

Electric Ireland

The Potential for EV's: *Beyond Driving*

EV Summit 2018

Agenda

1. Introduction
2. Power Off & Save
3. Looking to the Future



1. Introduction

Electric Ireland

- 1.3 million customers
- Gas, electricity and energy services
- Play key role in delivering ESB's
Brighter Future Strategy
- Smarter Living: Smarter Home, Climote,
Nest, Solar PV, EV Home Charger,
Honeywell, SPAYG



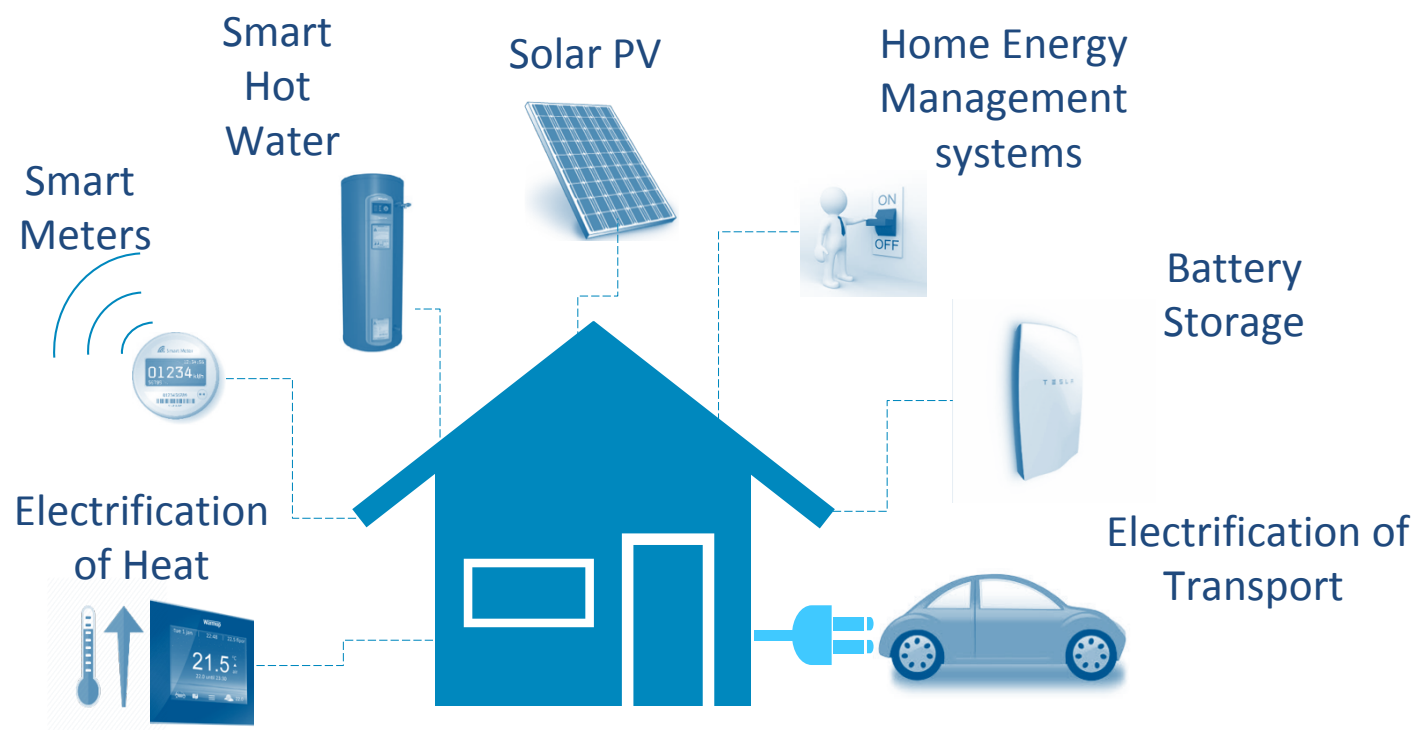
Electric Vehicle (EV)
Home Chargers

Smarter Living

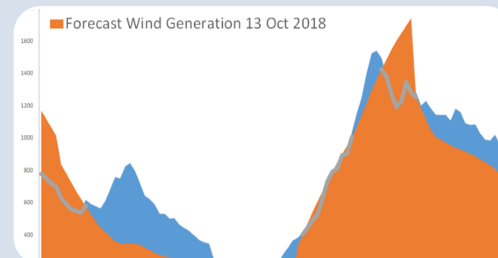
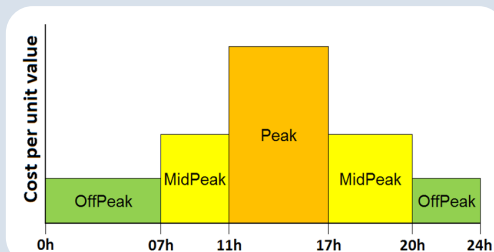
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The Opportunity Presented by the Electric Home of the Future!



