

Metering – A Smart Idea?

How can the roll out of smart metering help energy customers, and contribute to the development of true smart grids?

The Panel

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David Lee – Siemens Metering

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Metering – A Smart Idea?

Smart technologies

Fashion item or essential for the future ??

Can smarts save businesses and customers financially?

Which Government policies and tax regimes can smarts help with?

What is a smart grid and what does it mean for you?

What are the drivers for moving towards a smart metering and grid future?

Regulatory drivers

European Drivers

The now famous 20:20:20 targets are driving many European energy policies

- 20% Energy efficiency improvements

- 20% Renewables

- 20% Reductions in carbon emissions

All by 2020

Leading to a number of European initiatives:

Smart metering for 80% of European buildings by 2020 – 3rd Energy package Directives

Energy and Related Products Directive – pushing the markets for low energy and carbon products across all markets

Energy Performance of Buildings Directive – will increasingly force the UK Government to adopt tighter buildings based energy policies

Increasing interest in smart electricity networks

And in the UK....

The UK has been a leader in the publication and adoption of energy and climate changes related policies

2007 Energy White Paper

2008 Climate Change Act

Led to the formation of the Climate Change Committee, and the target of an 80% reduction in Carbon emissions by 2050, and the adoption of an electricity led future

2009 UK Low Carbon Transition Plan

May 2010 New Government = New energy and climate change policies?

2010 Lib-Con Coalition Agreement - Environment

No 1 - The establishment of a smart grid and the roll-out of smart meters

Lib-Con top energy policies

Planned role out of smart metering by 2016???

Big push for all renewables – on the network and on buildings

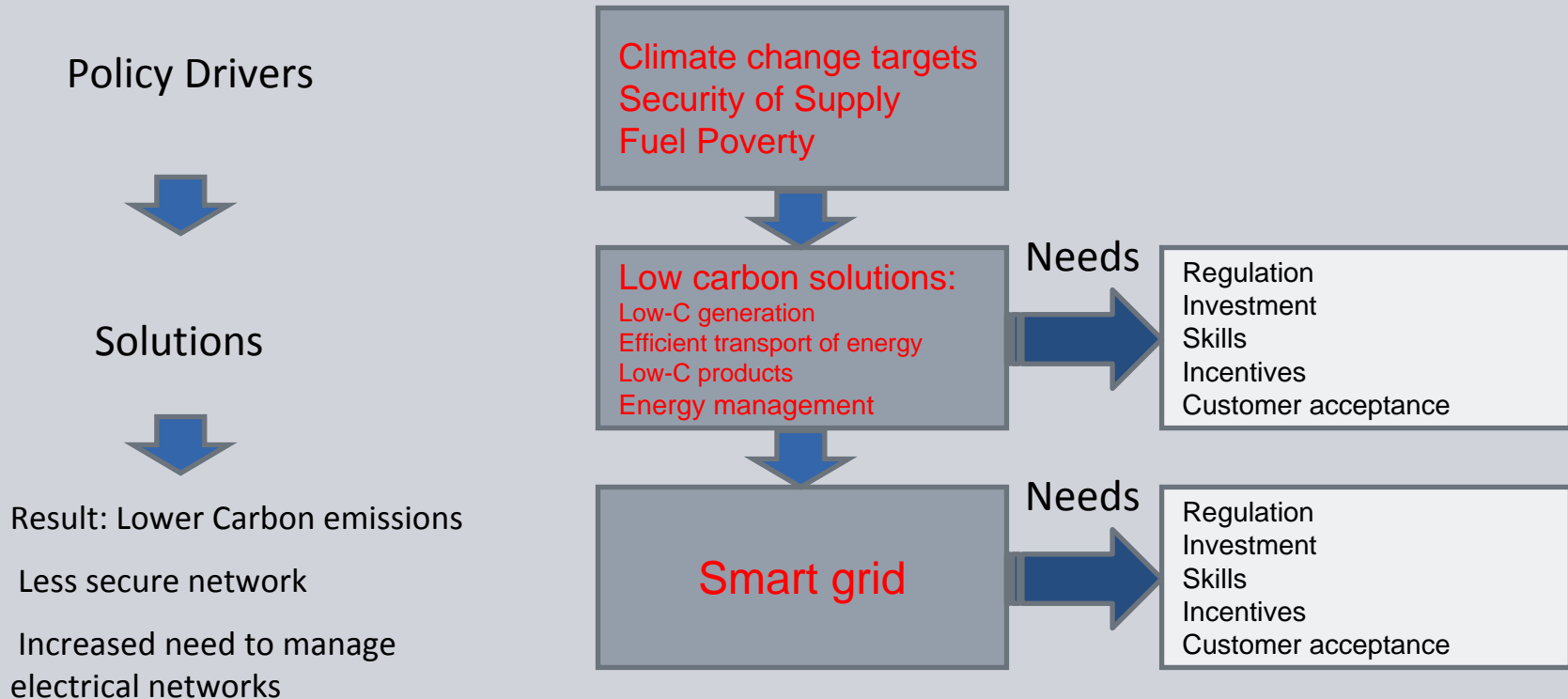
11 Environment

The parties agree to implement a full programme of measures to fulfil our joint ambitions for a low carbon and eco-friendly economy, including:

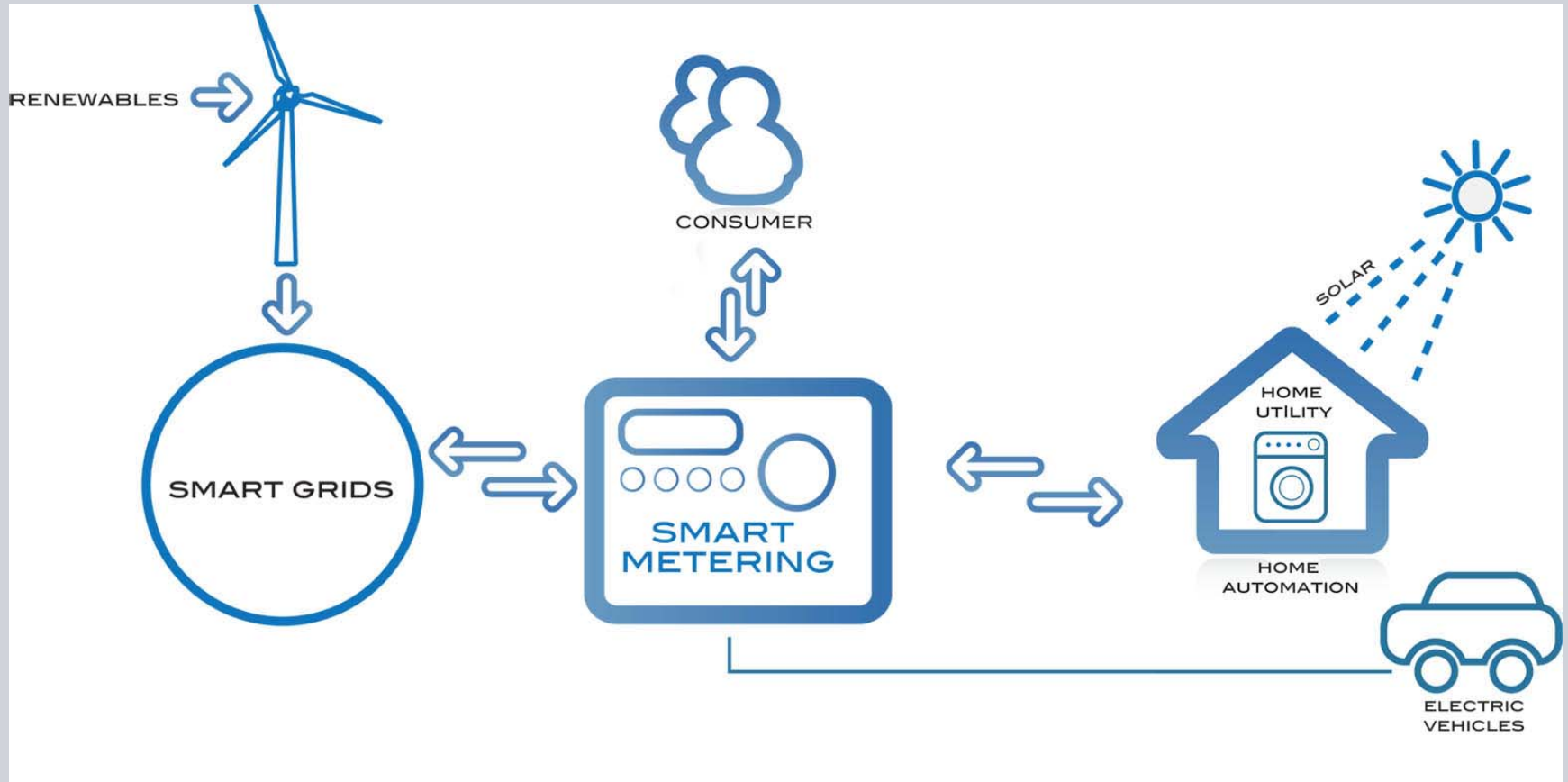
- The establishment of a smart grid and the roll-out of smart meters;
- The full establishment of feed-in tariff systems in electricity - as well as the maintenance of banded ROCs;
- Measures to promote a huge increase in energy efficiency and biomass digestion;
- The creation of a green investment bank;
- The provision of home energy improvement paid for by the savings from lower energy bills;
- Retention of energy performance certificates while scrapping HIPs;

Will allow households and businesses to invest in energy efficient solutions

How can these all these policies be implemented?



Smart Metering and Smart grid??



What it means for buildings – the domestic example

The Smart Home

In the future consumers may be able to communicate their energy choices to the power grid and automatically receive electricity based on personal needs

Ultra low-carbon vehicles

Plug-in hybrid and electric cars could store energy during periods when renewable energy generation exceeds demand. In the long term, if battery technologies develop, they may be able to act as backup generators for homes and supplement the grid during peak demand periods

Smart Meter

Real-time pricing signals create increased options for consumers.

