

Demonstrating Demand Management

How intelligent EV charging can
benefit everyone

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CREATING A MARKET

VICTORIAN ELECTRIC
VEHICLE TRIAL
MID-TERM REPORT

TRANSPORT.VIC.GOV.AU



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

Smart Energy products



*We help people
save on electricity*

<http://perceptscion.com>



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DiUS



THE UNIVERSITY OF
MELBOURNE



The Victorian Electric Vehicle Trial



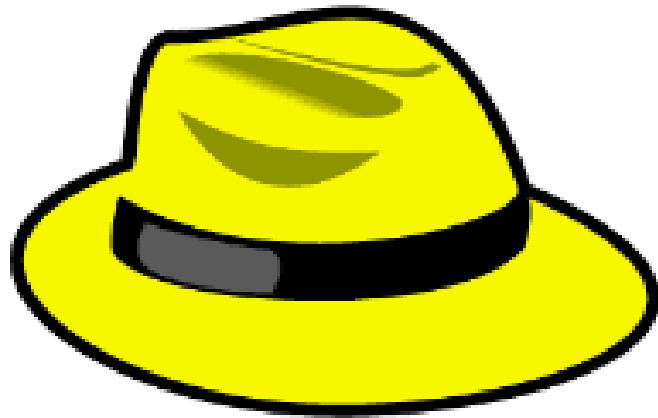
<http://percepacion.com/chargeiq>



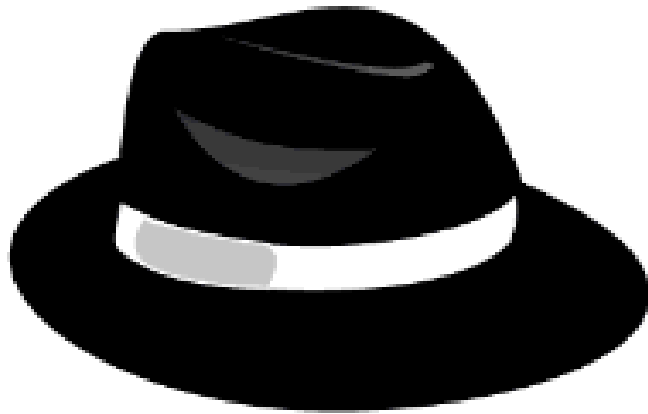
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**De Bono's
Six
Thinking
Hats**



