Overview of the UK Energy Landscape in Light of the CSR

Alan Aldridge

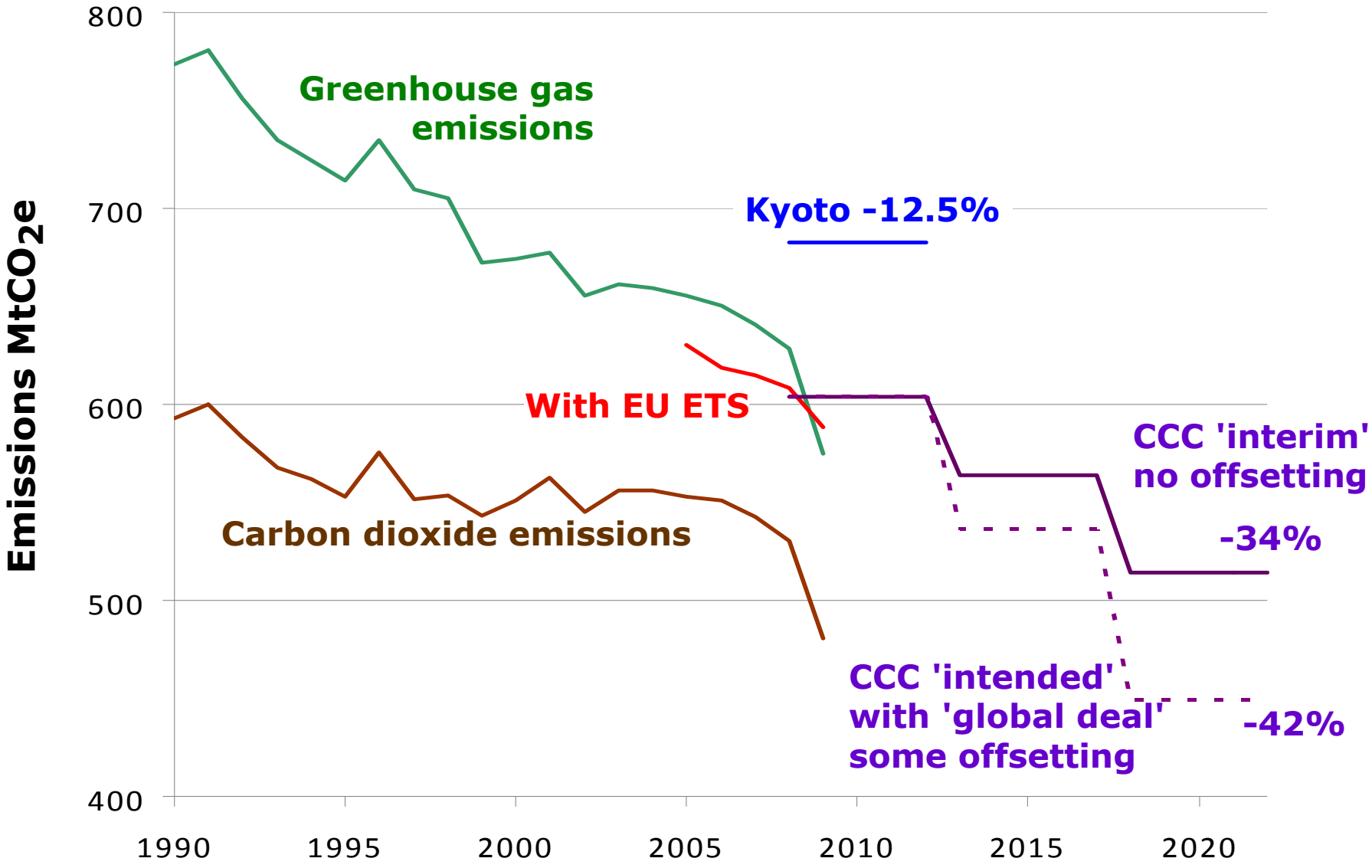
Executive Director

Energy Services and Technology Association

ESTA
PO Box 77
Benfleet
Essex SS7 5EX

T: 01268 569010
F: 01268 569737
E: alan@esta.org.uk
W: www.esta.org.uk

UK GHG emissions and targets



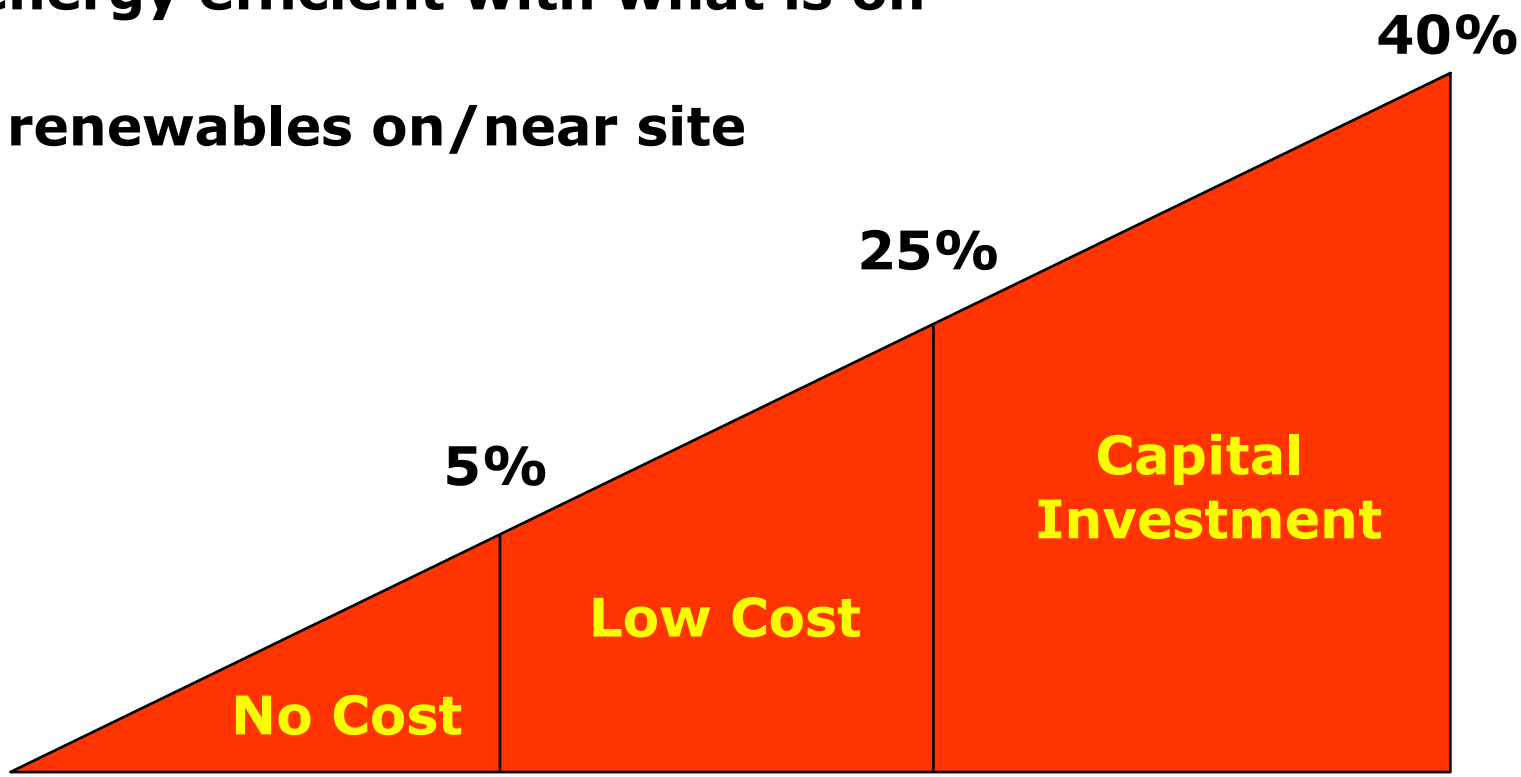
Saving energy and carbon

Priorities

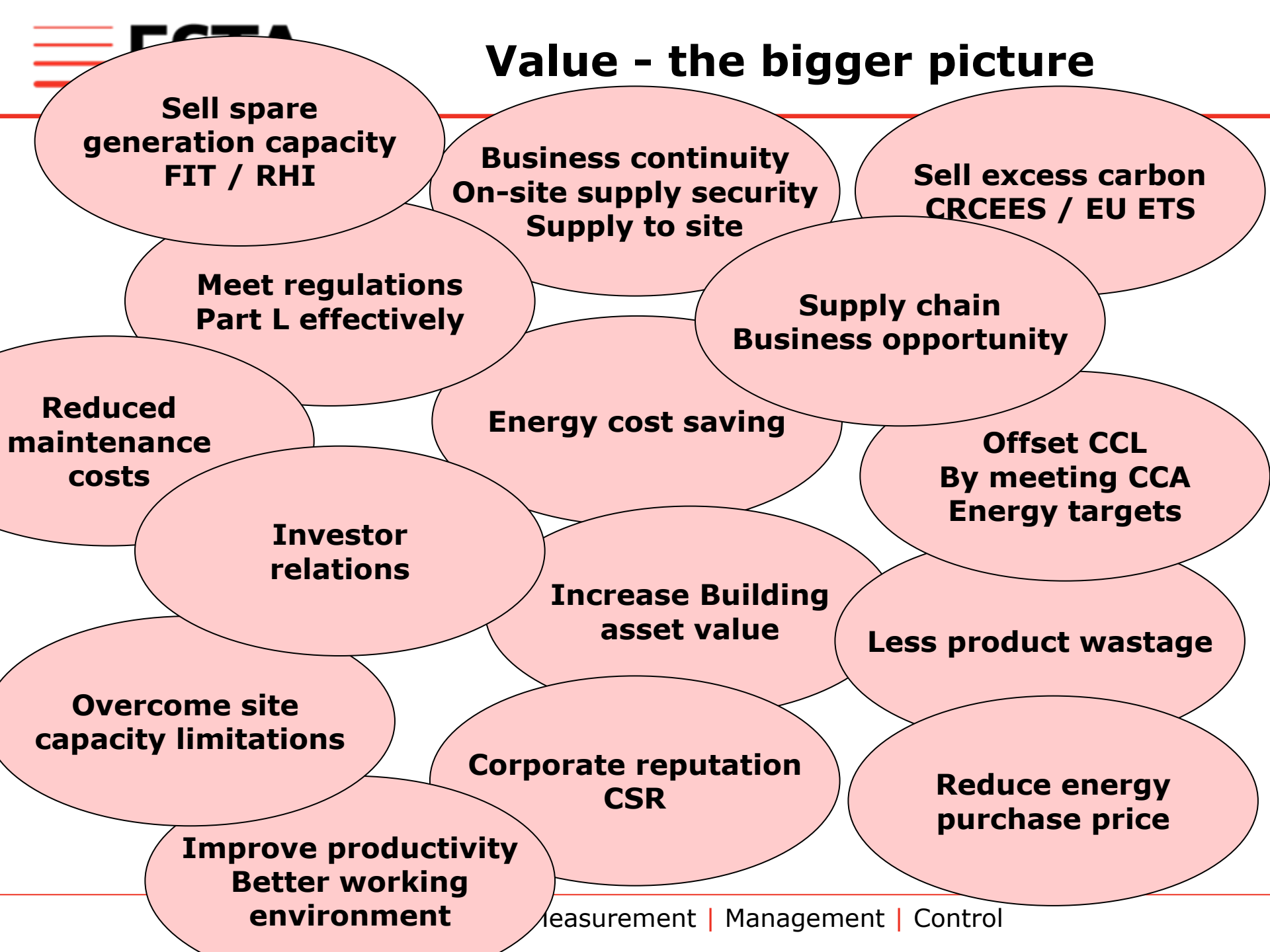
Turn off when not needed

Be energy efficient with what is on

Use renewables on/near site



Value - the bigger picture



Drivers for organisations

ENERGY COST
Climate Change Levy
Climate Change Agreements
EUETS / CRC
Feed-in-Tariffs
Renewable Heat Incentive

'BRAND' VALUE
Corporate Social Responsibility
Reputation
Supply chain
CRC League table

Climate Change
Energy Prices
Energy Supply

BUSINESS CONTINUITY
Security of supply
Supply network / capacity

LEGISLATION
Compliance
EPBD / Part L
EPC / DEC
EUETS / CRC
and regulation

Display Energy Certificate

Energy Benchmarks CIBSE TM46

Operational Rating A to G

Floor area
Energy use
Asset rating

Display Energy Certificate
How efficiently is this building being used?

HM Government

