

Green Deal: the story so far

Tokyo Green Deal Seminar
24 February 2014

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Overview

- Context and background
- How Green Deal works
- Development of the Green Deal
- Lessons learnt
- Wider Policies
- Predictions versus reality



Policy objectives

- Reduce CO₂ emissions → Legally binding target to cut UK emissions by 80% by 2050
- Reduce consumer energy bills → Average annual bill = £1,344
- Improve security of energy supplies
- Boost jobs and economic growth → Estimate up to 60,000 jobs

**Energy efficiency can
address all these objectives
and more**

UK Housing Stock

Key facts

- Over 26 million homes in total
- Homes tend to be permanent structures - 20% of stock built before 1919 (poorest performing)
- Majority are post-1945 cavity wall construction
- 21m homes heated by gas; 3.1m heated using electricity

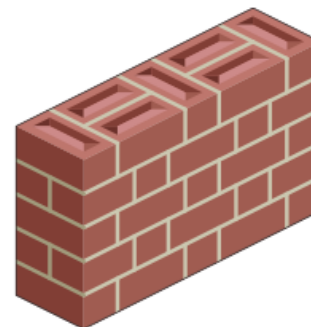
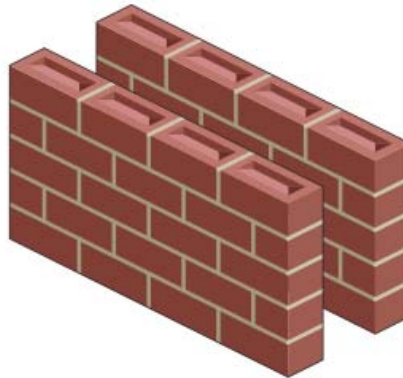


Key insulation measures

Loft insulation
~£500 to install on average
Almost all have *some* insulation



Cavity Walls
~12m dwellings
~£500 to install
~50% remain without insulation



Solid Walls
~8m dwellings
~£4,000 to £14,000+*
Almost all are uninsulated

Other technologies

All of these are eligible for Green Deal

Heating

- Condensing boiler (gas or oil)
- Fan-assisted storage heater
- Flue gas heat recovery device
- Heating controls (e.g. remotely controllable thermostats, zone controls, smart radiator valves)
- Warm-air unit

Hot water

- Hot water cylinder jacket
- Cylinder thermostat
- Waste water heat recovery devices for showers

Windows and doors

- Replacement glazing
- Secondary glazing
- High performance external doors



Insulation

- Cavity wall insulation
- Solid Wall Insulation
- Draught proofing
- Loft or roof insulation
- Room in roof insulation
- Under-floor insulation

Micro-generation and renewables

- Air source heat pumps
- Biomass boilers and heaters
- Ground source heat pumps
- Micro wind generation
- Micro CHP
- Water source heat pumps
- Solar water heating
- Solar Photovoltaics

Note: additional measures and technologies are available for non-domestic properties

Park homes

“Park Homes” are prefabricated homes designed for holiday accommodation, but ~250,000 occupied all year round

Designed to last 15 to 30 years.

~£4,000 to £6,000 to insulate with specialist systems



Reasons for intervention

Barriers to energy efficiency in UK

- Consumer awareness and motivation
- Upfront cost of measures
- Hassle factor
- Identifying the right measures and installers



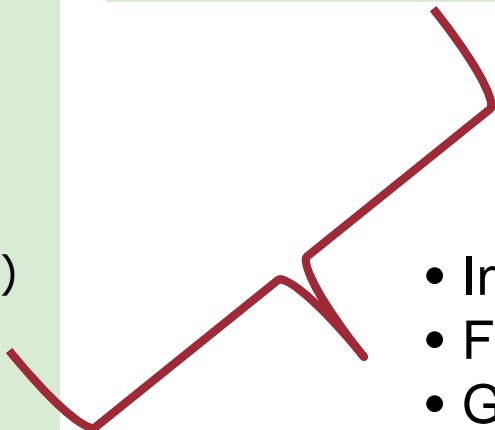
Policies past and present

Historical programmes

- Carbon Emission Reduction Target (CERT)
- Warm Front (fuel poor)
- Standards and labelling for appliances and gadgets
- Building Regulations (new build)
- Feed in Tariffs (for PV)

