Workshop on the Green Deal

CAN Training-Day Conference
3 September 2013

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Objectives

- To explain the Green Deal ‘occupancy assessment’ and advice process
- To discuss how the Green Deal can help overcome the barriers to energy efficiency investment
- To discuss how local authorities and community groups can support homeowners to:
  - Understand what they can do
  - Access potential sources of finance/incentives

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Key Components of the Green Deal

- Provision of independent, impartial advice
- Production of a Green Deal Advice Report:
  - EPC and Occupancy Assessment
- Arrangement of Green Deal loan finance
  - Up to a maximum determined by the ‘Golden Rule’
- Installation of improvement measures
- Repayments via electricity bills
- Benefits: increased comfort, reduced fuel bills

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Green Deal Provider

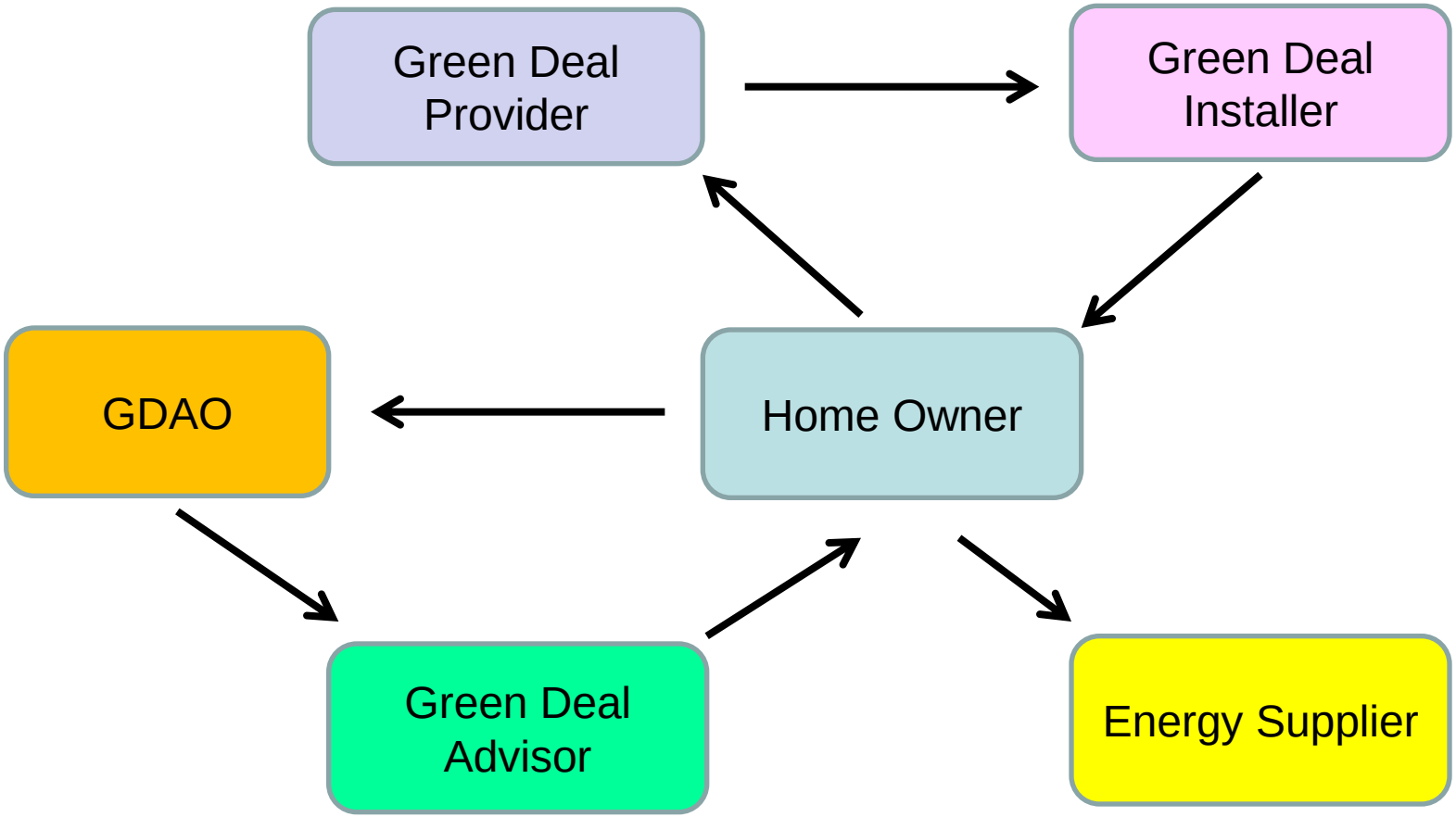
Green Deal Installer

GDAO

Home Owner

Green Deal Advisor

Energy Supplier



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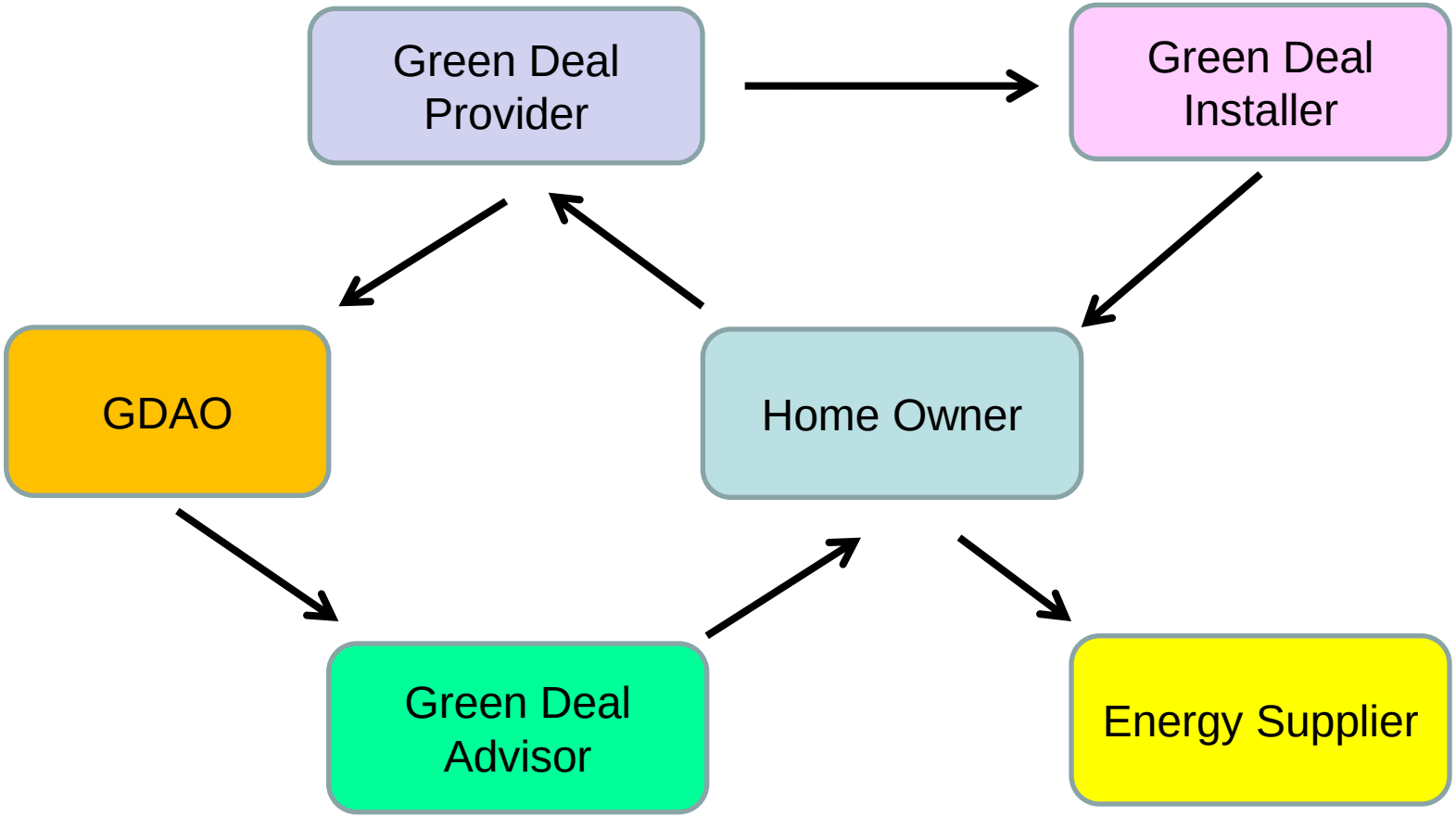

