SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Rialtas na hÉireann
Government of Ireland

Battery Storage

Manual of Consenting Procedures

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Disclaimer

Sustainable Energy Authority of Ireland

SEAI is Ireland's national energy authority investing in, and delivering, appropriate, effective and sustainable solutions to help Ireland's transition to a clean energy future. We work with the public, businesses, communities and the Government to achieve this, through expertise, funding, educational programmes, policy advice, research and the development of new technologies.

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1 Introduction

1.1 Purpose of Manual

Sustainable Energy Authority of Ireland (*SEAI) Single Point of Contact Renewable Energy* has produced an accompanying manual to support the online tool. It provides a more detailed overview of specific technological, legislative, and regulatory information in relation to battery storage.

This manual provides guidance and assists users in navigating which consents and licenses are required for the installation, operation, maintenance, and project end-of life procedures for battery storage.

1.2 An Introduction to Battery Storage

Battery storage systems play a pivotal role in addressing the challenges of renewable energy integration, grid stability, and energy efficiency while contributing to Ireland's commitment to reducing carbon emissions. The core principle of battery storage is simple yet transformative; it involves the storage of excess electricity generated during times of surplus energy production, typically from renewable sources like wind and solar power, which have variable energy outputs depending on conditions. This stored energy can then be deployed when demand exceeds supply, such as during peak hours or when weather conditions are unfavourable for renewable generation. In the context of Ireland's energy landscape, characterized by intermittent wind and solar resources, battery storage bridges the gap between energy generation and consumption, ensuring a steady and reliable electricity supply, reducing the need for more traditionally reliable fossil fuel plants.

Battery storage technology is a dynamic area of innovation, there are many different kinds of battery on the market, and in development. People are most familiar with lithium-ion batteries, like the batteries found in smartphones and other portable electronic devices. These can be used to store energy to be discharged onto the grid, however, there are many other types of batteries too, such as thermal batteries (storing energy as heat in an insulated vessel) or other chemical batteries. Smaller systems can also be installed in homes and businesses to excess energy generated from renewable installations, as opposed to selling this to the grid. The stored electricity can then be used later in the building when demand overtakes supply.

In Ireland, 2.5 GW of grid-scale battery projects have emerged, with increasing interest with collaborating with solar and wind farm projects, such as Kilathmoy Battery Energy Storage System (BESS) in Limerick, which is located on the site of a wind farm. Planning for battery storage projects is usually a shorter process than the equivalent for solar and wind farm projects, once permission is obtained, an application to EirGrid or the ESB is required for a connection. As of 2021, ESB has announced the development of the first major battery storage projects at Inchicore, Dublin with the potential to deliver 60 MWh, and Aghada, Cork, with the potential to deliver 38 MW.

Battery storage contributes to energy efficiency and cost reduction. By storing excess electricity during off-peak periods when electricity is cheaper and discharging it during peak demand when prices are higher, these systems can lower energy costs for both consumers and the grid operators. This promotes energy conservation and grid optimization while making electricity more affordable and accessible to consumers.

2 Design and Construction

2.1 Feasibility and Design Phase

2.1.1 Self-Consumer Feasibility

The first step when considering the use of battery storage on a small scale for the purpose of self-consumption, is to assess if the project is feasible and cost effective. Currently the most common application for battery storage, sees energy stored during the day largely from solar PV installations, then discharged in the evening and at night, when demand is typically higher, and production lower.

Depending on your electricity use and lifestyle patterns, battery storage may be a worthwhile investment. Before making this decision, please ensure that the costs are measured against the alternative, which sees excess electricity sold back to the grid via SmartMeters, which will be credited to your electricity bill (depending on your electricity provider).

2.1.2 Commercial Feasibility

Commercial battery storage projects have somewhat differing economics driving the feasibility of installation when compared to small-scale installations. The wholesale price of electricity can vary throughout the day, depending on demand (which follows a predictable pattern most days) and supply (which can vary due to weather conditions affecting renewable energies like wind and solar). Battery storage can be paired with renewable energy installations such as wind and solar farms, storing energy when there is an excess of electricity being produced (more supply than demand), when the price of electricity is low (less profitable for suppliers). Stored electricity can then be sold to the grid when demand rises or when supply falls (increasing the price).

This strategy can make renewable energy projects more profitable and can help to ease the peaks and troughs of electricity pricing, which benefits consumers.

Battery storage installations can also be run separately to a specific renewable energy project, instead taking advantage of the same principle of buying and storing electricity when supply exceeds demand (low prices) and discharging and selling when demand exceeds supply (higher prices). This is not common, however, remains an option for potential investment.

The siting of a battery storage project typically is pre-determined and will accompany a renewable project and will generally be installed on the same site.

Where a battery storage project is being considered independent of a specific renewable energy project, the following considerations should be taken into account when determining a suitable location:

- Site area;
- Available land and land ownership status;
- Ground conditions;
- Existing and future grid infrastructure;
- Road access; and
- Flood risk

Local Authorities may also have published information on the construction of battery storage developments in the area, which may impact planning decisions or serve as helpful guidance. Generally, a multi-disciplined team will be best placed to guide feasibility studies, across fields such as planning, engineering, financial consultants, developers, etc. It is then important to develop a project plan that maps out all the stages needed to realise your project moving toward design.

