Weaving a contribution story from multiple workstreams and counterfactuals – evaluation of UK Climate Change Agreements scheme

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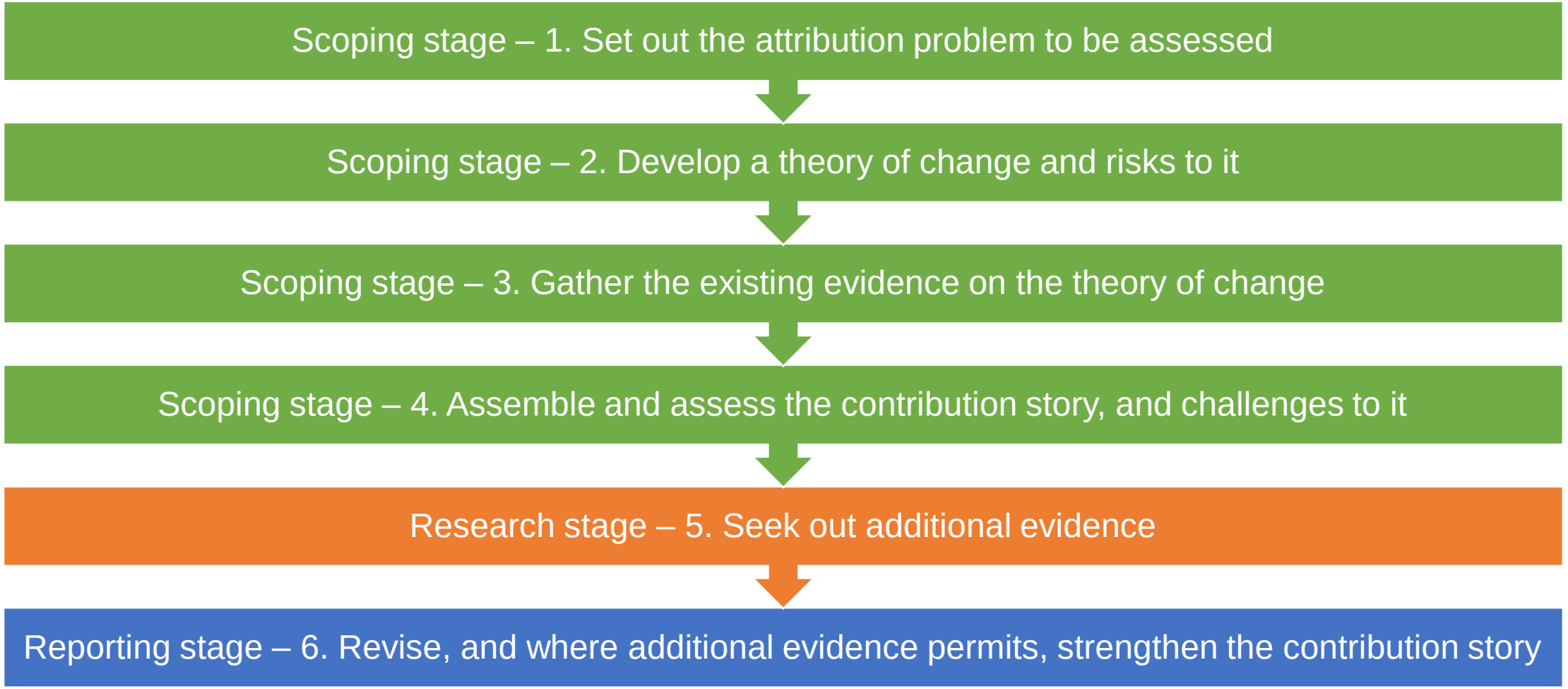
What is the Climate Change Agreements scheme?

- A **voluntary agreement scheme** for energy intensive industries in the UK – part of the UK's Clean Growth Strategy
- First scheme ran from 2001 to 2010, with the second scheme running from 2013 to 2023
- Sites or groups of sites called 'Target Units' in certain sectors (energy intensive and/or import intensive) commit to meeting **energy or carbon targets**
- Sector-specific targets for each two-year 'target period' are agreed between Government and industry sector bodies
- Participants receive **discounts on carbon taxes** (Climate Change Levy (and –formerly – exemption from CRC allowances)
- If a Target Unit fails to meet its targets, it risks losing its discount unless it pays **buy-out fees** or uses surplus from previous target periods to meet the target

BEIS commissioned a consortium led by CAG Consultants to evaluate the second CCA scheme:

1. What have been the **outcomes** observed during the second CCA scheme?
2. What has been the **impact** of the CCA scheme and can any identified energy/carbon savings or increased competitiveness be **attributed** to the CCA? **How** did the CCA generate any attributed effects?
3. Is the CCA scheme offering **value for money** for Government, units and society?
4. How effective and efficient has the **delivery** of the CCA scheme been?
5. What can we learn for any potential future iterations of the CCA scheme and **future policy**?