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Latest Green Deal statistics

	During July 2013	Total by 31 July
Green Deal Assessments	13,645	58,124
Green Deal Plans	113	419

Of the 419 total GD Plans:

1 is "live", 132 are "pending" (installation work proceeding) and 286 are "new" (quote accepted)

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Latest Green Deal statistics

Total numbers at 31 July 2013:

Advisors	Assessor Organisations	Providers	Installers
2,129	248	79	1,457

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Information required

- Number of occupants
- Heating times, temperatures and rooms heated
- Use of room heaters / portable heaters
- Numbers of showers and baths per day
  - and shower type
- Tumble dryer use
- Numbers of fridges and freezers
- Cooker fuel and type
- Unusual energy using items

AND actual energy consumption from fuel bills

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The Green Deal Advice Report

- The Green Deal Advice Report (GDAR) consists of two formal reports:
  - An Energy Performance Certificate (EPC), plus
  - An Occupancy Assessment (domestic) or an Operational Profile (non-domestic)
- An additional summary report prepared by the advisor may also be provided

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Occupancy Assessment report

- The EPC estimates energy savings based on ‘standard occupancy’
- The Occupancy Assessment report revises these estimates based on:
  - Actual fuel bills
  - Actual hours of heating, temperatures, use of heating systems
  - Adjustments for use of appliances

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Occupancy Assessment report

- Compares actual annual energy costs to those for a typical household
- Compares estimated savings from energy efficiency improvement measures for the household's occupancy pattern to those of a typical household
- N.B. It is the estimated savings for a typical household that determines the maximum loan repayment

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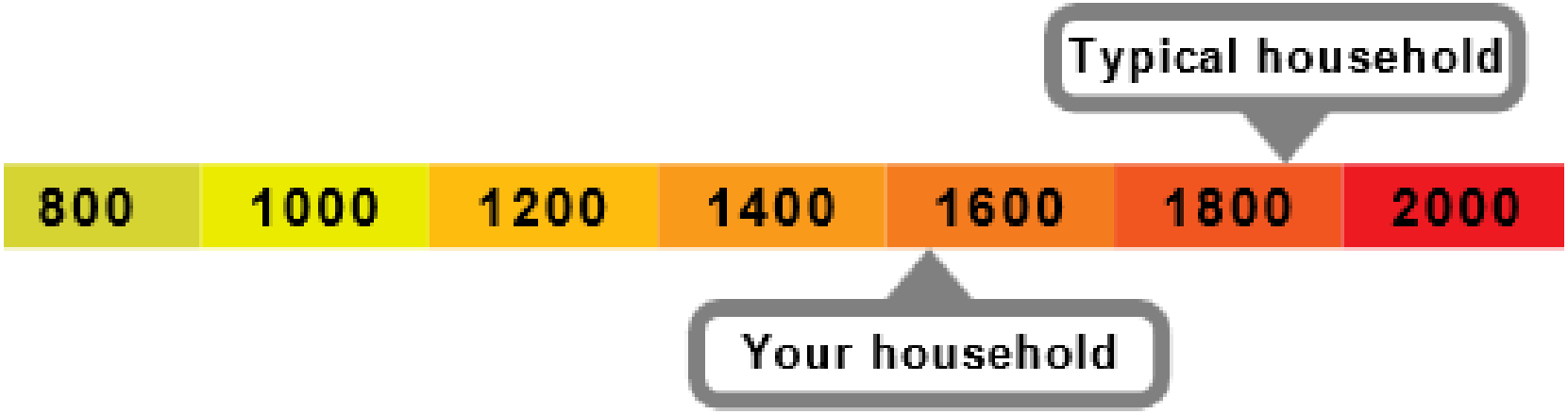
Current energy bill

ousehold in £/year



Typical household is based on:

- the RdSAP data for the actual building
- standard occupancy
- includes appliances, cooking, standing charges
- national average tariffs

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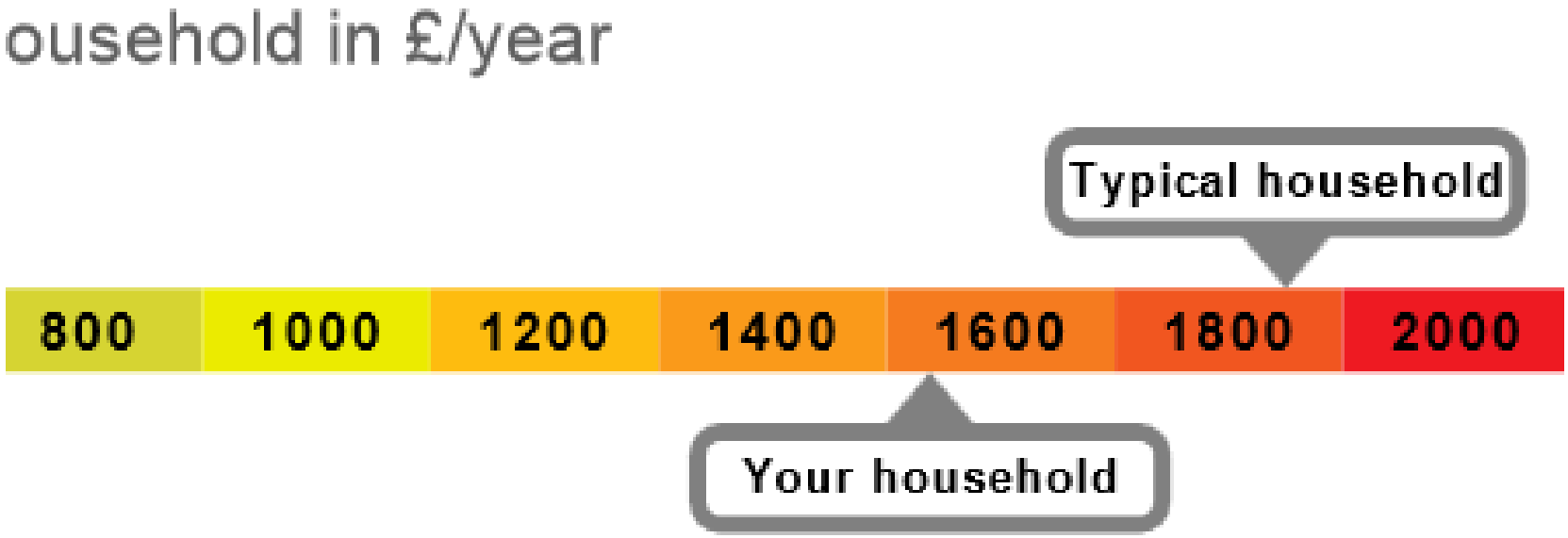
Current energy bill



Actual household is based on:

- the actual fuel bills if available, or
- amended RdSAP data based on the occupancy assessment plus national average tariffs otherwise

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Improvements recommended

Improvements	Estimated costs*	Your household's estimated annual savings	Typical annual savings - maximum Green Deal repayment in year 1**
Increase loft insulation to 270 mm	£100 - £350	£4	£8
Internal wall insulation (50 mm) to 90% of insulated solid wall	£4,000 - £14,000	£46	£94
Replace single glazed windows with low-E double glazing	£3,300 - £6,500	£15	£32
Solar photovoltaic panels (2.5 kWp, orientation S)	£9,000 - £14,000	£222	£222
Total	**£16,400 - £34,850**	**£287**	**£356**
Electricity/gas/other fuel savings			£221 / £134 / £0

