

<b>Title: Finalising CRC simplification: treatment of renewable energy &amp; the metallurgical and mineralogical sectors</b>  <b>IA No: DECC0157</b>  <b>Lead department or agency:</b> Department of Energy and Climate Change (DECC)  <b>Other departments or agencies:</b> Environment/climate change departments from Scottish Government, Welsh Government and Northern Ireland Executive.	<b>Impact Assessment (IA)</b>		
	<b>Date:</b> 10/2/2014		
	<b>Stage:</b> Enactment		
	<b>Source of intervention:</b> Domestic		
	<b>Type of measure:</b> Secondary legislation		
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## Summary: Intervention and Options

**RPC: Not Applicable**

Cost of Preferred (or more likely) Option				
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB in 2009 prices)	In scope of One-In, Two-Out?	Measure qualifies as
[-52]	[-40]	-3	No	N/A

### What is the problem under consideration? Why is government intervention necessary?

This Impact Assessment focuses on assessing two measures: a) delivering a government commitment announced in December 2012 to consider how to incentivise onsite renewable self-supplied electricity in the CRC Scheme; and b) introducing an exclusion from the CRC for energy supplied to metallurgical and mineralogical (met/min) processes in response to changes to the Climate Change Levy (CCL) announced at Budget 2013. Government intervention is necessary to ensure that the CRC Scheme is delivering the original intentions of simplification and to avoid introducing unintended CRC liabilities as a result of changes to the CCL.

### What are the policy objectives and the intended effects?

The policy objectives are a) to further incentivise deployment of onsite renewable self-supplied electricity generation within the CRC population of businesses, and b) to avoid unintended consequences of the proposed exclusion of met/min processes from the Climate Change Levy.

### What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

In respect of measure a) a number of options to incentivise onsite renewable self-supplied electricity generation within the CRC population were explored but discarded as they would duplicate support provided by other DECC policies, resulting in poor value for money and carrying state aid risks. The measure presented in this IA represents the best balance between incentives and risks.

For the met/min sectors, the CCL exclusion would result in new financial liabilities under the CRC Scheme where their eligible energy is no longer covered by a Climate Change Agreement. In order to avoid this unintended consequence the only proposed measure is to introduce an exclusion from the CRC for relevant supplies. If do nothing was chosen, then met/min businesses would face additional CRC costs.

### Will the policy be reviewed? It will be reviewed. If applicable, set review date: 2016

Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	<b>Micro</b> No	<b>&lt; 20</b> No	<b>Small</b> No	<b>Medium</b> No	<b>Large</b> Yes
What is the CO2 equivalent change in greenhouse gas emissions? (Million tonnes CO2 equivalent)			<b>Traded:</b> [0.1]		<b>Non-traded:</b> [0.2]

*I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.*

Signed by the responsible  
Minister:

Date: \_\_\_\_\_

# Summary: Analysis & Evidence

# Policy Option 1

**Description:** This IA covers the impact of implementing measures to remove from the CRC Scheme, supplies from eligible renewable sources and to exclude emissions from metallurgical and mineralogical processes.

## FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2011	Time Period Years 20	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: [-52]

COSTS (£m)	Total Transition (Constant Price)	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate			[-6]

### Description and scale of key monetised costs by 'main affected groups'

This option combines two measures A) incentivising onsite renewable self-supplied generation and B) excluding energy supplies for met/min processes. This option reduces administrative and capital costs to businesses by £6m as a number of participants would leave the CRC as a result of the met/min exclusion.

### Other key non-monetised costs by 'main affected groups'

BENEFITS (£m)	Total Transition (Constant Price)	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate			[-58]

### Description and scale of key monetised benefits by 'main affected groups'

These measures would result in a reduction of energy savings attributable to the CRC Scheme and an associated reduction in emissions covered by the Scheme. The reduction of energy savings would also impact on other ancillary benefits such as air quality. The loss of benefits is driven by a reduction of £44m in energy savings, £13m in Carbon savings and £1m in Air Quality benefits. This represents a decrease of £58m in the Present Value of benefits. CRC liability benefits for CRC participants have not been accounted for in this section as they represent a net transfer between participants and government but they have been included in calculating direct costs and benefits to business.