Contribution analysis provided the overarching framework for assessing CCA impact:



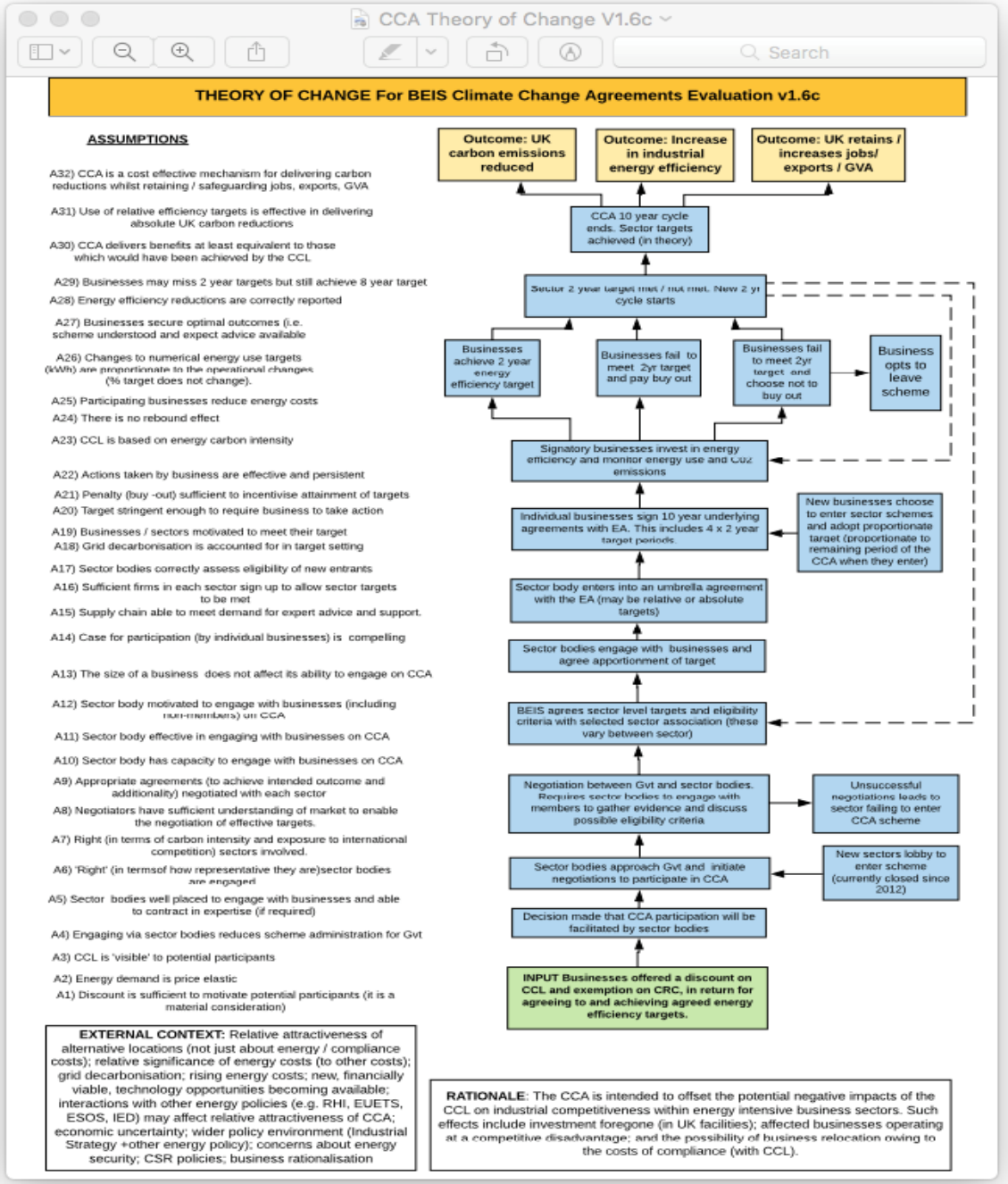
Mayne J., (2001). Addressing attribution through contribution analysis: using performance measures sensibly. The Canadian Journal of Program Evaluation, Vol 16, No.1, 1-24.

