

2050 Calculator

What's happening in the 2050 Calculator community?

Welcome to the 2050 Calculator community's first newsletter of 2021! In this edition, we provide an [update on the programme](#) in light of Covid-19 restrictions and include discussion on [stakeholder engagement](#) and the importance of [institutionalising the 2050 Calculator](#), along with our regular [country updates](#) from around the world and [event](#) updates.

The £3M 2050 Calculator programme was commissioned to 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. Visit our [website](#) for further information and/or join us on [LinkedIn](#).

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Programme update

Challenges and benefits

As expected, the Covid-19 pandemic and associated restrictions have slowed down work across the 2050 Calculator programme. A contingency plan for the programme was put in place in mid-March 2020 to continue working virtually. Nevertheless, progress has inevitably been delayed as we can no longer meet stakeholders face-to-face. We continue to provide training to countries, but it takes longer than originally planned as the training now needs to be spread over several online sessions rather than full-day in-person workshops. In addition, many countries we are supporting are not accustomed to working in the virtual space. Poor internet connection and access to reliable IT equipment have been challenging in some countries.

There have also been some benefits, however. As the programme countries (and our team) become more comfortable with virtual communication, we are able to engage with more stakeholders, more frequently than we perhaps would have been able to do prior to the pandemic. We look forward to continuing to engage with country stakeholders on the programme in the best way possible.

Calculating routes to net-zero carbon

Following on from the success of our annual virtual conference last November, **Adina Popa**, Mott MacDonald's programme director for the 2050 Calculator, has published an article on the importance of engaging stakeholders early on when building a Calculator. **[Read the article](#)** – Calculating routes to net-zero carbon: What's entailed in cutting carbon emissions to net-zero, am I affected, and how can I play a part?

Institutionalising the 2050 Calculator

John Watterson, Greenhouse Gas Emissions Inventories Knowledge Leader, Ricardo

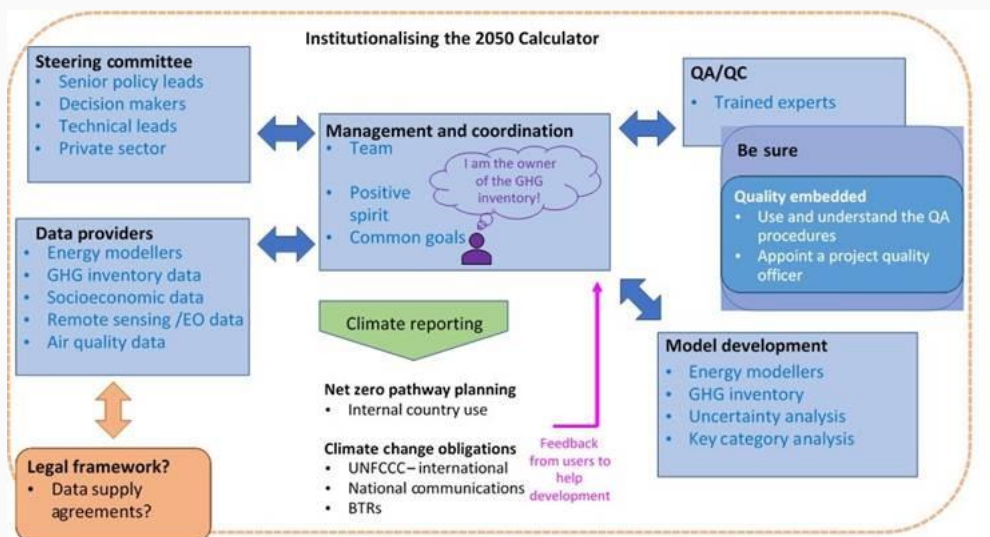
Why's the institutionalisation of the 2050 Calculator so important? You've developed a Calculator; it works quite well; it's helped you to understand your future energy pathways, and shown you how a net zero pathway might be achievable. Isn't that enough?

To provide an answer on the importance of institutionalisation, we need to first ask a couple of questions – how can all the effort that has been invested to develop and promote your 2050 Calculator be maximised? How can the investment have an enduring effect?

One of the most effective ways of maximising investment is to 'institutionalise' the knowledge and insights gained during the work to develop the Calculator. 'Institutionalisation' is a word that is frequently used in capacity building, but what exactly does it mean? Simply put, it is the action of establishing something as a convention or norm in an organisation or culture. Thinking about it slightly differently in the context of the Calculator programme, the essence of institutionalisation is about embedding the Calculator in a country's greenhouse gas mitigation planning, and placing the Calculator at the heart of the development of pathways to net zero.

To highlight how important institutionalisation of the Calculator should be, we looked back at the lessons of the past that helped shape the current 2050 Calculator programme. One of the ‘big 5’ lessons of flawed projects is that they fail when core people leave the project team. Institutionalisation is the key to help prevent failure when individuals leave a project, and will help preserve the memory of the Calculator for the future.

How exactly should you institutionalise your Calculator? Below are our thoughts summarised in a diagram:



Every country is likely to have an implementation that suits its unique circumstances, but with some common features, such as quality assurance/control. Note that any legal frameworks should encompass the whole Calculator system to ensure compliance, otherwise only the data supply agreements have a legal basis.

How should it be done? Who should be involved?

