



# EUCALC

*Explore sustainable European futures*

## Advisory Board contributions 1<sup>st</sup>

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**D11.4**

February 2018



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#### Short Description

*one paragraph summary of the report*

#### Quality check

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#### Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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## 1 Executive Summary

The report gives an overview on the two Advisory Board (AB) Meetings within the first project year and reflects on the discussions and advice the Board Members gave to the Project Consortium.

## 2 Introduction

An important group for the overall scientific direction as well as the close link to future users of the EU Calc outputs is the Advisory Board. It is composed of external organisations which have an outstanding expertise in regard to the scientific fields involved in the EU Calculator design and gave their consent in providing valuable input to the project (cf. Table 1 and Del. 11.3).

Name	Organisation
Dries Acke	European Climate Foundation (ECF)
Vincent van Steenberghe/ Koen Meeus	Federal Public Service Health, Food Chain Safety and Environment, Belgium government
Laura Aylett/ Jan Ole Kieso	Department of Business, Energy and Industrial Strategies (BEIS), UK government
Ingolf Schädler/Theodor Zillner	Ministry of Transport, Innovation and Technology, Austria
Matthew Tipper/ Martin Haigh	Shell
Paul Ekins	INNOPATH Project, University College London (UCL)
Lars J. Nilsson	Reinvent Project, Lund University

*Table 1 – EU Calc Advisory Board members, status Nov. 2017*

The EU Calculator Consortium regularly meets each six month in person to present the progress in each work package and discuss about the ongoing EU Calc work as well as the next steps and collect feedback on the next planned steps and challenges ahead. PIK, in its role as project coordinator, usually initiates one conference call per month where all work packages report on their current status of progress, interactions between WPs and next steps. Also smaller groups are in close exchange to each other to work on the tool (modelling group) and solve questions at an operational level.

Back to back to the two last project meetings also an AB meeting took place. PIK as coordinator invited the AB members on behalf of the whole project consortium. The project coordinator, Jürgen Kropp, opened the AB meeting with an overview talk together with the planned next steps, followed by questions and a discussion with the AB members.

## 3 Advisory Board Meetings in 2017

Two Advisory Board Meetings took place in 2017, both organised back to back to project meetings. This helps to ensure the attendance of almost all project partners as well as reducing travel costs and related emissions.

### 3.1 1<sup>st</sup> Advisory Board Meeting (26<sup>th</sup> May 2017 in London, Imperial College of Science and Technology)

In the 1st AB meeting on 26 May 2017 at Imperial College London three Advisory Board Members attended in person and two via remote connection; the latter had some technical problems, but in general this option should always be facilitated in terms to save time and increase the number of participants. All members of the AB have a high work load; they are experienced experts and can therefore only be reached to a very limited extent and it is not always possible for them to join the AB meetings in person.

#### 3.1.1 Presentation by the project coordinator

The presentation of the current status of the European Calculator project covered the following challenges:

- We had the first meeting in December (2016) and we saw some progress since then. We are at the cusp in laying down the general methodology.
- We still do not have an integrated model but we are having progress in this front.
- We want to make a relevant model for policy making across member states.
- 1.5 degree target is getting higher level of attention.
- Basic needs vs consumptive needs.
- Working on base years and time resolution.
- The Global Calculator was a very good starting point, but the consortium will go beyond and focus on Europe.
- We need to solve now how European countries interact.
- Decomposition of the global calculator into member states and parameterization of the rest of the world.
- Keep a model of intermediate complexity.
- User has a large control in the choices.
- Long wish list of stakeholder input (cf. Del. 9.4) - focus to be defined as not all can be tackled.

### 3.1.2 Discussion and Recommendations

The contributions of the AB members and the discussion with the EUCalc partners is structured in the following along specific topics which helps partners to take recommendations up in their work, if considered adequate.

#### **Complexity and transparency**

There has been a lively discussion on transparency and flexibility across energy models and hopefully the EU calculator can contribute to this front. In particular open source and open access are becoming important points.

The model (referring to the Global Calculator) is so broad but so simple that you can model 20 views of the transition and measure the inputs to make a comparison. But modelling all EU countries is very demanding; others tried something similar and failed.

The EUCalc model should help to reduce the chaos of views and force them into a more realistic comparison. The options stop being options and start to become facts in a follow-up discussion after using the model, because not all users are being honest about the consequences of the forces behind the policies they advocate for.

Transparency is a big need for industry, in order to see the full picture and identify trade-offs.

The scientific communication challenge: make something that is simple enough to be used without being wrong.

Simple models have a strong educational value, complex models have the opposite: they turn people off.

