2050 Calculator

What's happening in the 2050 Calculator community?

We are pleased to bring you information and updates from our ever-growing 2050 Calculator community.

The £3M, three-year programme will run to the end of 2021 and support up to 15 countries around the world to upgrade and/or develop new 2050 Calculators. The ultimate objective is to support governments to deepen their domestic action on climate change and strengthen ambition under the 2015 Paris Agreement.

In this issue:

The European Calculator (EUCalc)

Update

The three-year European Calculator (EUCalc) programme wrapped up at the end of February 2020. Funded by the European Union (EU)'s Horizon 2020 research and innovation grant, the EUCalc has provided decision-makers with a dynamic, highly accessible, user-friendly modelling solution for quantifying the sectoral energy demand, greenhouse gas trajectories and social implications of lifestyle and energy technology choices in Europe. The user can assess the impacts of their choices at the European and individual Member State (including Switzerland) levels, providing a unique perspective on the role and potential of the Member States and the EU in meeting global climate mitigation commitments.

The EUCalc model is built on the KNIME software platform that enables the development of a new generation of 2050 Calculators. This platform assists with handling of complex EU and inter-Member State transboundary and sectoral relationships, while allowing a high level of transparency.

The Transition Pathways Explorer user interface of the EUCalc model is now complete, having taken into consideration feedback from the public call for evidence. The interface has being rolled out via a series of Town Hall presentations in select cities, including Rome, Budapest, Vienna, London and Copenhagen. Policy briefs have been produced, examining pathways towards a European low emission society, while summarising key findings with a clear policy orientation. The briefs provide practical climate change mitigation insights for both EU and individual Member State decision-makers.

For the latest EUCalc developments, follow us on Twitter or sign up to our newsletter via the website.

Calculators around the world – updates

Malaysia

We undertook our first Calculator training session in Malaysia in January. The training was well attended by key stakeholders, including representatives from various government ministries, universities and trade organisations. The interactive sessions allowed participants to test different pathways using the EU Calculator (EUCalc) model, providing ‘hands-on’ insight as to how the Calculator could be used in Malaysia.

The Malaysian team is now undertaking data and stakeholder mapping exercises to develop its own version of the Calculator.

Vietnam

The Vietnamese team also undertook their first Calculator training session in January, attended by key stakeholders from government, universities and trade organisations. The team is now updating its existing Calculator, and exploring which levers should be expanded on in the new version.

Conferences and events

2050 Calculator International conference

13-15 November 2019, Windsor, UK – debrief

Our annual international conference was held in Windsor, UK, last November.

The three-day event, attended by more than 100 participants from nearly 40 countries, opened with a tribute to the late David MacKay, the British physicist, mathematician and academic, whose ‘Sustainable Energy Without the Hot Air’ book formed the basis for the Calculator. Other topics discussed included technologies for the removal of greenhouse gas emissions, policy impacts, land use, green finance and use of the Calculator in schools and cities. We also received updates from the Calculator teams from China, the EU, India, the UK and Vietnam.

Thanks to all our speakers and participants – it was inspiring to see the great work being done to lower carbon emissions worldwide.

You can listen to Engineering Matter’s podcast of the event – The Calculator that could save the world.

2050 Calculator International conference

October 2020, Da Nang, Vietnam

We are pleased to announce that this year’s international conference will be held in Da Nang, Vietnam. The workshop will focus on lessons learned from Calculators around the world and helping newer members of the community. Stay tuned for details!

COP26

9-20 November, Glasgow, UK

The 2020 United Nations Climate Change Conference, also known as COP26, will be held in Glasgow, Scotland, this November under the presidency of the UK government. Up to 30,000 delegates are expected to attend the event, which is designed to produce an international response to the climate emergency.

We have plans to be in attendance at COP26 and will keep you informed of developments.

Journal publications

Call for abstracts

Recognising that a major transformation of our energy system is required to mitigate climate change, SoftwareX is publishing a special issue on energy system models. The publication is looking for abstracts/papers on energy system or sub-sector models (eg, electricity system, transport system, city modelling); software which prepares and processes data used for energy system modelling (eg, R package); and/or software which analyses results from energy system models. Submissions on Calculator models would be welcome.

Deadline for submission of abstracts is **14th March 2020**. For more information, including submission requirements, please contact Peihao Li (p.li@ucl.ac.uk) or visit the UK Energy Research Centre (UKERC) website (note that the deadline has been extended, but the website hasn't been updated yet).

Comprehending climate complexities

Jem Woods and **Victoria Hoare** of Imperial College London have authored a paper on the future climate complexities involved in the EU and the Global Calculator models. The paper examines what could be done from a policy

perspective. See GeoExPro magazine, Vol.17, No. 1, pg 46 – *Industry Issues: Comprehending climate complexities*.

About us

2050 Calculator delivery partner

To deliver the 2050 Calculator programme, BEIS appointed a Mott MacDonald-led consortium as its delivery partner. **Mott MacDonald** is a global engineering and management consultancy that works on a wide-range of infrastructure and development projects around the world. Our consortium includes **Climact**, a Belgium-based consultancy providing technical support on Calculator development; **Imperial College London**, a leading UK university with extensive experience of Calculator development, land-use issues and energy system change; and **Ricardo**, a UK consultancy bringing expertise in model reviews and quality assurance.

The role of our consortium is two-fold. Firstly, we bring technical and capacity building support to work with governments and other stakeholders as they develop and use their Calculators. Secondly, we are responsible for disbursing UK Government funding to in-country downstream partners where required to ensure sufficient resources are available. Over the next two years, we will also be working to build and connect the international Calculator community through conferences, newsletters and the Calculator website. We look forward to working with all of you!

Delivery team highlights

Dearbhla Hone

2050 Calculator BEIS programme lead

Dearbhla manages the international 2050 Calculator programme for BEIS, working to support developing countries to create their own Calculator models. Over the past few years, she has also led work on climate change policy, focusing on bilateral engagement with India. Prior to joining the UK civil service, Dearbhla worked on justice and home affairs in the Permanent Representation of Ireland to the EU and led work on gender mainstreaming in the women's rights committee in the European Parliament.

Jonny McCormack

Project Manager, 2050 Calculator Delivery Partner

Jonny is a project manager and chartered mechanical engineer. He recently took over management of the international 2050 Calculator programme for Mott MacDonald, working to support developing countries to create their own Calculator models. Jonny joined Mott MacDonald in 2007 and, since then, his primary focus has been power generation. He has provided technical and commercial advice to clients developing a wide range of projects from biomass power plants in the UK, to solar thermal power plants in South Africa.

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