The attribution question centred around how far the CCA had contributed to ‘Clean Growth’:

Clean Growth

- Improving energy efficiency within energy-intensive industries
- Saving carbon and reducing energy bills
- Helping to retain jobs, GVA and investment in the UK
- Reducing carbon leakage

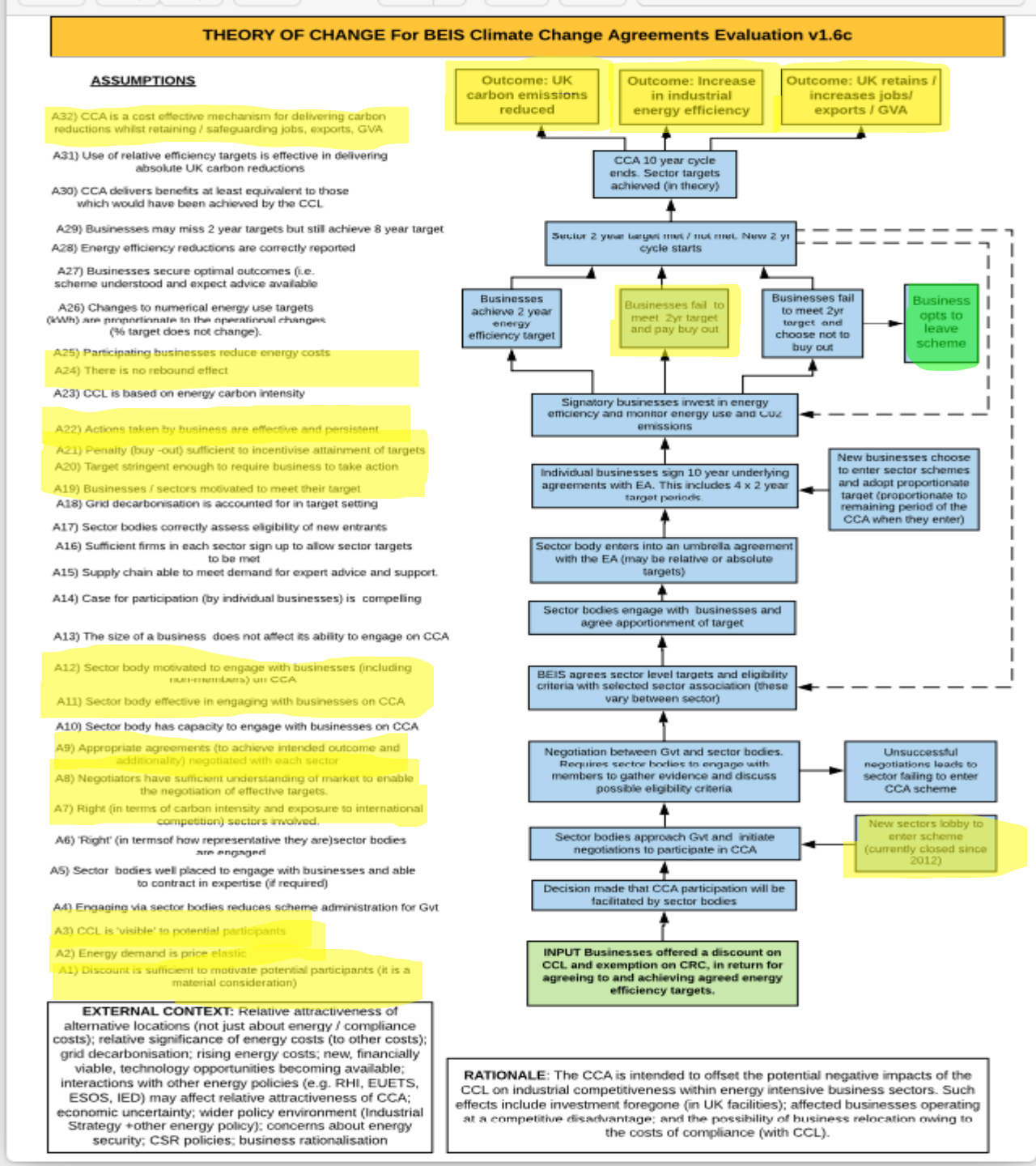
We developed a Theory of Change, in partnership with BEIS, summarizing the contribution story to be tested



