TRANSITIONS ENERGETIQUES :

UN REGARD SUR UK (ET ALLEMAGNE)

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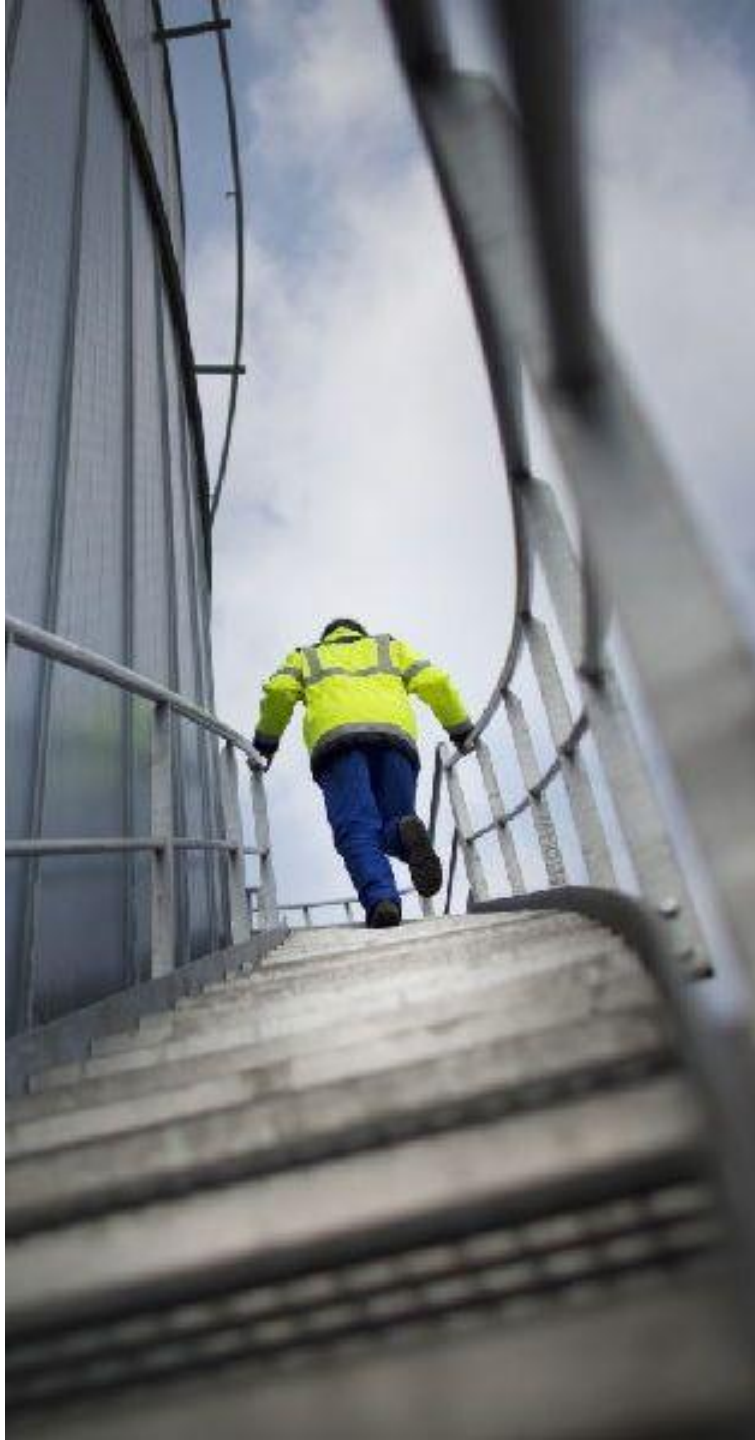