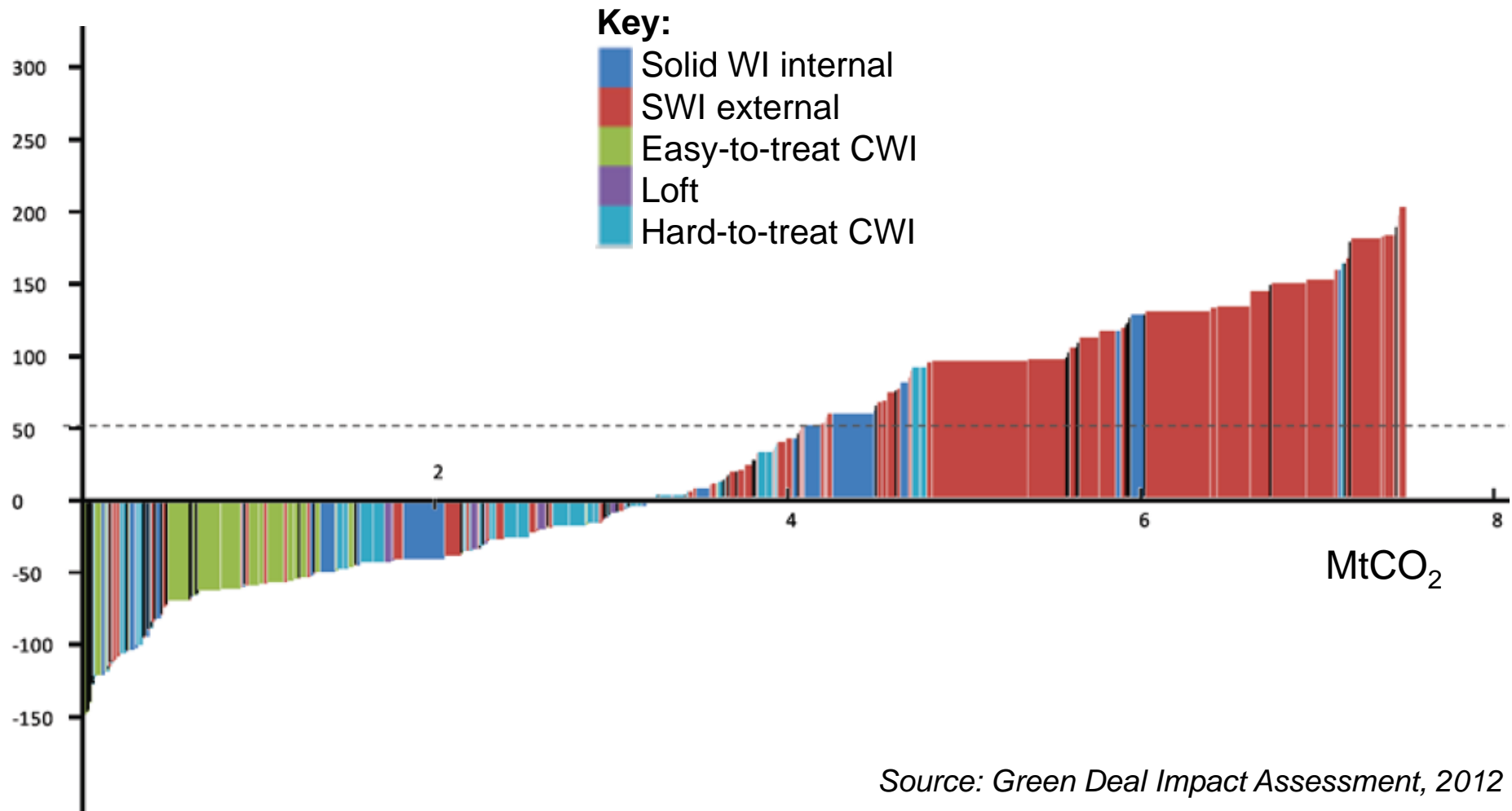
New and emerging policies

- Green Deal Finance
- Energy Company Obligation
- Cash back incentives
- Renewable Heat Incentive (domestic)
- Smart meters