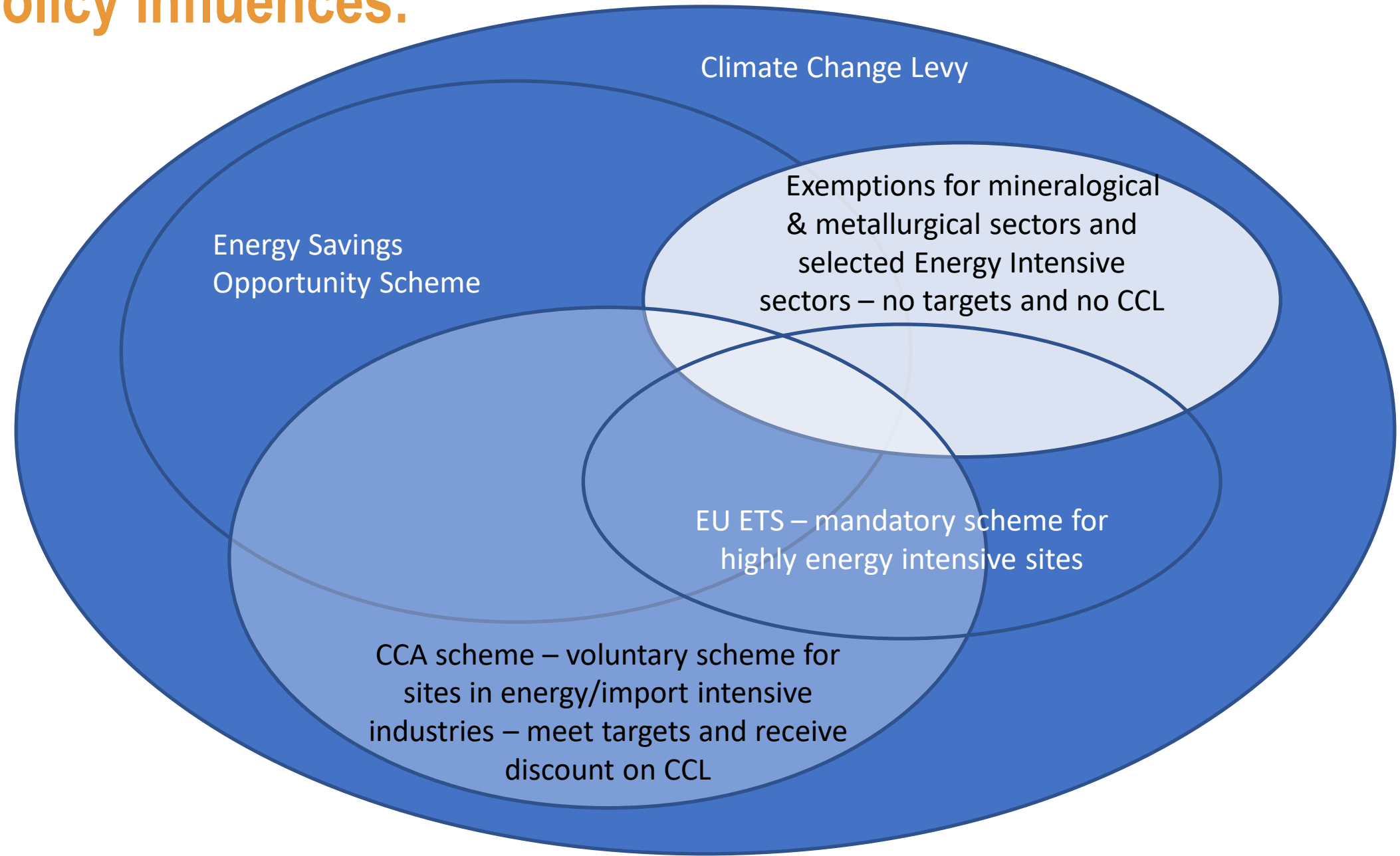
During the scoping stage, we undertook a literature review and reviewed existing evidence from other BEIS evaluations, and then identified gaps in the contribution story:

Areas where we needed more evidence included:

