

# **ETP division - Industry activities**

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### Outline of industry-related activities

### **Energy modelling:**

ETP Industry model conversion process

### **Analysis:**

- Energy Technology Perspectives
- Tracking Clean Energy Progress
- Industrial Low-Carbon Technology Roadmaps

### **Collaboration:**

IEA Energy Technology Network

# **Current ETP Industry modelling** framework

www.iea.ora



- Material production and demand intensity projections
- Excel platform

**ENERGY TECHNOLOGY** AND CO2 **EMISSIONS MODELLING** 

- Technology portfolio characterisation / stock turnover
- Energy use and CO<sub>2</sub> emissions calculation

TIMES platform (Iron&Steel and Cement) - OPTIMISATION

Excel platform (Chemicals, Pulp&Paper, Aluminium) - SIMULATION



4DS

2DS

Least-cost technology pathway to meet emission reduction target for each scenario



# **ETP Industry modelling 2015 schedule**

www.iea.org

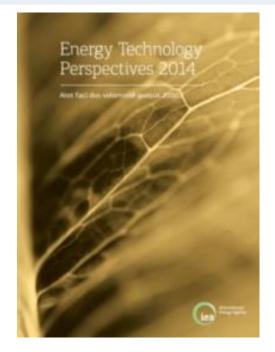
Q4 - 2014	H1 - 2015	Q3-2015	Q4 - 2015
✓ Completion of additional runs of Iron&Steel and Cement TIMES models	<ul> <li>✓ New Chemicals and Aluminium TIMES models development</li> <li>✓ Expert review of material production projections (all sectors) and input technoeconomic parameters (converted sectors)</li> </ul>	<ul> <li>✓ July-August:         <ul> <li>Input 2013</li> <li>baseline data and overall Industry model 1st run</li> </ul> </li> <li>✓ Sept: expert review of preliminary model results</li> </ul>	✓ Completion of additional runs of Industry model



### **Energy Technology Perspectives project**

www.iea.org

ETP project	2014	2015	2016
Part I – Global Energy Perspective	Global Outlook	Global Outlook	Global Outlook
Part II - Driving the Change (Thematic focus)	Harnessing electricity's potential	Innovating a new climate deal	Urban energy systems



#### ETP 2014:

✓ Global Outlook Industry section – global ETP scenarios results

#### ETP 2015:

- ✓ Specific Industry chapter: Driving sustainable industrial innovation
- ✓ Role of sustainable industrial innovation in 2DS
- Explore drivers and challenges for industrial innovation



# **Tracking Clean Energy Progress**

www.iea.org

TCEP project	2014	2015	2016 (tentative)
Industry sections	<ul><li>✓ Overall Industry</li><li>✓ Iron &amp; Steel</li><li>✓ Chemicals &amp; Petrochemicals</li></ul>	<ul><li>✓ Overall Industry</li><li>✓ Iron &amp; Steel</li><li>✓ Cement</li></ul>	<ul><li>✓ Overall Industry</li><li>✓ Chemicals &amp;</li><li>Petrochemicals</li><li>✓ Aluminium</li></ul>



#### Up to now:

✓ Monitoring energy savings technical potential by implementing Best Available Technologies Goal for future editions:

- ✓ Aiming at tracking energy efficiency (EE) and low-carbon technologies implementation indicators
- ✓ Significant data availability limitations to overcome

Available at

http://www.iea.org/publications/freepublications/publication/Tracking\_clean\_energy\_progress\_2014.pdf



# **Low-Carbon Technology Roadmaps**

# Industry link

www.iea.org

Roadmap projects	2013	2015	2016
	<ul><li>✓ India Cement</li><li>✓ Chemical catalysis</li><li>✓ CCS</li></ul>	✓ Hydrogen	✓ Brazil Cement



Technology Roadmap

Technology Roadmap

nerty and GHG Reductions in the

### <u>Hydrogen</u>:

- ✓ Main demand sectorial focus: Transport
- ✓ Brief industry analysis on hydrogen use in iron
   & steel sector and chemicals & petrochemicals

#### **Brazil cement:**

- ✓ Kick-off meeting Sept 2014
- ✓ Collaboration among SNIC/ABCP, WBCSD-CSI and IEA
- ✓ IEA modelling framework

Available at http://www.iea.org/roadmaps/



### **IEA Energy Technology Network**

www.iea.org

### **Industry Coordination Group**

#### **EUWP:**

- ✓ Industrial Energy Technologies and Systems
- ✓ Efficient Electrical Equipment
- ✓ Energy Storage
- ✓ Heat Pumping Technologies
- ✓ Reductions through Combustion

#### **REWP:**

- ✓ Hydrogen
- ✓ Bio-energy
- ✓ Solar Heating and Cooling

#### WPFF:

- ✓ Green House Gases
- ✓ Fluidized Bed Conversion
- √Gas and Oil technologies
- ✓ Clean Coal Center

#### **EEWP**

✓ Secretariat and Cabinet representatives

<u>WHAT?</u> Industry related analysis/information sharing, identify synergies/ gaps, and explore collaboration options.

WHEN? Kick-off webinar March 2014, first topical webinar aimed for Dec 2014 on industrial waste heat recovery



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