- 
- Information and labelling
 - Fiscal incentives
 - Grant
 - Choice editing
 - Regulation

Marginal abatement cost curve for insulation measures by 2020

£ / tCO₂



Source: Green Deal Impact Assessment, 2012

The Green Deal

The Green Deal helps people
pay for improvements
through savings on their energy bills.

Customer journey



Assessment



Assessor tailored recommendations on what customer needs.



Recommendations



Provider arranges quotes to customer, provides finance and arranges for installation



Quotes



Installer installs improvements



Installation



Repayments

Customer enjoys benefits and pays provider over time through savings

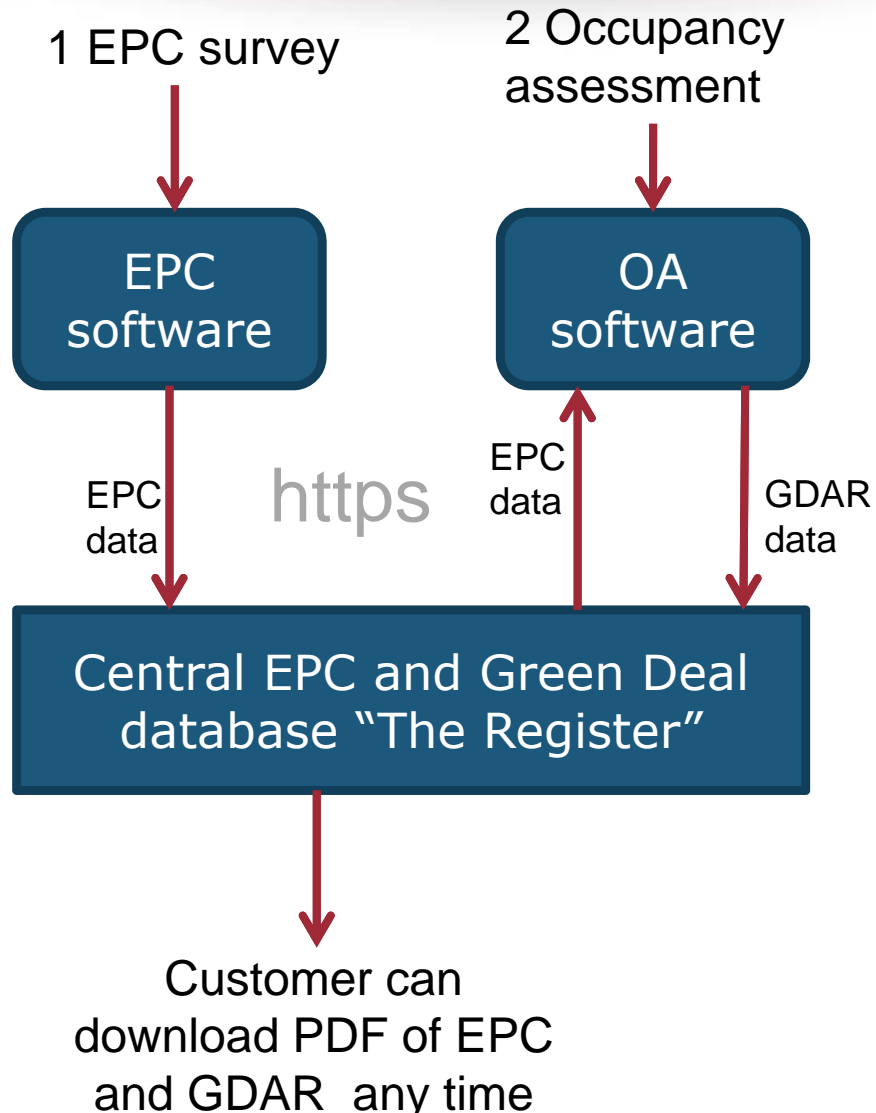
The Assessment (1)

