

AI Green Energy for EV Charging Solution

ASTRI's proprietary AI Green Energy for EV Charging Solution significantly reduces reliance on public electricity grids and lowers CO₂ emissions. Particularly suited to locations with limited grid capacity, it enables rapid EV charging deployment whilst avoiding costly, time-consuming infrastructure upgrades and civil works. Currently, trial is conducted at an outdoor private car park in Yuen Long, validating its technical feasibility and practical application.

Industry Challenges

- Integration of multiple innovative subsystems in a live operation, an EV charging site
- Deployment in an active private car park with constraints such as limited power capacity, space limitations, safety requirements, and the need to avoid prolonged disruptions

Major Benefits

- **Maximised Solar Power Utilisation:** harness solar energy for maximum efficiency
- **Integrated Battery Energy Storage:** smooth energy flow and storage for stable operation
- **V2G-Enabled EV Charging Technology:** Vehicle-to-Grid technology for future-proof flexibility
- **Ultra-Efficient DC- Lighting:** low-energy, high-performance lighting system
- **AI-Driven Predictive Energy Management:** intelligent optimisation of energy flow and usage

Application Areas

- EV charging station
- Sea water desalination
- General office
- School

Collaborator(s)

Semiconductor and Microelectronics Industry

Award

Hong Kong Innovation and Technology Award



Pioneering AI Green Energy EV Charging Solution seamlessly integrates photovoltaic solar power, energy storage systems, EV charging infrastructure, DC lighting, and AI-driven control capabilities

