

# CALL/TOPIC -Horizon / EUREKA Projects



## Proposed Approach & Experience

PCM Products Ltd is a UK based company actively involved in many aspects of the HVAC&R industry. We are committed to providing alternatives and improvements to current built environment, commercial and industrial HVAC&R technologies by offering more energy efficient and environmentally acceptable solutions. Among our areas of expertise are:

- Thermal Energy Storage (PCM and ice-based applications)
- Solar heating & cooling applications
- Temperature controlled Transport / Logistic
- Cold storage
- Food & Beverage Chilling
- Process Cooling / Heating
- Commercial & Industrial Refrigeration
- Air Conditioning
- Design and Application Consultancy

## Organisational Capabilities

For more than three decades we have been involved in the development of Phase Change Materials (PCMs). With unrivalled experience in designing and advising on PCM installations and applications, we continue to push the boundaries in PCM usage for the benefit of our ever-growing customer base.

From initial concept, research and development to production and distribution, our office and manufacturing facility in the UK and our Licensed outlets around the world offer bespoke products to meet unique customer requirements.

## Partners

We would like to meet anyone involved in any of the above applications & technologies. Our activities are involved in both the installation of our products and would love to be a partner for any academic institution, consultant / contractor involved in HVAC & R technologies planning to apply any of the Horizon funding and looking for a SME partner.

For the last three decades we have taken part more than dozen PF7 / Horizon funded R&D projects and we have three Horizon project at present and fully familiar with the Horizon funding system.

## Administrative Information

**PCM Products Ltd.**

[www.pcmproducts.net](http://www.pcmproducts.net)

Contact : Zafer URE

[z.ure@pcmproducts.net](mailto:z.ure@pcmproducts.net)

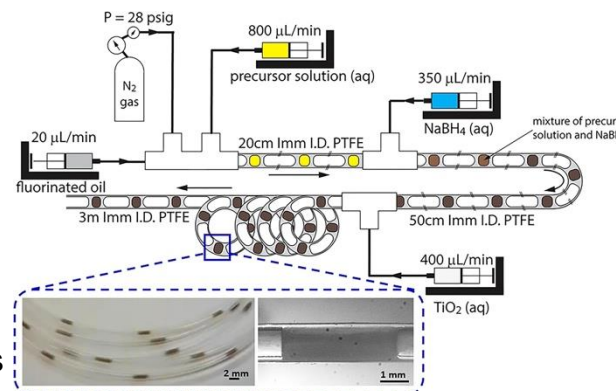
[Tel:+44-\(0\)1733243400](tel:+44-(0)1733243400)

UNITED KINGDOM

**PIC 985884333**

### Proposed Approach & Experience

- **Goal:** innovating bimetallic nanocatalysts composed of earth-abundant elements, leveraging Sabatier principle to achieve low-temperature efficiency comparable to current Ru-based catalysts.
- **Synthesis approach:** sol immobilisation in flow using triphasic milli-fluidic reactors.
- **How:** accelerated discovery using model-based design of experiments and machine learning.
- Expertise in computer-aided materials & process engineering, spanning molecular to macroscopic scales, and embracing both data-driven and mechanistic techniques, with a mix of academic and industrial experience.



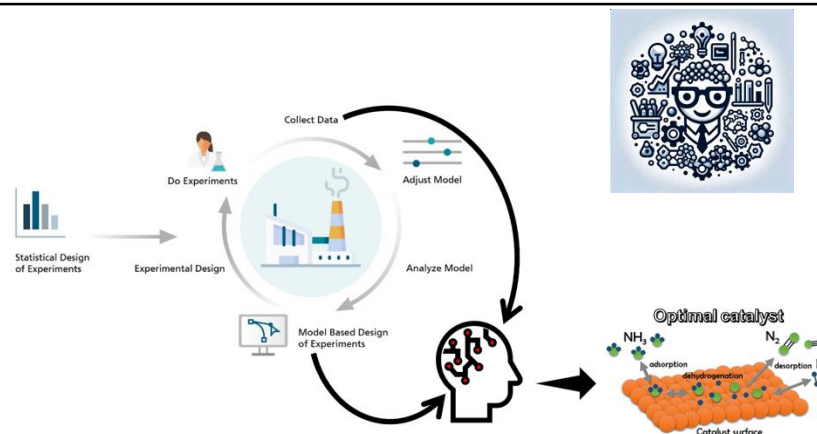
Wong et al. (2022). Chem. Eng. J., 430, 132778.

### Partners and potential opportunities

- Looking for both academic and industrial partners with interest in one or more aspect of the proposed project.
- Open to other relevant collaboration opportunities aligned with our expertise.
- Project scope—green economic catalysts for energy applications—can readily be extended to systems that share similar challenges, such as Fischer-Tropsch synthesis and CO<sub>2</sub> conversion, among others.
- Sol immobilisation in triphasic milli-fluidic flow reactors is generally applicable to heterogeneous catalyst syntheses, offering closely-controlled, large-scale, and reproducible production.
- Computer-aided catalyst design and optimisation tools are broadly applicable to practically any material discovery problem.

### Organisational Capabilities

- Our group (Laboratory of Intelligent Materials & Process Engineering) possess a dedicated in-house high-performance computing server, useful for both molecular simulation and machine learning applications
- We are seeking funding to set up a general-purpose flow reactor for catalyst production and a catalyst testing rig useful for a wide range of gas phase reactions.



### Administrative Information

- We are an academic research team part of the Chemical Engineering group at the School of Engineering.
- Depending on the specific project and target scheme, we are open to being either the coordinator or a partner.

### Contact details:

Dr Reza Andalibi | Lecturer in Chemical Engineering  
Email: [r.andalibi@lancaster.ac.uk](mailto:r.andalibi@lancaster.ac.uk)  
Phone: +44 (0)73 0554 1866  
Lancaster University, United Kingdom  
(PIC 898688705)

# SWIFT: Skills for Wind Innovation and Future Technologies



## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?

What previous, relevant, work or track record can you bring to the team?

SWIFT will address critical skill gaps in the wind energy sector by targeting emerging technologies in the manufacturing of offshore wind components and fostering innovation through collaboration with research institutions, industry leaders, and SMEs. The program aims to build a sustainable workforce equipped with future-oriented skills in digitalisation, automation and advanced manufacturing. SWIFT will create a holistic and impactful training ecosystem by partnering with universities, research institutions, industry players, and vocational training providers across Europe. The program is aligned with the EU Green Deal, contributing to the goal of achieving net-zero emissions by 2050.

I have a crucial role within the Scottish Offshore Wind Energy Council (SOWEC) new Education and Skills Group. I am also co-leading the wind skills programme for the High Value Manufacturing Catapult (HVMC) in the UK, driving forward innovation in this critical sector.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

The Manufacturing Skills Academy (MSA) of the National Manufacturing Institute Scotland (NMIS) is dedicated to transforming the workforce of today and tomorrow by supporting employers in addressing skills gaps and developing innovative approaches that enhance existing provisions across Scottish organisations. We offer advanced manufacturing awareness, training, and development opportunities for individuals at all levels, while also anticipating future skills needs, providing access to necessary equipment and training, and the Pre-Approved Talent Scheme (PATS). We encourage careers in manufacturing by showcasing a clean, high-tech industry that is accessible to everyone. We have features state-of-the-art learning environments, a comprehensive portfolio of training programs (Over 1900 people upskilled and reskilled through online and in-person, theoretical and practical training), a well-established Doctoral Centre that has funded over 140 PhDs, Knowledge Transfer Partnership (KTP) support, and paid internships. Over 80 graduate trainees have been offered placements in Scottish manufacturing organisations. 17 internships were offered last year with around 30% female and 6 in industry. This year 38 internships took place with 9 supported by industry.

## Partners

If you are looking for partners, what type of partners are you looking for?

- Industry partners including SMEs
- Research organisations
- Vocational training and skills delivery bodies

## Administrative Information

Is your organisation academic, SME, big business, etc.:

### Research and Technology Organisation (RTO)

Are you planning on being the Coordinator or a Partner? **Both**

Your contact details including:

Name, email and phone number: **Dr Abdul Ahmad**,  
[abdul.o.ahmad@strath.ac.uk](mailto:abdul.o.ahmad@strath.ac.uk), **07825658856**

What country are you from: **UK**

[Participant Identification Code \(PIC\)](#): **883187814**

### Proposed Approach

- **CSE's work** – tackling the dual challenges of cutting carbon emissions and helping those struggling with their energy needs.
- Flexible, transparent and cross-disciplinary approach supporting national and local net zero planning and delivery in the context of a just energy transition.
- Integrated approach across demand reduction, heat and power decarbonisation, community engagement, consumer advice and policy development support to achieve optimum outcomes.

