| From: To: | s 9(2)(a) | |
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| Cc: Subject: Date: Attachments: | [UNCLASSIFIED] Draft MOU with Climate Commission on developing a shared evidence base Thursday, 23 April 2020 9:12:41 pm image001.png draft MOU sharing information and evidence.docx MOU betweec CCC and govts UK.pdf | 7 |

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Dear All

Thanks for the discussion yesterday at the interagency data and modelling meeting about the proposal for a Memorandum of Understanding (MOU) between the Climate Change Commission and government agencies on developing a shared evidence base.

To recap, the Minister for Climate Change, through his letter of expectations to the Commission's Chair, has outlined that the Commission should develop an MOU that facilitates productive working relationships with relevant central government agencies (e.g. to develop climate-related capability and an accepted evidence base), while maintaining the independence of the Commission.

We have developed a draft MOU, which you can find attached to this email. This is a first draft for discussion - we recognise that it will likely need amendments and further clarification. It has been informed by a similar MOU that exists between the UK Climate Change Committee and UK government departments (which is also attached FYI), but with some adjustments for the New Zealand context and simplification to reflect the early stage that we are all at in terms of implementing the new legislative framework.

We now wish to start discussing this MOU with relevant government agencies with a view to agreeing it over the next couple of months. To kick of that off, we would like to propose the tollowing process:

- That each of the agencies involved (we've suggested these should be: MfE, MPI, MBIE, MoT, Treasury, and EECA)* nominate a contact point to coordinate the agency's input and with whom we can liaise with on the draft MOU. It would be great if you could get back to me on this within the next week, i.e. **by 1 May**.
- We'll look to convene a meeting during the week beginning 4 May, to discuss initial feedback from agencies, and begin the process of working through the MOU in detail.
- Depending on the nature of the issues that need to be clarified and amended in the draft MOU, we would then look to set up further meetings as necessary and aim to settle this ideally by the **end of June**.

*The MOU is focused mainly around emissions budgets as that is our key area of work for the

next year, and these are the agencies we expect to have the most need to interact with on data, modelling and other analysis. However, we're happy to receive feedback about this.

Please note that we intend to raise the MOU via the Climate Change Directors meeting so there is visibility of it at that level also.

Of course, please do not hesitate to get in touch with me if you have any feedback or questions.

| Many thanks, s 9(2)(a) | | | | |
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MEMORANDUM OF UNDERSTANDING

Development of a shared evidence base on climate change

1. Introduction

1.1. The Memorandum of Understanding (MoU) is entered into by and between the following Parties:

The Climate Change Commission (the Commission) and

- Ministry for the Environment (MfE)
- Ministry for Primary Industries (MPI)
- Ministry of Business, Innovation and Employment (MBIE)
- Ministry of Transport (MoT)
- The Treasury
- The Energy Efficiency and Conservation Authority (EECA)

collectively referred to as the "Government Agencies". The Government Agencies are both individually and collectively Parties to this MQU.

- 2. Purpose
- 2.1. The purpose of the MoU is to foster a collaborative approach to developing and sharing analysis, modelling and research on greenhouse gas emissions and climate change, in line with the Minister for Climate Change's expectations. It is intended to establish a common understanding of expectations and serve as a foundation for good working relationships.
- 2.2. This Mod aims to assist the Commission and Government Agencies to develop a shared evidence base, while avoiding unnecessary duplication of effort at public expense, by setting out the framework, principles, working arrangements and procedures for developing and sharing data, analysis, modelling and research.

and powers of the parties who have entered into this MoU. It is binding in honour only.

3. Roles

3.1.)

The Commission is an independent Crown entity, established to provide independent, expert advice to the Government on climate change mitigation and adaptation, and to monitor and review progress towards the Government's climate change goals.

- 3.2. The independent nature of the Commission means that, for reasons of public confidence, it can undertake its work as it best sees fit in a politically impartial manner that is free from Ministerial influence.
- 3.3. In the course of its work, the Commission expects to interact extensively with Government Agencies to draw on government-held and maintained information, and to engage widely to seek evidence and input from stakeholders. To perform its functions effectively the Commission will need timely access to, and understanding of, Government Agencies' analysis

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and evidence. The importance of this, and the importance of not duplicating effort and cost, was recognised when the Commission's baseline funding was established.

- 3.4. To establish and maintain the credibility of the framework for the Commission's work provided by the Climate Change Response Act 2002 (CCRA), and in particular of the process for advising, setting and reporting on emissions budgets, Government Agencies will need to have a shared understanding of the assumptions on which the Commission will base its advice. This will support Government Agencies in their role of serving the Government of the day and providing free and frank policy advice to Ministers.
- 3.5. The Commission and Government Agencies will endeavour to take a collaborative approach to research, analysis and modelling in order to assist the development of a shared evidence base and avoid unnecessary duplication.
- 3.6. This intent to share research, modelling, analysis and information does not create any obligation on the parties to jointly agree on or share draft advice or conclusions developed from the shared evidence base. This will maintain the Commission's independence and preserve Government Agencies' ability to serve the Government of the day.
- 4. Framework and principles for sharing information and analysis
- 4.1. There will be a presumption that objective data and analysis relating to emissions budgets and the work of the Commission will be shared among the parties.
- 4.2. The Commission is part of the state services and the executive branch of government. It is subject to the same obligations as public service departments related to releasing and withholding official information under the Official Information Act 1982. The Commission's independent status therefore should not prevent the sharing of objective data and analysis with the Commission according to the same principles and procedures that guide the sharing of such information among public service departments.
 - Where it is necessary for the Commission's work to access particularly sensitive data, such as Tier 1 statistics prior to public release or firm-specific commercial-in-confidence data, the Commission and its staff will follow any established procedures for accessing and protecting the data, or agree with relevant agencies the terms for access, use and storage of the data. Under section 5P of the CCRA, the Commission also has an obligation to maintain the confidentiality of information disclosed to it under section 99(2)(b)(iiib) of the CCRA.

