Ballynahone Energy Storage

Fact File

Would you like to know more? Here we have compiled answers to the most frequently asked questions about battery energy storage systems.

We have also added answers to queries received from the community and will update this list as more information becomes available.

If you still have questions, please contact us and we would be happy to help.

1. What is a battery energy storage system?

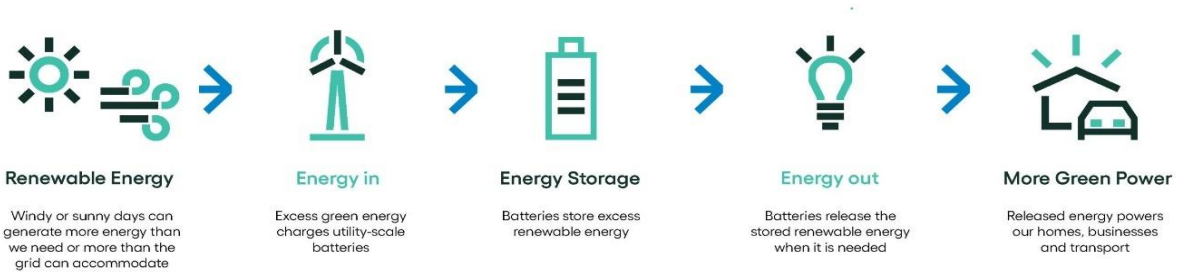
Battery energy storage systems (BESS) are used to store excess energy from the power grid, so it can be later used when the demand for electricity is high. This can help to balance the power grid, making it more efficient, reliable and resilient.

In the context of the electrical power grid, battery energy storage systems serve as a secondary source of power, allowing the storage of excess energy generated from renewable sources such as solar and wind. When the demand for electricity is high, the stored energy from a battery energy storage system can be released into the grid to help meet the demand. This can contribute towards reducing Ireland's reliance on fossil fuels and improving the stability of the power grid.

Battery energy storage systems can play a key role in transforming the electrical power grid into a more sustainable and reliable energy system while also reducing our reliance on imported fossil fuels, increasing our energy security and reducing our exposure to volatile prices and supply of fossil fuels.

2. How does a battery storage system work?

Battery energy storage systems enables energy from renewable sources, such as solar and wind, to be stored and then released when the power is needed most.



3. Why do we need battery energy storage?

Challenges arise when attempting to deliver deeply decarbonised power systems based on variable renewable technologies such as wind and solar:

- **Transmission network constraints:** As we continue to build new renewable energy projects, the electricity network can reach capacity at certain grid locations. This means that the renewable energy generators need to be turned down to prevent existing power lines becoming overloaded.
- **System-wide curtailment:** This can arise when there is so much power available from renewable generators that the system cannot accommodate it. Again, the generators need to be turned down and the power is wasted.
- **Generation adequacy at times of low renewable output:** When the wind isn't blowing or the sun isn't shining, the only alternative is to burn fossil fuels to generate power.

Storage technologies, particularly storage technologies with extremely large energy capacities, are capable of absorbing excess renewable generation at times of high output and providing this energy back to the system at times of lower output.

If these technologies can be deployed at scale and in the right locations across Ireland, they have the potential to simultaneously solve the three problems noted above while also reducing our reliance on imported fossil fuels, lowering harmful carbon emissions and lessening our exposure to volatile fossil fuel prices.

Ireland is recognised as being a global leader in integrating variable renewable electricity on its power system. The International Energy Agency considers Ireland and Denmark to be two of the most advanced countries globally in this respect. As of today, Ireland meets approximately 40% of its annual electricity demand, with only South Australia and Denmark listed as having higher renewable penetrations. Ireland's stated national ambition for 2030 is to go much further, with a target to reach 80% of electricity from renewable sources. In order to achieve this ambition, battery energy storage systems such as Ballynahone will be crucial.

4. What are the benefits?

Battery energy storage systems are a positive step towards a more sustainable, resilient and prosperous energy future for us all.

