Smart Metering Programme Benefits Map (Team A: RM, MK, SB, AP, GB)

Wider energy vision

Security or supply part of vision

Should we balance across fuels

SM Vision

O11: Deliver economic benefits
To manage the costs and benefits attributable to the programme , in order to deliver the economic benefits set out in the Strategic Business Case

Separate programme costs critical enabler

O8: Include wider policy benefits in business case
To ensure that the dependencies on smart metering of wider areas of potential public policy benefits are identified and included within the strategic business case for the programme, where they are justified in cost benefits terms and do not compromise or put at risk other programme objectives

O3: Effective competition
To promote effective competition in all relevant markets

Vibrant competing market with innovation etc.

[The roll out of] smart meters will play an important role in Great Britain's transition to a low carbon economy, and help us meet some of the long term challenges we face in ensuring an affordable, secure and sustainable energy supply

Vision needs +ve NPV [Net Pesent value]

O2: Smoother electricity demand
To promote cost effective smoother electricity demand, so as to facilitate anticipated changes in the electricity supply sector and reduces the costs of delivering (generating and distributing) energy

More about balancing demand than generating capability?

Network effect May not want to plan demand

Enablers
- Smart metering Facilitating
- TOU
- demand side mgt
- CPP etc

Low carbon transition plan

EMR [Elcctricity Market Reform]

Headline benefits (Minister level)

Early — Later

Carbon reduction

Early — Later

Cost savings to consumers

Benefits
- quantifiable
- intangible

Quantified benefits from IA
1 Energy savings E L
2 Avoided meter reading L
3 customer switching/NSS L
4 Debt handling L
5 [Less] inbound enquiries E
6Avoided cost of carbon L
7 Load shifting E
8 Avoided PPM COS premium L
9 Avoided site visit
10 TOU tariffs E
11 Remote (dis) connection L
12 Reduced losses (customers)
13 Reduced losses (networks)
14 Customer service overheads
15 Reduced theft
16 Micro generation

Accurate meter reading at COS

Depending on inspection derogation

Idle services?

Early

O6: Ensure support for smart grid
To ensure that timely information and suitable functionality is provided through smart meters and the associated communications architecture where cost effective, to support development of smart grids

Later

O4: Improved customer service
To facilitate improved customer service by energy suppliers, including easier switching and price transparency, accurate bills and new tariff and payment options

Measurement challenge
- may need to use existing meters

- sensitivity of supplier specific data
- is compliance true measure?

Benefits attributed to appropriate area of Govt policy eg FITS Green Deal?

Avoid cross contamination

Smart metering is an enabler in itself Key here are assumptions on how it is used to realise benefits

Critical enablers

Costs in IA are enablers Optimum

Competitive market required to deliver efficient deployment

O10: Ensure security, resilience and confidence
To ensure the communications infrastructure, metering and data management arrangements meet national requirements for security and resilience and command the confidence of stakeholders

Early — Later

Industry benefits

O5: Customer support for SM
To deliver customer support for the programme, based on recognition of the consumer benefits and fairness, and confidence in the arrangements for data protection, access and use

O1: Energy Savings
To promote cost effective energy savings, enabling all consumers to better manage their energy consumption and expenditure and deliver carbon savings

Regulatory governance

Avoided meteri reading

Solution

Install meters

Business readiness

Procure meters

Skills and training

O9: Deliver design requirements & frameworks
To deliver the necessary design requirements, commercial and regulatory framework and supporting activities so as to achieve the timely development and cost effective implementation of smart metering, meeting programme milestones and Government's 2020 deadline

Need to facilitate DSM, encoding, (FITS2) , Microgen, etc

Ties to design requirements

O7: Simplification of industry processes
To enable simplification of industry processes and resulting cost savings and service improvements

Timing of benefits realisation

Early in roll out — Later in roll out

Smart Metering Programme Benefits Map (Team B: ZM, SB, LG, AT)

Vision

Overarching theme

Confuses

What needs to happen to deliver benefit

Critical enablers / outcomes

Enablers

Deployment Optimisation Rationalisation

Measures

The roll out of smart meters will play an important role in Great Britain's transition to a low carbon economy, and help us meet some of the long term challenges we face in ensuring an affordable, secure and sustainable energy supply

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O11: Deliver economic benefits
To manage the costs and benefits attributable to the programme , in order to deliver the economic benefits set out in the Strategic Business Case