In other cases, where objective data or analysis that has been shared has not been published by its owner, written permission from the owner to disseminate or publish it must be received before doing so.

- 4.5. To facilitate the sharing of information, the parties may meet via existing inter-agency mechanisms, such as the interagency climate change data and modelling group (formerly CCPIM).
- 4.6. Each party should seek to keep other parties informed as to progress on their analytical projects.
- 4.7. In the interests of good practice, each party should share its respective plans for future analytical work relating to greenhouse gas emissions and impacts with the other parties.

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- 4.8. Where possible, when commissioning new analytical work in a relevant policy area, parties should discuss the specification with other relevant parties to this MoU. This should help minimise duplication and result in the commissioned work better complementing other parties' work programmes. During the course of an analytical project, each party should continue to confer with other relevant parties about changes to the specification of their work, or problems encountered.
- 4.9. Given the importance of transparency in supporting the credibility of and trust in emissions budgets, when designing and undertaking modelling and analysis, parties will endeavour to document and share the methods, assumptions and scenarios used and the rationale underpinning them.
- 4.10. Where possible, each party should offer other relevant parties the opportunity to comment and review the scope, progress and outputs of any external analytical projects which it commissions.
- 4.11. The Commission's baseline funding was established on the basis that it would have the ability to access or request model runs from models owned or hosted by Government Agencies at no charge. In other cases, each party will cover the cost of their analytical projects or co-fund collaborative analytical projects as agreed on a case by case basis.

5. Working arrangements

Sharing data, analysis, modelling and research

- 5.1. The intention is that all relevant parties will be able to access, request and use runs from models owned or otherwise held by other parties, as well as to access other relevant analysis, datasets and research.
- 5.2. [Annex A lists key models, datasets and relevant parties. This list should not be considered exhaustive, and models not specifically named should be considered covered by this MOU. This listing at Annex A may from time to time be reviewed and amended.]
- 5.3. The parties may in future attach as Annex B a list of priority analytical needs in their respected work programmes to help inform future work undertaken or commissioned by other parties. This would serve to give greater visibility of future demands. Such an annex would be updated annually.
 - . Each party will be required to give advance notice to the relevant party when requesting a run of a model or access to datasets owned or hosted by another party. Arrangements for requesting work (e.g. length of advance notice) are to be agreed among relevant parties.
- 5.5. Each party will be able to define its own assumptions for modelling which may differ from current Government policy or the position of the organisation hosting the model. Agreement to assumptions by the party hosting the model is not required nor is it implied by undertaking requested model runs.
- 5.6. The parties recognise that interpretation of models and model runs, including their limitations, is essential to effective provision of analysis under this MoU. Parties will assist

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each other in interpretation of model results but are under no obligation to jointly agree or share conclusions or advice developed from modelling results.

5.7. Government Agencies and the Commission will seek to obtain licences or otherwise facilitate access for each other to use relevant models which they develop or commission. Where it is considered appropriate and agreed between relevant parties, separate Terms of Reference for collaboration on particular models may be developed, in line with the principles for sharing information above, to set out working practices (including access privileges).

Commissioning and sharing of independent work

- 5.8. No part of this MoU should be interpreted as preventing parties from commissioning their own independent data collection, analysis, modelling and research work.
- 5.9. To support the collaborative approach set out in this MoU and to minimise duplication of effort, however, all parties should adhere to the principles set out above for sharing information on the work they are commissioning which is relevant to the climate change evidence base.

Publication

- 5.10. In the case where a party requests a model run from another party that owns or hosts the model, the requesting party will notify the model owner or host agency in advance before publicly releasing the modeling results or analysis of the model.
- 5.11. This engagement of relevant parties prior to publication will allow for joining up analysis, quality assuring and preparing briefing. The requesting party will provide sufficient advance notice of the content and the timing of the information to be published to enable the model's owner or host to undertake these tasks

5.12. All parties should agree that where work has been commissioned, direct criticism of models or results should not be published without prior discussion with the model owner or host who should be allowed sufficient time and relevant information to fully respond.

5.13. This engagement on modelling results will not affect the ability of model owners or hosts to sign off modelling results independently of other parties.

Problem management

514. It is the responsibility of each party to notify others about problems in the implementation of this MoU and to take actions to resolve them constructively as soon as possible.

6. Duration and review

6.1. This MoU takes effect from the date on which it is signed by all of the parties. It will run until its termination by either the Commission or the Government Agencies collectively, giving three months' notice in writing.

