

# We make charging electric vehicles super easy.



## ARENA Fleet Charging as a Service (CaaS) project Lessons Learnt Report #1: Aug-Nov 2023

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## Contents

1. Overview	3
2. Summary	4
3. Agreed Deliverables for this Milestone	6
4. Lessons Learnt	7

# 1. Overview

<b>Project</b>	<b>ARENA Fleet CaaS Project</b>
<b>Reporting Milestone</b>	<b>Lessons Learnt Report #1</b>
<b>Period</b>	<b>Aug - Nov 2023</b>
<b>Project Stage</b>	<b>Design</b>
<b>Project Description</b>	<p>The Project seeks to demonstrate JET Charge’s ‘Charging as a Service’ (CaaS) business model as a potential solution to the barriers preventing businesses from transitioning their fleets to BEVs, by:</p> <ul style="list-style-type: none"> <li>• Providing an end-to-end solution for customers, allowing the complexity of BEV fleet transition to be managed by businesses with JET Charge’s expertise; and</li> <li>• Offering standardised products allowing businesses to generate scale and recurring revenue – all of which are attractive features of a scalable business model to institutional investors seeking to deploy capital into the space.</li> </ul> <p>JET Charge is seeking to develop and scale the first full-service charging solution in Australia. By establishing this Charging-as-a-Service (CaaS) business model, JET Charge is combining BEV charging hardware, installation, operation, maintenance and asset management into an OPEX service. CaaS allows fleets to fully outsource their charging needs to JET Charge through a bundled monthly payment.</p> <p>JET Charge can aggregate demand from fleets across Australia to achieve the required economies of scale across all parts of the value chain and provide the lowest cost of charging to customers. At scale, the standardised product offering and recurring revenue is expected to attract new institutional investors, driving down the cost of capital in this sector.</p> <p>Over the Project’s three-year duration JET Charge aims to install 3,160 chargers, mostly at workplaces but with an estimated 800 chargers to be installed at customer’s homes. This target is matched with the uptake of 3,160 passenger and light commercial BEVs by fleet, which represents one BEV for each charger deployed under a CaaS contract.</p> <p>The Project aims to overcome the financial and operational barriers to accelerate to BEV uptake and accelerate fleet electrification with a bundled charging infrastructure solution that is comparable in cost to traditional ICE vehicle refuelling.</p> <p>The Project has potential to increase skills, capacity, and knowledge relevant to BEV technologies, and improve understanding of the CaaS business model.</p>
<b>Areas of focus for this milestone</b>	<ul style="list-style-type: none"> <li>• Stand up project management function and framework</li> <li>• Onboard teams across JET Charge</li> <li>• Initiate marketing and customer engagement</li> </ul>

## 2. Summary

An Overview of Lessons Learnt for this period

### Social

#### **1.1 Marketing and communications are a major challenge for a technology scale-up, but potentially the key for CaaS to unlock fleet electrification at scale.**

Market research and procurement leadtimes highlight that fleet managers increasingly identify the upfront cost and ongoing complexity of charging infrastructure as a barrier to EV uptake. JET Charge has designed CaaS to solve these problems, but early Project experiences highlight our need to build an effective marketing and communications capability.

#### **1.2 Novated leasing is classified as a Business customer, and is a large and distinct segment within the current Australian EV market requiring special focus**

Project channel development activities have revealed that around one half of business customer sales are to novated leasing customers rather than fleet operators. For this reason, JET Charge has brought forward product development activities aimed at providing a CaaS solution for the novated leasing segment.

### Financial

#### **1.3 Early indications are that employee home charging will be a key enabler for fleet electrification**

Customer conversations have highlighted the increasing interest in employee home charging solutions based on primarily the cost advantage over deployments that commercial building uplift. As an outcome, our customer (participant) recruitment is prioritising CaaS Employee @ Home for this first stage of the Project.

### Environmental

#### **1.4 The environmental impact of the Project will build on the foundation that is the net positive environmental benefit of our business**

As part of the carbon accounting capability being developed for the Project, JET Charge has completed its first Environmental Impact Assessment. We found that

the emissions associated with our business operation are more than offset by the carbon abatement that arises from the charging infrastructure we provide.

## Technical

### **1.5 Commercialisation projects are best delivered with a hybrid agile-waterfall model**

While our Project delivery has only just begun, the lesson learnt relates to project design. Specifically – how to support firm business case commitments while providing flexibility to accommodate learnings that should dictate changes in approach to improve the chances of success.

### **1.6 Cross functional projects require “lowest common denominator” collaboration tools**

One of the challenges identified in our Project setup lay in our selection of collaboration tools that will underpin the operating model. In bringing together a diverse team we found that more sophisticated tools were counterproductive as they raised the bar for user engagement and productivity, alienating some team members and undermining efforts to establish momentum. As an outcome, we have adopted a simple collaboration tool with the lowest bar for user engagement.

