

Defra January 2023 - Net Zero Pathway Commission Return to BEIS

Introduction

1. This covering note provides specific detail on any handling, caveats, or limitations to the accompanying sectoral excel documents which outline Defra's revised net zero pathway. The sections below cover (a) a general summary outlining caveats and limitations across the templates; (b) specific details to highlight by sector; and (c) specific caveats about the data from an analytical perspective.
2. Alongside this cover note, we are returning:
 - Template A;
 - Template B;
 - Template C;
 - Summary excel sp/sh of name/descriptor changes; and
 - Summary tables of our quantified and unquantified lists, as presented to Defra ministers.

Summary Across the Templates

Clearance

3. The return as of 25th January 2023 has **not** been ministerially cleared. We anticipate this taking place by 27th January and we may need to submit an updated version of the templates once this has taken place.
4. To note we have provided a summary of initial name changes to policies and proposals covered in template A as a separate attachment. However, our ministers are clearing this on the basis they will have another chance to review how the quantified and unquantified lists are presented publicly in the NZGP. We plan to put the public facing versions of these lists to our ministers w/c 20th February.
5. In regard to the unquantified list, set out in Template C, Defra ministers have had limited advice on some of the measures contained in this list, and thus this list should be treated as indicative until the advice w/c 20th February has been sent to ministers, and feedback received.

Devolved Administration Contribution

6. The savings returned in this commission include a mix of UK-wide and England savings. Distribution of savings between England and the DAs has been calculated using a range of crude scalers with no bespoke engagement with the DAs on whether and how they will be delivering their portions of the allotted savings.
7. Due to the devolved nature of Defra policies, the DAs may choose to implement different policies across environment and farming sectors. Currently Defra is not

resourced to track or monitor DAs' contributions to UK wide savings and thus the numbers provided should not be treated as either accurate or reliable. We welcome further guidance from BEIS on their strategy for assuring DA contributions across the whole economy.

The Gap

8. We currently calculate that there is a total gap of 13% between our Net Zero Strategy effort share and the current quantified list for England in CB6, and a gap of 13% for the UK in CB6. The gap is higher in CB4 and 5.
9. At UK level, 63% of this is accounted for by changes to our policy projections, and 37% of this is accounted for by recent BEIS baseline changes. Baseline changes are covered more fully in the caveats about the data section below, but we would like to pick these up with you given uncertainties, particularly around the EEP, in order to further firm up the size of the gap. We are not clear on the protocol for managing updates to departmental effort shares where changes in baselines have occurred and we do not accept that Defra 'owns' any additional gap created by baseline changes without further clarity and discussion.

Skidmore Recommendations

10. The Tab at Template C focussing on the Skidmore Recommendations should be taken as indicative only. Skidmore Recommendations have not been tested in full with Defra ministers and we don't anticipate this occurring until w/c 20th February. The majority of recommendations support or enable delivery of existing decarbonisation measures, consequently we do not anticipate the act of accepting the recommendations or not being likely to provide substantive additional carbon savings beyond our current pathway.

Sectoral Highlights

Agriculture

11. The majority of agricultural savings have remained the same from a policy perspective. The exception is the removal of the fertiliser tax from the quantified list of measures (negligible impact). Instead, we have put an additional fertiliser stretch measure in the unquantified list as an enabler but broadened the delivery vehicle out to cover other potential market interventions (including softer measures/incentives).
12. We have renamed the row previously called 'Additional Stretch from reduced size of livestock sector from BPS withdrawal'. Additionally, we would like to follow up with BEIS analysts prior to publication on the modelling for BPS withdrawal and the emissions savings we anticipate being associated with this, to ensure the projected savings are still accurate.

13. The unquantified policies in template C have not yet had ministerial clearance and will require fuller ministerial engagement (beyond this week), to get a steer on which measures they are content to pursue and publish as “unquantified” measures in the compliant report.

LULUCF

14. The expected emissions savings from forestry have reduced so they align with the Forestry Environment Act target and have a higher degree of delivery confidence. Reduction in target from 0.62MT to 0.43MT per annum by CB6.
15. The expected emissions savings from agroforestry have been reduced from 0.81MT to 0.09MT per annum by CB6, due to more realistic modelling changes, regarding density of planting and species mix. We will further test these assumptions against the NFU's. This does not include the expected 0.09MT contribution from hedgerow creation. This will be added as an independent measure (previously combined with agroforestry savings).
16. Expected savings from Biomass have reduced in part due to a delay in planting starting as a result of not receiving Spending Review funds (from 2023 to 2026), and the need to limit any potential trade-offs with Environment Act targets (e.g. biodiversity) and other land use constraints. Defra ministers indicated likely agreement to quantifying around one third of previous emissions savings (c.1MTCO₂e) and a desire to minimise the land take – we have asked for clarification on this in our advice to ministers and will confirm the position on biomass when we hear back from them. We are also quality assuring this modelling, so it should not be taken as final until we confirm.
17. In longer time we need to work with BEIS to understand the end markets for these types of biomass, and in particular demand from BECCS, to build confidence in the pathway – this work will need to continue after March.