- 6.2. This MoU can be reviewed at any time at the request of one of the parties and can be amended at any time with the agreement of all parties. A review of the MoU should be held in 2025, if a review has not occurred by that date.
- 6.3. Additional Government Agencies can become parties to this MoU with the permission of the existing parties.
- 6.4. Individual Government Agencies may withdraw from this MoU by giving three months' notice in writing. Given such withdrawals would represent a breakdown in agencies' good faith participation in the framework for climate policies provided by the Climate Change Response Act 2002 (CCRA), best efforts should be made to review the MoU to the mutual satisfaction of the parties before an agency withdraws from it.
- 6.5. [The list of models and datasets included at Annex A can be reviewed at any time (including the additions of further analysis or modelling) at the request of one of the parties, and can be amended at any time with the agreement of the Commission and the individual agency owning the analysis or model.
- 6.6. If an Annex B is created, outlining a forward look of priority areas for analysis, it will be updated annually prior to the start of each financial year. This annual review will be initiated by the Commission and MfE.]

Signed on behalf of: New Zealand Government Agencies

By:

Signature:

Date:

Signed on behalf of: Climate Change Commission

By: Jo Hendy, Chief Executive

Signature

Date

Sharing of analysis, modelling and research.

Memorandum of Understanding

1. Introduction

This Memorandum of Understanding (**MoU**) is entered into by and between the following parties:

The Committee on Climate Change (hereinafter referred to as the CCC) and

- Business Energy and Industrial Strategy (BEIS),
- Department for the Environment, Food and Rural Affairs (Defra).
- Department for Transport (DfT),
- H.M. Treasury (HMT),
- Department for Communities and Local Government (DCLG), herein after collectively referred to as the "UK Government Departments"

Note that these names are subject to change.

The Scottish Government (SG), The Welsh Government (WG), The Northern Ireland Executive (NIE), (hereinafter collectively referred to as the "Devolved Administrations").

For the purpose of the Working Arrangements detailed in this MOU, each of the parties will be referred to individually by their abbreviated name

This revised MOU replaces the MOU which was agreed and signed by the relevant parties on 12/05/2010.

2. Purpose of the MoU

The purpose of this MoU is to foster a collaborative approach to analysis, modelling and sharing of information relating to greenhouse gas emissions and energy use, and to assist of Government Departments and the Devolved Administrations in their policy development while avoiding unnecessary duplication of effort (at public expense) and maintaining the analytical independence of the CCC by:

• setting out the overall framework for cooperation and ways of working in sharing of information between the UK Government Departments, Devolved Administrations and the CCC; and

setting out specific working arrangements and procedures for sharing of analysis and research by all parties.

It is not a legally binding agreement or a contract and it cannot override the statutory duties and powers of the parties who have entered in to this MoU. It is binding in honour only. Any failure to follow the terms of the MoU is not to be taken as invalidating decisions taken by any of the parties to this MoU. Nor is the MoU intended to cover every detailed aspect of the relationship between them.

3. Framework for sharing of information

To establish and maintain the credibility of the carbon budgeting framework, of the reporting of progress towards these budgets, and of requirements and monitoring of progress towards adaptation to climate change, it is important that UK Government Departments and Devolved Administration analysts have a shared understanding of the assumptions on which the CCC will base its advice. This should also avoid unnecessary duplication in analysis.

To facilitate the exchange of information parties may request to meet through the auspices of the UK Government's Inter-departmental Analyst's Group.

In addition, new working groups may be set up in the future for the purpose of sharing information.

4. Principles for sharing information

There will be a presumption that objective data and analysis relating to carbon obudgets and the work of the CCC will be shared by all parties.

Where objective data or analysis that has been shared has not been published by the owner, written permission from the owner to disseminate or publish it must be received before doing so.

All parties should seek to keep all other parties informed as to their progress on their analytical projects. And in the interests of good practice future analytical work plans, relating to greenhouse gas emissions and energy use, should also be shared with all parties.

Where possible when commissioning new analytical work in the relevant policy area, all parties should consult other relevant parties to this MoU on the specification. This should, where appropriate, cover situations in which commissioned work is focussed on the UK level, and where Devolved Administrations may have an interest in extending the work to provide disaggregated outputs. There may, of course, also be cases where commissioned work is focussed at a Devolved Administration level and it would be appropriate to extend it to cover the UK as a whole. This consultation should help minimise duplication, and should result in the commissioned work better complementing other parties' work programmes.

During the course of an analytical project all parties will continue to consult other relevant parties about changes to the specification of their work, or problems encountered.

Where possible the relevant parties will be offered a position on the 'steering group' for analytical projects.

5. Roles of UK Government, Devolved Administrations and CCC on policy

The respective roles of the UK Government, Devolved Administrations and the CCC are set out in the CCC's Framework Document¹ and the Climate Change Act 2008.

6. Working arrangements

Analysis and data sharing

The intention is that all relevant parties will be able to access, utilise and commission runs from models owned or otherwise held by other parties, access other analysis and datasets.

Annex A lists key economic models, datasets and relevant parties. This list should not be considered exhaustive, and models not specifically named should be considered covered by the MOU. This listing at Annex A may from time to time be reviewed.

