

Driving On Sunshine®

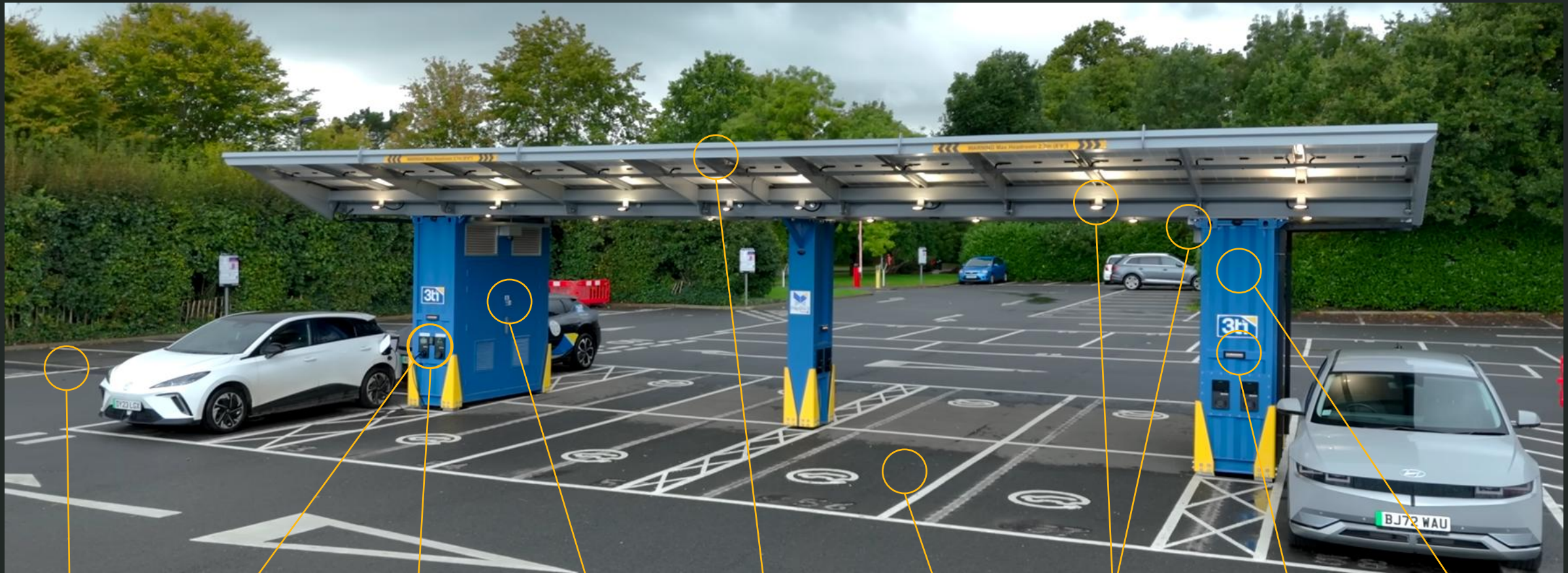


# Papilio3 V2X

Mark Potter – Chief Technical Officer



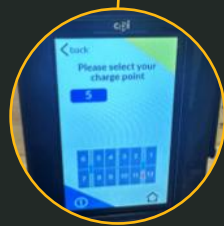
# Papilio3: Smart Solar EV Charging Hub



Single ~250A Feed  
& Internet  
Connection



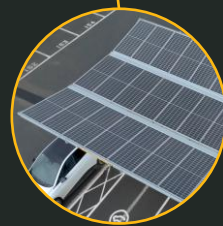
12 x 22kW AC  
Charge Points



Payments via App,  
Contactless &  
RFID



Plant Room with  
3tiG Controls



Solar PV Canopy  
(19.32kWp) &  
Shelter



Compliant with  
PAS 1899:2022  
Parking Bays



Sensor Controlled  
Lighting & CCTV



Optional Battery  
up to 500kWh



Optional Media  
Screens

# 3ti Upcycled Shipping Container & One-Day Deployment





# Papilio3 V2X

Innovate UK V2X Phase 2  
funded by DESNZ

Installed at UTAC Millbrook

Available for testing

**$\pm 240$  kW**

Single grid-facing  
microgrid inverter

**$12x \pm 30$  kW**

DC:DC Chargers  
CHAdeMO & CCS

**V2X**

Vehicle to  
Vehicle... Storage ...  
Building ... Grid ...

