

This attachment supports the market characterisation and site selection approach described in the main body of this application. The public EV charging market is often discussed as a single entity, but in reality, it comprises several distinct segments – each with unique commercial dynamics, customer needs, and barriers to investment. Failure to recognise these differences leads to policy confusion and ineffective interventions. This market scan deliberately focuses on the kerbside/pole-mounted charging segment, which remains underserved in regional NSW and is the primary focus of Essential Energy's Plug & Play trial.

The purpose of this scan is to:

- Clearly define the EV charging market segments and justify Essential Energy's focus on kerbside charging
- Demonstrate the current state of the kerbside segment, including evidence of market failure
- Identify market participants who may be affected by Essential Energy's presence
- Explain how Essential Energy's involvement is designed to enable, not crowd out, contestable market development
- Outline the safeguards in place to ensure competitive neutrality and consumer benefit.

Market Segmentation: focusing on the kerbside gap

The EV charging market in NSW can be segmented as follows:

Table 6: EV charging market segments

MARKET SEGMENT	TYPICAL PROVIDER(S)	COMMERCIAL MATURITY	DESCRIPTION
Home charging	Private consumers	Mature	Charging in residential garages or driveways (typically AC slow charging) by individual EV owners using private infrastructure. This remains the dominant mode of charging.
Destination charging	Hotels, retail, workplaces	Growing	Chargers located at non-transport-hub destinations (shopping centres, hotels, workplaces, car parks) where vehicles are parked for extended periods. These can be AC or DC units depending on location and use-case.
DC fast and "ultra-fast" charging	Commercial CPOs	Growing – though underdeveloped in the regions	High-power public chargers (often 50 kW+ DC) located along highways, major routes or in high-traffic areas to support long-distance travel or quick top-ups.
Kerbside / pole-mounted public charging	CPOs, councils	Immature	Public charging units mounted on street furniture (poles, streetlights, kerbside parking) typically in urban or regional areas where off-street parking is limited. Often lower power (AC) units designed for residents

MARKET SEGMENT	TYPICAL PROVIDER(S)	COMMERCIAL MATURITY	DESCRIPTION
			without private chargers, or visiting EV owners without access to home charging infrastructure.

Key context

- Kerbside charging serves residents without off-street parking and visitors in regional towns – groups not well served by other segments
- Commercial viability is low in regional kerbside settings due to thin demand, high enablement costs, dispersed load, and access to easements if not co-located with other street furniture
- Private investment is lagging: The segment is characterised by low deployment, high reliance on grants, and limited commercial interest—unlike the fast-charging or destination segments
- Essential Energy's trial is strictly limited to this segment, with no intention to compete in mature or commercially viable markets.

The kerbside segment: market status and rationale for intervention

Despite strong policy support for EV adoption, the kerbside (pole-mounted) charging segment in regional NSW remains in its infancy. The Essential Energy network, which covers the majority of regional NSW, currently has only 20 pole-mounted chargers in active service. These chargers are predominantly located on the east coast of NSW, with only a small number installed west of the Great Dividing Range.

Key characteristics of the current market

- **Extremely low deployment:** The total number of pole-mounted chargers in Essential Energy's footprint is 20, reflecting the broader trend that regional and remote towns have seen minimal rollout, despite clear need. The vast majority of pole-mounted chargers across NSW are concentrated in metropolitan areas and other DNSP footprints.
- **Facilitated, not commercial, deployment:** Nearly all pole-mounted chargers in the Essential Energy network have been installed through direct facilitation – such as the Electric Future trial[13] – where Essential Energy undertook site identification, technical assessment, and council engagement, and then invited CPOs to operate the chargers under concessional or flexible commercial terms. There is little to no evidence of purely commercial, non-facilitated pole-mounted charger installations in regional NSW.
- **High reliance on subsidies and DNSP support:** Almost all public charging deployments to date have been enabled by state or federal grants, or by DNSP-led initiatives that reduce enablement costs and risks for CPOs. Notably, the NSW Government's EV Fast Charging Grants program has offered to cover up to 80% (and in some cases up to 90%) of the capital cost for fast charging stations in regional and remote areas. Despite this high level of support, Round 3 of the program, with a budget of $54m was not fully subscribed – allocating less than 30% of the initial budget.[14] This particularly affects in low-utilisation regional zones which were the target of the program. This under-subscription highlights the persistent commercial barriers to deploying fast charging infrastructure in these areas, even with substantial government funding. The program has since increased its co-funding cap and introduced additional incentives, but the need for DNSP facilitation remains clear.