Annex B lists areas of analysis likely to be highest priority, given work programmes, for access or commissioning by other parties in the year ahead. This is intended to give greater visibility of potential future demands. It is envisaged that this annex will be updated annually.

All parties will be required to give advance notice to the relevant party when commissioning a run of a model, or requesting access to datasets, including any follow up requests for information - this may vary according to the model itself and the information sought. Arrangements for commissioning work (e.g. length of advance notice) are to be agreed by the relevant parties. Parties recognise that explanation of models and model runs is essential to effective provision of analysis under this MOU.

UK Government departments and Devolved Administrations will seek to obtain licences for CCC to use (relevant) models which are developed independently. Where it is thought appropriate and agreed between relevant parties, separate Terms of Reference (in line with principles for sharing information above) for each model will set out the working practices (including access privileges) which all relevant parties will have to adhere to.

The CCC will also seek to obtain licences for (relevant) UK Government departments and Devolved Administrations for any model that it develops independently. Where it is thought appropriate and agreed between relevant parties, separate Terms of Reference (in line with principles for sharing information) will set out the working practices for relevant Government departments' and Devolved Administrations' use of CCC analysis and models.

Commissioning and consulting of independent work

This MoU acknowledges that all parties to this MoU would continue to commission significant amounts of their own independent analytical and research work. No part of this MoU should be interpreted as preventing this.

¹ Available on the CCC website, https://www.theccc.org.uk

However, to complement and support the collaborative approach set out in this MoU and to minimise duplication of effort while maintaining analytical independence, all parties should adhere to the principles set out above for sharing information over the work they are commissioning.

Publication

All parties agree to consult the other relevant parties before making public results from the models. Where models have wider analytical applications (e.g. National Transport Model), this will apply only to the publication of results from specific modelling work commissioned by parties other than the model owner.

Consultation prior to publication will allow for joining up analysis, quality assuring and preparing briefing; sufficient time will be given to other parties to undertake these tasks.

All parties agree that where work has been commissioned, direct criticism of models or results should not be published without prior consultation with the model holder who should be shown the proposed text and allowed sufficient time and relevant information to fully respond.

Consultation will not affect model owners' ability to sign off results independently of other parties.

Problem Management

It is the responsibility of each party to draw the others' attention to problems relating to this MoU and to take actions to resolve them as soon as possible.

7. Duration and Review

This MoU takes effect from the date on which it is signed by all of the parties. It will run until its termination by any of the parties giving three months' notice in writing. This MoU can be reviewed at any time at the request of one of the parties, and can be amended at any time with the agreement of all parties.

The schedule of Analysis and Modelling (Annex A) can be reviewed and amended at any time (including the additions of further analysis or modelling) at the request of one of the parties, and can be amended at any time with the agreement of the CCC and the individual department owing the analysis or model.

It is expected that the forward look of priority areas (Annex B) will be reviewed and updated annually, prior to the start of each financial year. This annual review may suggest amendments to Annex A. This annual review will be initiated by CCC and BEIS.

Signed on behalf of: UK Government Departments and Devolved Administrations

By: Jenny Bates, Chief Economist & Director of Analysis, BEIS

Signature: s 9(2)(a)

Date: 23/03/2017.

Signed on behalf of: Committee on Climate Change

By: Matthew Bell, Chief Executive

Signature:

s 9(2)(a)

Date: 21/03/2017

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u>

ANNEX A – Analysis and Models

i. UK Energy Model

Parties: BEIS/CCC

The UK Energy Model is used to produce the energy and emissions projections (EEP) published by BEIS each year.

BEIS are owners of the model and will be responsible for running the model. BEIS will be responsible for commissioning and providing the non-CO2 elements of projections.

Where possible CCC will use the published projections, which will require BEIS support to ensure these are fully understood.

In some cases (particularly when advising on the level of carbon budgets), CCC may require specific runs of the model. CCC will discuss runs with BEIS in advance e.g. about how many runs they wish to commission and on what timescale. BEIS will agree with CCC a programme that is manageable.

CCC and BEIS will agree beforehand the detail and format of information related to runs of the BEIS energy model which is to be supplied to the CCC which should remain similar in all runs.

The CCC requested runs will, wherever possible, be within the current format of the UK energy model. Specific requests requiring addition model developments will be subject to prior negotiation between the CCC and BEIS taking account of all considerations of other pressures to complete work programmes.

CCC will acknowledge the use of the BEIS model and be responsible for presentation/ explaining the assumptions upon which the results are based and if necessary any differences from BEIS published results.

CCC will be responsible for financing any additional commissioned inputs to the BEIS model necessitated by the work undertaken for CCC projections runs. CCC and BEIS will meet periodically to discuss modelling requirements and assumptions and agree where possible. Where agreement has not been reached between the parties this will be clearly documented.

Where possible, all requests for detailed information, results and analysis regarding the BEIS Energy Model should be made through a single appointed BEIS modelling official.

All parties should advise BEIS in advance of any meetings they wish to hold with the BEIS modelling team and provide an outline of topics to be discussed. Appropriate attendance will be decided internally by BEIS on the basis of the topics to be discussed.

ii. Carbon Price Model

Parties: BEIS/CCC

BEIS will remain owners of the modelling. BEIS and CCC agree to collaborate in the development and extension of the model, including consultation on model assumptions.