### Experience

- Experience of coordinator and partner roles in FP7/EU Horizon 2020 projects.
- Extensive track record during CSE's 45-year history of working with public and private sector orgs supported by diverse funding sources.
- Large portfolio of impactful projects around the uptake of renewables, tackling fuel poverty and exploring local impacts and public perception of heat decarbonisation measures.

### Organisational Capabilities

- Complementary skills around technical analysis, software & modelling, research methods and community engagement techniques.
- Sophisticated building heat decarbonisation modelling capabilities including heat network planning and renewable energy resource assessment.
- Robust data analysis, GIS mapping and tool development skills.
- Deep understanding of low carbon housing retrofit using a people-centred approach
- CSE is an Independent Research Organisation (IRO) with highly developed social research and evaluation skills.

### Example projects

(visit [www.cse.org.uk](http://www.cse.org.uk)):

#### Energy modelling and tools

- *Solar Wizard*
- *THERMOS*
- *Impact (Community Carbon Footprint)*
- *Heat network zoning model*

#### Community energy and local leadership

- *Future Energy Landscapes*
- *Next Generation Community Energy*
- *Community-led Retrofit*
- *Aurora*

#### Smart energy system, flexibility and energy justice

- *Smart and Fair*
- *Energy Choices Tool*
- *Crowd Flex*
- *Demand Flexibility evaluation*

### Partners

We are looking to partner with organisations seeking innovative solutions to the climate emergency through collaboration and ambitious-thinking.

CSE particularly interested in the following calls from the topics being discussed at today's webinar:

- HORIZON-CL5-2024-D4-02-05 - *Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts (Built4People Partnership)*
- HORIZON-CL5-2024-D3-02-10 - *Market Uptake Measures of renewable energy systems.*

### Administrative Information

Jennifer Mitchell  
Senior Development Manager  
[jennifer.mitchell@cse.org.uk](mailto:jennifer.mitchell@cse.org.uk)

Centre for Sustainable Energy  
[www.cse.org.uk](http://www.cse.org.uk)

CSE is a not-for-profit SME based in Bristol, UK  
PIC: 999790641

### **Proposed Approach & Experience**

What is your understanding of the part of the problem/challenge you can solve?  
What previous, relevant, work or track record can you bring to the team?

**Experience team of chemists, chemical engineers, biologists, biochemists and business developers who have taken numerous biorefinery, bioenergy and bio-based products from lab scale to larger scale. We have previously participated in 4 Eu projects including being work package leader - two projects involved transfer to kilo scale and transfer to continuous processing. Our team have designed, built and operated bespoke pilot plant equipment for thermochemical processing and used existing plant for chemical and bioprocessing (enzyme processing and fermentation). Associated downstream purification has been developed and trialled at multi kilo scale. Experience of developing bespoke demonstrator (1 T) plant as part of IUK funded work on protein isolation.**

### **Organisational Capabilities**

What skills, capabilities, facilities does your organisation have that will be vital for this project?

**Pragmatic approach to scale up and problem solving. £10m pilot plant with highly experienced team of technologists to develop, transfer and operate through pilot phase. Experience with wide range of biomass feedstocks including straws, woods and biowaste from EU and non-EU sources plus seaweed and non-biological waste such as hard plastic.**

### **Partners**

If you are looking for partners, what type of partners are you looking for?

**Any projects looking to include bioeconomy or circular economy scale up work including chemical and biological processing plus associated downstream processing.**

### **Administrative Information**

Is your organisation academic, SME, big business, etc. **RTO**  
Are you planning on being the Coordinator or a Partner?

### **Partner**

Your contact details including: **Mark Gronnow**,  
[mark.gronnow@york.ac.uk](mailto:mark.gronnow@york.ac.uk) +44 (0)7508016358

What country are you from **United Kingdom**

[Participant Identification Code \(PIC\)](#) : 951852174



# Offshore Wind – Kinewell Energy

**Kinewell Energy is a UK-based worldwide company offering state-of-the-art SaaS infrastructure optimisation solutions that support our global transition to a net-zero society.**

**Kinewell Energy has developed three software solutions to optimise the design of offshore wind farms.**



## KLOC

Inter-array cable layout optimisation with support for both fixed bottom and floating offshore wind farms.

- Minimise cable system CAPEX
- Reduce electrical and unavailability losses
- De-risk key decisions such as substation location

[Learn more](#)



## KDOTS

Offshore wind transmission system design with electrical and hydrogen export modelling capabilities.

- Rapidly design feasible export systems
- Framework for robustly handling uncertainty
- Make risk-informed decisions

[Learn more](#)



## KWOTA

Wind turbine layout optimisation balancing wake losses against variations in CAPEX and OPEX.

- Maximise energy yield by reducing wake losses
- Reduce installation costs
- De-risk key decisions such as turbine selection and overplanting

[Learn more](#)

## Collaborate with us

Collaboration is an important driver of innovation, and we look to apply our knowledge, expertise and experience to solve new challenges.

We are keen to explore how we can work together with other companies, organisations and academia.

## Our core competencies



### Engineering expertise

Our highly skilled team have extensive knowledge of renewable energy infrastructure and engineering.



### Optimisation and AI

Our unique optimisation and advanced mathematical methods rapidly deliver higher quality, lower cost project designs.

These frameworks can be generalised and applied to a broad range of optimisation problems.



### UX design

We are experienced in SaaS product creation, including front and back end web-app design with a focus on user experience.

Additionally, we can host your product on the Kinewell Energy platform, decreasing your time to market.

## Contact Details:

Dr Henna Bains, CTO, Kinewell Energy Ltd (SME).



[henna.bains@kinewell.co.uk](mailto:henna.bains@kinewell.co.uk)



+44 (0)191 289 6665



Newcastle Upon Tyne, UK

# E-Flywheel SDI XBattery Design, R&D, and Prototyping (FESS)



## Proposed Approach & Experience

1. I myself, as an Inventor-researcher and as a founder of the AREEETS, the problem challenge and expertise acquired, have to bring on the table, an already solved the stress calculations Two-Boundaries Value Problems and design, mathematical modelling and simulation of the High-Speed, up to 100,000 rpm, of a rotating new flywheel energy storage DEVICE with multiple shapes factors, having the flat rim, called by myself as an E-Flywheel, meaning, Exponential Electrical Energy Compact High-Speed Disk Flywheel using Maple, Matlab and Ansys software.
2. Previous work is to bring to the team is to assemble, the E-Flywheel Device, Power electronics devices, PVs, other and create the an Electro-Mechanical Battery prototype using permanent passive magnet motor and a free-energy Magnets for a non-need of solar PVS source to empower the newbattery, but also applying AI, IoT and Wireless, to obtain AN ELECTRO-MAGNET MECHANICAL BATTERY, COMPACT & DIGITAL, WITH INTELLIGENT & SMART SYSTEM, (In Brief SDI XBATTERY) and Testing.  
(What previous, relevant, work or track record can you bring to the team?)

## Organisational Capabilities

1. From myself, I have all the skills needed, as an Inventor, but also an Idea when at the right time, to make the whole R&D, from devices to different types of batteries, made out of different shape factors of each device, up to different Batteries applications that are to be adapted to different Market-Segment, and AI and IoT applications. but need other professionals and expert to assist to build the physical product and applying AI, IoT and Wireless Communications to obtain a Battery-to-X Infrastructures and Apps, (B2X) SDI X Compact Battery products.  
(What skills, capabilities, facilities, do your organisation have that will be vital for this

## Partners

PARTNERSHIPS NEEDED INDEED FOR A WORLD-QUALITY OF A NEW & INNOVATIVE BATTERY

1. University that teaches, or Understand or that have an Advanced Lab with the FESS, meaning, The Flywheel Energy Storage Systems, and can build along with the AREEETS advising an Advanced Lab for High-Speed Flywheel Energy Storage devices and batteries, since other expertise will be needed, like on new bearings to adopt, and other ultracapacitors, Superconducting Magnets ES, ...
2. Catapult able to understand the concept and build a new Lab adapted to this type of manufacturing works//
3. Funding as well, the R&D and Products development support from Concept to Commercialization.  
(If you are looking for partners, what type of partners are you looking for?)

## Administrative Information

AREEETS MULTI-TECH GROUP UK LTD is a Startup,pre-revenue SME, and I will play the role of the CORDINATOR OF THE PROJECT

### CONTACT DETAILS:

By Michel Nlandu Mbumba (Inventor with an IP from UCT),  
+27682661434, [Nlandummb2@gmail.com](mailto:Nlandummb2@gmail.com),  
Citizen of DR Congo, Live in SOUTH AFRICA  
ORGANIZATION's [Participant Identification Code \(PIC\)](#)-**879522087**

# Navigating Eco-Social Vulnerabilities Through Participatory Design: Uncovering Knowledge and Practical Gaps



Northumbria  
University  
NEWCASTLE

## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?  
What previous, relevant, work or track record can you bring to the team?

Problems we will resolve

- How to actively engage eco-socially vulnerable communities in sustainable transition?
- Can we leverage digital solutions to improve participatory design process?
- How to reduce energy and mobility poverty?