### Other key non-monetised benefits by 'main affected groups'

Key assumptions/sensitivities/risks (%)	Discount rate	3.5
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## Evidence Base (for summary sheets)

1. This Impact Assessment (IA) follows the completion of a consultation published in December 2013 entitled 'Finalising CRC simplification: treatment of renewable energy & the metallurgical and mineralogical sector'. It reflects an assessment of the measures that Government will introduce (i.e. the preferred option) having incorporated responses received from consultees.

### Problem under consideration

2. The IA focuses on two main issues:
  - a. A measure to deliver the December 2012 commitment in the Government Response on simplifying the CRC Energy Efficiency Scheme, to consider how the CRC can incentivise the uptake of onsite renewable self-supplied electricity; and
  - b. A measure to introduce an exclusion from the CRC for energy supplied to metallurgical and mineralogical (met/min) processes, in response to changes to the Climate Change Levy (CCL) announced at Budget 2013.
3. The December 2013 consultation also proposed amendments to legislative text to ensure the CRC Order delivered on Government policy proposals on supplies used in a third party CCA facility or EU ETS installation and organisational disaggregation in a landlord-tenant situation. These two proposals were changes that Government introduced through CRC simplification, the impacts of which have been assessed in the Simplification Final Stage Impact Assessment of December 2012 (and updated in February 2013)<sup>1</sup> and no additional impacts are assessed in this IA.

### Rationale for intervention

4. The rationale for introducing these two measures is twofold:

*Delivering the CRC simplification package – incentivising renewable self-supplied electricity*

5. The CRC Simplification conclusions published in December 2012 explained that whilst the focus of the CRC is on energy efficiency, Government recognises the importance of and potential for further incentivising the growth of renewable generation under the CRC. Government therefore committed to consider how the CRC could incentivise the uptake of onsite renewable self-supplied electricity.

*Removing unintended CRC liabilities for metallurgical and mineralogical sectors*

6. In addition, Government is introducing an energy supply exclusion from the CRC for met/min processes. This is because exclusion for these sectors from the

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Climate Change Levy (CCL), as announced in Budget 2013, may mean that former holders of Climate Change Agreements (which provide a discount from the CCL and exclusion from CRC) become liable for CRC costs. This is an unintended consequence of the CCL exemption. The CRC exclusion aims to protect Government's policy intention for the CCL exemption, to support the competitiveness of UK businesses that are energy intensive.

## **Description of options considered**

### Incentivising onsite renewable self-supplied electricity

7. The consideration of options for incentivising renewable energy in the CRC, was constrained by the need to take into account the scope and impact of DECC policies targeted at promoting renewable energy generation across the wider economy. In particular, the Renewable Obligation (RO) and Feed-in Tariff schemes (FIT). It is essential that any CRC approach does not lead to duplication of support which would represent poor value for money to the taxpayer.
8. Following the December 2013 consultation, Government has decided that the consumption of energy from supplies that meet the definition of self-supply renewable electricity generation will be reported against a zero emissions conversion factor, providing these supplies have not been surrendered to claim ROC or FIT payments. In effect, this means that CRC allowances will not need to be purchased for eligible renewable energy.
9. Crucially, this will apply to all eligible supplies from April 2014. Eligible supplies are those that meet the criteria for claiming ROCs or FITs, which are from installations commissioned from 1st January 2008 (the start of qualification for the CRC scheme) and which are eligible for but have **not** received payments under the Renewable Obligation and Feed-in Tariff schemes.

