

# Demonstrating Demand Management

How intelligent EV charging can  
benefit everyone

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<http://go.vic.gov.au/63jJrM>



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# Smart Energy products



*We help people  
save on electricity*

<http://percepcion.com>



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DiUS



## The Victorian Electric Vehicle Trial



<http://percepcion.com/chargeiq>

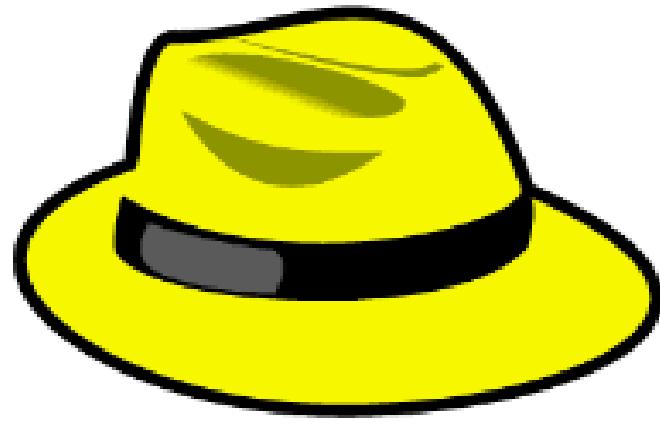


**De Bono's  
Six  
Thinking  
Hats**

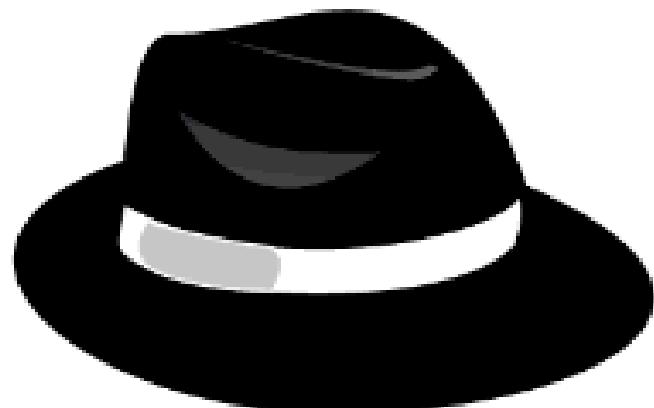




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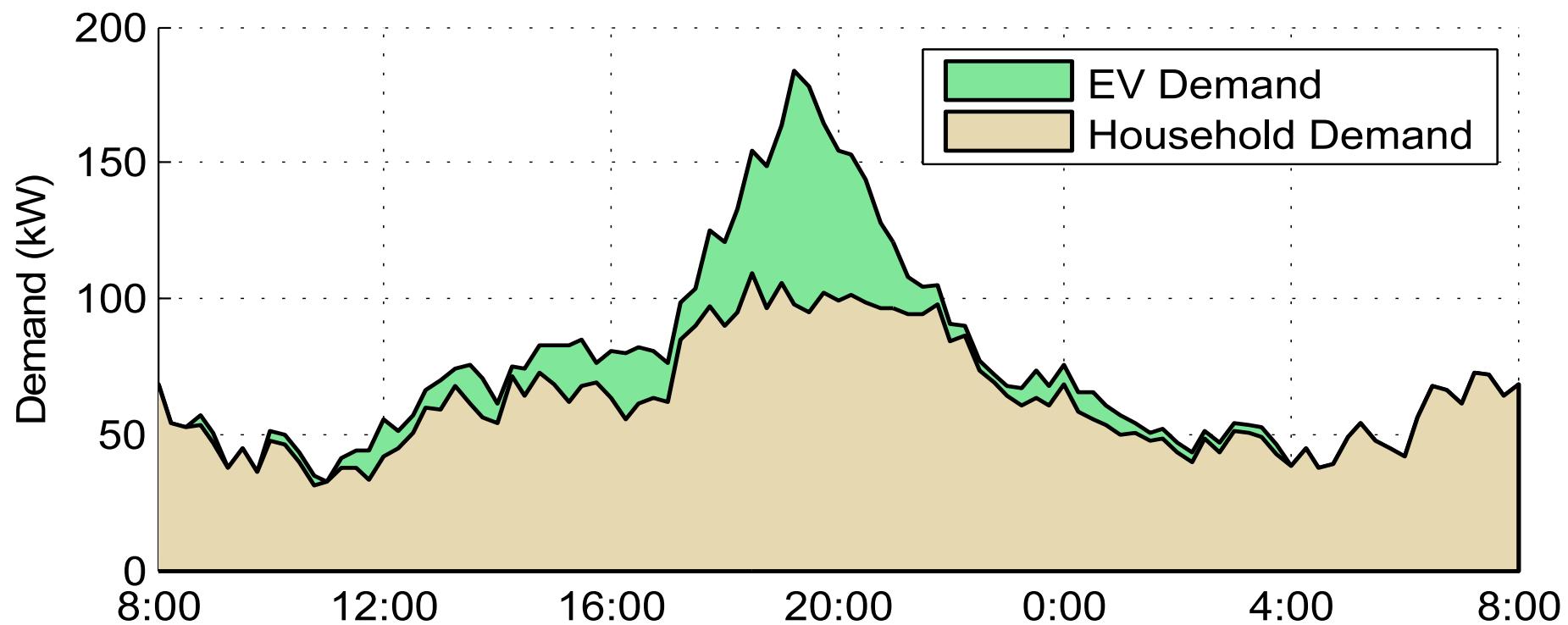
**Positive**



