

The Merton Rule –

A Practical Workshop

“The Importance of Adoption”

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Government's Energy issues (1)

- Years of no investment in Energy
- Power stations reaching end of life
- Grid needs costly upgrading
- Environmental rules have killed Coal
- Renewables now making a big impact
- Nuclear is expensive
- Biomass coming from Canada!
- Gas supply not guaranteed beyond 2035
- Existing Houses will have to change heating system!
- Government need an Energy Strategy



Government and Energy issues (2)

- Money and Support funding is running out
- Market will have to decide – lowest price wins!
- Distributed Generation is happening
- Air Source heat pumps need electricity
- Transport needs electricity (EV's & Rail)
- Cities are struggling with pollution issues
- Storage is a game changer for Solar and Wind



Industrial Strategy

- Security of Supply is vital (particularly with Brexit)
- Must be competitive with other Countries on energy
- Wind (Onshore), Solar and Storage will soon be the cheapest form of energy generation across the World
- Air Source, Ground Source Heat Pumps together with UK grown Biomass and AD all have a major part to play
- **TRANSITION**
- Will Nuclear ever be built? Can we wait?
- What happens if Energy providers go bankrupt
- Should investment be made in the Grid

Zero Carbon Buildings - Myth?

- Government previously relaxed Zero Carbon Building requirements
- But knowing EU required them by 2019
- So Zero Carbon has not gone away – just got delayed!

- Important that LA's take account of this when formulating policy.



Speed of Technology advancements

- Electronics Industry lead development for Phones and Computers developing smaller but more powerful batteries
- Motor Industry now developing the same technology to power Electric Vehicles
- This same technology is now entering the power industry at all levels, including buildings.
- All based around Lithium Ion battery technology