Our strengths are

- Preliminary project outputs with a stakeholder engagement workshop in the UK
- Established networks with collaborators in the Netherlands and Norway
- Team members with a good track record in sustainable cities, green buildings, participatory design, public engagement, etc.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

- Collaboration networks with internal and external stakeholders
- Talent pool
- Great support on research, innovation, and intellectual property
- Access to worldwide research databases
- Access to information exchange platforms and communication tools/software

## Partners

If you are looking for partners, what type of partners are you looking for?

We are looking for the following partners in **Europe (including associated countries)** to join us with an experience working in the areas of **sustainable deep renovate, green buildings/neighbourhood, sustainable cities, participatory design, public engagement, co-creation/co-design, digital solutions for sustainability.**

- **Industry stakeholders** (developers, contractors, technology suppliers, consultants, engineers, planners, architecture, surveyors, etc.)
- **Local councils/Municipalities/Public organisations**
- **NGOs**
- **Academic or research institutions**

## Administrative Information

Is your organisation academic, SME, big business, etc.  
Are you planning on being the Coordinator or a Partner?  
Academic institutions (Coordinator)

Your contact details including:

Dr. Cheng Siew Goh, [cheng.s.goh@northumbria.ac.uk](mailto:cheng.s.goh@northumbria.ac.uk)  
Northumbria University, United Kingdom

Your organisation's [Participant Identification Code \(PIC\)](#) if your organisation has one



# Navigating Eco-Social Vulnerabilities Through Participatory Design: Uncovering Knowledge and Practical Gaps

## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?

What previous, relevant, work or track record can you bring to the team?

- How to engage eco-socially vulnerable communities in sustainable transition?
- Can we leverage digital solutions to improve participatory design process?
- How to reduce energy and mobility poverty?

## Partners

If you are looking for partners, what type of partners are you looking for?

Looking for the following who work in the areas of sustainable deep renovate, green buildings/neighbourhood, sustainable cities, participatory design, public engagement, co-creation/co-design, digital solutions for sustainability.

- Industry stakeholders (developers, contractors, technology suppliers, consultants, engineers, planners, architecture, surveyors, etc.)
- Local councils and municipalities
- NGO

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

- Experienced team working in participatory design, sustainable cities and digital solutions
- Established networks in Netherlands and Norway

## Administrative Information

Is your organisation academic, SME, big business, etc.

Are you planning on being the Coordinator or a Partner?

Your contact details including:

cheng.s.goh@northumbria.ac.uk

Cheng Siew Goh, cheng.s.goh@northumbria.ac.uk

United Kingdom

Your organisation's [Participant Identification Code \(PIC\)](#) if your organisation has one

# Convert waste into SAF

## [H<sub>2</sub>R] Hydrogen Refinery

From 2025, ReFuelEU Aviation mandates 2% synthetic aviation fuel (SAF) blending rising to 50% by 2050



Partners

If you are looking for partners, what type of partners are you looking for?

- Waste
- Aviation fuel

Also operate in :

Marine sector

Fertiliser/Ammonia sector

Administrative Information:

SME

Stephen Voller

CEO

Hydrogen Refinery Ltd

20-22 Wenlock Road, London N1 7GU, UK

[Stephen.voller@h2refinery.co.uk](mailto:Stephen.voller@h2refinery.co.uk)

+44 780 122 6160

PIC: 8855598458

# NEXUS for Energy resilience in rural bioregions

Duncan Brown  
Futurist at [Hitachi Europe R+D](#)  
Trustee at [TCN](#)  
Core member of [ODEC](#)

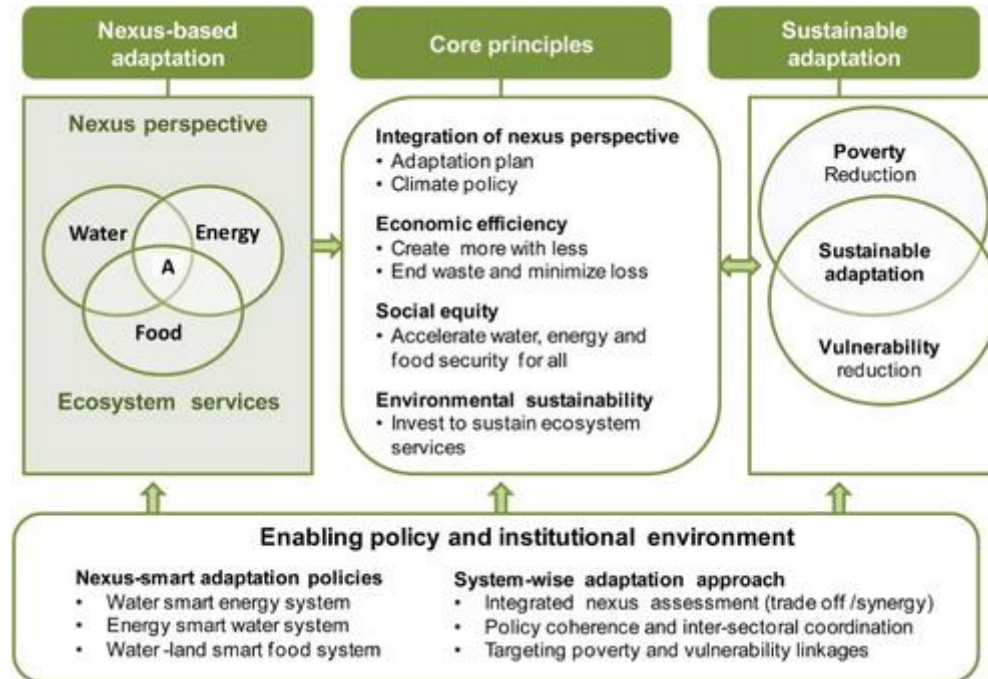


## Proposed Approach

We will apply the NEXUS framework to a UK bioregion to deliver a resilient energy system as part of an integrated approach we will explore economic efficiency of local energy markets.

## Experience

Duncan Brown is currently a design strategist and futurist at Hitachi Europe R+D labs in UK focussed mainly on transition design and localised place-based solutions to society resilience and fairness.



## Partners

We are actively looking for ambitious, future focussed partners.

We will look for partners with national, international and place-based service providers aligned to the NEXUS framework across:

- Water system
- Energy system
- Food system

Given the interrelated nature of the NEXUS approach we will look for a diverse range of partners aligned to the core principles.

## Combined Organisational Capabilities

- **Duncan Brown** brings R+D expertise across community energy and transition design
- **Transition Chipping Norton** is a place-based charity focussed on [transition movement](#)
- **Oxfordshire [Doughnut Economics](#) Collective** is reimagining 21st century economics in Oxfordshire

## Administrative Information

We would establish a new business entity as an SME/CIC to coordinate the delivery of this project.

Contact details:

**Duncan Brown**

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+44 (0)7971589981

UK

Hitachi: [999958645](tel:999958645)



# Nova Innovation – Shetland Tidal Array

HORIZON-CL5-2024-D3-02-04: Critical Technologies for the Future Ocean Energy Farms



## Project Opportunity

- Deliver sector leading marine energy projects at the world's first offshore tidal array:
  - › Operational tidal array, fully consented, highly reliable, grid-connected (with available capacity).
  - › 10+ years of environmental, operational and marine data.
  - › Site features microgrid, including energy storage and EV charger.

## Organisational Capabilities

- Expertise in:
  - › Marine energy technology development, deployment and operation.
  - › Data management and optimisation.
  - › Environmental monitoring.
  - › Device instrumentation and condition monitoring.
  - › Global asset management.

## Partners

- Successful partnerships with:
  - › Blue Chip industrials.
  - › Leading European academic institutions.
  - › Sector leading SMEs.

## Administrative Information

- Nova is a global leader in marine energy looking to partner with academic and industrial partners.
- Contact:
  - › Seumas MacKenzie
  - › +44 131 241 2000
  - › [seumas.mackenzie@novainnovation.com](mailto:seumas.mackenzie@novainnovation.com)
  - › PICs: 895593823 (IE) 938084770 (UK)



[Nova Tidal Short Video](#)

# Industrialisation of sustainable and circular deep renovation workflows (Built4People Partnership)



## **Proposed Approach & Experience**

What is your understanding of the part of the problem/challenge you can solve?  
What previous, relevant, work or track record can you bring to the team?

Solskin is a next-generation all-in-one smart facade solution, elegantly combining dynamic PV energy generation and smart shading, optimizing comfort and energy, hence, combining sustainability with elegant aesthetics and differentiating itself from competing solutions as it presents a holistic approach to climate resilient and sustainable architecture.

Solskin is able to save up to 80% of the energy (cooling heating and artificial lighting) of the room behind the installation.

## **Partners**

If you are looking for partners, what type of partners are you looking for?

