GETTING READY FOR THE ROADS REVOLUTION

Vehicles of the future will be cheaper, cleaner, quieter and safer.

As prices fall and range increases, take up of electric vehicles could accelerate rapidly

ELECTRIC VEHICLES MEAN:

1. **Cleaner air**
   - vehicles contribute to 80% of air pollution breaches and 34% of greenhouse gas emissions

2. **Lower costs**
   - electric motors are 3 times as efficient as petrol

3. **Flexibility for the energy system**
   - smart charging is a form of flexible demand

Charge point infrastructure is required to enable close to 100% electric new car and van sales in 2030

CONNECTED, AUTONOMOUS VEHICLES WILL MEAN:

- **Safer roads**
  - over 1,700 people are killed on the roads per year

- **Accessibility**
  - more people can travel by car

- **Time freed up**
  - driving takes an average of 140 hours per year
BUT ROADS WILL NEED TO CHANGE. SOME IDEAS ARE:

1. Connecting cars and traffic signals, instead of waiting at the lights
2. Flexible curbs changing use through the day, instead of yellow lines
3. Separate lanes, instead of mixing different types of vehicle
4. Variable speed limits, smoothing the flow of traffic
5. Automatic re-routing of journeys, instead of traffic jams

THE COMMISSION RECOMMENDS:

- Making it easier to convert parking spaces and provide charge points on the street
- Investing in the electricity network to achieve the benefits of electric vehicles
- Future road and rail investment plans need to reflect the impact of connected and autonomous vehicles
- Government support for rural charge points

Sources: Defra, BEIS, Newbury and Strbac, Aurora Energy Research, DfT, NIC Roads for the Future Competition entries