

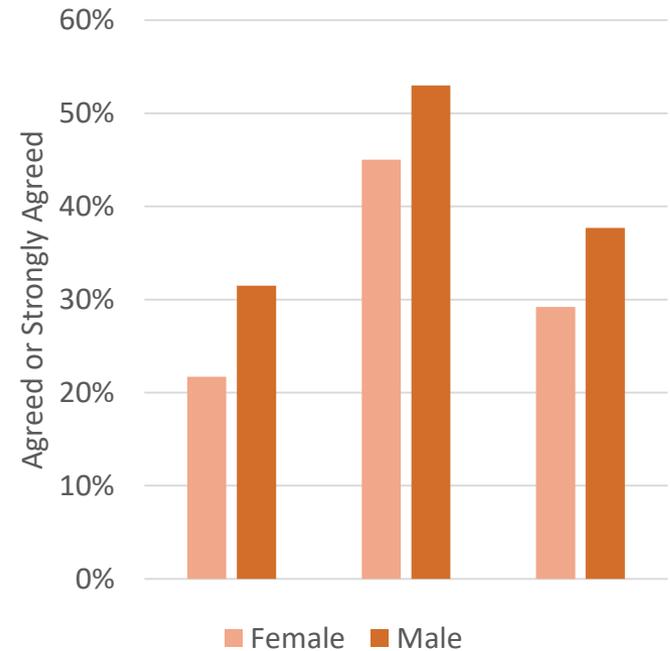
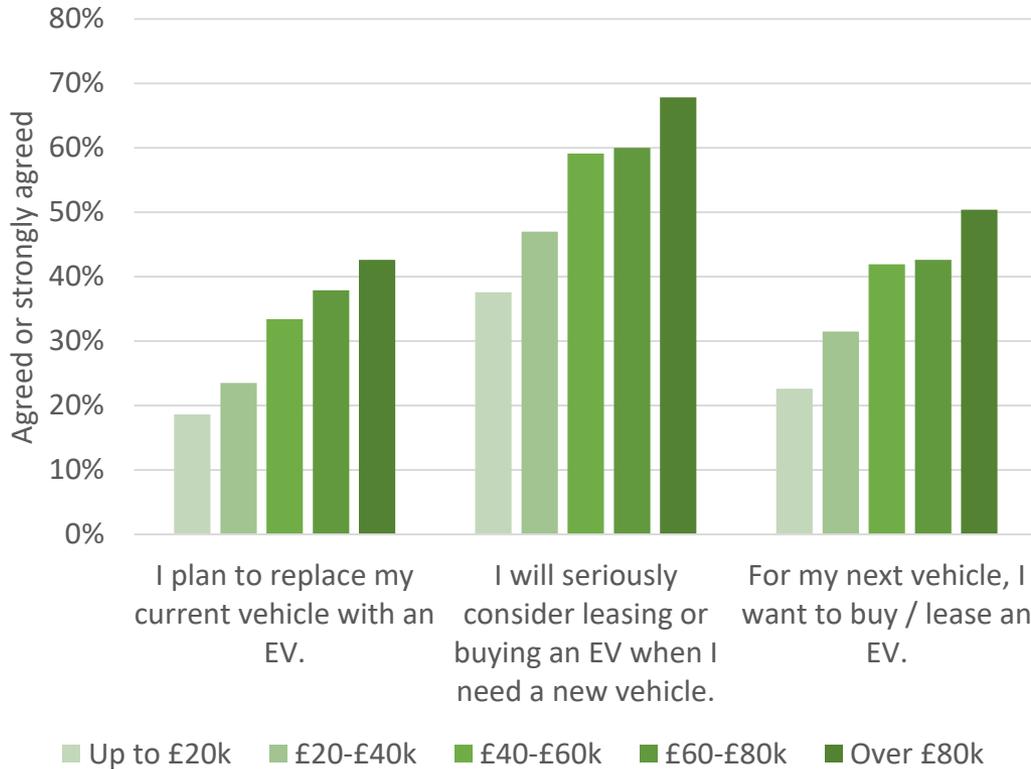
Policy for Inclusive EV Adoption

Oxford Energy Day
23 March 2022

Inclusive EV Adoption

- *Unequal* = ?? Ownership, access, use, interest
- Survey of *UK car drivers*, not early adopters – *equity*
- Stated choice experiment on *preferences* for public charging... *diverse* options to meet different needs
- *Capabilities* to switch and the *social* implications of sharing

