Mission Innovation 'Innovation Analysis & Roadmapping' Working Group

An Overview of the Working Group's Work to Date

Introduction

This document summarises the Mission Innovation (MI) 'Innovation Analysis and Roadmapping' Working Group (IAR-WG) work to date and initial outputs. These outputs reflect extensive discussions between the members of the Working Group and detailed discussions with experts in the International Energy Agency (IEA), the International Renewable Energy Association (IRENA) and the Carbon Trust.

A joint understanding of clean energy innovation needs across Mission Innovation (MI) stakeholders is essential to support Mission Innovation's objectives – helping to: provide insights that countries may choose to use in informing national plans; identifying potential areas for collaboration; and highlighting opportunities for private-sector engagement.

To that end the objective of this work-stream is that:

> Mission Innovation countries jointly agree and communicate clearly a shared view on the most critical areas for clean energy innovation, taking into account geographical, regional and national differences, and in full recognition that we need a diverse range of solutions for diverse range of needs.

This shared view would be based on a shared analysis of the innovation needs necessary to achieve Mission Innovation's objectives and a review of current and planned activities by Mission Innovation countries and the private sector.

Substantial Energy Innovation Analysis and Roadmapping has been carried out to date by countries and international bodies. Much of what we need to know therefore is already available and substantial new analysis, supported by Mission Innovation, is not needed. Our work to date however has identified a need to draw together key insights from those various sources, look for a consensus view amongst Mission Innovation members and present those insights in a way that is easily accessed and understood by senior decisions makers. Discussions with various stakeholders including the IEA and IRENA confirm that that activity would be valuable and would not duplicate existing work.

Outputs to date

Against this backdrop and ahead of the MI Ministerial meeting on 1st June 2016 in San Francisco, the 'Innovation Analysis & Roadmapping' Working Group (IAR-WG) has, in its initial phase of work, produced three deliverables to inform the efforts of Mission Innovation from mid-2016 onwards and to accelerate clean energy innovation. The three deliverables are:

I. *A Library of Reports*

An online repository, accessible to MI members only, that provides an overview of global, regional and national clean energy innovation roadmaps and reports that have been submitted by MI member countries and other stakeholders including the IEA, IRENA and the World Energy Council.

The scope of relevant reports is far reaching and may cover all innovation and deployment analysis related to the clean energy sector, including roadmaps, action plans and clean technology innovation needs analyses among others. The reports submitted by MI members in this database

can be in any language, though there is a requirement to provide a succinct summary in English which states the key themes and findings of the report.

At the time of writing, the following countries/institutions have submitted reports: IEA, IRENA, WEC, USA, UAE, Norway, Sweden, Japan, Indonesia, UK, France, Canada, and Australia. Any additional reports in the library were added by the Carbon Trust on behalf of the Working Group

The purpose of this deliverable is to share MI member countries' existing work on clean energy innovation as a resource that countries may choose to use to inform their national plans and to act as an evidence base for the meta-analysis report and IAR-WG work programmes (see below). The library is a live resource that is hosted on the Mission Innovation website and will continue to be updated as new reports are made available and produced.

II. *A Innovation Analysis Meta-Analysis Report*

Using the data collected in the library, this report identifies gaps left by existing innovation analyses that a new initiative, such as Mission Innovation, could focus on. The report examines 32 major studies of both current and required clean energy deployment and innovation analyses, 14 national studies, as well as a number of public databases and tools. Key findings of the report include:

- While clean energy system challenges and technology innovation needs are well documented, further work is needed to reach consensus;
- Priority innovation needs across technology areas have been identified, but it is less clear what has already been done to address these challenges and needs, especially in non-OECD countries;
- Barriers to and enabling policies for clean energy innovation and deployment are well understood both globally and nationally, yet the identification of key unaddressed innovation needs and opportunities for collaboration remain less well described.

III. *A Work Programme for the IAR-WG from June-2016 Onwards*

This document outlines a work programme for the IAR-WG from June 2016 onwards to address the gaps identified in the meta-analysis report. The work programme proposes that the working group should focus its efforts on identifying the most critical clean energy innovation needs that (i) are needed to address a representative range of clean energy system challenges, and (ii) that are currently receiving insufficient support from existing global and national RD&D initiatives.

A 1-year work programme is proposed that delivers on the objectives of the IAR-WG and builds on existing research programmes to identify unaddressed innovation needs clearly and communicate these succinctly to key stakeholders. We propose to ask existing international energy analysis teams to support the delivery of the next phase of work. The work programme will likely cost USD 300-350k from June through to December which we are looking to fund from voluntary MI contributions. Further work will be needed in 2017 but it may be possible to support some of that work through other work programmes.