Positive

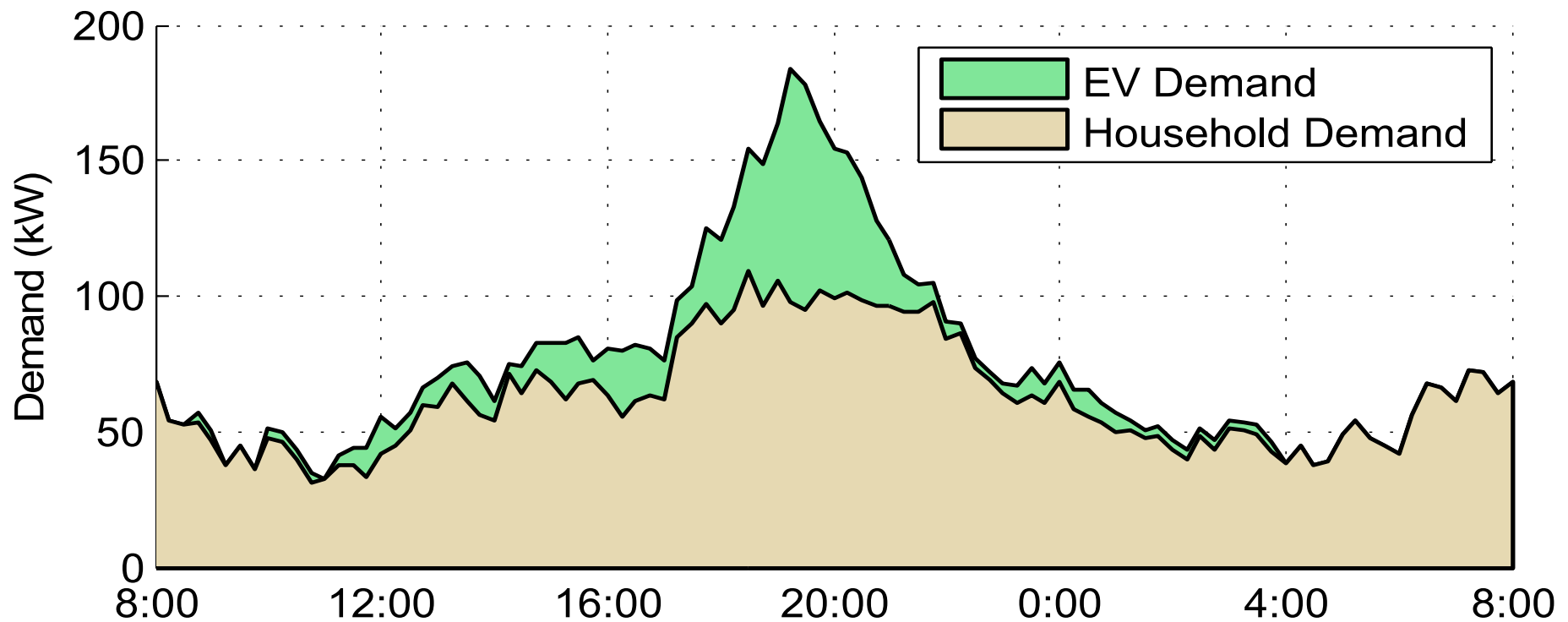


Negative



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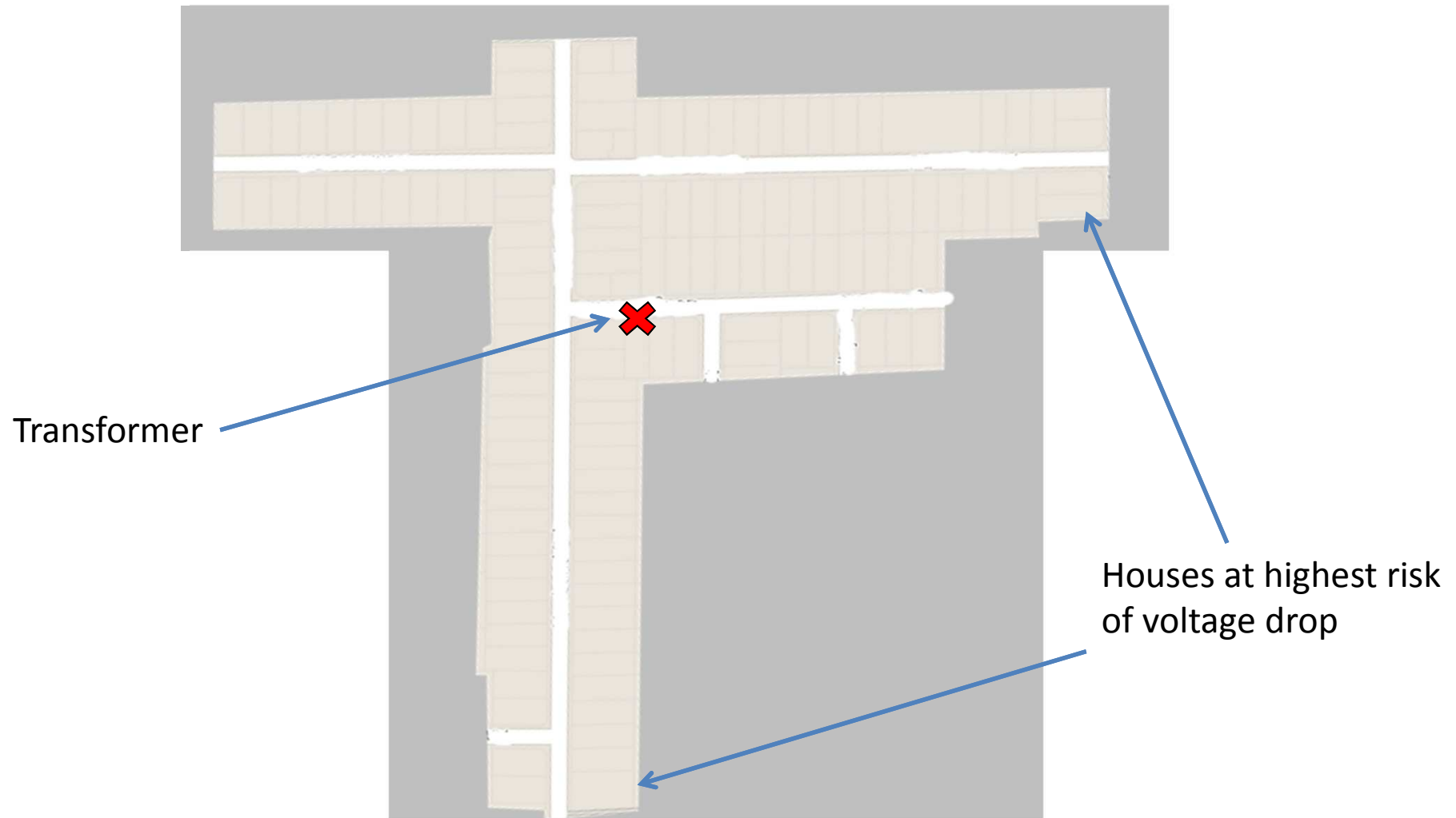
Uncontrolled charging





