

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



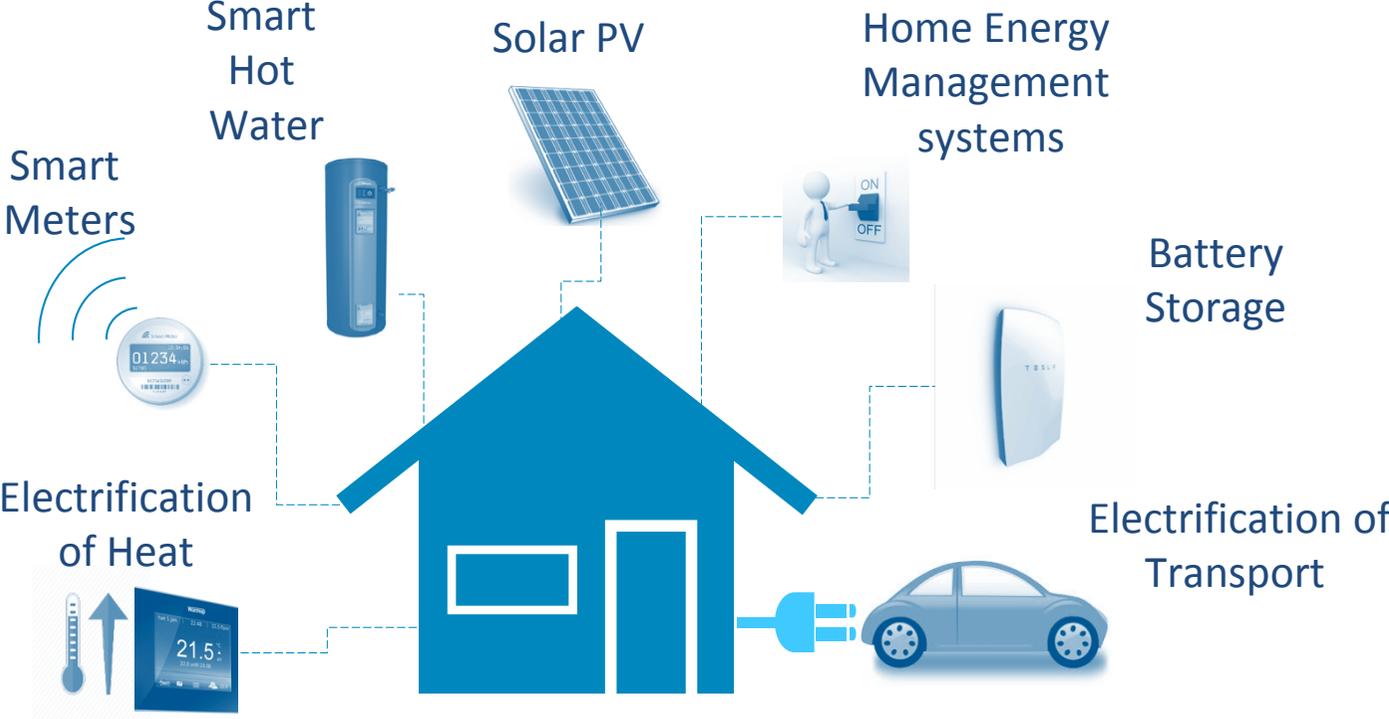
Electric Vehicle (EV)  
Home Chargers

Smarter Living

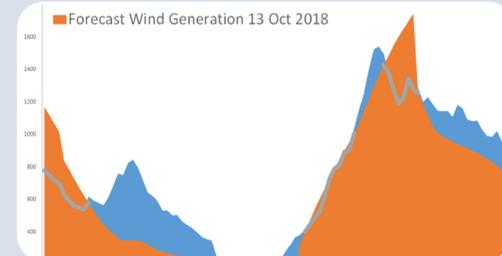
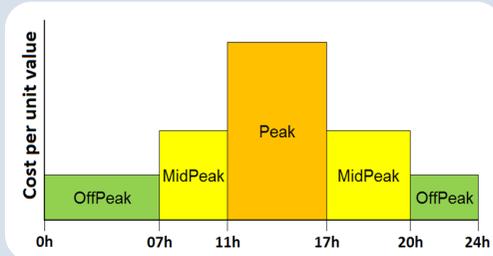
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# The Opportunity Presented by the Electric Home of the Future!