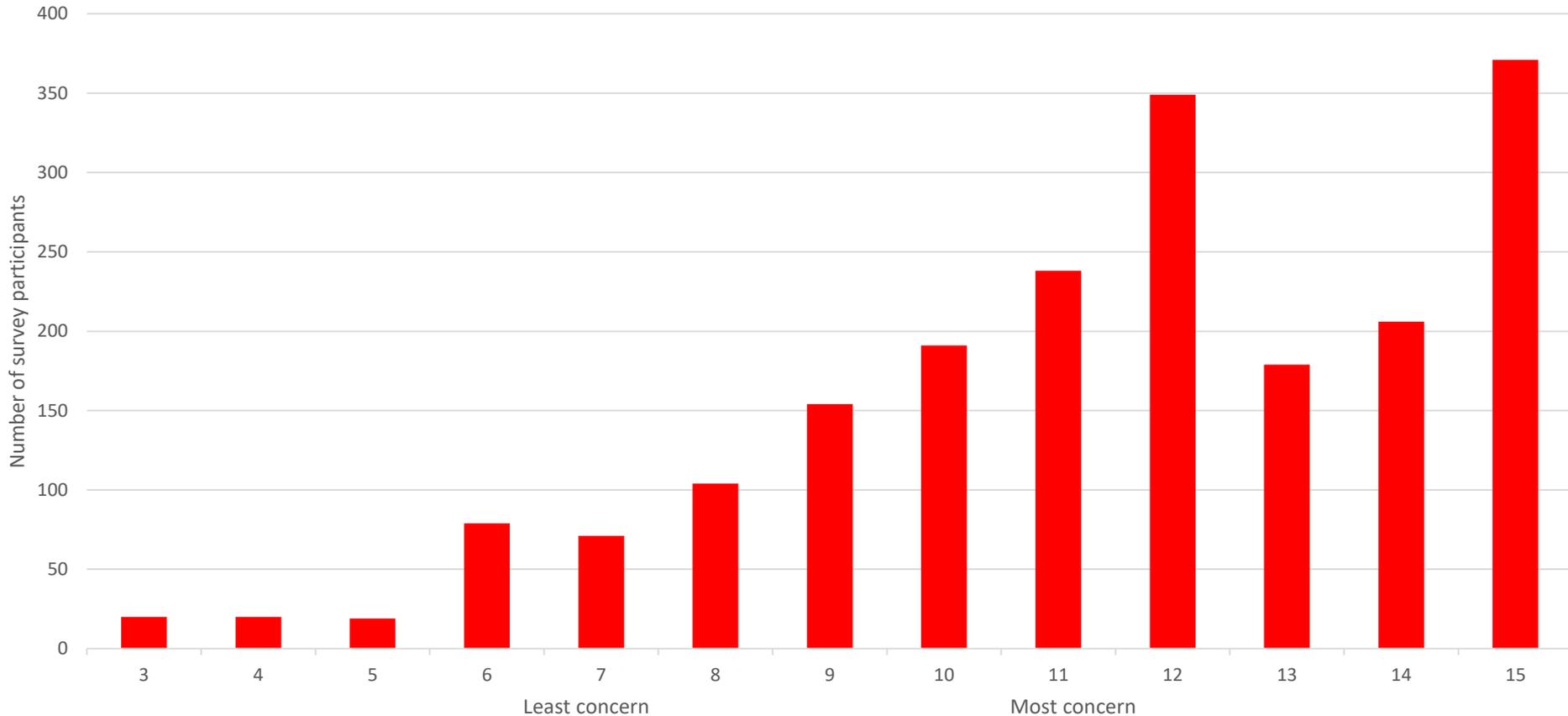
Unequal Intentions to Switch



(N = 1860)

Public Charging Nearby?

Expected Charging Difficulty



Preferences for Park & Charge?

On Street or Off Street

- Cost and payment options
- Walk time to / from home
- Duration of stay (overnight)
- Space availability / guarantee
- Security and experience



Willingness to Pay for Preferences



Who Holds Which Preferences

Value Seekers (n = 628)

- Value reservation, allocated space
- More likely to have experienced parking congestion



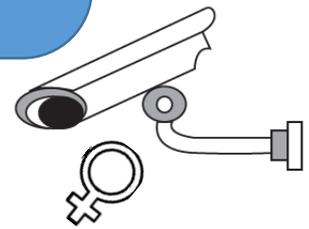
Cautious Users (n = 687)

- Safe and pleasant walk home non-negotiable
- More women, higher income



Prefer car park charging

- Car park security important
- Value unique, allocated space
- Greater share over 50
- Less likely to have children <16



Convenience Customers (n = 686)

Prefer on-street charging

- Want convenience – no time limits, no subscription, nearby
- Value on-street security only
- More likely to already pay for parking, less willing to change

Materials, Skills and Meanings



Materials

- Space
- Vehicle
- Charger
- Electricity Source
- Cable



Skills

- Orientation
- Programming
- Payment / Pricing
- Connection
- Calculation



Meanings

- Environment
- Technology
- Security
- Convenience
- Social Interactions

Capabilities for Private Charging

- Materials to park and charge conveniently
- Skills to get the best price
- Meaning of secure charging
- Neighbour reactions



Capabilities for Public Charging

- Charging location: Fitness, Safety
- Charging legibility: Navigation, Availability
- Optimise charging time and duration: Ease of use
- Social interactions: Competition | Collaboration



What about Sharing?

- Materials to share parking and charging space...

...what about car?

- Skills required – or taken care of by operator?
- Meaning depends on supporting policies



Implications for Policy Makers

- Public charging options:
 - **Security**: get the location right
 - **Certainty**: multiple bays = flexibility for operator and user
- Information on **how** as well as **where** to charge
 - **Confidence** to switch
- Create **positive** social interactions around parking and charging... and sharing?



THANK YOU

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Use Cases for Car Park Charging

So we'd be reliant on public, accessible charging... We live only 100m or so from the main car park... so if it was there, it would be nearby, easy to access for us.

Couple, over 50

We now have only on street parking, and therefore can't charge our cars at all at home. We are on double yellow lines, so the closest [parking space] is on the street around the corner.

Female, 30-50.

...like a lot of [new build homes], my actual parking space was... in a sort of... parking lot... at the back... to get the cable out... would just be quite expensive; to lift the floor and... get permission from everyone.

Male, under 30

We have a parking space but it's... around the corner from my house so that is a worry when it comes to the electric, because I don't have a way to charge it.

Male, 30-50