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Voltage drop is the first point of failure



Neighbourhood where trial took place



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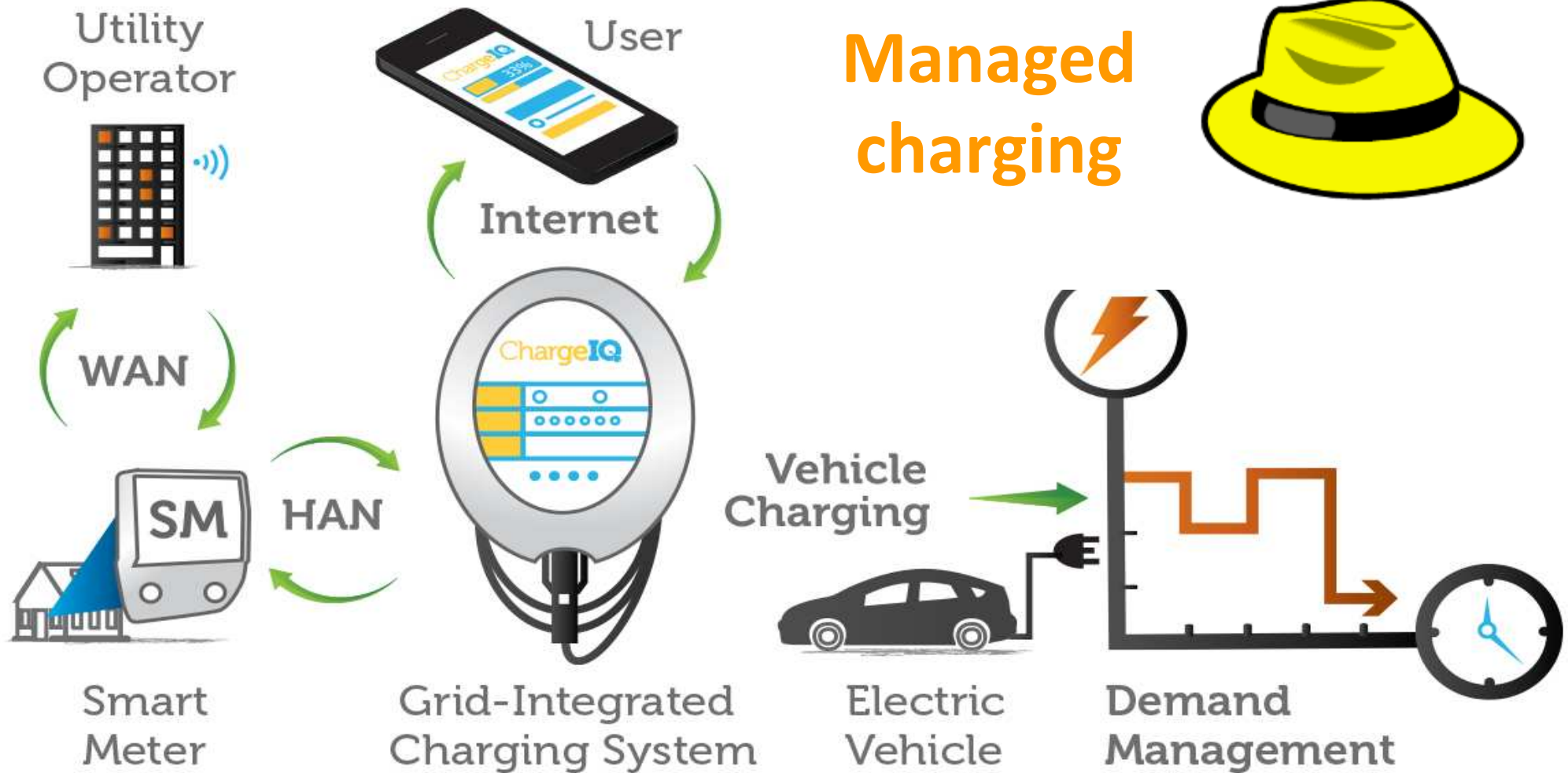
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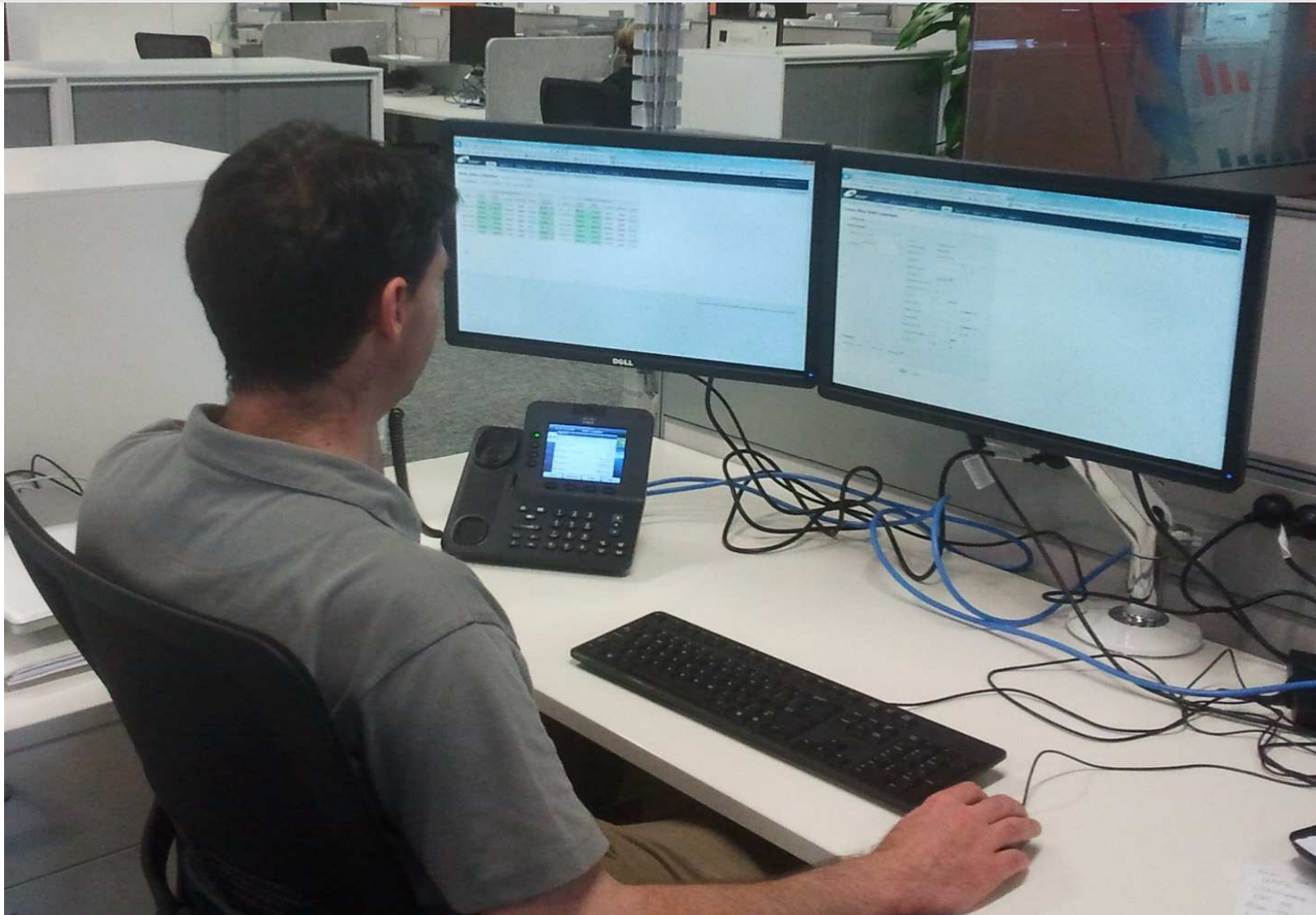
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Managed charging