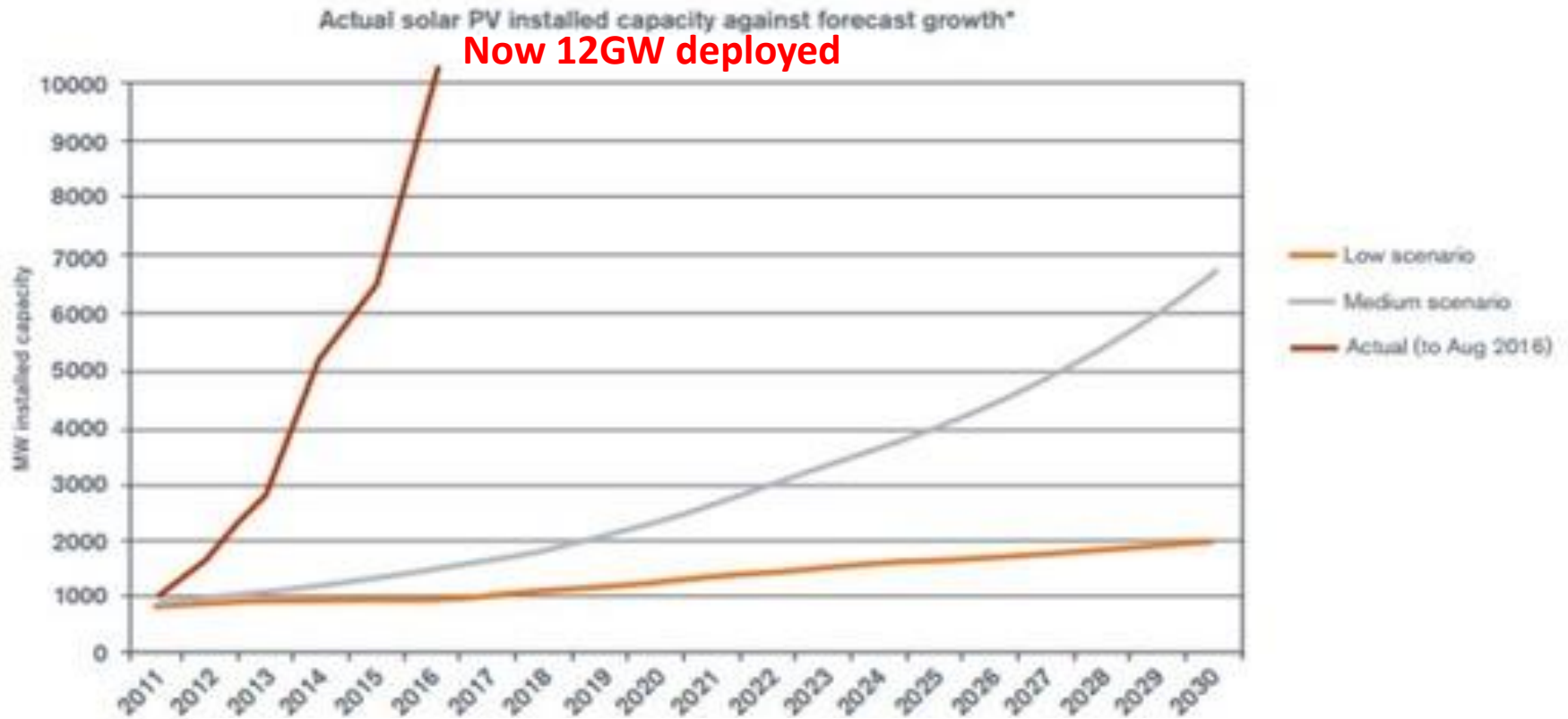


Energy solutions are Pollution solutions

- All car manufacturers are now introducing a full range of EV's from 2017 to 2020 with ranges of 200 to 350miles (range anxiety is dead!)
- Even heavy transport moving to electric (Buses, Ships & Lorries)
- Talk of a ban on diesels and a scrappage scheme
- Delivery vans will soon all be electric



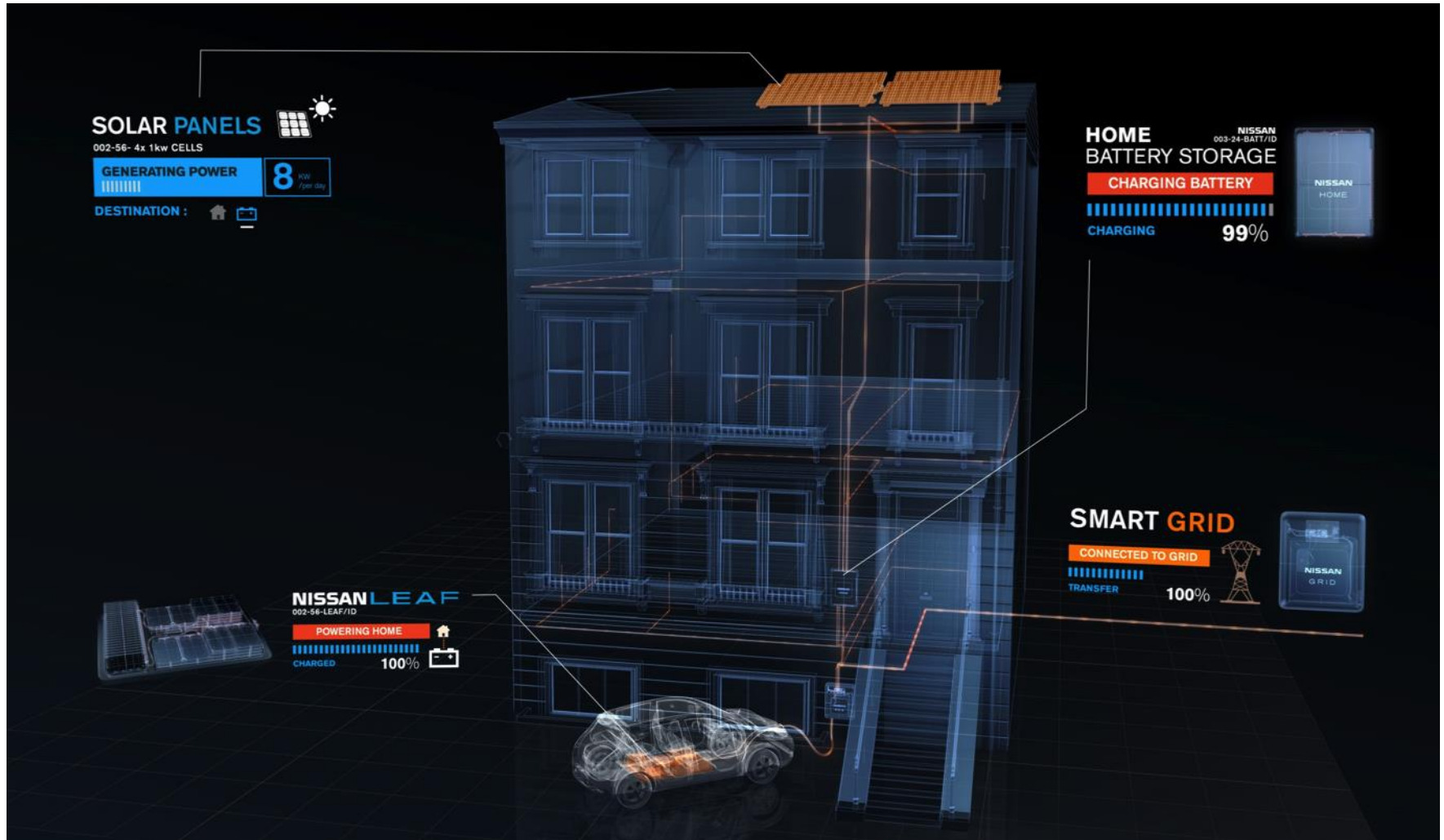
Global mass production drives down cost rapidly



