

# SEAS - Sustainable Energy with Adaptive Security

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# E-car chargers will turn off to prevent blackouts

Nicholas Hellen, Transport Editor

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12.01am, The Sunday Times



There are 300,000 battery electric vehicles on the UK's roads, but this could rise to 14 million by 2030  
TOBIAS SCHWARZ/AFP/GETTY IMAGES

Electric car charging points in people's homes will be preset to switch off for nine hours each weekday at times of peak demand because ministers fear blackouts on the National Grid.

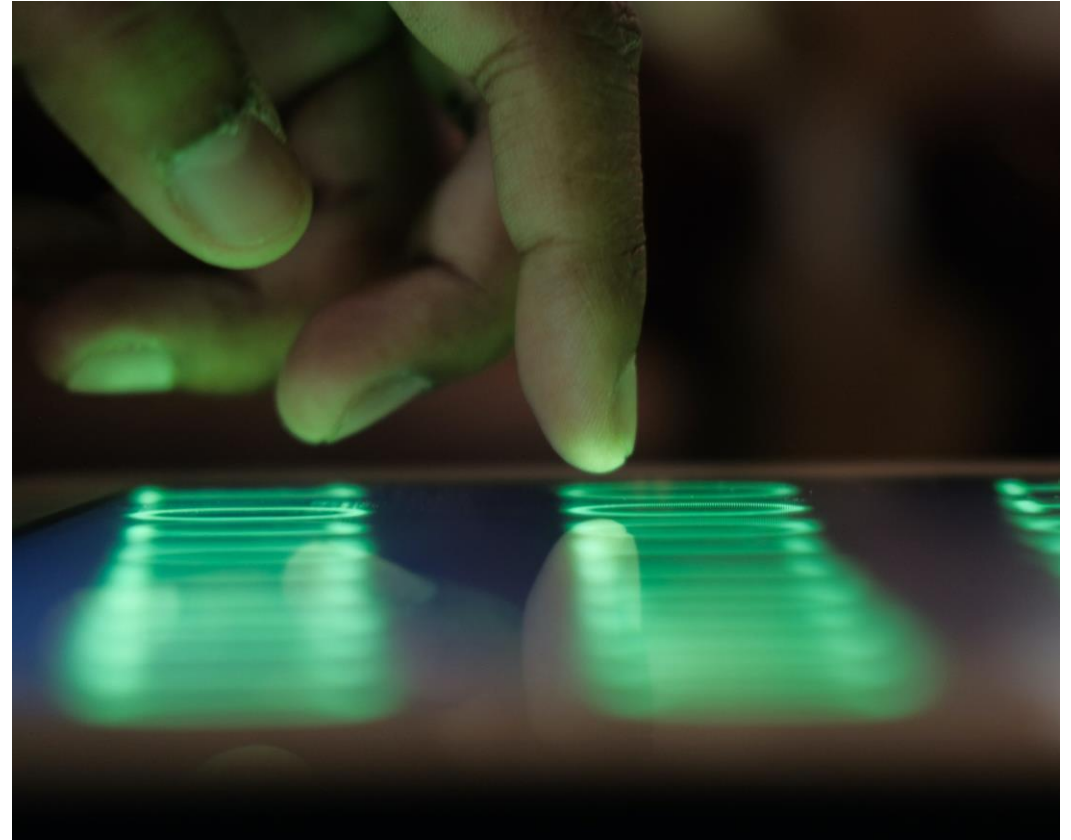
# We can do better!

- » Smart control of both demand and supply
- » Virtual batteries
  - » Aggregate the consumption
- » Virtual power plants
  - » Aggregate the production



# A joy for hackers?

- » Highly critical
- » Legacy systems
- » Controllable from the cloud
- » Operational Technology (OT) security is hard



# Our vision

- » To enable new digital services in future energy cloud ecosystems through improved security practices and adaptive safety/security risk assessment.



Sustainable Energy Adaptive Security

# Partners

- » Linköpings universitet (LiU)
- » Utvecklingsklustret Energi AB
- » RISE Research Institutes of Sweden
- » Sectra

# Goals



- » A secure implementation of an energy-cloud use case
- » New methods for risk management
  - » Safety + security
  - » Adaptivity
  - » Monitoring
- » Guidelines for future deployments

# Progress so far



Virtual battery use case is being developed



Adaptive risk management in collaboration with RICS project



Workshops with stakeholders



Thanks for listening!

**VINNOVA**  
Sweden's Innovation Agency



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