## b. EV Charging Infrastructure Construction and Maintenance

On the other hand, the wide availability of EV Charging Infrastructure nationwide is vital to support the adoption of EVs and to support domestic charging needs at steady-state. EV infrastructure such as charging points will need to be constructed and maintained regularly over the long term.

EV charging points will undergo the installation, operation and maintenance, and replacement or decommissioning lifecycle. Site works in general will include mechanical and electrical installations (including cable pulling and termination) with some sites requiring civil structural works such as those in bus depots (e.g. excavation works). Thereafter, routine maintenance and servicing will be conducted to comply to technical standards for charging points and to ensure the proper function and safety. An example of such an emerging role is the EV Charger Equipment Specialist. Supporting electrical infrastructure such as consumer switch rooms and substations will also need to be upgraded to provide for sufficient electrical capacity to support the installation of EV chargers.

The relevant skills required to perform these tasks include charging infrastructure maintenance, high voltage system maintenance and others, with the illustrative persona for EV Charging Infrastructure Electrician provided in Figure 15.

## EMERGING JOB ROLES IN ELECTRIC VEHICLE - EV INFRASTRUCTURE SPECIFIC EV Charging Infrastructure Electrician SKILLS AND REQUIREMENTS JOB DESCRIPTION . Charging infrastructure maintenance or replacement - Conduct regular testing and inspection to optimise the performance capacity of charging infrastructure onsite as well as replace electrical components such as AC/DC charge control modules Electric component replacement – Replace electrical components such as voltage sensors . High voltage system maintenance - Maintain and conduct proper diagnostic testing on high power voltage High voltage workplace safety and health - Proper handling of equipment and implement safety processes **KEY RESPONSIBILITIES** in high-voltage work environments · Perform general servicing and preventive/ corrective maintenance of various electrical The EV Charging Infrastructure Electrician performs general and/or specific EV charging infrastructure components (AC/DC charge) and mechanical component replacements and maintenance. He/she carries out inspection, servicing, troubleshooting commissioning, pre-commissioning of electrical charging stations on site as well as attending to inspection and components of EV charging infrastructure modification of distribution cabinet at the workshop. He/she also performs onsite basic repairs and diagnostics · Preparation of work activities, perform for EV, which include replacement of faulty components, network testing and system configuration. The assigned charging infrastructure electrician performs general housekeeping of workshop tools and equipment and adheres to Workplace Safety maintenance tasks and Health (WSH) procedures. The senior EV electrician assigns daily work tasks and provide technical guidance · Perform general housekeeping of and on-the-job coaching. maintenance tools, equipment and safety **EDUCATION AND EXPERIENCE EXAMPLE OF HIRING COMPANIES** · Perform service recovery during charging infrastructure failure BlueSG Tesla BYD Go Ahead Singapore mechanical engineering Experience in ICE-based or EV-based vehicle Source(s): SSG Skills Framework. Company careers portals. KPMG Analysis.

Figure 15: EV Charging Infrastructure Electrician Persona

These emerging job roles may be employed by bus operators, P2P fleet operators, motor workshop companies, OEMs and other land transport technology providers.



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