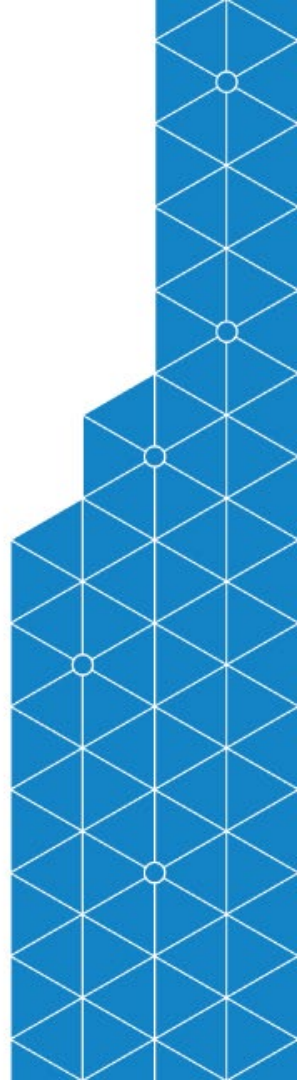




A Touchstone Energy® Cooperative

Cyber Threats to Beneficial Electrification

Richie Field
October 9, 2019



Beneficial Electrification

Technologies Used

Cloud Risk

Privacy Concerns

Supply Chain

Compliance Risk



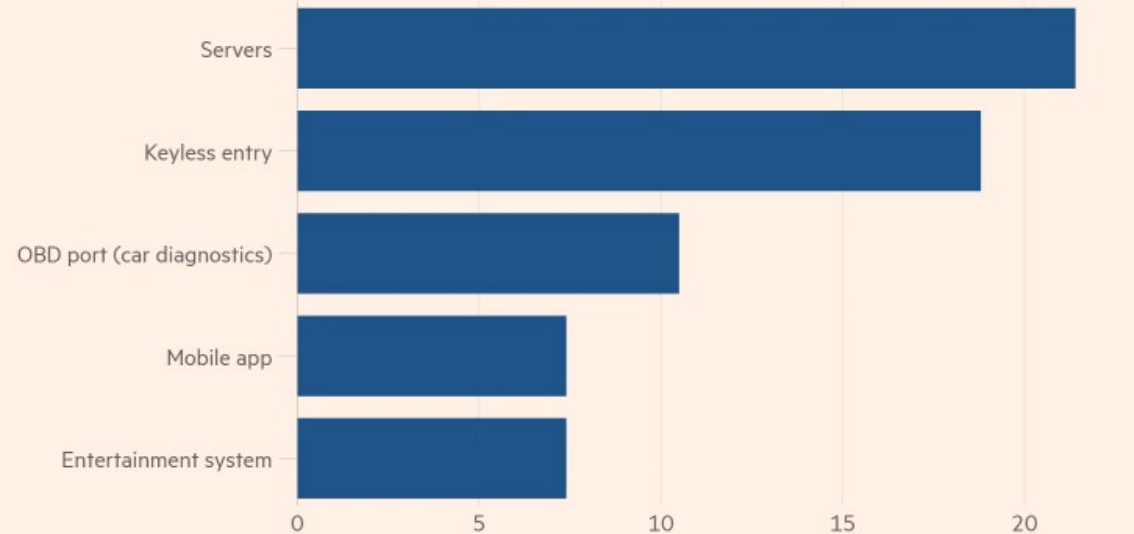
Beneficial Electrification

Technologies

- Residential / Personal Tech
 - Smart Home
 - Electric Vehicles
 - Internet of Things (IoT)
- Utility Tech
 - SCADA
 - EMS
 - DCS / Plant Controls
 - AMI/AMR