PERSPECTIVES 2050

AMBITIONS 2050

	Allemagne	UK	France
Emissions GES	- 80 à 95 %	- 80 %	- 80 %
Energie primaire	- 50 %	*- 20/47 %*	- 50 %
primaire / capita	*- 44 %*	- 31/54 %	*- 57 %*
finale			
finale / capita		- 31/54 %	
Consommation électricité	- 25 %	+ 29 à 60 %	
ENR / Elec	80 %	22 à 106 GW	
nucléaire	0	16 à 75 GW	*50 % (2025)*
% ENR / Energie Primaire	60 %		
% ENR / Energie Finale			

- Sources : Energiekonzept, The Carbon Plan, PLTECV
- *Valeurs : par calcul*
- Objectifs CO2 similaires mais bases de départ différentes et arbitrages entre leviers différents : ENR élec, nucléaire, ENR chaleur, efficacité énergétique

TRAJECTOIRES EN COURS

TRAJECTOIRES EN COURS : EFFICACITÉ ET ENR

	Allemagne	UK	France
Energie primaire 2012 (2005) Mtep	298 (317)	195 (223)	246 (262)
finale	213 (219)	134 (153)	151 (163)
finale / capita tep/hab	2.6 (2.6)	2.1 (2.5)	2.3 (2.6)
% ENR Elec 2012 (2005)	23.6 (10.5)	10.8 (4.1)	16.6 (13.8)
% ENR Chaleur et froid	11.1 (6.8)	2.3 (0.8)	16.9 (12.2)
% ENR Transport 2012	6.9	3.7	7.1
%ENR / Energie Finale 2012	12.4	4.2	13.4

- *Source EEA Country Profiles 2014*
- Niveau et évolution efficacité énergétique UK !
- Niveau et évolution ENR Elec Allemagne
- ENR chaleur en France
- Recours ENR en retrait en UK

TRAJECTOIRES EN COURS : EMISSIONS

	Allemagne	UK	France
GES 2013 (2005) Mt CO2 eq	951 (994)	570 (675)	492 (559)
/ capita tCO2eq/hab	11.6 (12.1)	8.9 (11.2)	7.5 (8.9)
/ GDP gCO2-eq/PPA en €	364 (464)	328 (402)	268 (359)
Dont EU ETS 2011 (2005) Mt CO2	481 (475)	226 (243)	115 (131)

- *Source EEA Country Profiles 2014*
- *Niveau et évolution moins favorable en Allemagne*
- *Impact du secteur EU ETS (production d'électricité)*

PERSPECTIVES 2020

GREEN TRANSITION ILLUSTRATION DU PILOTAGE UK

Box 1: The Climate Change Act 2008 and the carbon budget framework

The Climate Change Act established a legally binding target to reduce the UK's greenhouse gas emissions by at least 80% below base year levels by 2050, to be achieved through action at home and abroad.[2] To drive progress and set the UK on a pathway towards this target, the Act introduced a system of carbon budgets which provide legally binding limits on the amount of emissions that may be produced in successive five-year periods, beginning in 2008. The first three carbon budgets were set in law in May 2009 and require emissions to be reduced by at least 34% below base year levels in 2020.

The fourth carbon budget, covering the period 2023–27, was set in law in June 2011 and requires emissions to be reduced by 50% below 1990 levels.[3]

This report sets out the proposals and policies for meeting the first four carbon budgets.

	First carbon budget (2008–12)	Second carbon budget (2013–17)	Third carbon budget (2018–22)	Fourth carbon budget (2023–27)
Carbon budget level (million tonnes carbon dioxide equivalent ($MtCO_2e$))	3,018	2,782	2,544	1,950
Percentage reduction below base year levels	23%	29%	35%	50%

EEA TRENDS & PROJECTIONS 2020

UK EST VERT Y COMPRIS SUR ENR CAR EN LIGNE SUR SA TRAJECTOIRE DE RÉFÉRENCE

Table 7.2 Member State progress towards national 2020 climate and energy targets

Countries	GHG target under the ESD	RES target under the RED	EE target as defined by Member States under the EED
Austria			
Belgium			
Bulgaria			
Croatia			
Cyprus			
Czech Republic			
Denmark			
Estonia			
Finland			
France			
Germany			
Greece			
Hungary			
Ireland			
Italy			
Latvia			
Lithuania			
Luxembourg			
Malta			
Netherlands			
Poland			
Portugal			
Romania			
Slovakia			
Slovenia			
Spain			
Sweden			
United Kingdom			