### Excluding energy from metallurgical and mineralogical processes from the CRC

10. The Budget 2013 announcement to exclude from the CCL energy used in met/min processes aims to provide a tax relief to the most energy-intensive businesses as permitted under the Energy Tax Directive, and for whom energy makes up a significant proportion of total costs, and to help ensure that UK manufacturers in these sectors remain competitive with producers in other EU member states.
11. One consequence of the announcement is that where a CCA is withdrawn (as holders no longer need to benefit from the CCL discount that a CCA provides), former holders may become liable for CRC costs for the energy used in eligible met/min processes. In some cases, CCA coverage will have provided for a supply deduction for met/min process energy from the CRC to date.
12. Without further measures this supply deduction would cease to apply, and met/min process energy would no longer be excluded from the CRC. Allowing this to happen would contradict the original intention of the policy to provide a relief from energy costs for these sectors. Government is therefore going to introduce an exclusion from the CRC for eligible met/min process energy to remove this liability.

13. This will be done via a new 'supply deduction' whereby the energy used for specified met/min processes will not be considered a CRC supply for the purposes of both qualification and compliance. The existing provisions for the exclusion of CCA energy is delivered in an analogous way in the current CRC Order via a 'supply deduction' in Schedule 1 paragraph 29.
14. The detailed scope intended for the met/min and CCL exclusion, and so the detail of what the CRC supply deduction will need to cover to avoid the unintended consequences, has been published in a draft legislation paper for the Finance Bill 2014<sup>2</sup>.

### **Summary of consultation responses and government response**

15. The Government received a total of 31 responses to the consultation, 23 from CRC participants including the private and public sectors, and 8 from non-CRC participants. The majority of consultation respondents agreed that the proposed measures would deliver the Government's policy intent for the CRC on simplification and promoting the uptake of renewable energy, and support the effective implementation of the CCL exemption for met/min processes to help protect the competitiveness of UK energy intensive businesses.
16. A number of concerns were raised in relation to self-supplied onsite renewables. For instance:
- Proposals do not go far enough and a limited amount of large generators would face a disproportionate impact;
  - Feed-in-Tariffs do not reflect the return on investment faced by CRC participants;
  - There is no clear rationale to exclude renewable generation based on the start date of the CRC Scheme.
17. Prior to the consultation, a number of options to incentivise onsite renewable self-supplied electricity generation within the CRC population were explored but discarded as they would duplicate support provided by other DECC policies, resulting in poor value for money and state aid risks. Government has decided that the measure presented in this IA represents the best balance between incentives and risks.
18. In relation to the exclusion of met/min supplies, participants asked for a proportionate approach to accounting for energy covered by a CCA, such as the Directly Associated Activities or under the 70:30 rule, that would not be eligible for the met/min supply deduction.
19. However, there is still some uncertainty in accounting for what energy would not be eligible for the met/min supply deduction that cannot be resolved until DECC and the Environment Agency announce further details on the timing and process for withdrawal of CCAs. It is envisaged that this process will take place during the course of 2014.

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<sup>2</sup>[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/264648/Draft\\_clauses\\_and\\_explanatory\\_notes\\_for\\_Finance\\_Bill\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/264648/Draft_clauses_and_explanatory_notes_for_Finance_Bill_2014.pdf)

20. Government also received comments on the economic analysis and costs of the two measures. These related mainly to the cost impact of the CRC Scheme overall rather than the two measures assessed in this IA. Whilst some respondents questioned the assumptions employed in the economic analysis, no specific data evidence was provided that would enable the estimates presented in the consultation document to be revised.

21. In conclusion, Government acknowledges the concerns raised, but does not think they call for a revision of the estimates presented in the consultation document. The issues mentioned above are within the acceptable limits of evidence and it would not be possible to improve the assessment presented in this IA that would be proportionate in terms of cost and additional burdens on CRC participants.