# 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



## 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



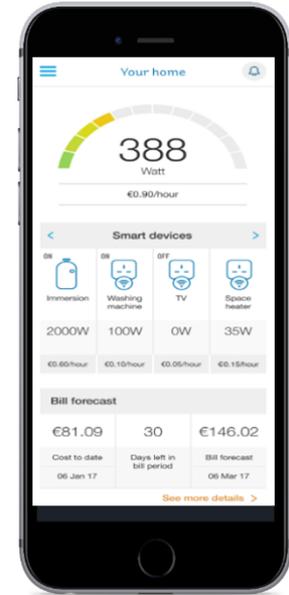
- 30 minute load measurement
- Text message
- Manual response



**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

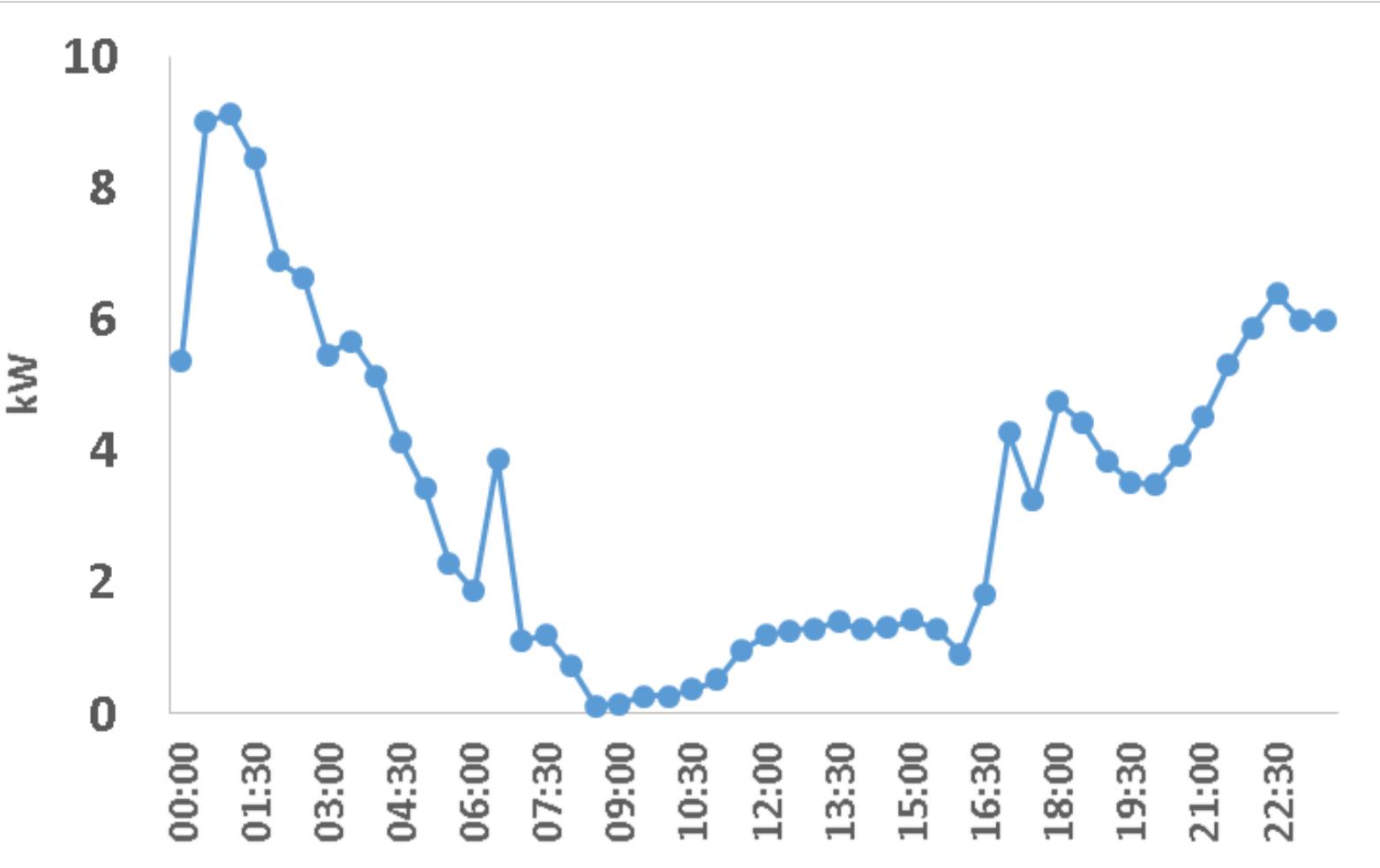
Higher reduction  
at times of higher  
load

