

# Killala Energy Hub

## CHALLENGE

The Killala Energy Hub comprising a Hydrogen Electrolytic Plant and Energy Centre at Killala Business Park, Co. Mayo needed to obtain advice from the Health and Safety Authority (HSA) in favour of the proposed development to support the planning application to Mayo County Council. The major accident hazards associated with the proposed development and risk to receptors at the business park influence the scale and design of the proposed Energy Hub.

## SOLUTION

AWN provided assistance to the project team on designing the scale and layout of hydrogen production, storage and road transport installations and the gas engine building at the proposed Energy Hub. AWN completed a COMAH land use planning quantitative risk assessment of major accident hazards at the proposed Energy Hub. Following design modifications the individual risk of fatality profile at the proposed Energy Hub was reduced to levels deemed acceptable by the HSA for such a development.

## RESULT

The Health and Safety Authority provided technical land use planning advice to the planning authority, Mayo County Council in support of the proposed Energy Hub.

The Killala Energy Hub contains a Hydrogen Electrolytic Plant and Energy Centre comprising a series of gas engines. The project supports European and National targets to reduce greenhouse gas emissions. The production of "Green Hydrogen" will assist Ireland in the transition to a low carbon economy.

The proposed Hydrogen Plant will produce hydrogen by the electrolysis of water and the hydrogen produced will be injected directly into the gas transmission network or removed off site by trucks with tube trailers. The Energy Centre will generate power by utilising a series of gas engines and will distribute the power generated via private wire to an end user.

Due to the presence of above threshold quantities of flammable gas (hydrogen and natural gas), the proposed development will be classified as a lower tier COMAH establishment and will be subject to the provisions of the Chemicals act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015, which implement the Seveso III Directive in Ireland.

AWN Consulting Ltd., a Trinity Consultants team, provided comprehensive design advice on site layout and project scale and completed a COMAH land use planning quantitative risk assessment in support of the planning application for the proposed development. Services provided include systematic hazard identification, consequence modelling of fire and explosion scenarios, modelling of risk and production of individual risk of fatality contours and societal risk assessment. AWN supported consultation with the Health and Safety Authority throughout the planning process.