Maximising renewable energy

Sometimes we have more wind energy available in a region than the electrical lines can carry or more than the system demand requires. Battery energy storage systems provide this energy with a place to go, where it can be stored and called upon when needed. This stops potential energy going to waste.

Grid reliability

Storing excess energy during times of high supply and low demand and releasing it during times of low supply and high demand ensures a consistent, reliable power supply. This capability reduces power fluctuations, improves power quality and helps the overall stability of our grid.

Environmental responsibility

By reducing the country's reliance on fossil fuels, we actively contribute to the reduction of greenhouse gas emissions. This will help the Government to reach its target of becoming carbon neutral by 2050. This positive impact on our environment creates a cleaner, healthier country for generations to come.

Financial savings

Energy storage systems can lead to significant cost savings for us all. They help to lower electricity costs by optimising energy usage and reducing our dependence on expensive fossil fuel, power generation.

Energy security

Ireland imports most of its gas and is vulnerable to global gas price volatility. Battery energy storage systems reduce both our reliance on fossil fuel imports and our economy's exposure to geopolitical events such as the war in Ukraine.

Safety

Iron-air battery technology is inherently safe. The cells consist of non-toxic electrodes and iron anodes submerged in a water-based, non-flammable electrolyte, similar to what you find in AA batteries.

5. What type of battery energy storage system are you proposing?

We are proposing to use an iron-air battery capable of storing energy for up to 100 hours at around one-tenth the cost of lithium ion for the Ballynahone Energy Storage project.

This form of multi-day storage is made from the safest, cheapest and most abundant materials on the planet: low-cost iron, water, and air. The principle of operation is reversible rusting: while discharging, the battery breathes in oxygen from the air and converts iron metal to rust; while charging, the application of an electrical current converts the rust back to iron and the battery breathes out oxygen.

This battery can provide reliability and resiliency in a highly renewable grid, delivering energy at low cost when the grid needs it most: during extended periods of extreme weather, grid outages, or low renewable generation.

The iron-air battery is inherently safe. There is no pathway for thermal runaway common to other battery technologies. The cells consist of non-toxic electrodes and iron anodes submerged in a water-based, non-flammable electrolyte, similar to what you find in AA batteries.

6. What do battery energy storage systems look like?

Typically, the batteries are housed in containers, installed on level concrete foundations. The overall footprint of the development will depend on the size of the storage project.

As part of the planning design, the project will be surrounded by enclosed fencing and where necessary and appropriate, will include landscaping and planting along site boundaries.

A biodiversity plan to include screen planting will be designed specifically for the proposed Ballynahone Energy Storage project.

7. **Does the battery pose fire risks?**

Iron-air batteries have no risk of thermal runaway, and thus do not pose unique fire risks. With lithium-ion batteries, overcharging, high temperatures or impact can create uncontrolled chain reactions at the cell that lead to fire risk. This mechanism is not possible for iron-air batteries, where the active components are submerged in a water-based, non-flammable electrolyte.

8. **Has this battery been tested before?**

Iron-air batteries have been studied for around 50 years, including by NASA in the 1960s and 1970s. Form Energy has taken this well-understood technology, and has refined it for the power grid. As part of this process, Form Energy has conducted thousands of tests at the cell level and has deployed full-scale test systems in the US.

Form Energy has been collaborating closely with UL Solutions, the world leader in battery safety testing and certification, to develop and execute a certification test plan specific to iron-air battery chemistry, in accordance with UL 1973, UL 9540, and UL 9540A. Testing to the UL standard covers several areas, including electrical, mechanical and environmental requirements.

9. **Will the Ballynahone project be the first time Form Energy's iron-air batteries are deployed commercially in a community?**

Form Energy will deliver its first customer projects in early 2025. It has announced 140MW/14GWh of further deliveries for the coming years, which would be activated before the Ballynahone site is built.