Consideration for EV



Smart Charging

- Smart Metering
- Time of Use
- Lower Running cost
- Wholesale market

Vehicle to Grid

- Reduce Home Electricity cost
- Maximise PV Output
- Demand Response

Flexibility Services

- System Services
- Balancing Markets
- Network Management

2. Power Off & Save

Power Off & Save

What is Power Off & Save?



- 1,500 customers
- 18 months
- 10 events (30 min in duration each)
- Up to €100 off bill per customer



Key elements of the trial

Customer
Recruitment &
Communications

Measurement of
Response

Range of
Technologies

Analysis

650 Smarter Home customers



- 1 second load measurement
- Text message & app push notification
- Opt in – POAS automatic response – Smart Plugs, Immersion, EV, (& Heat Pump)

850 Smarter Pay As You Go Customers



- 30 minute load measurement
- Text message
- Manual response



Climote Immersion Controller



Smarter Home



Solar PV



EV Home Charger

Range of Technologies

Home Appliances



Glen Dimplex Quantum Cylinders



In general
50% of homes
take part per
event

20% of response
within 15
seconds

For EVs
reductions of
3.5kW observed.
However, diversity
factor of ~25%
required

Load reduction of
12%-19%
observed

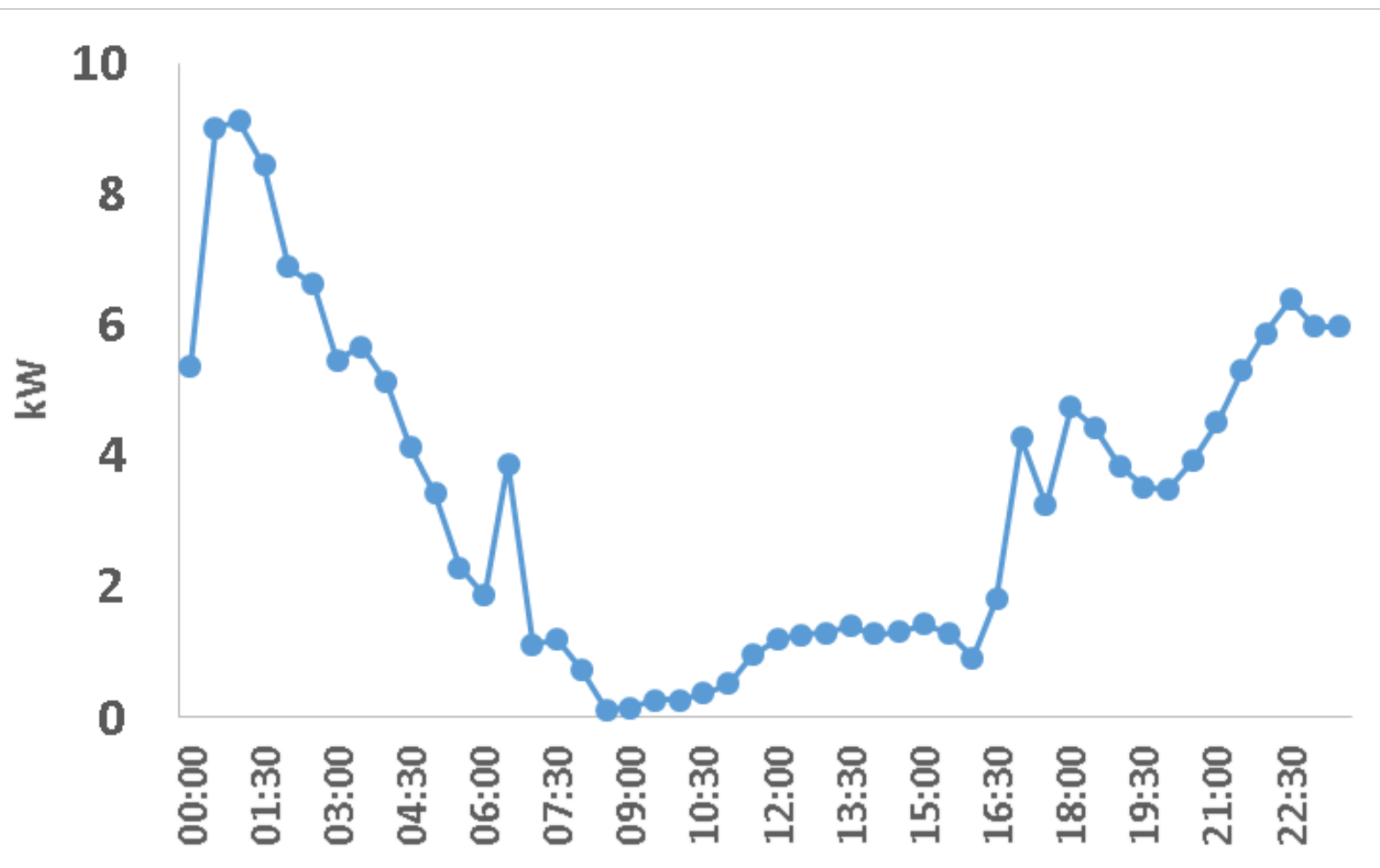
Higher reduction
at times of higher
load