2.1.3 Enabling Tasks

After a potential project and site passes feasibility screening, enabling tasks must be undertaken to transition toward the planning and pre-construction phases. These tasks include:

- Land lease options / Purchasing (where required);
- Options to access the site;
- Community engagement; and
- Site surveying

Some of these may take place in conjunction with the planning phase also. It is important to consider the need of community engagement early in the process. New renewable energy developments, especially in proximity to residential dwellings, frequently encounter concerns from residents for a number of reasons, including concerns about impact on visual amenity, noise, fire etc. There may be valid concerns from residents that can then be addressed early in the process, which can help to avoid negative community interaction later in the process, as well as fostering community buy-in, including the community in the process before any statutory requirements. This early engagement has been shown to improve the acceptance of renewable energy developments in the surrounding area. Identifying key public stakeholders and community leaders is an important task to undertake as early as practicable.

2.1.4 Design

For larger scale projects, following the feasibility stage, you may need to look at the design of the project. Depending on the scale you may need to undertake an Environmental Impact Assessment which involves conducting a range of environmental studies in order to inform the design of the project in line with relevant environmental regulations. Prior to undertaking these studies, you may need to apply for certain licences and permits based on the specifics of your chosen site and the project you are proposing, such as environmental derogation licences, ecological consents, archaeological excavation licences if near a national monument or detection device consents. The project is then designed by your technical team, following relevant planning regulations, and other environmental regulations, and you can then review the financial viability of the project based on that design, which will be more accurate than previous estimates.

2.2 Planning Phase

There is no planning legislation or regulations that relate directly to battery storage development. This means that there are no exempted development regulations, or criteria that would class a battery storage project as a 'Strategic Infrastructure Development'.

Any proposal for a standalone battery storage development therefore must be consented for by the relevant Local Authority. Many battery storage installations take place alongside other renewable energy projects, and thus often form a part of this planning application.

Small battery storage installations in homes and businesses generally do not require any planning consent, as they are not considered development, as they are installed within the home/business and do not materially alter the structure. This may not be the case if the structure is a Protected Structure. If your structure is listed on the Record of Protected Structures, please liaise with the relevant Local Authority before beginning any works.

2.3 Grid Connection

Depending on the scale of your project, one or more of the following Grid Connection Offers / Electrical Licences (**Sections**: **2.3.1- 2.3.10**) will apply. Prior to construction, a Grid Connection Offer must be obtained, which will allow for a generator to be connected to the national grid, to supply energy. It is important to note that to secure a grid connection offer, a project requires planning permission in advance of submitting a Grid Connection Application.

2.3.1 Micro-Generation Grid Connection Offer

All microgeneration (<6kW/25Amps AC for single phase connections and <11kW/16Amps for 3 phase connections) shall complete a NC6 notification form from ESB Networks and submit by email (networkservicesbureau@esb.ie) or post to ESB Networks in advance of the installation. Micro-Generation means the supply of electricity by equipment installed in homes or small businesses.

BESS are systems for storage of energy, which would otherwise export to the grid, within a battery and is considered a generator by ESB.

Micro-Generation installations are defined as follows:

- Only ***one customer*** is involved;
- Only ***one installation*** is involved; and
- Where multiple customers on the same housing scheme are involved, in planned [green field] multiple installations such as new housing schemes, where it is planned to have Micro-Generation or installed where there is a penetration level expected to reach 40% of the capacity in kVA of the existing MV/LV substation that supplies the estate or scheme.

To participate in grid connection Micro-Generation from battery storage the customer shall complete the Micro-Generation Installation Notification Form (Form: NC6, available on www.esbnetworks.ie).

Full conditions of Micro-Generation connection and operation are available from ESB networks.

2.3.2 Mini-Generation Grid Connection Offer

Mini-Generation grid connections are for small scale electricity generation and battery storage primarily for self-consumption and is defined as a source of inverter connected electrical energy and all associated equipment, in the following ranges:

- Greater than 25 A up to and including 72 A 1 at low voltage [230 V] (2), when the DSO network connection is single-phase.
- Greater than 16 A up to and including 72 A at low voltage [230 V/400 V] (3), when the DSO network connection is three-phase.

Where multiple generating sources [of the same or varied technologies] are on the same site and share access to the same Distribution System Operator (DSO) network connection point, the aggregate rating shall not exceed:

- 72 A 4 single-phase at low voltage, when the DSO network connection is single-phase; and
- 72 A per phase at low voltage, when the DSO network connection is three-phase.

The Mini-Generation process shall require an application for connection to ESB Networks, whereupon a network study shall be carried out locally by ESB networks and the conditions for connection advised in the Connection Offer. For installations in existing premises, the customer shall complete the Mini-Generation installation application form (Form: NC7) and provide with the application form, a Type Test Certificate from a recognised laboratory confirming compliance with I.S. EN 50549-1 for the proposed Mini-Generator and confirming the appropriate Interface Protections have been applied (see Section 2.2 of ESB networks conditions).

Following receipt of application and application fee, ESB Networks shall assess the network for the proposed connection and contact the customer with any associated connection limitations or costs (where requested). No works shall progress until the conditions in the Connection Offer have been met and any ESB Networks construction work has been completed.

After installation, the installer shall carry out any relevant on-site commissioning tests to ensure satisfactory operation of the generator. Once confirmation of the installation has been received by ESB Networks (email to dsominigeneration@esb.ie) the connection on the DSO system can be completed. Until confirmation of

the installation has been received by ESB Networks, the offered Maximum Export Capacity (MEC)[1] (and Export Limiting Scheme (ELS)[2], if applicable) shall not become active. The period of validity of the Connection Offers shall be as stated in the Connection Offer.