- Construction Companies
- Architecture Firms
- Planning Firms

## **Organisational Capabilities**

What skills, capabilities, facilities does your organisation have that will be vital for this project?

With the Solskin Design Suite software at the centre of our envisioned business model, we provide planners with the tool to find an optimal Solskin design for their project and connect them with certified regional installation partners, acting as distributors for the on-site installation of our prefabricated units to the end-customer site.

Ease of integration for installers and planners due to pre-fabrication of the highly modular units, fast installation, lightweight construction, and support by ZSR team or digital planning tools.

## **Administrative Information**

Startup  
Partner  
Matt Taylor  
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+447516597531  
Switzerland





# Climate, Energy and Mobility – CL5



## Proposed Approach & Experience

Industries across the spectrum need to optimise system performance and resource efficiency throughout the entire lifecycle, from design to decommissioning. We aim to optimise cyber-physical systems and digital twins, utilising simulation-based optimisation for energy reduction in various sectors. Our approach involves utilising these models to improve energy efficiency, enhance system performance, and integrate advanced technologies in smart systems.

- Sustainable design and operation
- Cyber-Physical system optimisation
- Data-Driven Performance
- Optimal, adaptable and reversible system design for energy efficiency and sustainability.

## Previous impactful projects:

- THERCOM: Intuitive thermal comfort controller to optimise domestic energy use ([www.thercom.net](http://www.thercom.net))
- SafeXtend: AI-Powered VR Construction Training Environment and Platform ([www.safextend.co.uk](http://www.safextend.co.uk))
- SafeSite: AI-Based Health and Safety Training in Offshore Construction
- QresLoadSIM: Quantum-based simulation and optimisation platform

## Organisational Capabilities

- Team of professionals with PhDs and extensive experience in relevant fields.
- Previous exp led and completed numerous funded projects (Innovate UK, Horizon 2020, British Council and more)
- Established connections within the energy and technology sectors.
- Access to demo sites In the UK and Europe.



Energy | Digital Twin | Simulation | Extended Reality | BIM | Aerial Survey | Artificial Intelligence | Internet of Things

## Partners

We are looking for:

- **Universities and Research Labs** with expertise in optimisation, energy efficiency, and sustainability.
- **Research and Technology Organisations (RTOs)** committed to advancing energy efficiency and sustainability. We are looking for partners who can provide insights, resources, and technical expertise to enhance our research initiatives.
- **Companies** in the energy, technology, and environmental sectors to engage in collaborative research efforts and project coordination.

## Administrative Information

V-LAB is a SME based out of Redcar in the England.

We are planning to be a Partner.

Dr Vishak Dudhee, [vishak@v-lab.uk](mailto:vishak@v-lab.uk), +447554389378

United Kingdom | [www.v-lab.co.uk](http://www.v-lab.co.uk)

Participant Identification Code (PIC): 888451810

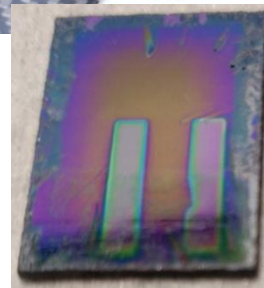
# Spray-cast perovskite solar cells



University of  
Sheffield

## Proposed Approach & Experience

We have a longstanding experience in the development of perovskite solar cells. One particular area is the deposition of materials and devices by spray-coating. We are also working on the deposition of perovskite solar cells onto carbon fibre. Our vision is to create structural materials that can generate energy.



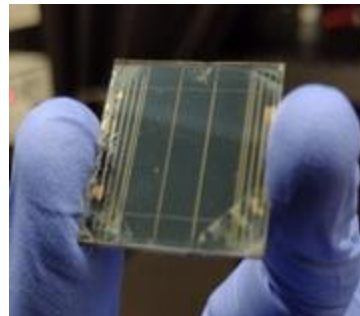
## Partners

Perovskite devices have a very high specific energy ( Watts / Kg) and so would add little in terms of mass, while generating lots of energy. Looking for partners in the utilisation of solar cells in new applications. Particularly interested in aerospace, satellite and automotive.



## Organisational Capabilities

We have a long-standing track-record in 3<sup>rd</sup> generation solar cells (polymer and perovskite). We have advanced processing and evaluation facilities. We work on spray-coating devices and undertake detailed studies on device operation and basic physics.



## Administrative Information

Department of Physics and Astronomy  
University of Sheffield

Prof. David Lidzey  
Electronic and Photonic Molecular Materials Group  
<https://epmm.sites.sheffield.ac.uk>  
[d.g.Lidzey@Sheffield.ac.uk](mailto:d.g.Lidzey@Sheffield.ac.uk)  
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PIC code 999976881

# Development of next generation synthetic renewable fuel technologies (HORIZON-CL5-2024-D3-02-02)



UNIVERSITY OF  
BIRMINGHAM

## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?

We are planning to develop a new zero-gap electrochemical cell technology to reduce carbon dioxide in order to solve the mass transport and ohmic loss problems that the current CO<sub>2</sub>RR suffer. We will develop novel catalyst-coated membranes, an electrochemical cell, and a short stack to produce methanol and formic acid that will be used in fuel cell technology.

What previous, relevant, work or track record can you bring to the team?

We have successfully developed membranes, bipolar plates, electrochemical cells, and stacks that will be actively used in this project. Thus, novel proton conductive fibre-reinforced membranes will be developed, and new CO<sub>2</sub> electrochemical cells and a 4-cell short stack will be manufactured based on our expertise.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

Our group has expertise in fuel cell and water electrolysis technologies. We will develop new technology based on water electrolysis results that we got. Thus, water will be purged into the cell from the anode side to be oxidized into oxygen, protons and electrons on Ir or non-Ir catalysts. The formed protons will move through the polymer electrolyte membrane, while electrons will transfer through the external circuit. The humid carbon dioxide will be introduced into the cathode side and reduced on the novel catalysts using the protons and electrons travelling from the anode side in order to produce HCOOH and CH<sub>3</sub>OH. The products will be tested on the fuel cell devices.

## Partners

If you are looking for partners, what type of partners are you looking for?

**CIIE (Spain)** will develop proton conductive fibres for the composite membrane fabrication.

**C2CAT B.V. (The Netherlands)** will develop catalysts for electrochemical CO<sub>2</sub> reduction.

**GENESINK (France)** will formulate catalyst inks and fabricate catalyst-coated membranes.

**SAATI (Italy)** will develop woven meshes for the reinforced membranes.

## Administrative Information

Is your organisation academic, SME, big business, etc.  
Academic

Are you planning on being the Coordinator or a Partner?  
Coordinator

Your contact details including:

**Name:** Elvin Aliyev

**Email:** e.aliyev@bham.ac.uk

**Phone number:** 07587127560

What country are you from: United Kingdom

Your organisation's [Participant Identification Code \(PIC\)](#) if your organisation has one: 999907526

# Green H<sub>2</sub> & Biogenic CO<sub>2</sub> Utilisation

## Proposed Approach & Experience

### Approach

- Novel biomass electrolysis technology to co-produce **green hydrogen** and **biogenic CO<sub>2</sub>** in separate parts of the reaction, no post-separation or capture required
- Feedstock is abundant **lignocellulosic biomass**
- **Electrochemical** process powered only with renewable electricity
- 50% reduction in energy requirement for green hydrogen, down to **25 kWh/kg**
- Targeting **\$2/kg** green hydrogen and **\$100/tonne** biogenic CO<sub>2</sub>

### Experience

- CTO research at the University of Cambridge on waste-to-hydrogen technologies
- CEO industrial experience developing the UK's largest hydrogen project worth \$800 million while at ExxonMobil
- COO 10+ years startup experience commercialising emerging technologies
- Technology is lab demonstrated and currently building an MVP (1 kgH<sub>2</sub>/day) by the end of the year with paid off-take (TRL 4 to 5)

## Organisational Capabilities

- Team of nine with expertise in hydrogen, electrochemistry, biochemistry, catalysis, and engineering; six with PhDs
- London laboratory facilities with testing rig and analytical equipment
- Birmingham site for MVP and larger engineering testing, with safety systems and hydrogen off-take setup
- Collaborative network of interested biomass producers in the UK

## Partners

SMEs and corporates piloting utilisation cases:

- E-fuels from H<sub>2</sub> and/or CO<sub>2</sub>, including e-SAF, green methanol, and green ammonia
- Bio-ethanol integration
- CO<sub>2</sub> geologic storage or sequestration into building materials

Biomass producers:

- Breweries
- Distilleries
- Paper recycling
- Agriculture waste
- Sugar production

## Administrative Information

Ki Hydrogen Ltd  
UK-based SME  
Coordinator or Partner

Contact information:

- Koji Muto, CEO <[koji@ki-hydrogen.com](mailto:koji@ki-hydrogen.com)>





**HORIZON-CL5-2024-D3-02-09** - Demonstrations of innovative floating wind concepts

**HORIZON-CL5-2024-D3-02-04** - Critical technologies for the future ocean energy farms

## Technology Offer

### SeaStack™

- Direct seawater-to-hydrogen electrolyser for use in marine environments
- Suitable for offshore installation
- Minimal balance of plant
- Small footprint, compact and robust
- NO desalination required

## Looking for partners in

- Offshore Hydrogen Production Pilot Projects
- Offshore Wind Operators
- Ports and Harbours

## Organisational Capabilities

Latent Drive are a small start-up specialising in innovative green hydrogen technologies aimed at **mass production** and **scalability**.