10. **How do you select sites to locate projects?**

We typically seek to locate storage sites near existing large electrical substations, subject to environmental desktop studies to rule out any areas of known environmental sensitivity.

This is supplemented by detailed field investigations that are carried out in advance of preparing planning application documents and environmental reports which form part of the planning application.

11. **Can you explain the planning process?**

The team consulted with An Bord Pleanála (ABP) to confirm whether Ballynahone Energy Storage was considered a Strategic Infrastructure Development project (SID). It was not considered a SID, which means that the application was made to the local planning authority, Donegal County Council. If it was determined to be a SID project, then we would have been required to submit the application to ABP.

All our planning applications are publicly available for review and comment. When the time arrives, a pre-planning advert will be placed in the local newspaper and notifications will be uploaded onto the dedicated project website. We also place site notices around the project area and inform everyone who has been in touch with the project during the community engagement process.

After the application has been submitted, the full application and all supporting documents and drawings will be available to view on the project website www.ballynahoneenergystorage.ie and on Donegal County Council's website. It will also be available for viewing at the offices of the designated planning authority.

Any person or body may make an observation on Ballynahone Energy Storage to the designated planning authority while the documents are available for viewing after the application has been submitted.

12. How can I be kept up to date?

The community engagement programme includes regular newsletters and information hubs held locally. This website will also be regularly updated.

You can email, call or text our community engagement manager Shane Lowry and ask any questions you may have and request to be kept up to date.

Call Shane: 087 210 5889

Email: ballynahone@futurenergyireland.ie

Alternatively, you can send us a message via the Contact Us section of the website

www.ballynahoneenergystorage.ie

Postal address: Shane Lowry, Ballynahone Energy Storage, c/o, FuturEnergy Ireland, 27/28 Herbert Place, Dublin 2. D02 DC97

13. Why was this location chosen for the Ballynahone project and why is it not located beside a wind farm?

The batteries' primary purpose is to enhance and support the electricity grid, which means that they are most effective when located as close as possible to an existing high voltage substation such as Trillick 110 kV station to allow for a more efficient operation and grid connection.

At present, when it is windy or sunny, excess energy generated by renewable sources is going to waste because there is nowhere to store this energy until it is needed. This is why grid constraints continue to remain a big problem locally and regionally.

We are developing multiple battery storage sites in areas of the transmission grid that need support. It is possible that some future sites may be co-located with renewable energy projects. The siting of each project is driven by the system need that we are identifying.

In this case, the Ballynahone site's physical and environmental characteristics were also suitable when they were initially assessed by the FuturEnergy Ireland team. These findings were further validated during site investigations conducted by third-party consultants.

Peat probing is also indicating minimal peat depths across the study area, which is positive for construction. There is a gentle slope across the site, which we are proposing to build into through cut/fill. This will also reduce the battery compound's visibility.

14. What impacts could the project have on existing dwellings and businesses in the area?

The planning application documents consider and assess any potential project impacts during the construction and operational phases to include impacts on local dwellings and businesses. They are available to view on this website.

The Ballynahone project has been designed in accordance with all applicable best practice guidance and regulations. As such, we do not envisage any significant or adverse impacts on local dwellings and businesses, other than moderate and temporary traffic disruption during the construction period.

A comprehensive Planning & Environmental Report was prepared in support of the planning application and an Appropriate Assessment Screening or Natura Impact Statement, if deemed necessary.

The Planning & Environmental Report follows the main headings of an Environmental Impact Assessment Report, including the following studies that examine any potential impacts of the proposed development on existing dwellings and businesses in the area:

- Planning Policy
- EIA Screening
- Land, Soils, Geology and Hydrogeology
- Hydrology / Water Quality and Drainage
- Biodiversity
- Traffic and Transportation
- Construction and Environmental Management Plan
- Population and Human Health
- Noise and Vibration
- Cultural Heritage
- Landscape and Visual Impacts

The planning application includes full details of all assessments carried out, which you will be able to view as part of the planning application once submitted.