2.3.3 Small Scale Grid Connection Offer

For Small Scale Generation connections, the Installed Generation Capacity is not permitted to be greater than the Maximum Import Capacity (MIC), and consequently the MEC cannot be greater than the MIC. If you wish for ESB Networks to assess the connection for the MEC level proposed, but where no reinforcements apply, please email: dsosmallscalegeneration@esb.ie. The MEC level proposed will be assessed and a quotation issued for the costs of any reinforcements proposed.

To make a battery based small scale Grid Connection, an application must be made to ESB networks completing an NC8 form for inverter[3] connections. Once the forms are emailed to dsosmallscalegeneration@esb.ie along with all required documentation (ESB networks small scale information for further detail). This will be verified for completeness, accuracy and compliance, and an invoice will then be issued for the relevant application fee. Once the invoice is paid the application can be deemed complete.

ESB Networks will then need to carry out a full technical assessment of a connection point prior to issuing a connection offer in order to ensure connection capacity is not exceeded and that grid safety, stability and reliability are maintained and to establish the nature of any upgrade works required to the system to facilitate the connection. Currently due to a high demand the average period for the connection offer documents to issue is 3 to 6 months from payment of the application fee, however, for a small number of complex applications this stage may take longer.

2.3.4 ECP Cat A Grid Connection Offer

Enduring Connection Policy (ECP) process for grid connection applications is the current pathway for generators, storage, and other system services technology projects to connect to the electricity system.

ECP Category A is for generation, storage, and other system services technology projects (MEC[4] >0.5 MW). Applications for this grid connection offer will occur in batches with application windows occurring annually.

An application fee applies for projects with MEC>500 kW (0.5 MW) which is €2,000. Successful applicants will be prioritised by largest renewable energy generation (first 25), then by planning permission grant date. Each batch application may set its' own generation priorities. A full list of all DSO (Distribution System Operator) ECP applicants is available from ESB networks.

To make a grid connection application Form NC5 should be used where an applicant has identified their specific generator manufacturer detail and would like their technical study processed using the specified data provided by the applicant. Form NC5A is a shortened version of this form and may be used where the specific generator manufacturer detail is unknown at time of application. Therefore, the technical study is completed using assumed data and the applicant is required to provide their specific data a year in advance of energisation. Fully completed application forms can be sent via email with all relevant documentation to DSOGenerators@esb.ie.

[1] The Maximum Export Capacity (MEC) is the maximum capacity that you can export to the Electricity Distribution System. MIC and MEC are measured in kilo Volt Amperes (kVA). 1kVA is roughly equivalent to 1 kW in most circumstances.
[2] The export limitation scheme must reduce the exported Active Power to a value that is equal to, or less than, the Maximum Export Capacity within 5s; The system must be fail-safe.
[3] Inverters convert DC (Direct Current) to AC (Alternating Current)
[4] The Maximum Export Capacity (MEC) is the maximum capacity that you can export to the Electricity Distribution System. MIC and MEC are measured in kilo Volt Amperes (kVA). 1kVA is roughly equivalent to 1 kW in most circumstances.

2.3.5 EirGrid Grid Connection Offer

Projects with total export capacity of under 40 MW at a single location should initially apply to ESB Networks for a Distribution Connection. Projects with over 40 MW total export capacity at a single location should initially apply to EirGrid for a Transmission Connection.

When submitting a new application to EirGrid as Transmission System Operator (TSO), the application must be accompanied by all supporting documentation as requested, including two signed copies of the EirGrid standard confidentiality agreement and the first instalment of €7,000 (inclusive of VAT) of the application fee. The total application fee is dependent on the size of the plant (taking into account the MEC[5] and MIC[6] values) and whether shallow connection works are involved in dealing with the capacity required.
For application forms for an EirGrid Enduring Connection Policy (ECP) and details of the application process consult the EirGrid website and any queries can be directed to OPMO@eirgrid.com.

2.3.6 Licence to Supply

A Licence to Supply is a mandatory licence for anyone wishing to supply electricity to final customers (a final customer is defined as a customer purchasing electricity for his own use[7]), it is applied for through the Commission for Regulation of Utilities (CRU), (Section 14(1)(b), (c) or (d) of Electricity Regulation Act 1999, as amended).

The CRU grants revokes and enforces these licences. The current fee for the licence to supply is €254 and can be applied for through the CRU application form. An Electricity Supply Licence will be valid for 15 years.

For further information and details on supporting documentation please refer to the CRU Electricity Supply website: https://www.cru.ie/regulations-policy/licences/electricity-supply/

2.3.7 Wayleave Consent: Section 48 to Lay Electric Cables

Wayleave Consent: Section 48 refers to the power to lay electric cables (Section 48 of Electricity Regulation Act 1999, as amended) is granted to: lay electric cables across or under any street, road, railway or tramway, and the right to break up any street, road, railway, or tramway for that purpose. This licence is separate to other agreements such as the Road Opening Licence.

The Section 48 wayleave consent is applied for through the CRU, see section 48 application form. At present there is no application fee. It should be noted that letters of consent from the landowners in addition to a copy of their connection offer are required as part of the application. If the land that is affected is a tramway or railway consent will also be required from CIÉ. A photocopy of the route map is also required to be submitted along with the application.

Applications should be submitted at least two months prior to when the applicant intends to use the consent. The CRU will acknowledge only fully completed applications within 10 working days of receiving them. Once the CRU acknowledge an initial application the CRU will review it, contact will be made if the cru requires clarifications or additional information. For further information or queries related to section 48 please contact the CRU at: consentapplication@cru.ie.

2.3.8 Wayleave Consent: Section 49 to Lay Electric Cables

Wayleave Consent: Section 49 refers to the power to lay electric lines (Section 49 of Electricity Regulation Act 1999, as amended), this is granted to lay lines across or under any land not being a street, road, railway, or tramway.