**Negative**

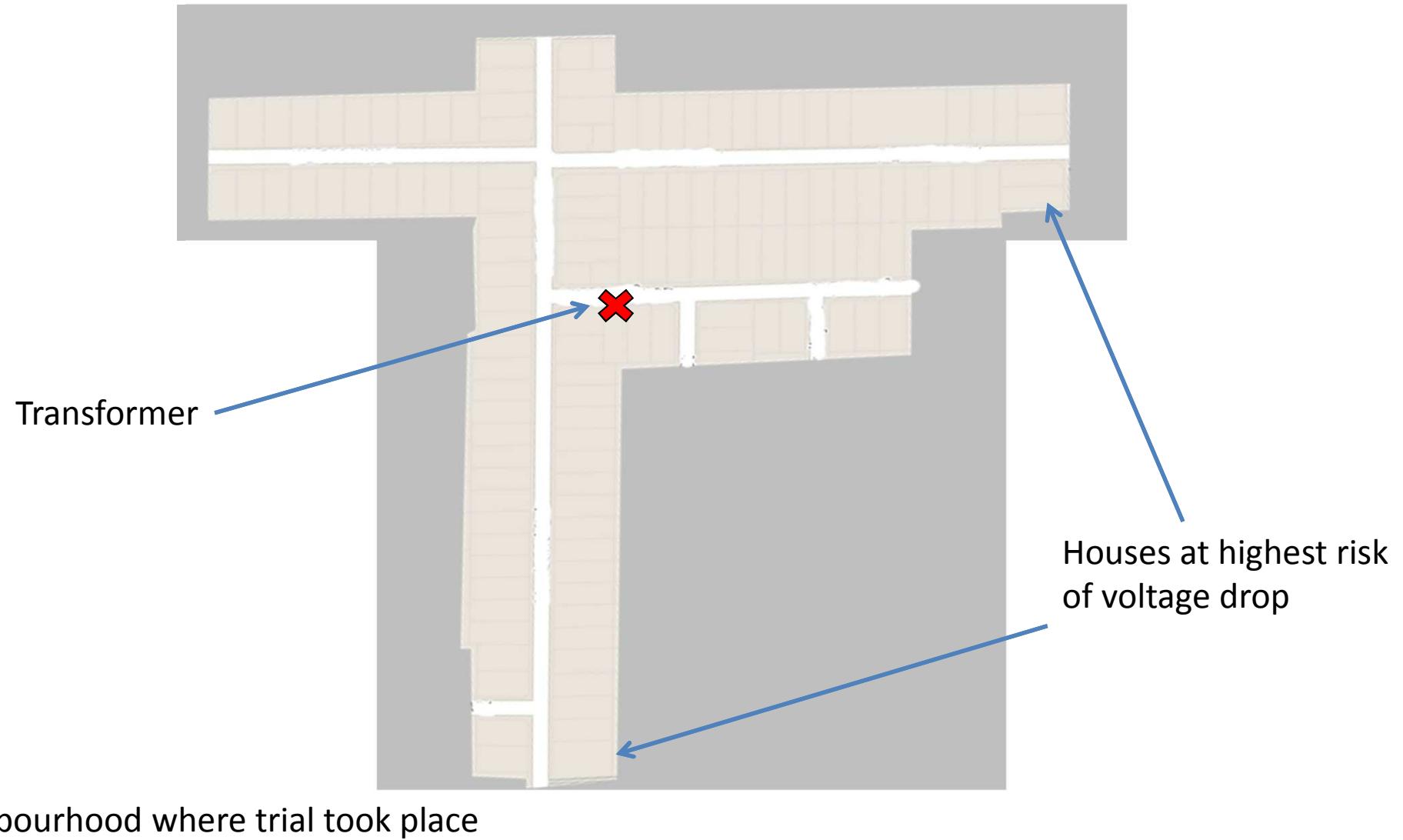


## Uncontrolled charging





## Voltage drop is the first