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[13] Pole Mounted EV Chargers | Essential Engagement

[14] Grant recipients | NSW Government

- **Limited commercial interest:** CPOs and other market participants have focused their efforts on more commercially attractive segments – such as highway fast charging and destination charging – where utilisation rates and returns are higher.
- **Barriers to entry:** High enablement costs, complex permitting, and uncertain utilisation make regional kerbside charging unattractive for private investment. The "chicken-and-egg" problem persists: without infrastructure, demand remains low; without demand, infrastructure is not built.

Summary

The current state of the kerbside charging market in regional NSW is defined by extremely low deployment, a near-total reliance on DNSP facilitation or public funding, and a lack of purely commercial installations. This demonstrates that, in the absence of targeted intervention, the contestable market is not delivering kerbside charging infrastructure in regional areas.

Evidence of need for market intervention

The persistent lack of kerbside charging in regional NSW is not due to a lack of demand, but rather to structural barriers that the contestable market has not yet overcome:

- **Limited access to off-street charging:** Approximately one-third of NSW drivers lack access to off-street charging. This creates a clear need for accessible public charging infrastructure.[15]
- **Regional EV adoption lags metropolitan areas:** As of September 2025, only 0.54% of registered vehicles in the Essential Energy network are EVs, compared to 2.03% across the rest of NSW. This gap is widening, highlighting the risk of regional communities being left behind in the energy transition.
- **Demonstrated consumer willingness:** Survey data from Essential Energy's trial sites and engagement forums indicates that regional consumers are willing to adopt EVs if reliable public charging is available. This suggests that the lack of infrastructure, rather than lack of interest, is the primary barrier.[16]
- **Thin markets and high risk:** Low population density, dispersed load, and high upfront costs mean that CPOs are not investing at meaningful scale in these areas. Even with substantial government support – such as the NSW Government's Fast Charging Grants, which have offered up to 80–90% co-funding for regional sites[17] – many locations remain commercially unattractive, and some grant rounds have required reopening or increased incentives to attract applicants.
- **Reliance on DNSP facilitation:** The majority of pole-mounted chargers in the Essential Energy footprint have only been delivered through direct DNSP facilitation or grant support. There is little evidence of purely commercial, market-driven installations in regional NSW.

Summary

These factors collectively demonstration market failure in non-metropolitan kerbside charging segment. Without targeted intervention, remote, rural and regional communities will continue to face higher costs, limited choice and persistent barriers to EV adoption.

[15] NSW government announces plan to roll out hundreds of public EV charging ports - ABC News

[16] Essential Energy, Streetlight EV Charger Trial Survey Results, Port Macquarie, June 2024

[17] NSW Fast Charging Grant - Round 3

Why Essential Energy is seeking to take action

Given the persistent barriers and clear evidence of market failure in the regional kerbside charging segment, DNSP intervention is both necessary and proportionate. The following points summarise why Essential Energy's involvement is justified:

- **Private investment is not forthcoming:** Despite strong policy incentives and substantial government support, as well as direct and ongoing support from Essential Energy to CPOs, including development of an Estimated Network Capacity Map[18] to assist CPOs identify locations with sufficient capacity and demand to support new kerbside EV Charging Infrastructure, commercial providers have not delivered kerbside charging infrastructure at scale in regional NSW. The lack of purely commercial installations, even with high levels of grant funding available, demonstrates that the market alone is not meeting community needs.
- **Regional inequity is perpetuated:** Electric vehicles have demonstrably lower running and maintenance costs, giving motorists the confidence to make the switch from internal combustion engine (ICE) vehicles which opens a new pathway to reduce their living costs. Without access to affordable and reliable charging options, regional communities will continue to face higher transport costs, limited choice, and delayed access to the benefits of electrification. This risks entrenching a two-speed transition, where metropolitan areas advance while regional areas are left behind.
- **Regional chargers suffer from poor service quality:** The tyranny of distance in regional areas makes ongoing maintenance of infrastructure uneconomic, resulting in low rates of EV charging 'up-time'. These factors compound range anxiety for EV motorists outside of metropolitan NSW who, despite good planning around charging, may need to travel hours out of their way to locate functional EV charging infrastructure.[19]
- **DNSP-facilitated shared infrastructure lowers barriers:** By leveraging existing assets, technical expertise, and established relationships with councils and communities, Essential Energy can reduce the cost and complexity of deploying kerbside chargers. This approach enables contestable service provision by making it commercially viable for CPOs to participate in thin markets.
- **All retail and customer-facing services remain contestable:** Essential Energy's role is strictly limited to providing and maintaining shared infrastructure. Pricing, billing, branding, and customer engagement are delivered by CPOs and eMSPs, ensuring competitive neutrality and consumer choice.
- **The trial is time-bound and evidence-based:** Essential Energy's Plug & Play trial is a targeted, temporary intervention designed to generate data and insights for future regulatory decisions. The objective is not to establish a permanent DNSP role, but to test whether shared infrastructure can catalyse market development and inform long-term policy.

Summary

DNSP involvement via a Ring-fencing waiver is justified as a necessary response to persistent market failure in regional kerbside charging. Essential Energy's Plug & Play trial is designed to enable, not crowd out, contestable market development – ensuring that regional communities are not left behind in the energy transition.

[18] Essential Energy has developed an interactive tool via its website to help CPOs to find cost-effective charging locations, including data on the estimated available capacity at each network distribution substation. This service has been in place since FY2022-23, and has been celebrated as industry-leading, saving considerable time and effort for charging providers looking to deliver new infrastructure.

[19] For example – see media reports: Some EV owners report facing inadequate charging infrastructure, long waits during summer road trips - ABC News, EV 'charging deserts' in regional Australia are slowing the shift to clean transport

Identification of market participants and impact assessment

Market participants potentially affected

The kerbside charging segment in regional NSW involves a range of stakeholders, including:

- **Charge Point Operators**
  Examples include EVX Australia, Evie, Asset Charge, Chargefox, Jolt, Everty, and others. In the Essential Energy footprint, the current active pole-mounted chargers are operated primarily by EVX Australia and Asset Charge, with all deployments to date facilitated by Essential Energy-led trials or partnerships.
- **Local councils**
  Councils play a dual role as site owners and facilitators of local planning and community engagement. Their participation is essential for site selection, permitting, and ensuring that charging infrastructure aligns with local needs.
- **Hardware and software providers**
  Companies supplying charging equipment, metering, and management platforms, such as ChargePost and EVSE Australia, may be indirectly affected by changes in procurement models or technical requirements.
- **Fleet operators and businesses**
  Early adopters of EVs, these organisations require reliable, convenient infrastructure to support their operations and may benefit from increased public charging availability.
- **Consumers and community groups**
  Regional residents, visitors, and advocacy groups are the ultimate beneficiaries of improved charging access and are key stakeholders in the consultation process.

How Essential Energy's presence may affect market participants

- **Enabling, not crowding out, competition**
  Essential Energy's role is strictly limited to providing and maintaining shared infrastructure in locations where commercial investment has not occurred. All retail and customer-facing services remain fully contestable, with CPOs selected through transparent, non-preferential processes.
- **Lowering barriers to entry**
  By absorbing enablement costs, streamlining site selection, and offering flexible commercial terms, Essential Energy makes it commercially viable for CPOs to operate in thin markets that would otherwise remain unserved.
- **Safeguards for competitive neutrality**
  - No sites are selected where a CPO has active commercial interest.
  - All access is via open, competitive tender with published criteria.
  - Lease fees are set to fully recover costs, with annual independent audits.
  - Technical information is shared transparently with all interested parties.
- **Supporting market development**
  The trial is designed to generate evidence and build utilisation, with the intention of crowding in future contestable investment as the market matures.