PILOTAGE EN UK

COMMITTEE ON CLIMATE CHANGE

2014 PROGRESS REPORT TO PARLIAMENT

EXTRAIT DU SUIVI ANNUEL DÉTAILLÉ, PRÉSENTÉ AU PARLEMENT. SIGNAUX VERTS / JAUNES / ROUGES SELON AVANCEMENT.

Table 2: Non-traded sector traffic light assessment

Indicator for progress to date	Traffic light evaluation of progress	Comments
Buildings		
Implementation		
Uptake of loft insulation	Amber	Progress good until 2012 but very low in 2013 following change in policy framework. Cumulative loft insulation levels in 2013 were 650,000 below our indicator (6.3 million).
Uptake of cavity wall insulation	Amber	Progress good until 2012 but very low in 2013 following change in policy framework. Cavity wall insulation levels at 2.9 million are 43% below our cumulative indicator for 2013 (5 million).
Uptake of solid wall insulation	Red	Very low uptake numbers (170,000 cumulatively by the end of 2013, compared to 500,000 in our indicator). Some success during 2012 (final year of Community Energy Saving Programme) but uptake numbers have fallen under Energy Company Obligation (ECO). Latest evidence suggests available cost-effective potential may be lower than expected.
Uptake of boilers	Green	High uptake of new efficient boilers, with cumulative uptake by 2013 1.8 million higher than our indicator (5.9 million).
Buildings penetration of low-carbon heat (%)	Red	Progress in buildings is off-track, with 0.3% of heat coming from low-carbon sources in 2012 compared to 0.6% in our indicator trajectory.
Uptake of energy efficient appliances	Amber	Stock penetration for the most efficient appliances is low (e.g. wet appliances A+ or better are 9% of the stock versus 16% in the indicator). However, overall efficiency of the appliances on the market has improved significantly.
Policy		
New energy efficiency financing mechanism	Red	Green Deal introduced in 2013 but very low uptake. Scope for currently unattractive interest rates to fall in future as Green Deal lending is scaled up.
Domestic and Non-domestic Renewable Heat Incentive (RHI) schemes in operation	Amber	Delays to Domestic RHI launch, but some progress made in setting standards and improving evidence base. Non-domestic scheme up and running since 2011, but low uptake apart from biomass.

COMMITTEE ON CLIMATE CHANGE

2014 PROGRESS REPORT TO PARLIAMENT

Table 2: Non-traded sector traffic light assessment

Indicator for progress to date	Traffic light evaluation of progress	Comments
Industry (non-traded)		
Implementation		
Industry penetration of low-carbon heat	Green	1.25% uptake compared to 1% in indicator.
Policy		
Publish industry strategy including milestones, incentives and mechanisms for meeting carbon budgets	Red	No strategy to meet carbon budgets has been published, but 2050 Roadmaps underway.
Transport		
Implementation		
New car CO_2	Green	Outperforming trajectory. Evidence of a growing gap between real-world and test-cycle emissions suggest real-world improvements were smaller; however likely still to have met trajectory.
Electric vehicle sales	Red	Uptake well below trajectory, although market developments (e.g. availability of a range of models) have been positive and in hindsight uptake in the proposed trajectory was too high.
Policy		
Biofuel policy	Amber	Biofuel penetration in line with our trajectory for first few years, falling short in past two years but improvements in sustainability.
Smarter Choices policy	Amber	Local Sustainable Transport Fund is funding a number of projects across England but evaluation framework is not comprehensive.
Waste and F-gases		
Implementation		
Biodegradable waste sent to landfill	Green	47% fall compared to 30% in trajectory.
Percentage of methane captured at landfill sites	Amber	Indicator suggested maintain at 75%, but a re-estimation suggests that the rate was 59% in 2012, although rising from 54% in 2007.
Policy		
Develop comprehensive waste policy	Amber	National Waste Prevention Programme published December 2013 but slow progress developing effective policy across waste streams.
Update to the EC's F-gas regulation to make it fit for purpose by end 2013	Amber	New EU F-gas regulation published in April 2014 and to come into force in 2015; Government still to transpose within UK legislation.

