



VOLVO BUSES

Electric Buses and Opportunity Charging



Full Electric Bus

- Opp Charge opportunity charging.
- Unlimited operational distance.
- Up to 36 km from one charge.
- Zone Management Capability
- Operating in Gothenburg, Luxembourg, Montreal and UK.

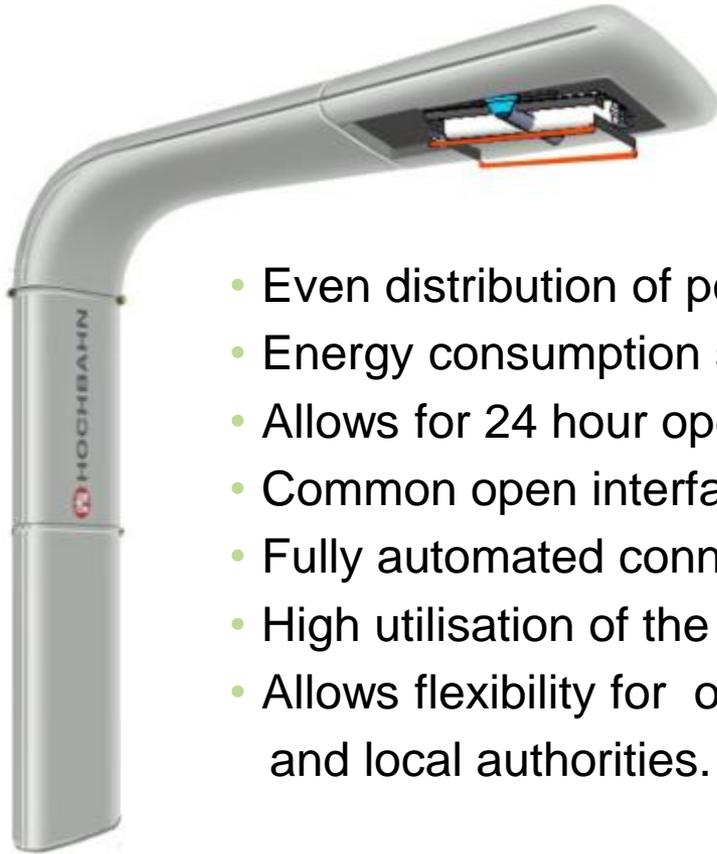


OPRcharge

FAST CHARGING OF ELECTRIC VEHICLES



Opportunity Charging Advantages.



- Even distribution of power demand
- Energy consumption spread through the day and night
- Allows for 24 hour operation
- Common open interface
- Fully automated connection
- High utilisation of the charger
- Allows flexibility for operators and local authorities.



Opportunity Charging and Renewables

Power outage
kWh



Overnight charging

Opportunity charging

0

Dawn
6

Noon
12

Dusk
18

Midnight
24

Power supply
kW



Sustainable power



Coal



Gas

Base power



Nuclear



Harrogate

- First project in the UK
- Converting the town network to zero emissions
- Supporting Transdev and Harrogate to move towards a low emission bus town.
- Traffic Start Q2-18



Harrogate

- 8 Vehicles
- 3 Routes
- 3 Charging Stations

6-x6 Harrogate Panel Ash Beckwith Knowle Business Park



3 Harrogate - Jennyfield



2A Dene Park/New Park and Bilton Circular



Harrogate



UK Demonstration Programme



- Investment in 12 month UK programme.
- Design of mobile charging station.
- Manchester
- Heathrow
- Coming to a City near you.



The Future