15. Will there be an impact on property/land use/potential sites in the area?

There is a pre-existing 110kV electrical substation immediately adjacent to the proposed Ballynahone site. This facility will read as an extension of this substation. The planning application will contain detailed assessments across a broad range of headings as noted in the response to Q2 above, which should give local residents comfort that all of these factors have been appropriately considered.

Ballynahone is designed to comply with all applicable guidance and includes appropriate screening / planting to minimise visual impacts. As part of the planning design, the project will be surrounded by enclosed fencing, and where appropriate, there will be landscaping and planting along site boundaries. A visual representation of the proposed project from different locations was made available at the community clinic.

If this project is granted planning permission, future developments would need to be cognisant of this decision. This is the case for all developments. The County Development Plan lays out planning policy for all development and the local county council office is your main point of contact for planning and land use queries.

a. Does the facility require water to operate? If so, what is the source? Is there wastewater and how is this managed – where does it go, how is it monitored and by whom?

The batteries require water to run. It is a key compound within the battery along with iron and air. The intention is to gain access to the public water supply or avail of an on-site private well. Both options are being explored.

A Pre-Connection Enquiry for the connection to the mains water supply has been submitted to Uisce Éireann. We will confirm the method of supplying fresh water to the proposed development pending the outcome of this process.

The supply to the site will be to a drinking water standard, however the proposed project requires de-mineralised drinking water. As such, this water supply requires further treatment before being fed into the battery system.

The de-mineralisation of the drinking water will result in the generation of wastewater. This wastewater is simply water with a higher concentration of minerals than are present in drinking water. This wastewater will be directed to the onsite surface water drainage system. This discharge water is considered free of contaminants and can be accommodated within the designed surface water drainage system and associated vegetated attenuation pond. The project team is preparing a drainage and surface water management plan based on the principles of Sustainable Urban Drainage Systems (SUDS). The planning drawings will also incorporate a drainage plan.

Within the planning application documents, the Planning and Environmental Report contains a detailed Hydrology, Water Quality and Drainage assessment, which includes findings from site investigations and an assessment of any potential impacts on local hydrogeology and mitigations, including arrangements for environmental monitoring where required.

b. Is there any potential impact on local water supplies, in particular on private wells? What steps will be taken to ensure that these water supplies won't be impacted?

Ballynahone's foundations, earthworks and drainage system, as well as construction methodologies, have been designed to avoid risk of groundwater or surface water contamination.

Each battery enclosure is carefully designed with both primary and secondary containment systems to mitigate the risk of electrolyte leakage. Within the primary system, electrolyte is contained within the battery cells, and within the secondary protective system, the battery cells are contained in a sealed enclosure. This provides two layers of protection.

An advanced 24/7 battery monitoring system and regular on-site inspections, maintenance and servicing by qualified personnel can detect any potential, but unlikely, damage within the primary system promptly and allow these to be addressed while secondary systems contain the leak. This makes the risk of any leakage beyond the secondary systems extremely unlikely.

A dedicated Water/Hydrology and Drainage chapter in the planning documents will outline findings during site investigations and assess any potential impacts and mitigations.

c. How frequent and what type/level of noise would be heard if the proposed facility is operational? Is there a minimum setback distance being applied to ensure that there won't be any undue noise?

The project team is designing the Ballynahone facility to ensure that operational noise emissions will meet the relevant limit values and criteria, as outlined by the Environmental Protection Agency, at all noise sensitive locations.

With regards to the assessment of noise and vibration, construction noise levels will be predicted and assessed using 'British Standard BS 5228-1:2009+A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites – Noise'. The assessment will specify any measures required to mitigate against the potential impacts of noise on the local community during the construction phase.

On-the-ground noise monitoring is being carried out at the site to accurately capture existing background noise levels. Detailed modelling of noise levels during construction and operation will be undertaken as part of the noise and vibration impact assessment.