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### 3. Agreed Deliverables for this Milestone

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Agreed project deliverables from the ARENA contract, current status and links to the deliverables.

<b>Contract Ref.</b>	<b>Deliverable Description</b>
Sch.1.9 Milestone No.1	Completion of the Design Phase

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## 4. Lessons Learnt

**Lesson Learnt** Marketing and communications are a major challenge for a technology scale-up, but potentially the key for CaaS to unlock fleet electrification at scale

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**Category** 🗣️ Social

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**Significance** **HIGH**

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On 23 Nov 2023 the Australasian Fleet Management Association (AfMA) released their second [“Electric Vehicles in Business Fleets”](#) report. Among a wealth of incredibly important market insights, it included an updated view on the main barriers to fleet electrification. According to the 167 fleets who responded, the cost and complexity of setting up workplace charging infrastructure jumped from fourth in the 2020 survey to now rank as the most significant concern for organisations looking to add EVs to their fleet - refer Figure 1 below.

This finding endorses JET Charge’s lived experience responding to fleet requests for charging solutions. In October 2023 the average time for a fleet procurement conversation to close from the date of first inquiry is 159 days, up from 119 days at the same time in 2022. Against the backdrop of the 2020 and 2023 AfMA survey results that highlight the increasing view of charging infrastructure as the main obstacle to EV uptake, a possible explanation may be that fleets are increasingly accepting the vehicles and now getting stuck on the infrastructure.

JET Charge’s Charging as a Service model targets exactly this problem. Our challenge therefore is to raise awareness and understanding of the CaaS solution. For this reason, a Marketing & Communications Plan was identified as a key deliverable for the first Project Milestone. To date, JET Charge has been largely a technology-led organisation – developing our marketing capability will be a key outcome from the first year of the Project.

Early results have highlighted the challenge – negligible customer inquiries arising from the Project launch communications and media coverage, low engagement with our LinkedIn campaigns, and a general reluctance by attendees to engage at the recent National Public Sector Fleet Managers event. These results need to be viewed in context – JET Charge has a highly effective channel strategy but is only starting out with outbound B2B marketing. These experiences underpin the “test-and-learn” approach we will continue to operate through Year One as we address the customer engagement challenge for the Project.



### CONCERNS OF FLEETS REGARDING ADDING EVs

Total concerned

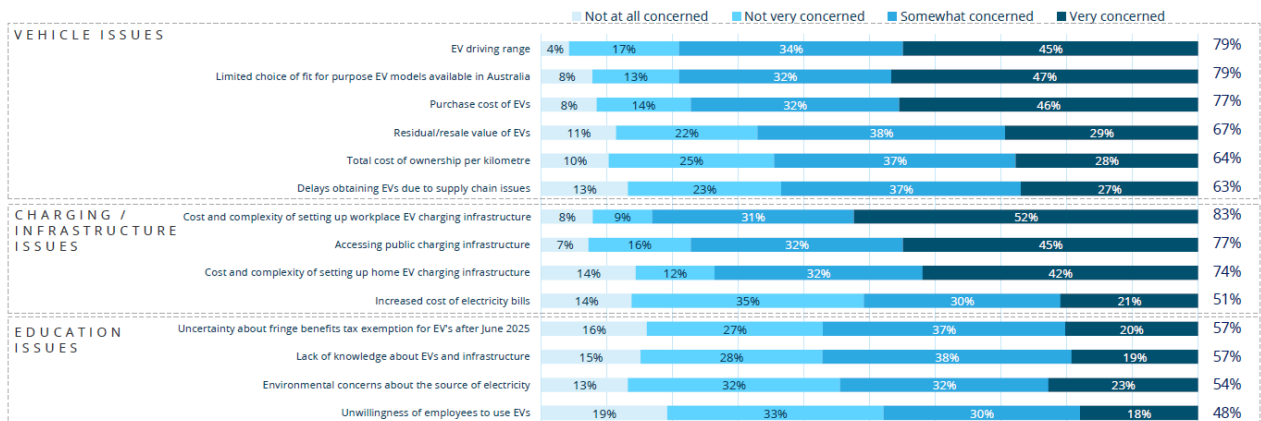


Figure 1. Extract from AfMA EVs in Business Fleets 2023 report, highlighting how the cost and complexity of charging infrastructure now ranks as the most significant concern for organisations looking to add EVs to their fleet.

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**Lesson Learnt** Early indications are that employee home charging will be a key enabler for fleet electrification

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**Category** 💰 Financial

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**Significance** **HIGH**

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Building on the previous insight regarding the challenges of workplace charging infrastructure, JET Charge has identified strong interest in employee home charging as a key enabler for fleet electrification.