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[5] The Maximum Export Capacity (MEC) is the maximum capacity that you can export to the Electricity Distribution System. MIC and MEC are measured in kilo Volt Amperes (kVA). 1kVA is roughly equivalent to 1 kW in most circumstances.
[6] The Maximum Import Capacity (MIC) is the upper limit on the total electrical demand you can place on the network system.
[7] Article 2(3) of the Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market in electricity (recast)

The Section 48 wayleave consent is applied for through the Commission for Regulation of Utilities (CRU), see section 49 application form. At present, there is no application fee.

Should the electric lines be required to go through private land a yearly agreement has to be reached between the asset owner and the landowner for the duration of the project. It should be noted that letters of consent from the landowners in addition to a copy of their connection offer are required as part of the application. A photocopy of the route map is also required to be submitted along with the application.

Applications should be submitted at least two months prior to when the applicant intends to use the consent. The CRU will acknowledge only fully completed applications within 10 working days of receiving them. Once the CRU acknowledge an initial application the CRU will review it, contact will be made if the CRU requires clarifications or additional information.

For further information or queries related to section 49 please contact the CRU at: consentapplication@cru.ie.

2.3.9 Transmission Use of System (TUoS) Agreement

This is a mandatory agreement that is required to obtain access to Transmission Use of System (TUoS) and transport electricity to and/or from the generation plant through the transmission system. This is regulated under Section 14(1)(b), (c), (d) or (h) of Electricity Regulation Act 1999, and Section 34 of Electricity Regulation Act 1999, as amended.

Suppliers and generators seeking to use the Transmission System will be required, prior to using the Transmission System, to enter into a Transmission Use of System Agreement (TUoS) with EirGrid Group. This agreement must be in place before a supplier or generator can participate in the Single Electricity Market (SEM)

2.3.10 Distribution Use of System (DUoS) Agreement

To obtain access to a distribution system and transport electricity to and/or from the generation plant through the distribution system an application must be made to ESB networks (Section 14(1)(b), (c), (d) or (h) of Electricity Regulation Act 1999, and Section 34 of Electricity Regulation Act 1999). Following on from the connection application, an initial payment is required. A DUoS charge is a fee that ESB Networks charges your Electricity Supplier for use of the Electricity Distribution System. Details of Charges for Connection to the Distribution System, approved by CER, are available on the ESB Networks Website.

For further Information on the process for connection of demand customers to the distribution system please refer to: https://www.esbnetworks.ie/docs/default-source/publications/guide-to-the-process-for-connection-of-demand-customers-to-the-distribution-system.pdf?sfvrsn=9b4433f0_4

2.4 Pre-Construction

2.4.1 Planning Permission Amendments and Conditions

As the planning phases may take place over an extended period of time, there is a possibility that an amendment may be required to the consented development agreed with the Local Authority, due to alterations or technological improvements.

Pre-construction, some conditions within the planning permission applied by the Local Authority or An Bord Pleanála must be sufficiently discharged, where required (formal applications process where requested details are required). This may include the likes of providing more specific details of design, or similar details. Failure to discharge planning conditions as specified by condition of a planning permission may result in an enforcement action.

2.4.2 Appointment of Construction Contractors

Pre-construction, contractors will need to be appointed to carry out the delivery of the development. There are two broad categories of contracting options:

1. Turnkey contracting, which sees a single company handling all battery equipment, electrical and civil engineering works; or
2. Separate contracting, where individual aspects are contracted out to specific companies.

Typically, if battery storage development follows the turnkey route, the battery equipment provider will lead, and sub-contract the electrical and civil engineering works to companies that would be deemed appropriate for the installation of their equipment.

Maintenance contracts are also usually agreed at this point, where required.

2.4.3 Pre-Construction Licencing

The following licences are suggested licences only. They will be updated in accordance with the approved guidance and legislation when it comes into force.

2.4.3.1 Road Opening / Closing Licence

A temporary road closure may be needed in conjunction with a road opening licence. To comply with statutory requirements, **an application for a temporary road closure should be submitted 8 weeks in advance** to the relevant Local Authority.

A 'Road Opening Licence' is required for any works in a public area, to dig up a public road, footpath, or grass verge, for works such as:

- Water/Sewer Connections;
- Lowering of footpaths;
- Footpath reconstruction; and
- Pipelaying;

Applications for Road Opening Licenses can be applied through the MRL website. You must register with the Road Management Office http://www.rmo.ie/non-registered-users.html online MRL System to apply for a Road Opening Licence.

Temporary Road Closures are on occasion required to facilitate road works. Completed **application forms must be submitted 5 weeks prior to the road closure** to the relevant Local Authority. Advertisement costs must be covered by the applicant.

In conjunction with the above licences the following licences should also be applied for where works take place on or near public roads or pathways: a Hoarding/Scaffolding Licence and a Signage Licence. A hoarding/scaffolding licence is required to facilitate building works and to ensure safety for the public. Completed **application forms must be submitted 3 weeks prior to works commencing** to the relevant Local Authority. A Signage Licence is also required to authorise the use of advertisement signs/structures on public roads, (including Directional Signs). Completed application forms must be submitted for assessment.

It will be necessary to check with the relevant Local Authority what the current fees are for the different permit applications.