Supply of energy reliable
Power outages

1

O1: Energy Savings
To promote cost effective energy savings, enabling all consumers to better manage their energy consumption and expenditure and deliver carbon savings

Customer service
Energy savings
Affordability

All customers benefit
Including low income

Carbon savings separate benefit

Lower cost bills
Better manage energy use

Quantified benefits from IA
1 Energy savings
2 Avoided meter reading
3 customer switching/NSS
4 Debt handling
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9 Avoided site visit
10 TOU tariffs
11 Remote (dis) connection
12 Reduced losses (customers)
13 Reduced losses (networks)
14 Customer service overheads
15 Reduced theft
16 Micro generation

O3: Effective competition
To promote effective competition in all relevant markets

Energy services
Supply
Products
PPM Market

Load shifting
Need protections
• Automation
• TOU esp CPP
•= customer satisfaction + confidence

Mandatory installation code of practice

• Customer satisfaction
• Customer complaints
• Cost PPM tariffs / TOU + smart tariffs

O2: Smoother electricity demand
To promote cost effective smoother electricity demand, so as to facilitate anticipated changes in the electricity supply sector and reduces the costs of delivering (generating and distributing) energy

Suppliers innovat in service deliver and metering

High quality IHDs free to all customers

Don't add in new costs to serve to PPM or leave PPM rollout until last

Put in place settlement framework that supports TOU tariffs

Legislation
Govt report on progress of strategy / delivery against Impact Assessment + cost benefit to customers

4

O4: Improved customer service
To facilitate improved customer service by energy suppliers, including easier switching and price transparency, accurate bills and new tariff and payment options

Not a benefit in itself
= enabler

KEY: Knock on effect where have bill and push in to debt

Modernising energy sector + deliver step change customer confidence and repute

Facilitate / enable smart grid

Fewer visits from meter people
Need to be clear what customer service improvement should be delivered + how you get there
Debt = friendly credit/emergency credit
Switching – speed/ease
- cost – customer better off
- quality – right deal / satisfied

O5: Customer support for SM
To deliver customer support for the programme, based on recognition of the consumer benefits and fairness, and confidence in the arrangements for data protection, access and use

Ensure suppliers not constrained in ability to engage consumers

Ensure barriers to rollout of PAYE removed

National engagement strategy

3

O7: Simplification of industry processes
To enable simplification of industry processes and resulting cost savings and service improvements

Centralised industry legislation by steps and processes

Coordination body to maximise engagement and cost savings

Free display should be pre-pay ready
Not separate display for PPM customer as will add to cost to serve

O6: Ensure support for smart grid
To ensure that timely information and suitable functionality is provided through smart meters and the associated communications architecture where cost effective, to support development of smart grids

Avoided meter readings = alternatives that safe for gas safety checks?

All smart meters support prepay and micro generation

-Mechanism to ensure cost transparency
- Network price controls

4

O8: Include wider policy benefits in business case
To ensure that the dependencies on smart metering of wider areas of potential public policy benefits are identified and included within the strategic business case for the programme, where they are justified in cost benefits terms and do not compromise or put at risk other programme objectives

PPM customers relative tariff cost decline + improved customer sevice

Govt liking up with wider programmes e.g. digital Britain, water? Fuel, poverty, health

2

Major benefit
Reduced meter reading costs£2.8n

O9: Deliver design requirements & frameworks
To deliver the necessary design requirements, commercial and regulatory framework and supporting activities so as to achieve the timely development and cost effective implementation of smart metering, meeting programme milestones and Government's 2020 deadline

Reform meter safety inspection rules

Mandated extra help for low income and vulnerable customers

Consumer protections in place
1 Data privacy
2 Security
3 Remote functionality
4 Sales and marketing

To facilitate theft reduction

O10: Ensure security, resilience and confidence
To ensure the communications infrastructure, metering and data management arrangements meet national requirements for security and resilience and command the confidence of stakeholders

Ensure regime protects consumers + builds confidence without undue impediment to benefits delivery

Support information for customers on how to use IHD + smart meter
Free phone help line
Free from mobile too

Challenge is that carbon puts people off
Do not necessarily need an IHD
Focus on ££s

Customers and third parties can access data on energy consumption easily and for free = promote competition

Data sharing to identify low income consumers = deliver extra help