point of failure



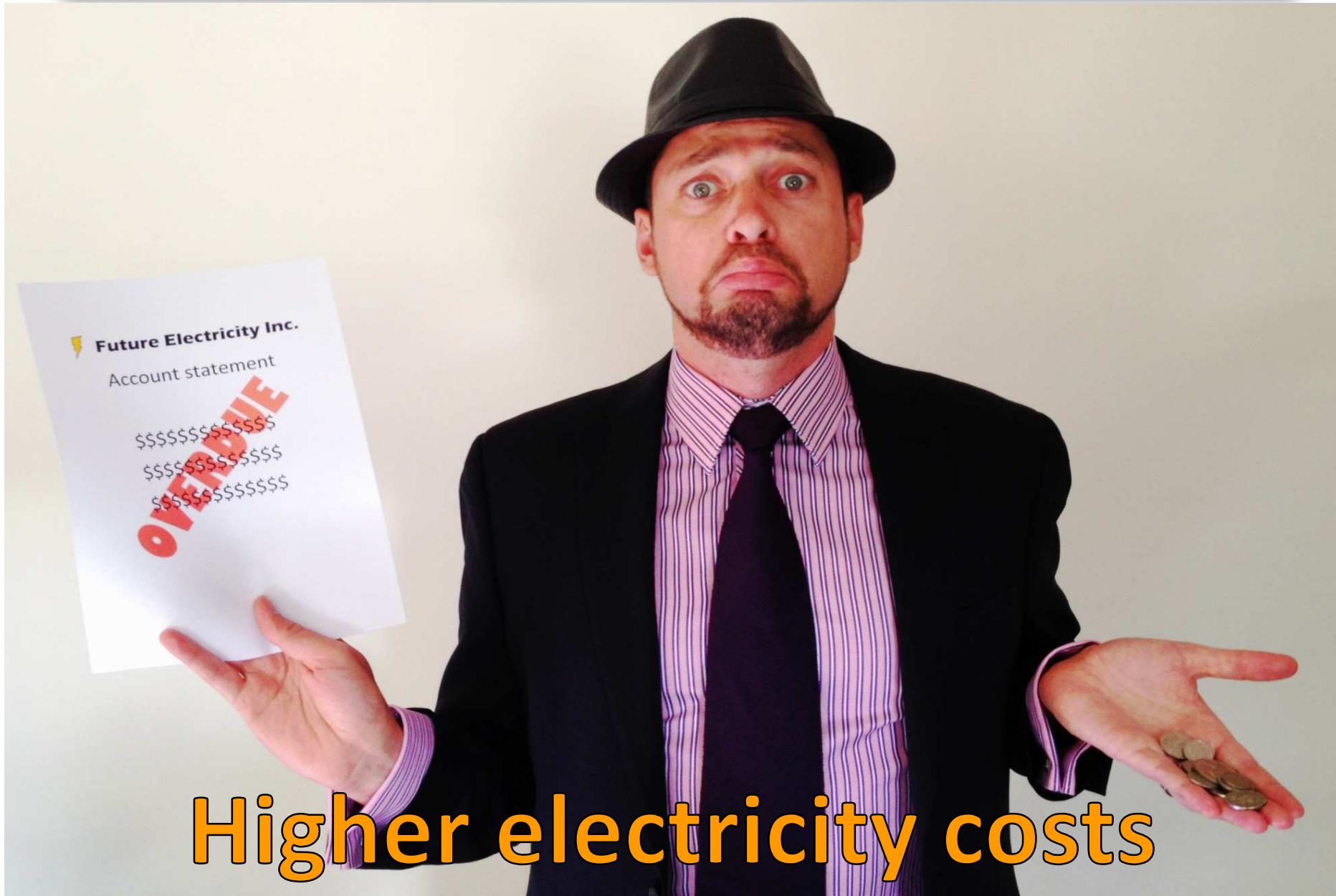


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