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:

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| **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 ProjectTo 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
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