We can offer facilities to provide our SeaStack technology, associated control systems and balance of plant.

Our team combines 40+ years of engineering expertise. We are well-equipped to scale production, drive technology development, and secure key opportunities for our hydrogen technologies.



## Administrative Information

Organisation: SME Partner, United Kingdom

PIC: 878494081

Frazer Ely, [frazer.ely@latentdrive.co.uk](mailto:frazer.ely@latentdrive.co.uk), 07766 752501





### Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?

What previous, relevant, work or track record can you bring to the team?

Windworks created the world's first real-time blade control system for wind turbine blades, empowering accessible and affordable clean energy. This technology uses on-board sensors and our in-house software to actively adjust the orientation of turbine blades in real-time, improving turbine performance, lifetime and electricity costs.

### Partners

If you are looking for partners, what type of partners are you looking for?

Offshore wind developers

Offshore wind test facilities

### Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

Windworks is a spin-off from EPFL University in Switzerland.

We have a partnership with SeaTwirl, global leaders in developing utility scale vertical axis turbines for floating offshore applications.

Our software can help wind turbine manufacturers ensure safe turbine operation, extending turbine lifetime from 15 to 25 years of operation and reducing their cost of electricity by 20 to 55%.

### Administrative Information

Is your organisation academic, SME, big business, etc.

Are you planning on being the Coordinator or a Partner?

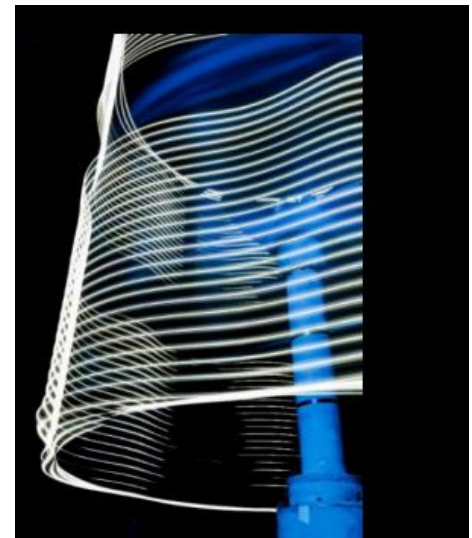
Startup

Partner

Matt Taylor

[matthew.taylor@windworks.ai](mailto:matthew.taylor@windworks.ai)

Switzerland



# Horizon Europe Energy Collaborative R&D Funding



## Proposed Approach & Experience

Nium has developed novel technology for green ammonia synthesis at lower operating conditions vs Haber Bosch. This means we integrate directly with hydrogen generation sources (eg. electrolyzers) removing the need for hydrogen compression/storage and enabling flexible operation with renewable power.

We have a modular, containerised solution which can be easily deployed and scaled.

Our technology will help decarbonise ammonia production and unlock green ammonia as a versatile energy vector.

## Partners

We are interested in partnerships with the following:

- Agricultural Producers / Fertiliser Offtakers
- Ammonia Producers/Offtakers
- Fertiliser Producers
- Renewable Energy Developers
- Green Hydrogen Developers
- Power-To-X Investors

## Organisational Capabilities

Purpose built R&D facilities at Milton Park, Oxfordshire

- Prototype reactors with inline analytical capabilities
- Large scale catalyst production in development on site
- 7 FTE tech team (heterogenous catalysis, physics, solid state chemistry, materials science, microscopy, nanotechnology, chemical and mechanical engineering)
- Pilot plants coming online in 2025

## Administrative Information

Nium is an SME

We are interested in acting as a partner

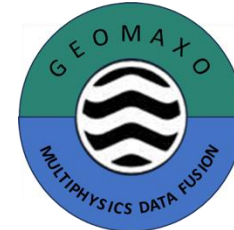
Contact details:

Joe Were - [joe.were@wearenium.com](mailto:joe.were@wearenium.com) - +447851235123

Commercial Director

UK

Nium PIC 877727296



## Cluster 5: REPowerEU – Renewable energy sources and green hydrogen

**Project title:** A source-to-sink approach to natural hydrogen exploration

### Proposed Approach & Experience

Natural hydrogen has the potential to significantly abate CO<sub>2</sub> emissions and mitigate climate-change. However, the deep structural controls on the genesis and distribution of natural hydrogen is not understood making exploration targeting difficult. This proposal is to develop a holistic source-to-sink approach that integrates diverse multidisciplinary (3D multiphysical and soil-gas geochemical) data for increased success in the exploration and development of commercial geologic hydrogen reservoirs in the deep subsurface.

The proposer has won awards in academia and industry, and has a track record of developing and applying innovative workflows and Multiphysics data integration technologies for remotely characterising contaminated land, solid minerals, groundwater and geothermal reservoirs (21.5 years), oil and gas reservoirs (15 years); natural hydrogen exploration and CO<sub>2</sub> storage in the subsurface (4 years) in Europe, Asia, South America and Africa (155+ innovative publications).

### Organisational Capabilities

(i) Robust workflows for cost-effective exploration for natural hydrogen and geothermal energy resources (Meju, M.A. & A.S. Saleh, 2023. Using large-size multi-dimensional marine electromagnetic data for efficient combined investigation of **natural hydrogen** and hydrocarbon gas reservoirs: A geologically-consistent and process-oriented approach with implications for carbon footprint reduction. *Minerals*, **13**, 745. <https://doi.org/10.3390/min13060745>). (ii) Algorithms and software technology for massively parallel modelling and inversion of 3D Multiphysics data. (iii) Algorithms and software technology for multidimensional quantitative integration of physical and chemical data from different measurement platforms. (iv) Well-established collaboration with geophysical equipment pool facilities in Europe and Brazil (Observatorio Nacional –Rio de Janeiro). (v) Past success as project coordinator in EU FP7 programme.

### Partners sought

- (i) Geochemical partners with robust soil-gas measurement systems (able to measure flux) for H<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub> & He. DGT Group, Lancaster University (DGT.com) contacted.
- (ii) Partners with expertise in, and instruments for, deep seismic reflection acquisition, processing and quantitative interpretation.
- (iii) Partners with expertise in, and instruments for, deep electromagnetic data acquisition and processing

### Administrative Information

Geomaxo is a SME with strong university collaborations. Proposal partner.

Contact details : Dr Max A. Meju, [maxmeju@gmail.com](mailto:maxmeju@gmail.com); [maxmeju@geomaxo.com](mailto:maxmeju@geomaxo.com)  
Tel: +44-7845-530644  
Country: UK

# Innovative, Community Integrated PV systems (CL5-2024-D3-02-06)



## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?  
What previous, relevant, work or track record can you bring to the team?

Regulatory support such community integrated PV systems is highly variable. Some facilitate the translation of low electricity generation costs into low end-user pricing, some do not. Business models and socio-technical configurations have evolved accordingly. We need to understand how these interact to ensure that end users, especially those in energy poverty and on low incomes, can benefit from low generation costs.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

Our team has worked on community energy in the UK in different capacities, but mainly academic and practice-oriented, for 15 years which has resulted in numerous collaborations and publications.

## Partners

If you are looking for partners, what type of partners are you looking for?

We are looking for partners involved in business model innovation which facilitates the translation of low electricity generation costs from community integrated PV systems into low end-user pricing, especially from Mediterranean countries. Partners could be academic, SME or government

## Administrative Information

Is your organisation academic, SME, big business, etc.  
Are you planning on being the Coordinator or a Partner?

Your contact details including:  
Colin Nolden, c.nolden@sheffield.ac.uk  
United Kingdom  
999976881

# Built Environment/Energy Cluster calls

## Proposed Approach & Experience

There is a need to work at the boundaries of disciplines to support research: e.g. policy/governance working with technical research of energy/buildings; different actors/disciplines across energy systems utilising same models/assumptions.

The **Urban Energy Research Group (UERG)** is a multi-disciplinary group in areas of building physics, energy modelling, and energy behaviour, including three current Horizon projects: **CrossCERT**, looking to test and validate next-generation Energy Performance Certificates across Europe; **FEDECOM**, identifying methods of increasing renewable energy penetration in local energy systems; and **InterPED**, designing and monitoring Positive Energy Districts. Furthermore, the £20M **Reflex** InnovateUK project explored methods of aligning local renewable supply with energy demand of communities in Orkney. UERG is also part of the UK EPSRC **H+C Zero Network**, focussing on decarbonising heating and cooling.