## 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

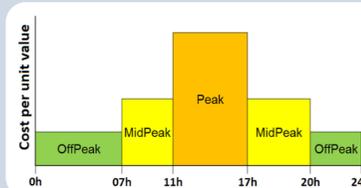
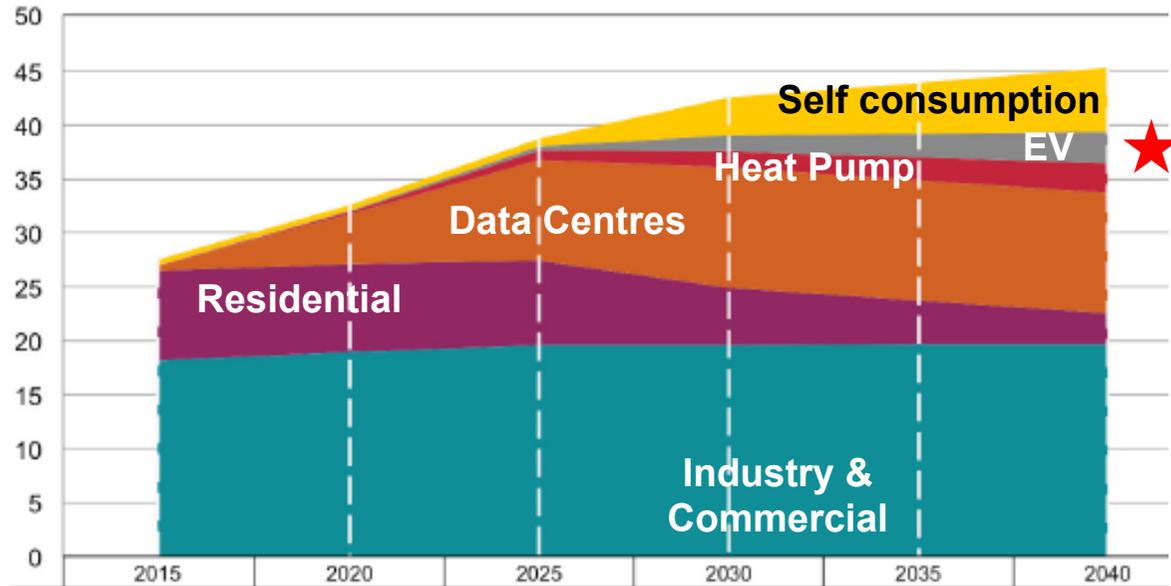