COMMITTEE ON CLIMATE CHANGE

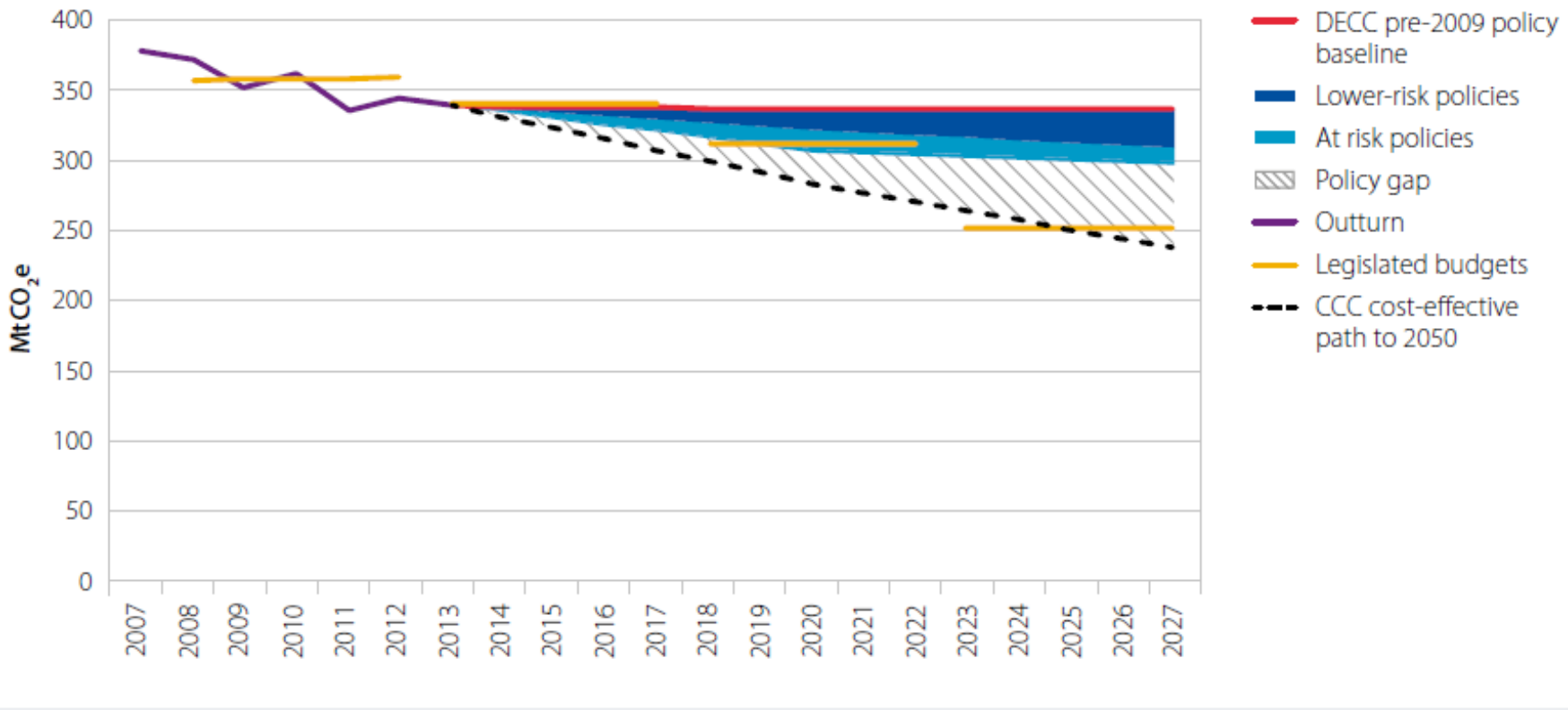
2014 PROGRESS REPORT TO PARLIAMENT

Table 3: Traded sector traffic light assessment

Indicator	Traffic Light	Comments
Power sector		
Implementation		
Onshore and offshore wind	Green	Capacity in line with indicator and a strong pipeline of projects to 2020. However, longer-term uncertainty could undermine the flow of projects from the pipeline to delivery.
Nuclear new build	Amber	Delayed new-build programme by at least 5 years, with expected completion date of first new plant pushed back from 2018 to 2023. However, strike price and terms of contract now agreed and potential programme of future projects.
Policy		
Review of electricity market to begin in first budget period	Amber	Energy Act legislated in 2013 including key elements of reform (long-term contracts and funding to 2020), but lack of clarity beyond 2020 and no decarbonisation objective could undermine delivery.
Carbon Capture and Storage (CCS) Front End Engineering and Design (FEED) studies complete by 2010, with first CCS project online 2014	Red	FEED studies now due to complete in 2015 (i.e. 5 years behind indicator). However, some lessons learned and programme due to deliver 2 plants by 2020.
Industry covered by the EU ETS		
Policy		
Publish industry strategy including milestones, incentives and mechanisms for meeting carbon budgets	Red	No strategy to meet carbon budgets has been published, but 2050 Roadmaps underway.

COMMITTEE ON CLIMATE CHANGE
2014 PROGRESS REPORT TO PARLIAMENT

Figure 2: Assessment of current and planned policy against future targets (non-traded sector)