DEPARTMENT OF COMMUNITIES AND LOCAL GOVERNMENT
Communities & Local Government
Eland House, Bressenden Place
LONDON
SW1E 5DU

Certificate Reference Number:
9330-1055-0204-0501-9821

This certificate indicates how much energy is being used to operate this building. The operational rating is based on meter readings of all the energy actually used in the building. It is compared to a benchmark that represents performance indicative of all buildings of this type. There is more advice on how to interpret this information on the Government's website www.communities.gov.uk/epbd.

Energy Performance Operational Rating

This tells you how efficiently energy has been used in the building. The numbers do not represent actual units of energy consumed; they represent comparative energy efficiency. 100 would be typical for this kind of building.

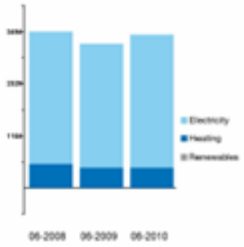
More energy efficient

A 0-25
B 26-50
C 51-75
D 76-100
100 would be typical
E 101-125 115
F 126-150
G Over 150

Less energy efficient

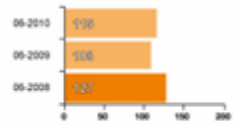
Total CO_2 Emissions

This tells you how much carbon dioxide the building emits. It shows tonnes per year of CO_2.



Previous Operational Ratings

This tells you how efficiently energy has been used in this building over the last three accounting periods



Technical information

This tells you technical information about how energy is used in this building. Consumption data based on actual meter readings.

Main heating fuel: Natural Gas
Building Environment: Air Conditioning
Total useful floor area (m²): 37962
Asset Rating: 55

	Heating	Electrical
Annual Energy Use (kWh/m²/year)	62	142
Typical Energy Use (kWh/m²/year)	123	130
Energy from renewables	0.0%	0.0%

Administrative information

This is a Display Energy Certificate as defined in SI 2007/991 as amended.

Assessment Software: TEAM, Sigma DEC, v3.0
Property Reference: 304285530001
Assessor Name: Mr Eric Kosi
Assessor Number: NHER005585
Accreditation Scheme: NHER
Employer/Trading Name: Team (EAA Ltd.)
Employer/Trading Address: 34 The Forum, Rockingham Drive, MILTON KEYNES, MK14 6LY
Issue Date: 01-06-2010
Nominated Date: 08-06-2010
Valid Until: 07-06-2011
Related Party Disclosure: Not related to the occupier

Recommendations for improving the energy efficiency of the building are contained in the accompanying Advisory Report.

