



# Energy Solutions develop Containerised Hybrid Electric Vehicle Charging Station for Ascension Island Airport

## The Client

Interserve is one of the world's foremost support services and construction companies. It is a successful, growing, international business and seen as a leader in innovative and sustainable outcomes for clients. The business offers advice, design, construction, equipment, facilities management and frontline public services.

Headquartered in the UK and FTSE listed, Interserve has gross revenues of £3.6 billion and a workforce of circa 80,000 people worldwide.

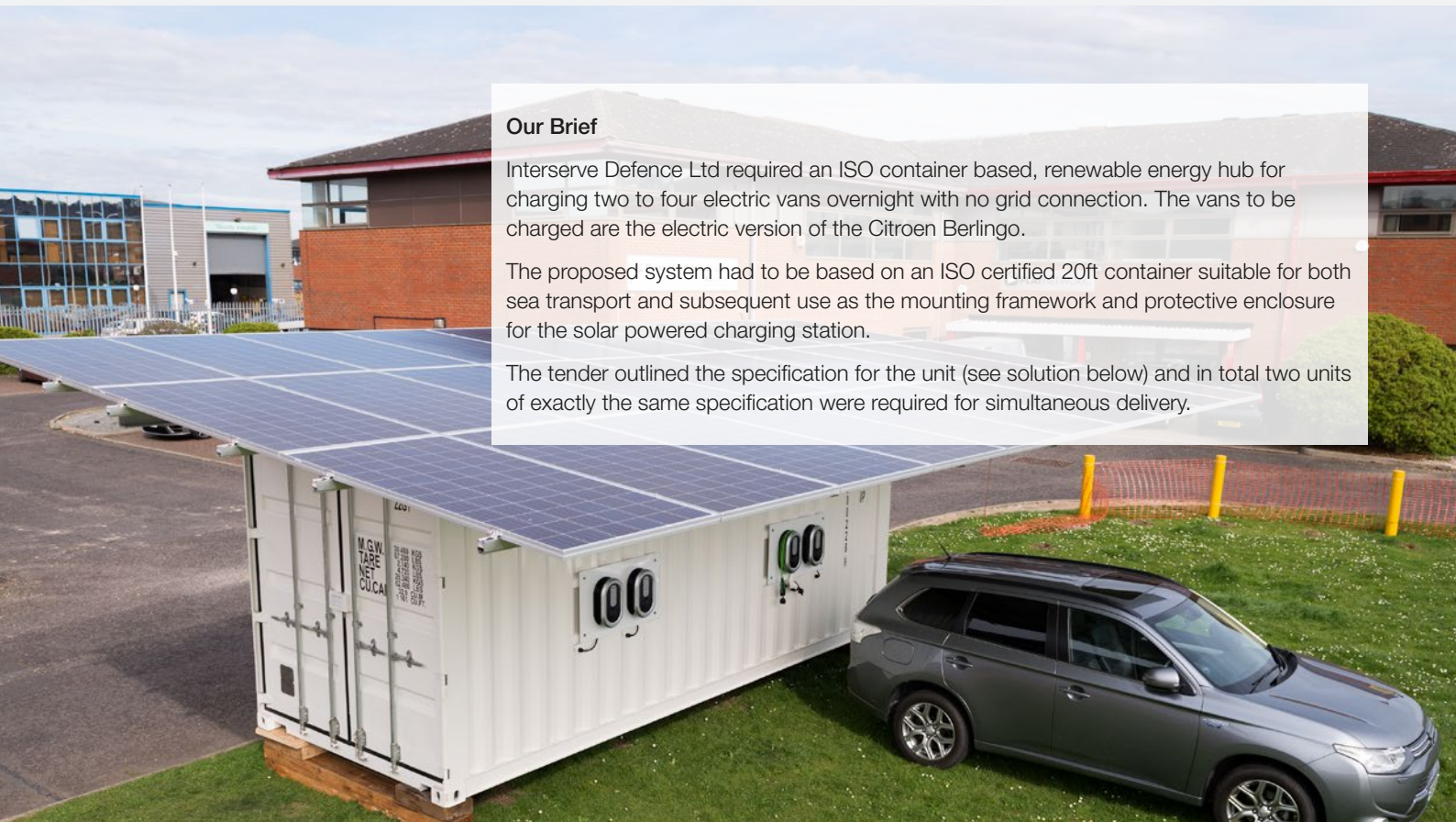


## Our Brief

Interserve Defence Ltd required an ISO container based, renewable energy hub for charging two to four electric vans overnight with no grid connection. The vans to be charged are the electric version of the Citroen Berlingo.

The proposed system had to be based on an ISO certified 20ft container suitable for both sea transport and subsequent use as the mounting framework and protective enclosure for the solar powered charging station.

The tender outlined the specification for the unit (see solution below) and in total two units of exactly the same specification were required for simultaneous delivery.



## Case Study

# Hybrid Electric Vehicle Charging Station



## The Solution

Energy Solutions were successful in winning the bid for the container charging station and had just 2 months to complete the project and prepare the containers for shipping to the Ascension Islands.

The entire project, including the solar panels, mounting brackets & charging points had to be able packed within the container securely and safely for sea transportation. The entire station was then to be re-assembled in situ at the Ascension Islands by client staff overseen by the Energy Solutions Engineering team.



### Each of the Charging Stations comprised of the following:

- 1 x 20ft ISO Certified Containers
- Self assembled mounting frame for the solar PV panels
- Suitable access door at one end of the sea container
- 4 x trickle charging points with double ended pre-coiled charging cables along the long side of each container
- 1 X 9.6 kWp Solar array mounted on a frame mount that is fixed directly to the container providing shade for the vehicles. There should be no requirements for ground works for the solar array other than a level area of hard standing for the container which will be arranged by Interserve.
- 2 x Battery Pack (each 48V 40 kWh)
- 1 x Individual monitoring of and logging of output from PV cells and battery charge / discharge.
- 1 x Access stair and platform at the back of the container to allow cleaning of panels.
- 1 x Comprehensive spares pack to cover anticipated requirements for 5 years

Both charging station were built, assembled for test and disassembled on site at Energy Solutions' Headquarters and delivered to Interserve for shipping to The Ascension Islands.

### Key Features

- Two ISO 20ft Containers
- Solar array fitted and angled for Ascension Island conditions
- Complete assembly instructions and maintenance guide compiled for on site staff
- Full on-going support from Energy Engineering team
- Fast and effective delivery

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