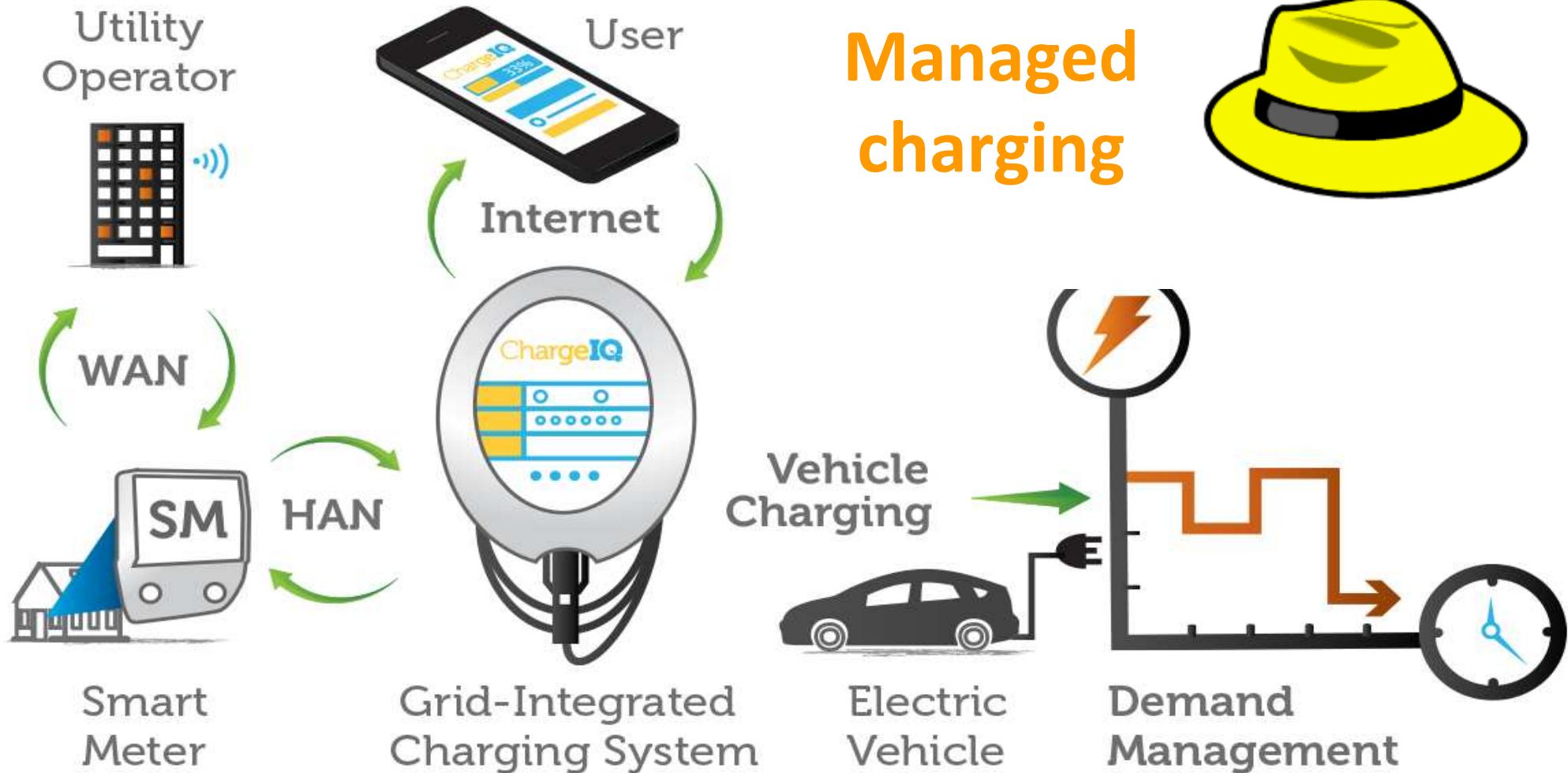
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Higher electricity costs