- **Objective** is to recommend improvement measures and estimate the annual energy bill savings. Output is a **Green Deal Advice Report (GDAR)**
- Has **two parts**:
 1. Building fabric (Energy Performance Certificate - EPC)
 2. How the occupant uses energy (Occupancy Assessment)
- Both parts use a **standard calculation methodology** (based on SAP*)
- **Assessment software** developed by commercial companies (currently seven approved Green Deal software tools).
- Data from EPCs and Occupancy Assessment is **stored on a central database** – “The Register”
- The Register provides customer with PDF of GDAR.



* SAP documentation: www.bre.co.uk/sap2012/

The Assessment (2)



- Only qualified Advisors can access the Register.
- All software must be tested and approved by Government.
- Certification schemes host the software and audit a % of all GDARs
- Customers can take PDF of GDAR to Green Deal Provider to get quotes.
- Some software on web and iPad lets customer play with results.

The Assessment (3)

GREEN DEAL Occupancy Assessment Advice Report

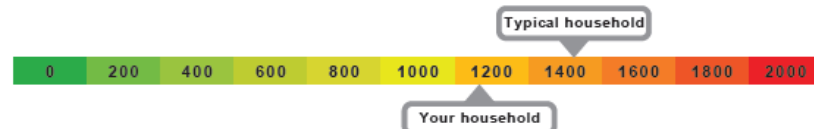
69, Blenheim Road, Caversham, READING, RG4 7RP

Date of assessment: 13 May 2013
Date of report: 13 May 2013

Reference number: 8309-6370-8859-5897-8573
UPRN: 8988338078

This report shows how your household uses energy currently, and recommends ways of making your home more energy efficient. The amount of money you could save from Green Deal improvements depends on how much energy your household currently uses - the higher your bills, the more you could save.

Current energy bill for your household in £/year



'Typical household' shows energy usage for a typical property of this size and type. Your household's energy usage is LOWER than typical. See page 3 for how we have worked this out.

Green Deal improvements recommended by your assessor

For the list of recommendations on your Energy Performance Certificate, turn to the next page.

Improvements	Estimated costs*	Your household's estimated annual savings	Typical annual savings - maximum Green Deal repayment in year 1**
Internal wall insulation (100 mm) to 100% of insulated solid wall	£4,000 - £14,000	£116	£124
Floor insulation (100 mm)	£800 - £1,200	£23	£25
Solar water heating (panel area 3 m ² , orientation E)	£4,000 - £8,000	£24	£24
Total	£8,800 - £21,200	£163	£173
Electricity/gas/other fuel savings			£-10 / £183 / £0

* Discounts available for qualifying homes - see page 4.

** Repayments capped at this level - providers could charge less.

Insulation thickness shown in the table is based on mineral wool. A different thickness of other materials may provide the same performance.

Final product of the assessment process: the Green Deal Advice Report

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£4,000 - £14,000	£116	£124
£800 - £1,200	£23	£25
£4,000 - £8,000	£24	£24
£8,800 - £21,200	£163	£173
		£-10 / £183 / £0

Golden Rule

Key Feature 1: Finance

- You can pay for some or all of the installation cost through a Green Deal Plan, collected as an integral part of your electricity bill.
- Maximum amount you can borrow, including interest is determined by how much energy you're expected to save (The "Golden Rule").
- Once a plan is agreed, payments are fixed.
- If you move out you stop paying.
- "Green Deal Finance Company" – a private sector mutual offering finance at 6.96% (+ fixed admin fees) to providers. 15 investors including DECC and GIB.

Key Feature 1: Finance



Key Feature 1: Finance

Later, energy prices rise by 10% !