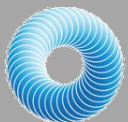
**280 kWh**

Li-Ion Energy  
Storage Battery

**20 kWp**

DC:DC Solar

**3ti**



**cenex**



GridBeyond

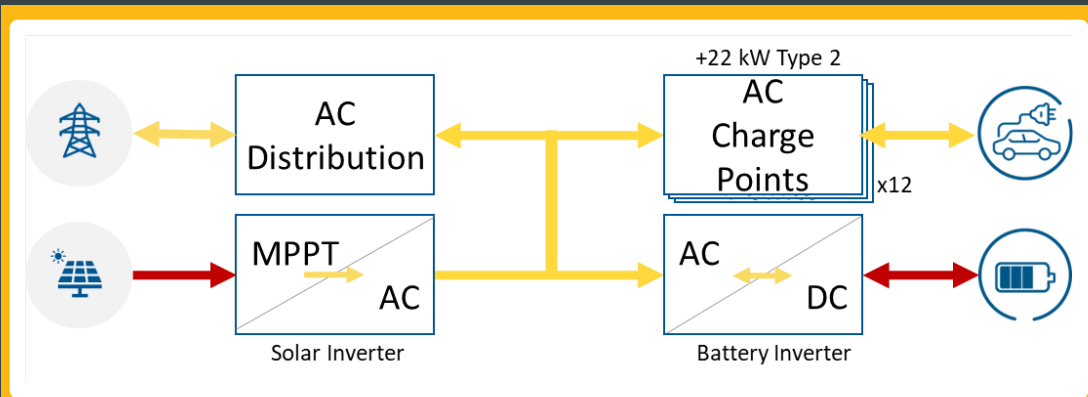


Department for  
Energy Security  
& Net Zero

UTAC



# DC Microgrid for Energy Efficiency



## AC Microgrid

AC : DC Chargers

AC : DC : AC Battery

DC : AC Solar

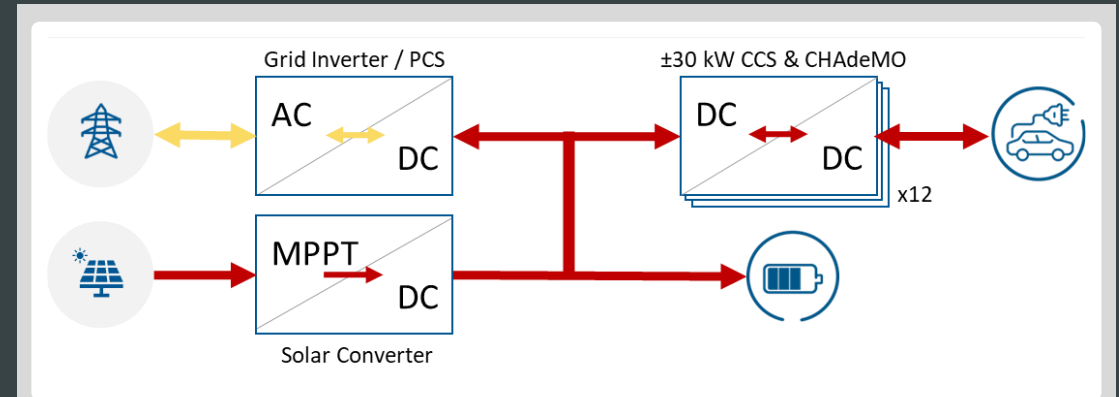
Efficiency ↘

Complexity ↗

System Cost ↗

Physical Space ↗

Grid Connection ↗



## DC Microgrid

DC : DC Chargers

