

Bioenergy How2Guide – project outline

Background

IEA Roadmaps

The IEA has produced a range of global technology roadmaps¹ covering many of the key technologies that will have to play an important role in a future sustainable energy economy. This series includes roadmaps on Biofuels for Transport (2011) and Bioenergy for Heat and Power (2012). These roadmaps have been very well received and widely distributed, with many countries with an interest in bioenergy providing positive feedback.

Meanwhile, national energy road-mapping exercises are being undertaken by a growing number of countries, in particular emerging economies, and the IEA is regularly asked to provide direct support to these efforts. In response, the IEA has collaborated with key Partner countries, including China on wind, India (national industry) on cement and South Africa on solar roadmaps. While facilitating and participating in bioenergy workshops held in Russia, Chile and Thailand, the IEA received expressions of interest for assistance in developing national technology strategies for bioenergy.

How2Guide – General Concept

With the need for efficient and consistent responses to the growing number of requests for assistance with national roadmaps, the IEA has developed a new policy tool – the '*How2Guide*'. Building on its strong expertise in the field of roadmaps and framed under the IEA's **International Low-Carbon Energy Technology Platform**², each such project involves a **series of regional workshops** and results in a short, freely available **policy manual** (the *How2Guide*) **with practical guidance on roadmap development at the national level for a given energy technology**. Each *How2Guide* seeks to build the capacity of Partner and Member countries in the development and implementation of national roadmaps for a given energy technology, while also serving as a source of regionally specific information for the wider analytical work on that technology. It also provides the chance for Partner countries to access IEA global networks of expertise, in particular its technology [Implementing Agreements](#). The IEA is currently developing *How2Guides* for the following technologies and systems: Wind Energy, on Bioenergy and on Smart Electricity Grids³.

¹ <http://www.iea.org/roadmaps/#d.en.8363>

² Created in 2010 by the G8 Leaders and IEA Ministers, the IEA Technology Platform is the Agency's chief tool for multilateral engagement with Partner countries on low-carbon technologies.

³ The *How2Guide for Wind Energy* was released in March 2014. The *How2Guide for Bioenergy* and the *How2Guide for Smart Grids* are expected to be published in 2015.

How2Guide for Bioenergy

Scope

As a clean and competitive source of renewable energy, many member countries of the IEA have already integrated a substantial amount of bioenergy into their energy mix, while an increasing number of developing and emerging countries are now looking to this multi-faceted energy source as a central component of their efforts to diversify their energy mix, and respond to climate change challenges.

Drawing on the experience with the IEA's global energy technology roadmaps, the *How2Guide for Bioenergy* responds to the growing number of requests for IEA assistance from emerging and developing economies with the **development of bioenergy roadmaps that are tailored to national frameworks, resources and capacities.**

Given the interrelationships along the value chain, the *How2Guide for Bioenergy* covers both biofuels and bioenergy for heat and power. The manual will include information and guidance on a range of topics that need to be carefully considered in producing national roadmaps, including:

- resource availability,
- sustainability of biomass supply and use,
- technology status and costs,
- potential barriers to deployment (e.g. technology, policy, market, finance),
- policy options and an analysis of their costs and effectiveness,
- financing options, and
- stakeholders engagement and public acceptability.

The guide will also include a number of case studies with relevance to bioenergy roadmap development at national or regional level.

The IEA may collaborate with other international organisations in the framework of the activities for the *How2Guide for Bioenergy*, including the Food and Agriculture Organization of the United Nations (FAO), and the International Renewable Energy Agency (IRENA).

Outputs

The *How2Guide for Bioenergy* will consist of the following outputs:

- The *How2Guide* manual, including relevant references and case studies. The publication will be available free of charge in electronic and paper version
- A compendium of presentations, regional data and information (on deployment, costs, policies etc.) compiled through a series of technical workshops

Process



The IEA and its partners will organise some expert workshops in key regions to test the draft guide, ensure local relevance and collect regional information. The organisers will define the specific technology focus for each of the regional workshops. Table 1 provides an indicative overview of planned workshops.

| Indicative Timeframe | 29-30 April 2014 | 23-24 July 2014 | 27-28 November 2014 |
|-----------------------------|-----------------------------------|---|--|
| Location | South Africa | Thailand | Brazil |
| Geographic scope | Southern Africa | South East Asia | South America |
| Indicative focus | Biomass waste to energy Biogas | Sustainability of biomass supply, including regional markets and infrastructure | Biofuels (sharing experiences on conventional and advanced biofuels) |

Table 1: indicative overview of workshops planned in the framework of the How2Guide for Bioenergy.