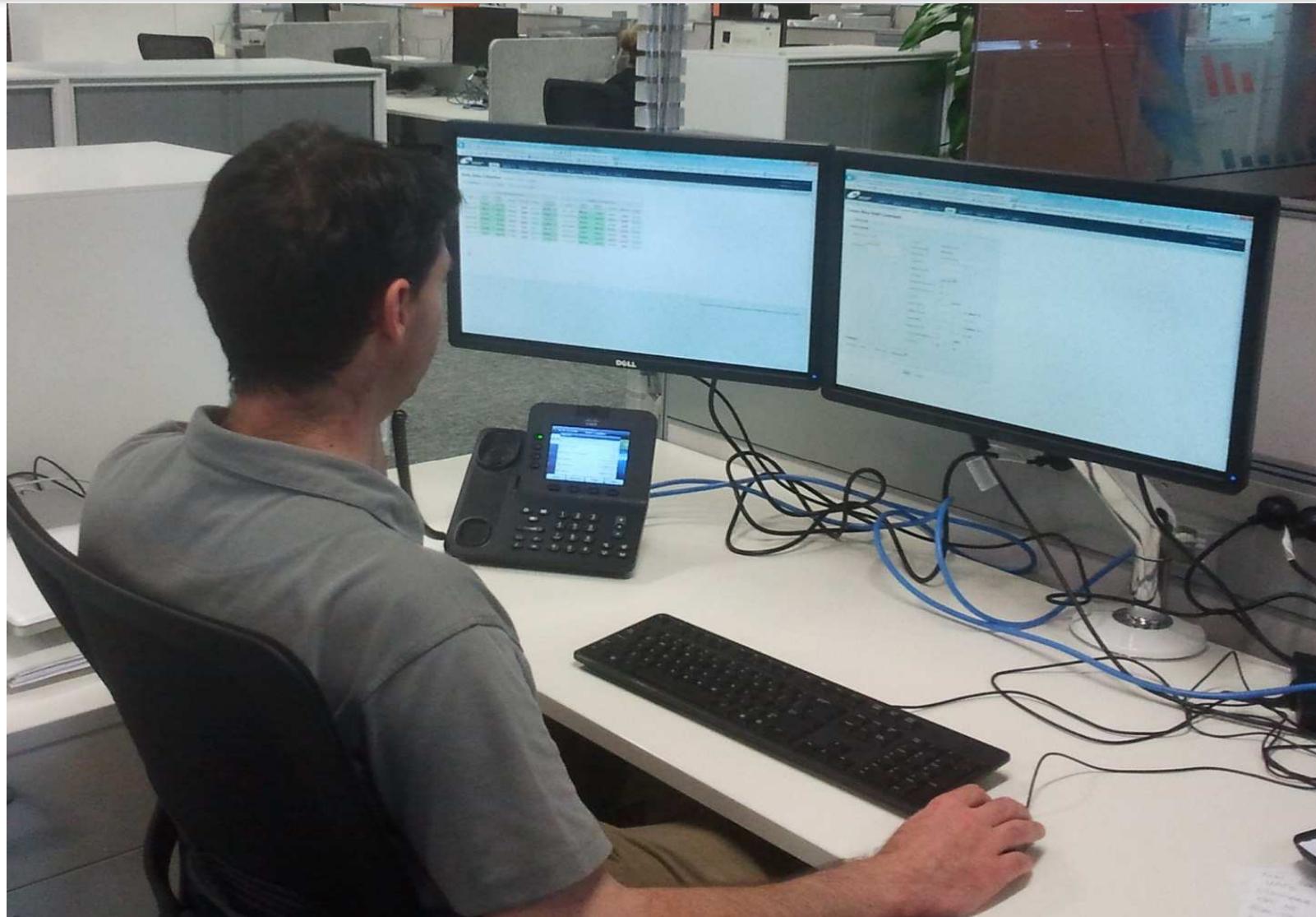


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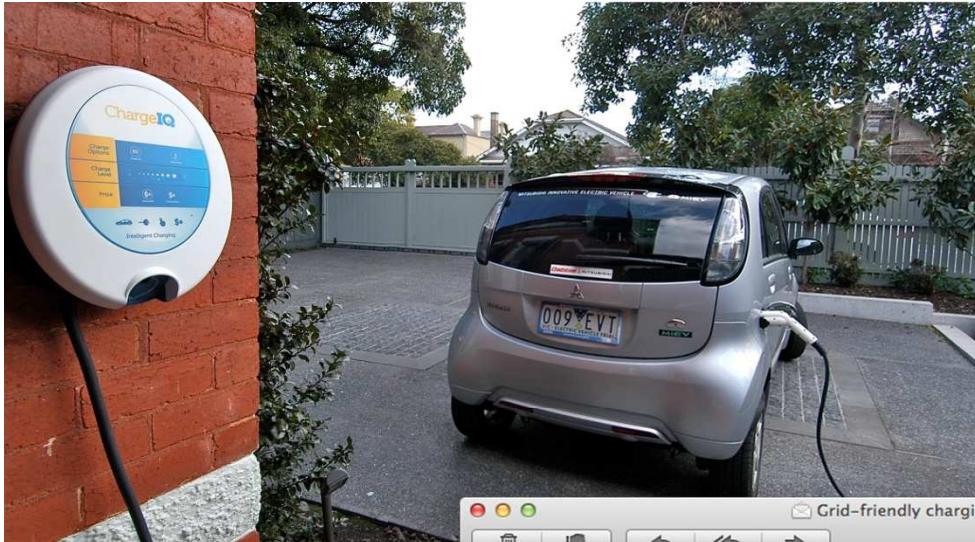
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*Network operator Demand Response (DR) event initiated*