Key Feature 2: Trust



- Assessors, Providers, Installers must be accredited – Quality Mark to prove it
- Standardised advice to make it easier shop around
- Cooling off periods
- Insurance-backed guarantees in case of faulty advice or installation
- Single point of redress: the Provider
- Ombudsman to handle unresolved complaints

Development of the Green Deal

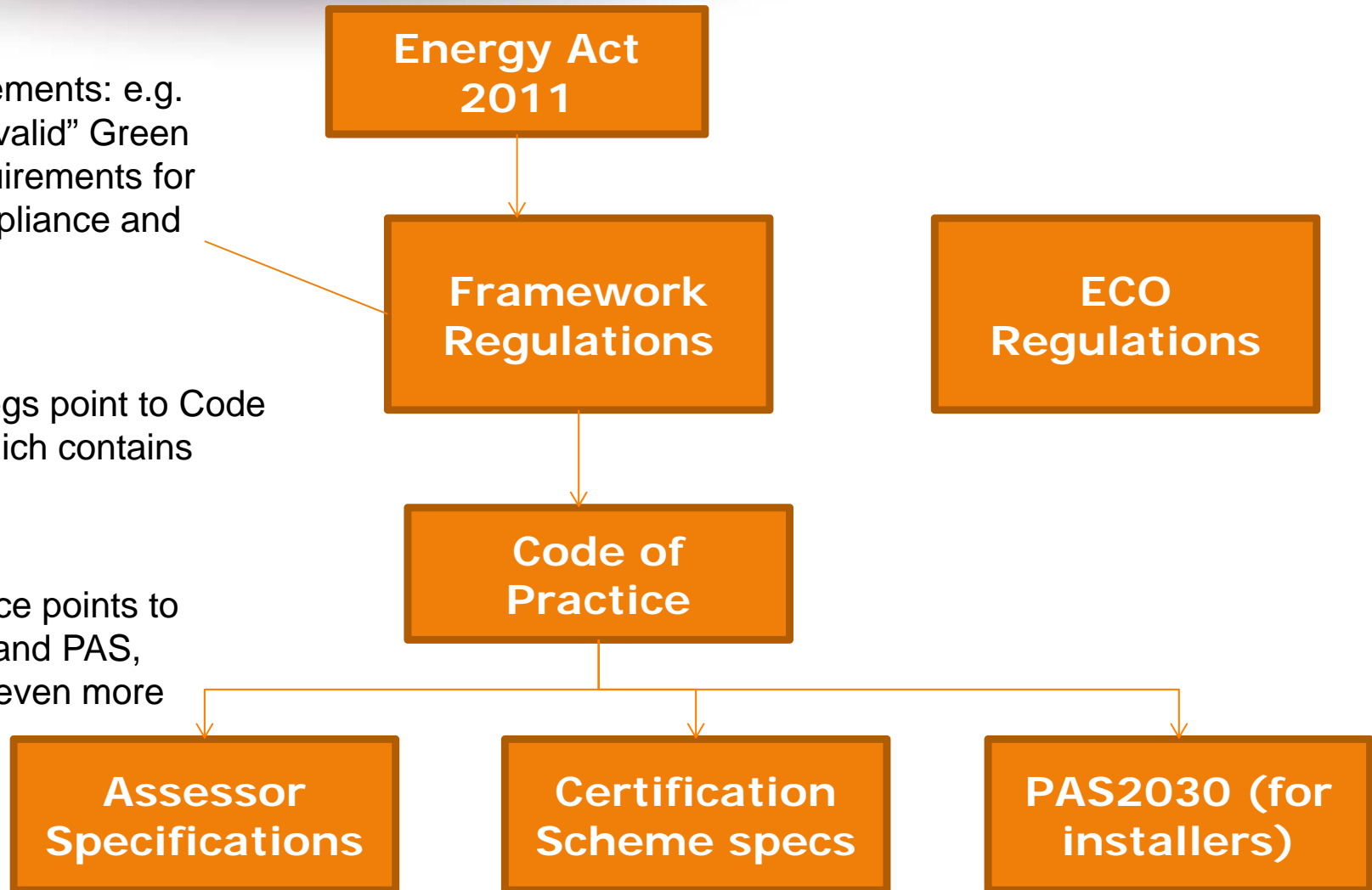
- New legislative framework
- IT infrastructure
- Skills and training
- Administration (Oversight and Registration Body)

Green Deal legal framework

Specific requirements: e.g. definition of a “valid” Green Deal Plan; requirements for disclosure compliance and enforcement.