* Low and Medium Scenarios come from the EA Technology 2012 report "Assessing the Impact of Low Carbon Technologies on Great Britain's Power Distribution Networks". Actual installed capacity is from DECC solar photovoltaics deployment data.

Storage will drop in price faster than Solar

Smart Transport and Housing



Reducing energy need and supply

- New Buildings – should apply the Merton rule
- EV charging needs to be included
- Energy efficiency should be “Passive Haus” levels
- LED lighting and “AA” rated white goods need to be specified
- Site generation is a must, technology has the solutions
- Energy companies in problems, 15% increase in price shows what is around the corner!



Time of use Smart meters are coming

- Customers need to be protected from “Red Zone” prices, particularly the “fuel poor”.
- Housing with Solar and Storage can avoid Red Zone prices
- Moving to a total electric economy
- Makes total sense to make buildings / sites a generator
- Costs now affordable
- Energy bills can be reduced by up to 75%



Start working out the opportunities

Cornwall's energy future

We will create an energy future that is cleaner and more affordable, retaining the social and economic benefits in Cornwall.



CORNWALL & ISLES OF SCILLY
LOCAL ENTERPRISE PARTNERSHIP



Cornwall has a wealth of renewable energy resources

- Best wind resource in Western Europe**
- Best solar resource in mainland UK**
- Best geothermal resource in the UK**
- Huge potential for offshore renewables**

32% of our electricity demand met by renewables in 2016

We will exploit this unique opportunity to...

Tackle energy inequalities

Making our homes, businesses and transport greener and more affordable.



Take local control of our energy

Generating, owning and using our energy locally to reduce bills.



Become a world-leading green economy

Retaining benefits in our communities and securing year round jobs.



We will create an energy future that is cleaner and more affordable, retaining benefits in Cornwall

2030 outcomes

- Reduce fuel poverty to 5%**
- 100% electricity demand met by renewables**
- 30% of energy spend retained in the Cornish economy**
- 50% locally owned generation**
- 20% reduction in fuel bills**
- 4000 green jobs**

but Cornwall is not benefiting and we currently spend £1bn a year on our energy

- 98%** of our energy spend leaves the local economy
- People are struggling to heat their homes**
- Public sector budgets and funding are reducing**
- Our economy is under performing**
- Our infrastructure is outdated**

More money for our public services

Improved air quality

Lower bills

Warmer homes

Year round jobs in Cornwall

Thriving communities

Locally owned generation

Cleaner transport

Exporting our expertise

Reduced impact on climate change

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The Merton Rule starts the Solution..

Thank You

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