

INTEGRATED **SET PLAN**

SET Plan Action 6 NETWORKING EVENT

Cooperation and Funding on Energy Efficiency in Industry

4 December 2019,

Thon Hotel EU, Brussels



SET Plan Action 6 NETWORKING EVENT

The Integrated Strategic Energy Technologies (SET) Plan Action 6 focuses on "making EU industry less energy and resources intensive, more carbon-neutral and competitive".

The SET Plan aims at accelerating the energy system transformation through coordinated or joint investments between European countries, private stakeholders (research and industry) and the European Commission.

To achieve this an implementation plan¹ was endorsed in September 2017, which defines four priority areas with high potential: Steel, Chemicals, Heat and Cold and System integration.

An Implementation Working Group (IWG6), consisting of 20 countries², the Commission and stakeholders, was set up to further develop the R&I activities and share information on programme portfolios, projects, cooperation and opportunities and is guided since 2019 by a Secretariat³.

Objectives

This networking event focuses on cooperation and finance for improved energy efficiency in industry, and specifically in steel production, chemicals, heat and cold technologies and system integration.

Building on the workshop of June 2018, the event aims to give a boost to theimplementation plan of SET Plan Action 6 through:

Cooperation:

- Enabling dialogue between European countries and the industry and research, and also with the European Commission
- Enabling project ideas to mature and get implemented

Finance:

- Providing information on European and national financial instruments
- Providing one on one advise on financial opportunities

^{1 &}lt;a href="https://setis.ec.europa.eu/system/files/set_plan_ee_in_industry_implementation_plan.pdf">https://setis.ec.europa.eu/system/files/set_plan_ee_in_industry_implementation_plan.pdf

^{2 20} countries are members of the SET Plan Action 6 Temporary Working Group: Austria, Belgium, Cyprus, Czech Republic, Finland, France, Germany, Ireland, Italy, Latvia, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

³ The SET Plan Action 6 Secretariat is run by Ecorys, Ricardo and CEPS.

Why should you attend

Both the public and private sector

You will get an overview of the stakeholder needs for R&I activities done by the secretariat.

You will hear about possibilities for combining financial opportunities.

Industry and research stakeholders

During the day you can meet a financial advisor on the available funds in 21 countries in Europe. As the sessions will be one on one you can discuss in private your project idea.

You will learn and share about practicalities around financing projects.

Public sector (mostly ministries and national funding agencies)

You will hear about financing programme opportunities in other countries. You will be able to meet other national funding agencies and ministries.

The morning session will be about sharing needs, developments and opportunities.

The afternoon session will consist of living labs where hypothetical project ideas will be discussed to see what is needed to realise them. There will also be individual consultation on project ideas and financing possibilities. These are meant as informal meetings.

9.00-10.00

Registration

9.00-10.00 13.00-14.00 17.00-18.00

Consultations on financing in 20 countries & EU funds

The SET Plan Action 6 Secretariat made an inventory of the EU and national financing opportunities for energy efficiency in industry in 20 countries. You can talk to experts from the Secretariat who made the inventory and also several funding agencies will be present to inform you on the focus of their programmes. You can also pre-book a max 15 minute consultation in the registration form. SET Plan Action 6 Secretariat and Funding Agencies

10.00-10.30

Opening

Update SET Plan and Action 6,

Timo Ritonummi, Chair of SET Plan Action 6 and Deputy Director General in Energy Department of Ministry of Economic Affairs and Employment, Finland

Priorities of the new Commission: Green Deal and EU industrial policy

Haitze Siemers, Head of unit C2, DG Energy, European Commission

10.30-11.10

Keynote speeches on combining funding

Experiences with implementing the Berlin Model (combined funding from different countries),

Mattias Andersson, Senior Executive Officer, Technical University of Denmark

Trilateral Strategy Innovation Table

Lia Voermans, Strategy Innovation Director, Brightland Chemelot Campus

11.10-11.30

Implementing SET Plan Action 6: Needs and demands from stakeholders

Insight in needs and demands from stakeholders: results from the survey Eugenia Bonifazi, Principal Consultant, Ricardo, SET Plan Action 6 Secretariat

