

Extension of the analysis estimating the effect of the Energy Efficiency Commitment on the fuel poor to 2010.

19th May 2006

The original analysis of the effect of the Energy Efficiency Commitment on the level of fuel poverty in England assumed that EEC3 was the same size as EEC2. In this note, the analysis has been extended to examine the effect of increasing the scale of EEC3 to 150% and 200% the size of EEC2. Both scenarios 1 (*no loft top-ups under EEC2, loft top ups included under EEC3*) and 2 (*loft top ups included under both EEC2 and EEC3*) have been recalculated with an enlarged EEC3 component. In total four additional runs of the model were required. The results of this analysis are shown in tables 1 to 12 below.

Approximately 150,000 households are removed from fuel poverty following an EEC3 150% the size of EEC2 under both scenarios (n.b. this figure includes households removed from fuel poverty by all previous EEC stages). Of these around 130,000 are vulnerable households. Around 45,000 households have had their SAP rating raised above 65 (35,000 vulnerable).

If EEC3 is extended further to 200% the size of EEC2, approximately 190,000 households are removed from fuel poverty at the end of all EEC stages under both scenarios. Of these around 160,000 are vulnerable households. Around 55,000 households have had their SAP rating raised above 65 (45,000 vulnerable).

RESULTS

EEC3 150% the size of EEC2

Scenario 1 (No loft top-ups under EEC2, Loft top ups included under EEC3):

	Number removed from fuel poverty	Number vulnerable removed from fuel poverty.
After EEC1 (no carryover)	17,000	14,000
After EEC1 carryover	38,000	32,000
After EEC2	74,000	63,000
After extended EEC3 (150% size of EEC2)	151,000	129,000

Table 1: Scenario 1. Number of households removed from fuel poverty using the Fuel Poverty Index after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 households.

	Number moved above SAP 65	Number vulnerable moved above SAP 65.
After EEC1 (no carryover)	5,000	4,000
After EEC1 carryover	12,000	9,000
After EEC2	20,000	16,000
After extended EEC3 (150% size of EEC2)	43,000	34,000

Table 2: Scenario 1. Number of dwellings containing a fuel poor household with a SAP raised above 65 after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 dwellings.

Energy Efficiency Commitment (EEC) and Fuel Poverty.

	Number moved to SAP 30-40. (vulnerable shown in brackets)	Number moved to SAP 40-50. (vulnerable shown in brackets)	Number moved to SAP 50-60. (vulnerable shown in brackets)	Number moved to SAP 60-65. (vulnerable shown in brackets)
After EEC1 (No carryover)	7,000 (4,000)	7,000 (6,000)	6,000 (5,000)	3,000 (2,000)
After EEC1 carryover	14,000 (9,000)	13,000 (11,000)	13,000 (11,000)	6,000 (4,000)
After EEC2	23,000 (16,000)	23,000 (19,000)	30,000 (24,000)	14,000 (10,000)
After extended EEC3 (150% size of EEC2)	40,000 (29,000)	44,000 (36,000)	62,000 (54,000)	37,000 (28,000)

Table 3: Scenario 1. Progress towards SAP 65. Number of dwellings raised into higher SAP band after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 dwellings.

Scenario 2 (Top ups included under EEC2 and EEC3):

	Number removed from fuel poverty	Number vulnerable removed from fuel poverty.
After EEC1 (no carryover)	16,000	13,000
After EEC1 carryover	37,000	31,000
After EEC2	74,000	63,000
After extended EEC3 (150% size of EEC2)	151,000	129,000

Table 4: Scenario 2. Number of households removed from fuel poverty using the Fuel Poverty Index after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 households.

	Number moved above SAP 65	Number vulnerable moved above SAP 65.
After EEC1 (no carryover)	6,000	4,000
After EEC1 carryover	12,000	9,000
After EEC2	20,000	15,000
After extended EEC3 (150% size of EEC2)	44,000	35,000

Table 5: Scenario 2. Number of dwellings containing a fuel poor household with a SAP raised above 65 after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 dwellings.