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Network operator Demand Response (DR) event initiated



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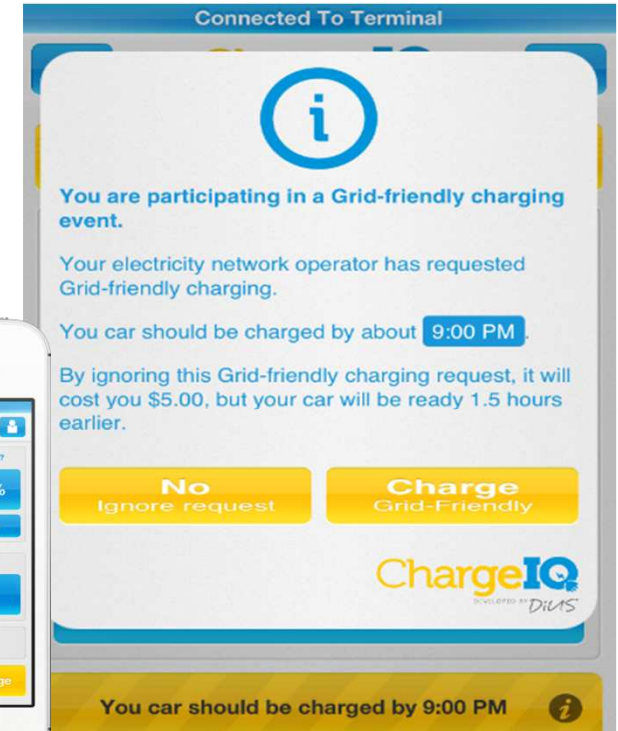
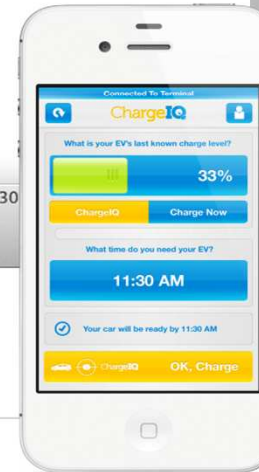
From: ChargeIQ <no-reply@chargeiq.com.au>
Subject: Grid-friendly charging today between 2:30pm and 3:30pm
Date: 4 October 2012 2:30:22 PM AEST
To: test <support@chargeiq.com.au>

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.