Institutional arrangements should build on existing national arrangements, where possible, or they can be restructured to promote effectiveness. The Calculator should have an institutional ‘home’ – a ministry, department or

agency that is responsible for it – and it should also have an ‘owner’. Your country most likely already has a ministry/department/agency that is leading on climate issues. Could this be the Calculator’s home? The owner should be an individual, rather than a team, and they should have overall responsibility for the Calculator, including knowledge of who built it and where records describing how it works are kept. If the owner leaves the programme, the Calculator should be handed over to a new owner. The institutional arrangements should ensure that all the data for the current and future Calculators are understood, recorded, made available and backed up. The owner should facilitate important data flows and make sure skilled resources are available to work with stakeholders. Some countries find a legal framework works to make the use of the Calculator mandatory and to secure the data needed through data supply agreements.

How should it be promoted?

The owner and ministry/department/agency should promote the Calculator. Understanding and communicating the objectives of the institutional arrangements and clearly presenting the related organisational structures is critical. The owner should facilitate the use of the Calculator, ensuring it’s recognised at all levels of government and is embedded in all policy thinking, not just in policies related to climate change.

How long might it take?

Less time than you might think. If you’ve already developed a Calculator, you’ll need to implement two key additional aspects – to document the systems and procedures required and maintain them. Make it easy for the next Calculator generation to continue the good work.

Are there other co-benefits?

Yes, there are other important co-benefits to institutionalising your Calculator. Thinking of the climate reporting obligations that all countries have under the UNFCCC, the Calculator is likely to support your efforts to

develop and enhance your measurement, reporting and verification and transparency system of climate action and support. It provides clear evidence that your country is making ambitious plans to tackle climate change, and the work it supports can be presented in your enhanced transparency report. As well as providing insight into greenhouse gas emissions, the Calculator can help in understanding the sources of air quality emissions and help to mitigate them.

[Can you get help for institutionalising your 2050 Calculator?](#)

Yes, you can. The UK-funded 2050 Calculator programme not only supports creation of country Calculators, but also aims to provide ongoing support to existing Calculator teams – including support for institutionalising Calculators.

So go ahead and institutionalise your 2050 Calculator. Create a plan, stick to it and check progress. What are the downsides to institutionalisation? We believe there are none.

For further support on institutionalising Calculators, see the [UNFCCC handbook on 'institutional arrangements to support MRV/transparency of climate action and support'](#).

Calculators around the world – updates

India – The [Tamil Nadu State Energy Calculator \(TNSEC\) 2050](#) has officially launched. See the launch on [Twitter](#). TNSEC 2050 is an energy scenario building tool, which aims to explore a range of potential future energy scenarios for India. It includes 17 energy demand and supply sectors, and 38 levers that will impact the Tamil Nadu energy system. The available combinations offer users hundreds of energy pathways to the year 2050. [More information](#).

Malaysia – the team is currently working to finalise one-pagers and populate the Excel model. This is expected to be completed within the next month, ready for consultation. Quick touch calls between the team and our Consortium technical experts are being held weekly to quickly resolve any issues.

Nigeria – the team’s sector leads have been busy with the preparation of draft one-pagers for electricity, land use, industry, transport and building sectors. Once drafted, the team will undertake stakeholder engagement to test and verify the one-pagers and the assumptions made therein. The National Steering Committee continues to support project-related networking, advocacy and data collection.

Philippines – the team had their first technical training session in February. The team structure is being finalised and the data gathering phase of the project has commenced.

Thailand – the team is currently working on data gathering in parallel with developing one-pagers. Consultation is planned after completion of the prototype model (expected to be around mid-2021). Weekly sessions are being held between the team and the consortium technical experts to resolve any issues.

Vietnam – the team has finished all data gathering. They are currently finalising one-pagers and preparing for expert peer review and consultations with stakeholders, which will take place in March 2021.

Conferences and events

2050 Calculator International conference

Date TBC

Our annual international conference will once again be held in the second half of the year. Details to follow.

COP26

1-12 November 2021, Glasgow, UK

The United Nations Climate Change Conference, also known as COP26, will be held in Glasgow, Scotland, this November under the presidency of the UK government. The event 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.

About us

2050 Calculator delivery partner

To deliver the 2050 Calculator programme, BEIS appointed a Mott MacDonald-led consortium as its delivery partner. Our consortium includes [Mott MacDonald](#), [Climact](#), [Imperial College London](#) and [Ricardo](#).

We bring technical and capacity building support to work with governments and other stakeholders as they develop and use their Calculators; and we are responsible for disbursing UK Government funding to in-country downstream partners where required to ensure sufficient resources are available. Over the course of the programme, we will also be working to build and connect the international Calculator community through conferences, communication channels (please join us on [LinkedIn](#)) and the [Calculator website](#). We look forward to working with all of you!

Delivery team highlights



Jessica Brislin-Higgs

Senior Advisor, Mott MacDonald

Jess is a Climate Resilience Advisor with Mott MacDonald, based in South Africa. She primarily works in a technical advisory capacity, undertaking climate risk assessments and climate-related capacity building on urban planning and infrastructure projects around the world. Jess became involved in the 2050 Calculator as a Country Manager in 2020. She looks after the west- and south-African projects in the 2050 Calculator extension programme. Her current 'active' countries include Nigeria and Zimbabwe.



Nuttawat Suwattanapongtada

Renewable Energy Advisor, Mott MacDonald

Nuttawat is a Renewable Energy Engineer based in Mott MacDonald's Bangkok office. He specialises in solar energy with experience in advisory support for developers, owners and lenders across the Asia-Pacific region. Nuttawat is actively involved in Thailand's national climate change mitigation through the country's 2050 Calculator programme, a collaboration between the Ministry of Energy and the UK Government.

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