European Commission

Sustainable Process Industry PPP: efficient and smart processes meeting the needs of tomorrow

- **Accelerating innovation and resource efficiency in the European process industry;**
- **Key targets: 30% less energy consumption and 20% fewer raw materials;**
- **Creating knowledge, skills and high-tech jobs;**
- **Increased use of renewable feed-stocks;**
- **Efficient sorting, separation and recovery technologies.**

What is the challenge?

The process industry is traditionally a very energy and resource intensive industrial domain. The European process industry currently suffers from a lack of competitiveness on the world stage since a significant part of raw materials is imported and energy in Europe is expensive. Sitting at the core of many European manufacturing value chains, the industrial sectors involved in SPIRE are vital for the European economy and employment. SPIRE has the ambitious target of rejuvenating the process industry, making it more sustainable (doing more with less) and strongly competitive at the world level –to the benefit of Europe. The initiative will strongly support the achievement of the ambitious targets set in the Europe 2020 strategy.

What is the SPIRE PPP?

SPIRE is a new public-private partnership (PPP) brought to life by the European Commission together with eight sectors of the process industry: chemicals, cement, ceramics, minerals, steel, non-ferrous metals, industrial water and process engineering. The SPIRE association proposes a clear vision for the future of the process industry in Europe, a long term commitment and ambitious targets. SPIRE supports the development of novel technologies for improved resource and energy efficiency in the process industry, making it more sustainable and competitive.

What results and benefits do we expect?

The SPIRE initiative aims to provide significant benefits from an environmental, economic and social point of view. These will be achieved by reducing the energy consumption in the process industry by 30% and by reducing the utilisation of primary (non-renewable) raw materials by 20%, compared with current levels. Moreover, the benefits expected from this initiative go far beyond only environmental aspects. The ambitious targets set by SPIRE will support a shift to a more sustainable and growing European economy.

SPIRE will also contribute to the creation of jobs as the industrial sectors involved in SPIRE represent 20% of the European manufacturing base, with around 450,000 companies providing 6.8 million jobs.

SPIRE will lead to significant progress in clean industrial technologies, and will contribute to wide dissemination of new knowledge and education of researchers

What is the budget?

The total contribution foreseen from the European Union budget is EUR 900 million over the seven year period of Horizon 2020, the EU's research and innovation programme for 2014-2020. A matching contribution will be provided by the private stakeholders of the initiative, which should allow reaching a critical mass able to achieve the ambitious targets set.

How will it be run?

The PPP research and innovation activities will be co-funded under Horizon 2020 and are subject to its rules for participation and dissemination. SPIRE activities will be based on a continual stakeholder dialogue between private and public bodies involved in the initiative. The technological objectives are guided by a 2014-2020 multi-annual roadmap developed by the research and industrial stakeholders and validated in a Europe-wide open consultation process. The European Commission ensures fair, open and transparent implementation through annual calls for proposals and a rapid proposal-to-grant process under Horizon 2020.

Useful links

SPIRE www.spire2030.eu

Factories to go

Imagine the most efficient chemical factory which can be moved when and where it is needed, and once it has finished its job is just moved somewhere else.

F^3 Factory and Copiride are two European research projects for a total budget of EUR 47 million that aim to make this vision a reality. They have developed a new "chemistry in a container" approach which provides faster, cleaner and more flexible production methods.

The projects demonstrated that a variety of chemical processes can be conveniently carried out in small mobile container factories (e.g. a chemical plant embedded in a 3 m x 12 m container) with a reduced energy consumption of up to 30% and a total environmental footprint reduction up to 50%. Used in this way, containers could drastically reduce logistical issues and ease seasonal production, providing benefits for local employment. Then, once the job is over, they would just go somewhere else.

F^3 Factory: www.f3factory.com
Copiride: www.copiride.eu/