

EUROPEAN FUNDING

EU plans energy spending to 2027 despite Brexit distraction

In an uncertain political climate, the EU is pushing on with funding future-facing energy projects. Keith Nuthall examines the bloc's medium-term ambitions.

The EU may be tangling with the potential impact of Brexit, but it is doing so while it agrees its next medium-term budget for 2021-2027 – and this includes earmarking billions of euros for the energy sector.

A key element of this investment will be research and development, via the Horizon Europe programme, whose 2021-7 budget is projected to be €96.5bn. This has now been backed in principle by the EU Council of Ministers and the European Parliament, which will need to authorise its budget in formal votes that are not expected to significantly change these financial allocations.

Indeed, the EU executive, the European Commission, has enough confidence that the agreement of Horizon Europe will hold to start preparing its implementation. The first draft work programmes will be ready by its launch on 1 January 2021. The current goal is for the Commission to narrow down any objections for some focused negotiations at the June European Council meeting with a view to another such meeting giving the package its formal blessing this autumn.

Resilient Europe

As usual, energy companies and researchers need to form themselves into international consortia to suggest ideas for projects that fit the more detailed priorities that will be released by the Commission, possibly by the end of this year.

Assuming their ideas dovetail with Horizon Europe priorities, the industry may also be able to tap some of the €15bn earmarked within the Horizon Europe budget for climate, energy and mobility projects. Innovations that may be eligible for support from this section include projects on climate science, energy supply, energy systems and grids, and energy storage.

A statement agreed by MEPs and EU ministers released on 27 March said selected projects would make: 'the energy and transport sectors more climate and environment-friendly, more efficient and competitive, smarter, safer and more resilient, promote the use of renewable energy sources and energy efficiency, [and] improve resilience of the EU to external shocks.'

Funding the future of energy

A key element of the new Horizon Europe programme is that projects associated with a renewed Connecting Europe Facility (CEF), the programme designed to fund major cross-border infrastructure investments linking EU member states together, may get priority funding. Under the current budget plans for 2021-7, the CEF will have an energy budget of €8.7bn, with spending focused on cross-border renewable energy projects, the interoperability of EU energy networks and better integration of the EU's internal energy market.

This, said a European Commission note, should help move the EU: 'towards clean energy and complete the [European] Energy Union, making the EU energy systems more interconnected, smarter and digitalised.' The MEPs/ministers' agreement on Horizon Europe said that information would be swapped between officials running both programmes, so that technologies developed by the R&D programme could be deployed via CEF projects.

Similarly, officials will liaise with those controlling another EU spending programme, the LIFE Programme for Environment and Climate Action, which will have €5.45bn to spend between 2021 and 2027 under current EU budget plans, and whose priorities include projects promoting clean energy systems. It does this through policy development, testing technologies and spreading best practice.

In Horizon Europe discussions, MEPs and ministers have agreed that the European Innovation Council – an institution that will promote inventions and be funded by the programme – will support, scale up and commercialise energy innovations developed by LIFE programmes.

Energy researchers undertaking basic research would also be able to apply for grants from the European Research Council (ERC), which is part of the Horizon Europe system. Its earmarked 2021-27 budget – prior to the final approval of the programme – is €16.6bn.

Nuclear future

Also, Horizon Europe – as with its predecessors – has a special Euratom section for nuclear power and for 2021-7. Its spending heading will be €2.4bn, covering research and training. In its detailed proposal on this nuclear section of Horizon Europe, the Commission has said a key priority will be research into protection from radiation from nuclear energy generation. Another goal is to make nuclear technologies safer by better understanding the ageing of nuclear reactors and improving accident management strategies.

The programme will also focus funding on fission technologies, which the Commission views as a priority given nuclear power's continued expansion, including into countries that have not used nuclear electricity generation in the past. This is also why this Euratom programme will develop nuclear safeguards, security and non-proliferation techniques.

Other research priorities will include managing and disposing of spent fuel and radioactive waste, decommissioning and supporting preparedness for radiation emergencies.

The Euratom element of Horizon Europe will also spend money on research and development regarding fusion that supports the International Thermonuclear Experimental Reactor (ITER)

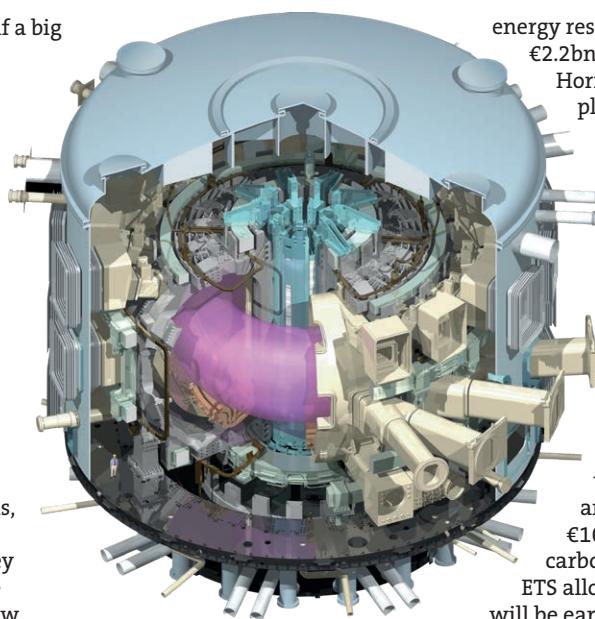
programme – itself a big separate 2021-27 budget item. The Commission said it would spend money on ‘demonstrating fusion’s feasibility as an energy source by exploiting existing and future fusion facilities, including ITER and preparing for future fusion power plants by developing designs, materials and technologies.’ A key target here will be boosting know-how transfers from fusion laboratories to the nuclear industry.