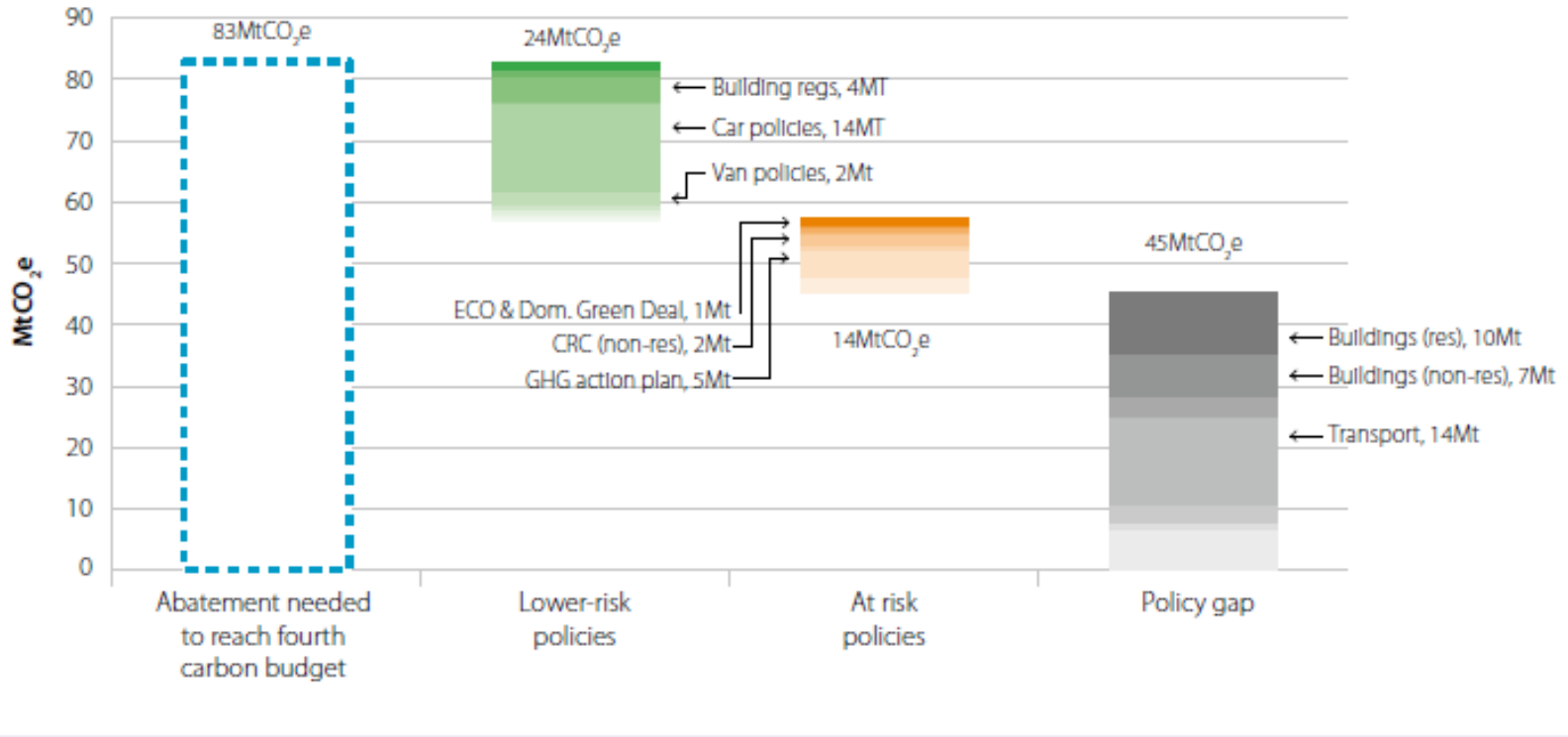


Source: DECC (2013) *Updated emissions projections*; CCC analysis.

GREEN TRANSITION

EXEMPLE D'ANALYSE DE BUDGET CARBONE, RÉSULTATS