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u> CCC will agree any amendments to the model with BEIS and inform them in advance about the use of the model for any analysis that will be published. CCC will acknowledge the use of the BEIS model but will not refer to price forecasts as BEIS forecasts and will consult BEIS on any references to the model.

iii. Dynamic Dispatch Model (DDM)

Parties: BEIS/CCC

The DDM is BEIS's in-house investment and dispatch model for the UK power sector.

CCC will be able to commission runs of the DDM (and explanations of those runs), using the Model Bid Template provided by the DDM team.

iv. Levy Control Framework forecast model

Parties: BEIS/CCC

This model is run by BEIS. It is used to project spend through the LCF based on expected output of supported low-carbon generation, its costs and the comparator cost of electricity.

BEIS will share and explain the assumptions and outputs of the model with CCC. This is currently expected to be on an ad-hoc basis, without the requirement for additional runs to be undertaken.

v. Global Carbon Finance Model (GLOCAF)

Parties: BEIS/CCC/other interested UK Government departments

BEIS will remain owners of the model and will run it. CCC will decide any policy assumptions used for running scenarios designed for use by CCC, but in consultation with BEIS. The CCC will discuss with the BEIS in advance e.g. about how many runs they wish to commission and on what timescale; BEIS will agree with the CCC a programme that is manageable

The CCC will acknowledge the use of GLOCAF and be responsible for presentation/explaining the assumptions upon which the results are based.

vi. Fuel Poverty Model

Parties: BEIS/CCC

The fuel poverty model is run by the Building Research Establishment (BRE) and joint owned by BEIS and BRE (BRE own the BREDEM modelling of energy consumption).

CCC will discuss with BEIS in advance any plans for working with the fuel poverty model, and BEIS who will take on the work where manageable and practical. Where work requires

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u> re-modelling of consumption or working with devolved administrations, CCC can approach BRE although after consulting BEIS, who should also be included in all correspondence. Fuel poverty statisticians from BEIS should be present on any meeting or steering groups.

CCC will be responsible for financing any additional work they wish to commission of BRE.

vii. National household model (NHM)

Parties: BEIS/CCC

Both BEIS and CCC have access to the NHM. Each will be responsible for executing their own model runs.

Parties agree:

- To meet periodically to discuss modelling requirements and expectations, and share experience
- Share model results where useful
- Collaborate on model development
- Share coding updates and developments

viii. Non-domestic buildings model and Buildings Energy Efficiency Survey (BEES)

Parties: BEIS/CCC

BEES data covers the non-domestic building stock in England and Wales in 2014-15. It includes data on how energy is used and on options for how energy use may be reduced.

BEIS will extract and share data with CCC. CCC will discuss data requirements and timetables with BEIS in advance. BEIS will agree with CCC a programme that, allowing for resources available, is manageable.

Sharing of the dataset or of excel tables of outputs could be subject to commercial sensitivity, so would require CCC processes in place for securing of data.

BEIS are owners of the model and will be responsible for executing the model runs.

CCC will discuss runs with BEIS and inform them in advance of any analysis they wish to commission and on what timescale. BEIS will agree with CCC a programme that, allowing for resources available, is manageable.

ix. Industry pathway model

Parties: BEIS/CCC

BEIS are owners of the model and will be responsible for executing the model runs.

CCC will discuss runs with BEIS and inform them in advance of any analysis they wish to commission and on what timescale. BEIS will agree with CCC a programme that, allowing for resources available, is manageable.

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x. UK Energy Pathway Models

The UK TIMES model has been developed in collaboration with University College London. UK TIMES is a least-cost optimisation model of the UK energy system. It can be used to identify possible paths for reducing emissions to 2050 and beyond.

Parties: BEIS / CCC

BEIS has overall ownership and responsibility for model development, but have set the model up to allow it to be run by others, including CCC. CCC will collaborate with BEIS on model development. All parties will share model runs and results where useful.

All parties will:

- share information on and consider using information from model runs that have already been commissioned by other parties;
- inform/consult all other parties of commissioned model runs in advance;
- involve the other parties in steering groups for projects and consultation on key assumptions;
- share key updates to models; and
- meet periodically to discuss new modelling requirements and expectations.

xi. UK Marginal Abatement Cost Curves

Parties: BEIS /CCC

BEIS will share with CCC the outputs and supporting analysis to the extent that they are integrated into the UK MACC framework, with information on how the integration has been achieved.

xii. National Transport Model (NTM)

Rarties: DFP/CCC

DfT are owners of the model and will be responsible for running the model.

CCC will discuss runs with DfT and inform them in advance about how many runs they wish to commission and on what timescale. DfT will agree with CCC a programme that, allowing for resources available, is manageable. Effective work planning is essential as model runs are demanding and will congest the NTM for other users if not properly planned and resourced.

CCC will acknowledge the use of the DfT model.

xiii. UK Air Passenger Demand &CO2 Forecasting Framework (APDCF) Parties: DfT/CCC

DfT are owners of the model and will be responsible for commissioning the model runs.