### Option 0 – The current CRC Scheme (Business as Usual)

22. In this IA, the Business as Usual (BAU) option reflects the current Scheme following the implementation of the simplification changes enacted in May 2013 through the CRC Energy Efficiency Order 2013 (2013 Order) and the added emissions from the met/min sector as a result of the CCL exemption announced at Budget 2013 (See para 30-36 for details of the estimated relevant met/min emissions).

23. Costs and benefits of the BAU are presented in Table 1 below. Although these are consistent with the cost benefit assessment of the simplification measures in the December 2012 IA (updated in February 2013), values in this IA have been updated to reflect new energy demand trends and policy overlaps published in DECC's most recent Updated Emissions Projections (UEP) of October 2013<sup>3</sup>.

**Table 1 Net Present Value of CRC BAU updated**

			Net Present Value (£m, in 2012 prices, discounted to 2011)	Present Value of Costs (£2012m)		Present Value of Benefits (£2012m)			
Option 0	Lifetime Change in TRADED emissions (MtCO <sub>2</sub> e)	Lifetime Change in NON-TRADED emissions (MtCO <sub>2</sub> e)		Capital Cost	Admin Cost	Air Quality	Energy Savings	Non-traded sector savings	Traded sector savings
<i>Simplification package February 2013</i>	4.9	20.8	4096	318	228	63	3543	949	86
<b>BAU</b>	3.8	18.7	2809	346	228	43	2419	852	68

24. Comparing this updated baseline with the assessment of the values in the Simplification IA, there is a significant reduction in energy savings which is driven by lower energy demand projections in the public and industrial sectors in the latest UEP. A lower energy demand projection has resulted in a reduction of

<sup>3</sup>Updated energy and emissions projections: 2013, <https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2013>

total lifetime carbon savings in the CRC of 3.2MtCO<sub>2</sub> over the period 2011 to 2030, and a reduction in overall Net Present Value of the policy, although the policy remains net positive overall.

**Option 1 - Measures to incentivise onsite renewable self-supplied electricity and exclude metallurgical and mineralogical processes (Preferred option).**

25. Implementing measures to incentivise onsite renewable self-supplied electricity and excluding energy supplies from met/min processes that are eligible for the exemption from the CCL will impact on the value of the CRC via:
- A reduction in emissions covered by the CRC; and
  - A reduction in the number of CRC participants

Estimated uptake of onsite self-supplied renewable generation

26. This measure provides a choice for participants between either claiming a subsidy for their renewable generation via a ROC or FIT, or reducing their CRC liability. While there is significant uncertainty associated with the uptake estimates (we have not undertaken primary research to ascertain companies' intentions), the relative value of the CRC relief when compared to existing incentives available through RO and FIT payments, suggests a small impact.
27. Some companies with existing onsite renewable generation capacity may wish to take advantage of the zero rating policy. However, the scope of this effect would be limited to generation capacity that was (a) installed after the start of the CRC (in 2008) and before the launch of FITs and the Renewables Obligation (RO); and (b) did not take advantage of the FITs and RO qualification window (available to all such generation).
28. Therefore, estimated uptake of this measure is based on existing and new generation but, in both cases, we believe this would be relatively small based on the following considerations:
- a. **Existing generation** would only cover onsite renewable installations commissioned during the lifetime of the Scheme since 2008, the first CRC qualification year. These installations would have been eligible for RO or FIT payments but did not claim, and would therefore qualify for zero rating in the CRC. The extent of the generation captured in this category would be reported in the CRC Annual Reports within existing onsite generation from Energy Generating Credits (EGC).

However, reporting data does not provide the relevant detail to enable us to distinguish (within EGC generation) between technologies that qualify for ROCs and FITs and those that do not. For simplicity, this IA assumes that the majority of EGCs are related to energy from waste facilities which do not qualify for ROCs (but see 'Risks and assumptions' below).

