**CE-SPIRE-02-2018: Processing of material feedstock using non-conventional energy sources (IA)**

… non-conventional energy sources, such as microwave, plasma, ultrasound and laser, as well as electrochemical and photochemical processes …

Scope: Proposals are expected to develop technologies applying non-conventional energy sources to processes of high industrial interest.

**CE-SPIRE-03-2018: Energy and resource flexibility in highly energy intensive industries (IA 50%)**

Scope: Solutions are needed for value chain optimisation through energy efficiency considerations in the design phase of manufacturing equipment and processes, collective demand side strategies, and potential integration of the nearby renewable energy sources.

**CE-SPIRE-10-2018: Efficient recycling processes for plastic containing materials (IA)**

Scope: Proposals submitted under this topic are expected to cover processes for the production of recyclable materials containing plastics.

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| **3.1. SUSTAINABLE PROCESS INDUSTRY (SPIRE)** | **Opening** | **Deadline** |
| 1. CE-SPIRE-01-2020: Industrial symbiosis (IA) |  | 2020 |
| 1. CE-SPIRE-02-2018: Processing of material feedstock using **non-conventional energy sources** (IA) | 31.10.2017 | 22.02.2018 |
| 1. CE-SPIRE-03-2018: **Energy and resource flexibility** in highly energy intensive industries (IA 50%) | 31.10.2017 | 22.02.2018 |
| 1. CE-SPIRE-04-2019: Efficient integrated downstream processes (IA) | 16.10.2018 | 21.02.2019 |
| 1. CE-SPIRE-05-2019: Adaptation to variable feedstock through retrofitting (IA 50%) | 16.10.2018 | 21.02.2019 |
| 1. DT-SPIRE-06-2019: Digital technologies for improved performance in cognitive production plants (IA) | 16.10.2018 | 21.02.2019 |
| 1. CE-SPIRE-07-2020: Recovery of industrial water, thermal energy and substances contained therein (IA) |  | 2020 |
| 1. CE-SPIRE-08-2020: Improved Industrial Processing using novel high-temperature resistant materials (RIA) |  | 2020 |
| 1. CE-SPIRE-09-2020: Making the most of mineral waste, by-products and recycled material as feed for high volume production (IA) |  | 2020 |
| 1. CE-SPIRE-10-2018: Efficient **recycling processes for plastic** containing materials (IA) | 31.10.2017 | 22.02.2018 |