17% of residential houses are heated through heat pumps by 2030

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



- 560,000 EVs
- 2.9TWh in 2040



### Smart Charging

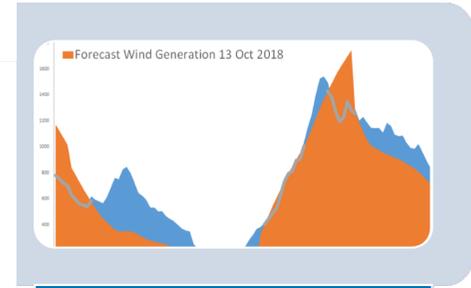
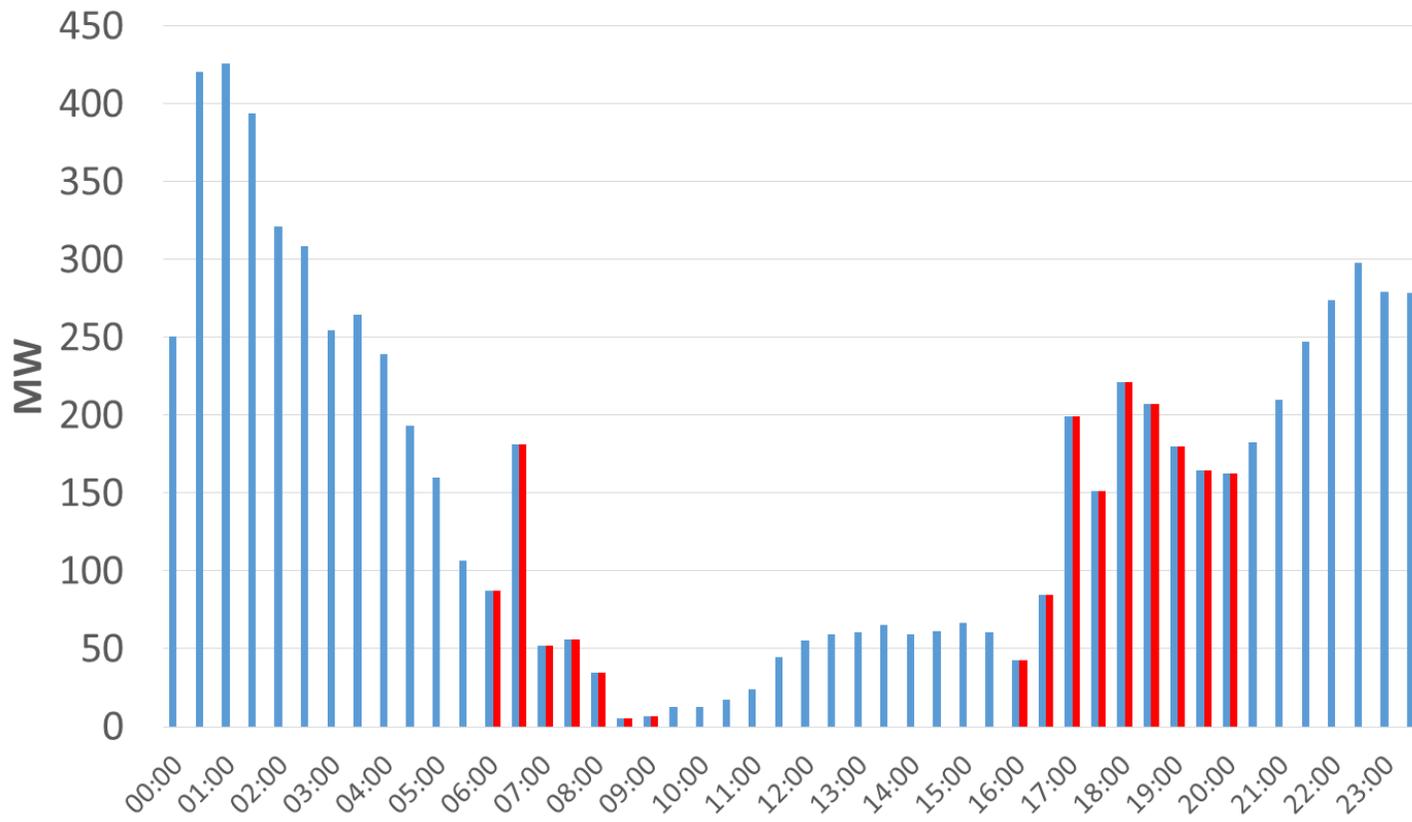
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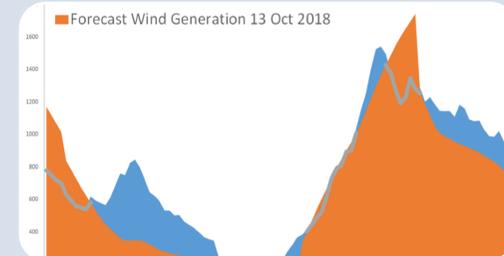
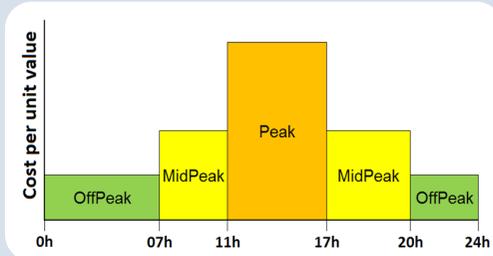
# Demand Response & Flexibility Services

## 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>