Furthermore, we have removed all self-supply EGC from waste and water companies on the assumption that these all generate energy from waste. Table 2 below shows that 10% of self-supply EGCs in 2012-13 relates to

non-waste/water companies. By excluding waste/water company supplies, the total amount of existing self-supplied generation in 2012-13 that could qualify for zero rating is 22,409 MWh (10,738 tCO<sub>2</sub>). Whilst some consultation respondents indicated that not all their energy is generated from waste, they did not provide evidence that would enable us to revise this assumption. This estimate is subject to the further assumption that existing capacity in 2012-13 would continue unchanged throughout the period 2014-15 to 2016-17.

**Table 2 CRC Annual Report Data – Self Supply Electricity<sup>4</sup>**

Reporting Year	Self-Supply EGC (MWh) from Waste/Water	Self-Supply EGC (MWh) from Non Waste/Water	Percentage of Self-Supply EGC from Non Waste/Water
2011-12	224,502	82,867	37%
2012-13	231,341	22,409	10%

b. **New generation** uptake is expected to be relatively small. The monetary value of zero rating CRC self-supplied onsite renewable generation is 0.76p/kWh (equivalent to £16/tCO<sub>2</sub><sup>5</sup>). This incentive is considerably lower than the support offered by FITs and ROCs, which ranges from 4.6p/kWh to 17.5p/kWh. Since ROCs and FITs pay at least five times more than CRC allowance zero rating, it is unlikely that CRC participants that qualify would choose CRC allowance zero rating over a ROC or FIT subsidy. There could be some isolated cases where participants would prefer the CRC zero rating but, in the absence of other information, we have not considered any additional uptake from new generation.

29. Overall, the total amount of take up this measure is estimated to result in and would qualify for CRC allowance zero rating is approximately 22.5 GWh or 11 KtCO<sub>2</sub>.

#### Estimated CRC liabilities for metallurgical and mineralogical sectors

30. Estimating the impact of the measure to avoid met/min sectors falling into the CRC as a result of the CCL exclusion for met/min processes, has required us to identify emissions from two possible sources:

- a) CRC emissions from met/min processes not covered by CCAs or EU ETS – these will result in a reduction of emissions covered by the CRC; and
- b) CRC emissions from CCAs (as a result of the 70:30 rule or directly associated activities) that may not be covered by the met/min processes – these will result in an increase of emissions covered by the CRC.

<sup>4</sup> Environment Agency

<sup>5</sup> This figure is expressed in real terms and is equivalent to the average of £15.60 and £16.40 announced by HMT in the Autumn Statement 2013.



*Source (a) - Emissions not covered by CCAs or EU ETS*

31. We have identified the met/min sectors that do not have CCA agreements and extracted all the CRC emissions related to these sectors from the CRC database. A draft list<sup>6</sup> of eligible met/min processes has been matched to SIC code classifications. The list was then matched against the corresponding SIC codes in CCAs. Finally, a number of SIC codes that do not correspond with a CCA sector were identified and are listed in Table 3 below.
32. Using data submitted by CRC participants in their annual reports for the sectors in Table 3 we estimate that the amount of CRC emissions related to organisations that fall within the met/min category and would now be excluded from the CRC, is 252KtCO<sub>2</sub>. Assuming a constant level of emissions and a price of £16/tCO<sub>2</sub>, the associated CRC allowance revenue impact would be £4m per year.

**Table 3 Min-Met sectors with no CCA agreement**

List of met/min sectors with no CCA agreement.	SIC Code
Processing of nuclear fuel	D.23.30
Manufacture of concrete products for construction purposes	D.26.61
Manufacture of ready-mixed concrete	D.26.63
Manufacture of mortars	D.26.64
Manufacture of fibre cement	D.26.65
Manufacture of other articles of concrete, plaster and cement	D.26.66
Cutting, shaping and finishing of stone	D.26.70
Production of abrasive products	D.26.81
Precious metals production	D.27.41
General mechanical engineering	D.28.52

*Source (b) - CRC emissions from CCAs that may not be covered by the met/min processes*

33. Eligibility for the CRC supply deduction is based on NACE codes for processes eligible for the CCL exemption published in draft legislation by HMRC in December 2013. Government is continuing to consider the list of eligible processes and is due to finalise this list in the Finance Bill 2014 after April.