ATTENDUS ET "RESTE À COUVRIR" (POLICY GAP)

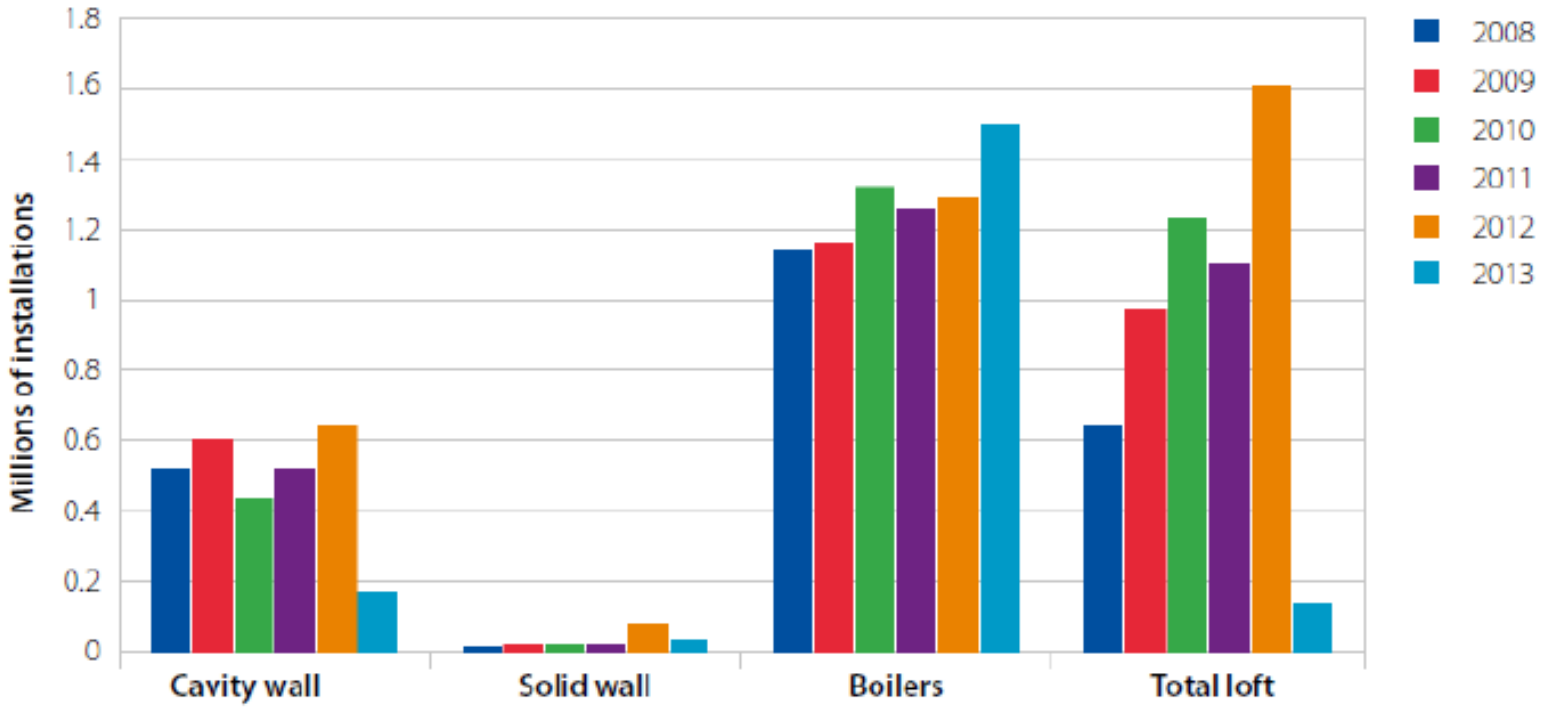
Figure 1.19: Getting from the DECC pre-2009 policy baseline to the fourth carbon budget in 2025