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u> CCC will discuss runs with DfT and inform them in advance about how many runs they wish to commission and on what timescale. DfT will agree with CCC a programme that, allowing for resources available, is manageable. Effective work-planning is essential as model runs are demanding and will congest the DfT aviation models if not properly planned and resourced.

CCC will acknowledge the use of the DfT model.

xiv. Environmental CGE Model

Parties: HMT/CCC

HMT will be responsible for running the model. HMT will be responsible for planning the use of the model.

CCC will discuss runs with HMT and inform them in advance about how many runs they wish to commission, on what timescales and whether and how analysis might be published. HMT will agree with the CCC a programme that, allowing for resources available, is manageable. CCC will make clear what input data is to be used and provide data where necessary.

CCC will not refer to analysis as HMT analysis and will consult HMT on any references to the model and in advance of publishing any results from the model.

CCC will be responsible for financing any adaptations to the model required.

xv. Non-CO2 GHG Modelling Inventory

Parties: BEIS / CCC / Defra

All parties will:

- share information on and consider using information from work that has already been commissioned by other parties;
- consult all other parties on new work and new runs to be commissioned in advance;
- involve the other parties in steering groups for projects and consultation on key assumptions; and
- meet periodically to discuss outputs of new research, new modelling requirements and expectations.

All parties agree to share information and collaborate on inventory development, projections and scenario development e.g. on development of the treatment of existing, and new, sources of non-CO2 gases in inventory.

xvi. Mechanisms for unlocking agricultural abatement

Parties: Defra / CCC

All parties will:

- share information on and consider using information from work that has already been commissioned by other parties;
- consult all other parties on new work to be commissioned in advance;

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u>

- involve the other parties in steering groups for projects and consultation on key assumptions; and
- meet periodically to discuss outputs of new research, new modelling requirements and expectations.

xvii.TMfS

Parties: Scottish Government/CCC/BEIS

SG will remain owners of the model and will be responsible for commissioning model runs. CCC/BEIS will discuss required runs with SG and inform them in advance about how many runs they wish to commission and on what timescale. The CCC/BEIS will acknowledge the use of TMfS.

xviii. CCC Aviation demand and emissions model

Parties: CCC/BEIS/DfT

Ownership: CCC will share the model with BEIS and DN, but will not be able to provide extensive support in its use.

Reporting: All parties should be informed of any planned publication of model results. Reporting of results should always be accompanied by a clear statement of assumptions. The model should be referred to as "the CCC's aviation model".

Development: All parties agree to share information on future model development.

This model has not recently been run within CCC.

File name; MOU 2016 update MB sign Docshare Ref: <u>DECCFCSJ-362-2036</u>

xix. CCC UK Shipping emissions model

Parties: CCC/BEIS/DfT

Ownership: CCC will share the model with BEIS and DfT, but will not be able to provide extensive support in its use.

Reporting: All parties should be informed of any planned publication of model results. Reporting of results should always be accompanied by a clear statement of assumptions. The model should be referred to as "the CCC's shipping model".

Development: All parties agree to share information on future model development.

xx. Wales 2050 Calculator

Parties: WG

The Wales 2050 Calculator will be developed with Cardiff University and BRE as subcontractors. Similar to the UK 2050 Calculator, it is a bottom up model which outputs emissions projections based on several policy choices for each sector.

Ownership: WG retain ownership of the model. However, a web version of the tool may be publicly available so external parties can investigate pathways. CCC plan to use a separate model to provide advice to WG.

Reporting: All parties should be informed of publication of results from the calculator, particularly if assumptions excel version of the tool are changed.

Development: BEIS are planning to update the 2050 calculator and WG/Cardiff will coordinate the development of the Welsh tool and explore synergies between them.

xxi. Other

The above listing should not be considered exhaustive, and models not specifically named should be considered covered by the MOU.

There may also be some models, such as the "Best use of Biomass model" held by CCC, which are not currently supported. If parties intend to update or further update such models, consultation with other parties would be useful.

ANNEX B – Likely priority areas 2017-18

The purpose of this annex is to highlight priority areas of work over the coming year, which may require access or running of economic models owned or held by other parties. This is intended to be helpful to other parties in considering future potential demands on those models and on internal resources.

Further discussion of specific requirements would in all cases be required.

Failure to highlight an issue or model here does not debar that use or access of other models may be requested.

Priority areas for CCC

- 2nd Joint Statutory Progress Report to Parliament will include assessment of the Government's proposals for policies and measures in their Emissions Reduction Plan. This will require an understanding of Government emission projections from the BEIS Energy Model and from the National Transport Model. It may also require model runs.
- The Progress Report and ongoing work beyond it will also involve work with UK TIMES and possibly the Dynamic Dispatch Model. The expectation is that CCC will run TIMES in-house consulting with BEIS during the process. Runs may be needed from the DDM, following the run commissioning process set out for DDM.
- Aviation emissions and abatement potential.
- Agriculture emissions and abatement potential

Carbon budgets advice to Welsh Government. The CCC will be advising the WG on their emission reduction pathway which will inform how, in regulation, the carbon account, interim targets and first 2 carbon budgets are defined.

