Dr Ahmed I. Osman

UK Research Partner for Horizon Europe 2027

Industrial Decarbonisation | Hydrogen | CCUS/CDR | Circular Materials | LCA/TEA | Scale-up

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Seeking strong, preferably industry-led Horizon Europe 2027 consortia where I can lead a defined work package or task covering sustainability, carbon performance, techno-economics, circularity or energy-system integration. I bring applied R&D, pilot-scale translation, industrial collaboration, standards experience and evidence-to-decision capability.

WORK PACKAGES / TASKS I CAN LEAD

- **LCA & whole-life carbon —** goal/scope, inventories, functional units, system boundaries, GHG intensity, avoided-burden and carbon-removal claims.
- **TEA & deployment economics —** CAPEX/OPEX, utilisation, sensitivity/uncertainty, cost-performance trade-offs and investment-readiness evidence.
- **Hydrogen & clean-fuel systems —** production, storage, conditioning, infrastructure, renewable methanol/e-fuels and whole-system integration.
- **CCUS/CDR & circular carbon —** capture/utilisation/removal pathways, biochar, MRV, permanence and carbon-cycle management.
- **Circularity & materials —** industrial side streams, waste valorisation, biochar and low-carbon construction materials, resource-efficiency metrics.
- **TRL, scale-up & validation —** technology benchmarking, pilot-to-demonstration planning, technical risk, standards/certification and implementation pathways.

RELEVANT DELIVERY EVIDENCE

- **€9.4m EU Interreg Bryden Centre —** led the biochar/circular-carbon workstream, integrating applied R&D, pilot capability, industry engagement, datasets and knowledge exchange.
- **£400k renewable methanol programme —** conceived and led a UK-Oman project on methanol as an energy-storage vector for renewable-energy systems.
- **Hydrogen infrastructure consultancy —** system-level LCA/TEA covering production, compression, storage, distribution, GHG intensity, CAPEX/OPEX and utilisation.
- **Belfast-Liverpool Green Corridor —** developed an e-methanol pathway ranked 1st among 33 concepts by industrial partners for feasibility and delivery.
- **Standards & assurance —** ISO/BSI carbon-footprint work, methane standards, technical evaluation and evidence-quality review.
- **Research depth —** 227 peer-reviewed papers, h-index 92, 35,289 citations across hydrogen, CCUS/CDR, circular economy, catalysis, materials and sustainability.

PRIORITY HORIZON EUROPE COLLABORATION AREAS

Energy-intensive industries	**Industrial decarbonisation**	**Hydrogen & e-fuels**	**CCUS / CDR**	**Circular economy**
Advanced materials	**Low-carbon construction**	**Bioeconomy**	**Energy storage**	**LCA / TEA / MRV**

PARTNERS / CONSORTIA SOUGHT

Industrial coordinators, energy-intensive manufacturers, hydrogen/CCUS technology providers, process-engineering companies, RTOs, SMEs, construction-material manufacturers and demonstration-site owners preparing 2027 Horizon Europe proposals. Best fit: consortia with an industrial demonstrator already in place and a need for a UK university partner to own sustainability, LCA/TEA, carbon-performance, circularity or system-integration activities.