Source: DECC (2013) *Updated Emissions Projections*; CCC analysis.

GREEN TRANSITION

REPORTING ENERGY EFFICIENCY BUILDINGS (07/2014)



Source: Ofgem (2013); DECC (2013) *Estimates of home insulation levels in Great Britain*; CESP data; CCC calculations.
Notes: 2013 data excludes uptake of 145 cavity walls, 2,666 lofts, and 17,421 solid walls due to CESP mitigation activity.

MODES COMMUNS

TENSIONS ET INCERTITUDES

MODES COMMUNS ET SPÉCIFICITÉS

- **Consensus politique ! En UK comme en Allemagne**
  - mais sur des solutions différentes
  - et avec des motivations différentes :
    - Allemagne : sortie du nucléaire et adhésion ENR
    - UK : parc électrique obsolète, déplétion champs Mer du Nord + indépendance énergétique
  - et une très forte sensibilité prix de l'énergie et précarité en UK

- **« NIMBY » :** existe chez chacun, mais centré sur les lignes THT en Allemagne, sur éolien onshore en UK

MODES COMMUNS ET SPÉCIFICITÉS

- **Planification !! Le grand retour, partout ?**
  - Développements électricité bas carbone : Feed in tariffs, premiums, CfDs, appels d'offres,…
  - Articulation réseaux / production : NEP, ONEP, transfert de pouvoirs vers l'échelon fédéral en Allemagne (projets réseaux),…
  - Mais à travers ce mouvement, une interpellation du système social et politique de nature différente :
    - questionnement du fédéralisme en Allemagne
    - et du libéralisme en UK

TENSIONS ET INCERTITUDES

- **Cout de la transition. En particulier pour l'électricité :**
  - Allemagne : réseaux / ENR (offshore, cannibalisation)
  - UK : ressources bas carbone (ENR, nucléaire)
- **Egalement pour efficacité énergétique**
  - Allemagne : rénovation reste à 1%/an malgré financements KfW, taux d'épargne,…
  - UK : rénovation a commencé par le plus efficace (cavity walls)
- **Sans doute des leçons communes à tirer :**
  - Financements des transitions
  - Qualité des politiques publiques (UE doit maitriser ses couts)
  - R&D : cout des technologies des prochaines décennies