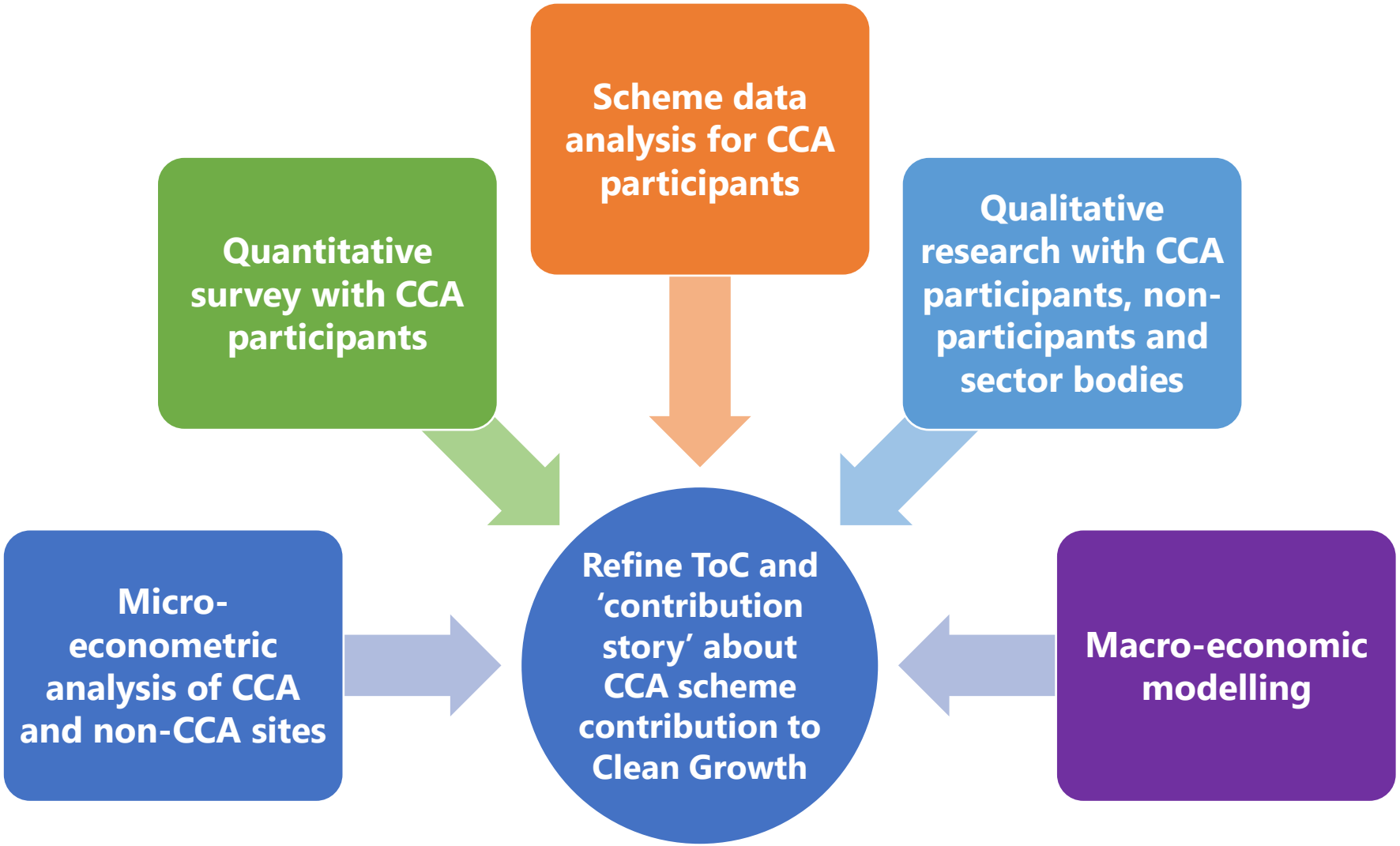
- How do CCAs influence firms' behaviour? Why is there such a high level of buy-out? Is buy-out too cheap? And are targets tight enough?
- What role do sector bodies really play and how does this vary between sectors?
- Are targets set at the 'right' level? Are the 'right' sectors targeted, to achieve CCA objectives?