Framework Regs point to Code of Practice, which contains more detail.

Code of Practice points to specifications and PAS, which contain even more detail!



Development costs

- Green Deal spend up to April 2013 was £71.9m.
- DECC staff resources peaked at ~90 people (not including external contractor staff)
- Budget provision for this year is £200m. This includes £125m for the Cashback scheme.
- The Green Deal indicative budget for next year is projected to be £19.2m.

Lessons learnt 1

- Never been done before – no precedents to use
- Sometimes didn't fit with other existing legislation (e.g. Consumer Credit Act 1974) – needed amendment
- Building on existing infrastructure (e.g. EPC framework) had pros and cons.
- Lot of IT infrastructure to develop:
 - Assessment tools (commercially developed)
 - Central national database
 - Energy bill repayments systems
 - And lots more!

Lessons learnt 2

- Market participants needed a lot of support in early stages
- Documentation and guidance alone is not enough
- Workshops and bilateral meetings help
- But also need hand-holding and trouble-shooting
- Make sure delivery partners are set up to provide good customer service to all users

Lessons learnt 3

- Many market participants were not ready at time of launch
- Lot of work required of Providers:
 - Administrative processes
 - IT systems
 - Staff training
 - Green Deal Plan templates
- So took longer for market to get their own systems in place.

Cashback Scheme

Some of the main rates

Loft Insulation	£100
Cavity wall insulation	£250
Solid wall insulation	£650
Condensing gas boiler	£270
Condensing oil boiler	£310
Single to A rated double glazing	£20/m ² max £320

- Packages could be worth over £1000 – the more work done, the more a householder can get.
- Limited offer while funds last. Rates guaranteed for the first £40M. £125M available in total.
- Process is exactly like the Green Deal – assessor, provider and installer all involved
- So, customers need to get an assessment to start the process.

**Full details and apply via
gov.uk/greendeal**

Green Deal Communities

- £80m fund for Local Authorities to bid for
- DECC currently assessing over 70 LA bids
- Winning bids will be those that demonstrate:
 - Strategy for **blending** Green Deal Finance with ECO funding
 - **Street-by-street** approach to delivery
 - Creation of **local partnerships**

