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**EXPLANATORY MEMORANDUM ON EUROPEAN UNION DOCUMENT**

**Proposal for a decision of the European Parliament and of the Council on the participation of the Union in a European Metrology Programme for Innovation and Research jointly undertaken by several Member States**

Submitted by Department for Business, Innovation and Skills on July 2013

**SUBJECT MATTER**

1. This document proposes the participation by the European Union along with several Member States in the European Metrology Programme for Innovation and Research (EMPIR). (Metrology is the science of Measurement.) EMPIR’s aim is to further develop the integrated European metrology research system which has been created through the current European Metrology Research Programme (EMRP); and provide metrology solutions and measurement technologies which support innovation and industrial competitiveness and help to tackle societal challenges such as health, environment and energy, including supporting policy development and implementation.

2. Reliable, traceable measurement is essential to almost all aspects of life. It underpins trade and regulation and is a vital enabler to the undertaking of scientific research. Measurement is necessary to demonstrate advances in manufacturing technology but also new areas of innovation can be opened up by developments in measurement capability. Given its importance as a public good, all developed economies support a national measurement infrastructure.

3. EMRP was established, under Article 185 of the Treaty on the Functioning of the European Union (TFEU), as a joint initiative involving 22 Member States. It co-funds a programme of collaborative research with projects consisting of consortia of scientists and engineers, primarily from national measurement institutes, but also involving academia and industrial partners. The interim evaluation indicates that strong integration has been achieved with 50% of dedicated national funding for metrology research in Europe now being jointly programmed. This has reduced fragmentation, avoided unnecessary duplication and helped achieve critical mass by concentrating resources on key areas. EMRP projects deliver European measurement solutions for major societal challenges and provide common European inputs into standards and regulations.

4. The successor programme, EMPIR, will build on this success to strongly contribute to achieving the objectives of Horizon 2020. This will be achieved by increasing the emphasis on support for innovation, increasing the number of Member States participating, to 27, and widening the ability of academic and industrial researchers to participate.

**SCRUTINY HISTORY**

5. BIS submitted an EM on Council document no. 17933/11 on 20 December 2011 relating to “Proposal for a Regulation of the European Parliament and the Council establishing Horizon 2020 - The Framework Programme for Research and Innovation (2014-2020)”. The Commons European Scrutiny Committee considered it politically important and cleared it (Report 3, Session 13/14. The House of Lords Select Committee on the European Union cleared it (POS 19/06/2013, Session 13/14).

**MINISTERIAL RESPONSIBILITY**

6. The Secretary of State for Business, Innovation and Skills has primary responsibility on innovation, research and industry matters.

**INTEREST OF THE DEVOLVED ADMINISTRATIONS**

7. The UK’s policy is a reserved matter under the UK’s devolution settlements but the devolved administrations have an interest and have been consulted in the preparation of this EM.

**LEGAL AND PROCEDURAL ISSUES**

8. The proposal for EMPIR is based on Article 185 of the TFEU, concerning the participation of the European Union in research and development programmes undertaken by several Member States, and is in scope of that Article. It is subject to the Ordinary Legislative Procedure with qualified majority voting in the Council.

9. There is no impact on UK law as the proposal simply allows the Union to participate in joint research programmes with Member States.

**FUNDAMENTAL RIGHTS ANALYSIS**

10. No fundamental rights issues arise in relation to this Proposal.

**APPLICATION TO THE EUROPEAN ECONOMIC AREA**

11. EEA countries and associated countries can participate within the Horizon 2020 Programme.

**SUBSIDIARITY**

12. The Government considers that the principle of subsidiarity is adequately reflected in the Proposal. It acknowledges the added value resulting from partial scientific and financial integration of national programmes with topic selection voluntarily agreed by an elected committee of participants.

**POLICY IMPLICATIONS**

13. The Government recognises that metrology research is a significant contributor to innovation across a very wide range of sectors of the economy and can support work to address a number of societal challenges, such as healthcare, energy and the environment. Because of the need for measurement in so many aspects of life, and the need for international equivalence of measurements, metrology is an area of research which is well suited to international collaborations in order to optimise use of resources. As a result the UK was one of the principal drivers in supporting the development of the EMRP, and is second only to Germany in terms of the level of participation in it.

14. The UK funding for EMRP is provided through the National Measurement System (NMS) Programmes operated by the National Measurement Office (NMO), an Executive Agency of the Department for Business, Innovation and Skills. The subject areas and “Grand Challenges” covered by the EMRP programme are closely aligned with the priorities of the NMS Programmes which are set out in a strategy document published in 2011 following public consultation in 2009.

