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Project Name| **eLITHE - Electrification of ceramic industries high temperature heating equipment**

Coordinator| Centro De Investigacion De Recursos Y Consumos Energeticos (CIRCE)

Remaining consortium | Instituto de Cerámica y Vidrio - Agencia Estatal Consejo Superior De Investigaciones Científicas (ICV), Ethniko Kentro Erevnas Kai Technologikis Anaptyxis (CERTH), Institut für Ziegelforschung Essen e.V (IZF), Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek Tno (TNO), Kungliga Tekniska Hoegskolan (KTH), Universita Degli Studi Di Genova (UNIGE), Glass Service a.s., Plustherm Point AG, INNCEINNMAT SL, RECOM Services GmbH, Refractory Solutions Insertec SL (RSI), Torrecid SA, Mytilinaios Anonimi Etaireia, ETRA Investigación y Desarrollo S.A, SGS Portugal, Energy Efficiency in Industrial Processes ASBL (EEIP) and Fondazione Icons.

Total requested funding | € 13 895 767.2

Start date | 1 January 2024

End date | 31 December 2028

Project duration | 48 months

Project Summary | eLITHE aims to support decarbonisation of the ceramic industry through the demonstration of sustainable and cost-effective Pathways to electrify high temperature thermal processes (i.e. melting, calcination and firing). This is crucial for the EU to achieve its 2050 target of climate neutrality as energy-intensive industries (EIIs) are responsible for a large portion of greenhouse gas emissions. eLITHE will demonstrate three different electric furnaces (a frit smelter based electrodes and induction, a microwave-powered alumina calciner and a hybrid brick firing tunnel kiln for combined use of electricity and hydrogen burning) at three pilot sites. Besides, eLITHE will develop novel material compositions compatible with the electric heating, research circular materials for their use high temperature energy storage applications and create digital tools to enhance process energy management and enable a safe and sustainable operation. The project consortium consists of 18 partners from 9 EU countries, with diversified expertise and knowledge in the addressed processes. The project will have a significant impact on the clean energy transition of EIIs and will lead to a reduction of over 97,000 tons of CO2 per year and over 505 GWh/yr of natural gas use for a full-scale unit replaced, contributing

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to reducing EU dependence on fossil-fuels imports. In addition to the direct impact on the clean energy transition of the ceramic industry, eLITHE will also have broader societal and economic impacts. The project will contribute to the development of a sustainable and circular economy, supporting the creation of green jobs and improving the competitiveness of European industries. The project's focus on electrification technologies and renewable energy integration will also contribute to the development of a more resilient and secure energy system for the EU, reducing its dependence on imported fossil fuels.

Project website and social media |

https://elithe.eu/

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No. 101138325.

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