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LESSONS LEARNT REPORT – SEPTEMBER 2022

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LESSONS LEARNT

Lesson Learnt #1: Metering requirements for EV DC charging
Category: Technical, Economic

There is currently no unified standard in Australia for metering of DC EV Charging Systems (EVCS). The application of metering for EVCS has also been inconsistently applied by site managers and across different site electrical networks. This situation has led ENGIE to reassess and rationalise its application of metering for DC EVCS.

EV charging equipment manufacturers selected for the Future Fuels Program have incorporated MID metering equipment into the EVCS (to comply with European jurisdiction where MID metering is required for revenue metering). ENGIE understands there is currently no requirement for NMI pattern and verification of metering in the EVCS. That said, it is understood NMI is currently considering the trade (revenue) measurement policy for EVCS going forward. This may include the alignment of policy with OMIL standards (which governs the MID certification).

Furthermore, sites which operate an embedded network may require the electricity supply to its tenants to be measured with NMI pattern meter. The connection of EVCS to the embedded network may be treated as a tenant (trade) and thus NMI pattern meter would be required to be installed upstream of the EVCS (at the supply connection point).

In view of the above, provision for NMI pattern metering upstream of the EVCS will generally be included in the EV charging installation in addition to metering built into the EVCS. This provides ENGIE flexibility to address the existing metering requirements while providing pathways to meet future requirements.

Lesson Learnt #2: Address global supply chain challenges

Category: Technical, Economic

ENGIE has experienced manufacturing delays with existing EVCS orders driven mainly by its ability of electronic components (such as PCBs) from Asia. The current geopolitical environment has seriously impacted trade flows and created inefficiencies in the global supply chains. The project team has engaged with its global procurement hub and its suppliers to explore other manufacturers' that could supply proven and compliant EVCS products. This includes manufacturers' that are subject to lower trade risks (relative to European manufacturers) and improved access to electronics from Asia (including China and Taiwan). This will provide improved manufacturing lead times and supply contingency in case there is further disruption and delays to European supply chains.

Furthermore, ENGIE has established long-term, call-off agreements with its existing suppliers to enable manufacturers to allocate production capacity in advance to provide greater schedule certainty and mitigate slippage in manufacturing lead times.

Lesson Learnt #3: Height, weight and space requirements can limit the choice of suitable locations

Category: Technical, Economic

ENGIE is looking to install charging station at mostly brownfield sites. This means that we have been restricted to existing carparks. Many of these are underground and/or quite restricted in terms of layout and spacing. This leads to a number of challenges when looking to install charging stations. In CBD car park locations where site hosts are reluctant to sacrifice car parking spaces to allow for the installation of charging stations. Further challenges also arise from site hosts being reluctant to allow civil works such as laying conduit in active car park locations.

ENGIE is generally able to resolve challenges on a site-by-site basis via careful selection of well-suited rapid charging stations. In addition, ENGIE has often found that it is able to work with site hosts to find locations that do not require extensive ground works. ENGIE feels that these challenges can be largely avoided if provision for charging is considered during renovation or other construction works. Laying of additional conduit to allow for the cabling for a charging station to be included can be highly beneficial. ENGIE is currently working with site hosts and other partners to ensure that adequate provision of conduit in car parks is provided to allow for installation of charging stations if renovation works are to be conducted.

Lesson Learnt Conclusions and Next Steps

ENGIE recognises both the global and local challenges presented in the deployment of the Future Fuels program, and as presented in this lesson learnt report is taking active steps to address these challenges and manage the associated supply and technical risks longer-term. ENGIE will continue to identify and capture lessons as the program transitions into an operational phase. In addition, ENGIE will continually evaluate the effectiveness in the actions and methods applied from the above lessons.