#### **Audience**

A policy maker needs much granularity and therefore the model might become of limited interest to a wider public. But by modelling all member states and sectors you reach countless actors in every country of the EU.

The model can be used for education to 'action for climate empowerment' by UNFCCC - as education tool/program in line with the Paris Agreement for addressing schools and universities to reach the future leaders as early as possible.

The European parliament requires such a model; they do not have the modelling capacity that the Commission has. In this respect the main gain lies in providing the long term perspective.

Debate of CO2 free is an excellent target to ask people when they think Europe can be CO2 neutral - debate in the next years.

#### **Bioenergy**

There was a very lively discussion on carbon accounting for bioenergy. The question of carbon accounting for bioenergy will be critical if we are calculating emissions towards 2050. Some recent scientific research suggests this it is a

very complex matter with value chains and practices that can be either positive or very negative from a carbon point of view. The model needs to reflect this uncertainty, maybe by making it a guardrail/lever, to avoid we 'hardwire' any assumption on bioenergy into the model.

NGO's have a public position that bioenergy is not renewable at all and has been modelled wrongly. Therefore we should contact and involve NGO's.

### **Reflecting existing policies**

It would be great if EUCalc was able to reflect the National Energy and Climate Plans (NECP) as proposed by the EU Commission in the [Winter Package](#) (but up for adjustments). Clarify internally on the possibility of the model being able to incorporate other runs.

### **Timing and contacts**

Presidencies set the EU agenda so coordinate your timing. Agenda setting takes place in the single Member States (upcoming Presidency of the Council of the European Union: 2nd half 2018 Austria, 2nd half of 2020 Germany).

AB can ease the access to DGs - the question is what you want and when you are ready.

### **Branding**

Do not call it a finished product, call it the latest version. Version control, so that we have a timeline on the product. Create benchmark for the next evolution and a more systematic modus of operation in process.

Make more clear what customers you are serving.

### **Others**

Make levels of levers more stringent given the new focus on the 1.5 degrees.

Try to ask the question "When do you think can the EU be CO2 neutral?"

The EU calculator can provide a platform to help countries in the revision process of their INDC's.

It would be interesting to see which countries reach carbon neutrality first?

## 3.2 2<sup>nd</sup> Advisory Board Meeting (17<sup>th</sup> November 2017 in Vienna, Österreichische Gesellschaft für Umwelt und Technik (ÖGUT))

In this meeting two Advisory Board Members attended in person and four via remote connection; two of the latter dialed in a bit later due to other important commitments before.

### 3.2.1 Presentation by the project coordinator

Topics:

- Jürgen Kropp gives an overview about the project partners and objectives.
- Presentation of the project structure and first ideas for the tool.
- Showing the achievements of the first year.
- Discussion about data and open questions.

Objectives:

- The consortium is aiming to build a novel energy-society model for 28 EU countries + Switzerland that allows autonomously and immediately calculate and visualise the impacts of user-selected ambition levels on energy independence and CO<sub>2</sub>eq emissions and its relation to NDC proposals (resolution 28+1 countries).
- Ambition levels should be calculated fast and independent.
- Support strategic decision making (EU and national scale) by including already existing strategies.
- Strong stakeholder involvement (co-design), e-learning tool also for education purposes are planned to reach wide variety of user.
- First results from the stakeholder demand workshops are very promising; a lot of additional expertise could be gained.
- Open source, easy usability and fast calculation are aimed – first calculation trees as well as input-output tables are developed, but this is an ongoing process.
- Single information for each countries (for instance about technology) needed, sector-wise calculation of emissions, demand etc.
- Some questions have to be solved, like how to handle with development in the “rest of the world” and how and which coupling effects and dependencies should be considered and modelled.
- Also the layout is under discussion, tool should be easy usable, but with a lot of leavers the user has to make lots of decisions as well and how to deal with inconsistencies and implausible choices.

### 3.2.2 Discussion and Recommendations

As at the first AB meeting, the contributions of the AB members and the discussion with the EU Calc partners is structured in the following along specific topics which helps partners to take recommendations up in their work, if considered adequate.

#### EU calculator and other projects

The question regarding connection to other modelling approaches – also in EU Projects came up and with this the suggestion that it could be useful to find a position for EU Calc among the already existing tools. These are:

- Connection to other models used in the EU project “[TRANSrisk](#)” (Transitions Pathways and Risk Analysis for Climate Change Mitigation and Adaption Strategies - Wegener Institute, Austria one of the partners) which deals with future socio-economic development within the EU.
- JRC is developing the [POTENCIA](#) (Policy Oriented Tool for Energy and Climate Change Impact Assessment) model. How does EU Calc fit to this?