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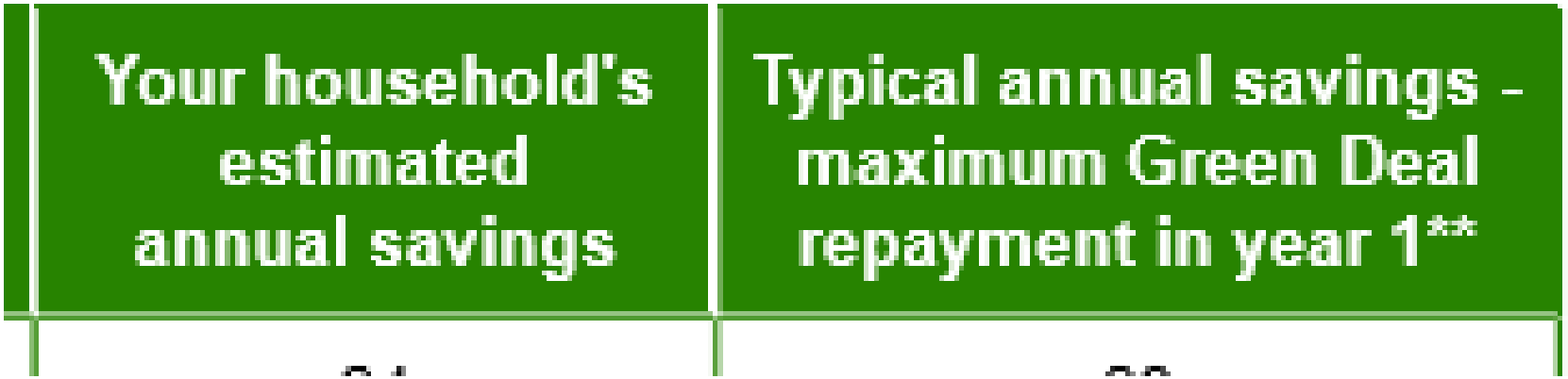

The estimated annual savings take account of:

- the occupancy data
- actual fuel consumption
- current fuel tariffs

The maximum GD repayment is the estimated savings based on:

- standard occupancy
- national average fuel tariffs

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Green Deal Plan

- Pay as You Save model - eligible to everyone with an electric meter
- No up front costs - recouped through electricity bills

BUT

- The Golden Rule must apply
  - Expected financial savings resulting from installing measures must be equal to or greater than the cost of repayment over the term of the Green Deal Plan

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Golden Rule Calculation

- The ‘golden rule’ is that the annual saving in energy cost must be at least equal to the annual repayments
- In practice this determines the maximum annual repayment that can be charged through a Green Deal Plan:
  - For a particular package of measures to the property in question

Golden Rule Calculation

- Where estimated energy cost savings are not sufficient to meet the Golden Rule, customers can choose to pay some of the installation costs up front
  - i.e. the loan amount only covers part of the cost so that the repayments are no greater than the estimated savings
- For homes with solid walls, ECO funding will be available to supplement Green Deal

Golden Rule Calculation

$$R = \frac{C \times r}{1 - (1 + r)^{-n}}$$

- Where:
  - R is the annual repayment
  - C is the cost of the measure (using the middle of the range if cost is quoted as a range)
  - r is the annual interest rate (7% at present)
  - n is the lifetime of the loan in years
- E.g. If C = £500 and n = 20 years R = £47