2.4.3.2 Section 254 Licence (Items on Public Roads)

A Section 254 Licence applies to all appliances, cables, signs, street furniture or other items on public roads. You will need to apply to the relevant Local Planning Authority to place on, under, over or along a public road numerous items or equipment, including the following which may be relevant to a battery storage project:

- A fence, scaffold or hoarding,
- A cable, wire or pipeline,

- Over ground electronic communications infrastructure and any associated physical infrastructure such as a telephone pole or cabinet, or
- Any other appliance, apparatus or structure specified in regulations made by the Minister for Housing, Planning and Local Government or by an Act of the Oireachtas that requires a licence.

To apply for a Licence, you will need to complete the application form and submit that form to the Planning Authority along with:

- A Site Location Map - 1:2,500 scale;
- A Site Layout Plan showing location of proposed appliance(s)/apparatus(s)/structure(s);
- Drawing(s) to scale of proposed appliance(s)/apparatus(s)/structure(s);
- The appropriate licence fee;
- Copy of Insurance Confirmation indemnifying the relevant County Council against claims arising out of any accidents to persons or property;
- Written legal consent of the landowner; and
- A copy of the Site Notice.

2.4.3.3 Abnormal Loads Permit (Permit for Specialised Vehicles)

A 'Special Permit' is required for any haulage vehicles which are considered to be either: Wide, Long or Heavy and travelling on the roads within the relevant Local Authority administrative area. These vehicles may be required when transporting larger components by road. Completed **application forms must be submitted 7 days prior to commencement of the journey**.

It will be necessary to check with the relevant local authority what the current fees are for the different permit applications.

2.4.2.4 Fire Safety Certificate

A Fire Safety Certificate is required where the applicant proposes a new building, a new building extension, material alterations to an existing building or a change of use of an existing building. The application is made through the Building Control Authority (BCA) in the local City or County Council. If the building or works complies with the requirements of Part B of the Second Schedule of the Building Regulations 1997, the BCA will issue a Fire Safety Certificate.

A Fire Safety Certificate application should be made by a Fire Safety Consultant, Architect or Engineer who is familiar with the Building Regulations and the procedure for applying for a Fire Safety Certificate. The fees for the application vary based on the type of application required (normal, 7-day notice or regularisation application).

A valid Fire Safety Certificate application must include:

- A completed application form;
- Relevant fire safety drawings in duplicate;
- A fire safety report in duplicate;
- Site location maps in duplicate; and
- The appropriate fee.

Please refer to Part II of the Building Control Regulations for further information and exemptions.

2.4.3.5 Disability Access Certificate

To determine if your project requires a Disability Access Certificate (DAC), please refer to the Building Control (Amendment) Regulations 2018 Article 20D, Part 4.

It is best practice to apply for your DAC at the same time you are applying for your Fire Safety Certificate. If both applications are prepared at the same time by the same person, the drawings can be co-ordinated prior to submission. A DAC application should be made by an appropriate consultant, architect or engineer who is familiar with the Building Regulations and the procedure for applying for a DAC.

A valid DAC application must include:

- A completed application form;
- Relevant fire safety drawings in duplicate;
- A disability access report in duplicate;
- Site location maps in duplicate; and
- Providing the application is lodged at the same time as the Disability Access Certificate application a €500 fee applies, otherwise it is currently €800 per building.

To determine if your project may be exempt from the necessity of obtaining a DAC please refer to the Manual for the Reuse of Existing Buildings.

2.4.3.6 Certificate of Registration

A Certificate of Registration is granted by the relevant Local Authority in area the works will be carried out. The waste activities that require a Certificate of Registration are listed in Part II of the Third Schedule of the Waste Management (Facility Permit and Registration) Regulations 2007, (S.I. No. 821 of 2007) as amended. To aid in rapid determination, if the project or development requires a Certificate of Registration please refer to the following Decision Tree.

Contact your Local Authority if you wish to apply for a Certificate of Registration.

2.4.3.7 Waste Disposal Licence/Permit

Waste disposal and recovery activities in Ireland require authorisation in accordance with the Waste Management Act 1996 as amended. To determine if the activity that is being carried out requires a waste licence, please refer to the EPA services. A waste licence is a single licence which deals with emissions from an activity and the environmental management of the facility. Waste licences are issued through the EPA.

2.4.3.8 Tree Felling Licence(s)

If as part of the project requirements an individual or project developer determines that there is a need for the felling of trees for the purposes of (not limited to) site clearance, safe cable installation or maintenance purposes, a Felling Licence may be required. This is granted by the Minister for Agriculture Food and the Marine provides authority under Section 7 of the Forestry Act 2014, as amended to fell or otherwise remove a tree (singular) or trees (multiple) and to thin a forest. All those involved in tree felling must ensure that a felling licence has been issued before any felling is carried out, unless they are satisfied that the felling is exempted. It is the responsibility of the landowner and or the person felling the tree to ensure that an exemption applies. A tree felling licence once granted is valid for a period of ten years and can be extended up to five further years.

Exemptions apply to the following common scenarios:

- A tree in an urban area provided it is not under a protection order;
- A tree within 30 m of a building but excluding any building built after the trees were planted;
- A tree less than five years of age that came about through natural regeneration and removed from a field as part of the normal maintenance of agricultural land - but not where the tree is standing in a hedgerow;
- A tree uprooted in a nursery for transplantation;

- A tree of the willow or poplar species planted and maintained solely for fuel under a short rotation coppice;
- A tree outside a forest within 10 m of a public road and which, in the opinion of the owner is dangerous to persons using the public road because of its age or condition;
- A tree outside a forest of the hawthorn or blackthorn species;
- A tree outside a forest in a hedgerow and felled for the purposes of its trimming, provided that the tree does not exceed 20 cm in diameter when measured 1.3 m from the ground;
- A tree outside a forest the removal of which is specified in a grant of planning permission; and
- A tree outside a forest on an agricultural holding removed by the owner for use on that holding, provided:

  2.4 it does not form part of a decorative avenue or ring of trees;

  2.5 its volume does not exceed $3m^3$;

  2.6 the removal of trees for use on the farm does not exceed 15 m^3 in any period of 12 months.