This agreement in principle on Horizon Europe comes as an advisory wing of the EU, the European Economic and Social Committee (EESC), which is consulted on all EU legislation, has supported plans to spend €6bn on developing ITER, up from €2.9mn that had been allocated for 2014-2020. This money would be in addition to the Horizon Europe research spending and indicates that the EU is prepared to see the ITER project through.

The EESC is happy that the EU is apparently prepared to put its money where its mouth is regarding fusion. While accepting ITER ‘does still entail some industrial risk’ (potentially something of an understatement), it added in a formal opinion: ‘In the event of success the realisation of a fusion power plant would... significantly change the existing energy supply by providing a disruptive innovation, with fusion fuel being abundant and virtually inexhaustible.’

The medium term 2021-2027 budget also allocates money for decommissioning nuclear power plants, with €552mn earmarked for helping Lithuania decommission its old Soviet-era Ignalina nuclear power station.

There is also a planned allocation of €63mn for Bulgaria and €55mn for Slovakia – to help their governments decommission old nuclear facilities – respectively at Kozloduy and Bohunice. And the European Commission is planning to spend €348mn on decommissioning EU-owned reactors run by the EU Joint Research Centre (JRC) – the EU’s in-house research agency. The JRC, whose remit includes cutting edge



Europe is spending money on projects that could demonstrate nuclear fusion’s feasibility as an energy source, including the International Thermonuclear Experimental Reactor (ITER)

Photo: ITER

energy research, is allocated €2.2bn under current Horizon Europe budget plans for 2021-2027.

Sustainable growth

Other spending programmes that will allocate EU money to the energy sector from 2021 to 2027 include an Innovation Fund linked to the EU Emissions Trading System (ETS), which will pool resources amounting to around €10bn, depending on the carbon price of 450 million ETS allowances whose sale will be earmarked for the fund.

It will expand the current EU Innovation Fund, (called the NER300 programme), which already supports the demonstration of carbon capture and storage and renewable energy technologies, to finance energy storage and boost efficiency in energy-intensive industries. It will offer grants to cover up to 60% of additional capital and operational costs linked to developing an innovation.

Smart energy network developers might also be able to access EU funds through a proposed €41bn Smart Specialisation Strategy, which the European Commission wants to build into the 2021-27 European Regional Development Fund (ERDF) programme to funnel money into poorer regions of member states.

The ERDF and its related Cohesion Fund will spend the lion’s share of an overall regional development budget between 2021 and 2027 that – under existing negotiating documents – may command €373bn. Projects that promote sustainable energy are a key priority for both funds, according to guidance tabled by the European Commission last May.

A goal is developing a ‘greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management,’ said the proposal. This would include the funds financing energy efficiency projects; promoting renewable energy; developing smart energy systems, grids and storage; as well as projects supporting adaptations to deal with climate change. The Commission’s directorate general for regional and urban policy and national member state governments essentially decide how this money is spent.

Energy innovators and renewables promoters may also be able to tap a new proposed InvestEU Fund, which includes public seed capital with the goal of attracting additional private investment to projects. Under current plans, it will have €38bn to spend, building on the model utilised from 2014-2020 by the Juncker Plan, supported by outgoing Commission president Jean-Claude Juncker, which was designed to kick the EU economy into more sustained growth.

A key partner of this programme (and the Juncker plan before it) will be the European Investment Bank (EIB), although with the anticipated departure of the UK from the EU, Britain’s subscribed capital will be withdrawn from the EIB. The bank has a 2019 financing target of €63bn, down from the €67bn target of 2018, as a result.

And Brexit?

Indeed, all these new EU 2021-27 spending programmes have been drafted with the assumption that Britain will be outside the EU during those years. Funding from the European Bank for Reconstruction & Development (EBRD), which focuses investment on eastern Europe and central Asia, including on significant energy projects, should not be affected as it is not directly linked to the EU.

But with the UK still struggling to decide how or when it might quit the bloc, if the slim possibility that Britain remains a member state for 2021-27 comes to pass – all these budgets would probably increase. If Britain quits, then its participation in Horizon Europe programmes (which the UK government has said it wants to secure) would be subject to negotiations with the EU – and Britain would obviously have to pay to play.

If the UK crashed out of the EU with no withdrawal deal, funding from the existing Horizon 2020 programme would be impacted. A House of Lords report released in February warned this could have serious consequences – including for energy researchers: Britain is the second largest recipient of Horizon 2020 fund, having been paid 15% of its grants since 2014, amounting to €5.7bn.

Despite ongoing geopolitical uncertainty, Europe remains committed to funding innovative energy projects. While it’s difficult to tell how (or if) these schemes will translate into necessary emissions reductions – it’s clear that the EU is serious about a low-carbon future. ●

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