Energy Company Obligation

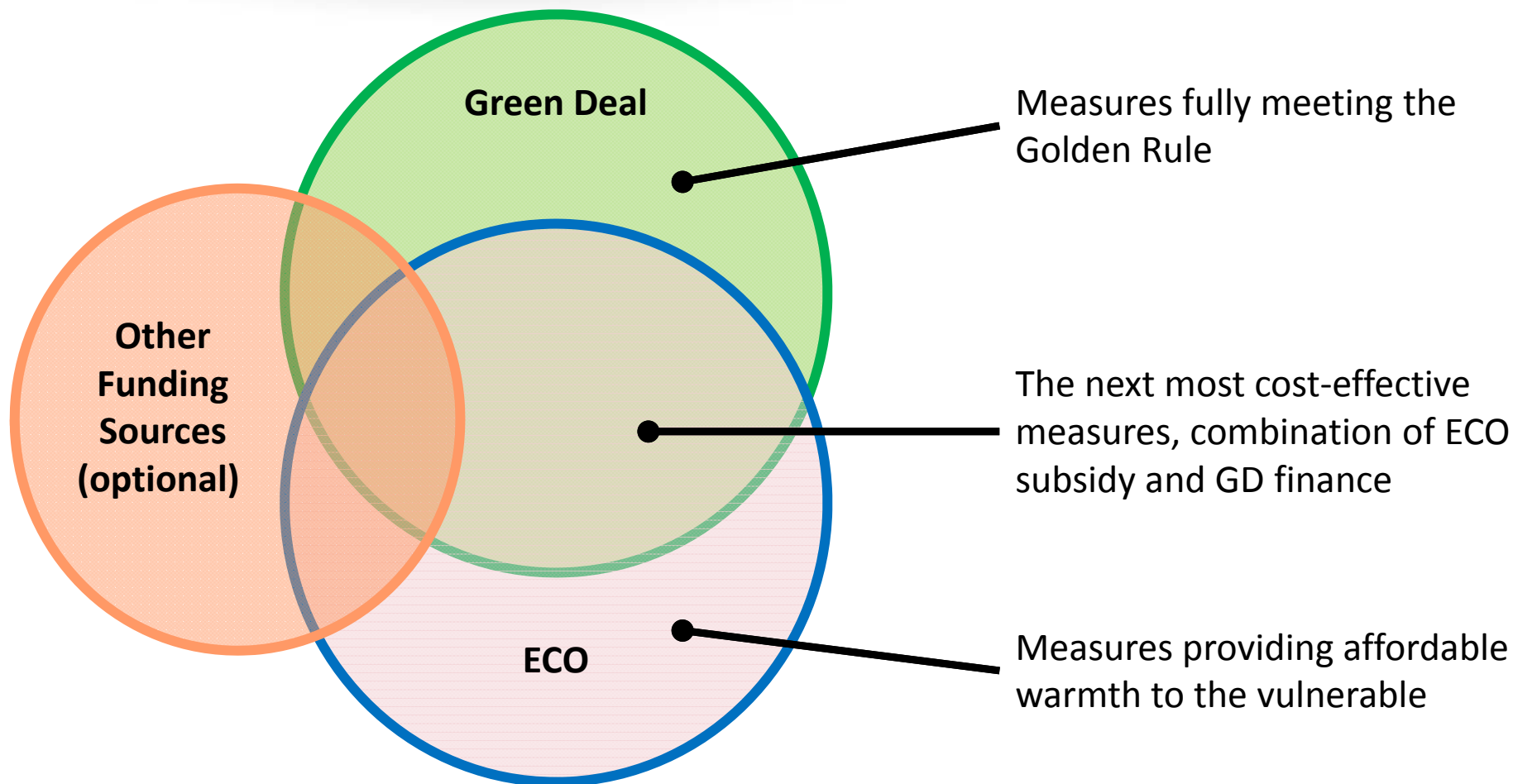
What is an energy company obligation?

- Government sets an outcome – in the case of ECO, carbon savings and notional fuel bill savings – and obliges through legislation energy retailers (with over 250,000 customer accounts) to deliver that outcome
- An administrator (Ofgem) then ensures the rules are followed – Government has no day to day control of the delivery
- Energy companies fund their obligations – we assume under ECO that costs will be recouped through consumer bills

Why use energy suppliers to deliver?

- Energy suppliers have a direct customer relationship with every household
- Liberalised market and economies of scale are thought to keep costs down
- Consistent with new EU Energy Efficiency Directive (Article 7)

Energy Company Obligation



Energy Company Obligation



- **ECO came into force on 1 January 2013** – initial obligation period runs until **31 March 2015**
- ECO is estimated to cost obligated energy companies around £1.3 billion per year to deliver
 - **‘Affordable Warmth’ Obligation**
£4.2 billion notional fuel savings (~£350m per year)
 - **‘Carbon Saving Communities’ Obligation**
6.8 MtCO₂ (~£190m per year)
 - **‘Carbon Saving Obligation’**
20.9 MtCO₂ (Approx. £760m per year)