<sup>6</sup> A final list will be confirmed by HMT for the Finance Bill after 1 April 2014.

34. This new 'supply deduction' would not cover 100% of the emissions covered by the relevant CCAs. Some processes currently covered by a CCA as Directly Associated Activities (DAAs) or under the 70:30 rule, may not be eligible for the met/min supply deduction and so may become liable for CRC payments where the implementation of the CCL exemption leads to a CCA withdrawal. Engagement with industry will soon be undertaken setting out the implications of CCA withdrawal.
35. However, at present, DECC has not been able to quantify the impact of this measure owing to a lack of data at the level of disaggregation necessary to distinguish between supplies from core processes, DAAs and the 70:30 rule.
36. Having considered the possible range of impacts, we believe the emissions that would fall back into the CRC Scheme would be relatively small because:
- DECC consulted with industry on the impact of this measure as part of the CCA simplification consultation. The response to the consultation indicated that only a limited amount of energy would be captured by the 70:30 rule.
  - The majority of the energy captured by CCAs would also be within an EU ETS installation (given the new treatment of these installations in the CRC); and
  - Given the majority of emissions would be excluded, the remaining supplies might not meet the 6000 MWh qualification threshold for CRC participation.

#### Quantified impacts of the preferred option

37. The impacts of the measures included in the preferred option have been assessed relative to the BAU set out above in Option 0.
38. Figures in Table 4 present the joint impact of these measures on the CRC Scheme NPV. These have been calculated by adjusting the Simplification IA of December 2012 (updated in February 2013) to the changes in emissions coverage of the Scheme identified in the previous section i.e. a reduction in the emissions covered by the CRC of 11KtCO<sub>2</sub> and 252KtCO<sub>2</sub>, from onsite self-supplied renewable energy and met/min exclusions respectively. This adjustment pro rates energy, carbon savings and capital costs to the change of emissions resulting from the two measures. At the same time, the change in administration cost has been adjusted to the number of CRC participants that would fall out of the scheme as a result of met/min exclusions (note only the met/min measure reduces administration costs driven by participants leaving the Scheme).
39. Reducing the number of participants reduces the emissions covered by the CRC by 0.3MtCO<sub>2</sub> overall, and a £44m reduction in energy savings. Additionally, fewer participants in the Scheme also results in a small reduction of £1m in administration costs. The net impact is a reduction of £52m or 2% of the Net Present Value over the period 2011 to 2030, although the Scheme overall remains net positive. Of the £52m reduction in NPV, this IA has estimated that the majority (£40m) would be associated with a loss to Business Net Present Value. This takes into account loss of energy, capital and administrative

savings<sup>7</sup>. Overall, these reductions are justified by providing wider policy coherence with renewables and by safeguarding the full benefits to the met/min sector from the CCL exemption.

**Table 4 Cumulative Impact of proposals, 2011 -2030**

Option	Lifetime Change in TRADED INDIRECT emissions (MtCO <sub>2</sub> e)	Lifetime Change in NON-TRADED emissions (MtCO <sub>2</sub> e)	Net Present Value (£m, in 2012 prices, discounted to 2011)	Present Value of Costs (£2012m)		Present Value of Benefits (£2012m)			
				Capital Cost	Admin Cost	Air Quality	Energy Savings	Non-traded sector savings	Traded sector savings
BAU	3.8	18.7	2809	346	228	43	2419	852	68
Option 1	3.7	18.4	2758	340	227	42	2375	841	66
<b>Net Impact</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-52</b>	<b>-6</b>	<b>-1</b>	<b>-1</b>	<b>-44</b>	<b>-11</b>	<b>-2</b>

40. Note that the Net Present Value calculations treat the cost of allowances as a cost to business and a benefit to Government but with a neutral impact on the Net Present Value since it represents a net transfer between participants and Government<sup>8</sup>.