DC : DC : DC Battery

DC : DC Solar

Efficiency ↗

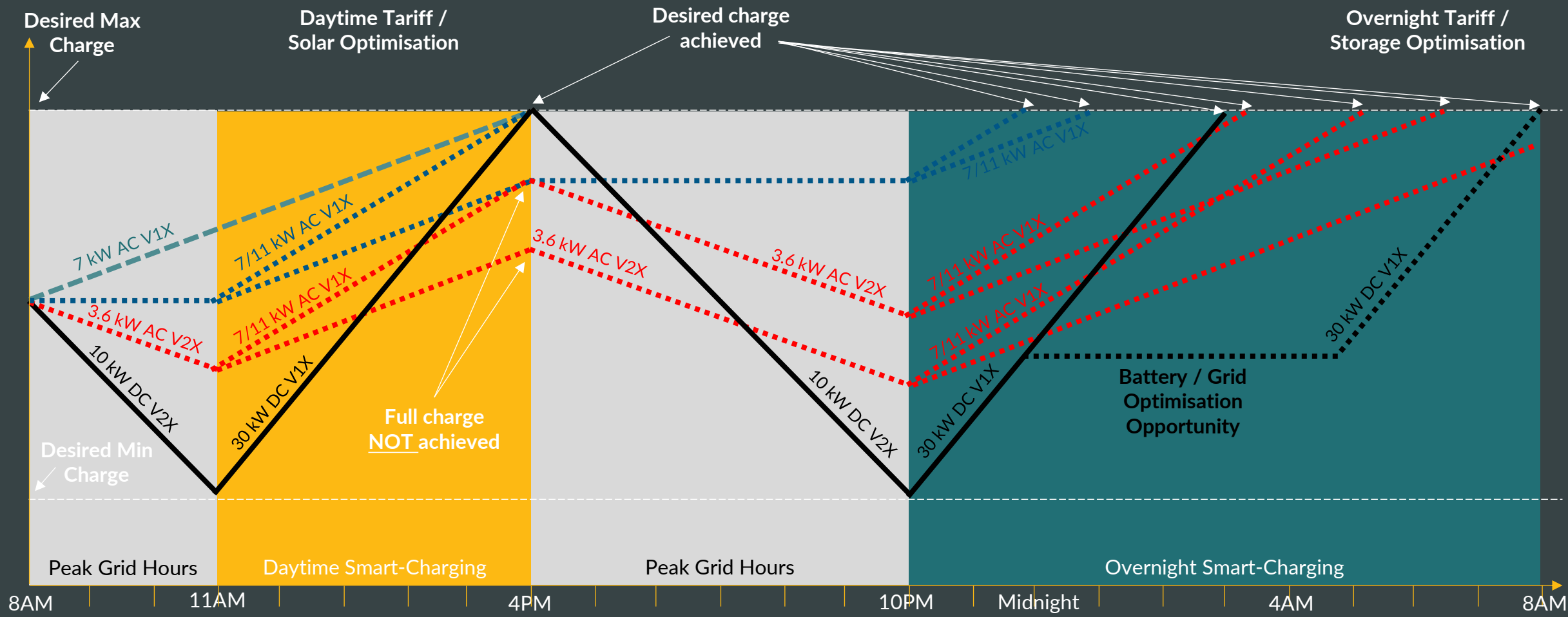
Complexity ↘

System Cost ↘

Physical Space ↘

Grid Connection ↘

# Faster Charge and Discharge for Double<sup>++</sup> V2X opportunity

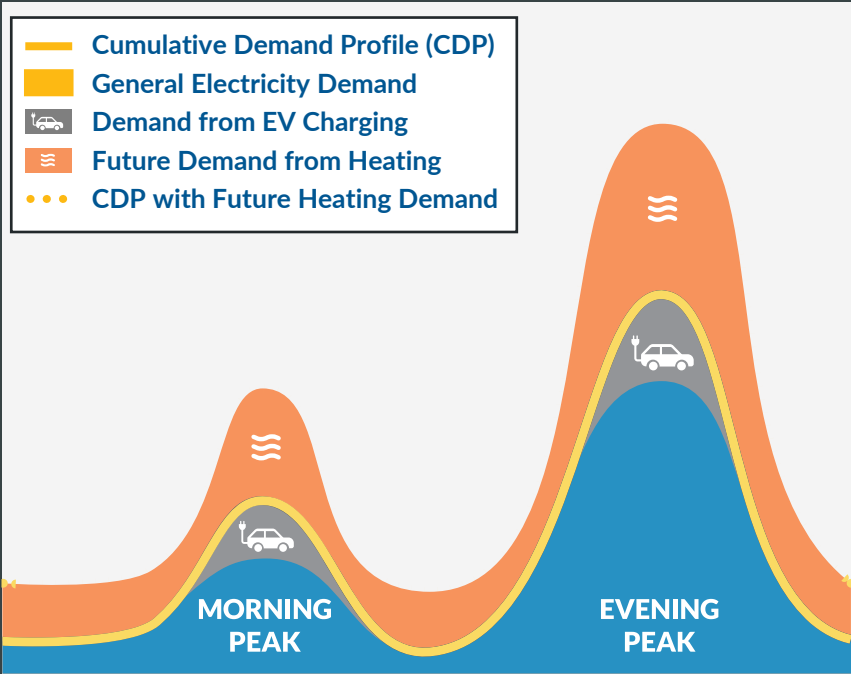


DC enables access to more battery more often  
 Perfect for daytime workplace charging and overnight fleet opportunities

++ = double and some....

# Future heat demand 3x EV demand: V2X for peak optimisation

## Extra demand from EVs and