Delivery so far

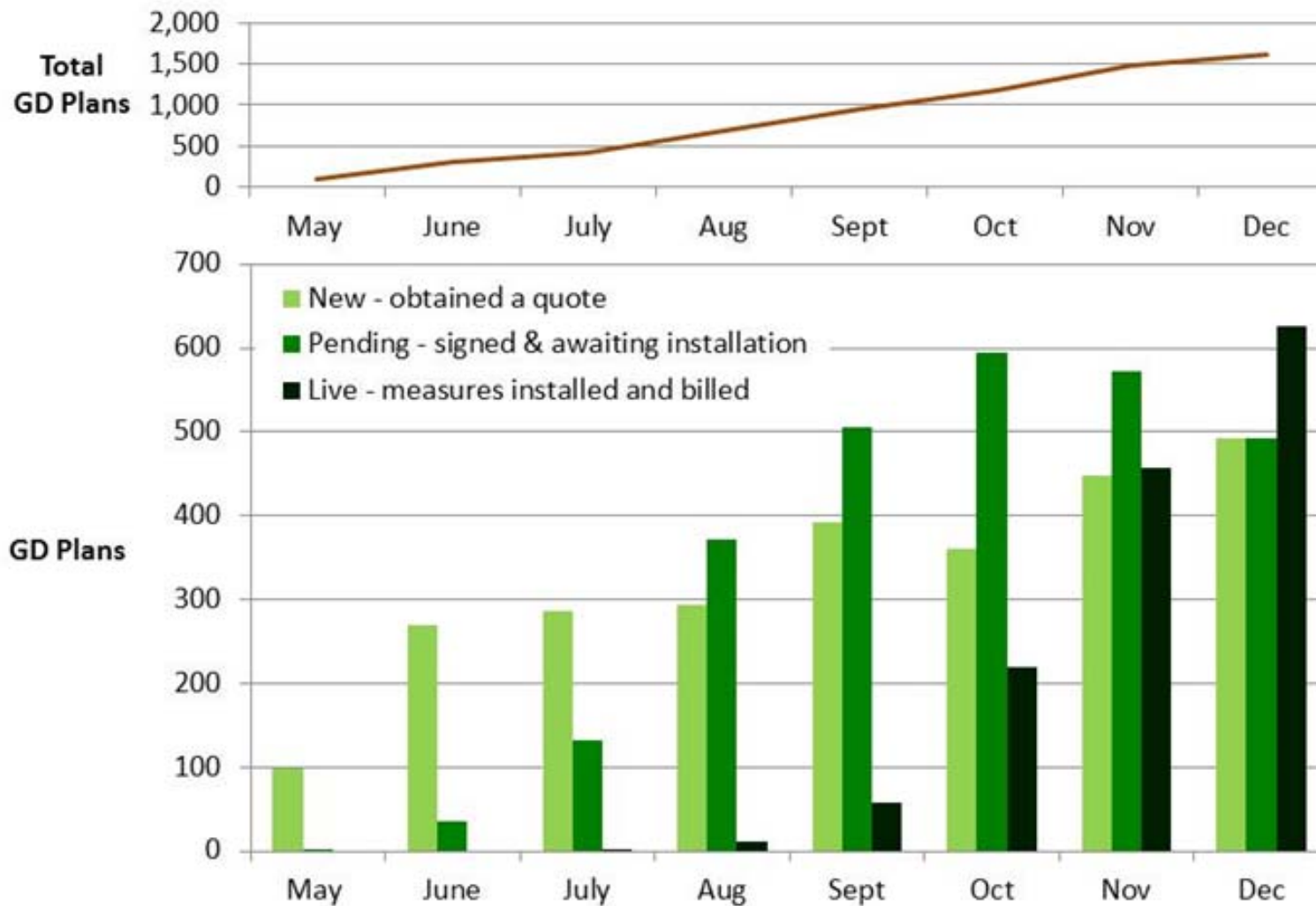
Key stats (as of end of January):

- 540,000 measures installed in around 457,000 properties
- 5% of measures were Solid wall insulation
- 145,110 Green Deal assessments
- 1,721 Green Deal Plan
- 11,044 Cashback Vouchers

Delivery so far



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Climate Change



Consumer feedback

- Recent research found the assessment experience to be fairly positive.
- Involved a survey of over 500 households.
<https://www.gov.uk/government/publications/green-deal-assessment-survey-summary-report>

Key findings:

- 75% of customers found their Green Deal assessment useful
- 77% had confidence in the recommendations they received from the Advisor
- 47% said they either had or were getting energy saving measures installed. A further 31 per cent said they would "definitely or probably" install at least one measure.

Thank you!



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