

Essential Energy: supporting you to electrify your vehicle fleet

We are facilitating the adoption of electric vehicles (EVs) in regional, rural and remote NSW. As we work towards the electrification of our own fleet, we're happy to share our expertise and what we're learning to help fleets, such as yours, who are looking to do the same thing.



What is the process of transitioning to an EV fleet?

We're learning that transitioning a fleet from Internal Combustion Engine (ICE) vehicles across to EVs is not an overnight process and it takes a great deal of careful planning to accomplish. We also know that a Fleet Transition Strategy is imperative because so many elements other than just vehicles are involved.

Here are some of the things to consider as you start to think about electrifying your fleet:

1: Discovery – compare vehicle functional requirements with available models

- > Gather information from market
 - Understand what electric vehicles are available now, and what vehicles are coming soon
- > Gather information about your fleet and its requirements
 - Physical fleet overview – assess your fleet, grouping vehicles into categories; understand the energy requirements, charging opportunities and replacement options
 - Know how your fleet is used: where is it parked, where it travels, where it stops, the distances it covers, whether it tows trailers or carries heavy loads
- > Determine if you want to Lead or Follow the market
 - What are your company objectives?
 - Will charging infrastructure you deploy support not only your fleet but other EV users such as delivery drivers, visitors, staff?
- > Hold an “EV 101” Information and Awareness session
 - What does transitioning your fleet mean
 - > How does it achieve your business goals and targets?
 - > Why is it important?
 - What is the process for transitioning your fleet?
 - > What business changes are required
 - > What policies, processes and specifications are likely to require change
 - > Scenarios and financials development
 - > What vehicles and charger trials will you do
 - > How will change management be done
 - > How to engage your employees in fleet transition
- > Determine the Governance forum for decisions
 - Make the business decisions
 - Include groups other than just fleet
 - > HR, Finance, Sustainability, Fleet, users, etc

2: Gather your data - understand the requirements to choose the best operationally-fit vehicle

- > Telematics
 - Vehicle usage patterns at individual asset level
 - Preferred age and replacement cycles
 - Develop use cases and user profiles
 - Vehicle maintenance changes and service locations
- > Charging requirements - making sure charging is in the right place at the right time
 - Will you need back-to-base charging infrastructure?
 - When do vehicles get back to base? Do they arrive at the same time?
 - What are their dwell times during the day? Will they be in and out?
 - Where are the vehicles parked at night?
 - Will you offer home charging options as well?
 - Can en-route public charging be utilised to support depot charging?

The answers to these questions will help you determine the combination of slow and fast chargers you will need to support your fleet – at the lowest cost
- > Site details
 - Site locations, landlords or council approvals, available parking, facilities
- > Emission reduction goals

3: How much energy does all this add up to?

- > Convert fuel usage to average and max daily kWh required
- > Can the max daily kWh required be delivered by EVs currently available on the market?
- > Build your ideal transition plan based on max daily kWh required and EVs availability timeline. This will give you your phasing, charger numbers and load profiles
- > Does the existing energy infrastructure at your site support the new energy requirement?
 - > Will you need to upgrade the energy available? At what cost?
 - > Can you use solar or batteries for better cost outcomes?

4. What is your charging strategy? (hint: knowing your Use Cases will help you with this)

- > Will you install charging before or after you have the vehicles purchased?
- > How will you determine charger access and utilisation?
- > How will you manage fast and overnight charging? And home charging?
- > How often will “top-up” charging be required during the working day?
- > Develop your charging plan – don’t forget a maintenance schedule

5: Site assessments and specifications

- > Site audits, design, parking, safety
- > Technical and data specifications
- > Tender and procurement for fit for purpose charging
- > Site reports
- > Know your site infrastructure and connection agreements
- > Who is the distributor and energy retailer at each of your locations?

6: Economic viability

- > Business case + budget
- > Total cost of ownership comparison vs traditional vehicle options to confirm cost/benefit
- > Consider if any government incentives are available
- > What non-financial benefits will the transition provide? What reputational benefits will be realised and how are these valued?
- > What is the vehicle safety comparison compared to your existing fleet

7: Transition plan

- > Develop phasing scenarios of when individual vehicles will transition
- > It might be beneficial to start with the more easily transitioned units to get the process going and build awareness and acceptance
- > Confirm required charging strategies, including the installation of chargers if required along with analysis of site load profiles
- > Find the EV champions in your business. Start deploying with those that are engaged and willing to pave the way first

8: Implementation

- > Consider conducting trials with the first EVs on your fleet and the ways they are charged
- > Utilise the EV advocates in your organisation to spread the word and demonstrate EV benefits to others
- > Ensure change management is embedded in your process to ensure necessary engagement/education/awareness to optimise the successful transition
- > Assess your charging plans and identify any changes or upgrades which may become needed at your sites to facilitate the growth in EV fleet numbers in the coming years
- > Develop tools and procedures to remain abreast of upcoming new EV model availabilities, and assess how you may need to change your transition phasing/timing accordingly
- > Implement careful monitoring of charging loads and ongoing assessment of system capacity into the future
- > Utilise telematics and charger data to track energy and charging patterns
- > Continue to engage users/drivers and other stakeholders in the process, as the need for ongoing education/awareness will remain for some time

Stay in touch:

If you would like to know more about transitioning your fleet talk to us at EVs@essentialenergy.com.au