Smart Appliances

Smart appliances contain computer chips that can communicate with the grid, sense grid conditions like frequency, and turn themselves on and off automatically to help manage spikes in demand.

Internet control

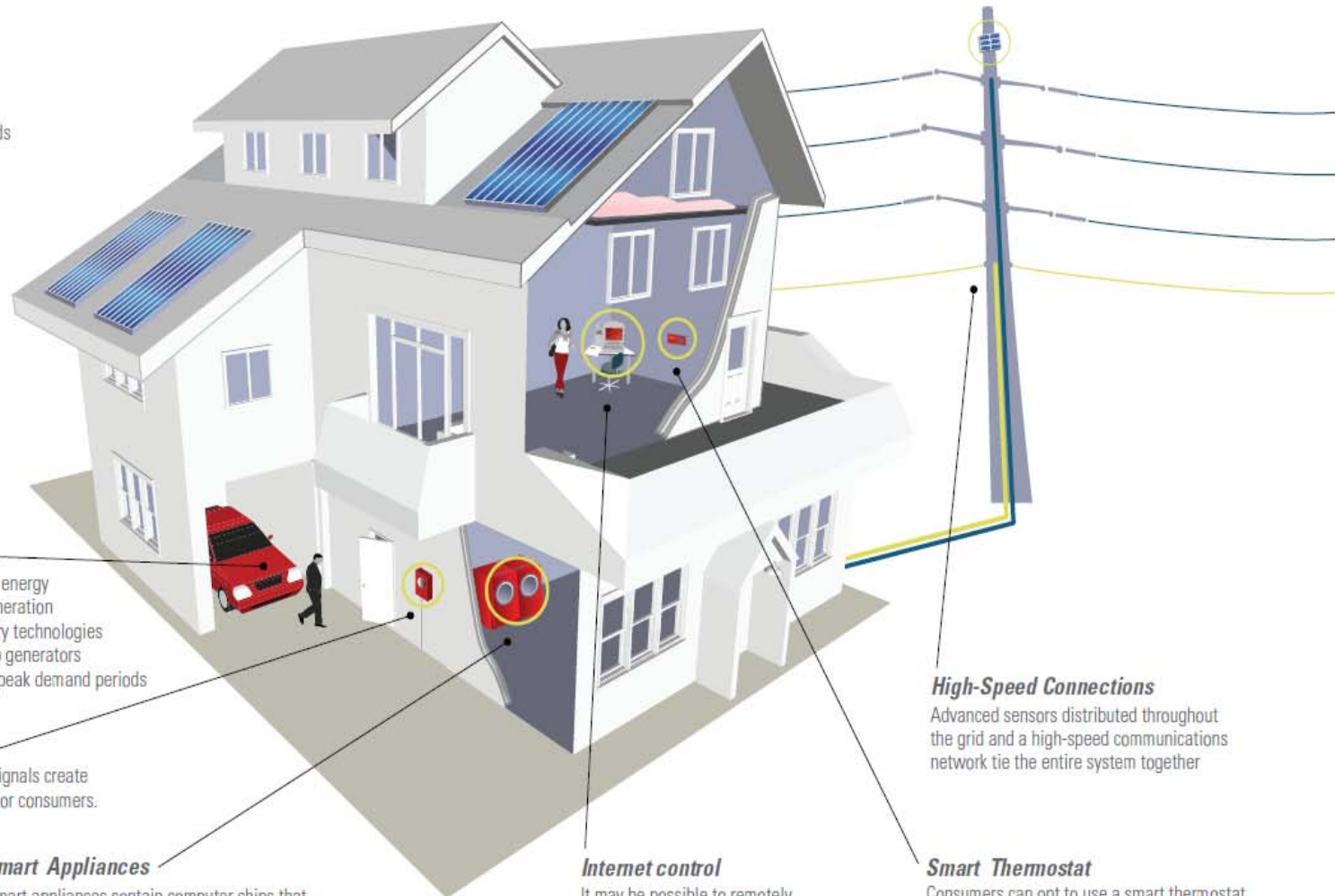
It may be possible to remotely control electricity usage

High-Speed Connections

Advanced sensors distributed throughout the grid and a high-speed communications network tie the entire system together

Smart Thermostat

Consumers can opt to use a smart thermostat, which can communicate with the grid and adjust settings to help optimize energy demand management.



What does this mean for UK businesses?

All businesses will be faced with:

- Increased energy costs
 - Increased environmental and carbon based regulations – these usually will cost money!!
 - Increased customer demands for green and clean products and solutions
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- Smart solutions provide the tools for businesses to controls costs, and position them as Green leaders
 - Investing in smart technologies – or taking advantage of utility offers – will put businesses in the best position to deal with current and future pressures.

And – domestic consumers will be faced with the same pressures and smarts can provide the same answers.

Thank You

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