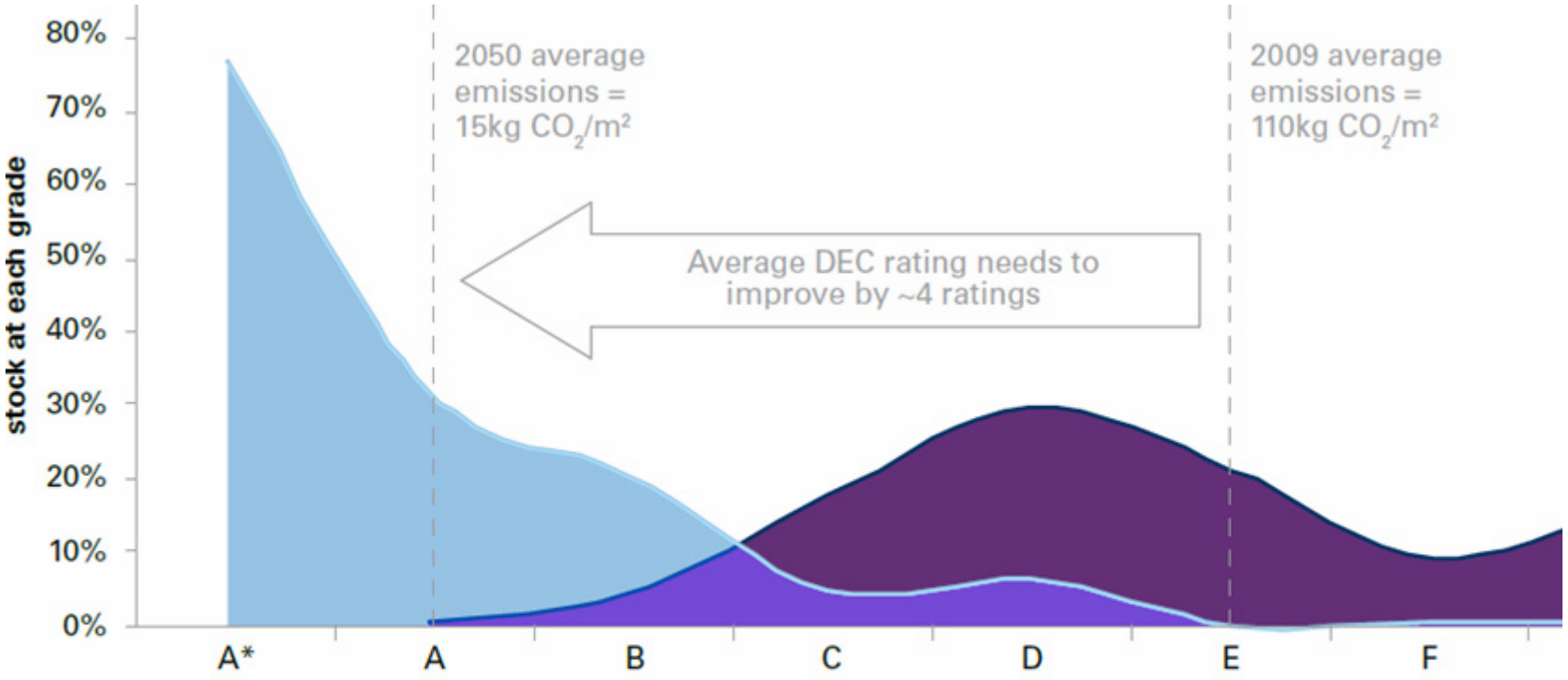
Unique reference number

Total CO2 emissions

Previous ORs

Scheme
Software
Dates

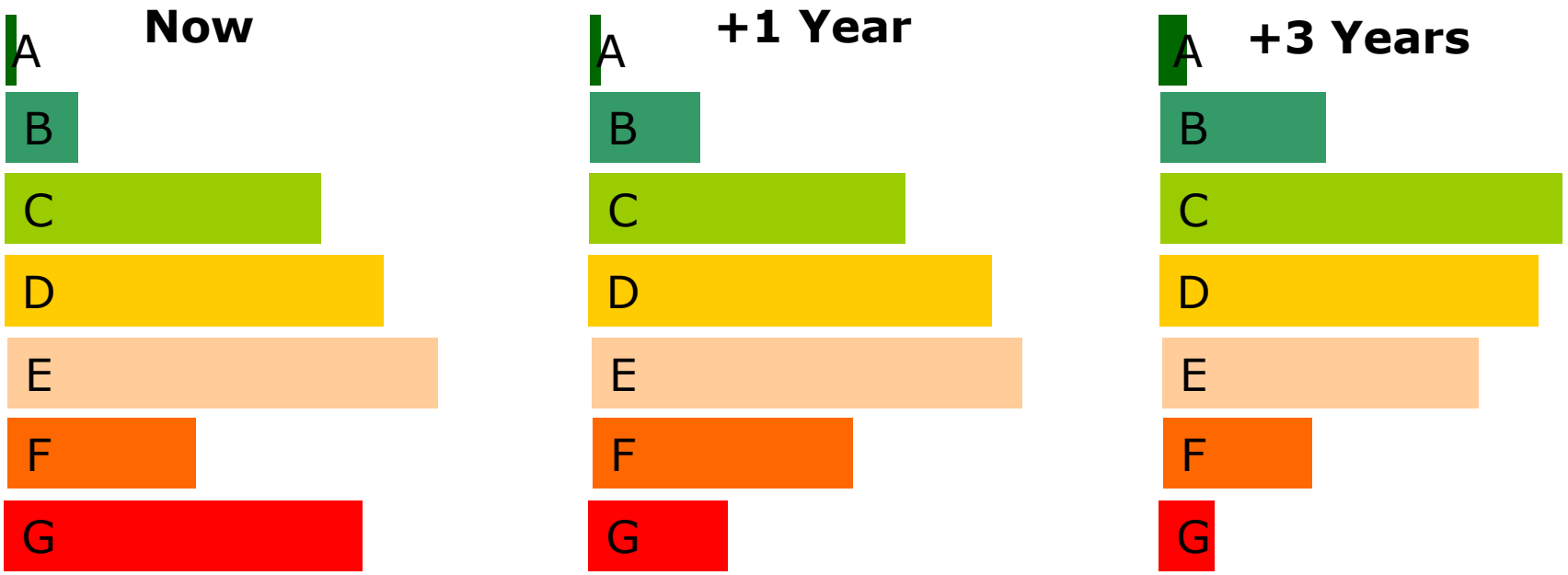
DEC distribution 2009 - 2050



	A*	A	B	C	D	E	F
09 carbon tribution	0%	0.1%	2%	10%	24%	22%	12%
50 carbon tribution	0%	19%	36%	14%	26%	2%	1%

rce: Department for Communities and Local Government data for public sector buildings (August 2009); Carbon Trust analysis