Table 7: Summary Table – Market participants and impact

PARTICIPANT TYPE	CURRENT ROLE/PRESENCE IN ESSENTIAL ENERGY FOOTPRINT	POTENTIAL IMPACT OF TRIAL	SAFEGUARDS IN PLACE
CPOs (e.g. EVX, Asset Charge)	Operate all current pole-mounted chargers (facilitated)	Lower barriers, new commercial opportunities	Open tender, no preferential access
Councils	Site owners, planning partners	Improved infrastructure, local input	Collaborative site selection
Hardware/Software Providers	Equipment and platform suppliers	Opportunity to supply new sites/develop new charging products	Technical neutrality, open procurement
Fleet Operators/Businesses	Early adopters, users	Improved access, operational benefits	Transparent pricing, contestable services
Consumers/Community	End users, advocates	Increased access, equity	Ongoing engagement, published outcomes

Summary

Essential Energy's Plug & Play trial is designed to enable, not displace, market participants. By focusing on underserved locations, maintaining competitive neutrality, and ensuring all commercial functions remain contestable, the trial supports the development of a sustainable, competitive kerbside charging market in regional NSW.

Safeguards and competitive neutrality

Essential Energy's Plug & Play trial is designed with robust safeguards to ensure that DNSP involvement enables, rather than impedes, the development of a competitive kerbside charging market in regional NSW. The following measures are in place to protect competitive neutrality and maintain market confidence:

- **Transparent site selection and access**
  All sites for DNSP-facilitated chargers are selected through a collaborative process involving councils and community stakeholders, with a focus on locations where commercial investment has not occurred. No sites are reserved or prioritised where a CPO has expressed active commercial interest.
- **Open, competitive tendering**
  Access to DNSP-owned charging infrastructure is allocated via open, competitive tenders. All interested CPOs and eMSPs have equal opportunity to participate, with selection criteria and outcomes published to ensure transparency and fairness.
- **Non-preferential commercial terms**
  Lease fees for use of DNSP-owned chargers are set to fully recover costs, benchmarked against market rates, and reviewed annually. All operational expenditure for contestable assets is funded exclusively by commercial arrangements, not by regulated network tariffs. Annual independent audits confirm that no cross-subsidisation occurs.
- **No retail or customer-facing involvement**
  Essential Energy's role is strictly limited to infrastructure provision and maintenance. All retail pricing, billing, branding, and customer engagement functions remain fully contestable and are delivered by CPOs/eMSPs.

- **Transparent information sharing**
  All technical and site information relevant to charger operation is made available to interested parties through an information register, ensuring no party receives preferential access or inside information.
- **Annual independent audit and public reporting**
  The trial is subject to annual independent audit of ring-fencing compliance and cost allocation, and public reporting through ARENA's knowledge-sharing framework.
- **Time-bound and reviewable**
  The waiver and trial are strictly time-bound, with a clear exit strategy and review process at the end of the trial period. Any future DNSP role will be reassessed based on market development and consumer benefit.

Summary

These safeguards collectively ensure that Essential Energy's Plug & Play trial operates as a neutral market enabler, not a competitor. By maintaining open access, transparent processes, and strict separation of contestable and regulated activities, the trial supports the long-term development of a sustainable, competitive kerbside charging market in regional NSW.

Summary and conclusion

The kerbside (pole-mounted) EV charging segment in regional NSW is characterised by extremely low deployment, persistent commercial barriers, and a lack of purely market-driven investment – even in the presence of substantial government support. Essential Energy's Plug & Play trial is a targeted, time-bound intervention designed to address the need for further intervention by enabling contestable service provision where it would not otherwise occur.