#### **Direct costs and benefits to business**

41. Direct costs to business of participation in the CRC Scheme are mainly driven by the cost of allowances. Other costs to businesses such as administrative and capital expenditure costs are considered to be negligible because the impact of these measures in energy savings is minimal (about 1% of carbon savings).

42. The net cost to business calculation applies to the non-public sector only. Some of the savings in CRC allowances cost from renewables could be attributed to local authorities and other public organisations. However, given the small coverage identified, this IA assumes that this would be minimal and they have not been deducted from the overall costs.

#### **Benefits to businesses from incentivising onsite self-supplied renewable energy**

43. This impact has been estimated by converting projected electricity generation from eligible supplies into CRC allowances using currently published emissions factors<sup>9</sup>. Our assessment takes into account the 22,409 MWh identified above that could qualify for zero rating and assumes this capacity remains constant. On this basis, the impact associated with the existing stock of onsite generation

<sup>7</sup> Since there is no information on capital cost and administrative cost, this IA has adjusted Business Net Present Value by a scaling factor of 77%, which corresponds to the ratio of business to total emissions in the Simplification IA (February 2013). This results in a loss to Business Net Present Value of £40m.

<sup>8</sup> This in accordance with appraisal guidance from: the Green Book published by HMT; IAG guidance on carbon appraisal by DECC; and the One in Two Out evaluation guidance published by BIS.

<sup>9</sup> <https://www.gov.uk/crc-energy-efficiency-scheme>

would be £0.17 million per annum reduction in allowance liabilities for CRC participants.

### Benefits to businesses from the metallurgical and mineralogical exclusion

44. Table 5 shows the projected emissions that would be covered by this exclusion in each annual report from 2014-15 to 2019-2020<sup>10</sup>, and the associated revenue impact (in real 2012 prices).

45. This impact has been estimated by:

- Identifying all CRC emissions in the CRC report that relate to met/min processes not covered by CCAs;
- Applying the CRC projected emissions trend for the period 2014-15 to 2019-20; and
- Multiplying projected emissions by the relevant price of allowances.

**Table 5 Reduction of CRC allowance liabilities of the met/min exclusion**

Min-Met sector with no CCA agreement.	Annual Report Emissions 2010-2011	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
<b>Total Emissions tCO<sub>2</sub></b>	252,415	217,345	214,838	212,636	212,017	211,096	210,696
<b>Total CRC Allowance Impact by year Real (2012) £m</b>	2.7	3.4	3.4	3.5	3.6	3.8	3.8

### Net cost to business per year

46. The net cost to business per year is a reduction of £3m (EANCB in 2009 prices)<sup>11</sup>. It has been estimated by aggregating benefits from renewables up to 2030 and the met/min exclusion and transforming all revenues from 2012 to 2009 prices and discounting these by the annuity rate. Although the CRC is not in scope of One In Two Out, reporting benefits to business in EANCB in 2009 prices allows for comparison with other policies.

## **Risks and Assumptions**

### Onsite self-supplied renewables

47. Estimates of renewable uptake presented in this IA are subject to considerable uncertainty because in the first two years the CRC Scheme generated some

<sup>10</sup> These values have been projected to 2030 to estimate the overall NPV but Table 5 only shows up to 2020.

<sup>11</sup> EANCB = Equivalent Annual Net Cost to Business

<http://www.bis.gov.uk/assets/biscore/better-regulation/docs/o/11-671-one-in-one-out-methodology.pdf>

unreliable EGC data due to the complexity of reporting. In the annual reports of 2010-11 and 2011-12, EGCs were subject to significant revisions. As a result, estimates of EGCs emissions are based in data reported for 2012-13 only.