DECs for business planning

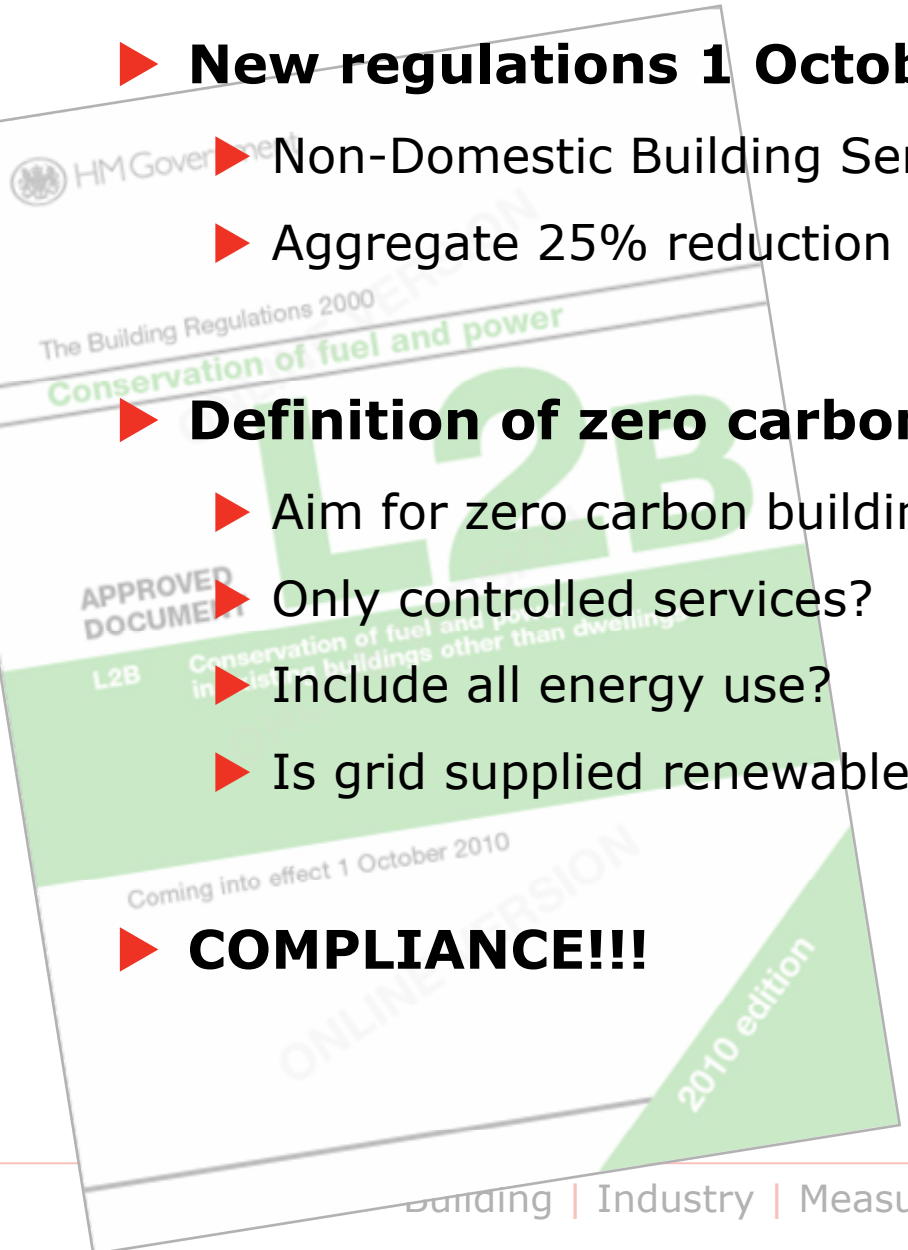


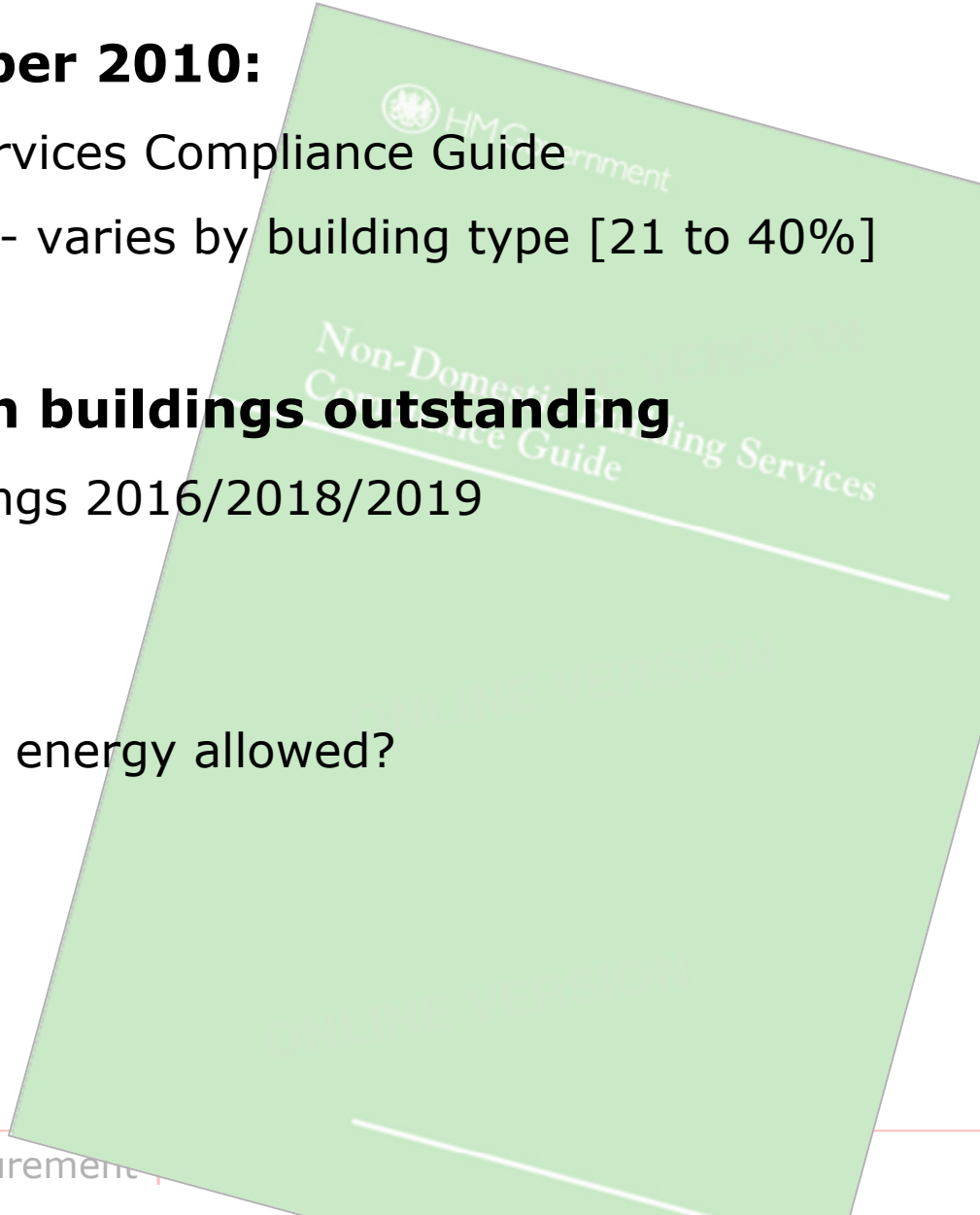
Say 50 buildings with total 150,000 sq.m. under management
At a saving of £10 per sq.m. per year for each grade improvement

Grade improvements	20	50
Energy saving pa.	£600k	£1,500k
Potential viable investment with 2 year payback		£1,000k pa.

Building Regulations Part L

- **New regulations 1 October 2010:**
  - Non-Domestic Building Services Compliance Guide
  - Aggregate 25% reduction - varies by building type [21 to 40%]
- **Definition of zero carbon buildings outstanding**
  - Aim for zero carbon buildings 2016/2018/2019
  - Only controlled services?
  - Include all energy use?
  - Is grid supplied renewable energy allowed?
- **COMPLIANCE!!!**





Air Conditioning Inspections

- **Now inspect units of 250kW cooling**
  - Estimated 8% of eligible units actually inspected - COMPLIANCE!!!
- **From 4 January 2011 - inspect 12kW units**
- **How is compliance going to be achieved?**

EU ETS

- **Covers electricity generation, heavy industry and aviation from 2012**
- **From 2013, auctioning will be preferred means of allocation**
  - Electricity generation sector - 100% auctioning
  - Free allocation for some sectors - based on benchmarks
  - Member States can exclude small installations
- **Benchmark = the average of the top 10% of the most GHG efficient installations in 2007-08**
- **Expect Member State vote in December**
  Adoption by March 2011