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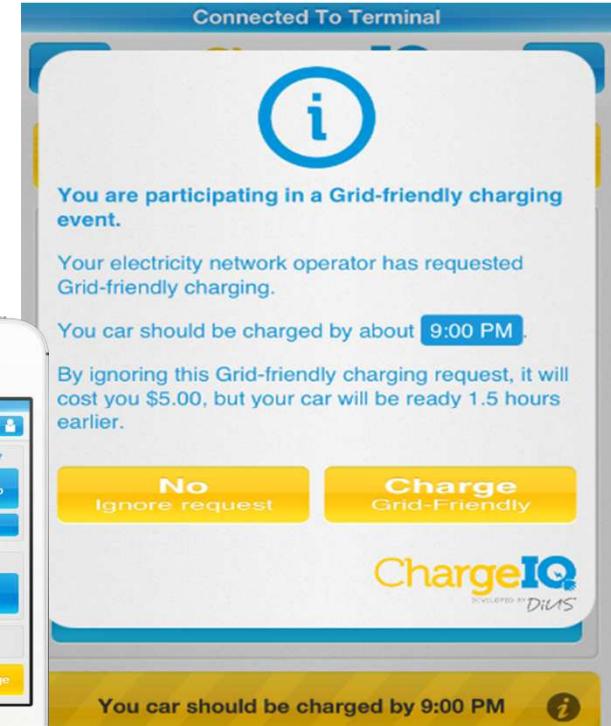
**From:** ChargeIQ <no-reply@chargeiq.com.au>  
**Subject:** Grid-friendly charging today between 2:30pm and 3:30pm  
**Date:** 4 October 2012 2:30:22 PM AEST  
**To:** test <support@chargeiq.com.au>

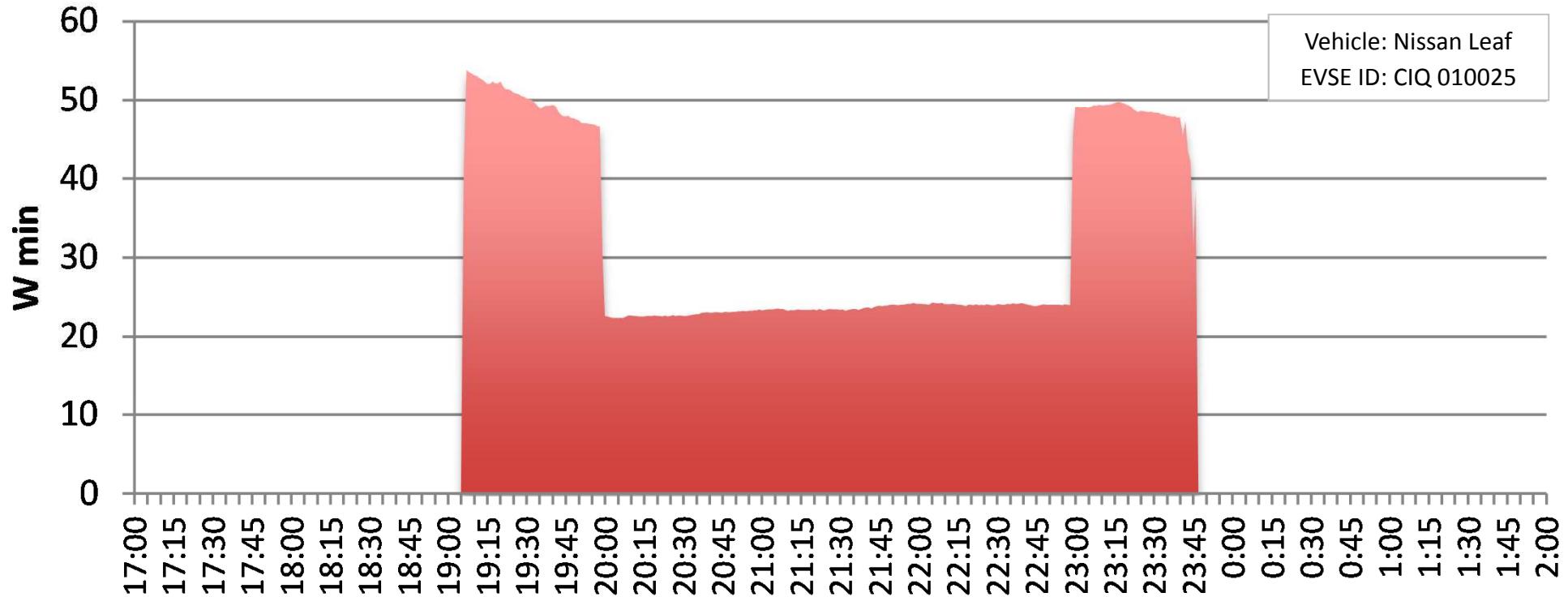
Hi test,

Your electricity network operator has requested Grid-friendly charging today between 2:30pm and 3:30pm.  
Any charging intended to take place during this time will be delayed.

Should you wish to decline the Grid-friendly charging request, opt-out using your ChargeIQ station, website user account, or iPhone application.

