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Building a market for EV charging infrastructure

CharIN Tuesday Europe

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Benefits from EVs

- Provide flexibility
- Integrate renewables
- Decarbonise transport **and** power
- **Reduce cost**



EV drivers everywhere should have ready access to sufficient, accessible and smart charging infrastructure to fit their needs at attractive prices.

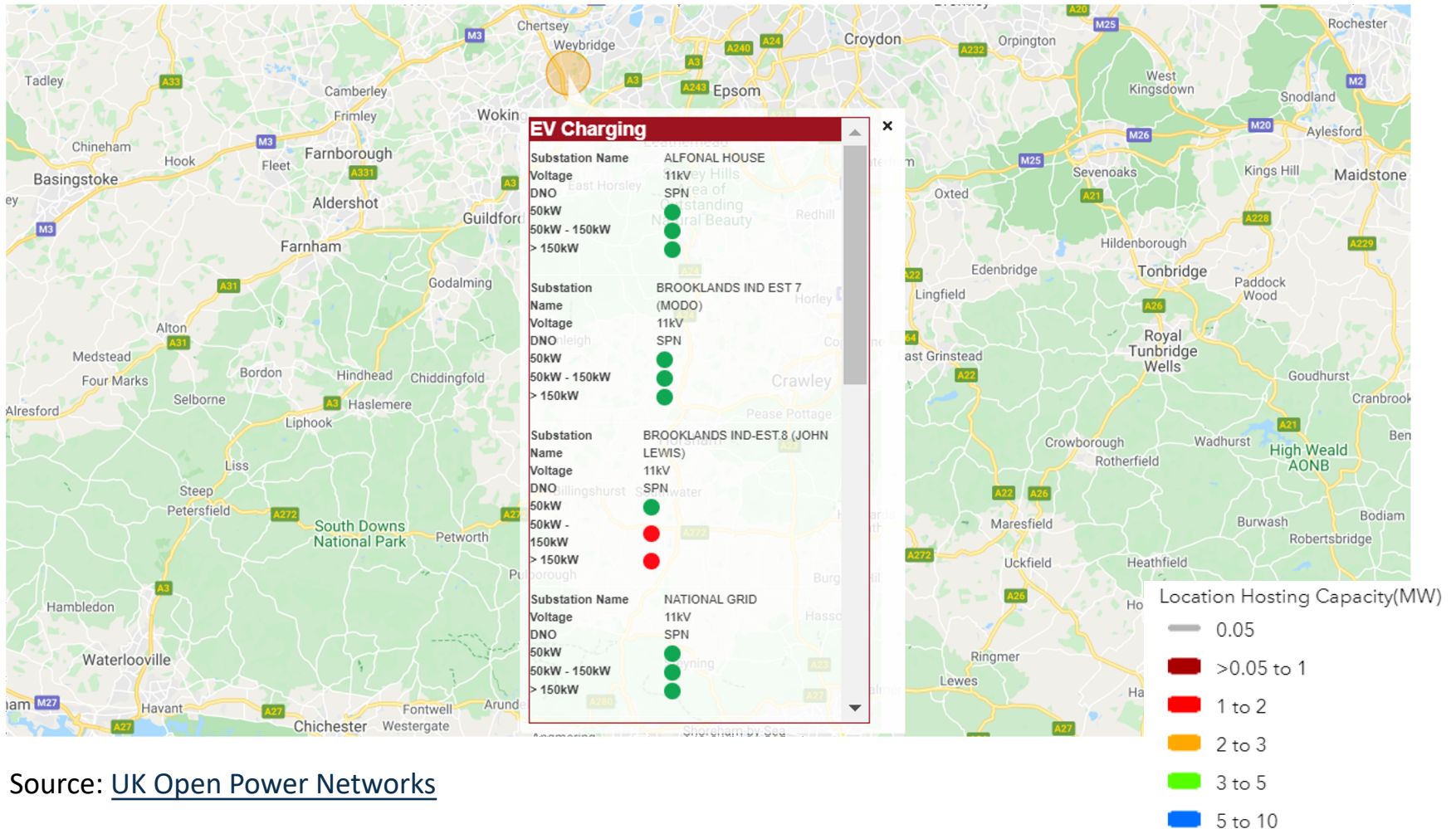
Essential charging network

- Focus investments on essential infrastructure
- Allocate subsidies in most effective manner
- Include non-profitable locations