	Number moved to SAP 30-40. (vulnerable shown in brackets)	Number moved to SAP 40-50. (vulnerable shown in brackets)	Number Moved to SAP 50-60. (vulnerable shown in brackets)	Number moved to SAP 60-65. (vulnerable shown in brackets)
After EEC1 (No carryover)	7,000 (4,000)	7,000 (6,000)	5,000 (4,000)	3,000 (2,000)
After EEC1 carryover	13,000 (8,000)	13,000 (11,000)	13,000 (10,000)	6,000 (4,000)
After EEC2	23,000 (17,000)	23,000 (19,000)	28,000 (24,000)	14,000 (10,000)
After extended EEC3 (150% size of EEC2)	39,000 (29,000)	43,000 (35,000)	62,000 (54,000)	37,000 (28,000)

Table 6: Scenario 2. Progress towards SAP 65. Number of dwellings raised into higher SAP band after each EEC stage. EEC3 modelled as 150% the size of EEC2. Results rounded to nearest 1000 dwellings

Energy Efficiency Commitment (EEC) and Fuel Poverty.

EEC3 200% the size of EEC2

Scenario 1 (No loft top-ups under EEC2, Loft top ups included under EEC3):

	Number removed from fuel poverty	Number vulnerable removed from fuel poverty.
After EEC1 (no carryover)	17,000	14,000
After EEC1 carryover	38,000	32,000
After EEC2	74,000	63,000
After extended EEC3 (200% size of EEC2)	186,000	161,000

Table 7: Scenario 1. Number of households removed from fuel poverty using the Fuel Poverty Index after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

	Number moved above SAP 65	Number vulnerable moved above SAP 65.
After EEC1 (no carryover)	5,000	4,000
After EEC1 carryover	12,000	9,000
After EEC2	20,000	16,000
After extended EEC3 (200% size of EEC2)	53,000	44,000

Table 8: Scenario 1. Number of dwellings containing a fuel poor household with a SAP raised above 65 after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

	Number moved to SAP 30-40. (vulnerable shown in brackets)	Number moved to SAP 40-50. (vulnerable shown in brackets)	Number moved to SAP 50-60. (vulnerable shown in brackets)	Number moved to SAP 60-65. (vulnerable shown in brackets)
After EEC1 (No carryover)	7,000 (4,000)	7,000 (6,000)	6,000 (5,000)	3,000 (2,000)
After EEC1 carryover	14,000 (9,000)	13,000 (11,000)	13,000 (11,000)	6,000 (4,000)
After EEC2	23,000 (16,000)	23,000 (19,000)	30,000 (24,000)	14,000 (10,000)
After extended EEC3 (200% size of EEC2)	46,000 (34,000)	54,000 (44,000)	78,000 (69,000)	48,000 (37,000)

Table 9: Scenario 1. Progress towards SAP 65. Number of dwellings raised into higher SAP band after after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

Scenario 2 (Top ups included under EEC2 and EEC3):

	Number removed from fuel poverty	Number vulnerable removed from fuel poverty.
After EEC1 (no carryover)	16,000	13,000
After EEC1 carryover	37,000	31,000
After EEC2	74,000	63,000
After extended EEC3 (200% size of EEC2)	187,000	161,000

Table 10: Scenario 2. Number of households removed from fuel poverty using the Fuel Poverty Index after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

Energy Efficiency Commitment (EEC) and Fuel Poverty.

	Number moved above SAP 65	Number vulnerable moved above SAP 65.
After EEC1 (no carryover)	6,000	4,000
After EEC1 carryover	12,000	9,000
After EEC2	20,000	15,000
After extended EEC3 (200% size of EEC2)	54,000	45,000

Table 11: Scenario 2. Number of dwellings containing a fuel poor household with a SAP raised above 65 after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