Findings

For immersions
2-3kW load
reduction
observed

High levels of
customer
engagement and
satisfaction

Average Profile for 12 EV Customers in Power Off & Save



3. The Future – Supplier's Perspective

Smart Charging

Consumer Action

A strong economy leads to high levels of consumer spending ability. The public want to reduce greenhouse gas emissions. Electricity consumers enthusiastically limit their energy use and generate their own energy. This results in a large number of community led energy projects and a rapid adoption of electric vehicles and heat pumps in the home.

There are almost 560,000 electric vehicles on the road by 2030

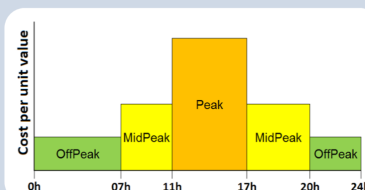
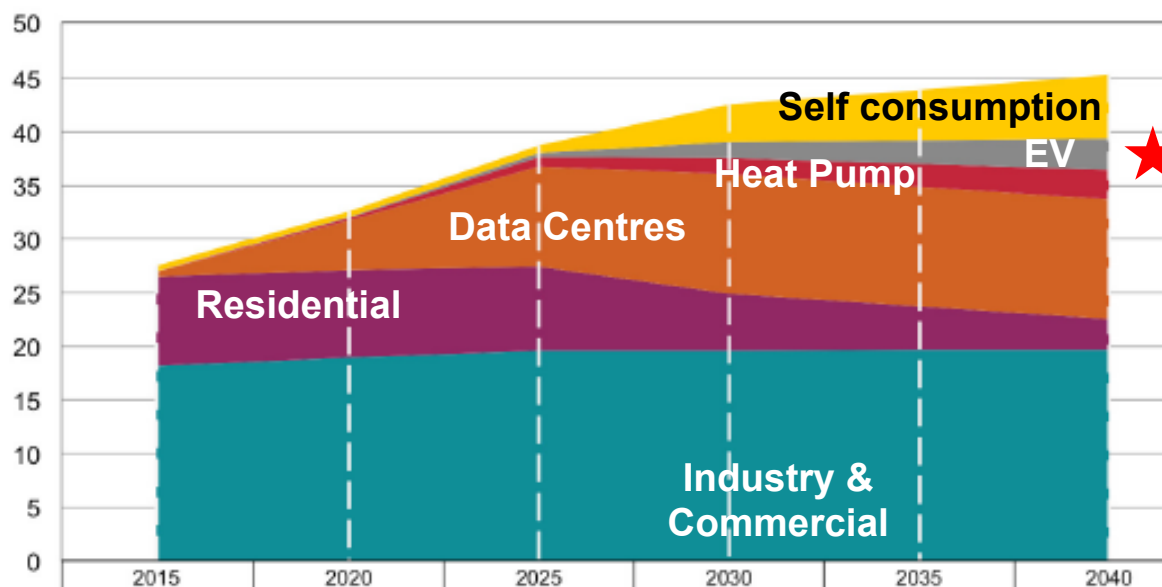


17% of residential houses are heated through heat pumps by 2030

Household batteries and Solar PV help to increase self-consumption of electricity