Where hackers get in

Target on car, by % of attacks

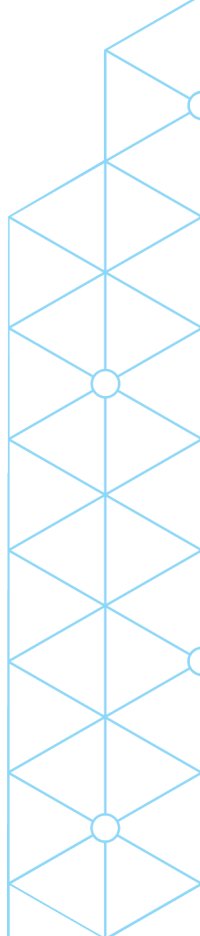
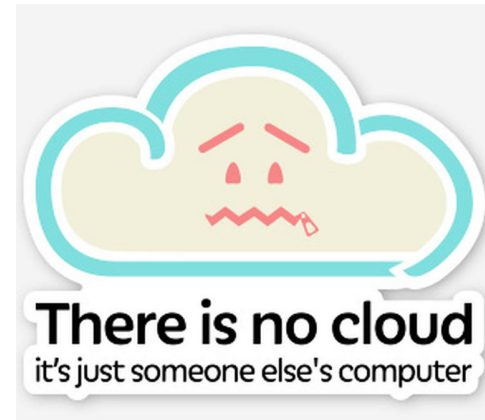
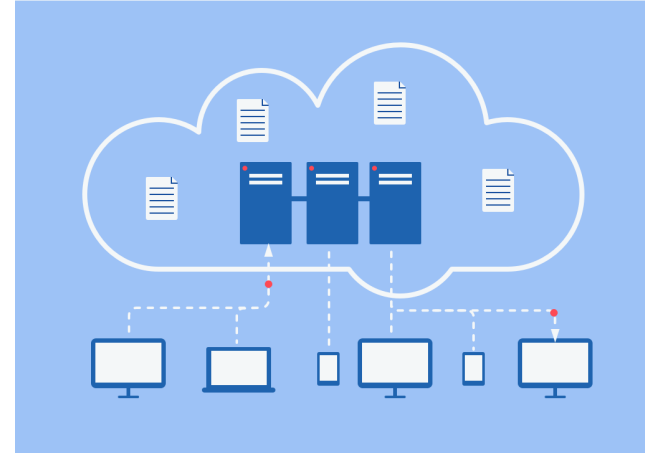


Source: Upstream Security
© FT

Beneficial Electrification Technology

Cloud Risk and Privacy

- Is the cloud insecure?
 - It depends
- Is the cloud a path into an EV or smart home?
- Who has your data?
- Why do they want your data?
- What do they plan to do with your data?
- Can you be profiled?



Beneficial Electrification Technology

Supply Chain Risk

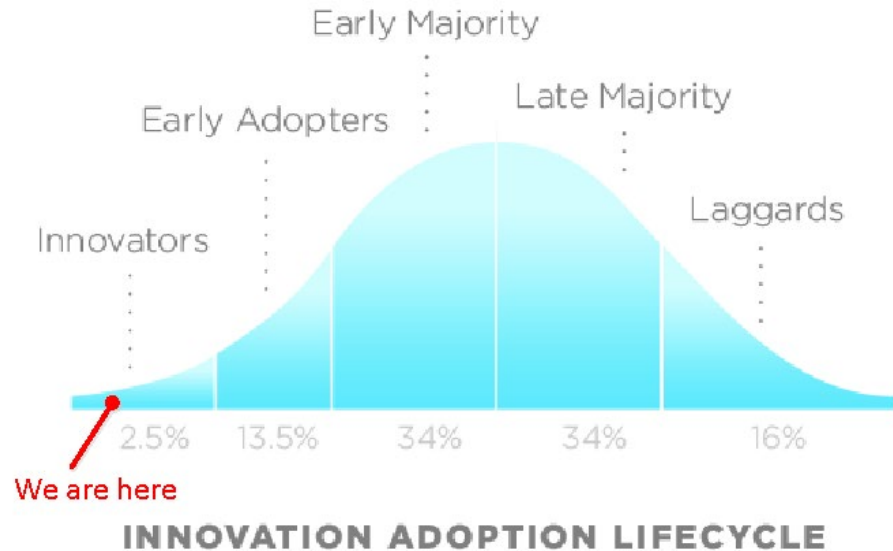
- Who's accessed the hardware?
- What is your software doing, really?
- Who is the vendor working with?
- What if the manufacturer goes out of business?
- Rush to market



Beneficial Electrification Technology

Compliance Risk

- Utility perspective
 - NERC CIP concerns
 - Can the utility shed 300 MW of load?
 - Can someone else shed load?
- Risk or opportunity?
 - Opportunity to drive standards and behaviors .
 - Answer the questions before widespread use.



Questions?

Richie Field

rfield@hepn.com

812-876-0320