## Organisational Capabilities

Within Heriot-Watt University's Institute of Sustainable Built Environment, UERG has a long track record of funding in the area of energy and buildings.

The team have experience in building energy modelling, energy system modelling, the role of simulation and modelling within energy policy, and the interaction of behavioural science with energy analyses.

This is also supported by the iNetZ+ Institute, a cross-university initiative looking to respond to the challenges of Net Zero. This institute has research support, commercialisation, and dissemination facilities to utilise.

## Partners

Interested in:

- Role of building **Energy Performance Certificates** in supporting zero carbon policy and linking modelling expertise with implementation of the **Energy Performance of Buildings Directive** (looking for academic partners, energy agencies, municipalities, practitioners/consultants)
- Partners looking to enhance understanding of relationship between **energy supply and demand in community energy projects**

## Administrative Information

Academic organisation, looking to partner a bid

Contact details:

Prof David Jenkins, Heriot-Watt University, Scotland, UK  
[D.P.Jenkins@hw.ac.uk](mailto:D.P.Jenkins@hw.ac.uk)

PIC: 999853400



## Rapid Fit External Insulation System

U-Value 0.265



Seeking Manufacturing and Research Partners

## The worlds first Insulated Greenhouse

W/m/K value 1.808



Contact [assim@envirup.com](mailto:assim@envirup.com) 0044 7976 878882

# LJMU – Energy R&D Funding

## Proposed Approach & Experience

- >9m Euro won in EU Funding
- Participation in >12 EU projects participation and coordination
- Strong team working on alternative fuels and offshore wind
- Interested in the following calls:

Critical Technologies for the future ocean energy farms

Development of next-generation synthetic renewable fuel technologies

Carbon capture units and their potential to produce alternative fuels

Demonstration of innovative floating wind concepts

Biofuel production and usage in the transportation sector.

## Organisational Capabilities

- LOOM – Liverpool Logistics, Offshore and Marine Research Institute
- Expertise: -LCA, CFD, power system simulation, environmental modelling, cost-benefit analysis, alternative fuels, dual-fuel engines, fuel cells, offshore wind, solar energy, energy storage systems risk assessment, human factors, decision making systems, optimisation algorithms, machine learning, transport decarbonisation, cyber security, and port logistics.
- Prospero – High Performance Computer >3,500 cores
- Ongoing research:
- Hydrogen fuel cell, battery, waste heat recovery system design, integration and optimisation to ship electricity generation system through numerical modelling.
- Ammonia decomposition system design and safety analysis onboard to produce green hydrogen.

## Partners

We are looking for

- Technology Developers
- Research Centres
- Engineering Design Companies
- Feedstock Providers
- Laboratory Institutes
- Fleet managers or owners in the transportation sector.

## Administrative Information

Liverpool John Moores University

United Kingdom

Prof Jin Wang

Dr Eddie Blanco Davis

Dr Andrew Spiteri

Dr Onur Yuksel

Email: [o.yuksel@ljmu.ac.uk](mailto:o.yuksel@ljmu.ac.uk)

Number: 0777 882 07 28



# Development of next generation synthetic renewable fuel technologies (HORIZON-CL5-2024-D3-02-02)

## Proposed Approach & Experience:

### Approach:

- Lessons learned from previous projects
- Demonstration capabilities in the future
- Utilisation of our own green hydrogen and potential for DAC – excess renewable energy available locally.

### Experience

- Demonstrated synthetic fuel technologies previously
- Production of synthetic gasoline from Hydrogen
- Numerous synthetic fuel projects focused on synthetic fuel technologies
- Green hydrogen production and hydrogen ecosystem in [Orkney](#).
- Access to extensive supply chain – potential project partners



## Partners

- Synthetic fuel technology developers
- Academic institutions
- National laboratories or low TRL test facilities.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

### Facilities:

- Hydrogen ecosystem: electrolysis, compression, storage, transportation.
- Local synthetic fuel offtakers
- Caldale facility including access to renewable energy

### Capabilities:

- Hydrogen and synthetic fuel engineers and technical experts
- Electrical and operational engineers
- Full project management team
- Business support including marketing, stakeholder engagement and commercial modelling.

## Administrative Information

RTO, innovation partner, real world MRE test facility.

Your contact details including:

**Matthew Finn**  
Commercial Director

+44 (0)1856 852064  
[Matthew.Finn@emec.org.uk](mailto:Matthew.Finn@emec.org.uk)  
Orkney, Scotland.  
PIC 999493239



# CCU for the production of fuels (HORIZON-CL5-2024-D3-02-11)

## Proposed Approach & Experience

### Approach:

- Proposed demonstration of CCU activities utilizing access to available renewable energies from EMEC's owned grid connected test site.
- Lessons learned from previous projects within synthetic fuel production and green hydrogen.

### Experience

- Demonstrated synthetic fuel technologies previously
- Production of synthetic gasoline from Hydrogen
- Multiple demonstrations of renewable technologies on EMEC sites.
- Numerous synthetic fuel projects focused on synthetic fuel technologies
- Green hydrogen production and hydrogen ecosystem in [Orkney](#).
- Access to extensive supply chain – potential project partners

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

### Facilities:

- Hydrogen ecosystem: electrolysis, compression, storage, transportation.
- Local synthetic fuel offtakers
- Caldale facility including access to renewable energy.

### Capabilities:

- Hydrogen and synthetic fuel engineers and technical experts
- Electrical and operational engineers
- Full project management team
- Business support including marketing, stakeholder engagement and commercial modelling.

## Partners

- CCU developers
- Academic institutions
- National laboratories
- CCU and synthetic fuel supply chain partners



## Administrative Information

RTO, innovation partner, real world MRE test facility.

Your contact details including:

**Matthew Finn**

Commercial Director

+44 (0)1856 852064

[Matthew.Finn@emec.org.uk](mailto:Matthew.Finn@emec.org.uk)

Orkney, Scotland.

PIC 999493239





# Critical technologies for the future ocean energy farms (HORIZON-CL5-2024-D3-02-04)

## Proposed Approach & Experience

### Approach:

- Provide grid and non-grid connected facilities for testing of future components of marine renewable energy farms.
- “plug and play” test sites enabling operational efficiency.
- Extreme maritime conditions to test longevity and corrosion resistance, focus on improving efficiency, durability, operation and maintenance through best practice learnings
- Real time condition and performance monitoring – ability to host new technology for hydrodynamic modelling, big data and machine learning.

### Experience:

- 21 years of demonstrating MRE devices, components, systems and arrays.
- Broad range of expertise to suit all levels of TRL.
- Grid connected and non-grid connected sites.

## Organisational Capabilities

### Facilities:

- Grid and non-grid connected, open-water test sites
- Waverider buoys, instrumentation and equipment eg, ADCPs.
- Test support buoy with Microgrid capabilities to monitor power output
- LiDAR
- Pre-consented envelope of activities

### Capabilities:

- MetOcean data including 21 years MetOcean data collection.
- Performance test engineers
- Environmental and consenting experts
- R&D engineers and full project management office.



THE EUROPEAN MARINE ENERGY CENTRE LTD

## Partners

- MRE technology developers
- Marine contractors
- Measurement and sensor developers
- Software and AI developer support
- Academic and research institutions
- NGOs with marine conservation/ sustainability focus
- Government and regulatory bodies



## Administrative Information

RTO, innovation partner,  
real world MRE test facility.

Your contact details including:

**Dernis Mediavilla**, Commercial Manager

**Lily Wain**, Marine Energy Development Coordinator

+44 (0)1856 852218

[Dernis.Mediavilla@emec.org.uk](mailto:Dernis.Mediavilla@emec.org.uk); [Lily.Wain@emec.org.uk](mailto:Lily.Wain@emec.org.uk)

Orkney, Scotland.

PIC 999493239

## Efficient, sustainable and inclusive energy use (HORIZON-CL5-2024-D4-02) KSO C & A

### **Proposed Approach & Experience**

Intercultural Roots' EcoGPX® and "Places by EcoGPX®" mobile app offers valuable contributions to the call by:

- **Enhancing Community Engagement:** Through deep listening and participatory practices, fostering meaningful involvement in urban planning, especially in diverse and disadvantaged communities.
- **Innovative Digital Tools:** Developing the "Places by EcoGPX" app that connects users to local environments via creative, location-based content, directly supporting participative urban design.
- **Sustainability Focus:** Promoting eco-artistic practices that drive sustainable behaviours and decisions, aligning with the call's goals for environmental impact.
- **Cultural and Social Integration:** Addressing the social and cultural needs of urban spaces, creating inclusive environments that reflect the community's values.