- 560,000 EVs
- 2.9TWh in 2040



Smart Charging

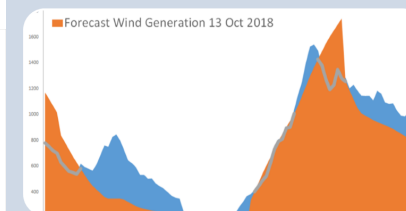
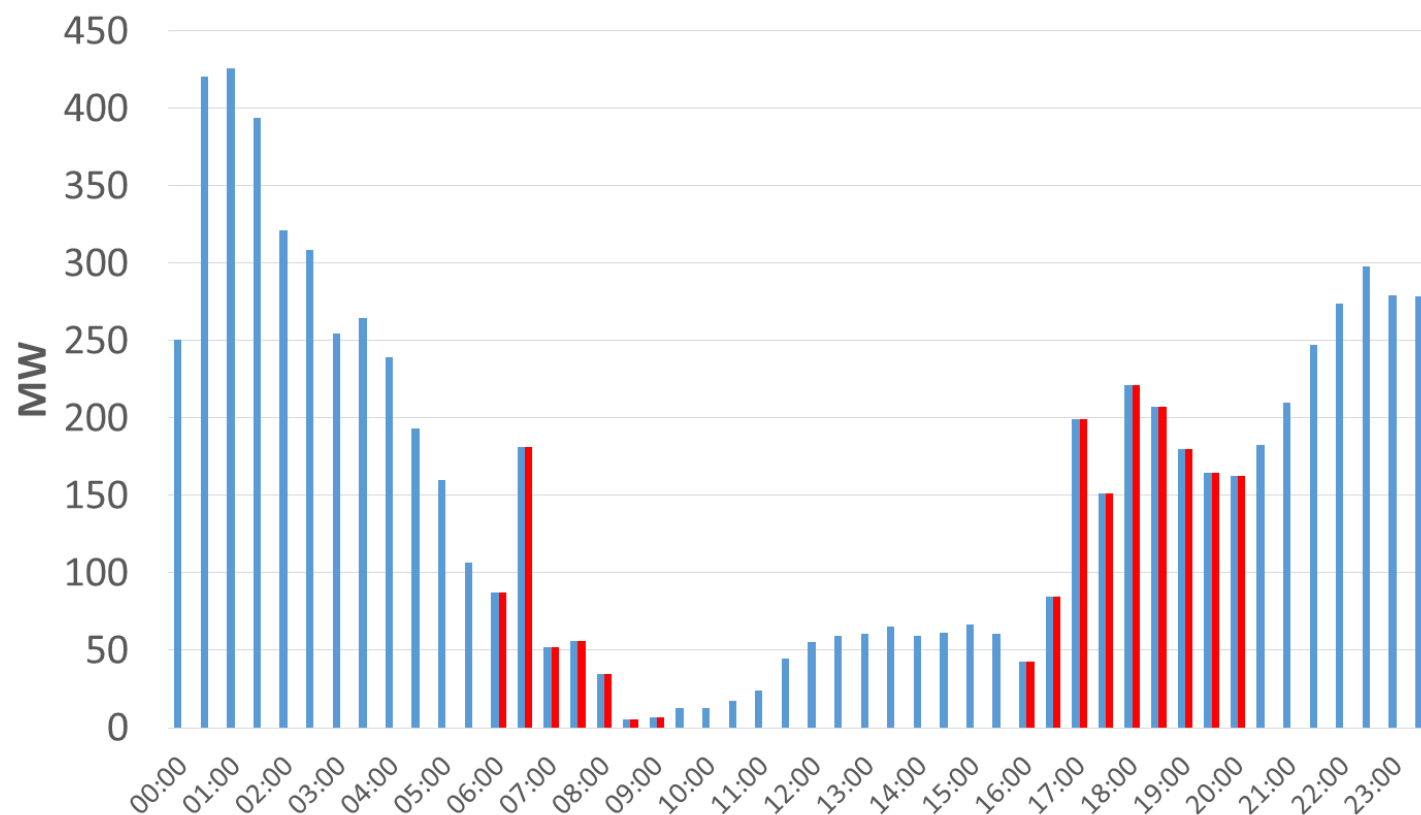
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Vehicle to Grid

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- Maximise PV Output

Demand Response & Flexibility Services

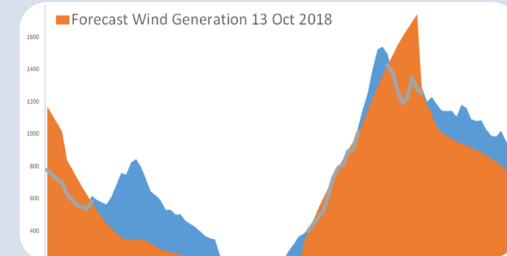
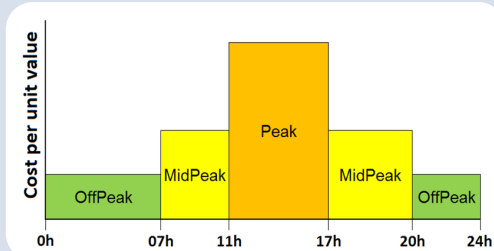
Electric Vehicle Available Demand – 2030 EirGrid 'Consumer Action' Scenario



Flexibility Services

- System Services
- Balancing Markets
- Network Management

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Thank You

<https://www.electricireland.ie/residential/products/smarter-living/power-off-and-save>

<https://shop.electricireland.ie/products/install-detail/ev-home-charger>