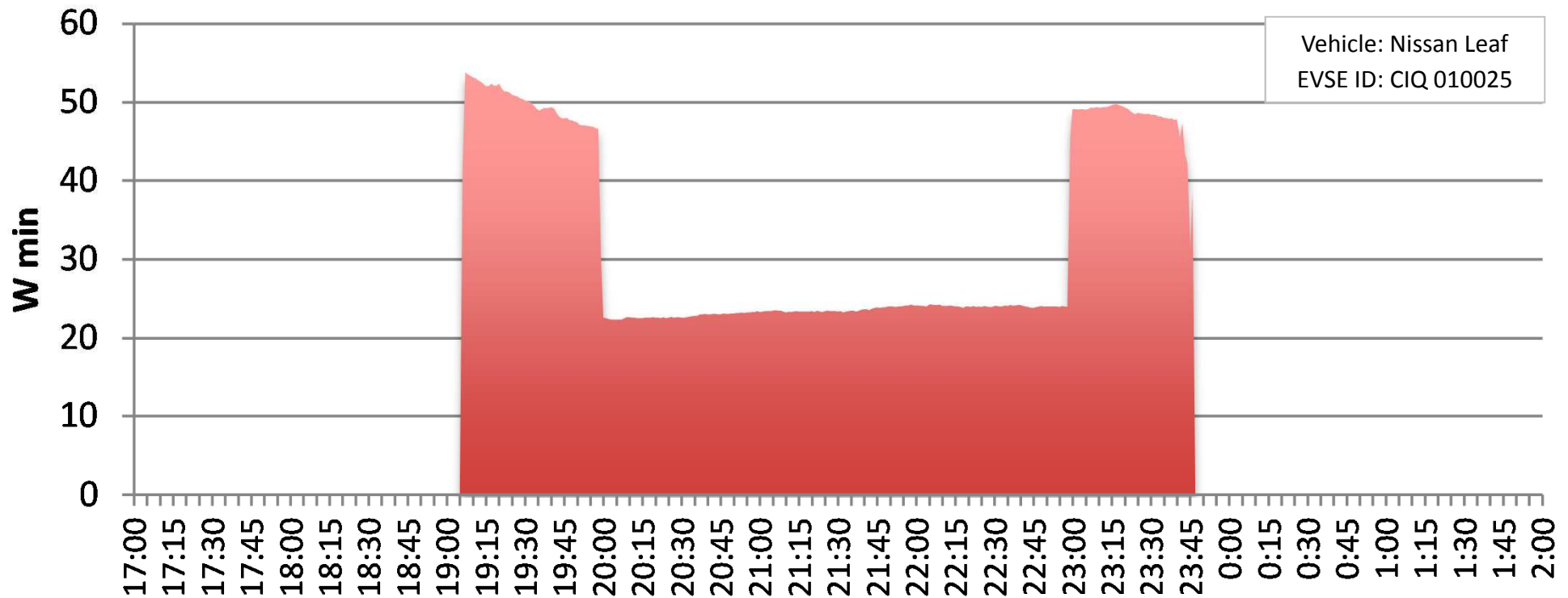
Should you wish to decline the Grid-friendly charging request, opt-out using your ChargeIQ station, website user account, or iPhone application.

Regards,
The ChargeIQ Team





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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

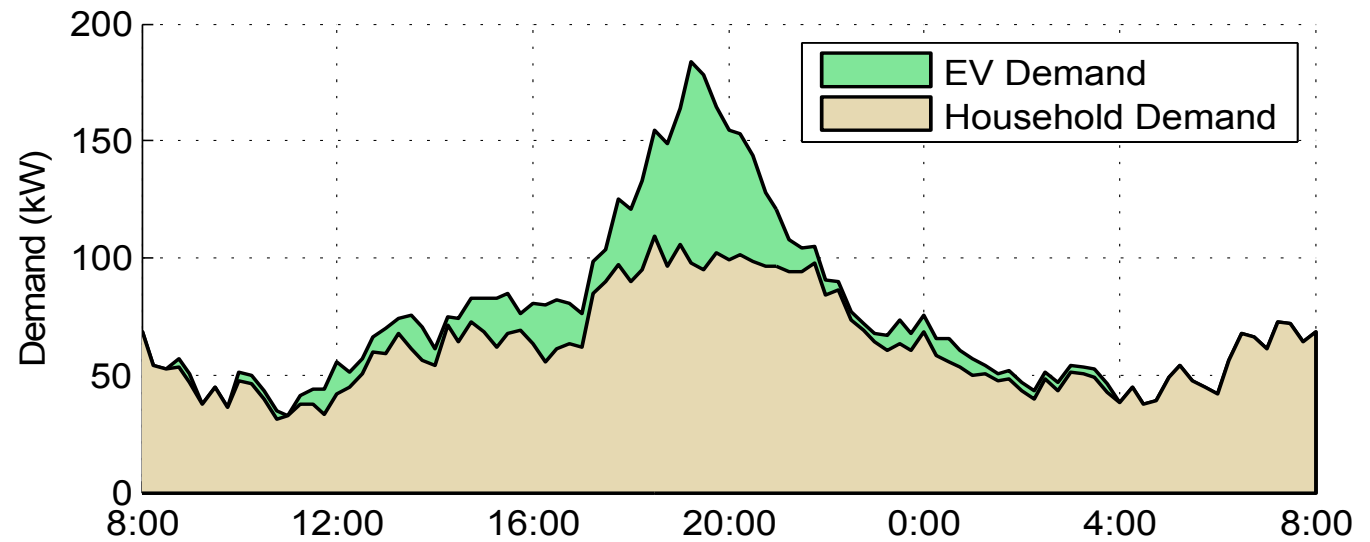


Total load (Wh):	9162.0
Total load during LC (Wh):	4232.2
Load Shift (Wh):	3263.0