### **Organisational Capabilities**

- **Diverse Leadership:** Experienced professionals with significant representation from Black and Racially Minoritised groups.
- **Technical Expertise:** Specialists in mobile app development, digital media, and interactive technologies.
- **Proven Project Delivery:** Successfully scaled projects, growing turnover from £83,630 to over £228,000 in one year – Successful Innovate UK project funding of £150K
- **State-of-the-Art Facilities:** Access to cutting-edge technology and facilities within the 'Silicon Spa' Creative Cluster 'Launchpad' Quarter.
- **Inclusive Approach:** Strong focus on community engagement, social justice, and ecological sustainability.

INTERCULTURAL ROOTS



EcoGPX®

### **Impact Contribution**

Intercultural Roots and EcoGPX® bring diverse leadership, a cutting-edge social and environmental innovation digital app expertise, and a proven track record in delivering impactful, community-driven projects. With access to state-of-the-art mobile app development, expert team and a strong focus on inclusivity, social justice, and sustainability, we are ideal partners for creating innovative, participatory urban environments that resonate ecologically with communities and stakeholders.

### **Administrative Information**

Intercultural Roots for Public Health is a UK based (London Registered) CIO – Charitable Incorporated Organisation regulated by the Charity Commission for England and Wales No. [1179885](#) – Companies House No. [CE015098](#)

Contact details:

Dr Alex Boyd – uid - n00fhv6a

[alex@interculturalroots.org](mailto:alex@interculturalroots.org)

+44 (0)7753 611768

British, UK

PIC No. 876569989

# Topic: Buildings and industrial facilities in energy transition



University of  
**Salford**  
MANCHESTER

## Proposed Approach & Experience

### -Air Source Heat Pumps:

- Low-Carbon innovations for heating homes such as Air Source Heat Pumps are becoming more common
- Environmental noise concerns
- Elements such as pipes, fans, compressors, and valves all have potential to create noise inside and outside of the home

### -Modular Buildings:

- Employ lightweight mobile structures- must be transported from factory to site
- Reduced mass means more sound transmission and less absorption
- Adding acoustic treatment may add to mass

Acoustics research has been conducted at Salford University for over 60 years. It is funded by research councils, national and international government bodies, and industry. Our research has fed into products that companies make and sell worldwide, as well as regulations and standards used in the UK, Europe and internationally.

## Organisational Capabilities

We have [world-class acoustics laboratories](#): listening rooms, reverberation rooms, anechoic chambers, an accredited calibration laboratory and state of the art equipment and instrumentation. We are the [Designated Institute for Airborne Acoustics Metrology in the UK](#). Through the laboratories we bring much of our fundamental research into real life applications. We also have a [commercial team who carry out testing and R&D work](#).

### Advanced Acoustics Testing:

- Structure-borne and vibration measurements
- Scanning laser vibrometer
- High-fidelity measurements of Sound Power Level and directivity (Bespoke microphone array & Microflown intensity and vector intensity probes with 2D and 3D 'Scan and Paint' post-processing software)

## Partners

Looking for following partners:

- Heat Pump manufacturers
- Manufacturers in the low carbon and Modern Methods of Construction fields
- Experts in energy research
- Regulators

## Administrative Information

Acoustics Research Centre  
University of Salford  
Manchester M5 4WT  
Looking at joining a consortium as partner.

Dr Antonio J Torija Martiinez  
[A.J.TorijaMartinez@salford.ac.uk](mailto:A.J.TorijaMartinez@salford.ac.uk)  
+44(0) 161 295 0400  
United Kingdom  
PIC: 999829441

# Just Energy Transition in the Northern Cape Province - South Africa: A Case Study

## Proposed Approach & Experience

What is your understanding of the part of the problem/challenge you can solve?

What previous, relevant, work or track record can you bring to the team?

**This research primarily aims to analyse the dynamics of the just energy transition in the Northern Cape Province. It specifically focusses on the following aspects:**

- Identifying the primary individuals or groups who have a **significant interest or influence in the process of transitioning to alternative energy sources.**
- Evaluating the **societal and financial effects of renewable energy initiatives on nearby communities.**
- Evaluating the **policy frameworks and regulatory systems that regulate the transition of energy in the region.**
- Investigating the **obstacles and potential for successfully transitioning to renewable energy sources in a fair and equitable manner.**
- Research experience: <https://ivansteenkamp.academia.edu/>

## Organisational Capabilities

**What skills, capabilities, facilities does your organisation have that will be vital for this project?**

- Evers Xcellence leverages advanced data collection and analysis to personalize learning experiences, **identify skill and research gaps**, and continuously improve our training programs based on real-time insights.
- Ivan, as the Project Manager has a commitment to academic excellence which is evident through his current pursuit as a **PhD Research scholar at UNICAF University, Zambia Campus**. His dedication to scholarly research underscores his passion for continuous learning and knowledge dissemination.

## Partners

**If you are looking for partners, what type of partners are you looking for?**

- Government institutions.
- Independent Power Producers (IPPs).
- Mining houses within the radius of solar energy projects.
- Development Financial Institutions (DFIs).



## Administrative Information

**Is your organisation academic, SME, big business, etc.**

- Yes – we are a Small, Micro Enterprise (SME)

**Are you planning on being the Coordinator or a Partner?**

- Our organisation can play both roles – **Coordinator or a Partner.**

Your contact details including:

**Name:** Ivan Steenkamp, Email: [phdscholarza@gmail.com](mailto:phdscholarza@gmail.com)

**Phone number:** +27828904759 / +27538312974

**What country are you from:** South Africa

Your organisation's [Participant Identification Code \(PIC\)](#) if your organisation has one – **None.**

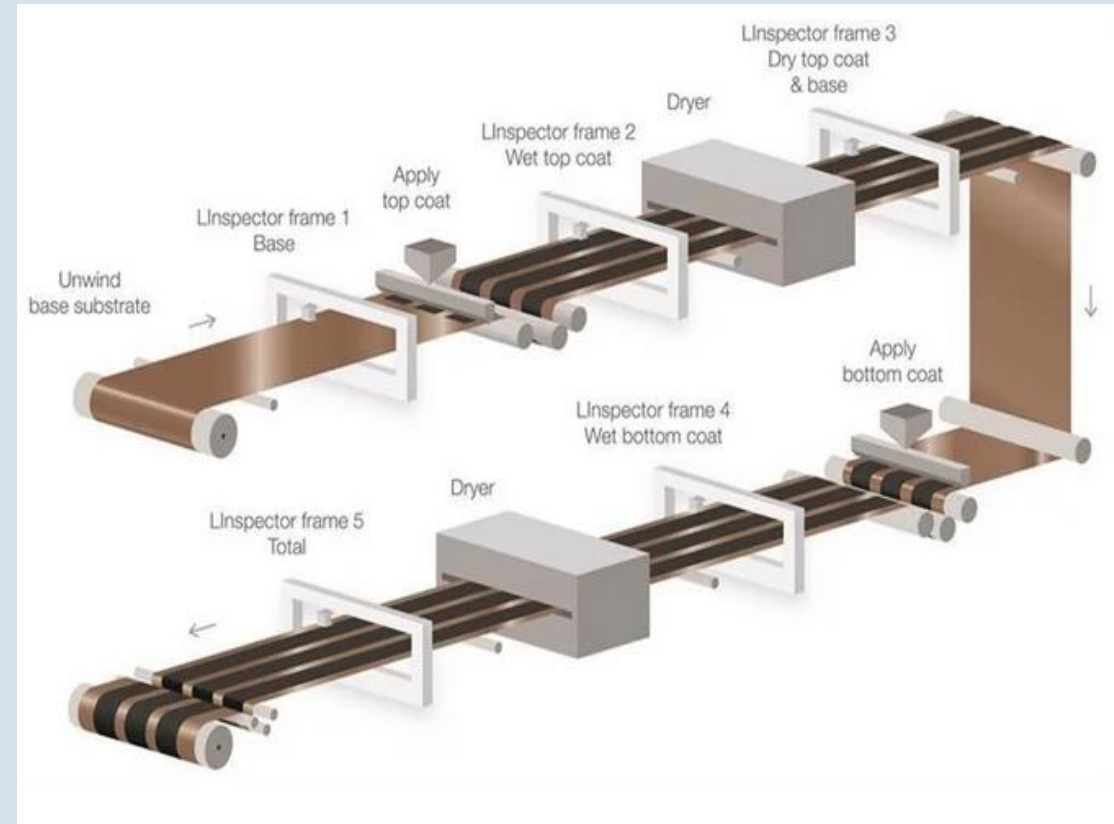
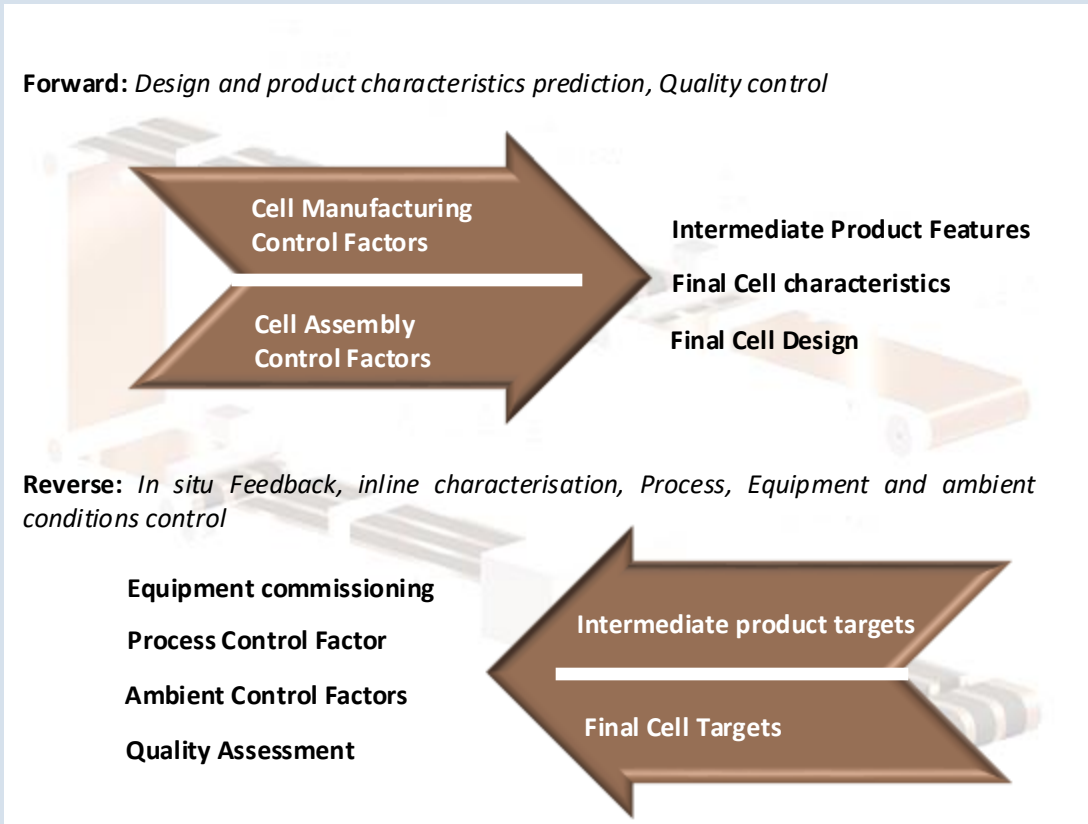