Priority areas for Government Departments and Devolved Administrations

Developing analysis in support of the emissions reduction plan Development of a Wales 2050 calculator as supporting evidence for carbon budgets, interim targets and policies and proposals in Wales.

| s | 9 | (2) | (a) |
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| From: | s 9(2)(a) |
|--------------|---|
| Sent: | Tuesday, 1 June 2021 4:21 pm |
| To: | s 9(2)(a) @mfe.govt.nz |
| Cc: | s 9(2)(a) |
| Subject: | FW: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline |
| Attachments: | Final scenarios dataset for Government agencies 2021-05-31.xlsx |

[IN-CONFIDENCE]

Kia ora^{s 9(2)(a)}

I understand you requested a spreadsheet form of the budget scenario. I'm not 100% sure what that refers to? Attached is a excel spreadsheet for the outputs of ENZ for the following:

Current Policy Reference case Demonstration path Headwinds Further Behaviour Change Further Technology Change Tailwinds Alternative path A Alternative path B

I think you were on the distribution list for this yesterday. Let me know if this isn't what you're after. As Anita said today, we are working on getting the CPLAN results into Excel but that requires her moving the data across. She was in the meeting today with Ministries, so will focus on that asap.



Kia ora koutou,

Please find attached a dataset for the scenarios and paths in our final advice.

We will leave it to MfE to handle the distribution to other Government agencies. Please note this is not to be shared outside of Government.

We will be producing a version of this spreadsheet for publishing on June 9, which may involve further modelling outputs. If you have any suggestions for other lines of data that you would find useful, let us know and we will do our best to accommodate your requests.

We look forward to engaging with you all over the coming days and weeks. Ngā mihi, s 9(2) and the CCC team (a) s 9(2)(a) W climatecommission.govt From ^{s 9(2)(a)} Sent: Monday, 31 May 2021 3:23 pm @mfe.govt.n2>, \$ 9(2)(a) **To:** ^{\$ 9(2)(a)} @climatecommission.govt.nz>; s 9(2)(a) @dimatecommission.govt.nz> @mfe.govt.nz>; s 9(2)(a) Cc: \$ 9(2)(a) @mfe.govt.nz>; s 9(2)(a) @mfe.govt.nz>; \$ 9(2)(a) @mfe.govt.nz>; s 9(2)(a) @mfe.govt.nz> Subject: RE: [IN-CONFIDENCE] - confidence: updated Commission Current Policy Reference baseline s 9(2)(a) and al Hi Yes, we're just working on this now and will share it with you by close of play today (and as soon as we have it ready). 9(2)(a)

| From: ^{s 9(2)(a)} | @mfe.govt.nz> |
|--------------------------------|---|
| Sent: Monday, 31 May 2021 2:35 | i pm |
| To: s 9(2)(a) | @climatecommission.govt.nz>; \$ 9(2)(a) |
| @climatecommissio | <u>n.govt.nz</u> >; s 9(2)(a) |
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s 9(2)(a) @mfe.govt.nz>

Subject: RE: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline

Hi all,

In the documents sent over today, it looks like we have PDFs of the advice report and evidence material. Is there also an excel spreadsheet of the advice scenario numbers? That's pretty important for Agencies' initial analysis and advice to Ministers in the next few days. We had been assuming this would be part of the pack.

Thanks s 9(2)(a)

| From: s 9(2)(a) @climatecommission.govt.nz> |
|---|
| Sent: Thursday, 27 May 2021 1:51 pm |
| To: s 9(2)(a) @climatecommission.govt.nz>; s 9(2)(a) @mfe.govt.nz |
| s 9(2)(a) @climatecommission.govt.nz> |
| Cc: s 9(2)(a) <u>@mfe.govt.nz</u> >; s 9(2)(a) <u>@mfe.govt.nz</u> > |
| Subject: RE: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline |
| [IN-CONFIDENCE] |
| Hi ^{s 9(2)(a)} all |
| |
| In the NDC chapter all our figures are in AR4 to be consistent with the budget chapters. As our quantitative recommendations on the NDC are wrt to the % reduction targets, which don't change when the calculation is done |
| in AR5 (at least not to 2 sf) we haven't presented the figures in AR5 for the NDC. |
| In ARS (at least not to 2 si) we haven t presented the lightes in ARS for the NDC. |
| Cheers |
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| REF AL |
| [IN-CONFIDENCE] |
| From: \$ 9(2)(a) @climatecommission.govt.nz> |
| Sent: Thursday, 27 May 2021 1:20 pm |
| To: s 9(2)(a) <u>@climatecommission.govt.nz</u> >; s 9(2)(a) <u>@climatecommission.govt.nz</u> >; s 9(2)(a) |
| Cc: \$ 9(2)(a) @mfe.govt.nz>; \$ 9(2)(a) @mfe.govt.nz> |
| Subject: RE: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline |

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I'll have to pass to $a^{s} \frac{9(2)}{a}$ to answer that one.

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| Sent: Thursday, 27 May 20 | 021 1:01 pm |
| To: s 9(2)(a) | <pre>@climatecommission.govt.nz>; \$ 9(2)(a)</pre> |
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@mfe.govt.nz>

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Subject: RE: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline

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Thank you.

Is the same approach taken for the NDC advice?