A list of relevant guidance documents used for the preparation of this assessment are provided below.

- Environmental Protection Agency, 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to. Scheduled Activities (NG4) (2016)'.
- International Organisation for Standardization, ISO 9613-2:1996, 'Acoustics – Attenuation of Sound During Propagation Outdoors'.
- British Standard 4142:2014+A1:2019, 'Methods for Rating and Assessing Industrial and Commercial Sound'.
- BS 7385-2:1993, 'Evaluation and Measurement for Vibration in Buildings: Guide to damage levels from ground borne vibration'.
- BS 6472-1:2008, 'Guide to Evaluation of Human Exposure to Vibration in Buildings: Vibration sources other than blasting'.
- BS 5228-2:2009+A1:2014, 'Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 1: Noise'.
- BS 5228-2:2009+A1:2014, 'Code of Practice for Noise and Vibration Control on Construction and Open Sites – Part 2: Vibration'.

Within the planning application documents, there is a dedicated noise and vibration chapter that outlines findings during the site investigations for you to view that assesses any potential impacts and mitigations.

16. **How long would construction take? What impacts will there be on local traffic, and will any damage caused to local roads be repaired?**

We anticipate that construction would take approximately 12 months.

A detailed assessment of potential traffic and transportation impacts on the local transportation network is being undertaken as part of the environmental assessment. This includes the assessment of expected construction and operational phase traffic with a particular focus on the amount of HGV trips that will be generated during the construction phase.

Construction stages will be identified, with associated peak traffic volumes modelled.

The haul routes will be identified and reviewed for their appropriateness for HGV movements in and out of the site. HGV movements will be estimated to give a daily average and determine their impact on the local area. The site entrance will be designed in accordance with Transport Infrastructure Ireland (TII) standards.

Proposed construction and operational site accesses shall be located and designed in accordance with TII standards and in consultation with the local authority.

A detailed Traffic Management Plan (TMP) will be prepared which will set out any traffic management measures to be implemented prior to the construction works commencing. If the project is granted, the TMP will be finalised in accordance with this plan following the appointment of the contractor for the main construction works contract.

In relation to any potential road damage, we will undertake a condition survey of the local roads before construction starts and again on completion of construction. FuturEnergy Ireland commits to repairing any road damage that results from construction works. This commitment is typically enforced in planning conditions imposed by the local planning authority.

The planning application documents include a chapter on Traffic & Transport during the construction and operational phases.

17. **Will there be replacement forestry planted to compensate for the trees being felled for this project?**

Yes. The project must apply for a felling licence before any trees are harvested. A condition of application for a felling licence will be the provision of re-planted lands, stating that any trees felled at the proposed location will/must be replaced elsewhere.

In addition, a storage system of this type stores and circulates clean, green energy from renewable sources. This replaces the need to generate energy by burning fossil fuels such as gas and coal, which emit vast amounts of CO2 into the atmosphere. This means that a BESS system, such as the one for Ballynahone, has a significant net benefit of reducing carbon emissions.

18. **Could lithium-ion batteries replace the iron-air batteries after a planning application, during construction or during the lifetime of the project? What prevents a project owner from doing this?**

The planning application and associated assessments are all based on iron-air technology. It would not be possible for the project to switch to lithium-ion technology without re-applying for

planning permission. This would involve an entirely new planning process, including a separate community engagement programme.

19. What will the project look like when construction has been completed?

The iron-air batteries proposed for the Ballynahone site will be housed in weatherised containers and installed on level concrete foundations. The containers are approximately 12 metres in length by 2.5 metres in width and height. It should be noted that the containers will not be stacked on top of one another.

A comprehensive Visual Impact Assessment has been carried out which will consider potential views from key locations. The preparation of realistic 3D photomontages informs the assessment. Ballynahone Energy Storage is being designed to minimise its visual impact to the extent practicable. As part of the planning design, the project will be surrounded by enclosed fencing and where appropriate, will include landscaping and planting along site boundaries. Every attempt will be made to mitigate the visual impact of the site i.e. using biodiversity/planting corridors up 10m in width around the perimeter of the site at certain locations.