Regards,  
The ChargeIQ Team





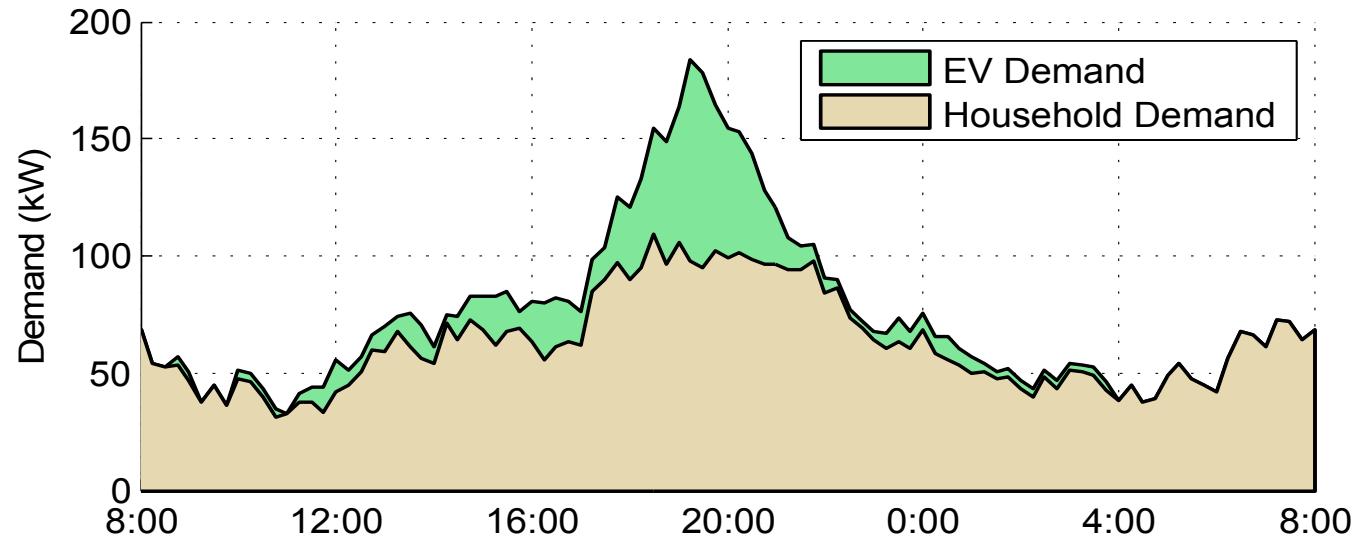
LC Start :	8 pm
LC Finish:	11 pm
Connect Time	7:04 pm 16 Oct 2012
Start of Charge:	7:06 pm
Finish Charge:	11:47 pm
Disconnect Time	7:28 am 17 Oct 2012



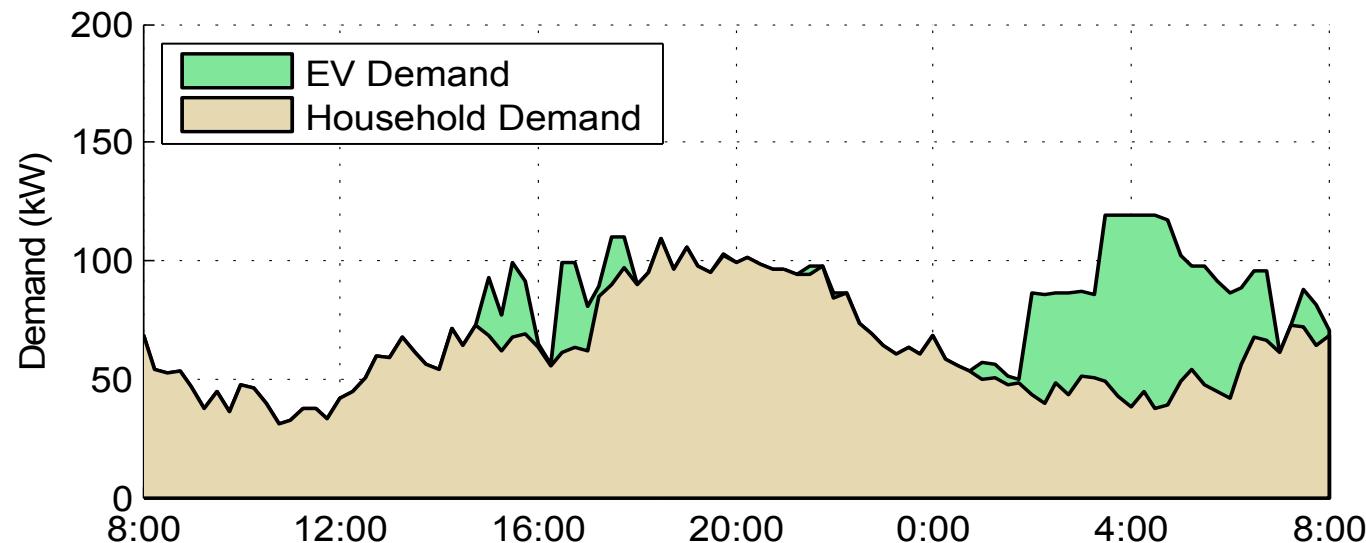
<i>Total load (Wh):</i>	9162.0
<i>Total load during LC (Wh):</i>	4232.2
<i>Load Shift (Wh):</i>	3263.0