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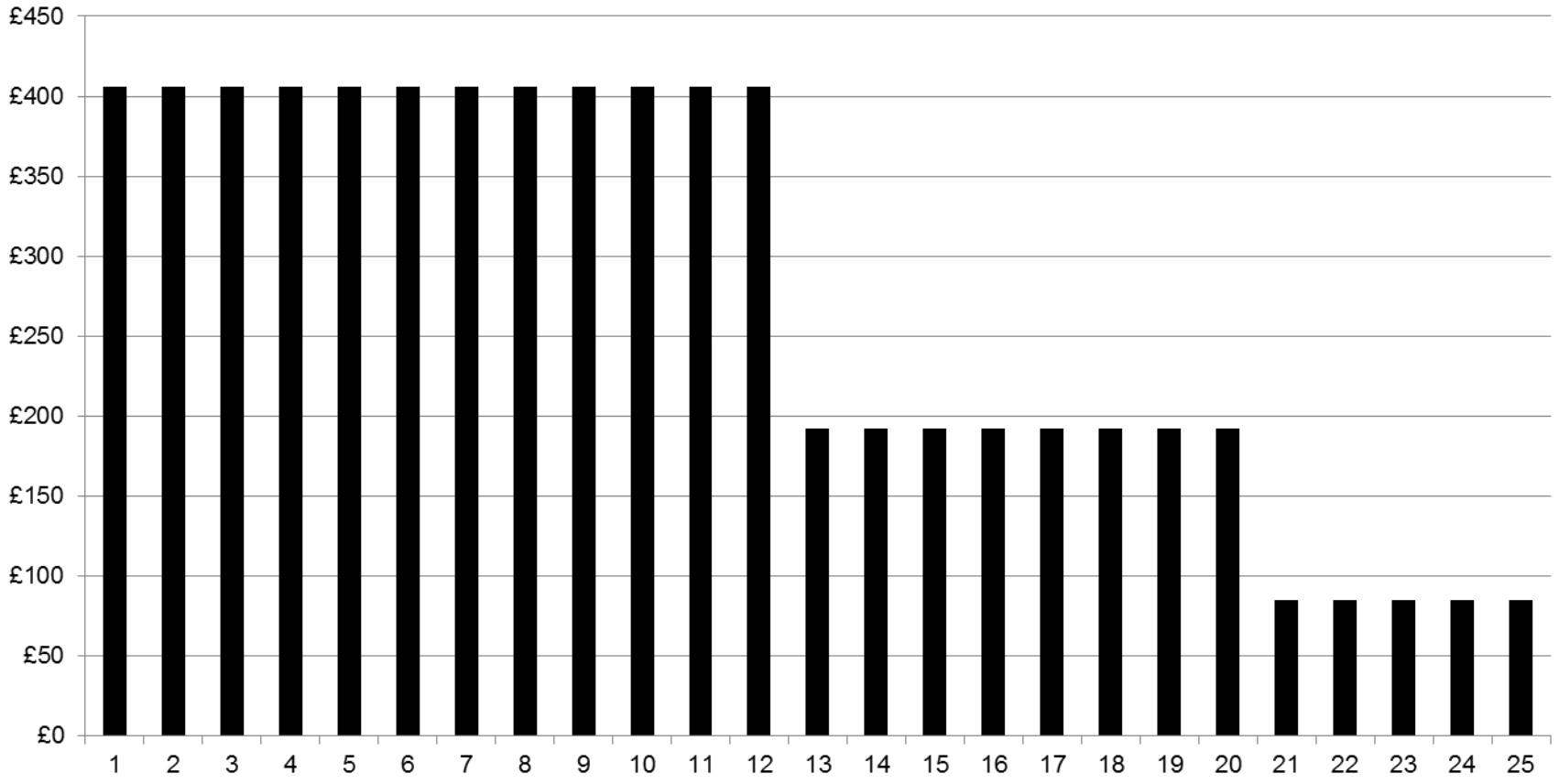
Annual repayments

- These will depend on:
  - The installation costs (3 quotes required if over £10,000)
  - The interest rate offered (subject to competition between Providers but expected to be around 7%)
  - The length of the loan (maximum 25 years but shorter if the measures have a shorter lifetime than this)
- Repayments are fixed at the start
  - May be constant throughout the loan period or increase by up to 2% per year