15. The Commission’s evaluation of the Programme is positive, finding that the programme is well managed and that it has achieved a high degree of integration of national programmes in terms of science, finance and management. Overall on average 50% of European national metrology research funding is now integrated through EMRP. The Evaluation Panel identified two areas for improvement in achieving the overall aims of the Programme. The first was to increase the participation beyond National Metrology Institutes of industrial, and more particularly academic, partners. The second issue was the degree to which the Programme supports the development of metrology capability in those countries with less developed National Metrology Institutes.

16. The NMO and the UK’s national measurement institute the National Physical Laboratory (NPL) have been actively involved in shaping the development of the follow on programme, EMPIR, which is being proposed by the Commission. NPL is represented on the committee which will oversee the Programme and is also responsible, under contract, for much of its administration. The proposed EMPIR has addressed both of the EMRP evaluation panel’s recommendations for improvement. The proposed programme also has a greater emphasis on taking scientific developments in metrology through to innovative applications. This will be relevant in providing increased support to the sectors covered in the UK’s industrial strategy.

**CONSULTATION**

17. The Commission received 624 responses to an online public consultation carried out in 2012 on a future European Metrology Research Programme. 28 % of these came from individuals and 72 % came from organisations. The latter were mainly research organisations (32 %) and businesses 16 %, of which 69 % SMEs. There was almost unanimous agreement (97 %) on the importance of metrology research for addressing grand challenges; for the European economy and industrial competitiveness; and for European policies, standardisation and regulatory work.

**IMPACT ASSESSMENT**

18. The Commission has carried out an Impact Assessment, which is provided as an addendum to the Proposal. The assessment compares the level of investment in metrology in a number of countries both in Europe, the US and Asia. It concludes that taking into account the level of investment and metrology’s role in promoting scientific excellence and industrial competitiveness, a single Member State or even a group of countries acting together could not compete in the global context. Public intervention at EU level is therefore necessary to integrate diverse national research programmes, achieve the critical mass of investment required and to increase the cost-effectiveness and impact of European activities in this field.

19. The Impact Assessment notes a key finding of the interim evaluation panel for of the EMRP, i.e. ‘The Panel had a common view that the Article 185 is an almost perfect instrument for joint programming within the metrology community due to the long-term national funding commitments, the relatively homogenous national structures and the pre-existing networking frameworks.’ It concluded that the proposed European Metrology Programme for Research and Innovation (EMPIR) could build on the success of the EMRP. The improvement from EMRP to EMPIR would result from a stronger focus on innovation and industrial uptake, new support for standardisation and dedicated capacity building. In order to support participating states with less developed metrology systems and allow them to close the gap with more established metrology systems links to other funding sources, such as structural funds were needed.

**FINANCIAL IMPLICATIONS**

20. The Government is supportive of the EMPIR proposal, but remains committed to the position that in the MFF negotiation nothing is agreed until everything is agreed, and will not agree to this decision before the overall MFF regulation is formally finalised.

21. The Commission currently propose a total value for the Programme of €600M (£514.32M). (Exchange rate £1 = 1.1666 Euro 1 Euro = £0.8572) Of this €300M (£257.16M) will be the Union’s financial contribution, including EFTA appropriations. This total is subject to final agreement on the Horizon 2020 budget, which is itself dependent on the Multi-annual Funding Framework. The maximum

22. The Union funding will be drawn from the following challenges and themes within Horizon 2020.

* Leadership in nanotechnologies, advanced materials, biotechnology and advanced manufacturing and processing;
* Leadership in information and communications technology
* Improving lifelong health and wellbeing
* Improving food security, developing sustainable agriculture, marine and maritime research and the bio-economy
* Making the transition to a reliable, sustainable and competitive energy system
* Achieving a European transport system that is resource-efficient, environmentally friendly, safe and seamless
* Achieving a resource-efficient and climate change resilient economy and a sustainable supply of raw materials

23. A matching figure of up to €300M (£257.16M) will be provided by the participating Member States. The exact distribution of this is dependent on competitive bids but based on experience from EMRP and the relative size of national metrology research budgets, the UK share of this is likely to be 14-23%, i.e. £36-60 M. Subject to future Spending Reviews, this funding would primarily be expected to come from within the BIS National Measurement System Programmes, although there is the possibility for universities to bid into some projects using their own funds or research council grants.

**TIMETABLE**

24. Negotiations on the Proposal are likely to begin in September with final approval expected by the summer of 2014.

**Rt Hon David Willetts**

**Minister of State for Universities and Science**

**Department for Business, Innovation and Skills**