Heating



Reduce peak electrical demand & use existing infrastructure capacity



Sell electricity back to the grid from a battery or EV "V2G" / "V2X"



Financial Reward  
Flexibility revenue

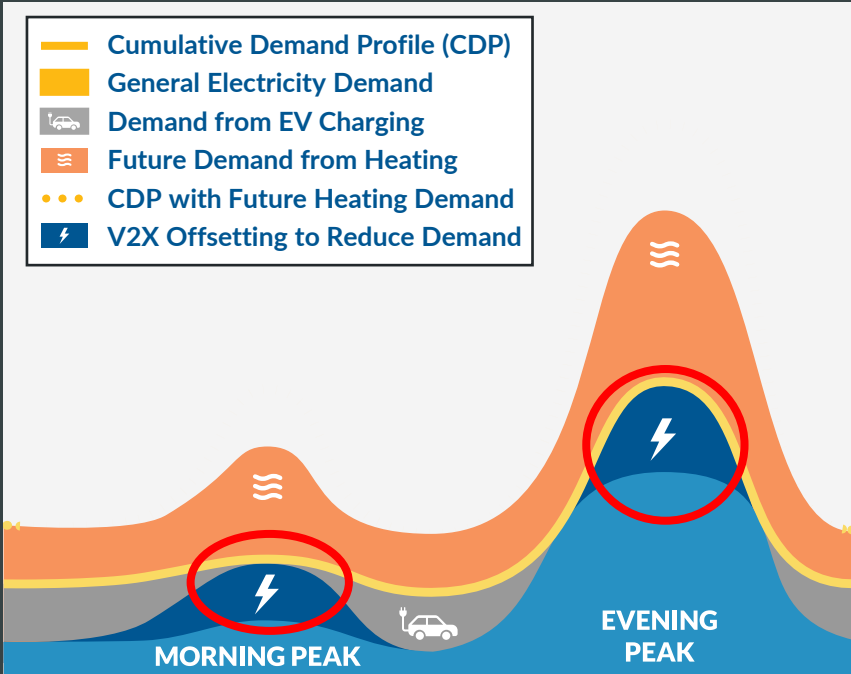


Energy resilience  
Unlock back-up power supply



Grid Friendly  
Better use of capacity

## Flexible demand & V2X from EVs



AC V2X is perfect for mass-market domestic overnight bidirectional charging  
DC V2X creates additional revenue opportunities 2x as often, 3x as much