	Number moved to SAP 30-40. (vulnerable shown in brackets)	Number moved to SAP 40-50. (vulnerable shown in brackets)	Number Moved to SAP 50-60. (vulnerable shown in brackets)	Number moved to SAP 60-65. (vulnerable shown in brackets)
After EEC1 (No carryover)	7,000 (4,000)	7,000 (6,000)	5,000 (4,000)	3,000 (2,000)
After EEC1 carryover	13,000 (8,000)	13,000 (11,000)	13,000 (10,000)	6,000 (4,000)
After EEC2	23,000 (17,000)	23,000 (19,000)	28,000 (24,000)	14,000 (10,000)
After extended EEC3 (200% size of EEC2)	47,000 (35,000)	52,000 (43,000)	78,000 (70,000)	49,000 (38,000)

Table 12: Scenario 2. Progress towards SAP 65. Number of dwellings raised into higher SAP band after each EEC stage. EEC3 modelled as 200% the size of EEC2. Results rounded to nearest 1000 households.

Appendix: Modelling details

Modelling details

In undertaking the modelling of an EEC3 which is greater in size than EEC2 it has been necessary to modify the assumptions made for EEC3 in the original modelling. The original analysis followed the tenure splits as laid out in Defra's illustrative mix of measures in determining how many measures were installed. It was possible to follow these guidelines (with a few minor adjustments) and to complete an EEC3 stage with the same level as EEC2, as there remained sufficient capacity in the social sector.

However, it was not possible to continue to use the illustrative mix in the same way when considering an EEC3 greater in size than EEC2. There is insufficient potential remaining within the social stock to follow the tenure split in outlined in the illustrative mix.

In order to progress the modelling, the total *additional* installations (i.e. the extra 50% or 100% over and above the size of EEC2) are not constrained by tenure in this extended analysis. A 50% priority group split (by measures) is applied but, as it is impossible to follow the social / private split as laid out under the illustrative mix any further, the social/private ratio is ignored. This has the effect of measures over and above the size of EEC2 going primarily into households in the private sector.

Control limits

Control limits applied to the additional 50%, over and above the level of EEC2, when raising the level of EEC3 to 150% size of EEC2.

<i>Control limit</i>	<i>Number of installations</i>
Priority Virgin Loft Insulation	19,118
Non-priority Virgin Loft Insulation	19,118
Priority TopUp Loft Insulation	193,312
Non-Priority TopUp Loft Insulation	193,312
Total DIY Loft Insulation (m ²)	6,979,901
Priority Cavity Wall Insulation	322,441
Non-Priority Cavity Wall Insulation	322,441

EEC3 200% the size of EEC2

Energy Efficiency Commitment (EEC) and Fuel Poverty.

For an EEC3 200% the size of EEC2 there is an insufficient number of the required unfilled priority cavities (approximately 23,000 too few under Scenario 2 and 17,000 too few under Scenario 1) remaining to meet the control limits. Therefore, the limits have been adjusted to assume that the required priority CWI installations are in fact met by additional priority virgin loft insulations.

Scenario 1: Control limits applied to the additional 100%, over and above the level of EEC2, when raising the level of EEC3 to 200% size of EEC2.

<i>Control limit</i>	<i>Number of installations</i>
Priority Virgin Loft Insulation	38,238 (plus ~17,000 from shortfall)
Non-priority Virgin Loft Insulation	38,238
Priority TopUp Loft Insulation	386,626
Non-Priority TopUp Loft Insulation	386,626
Total DIY Loft Insulation (m ²)	13,959,802
Priority Cavity Wall Insulation	644,882 (minus ~ 17,000 from shortfall)
Non-Priority Cavity Wall Insulation	644,882

Scenario 2: Control limits applied to the additional 100%, over and above the level of EEC2, when raising the level of EEC3 to 200% size of EEC2.

<i>Control limit</i>	<i>Number of installations</i>
Priority Virgin Loft Insulation	38,238 (plus ~23,000 from shortfall)
Non-priority Virgin Loft Insulation	38,238
Priority TopUp Loft Insulation	386,626
Non-Priority TopUp Loft Insulation	386,626
Total DIY Loft Insulation (m ²)	13,959,802
Priority Cavity Wall Insulation	644,882 (minus ~ 23,000 from shortfall)
Non-Priority Cavity Wall Insulation	644,882