It should be noted that the three above exemptions do not apply in all circumstance, for example when trees are more than 150 years old or are close to certain protected structures, monuments, archaeological sites, specific environmentally sensitive areas. If you live in an urban area, you may need to contact your Local Authority to see if there is a preservation order on the tree. For further detail on these exemptions please refer to: Tree Felling Guidance Ireland.

Certain bodies are exempted from the requirement for a felling licence, these include but are not limited to:

- Bord Gáis (Section 27, Gas Act, 1976);
- Aer Rianta (Section 46, Air Navigation and Transport (Amendment) Act, 1998);
- CIÉ or any other railway undertaking (Section 49, Transport (Railway Infrastructure) Act, 2001);
- CIÉ (Section 15, Transport (Dublin Light Rail) Act, 1996);
- Any telephone/mobile network operator (Section 58, Communications Regulation Act, 2002);
- The ESB (Section 45, Electricity Regulation Act 1999, as amended);
- NPWS (Section 72, Wildlife (Amendment) Act, 2000);
- Minister for Defence (Section 7, Defence (Amendment) Act, 1987); and
- Inland Fisheries Act (Section 59, Inland Fisheries Act, 2010).

At present, each tree felling licence application costs €20.
Further information on tree felling can be found online at https://www.agriculture.gov.ie.

Where a project involves a large area of forestry and or felling of a number of trees, this often triggers the requirement for replacement trees of suitable species or mix thereof to be planted on "bare plant-able lands" elsewhere via an Afforestation Licence (see **Section 3.1.1** for further information).

2.4.3.9 Derogation Licence(s)

A Derogation Licence may be required when removing vegetation in preparation for tree felling/afforestation. Derogation licences are licences to disturb or interfere with protected plant and animal species. A number of plant and animal species are legally protected in Ireland. Some of these species are included in a system of Strict Protection pursuant to the requirements of Articles 12, 13 and 16 of the Habitats Directive (92/43/EEC) and are sometimes referred to as Annex IV species. The list of Annex IV species which occur in Ireland and its waters is set out in **Table 1**. The European Commission Guidance

document[8] on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC (October 2021) should also be consulted for further information.

Table 1: Annex IV Species

Annex IV Species	
Animals	**Plants**
All bat species	Killarney Fern
Otter	Slender Naiad
Natterjack Toad	Marsh Saxifrage
Kerry Slug	
Dolphins and Porpoises	
Whales	
Marine Turtles	

2.4.3.9.1 Derogation Licence to Disturb Bats or their Breeding or Resting Places

At present there are nine confirmed resident bat species in Ireland. All bats are listed on Annex IV of the EU Habitats Directive. Under the Irish law that implements this directive, both the bats themselves and their roosts are protected, as such it is an offence to disturb or interfere with them without an appropriate licence. If any bat species is suspected to inhabit structure (e.g., trees, bat boxes, buildings, stone bridges etc.) in any area proposed for development, a derogation licence to disturb bats, their breeding or resting places may be required by the granting authority[9].

Even when planning permission is granted, the wildlife legislation applies. **Works which would capture or kill them, damage or destroy their roosts or disturb them at important parts of their life cycle cannot take place without obtaining a *second derogation licence***. This licence is issued when planning permission is given under Regulation 54 of the Regulations, and strict criteria must be met before such a licence can be approved. 'Bat Mitigation Guidelines for Ireland'[10] should also be referred to when carrying out works which may disturb them.

2.4.3.10 Licence To Interfere with or Destroy the Breeding Places of Any Wild Animals

If you are intending to develop in an area to be known for breeding places of any wild animals, a licence 'To Interfere with or Destroy the Breeding Places of Any Wild Animals' may be required to proceed. A licence may be required by the granting authority, NPWS (Section 23 (5) (d) of the Wildlife Act 1976 as amended), the legislation states that any person who wilfully interferes with or destroys the breeding place or resting place of any protected wild animal, shall be guilty of an offence.

See https://www.npws.ie/licences-disturb-or-interfere-protected-plant-and-animal-species for a further information.

[8] European Commission Guidance document. Available online at: https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en [accessed August 2023].
[9] National Parks and Wildlife Service (NPWS), under EC (Birds and Natural Habitats) Regulations 2011-2021.
[10] NPWS Bat Mitigation Guidelines for Ireland. Available online at: https://www.npws.ie/sites/default/files/publications/pdf/IWM134.pdf

2.4.3.11 Commencement Notice / 7-Day Notice

In accordance with the Building Control Regulations, you are obliged to submit a *Commencement Notice* or a *7-Day Notice Application Form* with a *Seven Day Statutory Declaration* prior to commencement of the development to the Building Control Section of the Local Planning Authority, giving notice of the intention to start work.

The Building Control Authority must receive a Commencement Notice not less than 14 days and not more than 28 days before you wish to commence.

Additional documentation may be required to be submitted with the completed Commencement Notice; and this should be completed online on the National Building Control Management System (BCMS). An online system (BCMS) for lodging commencement notices and 7 Day Notices and complying with the various new requirements is available at www.localgov.ie.