WWF

18. Revisions to the WWF rows include policy name changes for clarity on what is included within each policy row.
19. Additionally, there have been changes to the modelling of emissions projections figures for waste i.e. W1A, due to use of a new modelling system (LEAF to MELMOD). This has slightly decreased the emissions savings for W1A, and increased the savings for W1B; the overall emissions projections across both W1A and W1B remains the same as before. We are exploring policy ideas to add to W1B to make up the shortfall.
20. No significant changes to wastewater emissions projections since NZS. We have included W2A savings in our emissions pathway as we are still awaiting confirmation from BEIS about its inclusion into the latest EEP baseline.
21. F gas savings from Net Zero Strategy used production-based emissions figures. They are now measured using consumption-based emissions figures which more

accurately reflect the real-time emissions in a given year. Because of this, savings which were attributed to FG2 at the time of the Net Zero strategy are now attributed to FG3. We are undertaking a review of F-gas policy in 2023 and believe this will help identify policy action to deliver savings for FG3 though further analysis will be required.

Caveats about the data

Delivery Confidence

22. Our emissions savings projections by and large represent maximum feasible savings rather than a likely scenario. Delivery confidence is low for many of these emissions savings and scientific uncertainty limits precision. Key assumptions underpinning these numbers that are subject to high levels of uncertainty include land area that will be available for peatland restoration and afforestation; policy uptake rates by businesses, land managers and farmers; and sector-level economic growth projections. We have kept policies and proposals with high delivery uncertainty in template A, as per BEIS advice issued around this commission.

EEP Baseline

23. EEP baseline projections for Defra emissions have increased between the Net Zero Strategy baseline and the 2021 to 2040 version. They have increased by 14.7 MtCO₂e in CB4, 9.9 MtCO₂e in CB5 and 7.1 MtCO₂e in CB6.

Increases in the baseline between EEP NZS and EEP 2021 to 2040			
	CB4	CB5	CB6
Agriculture	2.8	1.8	1.3
LULUCF	3.2	-4.8	-10.4
Waste management	4.4	7.4	11.1
F-gases	4.3	5.6	5.1
Defra sectors total	14.7	9.9	7.1

24. We do not yet have a full picture on the cause of this change from the BEIS EEP team or from the Defra, BEIS and externally contracted teams that create agriculture, LULUCF, F-gas and waste emissions projections. The majority of the difference arises due to underlying modelling described in EEP Annex N rather than in the policy savings estimates specified by BEIS in EEP Annex D. This is well specified for F-gases and waste but very little explanation of factors giving rise to the modelling change is given for LULUCF or agriculture. Uncertainty about the scale of the covid-19 economic downturn and the post-pandemic rebound appears to depress projections in the Net Zero Strategy EEP which have then increased in the 2021 to 2040 EEP.

25. We are not clear on the protocol for managing the EEP updates and the impact these have on departmental effort shares. We need to further understand the impact of these changes imminently. As above, we do not accept that Defra ‘owns’ any additional gap created by baseline changes without further clarity and discussion.

Policy savings in the EEP

26. There is considerable uncertainty about what policies have been successfully transferred and incorporated into the latest EEP 2021-40 baseline.

- Wastewater W2(A) savings have been included in the NZ Strategy savings bucket, pending further conversations on the result of baseline changes to effort shares.
- Peat5 savings have been included in the NZ Strategy savings bucket, pending confirmation as to whether they have been successfully transferred to the EEP baseline.

Implied England Figures for EEP baselines and effort share targets.

27. The EEP baselines and effort share targets are only available as UK only figures. We have approximated England EEP baselines and thus England-only effort shares by applying the same devolved administration (DA) scaling factors that are traditionally used for converting England savings to UK savings to the UK EEP baselines and UK effort share targets.

Three agri-based LULUCF measures and silvo-arable agroforestry

28. The three agri-based LULUCF measures (A4.3.2, A4.3.3 & A10.1) and silvo-arable agroforestry (A2) are counted in the LULUCF sector and not the agriculture sector for the purpose of our gap analysis for sectors.