48. In addition, this IA assumes that there are no eligible supplies from EGCs generated by waste treatment and water companies. Some consultation responses challenged this assumption, indicating that some of the generation from this sector could come from qualifying technologies. Although no evidence was submitted that would enable us to revise our estimate of onsite self-supplied renewables, this IA considers the relative impact on our results from alternative assumptions:

- 5% of the energy from these technologies that generate electricity from EGCs would qualify for the exemption
- 10% of the energy from these technologies that generate electricity from EGCs would qualify for the exemption

**Table 6 Sensitivity of assumption on eligible EGCs from waste and water companies**

Assumption	NPV of the CRC	Impact on Emissions covered CRC (MtCO <sub>2</sub> )	Impact on Annual Revenue (£m) at £16/tCO <sub>2</sub>
None	2758	0.01	0.17
5%	2757	0.02	0.26
10%	2752	0.02	0.35

49. Table 6 above shows the impact on the estimates presented in this IA from using alternative assumptions of eligible EGCs from waste and water companies. Although the impact on emissions doubles relative to the assumption in the IA, it is against a very low emissions impact base. There is a larger impact on revenues, double in the case of the 10% sensitivity. However, this too is set against a low base.

50. The impact of alternative assumptions is small and therefore our assumption in the preferred option is valid.

#### Mineralogical and metallurgical exclusion

51. The following assumptions and caveats apply to the calculation of the impacts of the met/min exclusion:

- In estimating the annual revenue impacts, it is assumed that emissions follow the CRC emissions trend.
- Reporting for the CRC is based on the SIC code of the parent organisation<sup>12</sup> but this does not mean that 100% of these emissions would be related to the

<sup>12</sup> Or Participant Equivalent

same sector. For example, an organisation could be classified as Precious Metals Production while owning a subsidiary in the hospitality sector.

- Met/min processes do not cover total energy reported by CRC participants. As a consequence, not all the energy used by these participants would qualify for exclusion.

52. It is likely that the impact of the last two assumptions will be negligible because removing energy from energy intensive processes may well result in an organisation falling below the CRC qualification threshold.

### **Wider impacts**

53. This IA quantifies the direct impact on businesses of the proposed simplification measures. The following impacts have been considered as having no or negligible effects:

1. Costs in employment
2. Barriers to start up and other impacts in small and medium size business
3. Competitive distortions
4. Regional distortions
5. Social impacts such as well-being, human rights and inequality

## Annex A Profile of savings from simplification measures

### Energy and Carbon Emissions Savings

Part A of this annex shows annual energy and emissions (split between traded and non-traded) savings in the (preferred) Option 1 up to 2030.

Year		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
Energy TWh																						
Public	Electricity	0.08	0.08	0.11	0.14	0.19	0.25	0.33	0.41	0.50	0.60	0.79	0.98	1.12	1.26	1.41	0.99	0.58	0.16	0.00	0.00	
	Gas	0.19	0.31	0.44	0.56	0.73	0.92	1.13	1.34	1.56	1.79	2.05	2.32	2.52	2.72	2.94	2.53	2.12	1.70	1.43	1.17	
Commerce	Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Gas	0.37	0.61	0.87	1.12	1.47	1.85	2.28	2.69	3.13	3.59	4.11	4.65	5.06	5.47	5.91	5.07	4.26	3.42	2.88	2.35	
Industry	Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Gas	0.05	0.08	0.11	0.15	0.19	0.24	0.30	0.35	0.41	0.47	0.54	0.61	0.66	0.72	0.78	0.67	0.56	0.45	0.38	0.31	
Emissions savings MtCO2	Traded indirect	0.03	0.03	0.04	0.05	0.07	0.10	0.13	0.16	0.19	0.23	0.30	0.37	0.42	0.48	0.53	0.35	0.19	0.05	0.00	0.00	
	Non-Traded Direct	0.11	0.18	0.26	0.34	0.44	0.56	0.69	0.81	0.94	1.08	1.24	1.40	1.52	1.65	1.78	1.53	1.28	1.03	0.87	0.71	