The fees relating to a 7-day notice are set out in **Table 2.**

Table 2: Breakdown of the current rates and fees for a 7-day Notice Application

Submission of a 7 Day Notice in Respect of:	Current Rates and Fees
a) Work in connection with the construction or extension of a building	€250, or €5.80 for each square metre of floor area being provided, whichever is the greater
(b) Work in connection with -	
(i) the material alteration of the interior of a building	€250, or €5.80 for each square metre of relevant floor area, whichever is the greater
(ii) the material alteration of the external surfaces of a building	€250
(iii) a combination of (i) and (ii) above	€250, or €5.80 for each square metre of relevant floor area, whichever is the greater
(c) A building in which a material change of use takes place	€250, or €5.80 for each square metre of relevant floor area, whichever is the greater
(d) Works or a building, where the building concerned will be used as an agricultural building	€130, or €1.60 for each square metre in excess of 300 square metres of -
	(i) gross floor area being provided,
	Or
	(ii) relevant floor area
	As the case may be, whichever is the greater

2.4.5 Pre-Construction Conditions

For the purposes of safe construction and operation of and battery storage facility additional conditions need to be strictly adhered to. In the case of the Seveso Directive this is not a licence so much as an international standard that must be adhered to if your activity involves the storage, use or potential release of dangerous substances.

2.4.3.12 Seveso III Directive

The Seveso III Directive aims to control major accidents and or hazards involving dangerous substances, especially chemicals. They are a set of preventive measures and notifications in order to reduce the risk of hazardous activities and a put limitation on the consequences for human health and the environment, with a view to ensuring a high level of protection throughout the EU in a consistent and effective manner.
This Directive shall not apply to any of the following:

a. Military establishments, installations or storage facilities;

b. Hazards created by ionising radiation originating from substances;

c. The transport of dangerous substances and directly related intermediate temporary storage by road, rail, internal waterways, sea or air, outside the establishments covered by this Directive, including loading and unloading and transport to and from another means of transport at docks, wharves or marshalling yards;

d. The transport of dangerous substances in pipelines, including pumping stations, outside establishments covered by this Directive;

e. The exploitation, namely the exploration, extraction and processing, of minerals in mines and quarries, including by means of boreholes;

f. The offshore exploration and exploitation of minerals, including hydrocarbons;

g. The storage of gas at underground offshore sites including both dedicated storage sites and sites where exploration and exploitation of minerals, including hydrocarbons are also carried out; and

h. Waste land-fill sites, including underground waste storage.

Notwithstanding points (e) and (h) of the first subparagraph, onshore underground gas storage in natural strata, aquifers, salt cavities and disused mines and chemical and thermal processing operations and storage related to those operations which involve dangerous substances, as well as operational tailings disposal facilities, including tailing ponds or dams, containing dangerous substances shall be included within the scope of this Directive.

In the event of a major accident with the potential to pose a significant threat to human health the operator is required to notify the HSA immediately using the approved Notifiable Incident Form and email this to comah@hsa.ie.

Please refer to: Seveso III Directive – Seveso III On the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (Text with EEA relevance), Annex I for a list of Dangerous Substances considered under the Seveso Directive.

2.5 Construction

2.5.1 Planning Permission Conditions

Upon a grant of planning permission, there will almost certainly be planning conditions imposed by the Local Authority, which may cover a range of matters. There will likely be conditions that will cover construction, such as working hours, which specifies the acceptable window of time when construction may take place, or other conditions in relation to noise from construction, dust generated, wheel washing, etc. These conditions must be strictly adhered to, and if a project is found to be in breach of conditions, a Local Authority may initiate enforcement proceedings.

The Local Authority may deploy Site Inspectors to ensure compliance with planning conditions, and other site matters under which the Local Authority has jurisdiction.

2.5.2 Outline of Construction

For smaller battery installations, micro and mini-generating systems batteries can be used to guarantee supply during weather related electrical outages. Batteries are connected to inverters and connect to the circuit of the building, and the electricity meter (where applicable for feeding to the national grid). A licenced electrical engineer should handle the installation of a battery system.

Once construction is ready to commence, site clearance is the first stage, if required, preparing the site for construction, access roads will be put in place allowing construction vehicles to access the site. ***For safety and security, the actual batteries are housed in their own structures, such as warehouses or containers***. Battery storage units often are typically supplied in containers that are situated in the prepared site – the containers usually with lithium batteries are simply put in place on a concrete platform and the substation constructed and connected to the grid.

2.5.3 Commissioning

Following the construction of a battery storage installation, it must then be commissioned. This takes place on all installations regardless of size, however, for large and commercial projects, this is generally a more formal process.

Commissioning involves a series of electrical testing, mechanical testing, performance evaluations and corrections reporting. The purpose is to ensure the equipment has been correctly installed and will operate safely and efficiently.

Provided a project passes the commissioning stage, it will then enter its operational stage, and begin to store electricity for consumption or sale.

3

Operations and Maintenance Stage

Some licences and consents may not have a duration that covers the entire lifespan of a BESS project, and so may require further attention from the owner/operator. This may be as a result of the legislative basis for the consents, or as a change of legal circumstance, or an environmental change over time.

3.1 Licences

3.1.1 Afforestation Licence (Technical Approval)

An Afforestation Licence "*provides the permission to plant all or part of the areas specified, and the areas planted meet scheme requirements*." This is necessary for all afforestation projects where the area involved is greater than 0.1 hectare (approx. 0.25 acres). Afforestation is defined in the Forestry Act 2014, as amended, as *"the conversion of land to a forest with a minimum area of 0.1 hectares and tree crown cover of more than 20 per cent of the total area, or the potential to achieve this cover at maturity"*. Forest land is defined as land under trees with a minimum area of 0.1 hectare and tree crown cover of more than 20% of the total area (or the potential to achieve this cover at maturity).