11.30-13.00

Implementing SET Plan Action 6: Inspiration on finance opportunities for cooperation

Overview of the available funding opportunities of the member countries based on research done

by Chris Nuttall, Senior Consultant, Ricardo, SET Plan Action 6 Secretariat

Innovation Fund: Driving clean innovative technologies towards the market

Roman Doubrava, Deputy Head of Unit C3 Land use and Finance for Innovation, DG for Climate Action, European Commission

EIB support to energy demonstration and low-carbon industry projects

Marc Tonteling, Industry Expert, Advanced Materials Division, EIB

IPCEI possibilities for funding

Jyri Ylkanen, Policy Officer, DG Grow, European Commission

Panel Discussion

Moderated by Jan-Maarten de Vet, Director, Ecorys, SET Plan Action 6 Secretariat:

- · Haitze Siemers, European Commission
- · Duncan Akporiaye, Research Director, SINTEF
- Lia Voermans, Brightland Chemelot Campus
- $\boldsymbol{\cdot}$ Elvira Lutter, Program and Research Manager, Austrian Climate and Energy Fund (tbc)

13.00-14.00

Consultations on financing in 20 countries & EU funds

13.00-14.00

Lunch

14.00-15.30

Living labs: implementation and funding of projects on making EU industry less energy intensive and more competitive systems

In three separate rooms, presentation of a project and discussion in small groups on cooperation and finance related to:

Chemical & steel

Moderated by Jean Theo Ghenda, Director Technologies, EUROFER, with SET Plan Action 6 Secretariat

- · Project SIDERWIN presented by Hervé Lavelaine, Coordinator of the SIDERWIN project, ArcelorMittal
- Thyssenkrupp's transformation strategy towards 2050 by Bianca Prado, Thyssenkrupp Steel Europe AG

Heat & Cold

Moderated by Ugo Simeoni, Research and Innovation Manager, ETN Global, with SET Plan Action 6 Secretariat

- Waste Heat to Power sCO2 cycles presented by Marco Ruggiero, External Funding & Technology Development, Baker Hughes; and Olaf Bernstrauch, Technology and Innovation Manager, Siemens
- Polygeneration system for the small scale industry presented by Maija Mäkinen, Project Manager, Aurelia Turbines

System integration

Moderated by A.Spire, with SET Plan Action 6 Secretariat

· Project presentation to be confirmed

15.30-16.00

Coffee break

16.00-16.40

Concluding on the living labs

Lessons, tips and hints for cooperation and finance on improving energy efficiency in industry

Moderated by moderators of the living labs

16.40-17.15

Moving forward with implementing SET Plan Action 6

How to move forward with the SET Plan Action 6

Moderated by Marie-Jose Zondag, Ecorys, SET Plan Action 6 Secretariat

17.15-17.30

Closure session

Conclusions by

Eric Lecomte, Policy Officer C2 New energy technologies, innovation and clean coal, DG Energy, European Commission

Timo Ritonummi, Chair of SET Plan Action 6 and Deputy Director General in Energy Department of Ministry of Economic Affairs and Employment, Finland

17.00-18.00

Consultations on financing in 20 countries & EU funds

17.30-19.00

Networking & drinks

Four priority areas in SET Plan Action 6

To maximise the impact of R&I initiatives and allow for concrete and coordinated actions, the SET Plan Action 6 Implementation Plan identified four priority areas with high potential. Reflecting the priority areas of the Implementation Plan, four thematic groups (TGs) have been established to support the development of the project ideas: Steel, Chemicals, Heat & Cold and Systems. In addition, a National Representatives Group (NRG) gives the Countries representatives an opportunity to address issues among themselves. The thematic groups met on 10 October 2019 for the first time and will meet again in 2020. Below the scope of each priority area is provided.

The networking event of 4 December will contribute to these priority areas through discussions in three Living Labs in the afternoon.