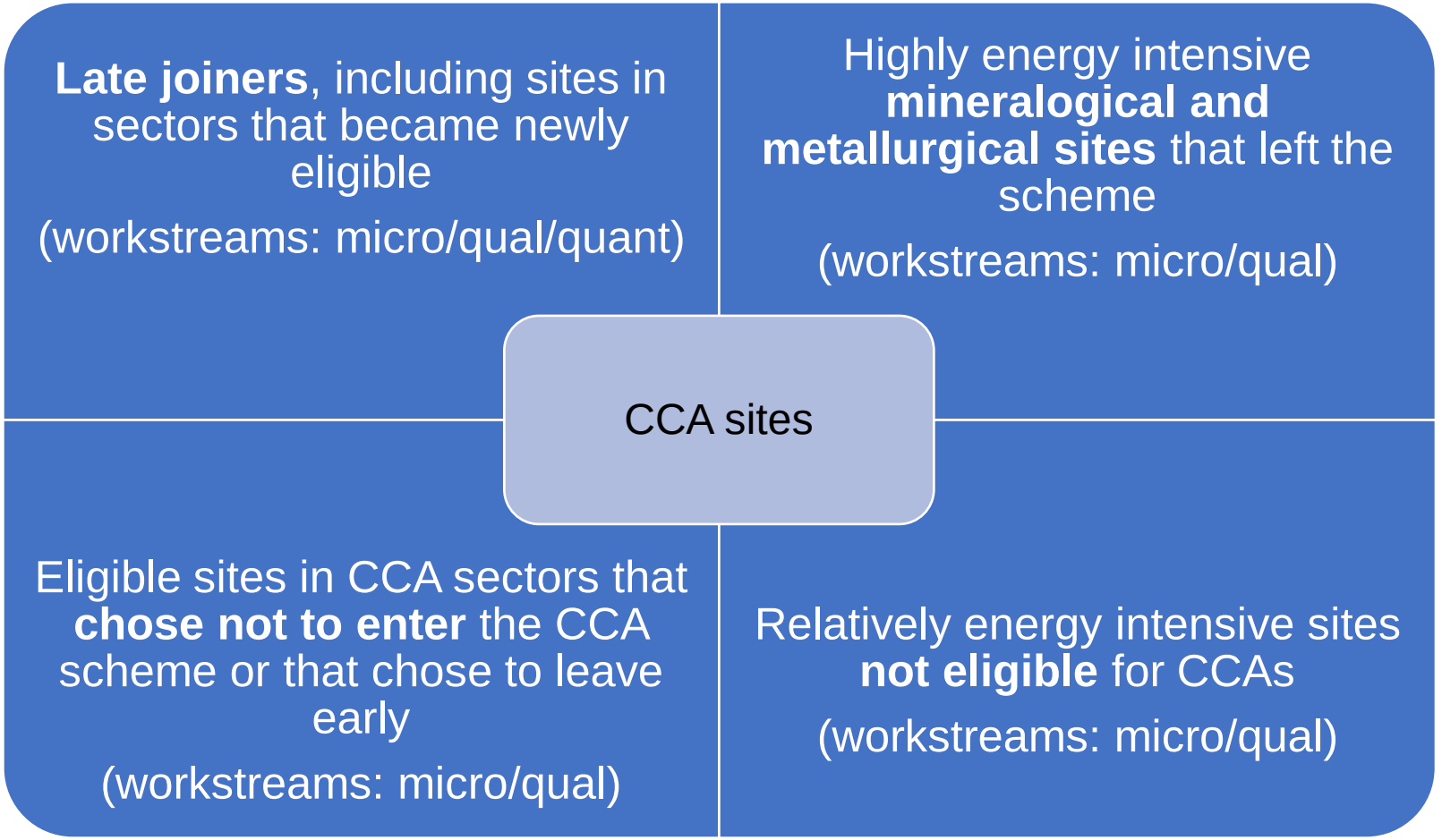
Refining the contribution story involved disentangling complex policy influences:



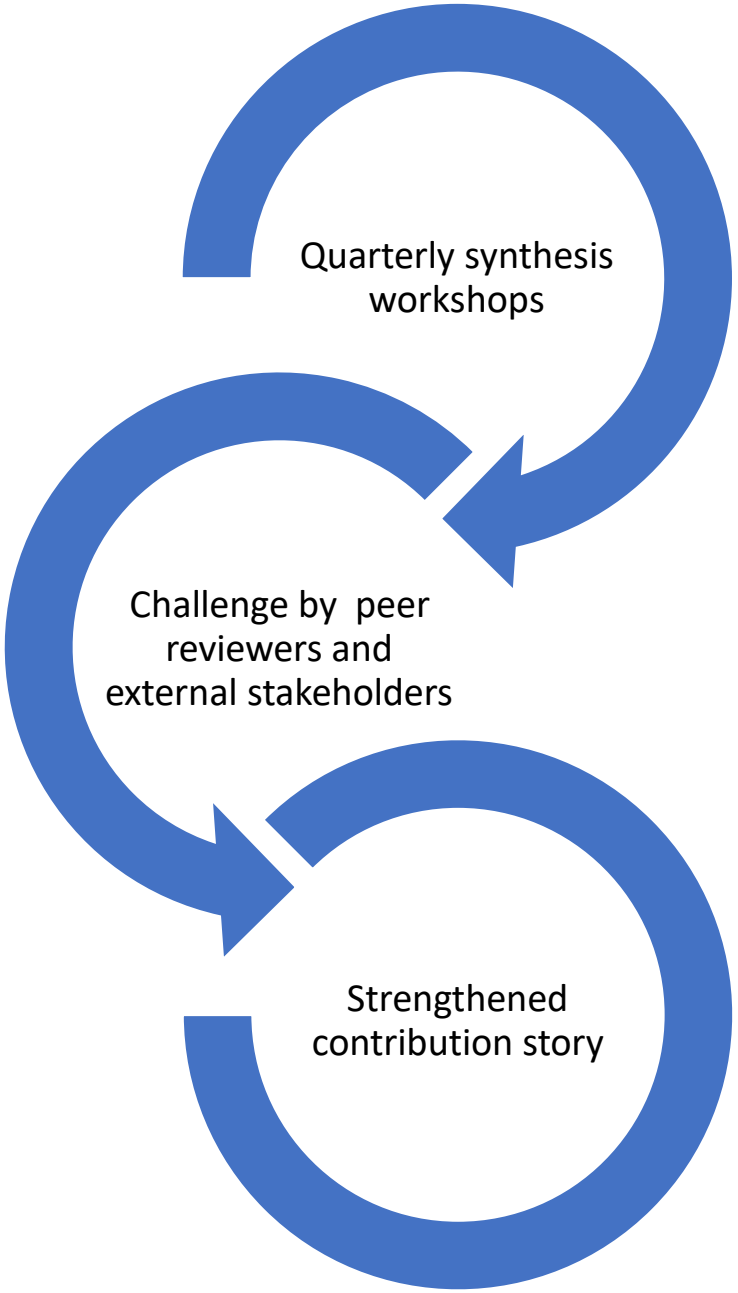
We used new data collection to fill gaps in our understanding of the ToC and contribution story:



We used several different comparison groups to help understand the counterfactual and assess/quantify CCA impact compared to CCL/CRC.



Synthesis of evidence and refinement of the contribution story was an iterative process during the year-long evaluation:



Finally, we reassessed the Theory of Change in the light of our synthesis of new evidence from all the workstreams:

Some key assumptions in the ToC required careful consideration:

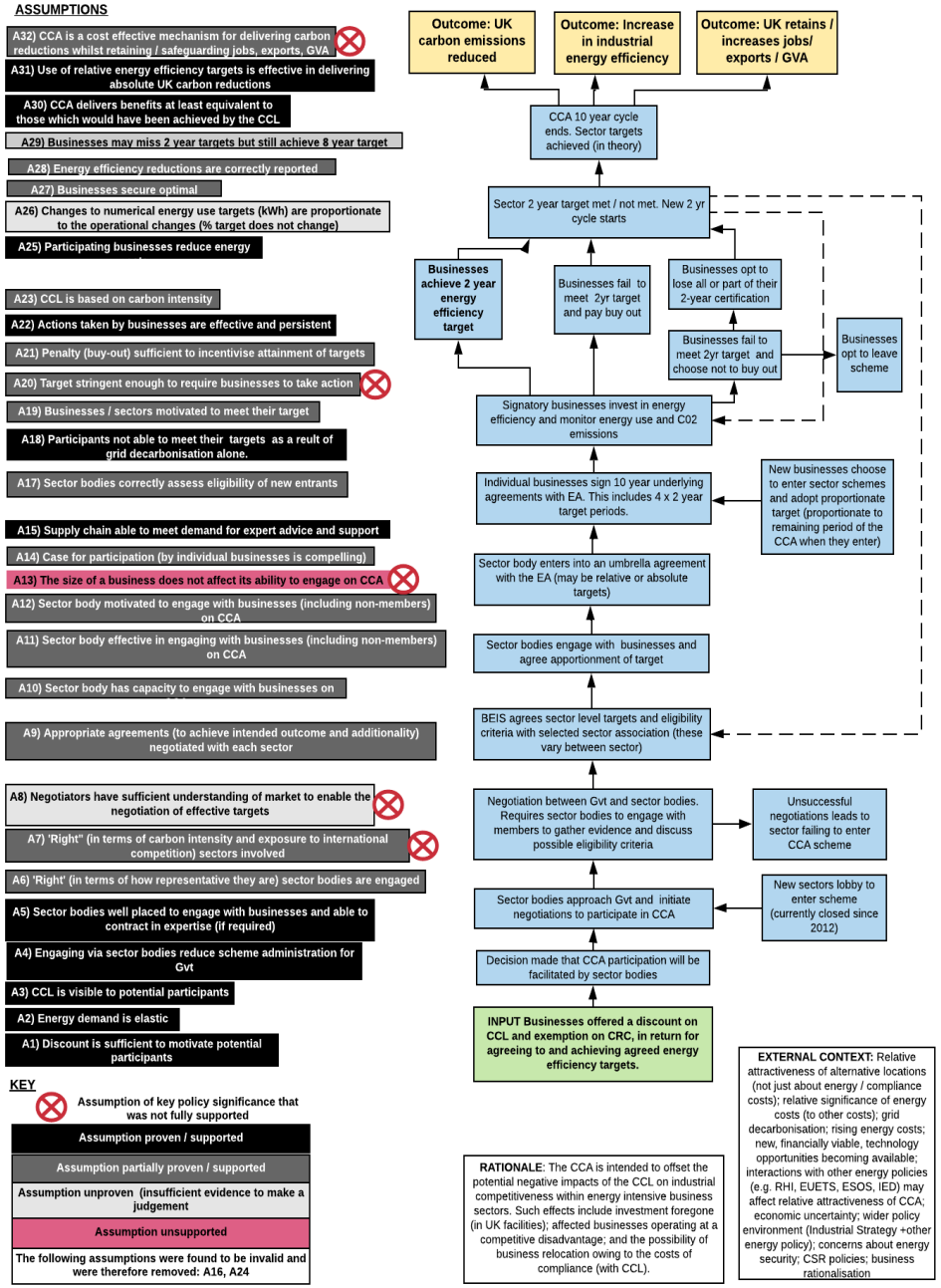
A7) Were the ‘Right’ (in terms of carbon intensity and exposure to international competition) sectors involved?