This permit is necessary when a developer seeks to replant trees which were felled during a site development. For the proposed afforestation of alternative lands, approval must be obtained before the associated felling licence can be granted. Proposed alternative land should be submitted for afforestation approval as early as possible, ideally at the same time as the felling licence application is submitted. Afforestation approval must be applied for using the Afforestation Pre-Approval Form.

All afforestation projects (whether availing of a grant or not) must obtain prior written approval from the Department of Agriculture, Food and the Marine (DAFM) termed 'Technical Approval'. A technical approval confirms that the proposed forest detailed in the application complies with the silvicultural (control of the growth, quality and needs of the forest, of particular importance for timber production) and environmental requirements. This approval provides permission to plant all, or part of the areas specified in the application. Grant aided projects require a supplementary 'Financial approval' in conjunction with technical approval. This financial approval' must be obtained before work can commence.

Further information on tree felling can be found online at https://www.agriculture.gov.ie.

3.1.2 Waste Disposal Licence/Permits

Disposal of waste from BESS facilities will be required to be with registered waste companies that are approved to deal with the waste type. Lithium batteries are classified as hazardous waste and any replacement of units will require removed batteries to be dealt by appropriately approved waste management companies.

For further information regarding specialised waste disposal please refer to **Section 2.4.3.7**.

3.1.3 Seveso Directive Compliance

Large scale battery facilities (BESS) have the potential to require a Hazardous Substance Consent and be subject to the COMAH Regulations, but this does not always apply. Currently there are no Lithium BESS facilities listed under COMAH by the Irish Health and Safety Authority but this may change in the future. Other battery systems such as those using Dinickel trioxide (Ni_2O_3) are listed under the Seveso Directive and would require regular updates to safety and emergency plans.

For further information relating to the Seveso Directive please refer to **Section 2.4.5.11.**

3.1.4 Abnormal Loads Permit (Permit for Specialised Vehicles)

Should the batteries need to be replaced or exchanged during the course of normal operations an abnormal load permit may be required. Please refer to **Section 2.4.3.3** for further information.

4 Project End Stage

4.1 Decommissioning

Decommissioning refers to the cessation of energy production and the dismantling and removal of associated equipment and infrastructure.

4.1.1 Planning

Typically projects that have been constructed following the procurement of planning permission from a Local Authority, will deal with decommissioning by condition. This means that within the conditions attached to the planning permission, it will directly set out how to carry out decommissioning and restoration of the site to its original condition. This is typically ordered after a set period of operation, and thus the decommissioning of the installation does not require further consent, as it has been provided for under the original application. If, however, you wish to conduct works not specified within the condition, planning consent will be required for those works.

Please note that there may be other conditions specified regarding the end of a project's lifespan, so please review relevant permissions carefully.

4.1.2 Licences

The decommissioning phase of a project may require reapplication for licences applied for during the pre-construction phase along with additional licences.

4.1.2.1 Notice to Close and Application to Terminate Connection Agreement

Notice of intention to stop/change electricity generation is a mandatory requirement as part of grid connection agreement.

The requested termination date must be in line with Grid Code requirements. For generators less than 50 MW the date must be at least two years after the deemed complete application date. For generators greater than 50 MW installed capacity, the date must be at least three years after the deemed complete application date.

For further information on the steps required for a valid notice to close and application to termination connection agreement please refer to the EirGrid Group Plant Closure Process.

4.1.2.1 Other Licence(s)

In addition to the above licences other licences may apply such as abnormal load or road closures if the site is to be fully decommissioned – these licences will be subject to the conditions laid out under planning.

4.2 Lifespan Extension

4.2.1 Planning

For installations that required planning permission for construction, there may be a condition attached in relation to the lifespan of the installation. If there is, this must be complied with, however, if not, the owner/operator may leave the installation in place according to their own wishes, while ensuring it remains safe.

Regarding larger scale projects it is more likely that lifespan extension will be dealt with by condition, meaning that within the conditions attached to the original planning permission, it will directly set out how to carry out a lifespan extension. Typically, this will specify that further planning consent is required. If there is no specific condition, you may not require planning permission. If you have any doubts whether planning permission is required, you may contact your Local Authority and request a Section 5 Declaration, in which it will be determined if your works are exempt from planning permission or not.

4.2.2 Licences

As project extension entails the use of the equipment for a slightly longer period of time the licences would fall under the operation and maintenance remit. For further information on operation and maintenance licences please refer back to **Section 3** of this document.

4.3 Re-Powering

4.3.1 Planning

From a planning perspective, it is best to approach considering this like a new project when considering re-powering, and so it is useful to utilise the SEAI Single Point of Contact Renewable Energy online tool for guidance, in addition to complying with the regulations.

For projects that previously required planning permission, planning permission may be required.
The original planning permission may contain a condition specifying that any further works on the site requires further planning permission to be obtained. If there is no such condition, you may still require further planning permission, as the works required may be substantial. It is recommended that you consult with the Local Authority regarding re-powering, and potentially seek a Section 5 Declaration. It is likely that permission will be required, as re-powering may be classed as 'land use intensification.'

4.3.2 Licences

With the exception of the certificates that will not be required for renewal (e.g., Disability Access Certificate), it is likely that the remaining licences will require renewal or reapplication. It is recommended that you consult with the various granting authorities regarding re-powering of your project and seek advice as to whether renewal/reapplication is required.

5 Other Useful Resources

Battery Energy Storage Systems (BESS) using LI-Ion batteries: ARC Tech Talk Volume 26 Battery Energy Storage Systems (BESS) (allianz.cm)

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