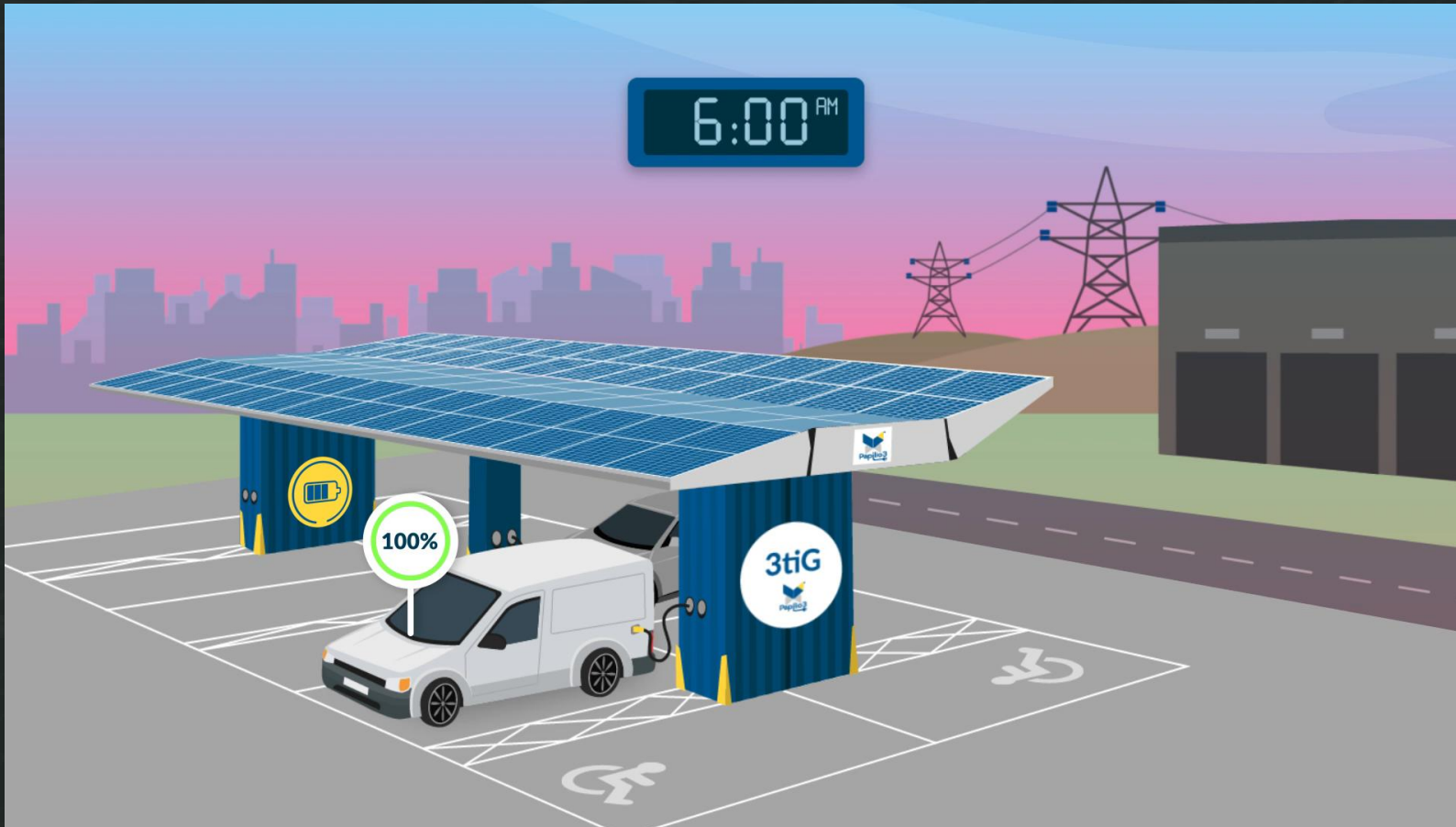
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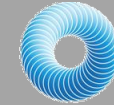
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Available for testing<sup>\*almost</sup>

Enquiries: [www.3ti.co.uk](http://www.3ti.co.uk)



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## V2X

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