Priority area Steel

The focus of the SET Plan Action 6 priority area Steel is on the implementation of project ideas relevant to primary steel production. The identified activities in the Implementation Plan under this area include:

- CO2 emission avoidance through direct reduction of iron ore using hydrogen;
- Hisarna smelting reduction process for lowering energy consumption and CO2 emissions of steel production;
- Top Gas Recycling Blast Furnace (TGR-BF) using plasma torch.

Innovation has evolved in the steel sector since the establishment of the Implementation Plan. Hence, while giving priority to the activities included the Implementation Plan, activities structured along the following areas in order to reflect the dynamic aspect of R&D&I are also relevant:

- Smart Carbon Usage through process integration as well as carbon and other by-products capture and usage;
- Carbon Direct Avoidance though direct reduction of iron ore using hydrogen

Priority area Chemicals

The focus of the SET Plan Action 6 priority area Chemicals is on the implementation of project ideas relevant to the Chemical sector. The identified activities in the Implementation Plan under this area include:

- Process and plant (re-)design, and optimisation: intensification and modular approach;
- Separation technologies;
- Electrification, Power-to-X & unconventional energy sources.

In addition, the scope is open to more circularity, e.g. through industrial symbiosis.

Priority area Heat & Cold

Heat and cold recovery technologies are instrumental for intra-plant optimisation and inter-plant integration (industrial symbiosis) to enable cascade use of heat (or cold) between cross-sectoral plants in industrial parks and district heating/cooling networks. The identified activities in the Implementation Plan under this area include:

- New technologies for utilisation of high-temperature waste heat in industrial systems, from the heat production to the delivery and end-use;
- Conversion of low grade heat or cool into higher grade heat or cool;
- Heat recovery (low and high temperature), conversion to mechanical or electrical power;
- Polygeneration (heat, cold, electrical power) and hybrid plants.

Priority area Systems

The last priority area is integrated systems. Four main areas of cross-cutting R&I activities have been identified as having large potential for energy saving due to their applicability in several sectors. Apart from identifying and developing project ideas, this group addresses non-technical barriers/enablers such as funding opportunities, sustainable energy (electricity, hydrogen, heat, cold...) at competitive prices, a market for new low-carbon products and EU legislation preserving global competitiveness. The identified activities in the Implementation Plan under this area include:

- Industrial symbiosis between industries to valorise energy losses streams and better manage energy globally;
- Non-conventional energy sources in the process industry;
- Digitisation: Further integration in process and plant management including plant/process design phase and processing plant retrofit;
- Improving the exchange of technological, economic, behavioural and social knowledge, training, capacity building and dissemination.



The venue

The Networking event of the SET Plan Action 6 will take place at Thon Hotel EU on Wednesday 4 December 2019.

The venue is conveniently located in the European quarter, and within easy reach from the city centre, at

Rue de la Loi 75, 1040 Brussels, Belgium.

How to reach the venue

The venue is conveniently located 1 minute away from Maelbeek metro station and a 10 minutes walk away from the Schuman roundabout.

From Brussels Gare du Midi/Zuid Station

If you are arriving by train (including Eurostar and Thalys), you can either take a taxi from the station to Thon Hotel EU (allow at least 15 minutes), or take the Metro line 2 or 6 to "Arts-Loi" and walk for 7 minutes.

From Brussels-National Airport

Licensed taxis are available outside the Arrivals hall. It takes about 25 minutes (but allow 35-45 minutes during rush hour) and the fare should be around €45-€50.

Airport line: take bus No.12 (or No. 21 after 20:00 or during the weekend) to "Schuman". The bus leaves three times per hour from the bus station on the level below the Arrivals hall. The journey should take around 30 minutes and cost €4,5

The train station is located on Level -1 of the airport, and there are four trains an hour. Take the train to Brussels Central Station (\in 8,9) and follow the instructions indicated below.

From Brussels Central Station

Take Metro line 1 or 5 to "Maelbeek". The journey should take 10 minutes or less and cost €2,1.