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| Sent: Thursday, 27 Ma | | | all |
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| | @climatecommission.govt.nz> | $ \leq 1 $ | |
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| Hi $\sim 10^{-1}$ (and all, | | allo | |
| In our final advice we | convert the recommended budget levels t | ATT ves well as showing them in Af | A) but all athor |
| | our analysis are using AR4. | | (4), but all other |
| numbers throughout c | Jui allalysis are using AR4. | 2 | |
| Hone that answers voi | ur question Give me a call if not. | | |
| hope that answers vot | a question dive me a calin ride. | | |
| Cheers, | 15° ALD | | |
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| From: ^{s 9(2)(a)} | @mfe.govt.nz> | |
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| Sent: Thursday, 27 May 2021 12:29 | pm | |
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| @climatecommission.g | ovt.nz> | |
| Cc: s 9(2)(a) <u>@n</u> | i <u>fe.govt.nz</u> >;s 9(2)(a) | <u>@mfe.govt.nz</u> > |
| Subjects Ewe [IN CONFIDENCE] In co | nfidence: undated Commission Current Deli | ny Reference haceline |

Subject: Fw: [IN-CONFIDENCE] In-confidence: updated Commission Current Policy Reference baseline

Hi^{s 9(2)(a)}

Thank you for this - extremely helpful.

The Commission's draft advice said that the final advice would update for AR5 GWPs, but these baselines are still in AR4. Could you urgently clarify what GWPs the advice will use? If it will be AR5, do you have a version of this spreadsheet with AR5 GWPs?

| Thank you, | |
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| From: s 9(2)(a) | @climatecommission.govt.nz> |
| Sent: Wednesday, 26 May 2021 12:51 pm | |
| | <u>.nz</u> >; s 9(2)(a) @mbie.govt.nz>; s 9(2)(a) |
| s 9(2)(a) <u>@mbie.govt.nz</u> >; s 9(2)(a) | |
| s 9(2)(a) <u>@mpi.govt.nz</u> >; s 9(2)(a) | |
| <u></u> , | <u>@transport.govt.nz</u> > s 9(2)(a) <u>@mfe.govt.nz</u> > ission.govt.nz>; s 9(2)(a) |
| s 9(2)(a) @climatecommission.govt.r | |
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| Subject: [IN-CONFIDENCE] In-confidence: up | odated Commission Current Policy Reference baseline |
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| | [IN-CONFIDENCE] |
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| | |
| Dear Colleagues, | |
| | |
| | onths helping us to update and align our Current Policy Reference |
| baseline with agency projections. Please see | attached our CPR for final advice on emissions budgets 1-3. |

We are sharing the CPR before formally presenting our advice to Ministers to allow agencies time to understand any remaining differences between the baselines.

We are happy for you to share this information with anybody else within your agency who needs to access it. It should not be shared outside your agency until after the Minister for Climate Change has tabled the Commission's final advice in the House, and our report and data sets are published.

As we are busy finalising the reports we will not have time to respond to any queries on this data until after our advice is handed to Ministers.

Thank you again for your help,

s 9(2)(a)



s 9(2)(a)

E christopher.holland@climatecommission.govt.nz

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As allowed for under s 16 (1)(e), a summary of the attached data is provided to ensure the confidentiality of the organisations whose data is included. The summarized data is available at: https://ccc-productionmedia.s3.ap-southeast-2.amazonaws.com/public/Inaia-tonu-nei-a-lowemissions-future-for-Aotearoa/Modelling-files/Scenarios-dataset-2021final-advice.xlsx. Hi

| Subject: | MfE & CCC |
|---------------|------------------------------|
| Location: | Meetingroom EH 1B (Puke Ahu) |
| Start: | Mon 10/08/2020 3:30 pm |
| End: | Mon 10/08/2020 4:30 pm |
| Show Time As: | Tentative |
| Recurrence: | (none) |
| Organizer: | s 9(2)(a) |
| s 9(2)(a) | |

As just discussed, we're keen to catch up with you (and anyone else relevant from the ETS teams) in connection with the work we're doing on the NDC. A meeting at 3.30pm next Monday 10 August would be great. We're interested in updates from your perspective on:

- prospects for offshore mitigation and how the purchasing of it might be planned for / managed / handled, including in terms of interactions with the ETS
- financial accounting for the NDC & ETS

There's also a couple of other issues related to emissions budgets & 2050 target accounting that I'd like to check in with you about (voluntary offsetting & metrics), if there's time.



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| From: | s 9(2)(a) |
|--------------|---|
| Sent: | ruary 2021 11:57 am |
| To: | s 9(2)(a) |
| Cc: | |
| Subject: | RE: copy of numbers in advice scenario? |
| Attachments: | Advice report key charts and data 2021-02-01.xlsx |

I've attached a spreadsheet which has the data for the charts in the Advice report exec summary and Chapter 2. This is all we have ready to share right now on the data front but we're thinking about how we share more. It would be good to have a chat with you about what you need and how we can help you get across our numbers.

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1

Refused under 18(d), as the data is publicly available at: https://cccproduction-media.s3.ap-southeast-2.amazonaws.com/public/2021-Draft-Advice-Report-charts-and-data-v3.xlsx

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