EUCalc would be a good complement to that. For comparison of different policies the EUCalc is a very good tool. POTENCIA aims to be the own model of the EU and to be more transparent and open. The EU should connect with them and see it as a complementary work.

It should be clarified how to integrate or if it would be possible to use their results?

Reply from the consortium: EUCalc could support in terms of comparison the results with POTENCIA (EUCalc has the advantage of transparency). The project consortium is aware of these initiatives. But it is not a problem to have more tools doing the same thing. Connecting with all will overburden us. This is a matter of scientific competition.

There were joint events with the sister projects in the past, they will deal with similar output, but [INNOPATHS](#) focused on four countries and they are using already existing models – it is planned to have a joint meeting. In December we are gathering experts to look into which social impacts are to be covered also together with INNOPATHS colleagues.

#### On regional detail of levers and technology

The next discussed topic was about data and used databases in regard to define the four ambition levels for 29 countries. But not all levers will be on a country level, some will stay on an EU level. This is still not decided, so that also database issues have to be decided after data collection has developed further.

Some levers can be done at the EU level; others will require a country dimension. We are aware of this and still need to decide which levers follow which geographic level.

Is the out-phasing debate one that will be reflected in the EUCalc settings?

For some technical levers we can include S curves, but not for all. Additionally we have a slider of technology adoption attached to the levers.

For transport country wise projections are made, identifying most influential drivers for lifestyles and finding a range for the countries.

For some areas technology deployment has to be considered, maybe for infrastructure 10 years before it becomes a key factor (for EVs for example).

## **On Bioenergy**

EU calculators should reflect the variety of points of view on bioenergy. Consider certain amounts of sustainable biomass amounts to be available.

IMPERIAL is taking this into account. Based on food security this will allow us to start looking into strategies. The key issues would be what the level of availability of sustainable biomass is.

The EUCalc approach should be kept very open to new developments. E.g., PV and electric cars could kill the biomass problem.

Clean Energy Package to be addressed in the EUCalc model: EUCalc should be able to address the current political discussion, "NetZero-Target" and connection to bioenergy also a crucial issue to address (work done at Imperial on land use, biomass etc.), carbon sinks potential and deforestation.

## **Others**

Other input from the AB was the following:

- Strategic Positioning of the project has to be done, EU presidencies using for enhancing the visibility.
- Addressing EU policy targets and positioning within EU model landscape – also in comparison to other projects dealing with similar topics.
- Do not underestimate that you need to communicate this 50 times.
- The Calculator should be very open, so that new technologies can be included at a later stage easily, disruptive technology can change the whole picture in just a few years.
- Consider of having a "soft launch" to test the lever settings and underlying policies.
- Interrelation and feedbacks are the most ambitious issues.
- You are searching to include the desegregation of countries. Therefore the right granularity is important to do the connection. To what level of detail you have countries communicating with each other.

## 4 Conclusions

In general the discussion and recommendations given by the Advisory Board members are helpful and are of high value for the development of the project activities.

As a result of the discussion in London (1<sup>st</sup> AB meeting) Imperial started to investigate the biomass/bioenergy topic more detailed aiming to implement it into the model. The lively discussion showed that this is a very important topic and that is also the reason why this question came up also during our next meeting in Vienna.

Also the wish to use the EU Calculator as a tool to reflect on impacts of discussed or already decided policy strategies was discussed in both meetings. The consortium agrees to try to address this request as it is the declared aim to build a useful tool that addresses the user's needs. Between the sistering projects it has also been agreed on to deepen the cooperation in terms of attending or organising one joint project meeting, attend the co-creation workshops or to exchange ideas on highly relevant topics and trends (e.g. technological development, EU policies)

After a year of shaping the tool and being close to a first version the question of relations to other projects, models and tools came up and made the consortium aware that we also have to think more about how to position the EU Calculator among all the available competitive products. We have to strongly show what will be the advantages of the EU Calculator and could also thinking about to see the whole process as a scientific competition.

For sure we will not be able to consider all recommendations given by the AB, but nonetheless this input is very valuable. Not only because it shows what are the expectation towards the EU Calculator, but also due to raising awareness for topics and questions and how different experts from different fields are discussing them.

The Advisory Board will be continuously involved in the next steps of the project, either by a face-to-face meeting or by a conference call. Outcomes of these meetings will be reported in the D11.5 Advisory Board contributions 2nd

## 5 References

EUCalc (2017): Advisory Board final list and Terms of Reference (Deliverable 11.3)

EUCalc (2017): Method for implementation of EUCalc co-design process (Deliverable 9.4)