A8) Did negotiators have sufficient understanding of the market to enable the negotiation of effective targets?

A13) Did the size of a business affect its ability to engage on CCA?

A20) Were targets stringent enough to require business to take action?

A32) Is the CCA a cost-effective mechanism for delivering carbon reductions whilst retaining / safeguarding jobs, exports, GVA?



We concluded that the CCA scheme made a modest contribution to energy efficiency, based on our synthesis of findings from all the workstreams:

Micro: electricity consumption on CCA sites slightly lower than on sites paying full CCL. Min-met firms leaving the scheme showed slight increased electricity consumption. Gas consumption and electricity intensity lower for certain sectors.

Macro: Energy consumption (electricity and gas) was slightly lower in industrial sectors significantly affected by the CCA, compared to the same sectors in other European countries. Non-CCA factors may play a role.

Scheme data: Where Target Units (TUs) missed their CCA targets, they underperformed by a small margin - 6.5% of reported emissions. Where TUs exceeded targets, the surplus represented 13.5% of emissions.

Quantitative survey: Half of CCA firms would have taken all the same actions anyway. A minority reported that CCA made a significant difference to energy efficiency action; others reported slight CCA influence.

Qualitative research: Sector bodies reported that targets are challenging but participant responses more mixed. Some types of firms showed credible evidence that CCAs encouraged slightly more action on energy efficiency than non-CCA firms.

Similarly, we concluded that the CCA scheme made a modest contribution to growth, based on our synthesis of evidence across all the workstreams:

Scheme data analysis: Significant scale of CCL (and historically CRC) savings – around £300 M pa. Plus some energy bill savings.

Micro: GVA/turnover at CCA sites estimated to have grown slightly faster than for equivalent non-CCA, non-CRC sites paying full CCL. GVA/turnover at sites in min-met sectors have grown slightly faster than equivalent firms that stayed in the CCA scheme.

Macro: CCA is estimated to have had a very slight but positive effect on GVA at macro-level.

Quant: CCA reported to play some role in location decisions for nearly half of CCA participants where they were deciding to establish new sites. Rising energy costs cited as one factor triggering relocation decisions, for 27% of those relocating or considering relocation. But only 7% of firms had relocated since 2013.

Qual: Slight but positive influence of CCA on firms facing international competition, because CCL contributes to high energy costs in UK. But for others, international competition is not relevant and their main concern is having a level-playing field with UK competitors.

For more detail, please see the published evaluation report:
https://www.gov.uk/government/publications/second-climate-change-agreements-scheme-evaluation

Thank you.