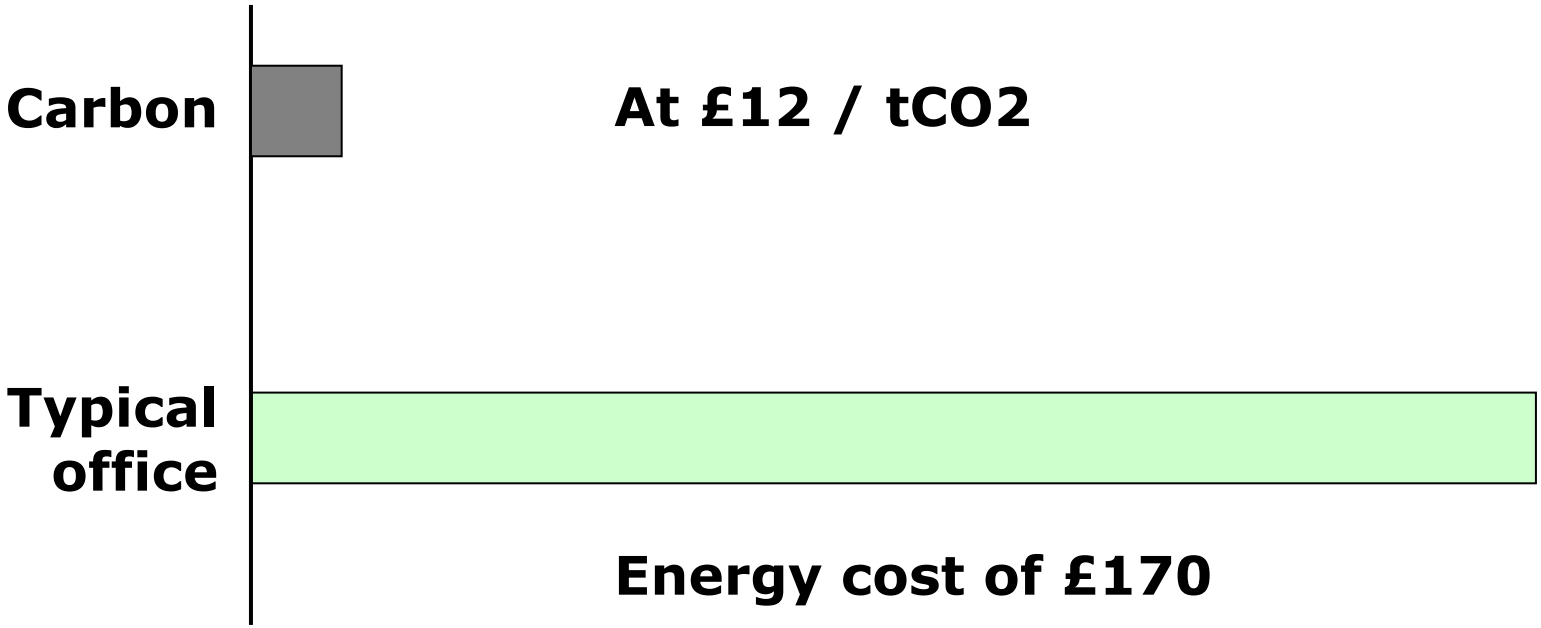
Climate Change Agreements

- **CCAs have been successful - beyond CCL?**
- **Future of CCAs depends on carbon price support**
- **Current CCAs will end with the 2010 target period**
- **Negotiations suspended pending the results of the carbon price support consultation this Autumn**
- **Next steps: to consider where CCAs fit in the wider regulatory landscape of the Coalition**

CRC Energy Efficiency Scheme

- **Introductory phase registration closed 30/09/2010**
- **More than 2,500 participants have registered**
- **CSR Announcements :**
  - Revenue from allowance sales will not be recycled back to participants = Carbon Tax
  - First sale of allowances deferred from 2011 to 2012
  - Phase 2 delayed to 2013
- **Performance League Table retained**
- **Simplification Agenda:**
  - Government will soon begin dialogue with participants
  - Next year: legislative proposals to amend and simplify CRC

Carbon vs. energy cost



Energy = 1 to 5% of operating cost

Carbon = 0.15 to 0.4% of operating cost

Carbon Price Support

- **Current market arrangements in the UK unlikely to deliver the required investment in low carbon electricity generation**
- **HMT/HMRC will shortly publish proposals to reform the climate change levy**
- **Subject to proposals, Government will bring forward relevant legislation in Finance Bill 2011**
- **Government will consider how supporting the carbon price will affect wider work to reform the electricity market**

FITs and RHI

Feed In Tariffs:

- Based on 8% ROI
- Guaranteed 20-25 years
- 10 - 41.3 p/kWH [3p export]
- Review 2013 - reduce?
- Increase export premium?