# Model-Based Electrode and Cell Manufacturing

**Contact:** Mona Faraji Niri, PhD  
Associate Prof, Battery Systems  
Email: [Mona.faraji-niri@warwick.ac.uk](mailto:Mona.faraji-niri@warwick.ac.uk)  
[LinkedIn](#)



## An Intersection of AI+First Principal Models and Inline Characterization



### Processes

- Formulation
- Mixing
- Coating
- Drying
- Calendaring
- Electrolyte infiltration
- Formation

### Modelling capability

- Trustworthy AI
- Particle Scale
- CFD

### This Multi-scale modelling Promise offers:

- Reduce Waste During R&D and Innovation investigations, Enabling Manufacturing process Optimisation and control
- Reduce Commissioning, and dial-in Time and Effort
- Effective Scale Up, Transferability, and innovation accommodation across various materials and process technologies

- **The Team:** [WMG Battery Systems](#)
- **Experience:** Academics, Engineers and Leaders
- **Team size:** 52
- **Related projects:** [Nextrode](#) by Faraday Institution, 2019-2027
- **Facilities:** Electrode and Battery Manufacturing pilot line, co-owned facilities with UKBIC and CPI, Battery Characterisation facilities (over 1000 cell cycling channels), HiL lab, [Virtual Tour](#)
- [Published Records](#)

# CALL: Horizon Europe energy collaborative R&D funding



## Proposed Approach & Experience

### 1. What is your understanding of the part of the problem/challenge you can solve?

PelkTec Co. Ltd propose solutions for Clean Energy project development (sufficiency, efficiency and affordability). Thus, proves to sustaining Economic growth, impacting Environmental resilience in global context against GHG emissions, hence derives an improved share prosperity in the Water-Energy-Food nexus activities.

### 2. What previous, relevant, work or track record can you bring to the team?

- a). Development of Clean Energy, E-Mobility, Resilient Climate Change Action, Agriculture & Industrial Machinery, and Water and Environmental Sustainability including R&D
- b). Incorporation of Tech-Driven (Digitalization) solution in the deployment of projects and Implementation with adherence to Environmental sustainability.
- c). Execute projects through Turnkey approach with favorable Project finance models aligned with client's operational needs with Offtake Agreement.
- d). Collaboration with reputable Deep-Tech Technology suppliers and Financial/Investor organizations in the world Spotlight market as partners in the fast growing Clean Energy Development and Resilient Climate applications.

## Organisational Capabilities

What skills, capabilities, facilities does your organisation have that will be vital for this project?

1. Clean Energy Production (Electricity, Heating & Cooling) as Off-Grid/Microgrid /Stand-Alone, E-Mobility (EV development), Energy Storage Systems and Energy Efficiency
2. Clean Water Production and Waste Water Treatment with Environmental Sanitation
3. Green Infrastructure and Community Development
4. Resilient Climate Practice (Mitigation and Adaptation)
5. Agriculture Processing & Industrial machinery
6. Project development, Feasibility and Consultancy as EPCM (Turnkey with Project finance)
7. Technology Research and Development expertise

## Partners

**If you are looking for partners, what type of partners are you looking for?**

1. Product and Equipment Manufacturers/Suppliers
2. Investment/Project Finance entities
3. Research Institutions and collaborators/Centers
4. Production Line/Assembly Plant partners/Investment
5. B2B
6. Climate/Carbon Credits Finance

## Administrative Information

Is your organisation academic, SME, big business, etc.

Are you planning on being the Coordinator or a Partner?

Yes; SME and R &D, and ready to be coordinator/partnership

Your contact details including: Name: Dr. Emmanuel Payne

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Email: [mypaynegm@gmail.com](mailto:mypaynegm@gmail.com) ; Tel: +233 202849958

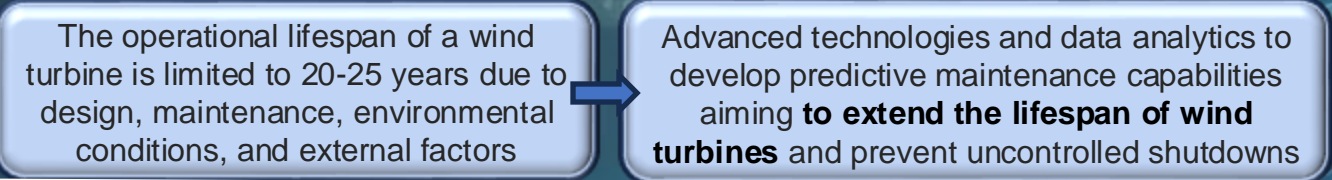
Ghana

Your organisation's [Participant Identification Code \(PIC\)](#) if your organisation has one

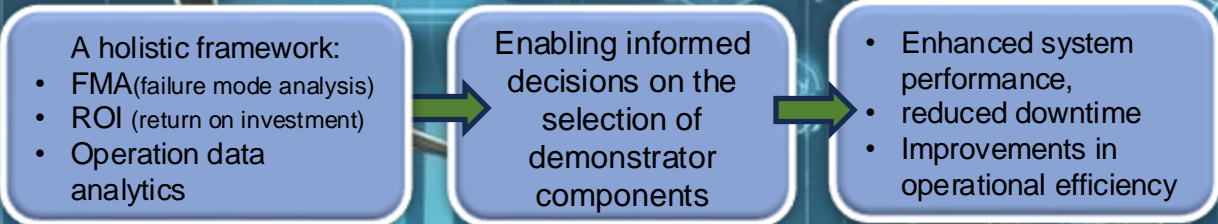
## Proposed Approach & Experience

## Partners:

Problem



Approach



Vision

Previously performed high-level assessments will serve as a baseline to enable remanufacturing options that showcase both economic and environmental impact, promoting sustainable practices within the product life cycle.

Resources

**Organisational Capabilities:**

10 key strategic initiatives worth £20m

Recycling and remanufacturing capabilities

World-leading expertise including:

- manufacturing (Forming, Forging, AM)
- digital (Digital Factory, NMIS)
- data analytics (Co-Lab).



### Looking for a LEAD partner and collaborations

- SMEs
  - O&Ms
  - OEMs
  - Academia
  - RTOs
- Working in the Wind sector
  - Manufacturing,
  - Refurbishment and remanufacturing
  - Recycling

- Coalition for Wind Industry Circularity
- ACT Blade
- Offshore wind substructure manufacturing automation
- £2 million pilot to develop UK's first WT blade recycling project
- Glasgow Re-make
- Laser machining of WT components
- Remote inspection of WT blade
- AM gear tooth repair