Visual representations of the proposed project viewed from different locations were available at the community clinic. These can also be viewed as part of the planning application.

20. Are there potential health impacts or health and safety risks associated with this technology? Have tests been carried out to ensure the project can be deployed safely?

The inherent safety of iron-air batteries is one of this project's strongest assets. There is no pathway for thermal runaway (i.e. fire risk) with iron-air batteries that is common to other battery technologies. The cells consist of non-toxic electrodes and iron anodes submerged in a water-based, non-flammable alkaline electrolyte, similar to AA batteries.

Furthermore, this technology does not rely on any toxic-heavy metals. There is no reason to expect that Ballynahone Energy Storage will have any negative health impacts on the surrounding community.

Thousands of experiments have been conducted on representative iron-air sub-scale cells to identify and ensure safe operating conditions. Additionally, the technology provider has been collaborating closely with UL Solutions, the world leader in battery safety testing and certification, to develop and execute a certification test plan specific to iron-air battery chemistry, in accordance with UL 1973, UL 9540, and UL 9540A. Testing to the UL standard covers several areas, including electrical, mechanical and environmental requirements.

Prior to the Ballynahone project, several iron-air commercial systems will be deployed in the US to ensure the utmost safety before this proposed project, which we currently expect will be operational in 2027/2028.

Batteries installed will have robust safety components based on best practice learned from other utilities. These safety measures include:

An advanced battery monitoring system
Each battery energy storage system comes with an advanced monitoring system that provides

operators with 24/7 information. The monitoring systems have the ability to shut down the facility remotely.

Proper handling and storage
Scheduled and consistent on-site checks, safety protocols, maintenance and servicing by qualified personnel.

Containment and leak prevention
Designing battery systems with effective primary and secondary containment structures ensures the risk of any leakage is negligible. Regular inspections and maintenance can detect and address any potential leaks or damage promptly.

Recycling and responsible disposal
Recycling programmes and working with certified recycling facilities ensures the proper management of end-of-life iron-air batteries. Recycling processes can recover valuable materials while safely handling and disposing of electrolytes and other components.

Remote monitoring site security
During construction and operation, remote monitoring site security will be in place.

Within the planning application documents, the Planning and Environmental Report will include a Construction and Environmental Management Plan that provides more details on the above.

21. Does the local fire brigade need to be notified of the proposed project?

While there is no risk of thermal runaway with iron-air battery technology, FuturEnergy Ireland and the technology provider will advise the local fire service of the site location and ensure they are equipped with the necessary information and training to safely respond in the unlikely event of a fire emergency, e.g. a typical building fire.

22. Will there be any fumes emitted?

During operation, very small amounts of hydrogen would be released, which would easily and quickly dissipate outside the enclosure due to its low density.

The battery system is designed to ensure hydrogen is vented properly and safely. The system will adhere to the standards set out in UL 9540A, NFPA 855, and NFPA 70, all renowned global authorities in energy storage testing and safety protocols.

The battery electrolyte is composed of water and potassium hydroxide. Each battery enclosure comes equipped with both primary and secondary containment systems to mitigate the risk of electrolyte leakage.

Additionally, electrolyte will be delivered separately from the battery units/enclosures and will be filled on site during construction by qualified personnel. For potassium hydroxide, we do not expect any fumes during construction or operation of the facility. The electrolyte would be mixed prior to delivery and contained within the battery enclosures. As a result, the only time electrolyte would be handled outside the enclosure is during initial fill, during repowering, which takes place in and around a 15-year timeframe, and at decommissioning. For these occasions, electrolyte would be transported/removed from the site via a standard tanker truck.

Potassium hydroxide is an alkaline (a strong base). Commissioning, handling, maintenance and servicing, and working with iron-air batteries components will be carried out by trained and qualified personnel wearing PPE such as gloves and goggles.