Uncontrolled



Managed  
(8-hr horizon)





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Lower electricity costs



**EV uptake:**

**Uncontrolled = 15%**

**Optimised  $\geq 80\%$**

**Save \$1,000-1,500 per household**



KEY

- Commercially available
- Robust reg. review
- Preliminary reg review
- Pilots or nothing

## Regulatory framework is the key

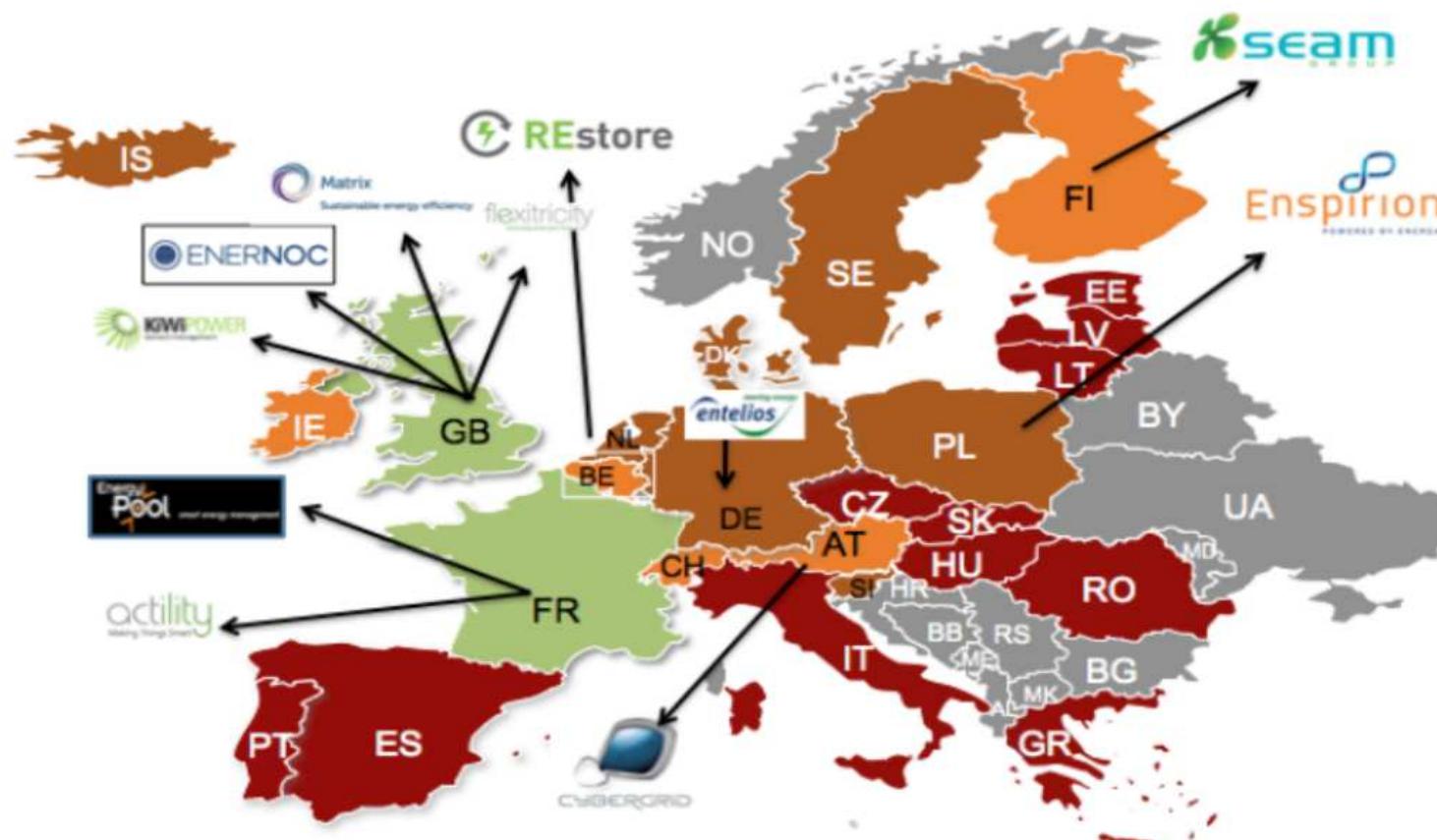


Figure 1: DR development in Europe. Source: SEDC



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[www.percepcion.co](http://www.percepcion.co)



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