→ To get there

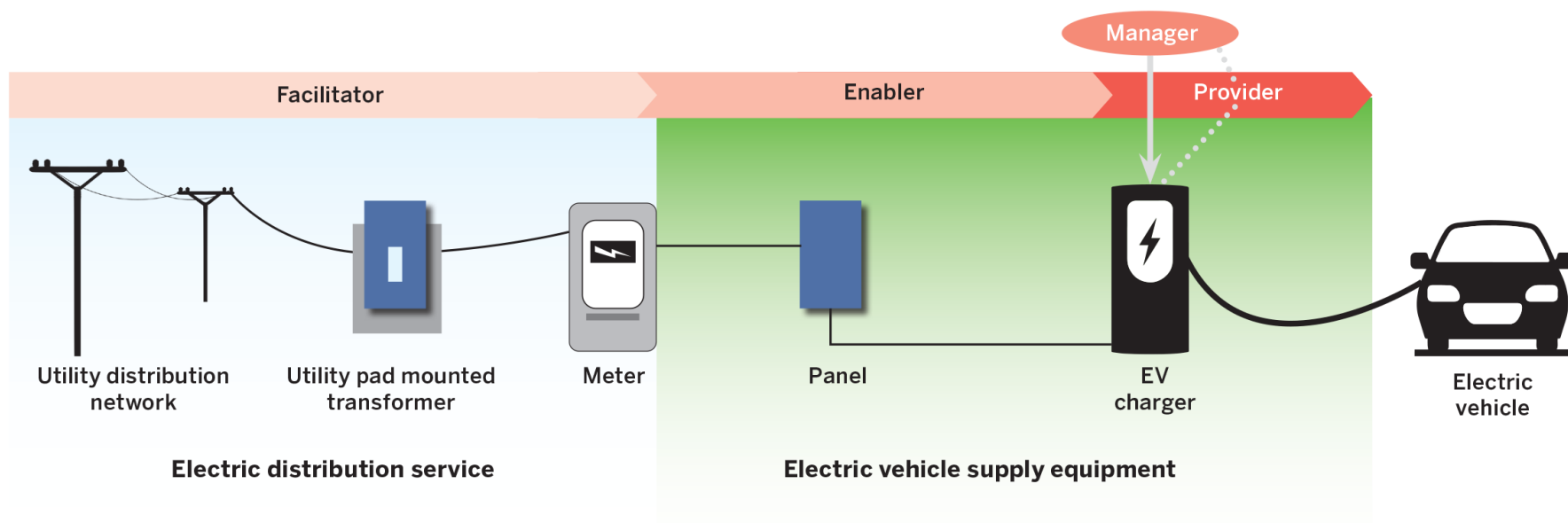
- Grid-integrated planning
- Issue public tenders with “mixed zones”
- Auction charging point locations to reveal value

Grid-integrated planning



Source: [UK Open Power Networks](#)

The role of grid operators



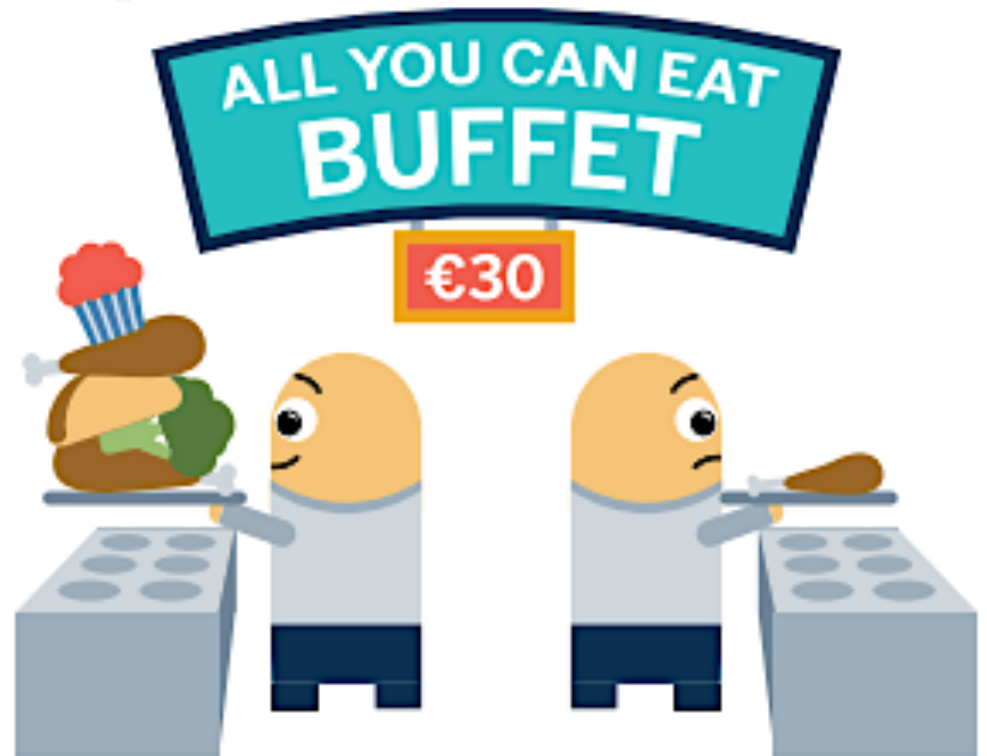
Sources: Base illustration based on California Public Utilities Commission, Application 15-02-009, Proposed Decision of ALJ Farrar, Mailed November 14, 2016. Roles drawn from Nelder, C., Newcomb, J., and Fitzgerald, G. (2016). *Electric Vehicles as Distributed Energy Resources*; and Advanced Energy Economy. (2018). *EVs 101: A Regulatory Plan for America's Electric Transportation Future*

Tariff design and fast charging

- High, inflexible network tariffs preclude viable business case for fast chargers
- Problem will increase with HDV charging
- Temporary exemption or gradual phase in can support commercial operation

Transparent, easy-to-compare pricing

- Pricing mainly based on consumption (kWh)
- Transparent price composition
- Keep roaming prices proportionate



Policy Recommendations

- Develop a common vision for EV charging in EU.
- Require MS to define an “essential charging network.”
- Require time-varying network tariffs for smart charging and reduced network tariffs to develop public fast charging.
- Offer guidance for making EV charging prices more transparent. Encourage pricing based mainly on electricity consumed.

About RAP

The Regulatory Assistance Project (RAP)[®] is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org



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More Information

- Building a market for EV charging infrastructure: A clear path for policymakers and planners
- Start with smart: Promising practices for integrating EVs into the grid
- Treasure hiding in plain sight: Launching electric transport with the grid we already have