23. Do these batteries emit any kind of radiation?

All electronic devices that produce electric current also produce electro-magnetic radiation, including appliances in your home such as wi-fi routers, broadband, laptops, mobile phones, microwaves, hair dryers and smart TVs.

There would be electric current flowing on the site, which means electro-magnetic radiation would also be produced. However, these levels would not exceed those within the existing Trillick substation and would pose no public health or safety risk.

24. Can you explain the planning process?

In advance of any planning application being submitted, an advert will be placed in the local newspaper and notifications will be uploaded on to the dedicated project website. We also place site notices around the project area and inform everyone who has shared their contact details during the community engagement process.

When a planning application is submitted and validated by the relevant planning authority, the planning documents, including all environmental surveys, will be uploaded onto the project website and available to view.

A copy of the planning application documents will also be available on the relevant planning authority's website and a hard copy will be in the offices of Donegal County Council. All our planning applications are open for you to review and provide feedback.

25. When the batteries reach their lifespan, what is recommended for their safe disposal or replacement?

The proposed Ballynahone development is temporary with a modelled operational lifespan of circa 30 years. The site will then be returned to its original state or recommissioned. The electrolyte would be disposed of in line with standard hazardous waste disposal guidelines.

The recycling of component parts is not an issue; the components are made with recyclable plastics and metals such as iron, which is one of the most common materials on the planet.

26. Do the batteries contain any acid?

No, the batteries have a water-based, non-flammable electrolyte which is alkaline, not acidic.

27. Will or can the electricity be exported to Northern Ireland?

We have an all-island power system in Ireland, which means that power generated anywhere on the island can in theory flow to anywhere else on the transmission system. Exact power flows at

any given time depend on the location of electricity generation in operation and the demand at each node on the system.

28. What is the total site area and what is the proposed area size for development?

The battery compound is approximately 12 hectares.

29. Will local contractors and suppliers be used for construction?

The Ballynahone team have not made any decisions regarding contracting at this early stage in the project development cycle, but we would make every effort to ensure that local contractors and suppliers are used where possible. The supply of certain materials to the site such as stone and concrete would certainly come from local suppliers.

30. Will the connecting cables be underground or are there pylons involved?

The connecting cables will be almost entirely underground. Specifically, the medium-voltage (MV) collection will be entirely underground and so will the direct current (DC) collection.

However, there will be a few connections made above ground that will be contained within enclosures. These are necessary for linking the DC collection to the battery enclosures.

31. What is the MW capacity of the Ballynahone Energy Storage project?

The size of the Ballynahone Energy Storage project is estimated at ca. 10MW, which will provide 1,000MWh of energy storage capacity.

32. Will this capacity be filled completely by the proposed FuturEnergy Ireland wind farm project nearby and can further details in respect of this be provided?

We don’t propose to or see any way of ringfencing the benefits of these technology deployments solely for our projects, and as such our expectation is that this project would benefit any renewable generation attempting to connect in the area. However, we can’t totally rule out the possibility that at some point this might become possible.

It would be helpful to get more information on the locations, status and scale of projects that the local community have in mind so that we can better understand the challenges faced and how our storage projects might help.

It is worth noting that Ballynahone is just one of a number of sites that we are seeking to develop in this region.

33. Will the project have the capacity to reduce or eliminate any curtailment or constraint as a result of the Inishowen bottleneck? Will the project create an opportunity to free up capacity and enable a community-owned project to connect to the grid?

This project and other similar projects that we are developing have the potential to create material additional space for renewable energy projects in general, including community-owned projects in Inishowen.

We would, however, flag that all development projects come with delivery risks, and we would not encourage local people to put money at risk by relying entirely on this as a solution to network capacity issues.

Where communities have already put development money at risk, these technology deployments have the potential to reduce network congestion levels and therefore increase the probability that communities might make a return on pre-existing investments.