**Draft Dublin Regional Electric Vehicle Charging Strategy**

**Overview**

To inform the LAs on the requirements for numbers, type and optimal locations of chargers, it was agreed that a consultancy team would be best suited to develop the strategy. The Dublin CARO and Smart Dublin team were included on the steering group due their work in climate action and smart technology projects across the Dublin region.

The objective of the strategy was to produce an EV charging network strategy for the Dublin region, taking account of the following factors:

* Future Electric Vehicle numbers and charging needs.
* Current and future consumer preferences (e.g. slow vs. rapid charging including the provision of hubs).
* European Union and Irish Government policy and legislative requirements.
* International best practice.
* suitable locations/mix of fast/slow EVCPs having regard to the balance that might be required in line with policy of encouraging a modal shift to public transport etc.

**National Objectives**

The strategy describes the National targets on electric vehicle uptake by 2030. It describes the current political environment and programme for Government and the Green objectives. It outlines the national targets on carbon reductions by 2030 and carbon neutrality by 2050, including a ban on fossil fuelled vehicles by 2030.

The report defines the significance proportion of the national fleet within the Dublin region (25%).

States the requirement to deliver a comprehensive EV charging network over the next 10 years.

**Current EV Public Charging Network**

170 charging points in Dublin region, 65% are 22kw, 10% are 50kw remainder are 7kw and 11kw.

26 Public charging points in SDCC at 14 locations.

**Type of EV Charging**

The strategy outlines the types of EV charging that will make up the comprehensive network and the strategy deals with the first 3 types namely:

1. Residential (home and on-street)
2. En-route charging
3. Destination charging
4. Workplace charging

Residential charging has been split into on-street and hub charging. A key trend is the shift to coordinated hub-based deployment, utilising load balancing/management which offers benefits where (power) capacity is limited.

**Residential Charging**

In South Dublin 86% of properties have access to off street parking while 14% rely on on-street parking. Large areas of South Dublin have a high availability of off-street parking. Majority of EV owners in South Dublin will be able to charge their cars at home. (international evidence that 75%-80% of EV owners charge at home)

Two types of residential charging are outlined in the Strategy, there are Rapid Hub Charging sites and On-Street Charging.

Rapid hubs are sites which provide quick charging at a centralised location and they are like petrol stations. Rapid Hubs are seen as the preferred solution to EV Charging for the residential charging.

The alternative to the Rapid Hubs is the slower “On-Street” Charging which requires overnight charging nearer to home.

Rapid hub charging can be delivered in a way that consistent with a move away from private car ownership, in favour of more sustainable transport models.

If the infrastructure is not strategic and demand led it will result in poor usage and return on investment.

**Metrics for suitable Rapid Hub Charging**

* High traffic volumes
* Number of amenities
* Taxi Ranks and Club Car locations
* EV uptake in area
* Off street parking in area
* Grid capacity
* Potential sites

**Alignment with wider mobility trends**

Siting charging infrastructure should align with and compliment wider modal shift plans, to support sustainable travel (e.g., public transport park and ride)

**Projected EV requirement**

Demand analysis up to 2030 based on Curtailed Medium uptake.

With a mixed technology scenario, by 2025 South Dublin would require

176 on-street chargers plus 12 rapid hubs, 13 en-route chargers and 129 destination charge points by 2025.

685 on-street chargers plus 47 rapid hubs, 38 en-route and 481 destination charge points by 2030.

Medium take-up analysis predicts a 40% reduction on these figures.

**Business Model and Costs**

There are many models of delivery that are outlined in the Strategy as follows:

* Own and Operate
* External Operator (external contractor to provide O&M)
* Private Sector match Funding
* Concession
* Lease

**Risk Assessment**

The report examines the potential risks associated with the delivery of the EV charging network. The RA is examined under 4 main categories

1. Market
2. Deployment
3. Mobility trends
4. Policy and Funding

**Next Steps**

The next steps being examined are:

1. Engage with Department on capital funding streams.
2. Assess contract and procurement options to deliver a consistent, interoperable network of EV charge points.
3. Exercise to be carried out on potential locations and power availability.