Key points:

- The trial is strictly limited to the kerbside segment, with all retail and customer-facing services remaining fully contestable
- All current pole-mounted chargers in the Essential Energy footprint have been delivered through DNSP facilitation; there are no purely commercial installations in regional NSW
- The trial is designed with robust safeguards to ensure competitive neutrality, transparency, and no cross-subsidisation from regulated customers
- By lowering barriers to entry and generating evidence for future regulatory decisions, the trial supports the long-term development of a sustainable, competitive kerbside charging market in regional NSW.

Essential Energy's role is not to compete with the market, but to enable its development where it has not yet formed. The Plug & Play trial will inform future regulatory frameworks and ensure that regional communities are not left behind in the energy transition.

CPOs

OPERATOR	NSW FOOTPRINT	CHARGER TYPES	PUBLIC SITES	PRIVATE SITES	KERBSIDE CAPABLE	SITE IN ESSENTIAL ENERGY'S FOOTPRINT	NOTES
Chargefox	Yes	AC & DC	Yes	Yes	Yes	0	Has AC public chargers suitable for kerbside deployments.
Evie Networks	Yes	DC	Yes	No	No	0	Primarily DC fast charging; not a kerbside AC provider.
Exploren	Yes	AC & DC	Yes	No	Yes	0	Public AC network suggests kerbside suitability.
Jolt	Yes	AC & DC	Yes	No	Yes	0	Business model focuses on kerbside-style AC charging.
BP Pulse	Yes	DC	Yes	Yes	No	0	Retail-site DC chargers; not kerbside AC.
AmpCharge (Ampol)	Yes	DC	Yes	Yes	No	0	DC highway/retail charging.
NRMA Electric	Yes	AC & DC	Yes	No	Potentially	0	Some AC sites may be kerbside-suitable—requires validation.
ChargePost	Yes	AC	Yes	Yes	Yes	0	NSW grant recipient; targets councils & property owners; plug-and-play AC.
Connected Kerb	No (UK-based, pilot in AU)	AC	No	No	Yes	0	UK leader (10,000+ chargers); expanding via EVX in AU; modular kerbside units.
Kerb-e	Yes (pilot/early stage)	AC	Yes (pilot)	No	Yes	0	Early-stage in AU; strong UK presence; urban-focused pilots; modular kerbside units.
EVX	Yes	AC	Yes	No		9	CPO with active pole-mounted kerbside sites in Essential Energy footprint
Asset Charge	Yes	AC	Yes	No		11	CPO with active pole-mounted kerbside sites in Essential Energy footprint

OPERATOR	NSW FOOTPRINT	CHARGER TYPES	PUBLIC SITES	PRIVATE SITES	KERBSIDE CAPABLE	SITE IN ESSENTIAL ENERGY'S FOOTPRINT	NOTES
Everty	Yes	AC	Yes	Yes		0	Platform provider for some regional pilots; no direct EE kerbside sites.

Notes:

- "Kerbside Capable" = Operator has AC chargers suitable for kerbside/pole-mounting, or business model includes kerbside deployments.
- "Connected Kerb" and "Kerb-e" are both UK-based with pilot activity in Australia, including NSW, but limited scale to date.
- "ChargePost" is a recent NSW grant recipient and is actively targeting kerbside deployments with plug-and-play AC chargers.
- "NRMA Electric" has some AC sites that may be kerbside-suitable, but most of its network is DC highway/destination charging.
- **EVX and Asset Charge** are currently the only CPOs with active pole-mounted kerbside sites in the Essential Energy footprint (20 sites, all facilitated by Essential Energy).
- Other CPOs (Chargefox, Jolt, Exploren, ChargePost, Kerb-e, Connected Kerb, Everty) have business models or technology suitable for kerbside, but as of now, have no confirmed kerbside deployments in the Essential Energy region.
- Some CPOs may have destination or DC fast charging sites in the Essential Energy footprint, but not kerbside/pole-mounted AC chargers.
- The list above is comprehensive for the current market, but new entrants may emerge as the market matures and as Essential Energy's Plug & Play program expands.

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