Renewable Heat Incentive

- Based on 12% ROI
- 6% ROI for solar thermal
- Guarantee 10 - 23 years
- 1.5 - 18 p/kWH proposed
- Implement April 2011

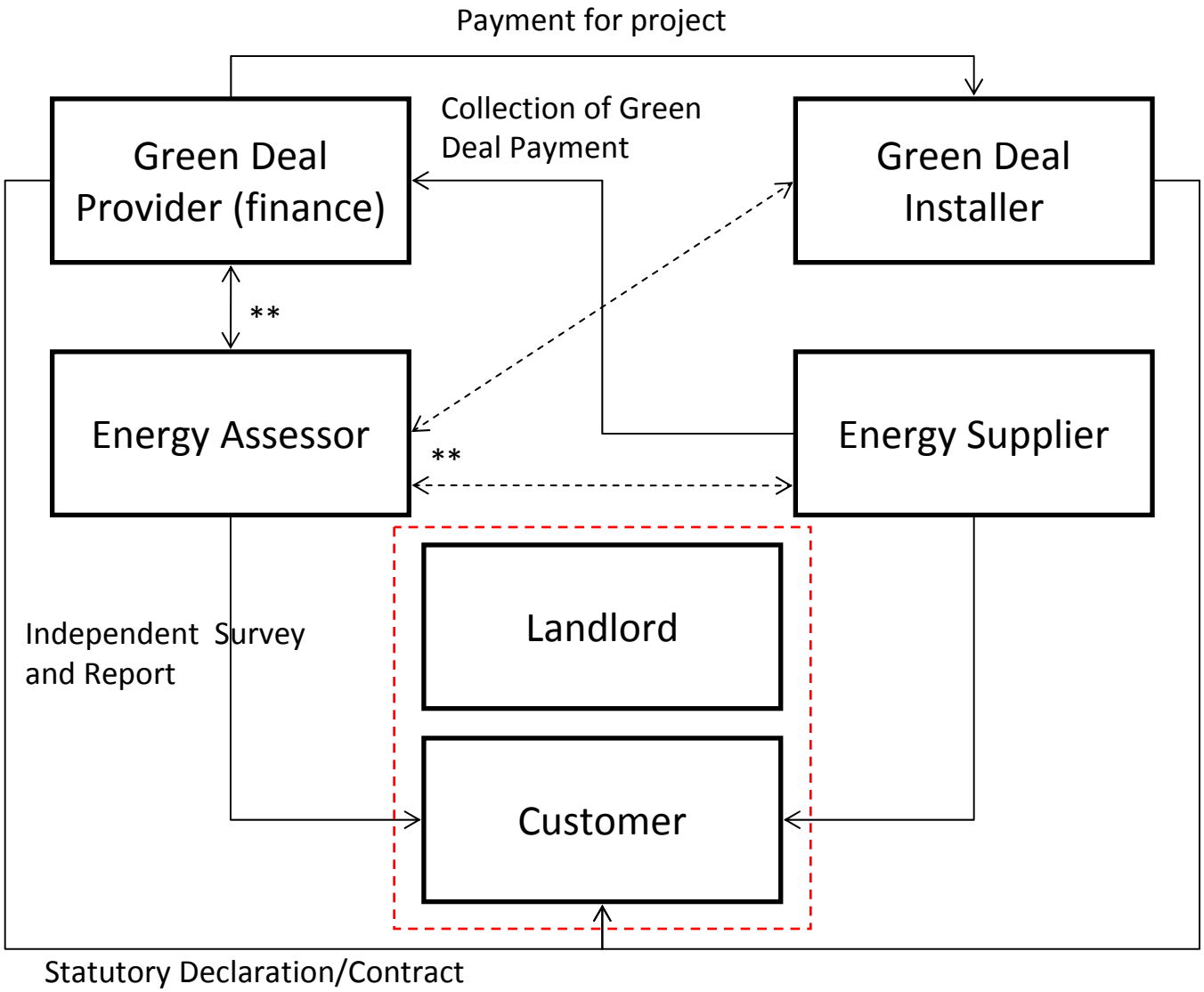
Green Deal

- **Aims:**
  - Improve security of energy supplies
  - Facilitate low carbon energy
  - Empower customers

- **Across ALL sectors - pay as you save!**
- **Customers repay through savings via energy bill**
- **Bill less than original energy cost - immediate saving**
- **Debt stays with the meter point**

- **Q4 2010 Energy Security and Green Energy Bill**
- **Q3 2011 to become law**
- **Q1/Q2 2012 detailed guidance**
- **Q3/Q4 First Green Deals**

Energy Efficiency Project



Green Investment Bank

- **£1bn funding proposed but may need £4-6bn initially**
- **£550bn needed by 2020 - supply and infrastructure**
- **Bias to supply / renewable generation**
- **Funding major projects - Carbon Capture & Storage**
- **Integrate other funding routes into single offering**
- **Start lending in September 2012 [BIS]**

- **What is impact on end-users?**
- **What is relationship with the Green Deal?**
  - Community projects? Mixed use developments

Where from here.....ESTA view

- **The big money will go to energy supply and large scale renewables**
- **Focus on trading to energy suppliers = wider carbon taxes - limited impact on demand side incentives**
- **Green deal has much potential - if kept simple**
- **Need 100% roll out of DECs in non-domestic sector**
  - Business rates; minimum levels required
  - improve operational management and maintenance
- **Implementation up to 2020:**
  Focus on existing available demand side measures, in the existing building estate with an ROI well above 6, 8 or even 12%!!