



Newsletter

Second Edition

Welcome to the second edition of our HUGE Project newsletter. We have been extremely busy with building on our early successes in the project. We have our website completed along with new social media channels. You can find links to them all below. We have been busy creating new content videos, with information on the project and explaining our vision for a green hydrogen economy in remote and rural communities in northern Europe. We have been publishing our monthly Newsflashes, compiling all the hydrogen news in the Northern Periphery and Arctic so you don't have to look, all of which can be found on our website. We continue with the development of our tools and services and look forward to sharing them with you soon.



The Hydrogen Utilization & Green Energy (HUGE) project is a €1.4 million 3-year project



It is funded by the Northern Periphery and Arctic (NPA) Programme



The aim is to raise awareness of green hydrogen as a viable energy option in remote and rural communities

In this edition you will find stories highlighting our TEA Tool, our project partner meeting in Lappeenranta, Finland, and our project partners CFOAT (Comharchumann Fuinnimh Oileáin Árann Teoranta) a community owned Energy Co-operative based on the Aran Islands in Ireland.

As always please don't hesitate to get in touch with us via our website or social media channels, all of which can be found on this page.

- Website – www.Huge-Project.eu
- Twitter – [@HUGE_Project_EU](https://twitter.com/HUGE_Project_EU)
- Facebook - [@HugeProjectEU](https://www.facebook.com/HugeProjectEU)
- YouTube - The HUGE Project
- LinkedIn - HUGE Project EU
- Email - info@huge-project.eu





Project Meetings

Project partners met just before Christmas at Lappeenranta University of Technology (LUT). LUT University is a Finnish national university of technology and economics and is the project partner leading on our HUB tool, creating hydrogen utilisation business models.

Partners met to discuss project development and goals and particularly looking at how we are going to develop our Hydrogen Hotspot Map as part of the Techno Economic Assessment (TEA) tool.

Agreement was also reached on case studies being looked at by partners across the Northern Periphery and Arctic region. The aim of the case studies is to find solutions to partners challenges, that are also appropriate for other regions in the NPA area. A mix of heat, storage, and transport case studies will be investigated by the project leading to greater knowledge and capacity in our remote and rural communities.



On the last day of our partner meeting the HUGE Project, in association with LUT held at the university campus. The seminar discussed *Green Energy and New Business Opportunities for Finnish Regions* and was well attended by a mix of scientists, policy makers, business leaders, and politicians.

Jari Hämäläinen Vice President for Research and Innovation at LUT welcomed us to the campus before we started on presentations. The presentations were a blended mix of HUGE Project Partners and invited guests from hydrogen projects across the EU.

Jón Björn Skúlason from Iceland New Energy discussed the Icelandic approach to hydrogen utilisation and Dr Pau Farràs from NUI Galway looked at common hydrogen maritime solutions for Europe. Both are pictured to the left respectively.

The HUGE Project holds regular seminars on hydrogen solutions. Please check our website for our next seminar.





TEA Tool



TEA TOOL

INNOVATION

Comprising of pooling of competences and transnational learning will take place in order to create the Techno Economic Assessment (TEA) Tool. The overall objective will be to eliminate any bottlenecks and to optimize the process in order to provide a base for scale-up research.

DESIGN

It will combine process modelling and engineering design with economic evaluation and will be made available to the public and industry/professionals in all regions. This will result in the advance of innovative economic development solution that can be applied in practice in all the partner regions.

SOLUTION

The TEA tool, will increase readiness to invest in hydrogen utilization solutions suitable for housing and public infrastructures in cold climates and dispersed settlements by assessing the economic viability of a process and provides direction to research, development, investment, and policy making

The TEA tool will combine process modelling and engineering design with economic evaluation. The tool will be made available to the public and industry professionals across the NPA region.

By adopting a common approach to techno-economic analysis solutions can be applied in practice to all partner regions.

The tool will increase readiness to invest in hydrogen utilisation solutions, suitable for housing and public infrastructures in cold climates and dispersed settlements. This will be achieved by assessing the economic viability of a process and providing direction to research, development, investment, and policy making.

The HUGE Project welcomes thoughts and contributions from industry and academia across the development of all its tools and services.

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The Techno Economic Assessment (TEA) tool is one of three tools that contributes to the HUGE Project HOT Service. The HOT Service is a transboundary service allowing a variety of stakeholders and end-users in the public infrastructure domain and beyond a full economic utilisation of the plentiful renewable resources that surround them by catalysing a hydrogen economy.

The TEA Tool aims to eliminate any bottlenecks in green hydrogen solutions and to optimise the process in order to provide a base for scale up research.

The TEA tool is currently being developed by Northern Irish company, and HUGE Project Partner, Action Renewables.



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Northern Periphery and Arctic Programme
2014-2020



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Aran Islands Energy Co-op (CFOAT)

We are CFOAT (Comharchumann Fuinnimh Oileáin Árann Teoranta) a community owned Energy Co-operative based on the Aran Islands in the West of Ireland. We are working towards complete decarbonisation of our 3 islands and intend to install a 2.3Mw wind turbine in the near future.

Our goal is to eliminate the emission of carbon dioxide and the pollution of the atmosphere caused by fossil fuels. The fact that hydrogen is a clean energy and has zero emissions is very exciting. We also want to create sustainable employment on the islands and become less reliant on tourism.

Through HUGE we have the possibility of investigating hydrogen as a potential method of storage of clean energy. It is likely that our wind turbine will produce more power than we can use when it is at maximum production. With average wind speeds of between 65 and 80 kmph, and gusts of between 110 and 130 kmph, we have an unlimited source of green energy. We must not only generate it but learn how to store and transport the surplus.

The co-op is also involved in another hydrogen related project called SEAFUEL. This European study is examining the potential for producing and using hydrogen in transport on islands. HUGE complements and builds on this project.

For more info please contact: Helena Concannon. helenaconcannon@gmail.com

On the Aran Islands, our ferries are by far the largest consumers of fossil fuels. Ferry operators who serve the islands have shown interest in investigating the potential for hydrogen fuel-cell technology.

Through HUGE, we will conduct a case study into the possibilities of hydrogen in maritime transport. Environmentally friendly transport for both the local residents, and the hundreds of thousands of tourists that visit us every year, is an important ambition of our co-op.

The economics of using hydrogen as a fuel is also an important question from a business perspective. Aran ferry operators will be concerned about this.

The TEA and HUB model in HUGE should provide us some answers to these questions.