The reasons for this are mainly financial. Most commercial buildings can accommodate up to 5 AC chargers within existing infrastructure before an expensive uplift is required. As a rule-of-thumb, the distribution boards, cable trays and cabling to support up to 50 AC "destination" charging stations will cost around \$100k. This infrastructure is a building uplift and not able to be repurposed elsewhere, nominally making it the responsibility of the building owner who may be capital constrained and reluctant to invest without a long-term tenancy commitment &/or rent increase. And even if the vehicle operator is prepared to pick up the tab, they will still need approval from their building owner.

By comparison, home charging solutions are relatively cost-effective and simple. At a unit economics level, a home charging solution costs less than half the equivalent charging solution installed in a commercial building. And the leadtime for a home charging installation is around 2 weeks as compared to 3-6 months for a large commercial building project. Considering around half of fleet vehicles are garaged in employee homes overnight ([AfMA 2023](#)), the importance of employee home charging for fleet electrification becomes clear.

JET Charge's CaaS Employee @ Home solution addresses this opportunity and the barriers that are holding many fleets back. Per the AfMA research findings above, the cost and complexity of setting up home EV charging infrastructure is seen as one of the most significant barriers to fleet electrification. With ARENA's support, JET Charge is seeking to address this with a fuel-card-like experience that nominally costs the same as ICE refuelling even when the electricity cost is taken into account.

JET Charge customer engagement has highlighted strong interest in this solution. While the majority of fleets currently believe workplace (depot) charging will be the mainstay of their fleet electrification plan ([AfMA 2023](#)), those more advanced in their electrification journey are beginning to realise how employee home charging may play a greater role. As these customer conversations convert to CaaS agreements, this will provide further validation of the importance of home charging to fleet electrification.

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**Lesson Learnt** Novated leasing is classified as a Business customer, and is a large and distinct segment within the current Australian EV market requiring special focus

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**Category** 🧑🏻🧑🏻 Social

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**Significance** **HIGH**

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Novated leasing is a salary sacrifice arrangement made available by businesses to their employees which historically has accounted for around 10% of vehicle sales ([NALSPA 2020](#)). As Fringe Benefits Tax (FBT) applies to this benefit, it is usually passed on to the employee through the novated lease provided by the FMO. From 1 July 2022 the Australian Taxation Office provided an [exemption on FBT](#) for eligible electric cars, the outcome from which has increased the EV share of novated leasing from 1-2% to 10-15% ([NALSPA 2023](#)) or around 17% of EV sales overall. The Government have committed to completing a review of the FBT exemption by mid-2027, meaning that novated leasing via FMOs will continue to be an important segment within the overall EV market until at least that time.

The VFACTS industry sales data provided by the Federal Chamber of Automotive Industries (FCAI) is the source-of-truth for new vehicle sales insights, including EV sales. It is based on monthly sales data reported by vehicle OEMs to FCAI under a voluntary commitment. VFACTS segments sales by customer type into Private, Business, Government and Rental. Given that novated leasing is for employees, a logical interpretation would be to classify it as a Private sale.

As part of channel development activities undertaken for the Project, JET Charge has consulted with vehicle OEMs and found that novated leasing is actually classified as a Business sale to a Fleet Management Organisation (FMO) even if they are fulfilling a vehicle order by a private buyer. This being the case, to get a true picture of the market segmentation the VFACTS sales data should be reinterpreted to subtract novated leasing purchases from Business and add them to Private.

JET Charge analysis suggests the impact of this reallocation is significant. EV sales projections for 2023 would nominally have split the market at around 68% Private buyers versus 32% Fleet (consisting of Business, Government and Rental). Adjusting for the reclassification of novated leasing away from Business and adding to Private suggests the actual ratio is around 85% Private to 15% Fleet. While this highlights the success of the FBT exemption in driving EV uptake, it also highlights a smaller market for “traditional” fleet EVs than industry sales data suggests. As an outcome, JET Charge has brought forward efforts aimed at developing a tailored CaaS solution for FMO novated leasing.

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**Lesson Learnt** The environmental impact of the Project will build on the foundation that is the net positive environmental benefit of our business

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**Category**  Environmental

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**Significance** **HIGH**

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JET Charge is developing its carbon accounting capability for the Project via analysis for our first Environmental Impact Report that will be published in early 2024. As we install EV chargers, we help decarbonise transport by enabling electrification which is more efficient and potentially much lower emissions than traditional transport fuel options. While the switch provides a reduction in CO2 emissions, we still need to account for the emissions associated with the relevant source of charging energy as well as those from our business operation.