Repayments over 25 years



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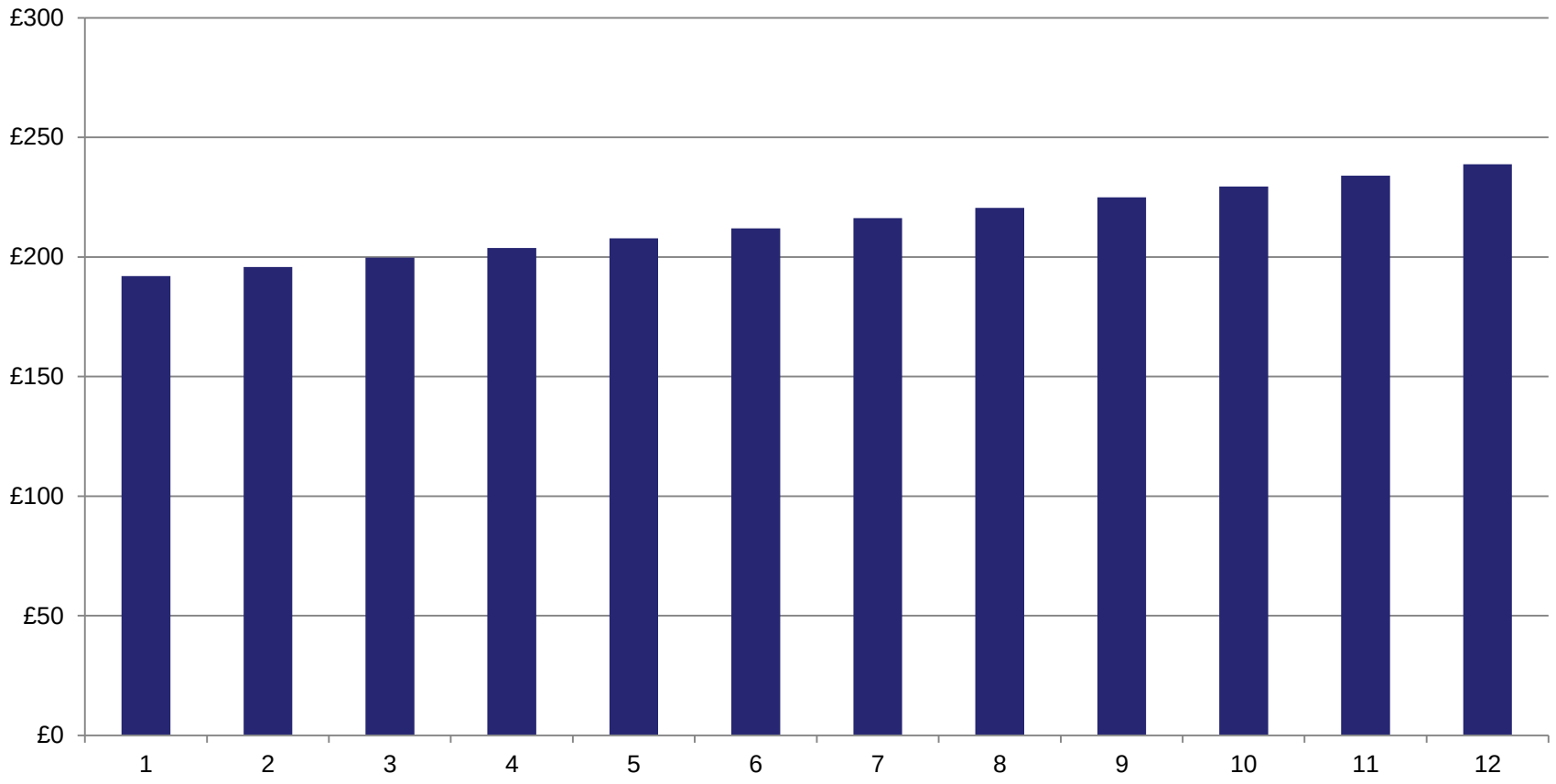
Payments increasing at 2%/year



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Measure lifetimes

Measure	Lifetime
Draught sealing, cylinder jackets, micro wind	10 years
Condensing boilers, FGHRS, heating controls, cylinder stats	12 years
ASHP, micro-CHP	15 years
Replacement glazing, secondary glazing, flat roof insulation, GSHP, biomass room heaters, fan-assisted storage heaters, warm air heating, WWHRS	20 years
PV, solar HW	25 years
Insulated doors	30 years
External or internal wall insulation	36 years
CWI, loft insulation, room-in-roof insulation, floor insulation	42 years

Measures	In-use factor
Heating controls	50%
Loft insulation (inc. loft hatch and rafter insulation), cavity wall insulation	35%
Insulation to solid brick walls built before 1967	33%
Other external or internal wall insulation, room-in-roof insulation, condensing gas or oil boiler, biomass boiler or room heater, ASHP, micro-CHP	25%
Flat roof insulation, floor insulation, hot water cylinder insulation, double glazing, secondary glazing, insulated doors, draught proofing	15%
FGHRS, WWHRS, cylinder stat, new or replacement storage heaters, replacement warm air unit, GSHP	10%
Solar hot water, solar PV, wind turbine	0%