GENERAL TOPIC

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2024-d3-01-10?tenders=false&callIdentifier=HORIZON-CL5-2024-D3-01&pageNumber=2>

And this are the calls:

|  |  |  |
| --- | --- | --- |
| **Next generation of renewable energy technologies HORIZON-CL5-2024-D3-01-10** | <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl5-2024-d3-01-10?tenders=false&callIdentifier=HORIZON-CL5-2024-D3-01&pageSize=25> | **CONCEPT NOTE:**  The project aims to study :   * **High-Temperature Hydrogen Cells** (this implies also electrolyzers and fuel cells) - Traditional fuel cells operate at lower temperatures, which limit their efficiency. High-temperature hydrogen cells can not only produce electrical current but also generate hot water. This dual output can optimize energy use, especially in residential and industrial settings. * **Versatile Batteries -** Integrating battery storage with hydrogen systems can smooth out energy supply, storing excess energy produced and releasing it when demand peaks. * **Dual-Fuel Hydrogen Cells -** There's a growing interest in hydrogen cells that can operate on both natural gas and hydrogen. Such dual-fuel systems can act as a bridge – utilizing the existing natural gas infrastructure while the world transitions to a hydrogen-based economy.   Objective of the Horizon Project  To accelerate the development, integration, and commercialization of next-generation renewable energy technologies with a focus on hydrogen. The project will:   * **Foster research** on improving the efficiency and cost-effectiveness of electrolyzers. * **Enhance the design of high-temperature hydrogen cells** for optimized energy and hot water production. * **Explore the potential of dual-fuel hydrogen cells**, leveraging existing natural gas infrastructure. * **Integrate advanced battery systems with hydrogen solutions** for superior energy storage and grid stability.   Expected Outcomes   * **Development of scalable and efficient hydrogen** production methods. * **Integration of high-temperature hydrogen cells** into residential and industrial settings. * **Increased adoption of dual-fuel hydrogen cell**s, facilitating a smoother transition to a hydrogen economy. * **Strengthened grid resilience and reduced energy wastage** through advanced energy storage solutions.   **NEED PARTNERS TYPES**   1. Research Institutions & Universities 2. Technology & Equipment Manufacturers for - **Electrolyze Manufacturers** - For scalable and efficient hydrogen production; **Fuel Cell Producers** - Ensuring optimized fuel cells suitable for various applications; **Battery Producers -** For advanced energy storage solutions. 3. Energy Companies - **Renewable Energy Producers**: Integration of hydrogen production with renewable sources like wind, solar, and hydro.; **Natural Gas Providers -** For dual-fuel hydrogen cell developments and leveraging existing infrastructure; 4. Infrastructure Developers & Engineers 5. Government and Regulatory Bodie 6. Financial Institutions & Investors 7. Environmental Organizations 8. Industrial End-Users 9. Systems Integrators 10. Supply Chain Partners 11. Media and Communication Partners & International Organizations and Forums 12. Software & Data Analytics Companies |