For our first report we worked with experts from one of our investors Kilara Capital to develop our emissions reduction model. To calculate our impact, we gathered data on the energy delivered through our residential installations in FY22 and calculated an equivalent travel distance. We then calculated the CO2 impact of the grid electricity and compared it with the impact of ICE vehicles if they had travelled the same distance.

We then compiled the FY22 emissions inventory from our business operations. Building energy and transport activity were identified as the main sources of our greenhouse gas emissions.

Based on the results from this analysis, we found that JET Charge has a net positive environmental impact in terms of greenhouse gas emissions reduction. Further detail on the analysis we undertook will be made available once the report is published.

This analysis took the emissions reduction from our residential installations only into account. For the ARENA Fleet CaaS project, we will measure all charging energy and acquit it against renewable sources. This will enhance the beneficial environmental impact of our business in supporting the switch to electric with zero emissions energy sources.

These results are an important affirmation for our business and align with our leadership mission to promote demonstrated environmental stewardship in the emerging EV charging sector.

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**Lesson Learnt** Commercialisation projects are best delivered with a hybrid agile-waterfall model

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**Category**  Technical

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**Significance** **MEDIUM**

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For JET Charge business planning and our ARENA project agreement, milestone planning is essential. Specific deliverables and dates must be committed for contracts, budgets and resource allocation. This is best managed through a traditional “waterfall” project management approach that emphasizes a linear progression from beginning to end.

Unfortunately the early stage commercialisation task is plagued by uncertainty, requiring flexibility in the delivery model to accommodate learnings that dictate next steps. The agile project management approach evolved to address exactly this issue, and emphasizes an iterative approach to incorporate feedback.

As part of our project set-up, JET Charge has designed and implemented a hybrid approach that reflects the milestone plan that is the foundation of our funding agreement and the commercialisation problem that we are seeking to solve. The overarching project management plan uses a waterfall “Stage Gate” model:

### Stage Gate 1: CaaS Product-Market Fit

- Delivery of 200 chargers installed by 2 April 2024 and 550 by 1 September 2024
- Objective is to ensure the customers are engaged and the product will meet the needs of the market
- Service model design focus
- Target date for completion = Milestone 3, 1 Sep 2024

### Stage Gate 2: CaaS Service Model Build & Validation

- Delivery of 1,050 chargers installed by 3 April 2025 and 1,880 by 1 September 2025
- Objective is to ensure the service model is fit-for-purpose and capable of supporting delivery at scale
- Service model build focus
- Target date for completion = Milestone 5, 1 Sep 2025

### Stage Gate 3: CaaS @ Scale

- Delivery of 2,860 chargers installed by 2 April 2025 and 3,160 by 1 September 2026
- Objective is to ensure the CaaS business has an established pipeline and delivery model operating at scale
- Service model operation focus
- Target date for completion = Milestone 7, 1 Sep 2026

In parallel, we have established a cross-functional Squad delivery model that is aligned with the customer problem and CaaS solution:

- Residential Squad who will focus on fleet vehicle charging at employee premises or FMO novated leasing
- Small Commercial Squad who will focus on a standardised commercial building solution supporting up to 5 chargers
- Enterprise Squad who will focus on bespoke commercial building solutions for more than 5 chargers

Each of the Squads will manage their workload using an Agile methodology applied across quarterly planning increments broken down into sprints that will be informed by build-test-learn feedback loops.

While our project delivery has only just begun, the lesson learnt relates to project design and how to support firm business case commitments while providing flexibility to accommodate learnings that should dictate changes in approach to improve the chances of success.

**Lesson Learnt** Cross-functional projects require “lowest common denominator” collaboration tools

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**Category** 🧑🧑 Social

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**Significance** **LOW**

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One of the challenges identified in the setup of our cross-functional Squads lay in the collaboration tools that will underpin the operating model. JET Charge is a highly diversified business with lawyers, engineers, project managers, electricians, graphic designers, accountants and software developers, all of whom have their own ways of working. While this is not a major issue when working in a functional team structure, establishing a common way of working within a cross-functional team has proved to be challenging.

Many collaboration tools have extensive feature-sets that enhance and streamline (e.g.) ideation, analysis and reporting tasks... once you know how to use them. In bringing together a diverse team we found that more sophisticated tools were counterproductive as they raised the bar for user engagement and productivity, alienating some team members and undermining efforts to establish momentum.

As an outcome, we have adopted a simple collaboration tool with the lowest bar for user engagement. The Atlassian SaaS platform Confluence is a “blank canvas” that resembles a stripped-back version of Microsoft Word. The intuitive UX allows users to easily copy-and-paste artefacts from a range of sources, thereby promoting engagement without a large training overhead or wasted time spent formatting documents etc. Similarly, the hierarchical information management structure analogous to an internet site map is intuitive and recognisable to anyone used to navigating their way around websites.