

**Programme:** EU-HORIZON 2020 Societal challenges - Secure, Clean and Efficient Energy - 2014-2020

**Call:**

LC-SC3-NZE-4-2019

**Topic/s:**

With a growing share of energy produced from renewable resources (RES), fossil fuel power plants will have to increasingly shift their role from providing base-load power to providing fluctuating back-up power (i.e. ramping up and down) in order to control and stabilise the grid. These strong fluctuations result not only in increased wear-and-tear, but (more importantly) also in a lower efficiency and hence higher greenhouse gas emissions per unit of produced electricity. Severe ramping up and down can be limited through load-levelling i.e. storing power during periods of light loading on the system and delivering it during periods of high demand.

Validation and pilot demonstration of the integration of energy storage and/or use of excess energy (including via power-to-X-to-power in fossil fuel power plants and showing that EU emission limits for such installations can not only still be met, but that emissions of air pollutants can even be reduced. This could include the enabling of the combustion system to deal with synthetic fuels and/or hydrogen enriched fuels, as well as a better integration of combined production of heat and power into the overall system.

Proposals are expected to bring technologies to TRL 6-7 (please see part G of the General Annexes). Technology development has to be complemented by activities to create awareness, gain feedback on societal impact and advancing society's readiness for the proposed solutions.

The Commission considers that proposals requesting a contribution from the EU in the range of EUR 6 to 10 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

**AG1 priority fields:** Energy

**Call Budget:** 20000000,00€

Co-funding type:

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**Opening date:** 07 May 2019

**Deadline date:** 27 Aug 2019

**Call presentation and documents:** <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunit...>