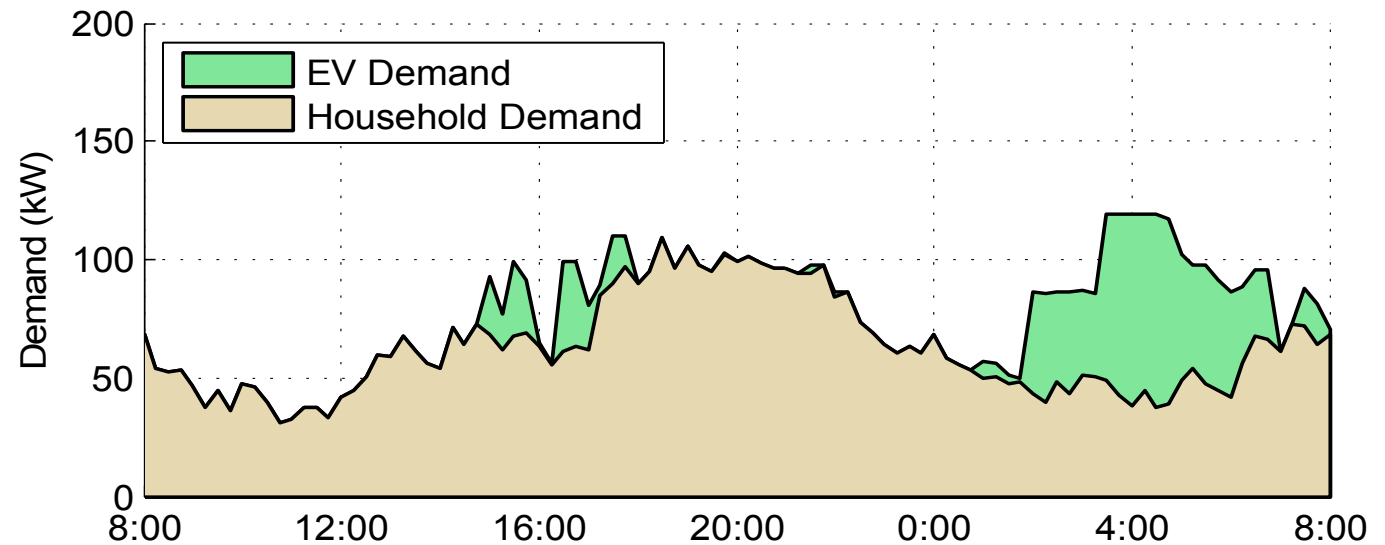


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Uncontrolled



Managed (8-hr horizon)





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Lower electricity costs



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EV uptake:

Uncontrolled = 15%

Optimised $\geq 80\%$

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



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KEY

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

Regulatory framework is the key

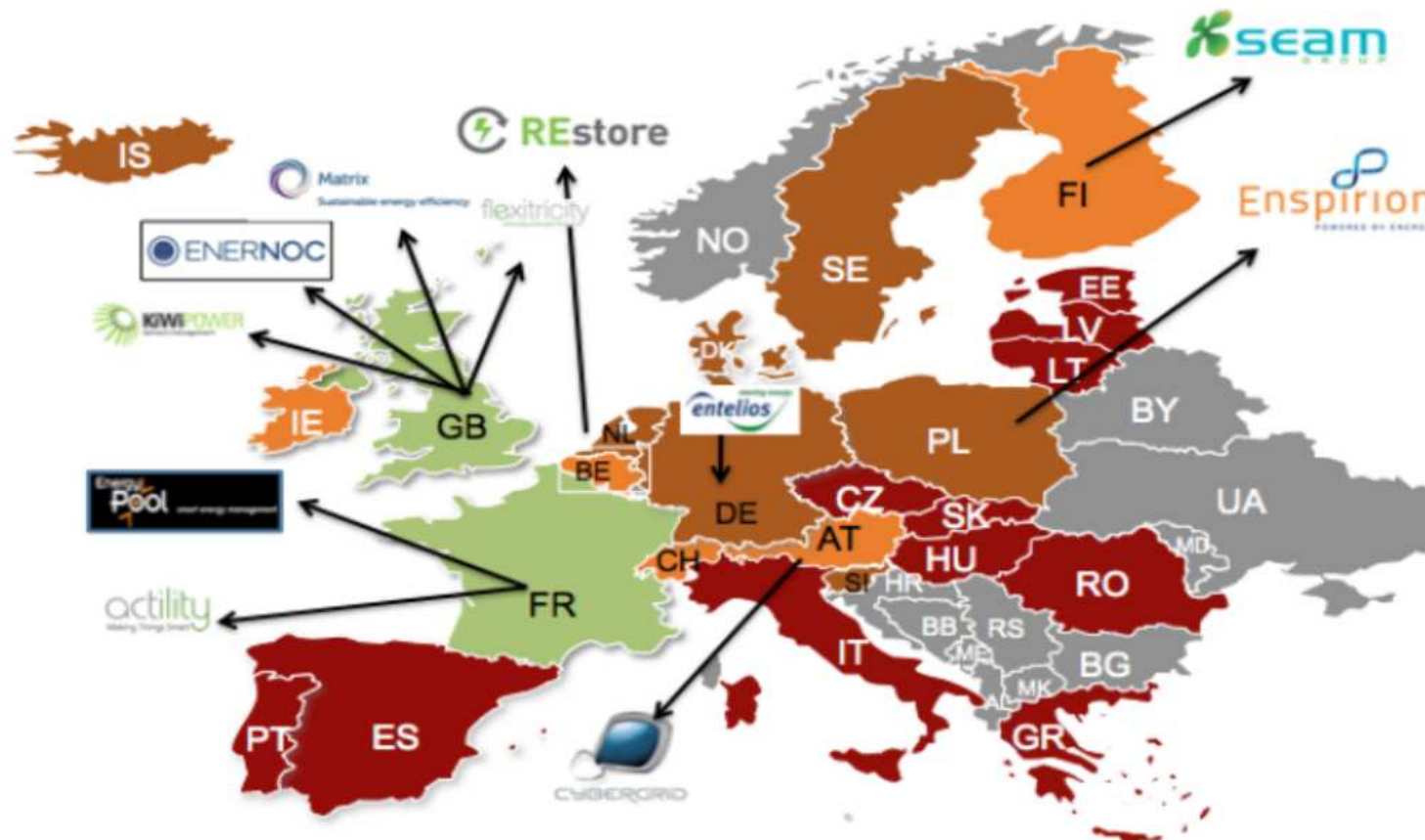
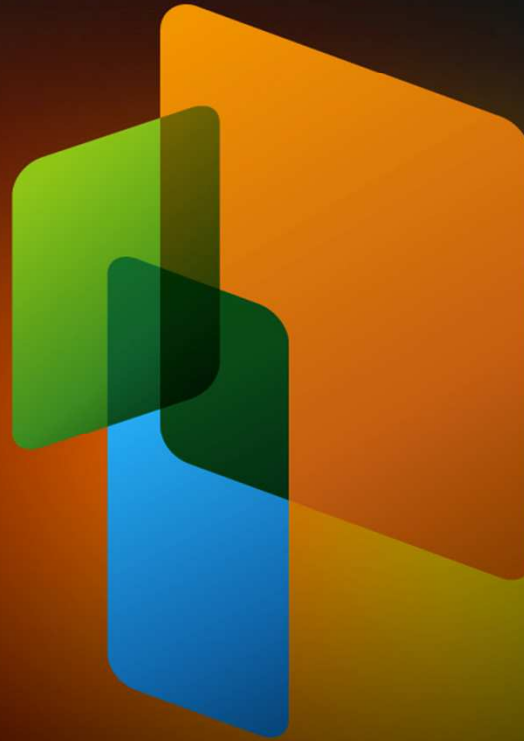


Figure 1: DR development in Europe. Source: SEDC



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