

## Appendix 2 – Summary of applicants supporting information

**Pre-application Consultation Report** – the report describes the consultation process undertaken by the applicant prior to submitting the application. This report outlines the engagement activity that took place with potential interested parties which included advertisement of the public event in the press and notification of local properties within proximity to the development site. The report explains that an accessible website hosted information for the development proposal with two online interactive consultation events held from 1600 to 1900 on 20 May 2021 and 1700 to 1900 on 24 June 2021. The events were attended by 12 parties including 4 local elected members. The report states that comments were made in relation to a number of matters which included – noise impact; landscape and visual effects; impacts on wildlife; flood risk; traffic impacts; site selection; carbon balance; community benefit fund and potential danger from fires and battery failures.

**Supporting Statement** – this document provides the applicant's assessment of the proposal in the context of the provisions of the Development Plan and other material considerations. The document outlines the development proposal and describes each of the elements that makes up the energy storage system. It details that each container will be fitted with a fire suppression system which controls the risk of fire spreading between containers should a fire occur at the site. The installation of the 49.9MW energy storage project will result in significant carbon savings, helping to decarbonise the UK electricity grid. This is estimated to be within the range of 2,157 to 3,371 tonnes of carbon dioxide equivalent per annum. A 50MW/100MWh battery will result in a saving of 3,371 tonnes of carbon dioxide equivalent per annum. This is equivalent to the impacts from the non-heating electricity use of 3,805 average homes. It is considered that the proposal represents sustainable development and that the benefits of the proposed development outweigh any potential harm caused by the development of the site. The statement suggests the project will enhance the economic development and sustainability of the local area, while also helping to deliver the further decarbonisation of the Scottish and UK electricity sector. It is stated that the proposal would secure economic development and would help meet national policy to support the economy by ensuring continuity of the energy supply. The statement concludes that the principle of the proposal is considered to be acceptable in terms of the NPF3, SPP, the TAYPlan and the Angus LDP.

**Factors for Site Selection** – this document provides further information regarding the operational and technical requirements for siting the development next to an electrical substation. It indicates the need to be geographically nearby has several driving factors and from an electrical viewpoint it is related to impedance, volts drop and signalling losses. Essentially the longer the cable run, the greater the resistance and the more volts are dropped. Battery storage systems operate Bi-directionally as they charge and discharge so any voltage drop during transmission should be multiplied by two as it has an effect in each direction. Signalling losses should also not be underestimated as every meter of cable slows down the instructions for the battery to charge or discharge. Using the volts drop calculation the longer the cable run the greater the power loss, for example, there would be an annual energy loss in a 150m cable of 1,168kWh. Using the same data, a 300m cable run would lose 2,336kWh and at 1km, annual losses would be 7,811kWh or more than enough energy to power 2 homes for an entire year. As an energy storage system may operate up to 10 times over a 24-hour period, this would add up to a significant amount of wasted energy if there is a 'significant' separation distance from the point of connection. Therefore, the closer to the point of Grid connection a battery is, the less losses are incurred. From an operational viewpoint an SSE Engineer may be required to attend to visit the site during routine or fault conditions (the are times when a fault on SSE's network can cause the battery energy storage system to 'trip' and this will require resetting manually) and the closer the site is to a substation, the easier and faster this work can be carried out.

**Design and Access Statement** – this document explains the design and access principles and concepts that have been applied to the development proposals. It indicates the proposal is located on the B9134 Old Brechin Road, which is considered to provide more than adequate road network capacity during both the construction and operational phases of the development. Once operational the proposed Whitehills Energy Storage Project will generate infrequent vehicular trips, consisting of visits to the site by a light van or car one or two times a week. It concludes that the proposal will lead to an insignificant increase in travel generation once operational, lower than that associated with a single residential dwelling.

**Construction and Environment Management Plan** – this document outlines how the construction project will avoid, minimise or mitigate effects on the environment and surrounding area. Specific information is provided on the construction process as well as the roles and responsibilities of individuals who are involved in the project and how they ensure environmental compliance will be achieved. Information is provided in relation to construction dust which incorporates mitigation measures to deal with dust generation related to construction operations; earthwork operations and vehicle movements. Construction noise and vibration management procedures are incorporated to ensure compliance with permitted hours of operation; legal noise constraints and a complaint investigation and resolution procedure is identified. Ecology protection will be undertaken through the appointment of a qualified Ecological Clerk of Works (ECoW) for the duration of the construction. The ECoW will liaise with the Principal Contractor to ensure that all construction practices comply with best practice guidance and that all relevant ecological legislation and all planning conditions are adhered to and will ensure that all mitigation measures are working effectively and where appropriate make recommendations on where improvements could be made. Provision is also made for procedures for dealing with environmental incident and emergency responses.

**Noise Assessment** – this document assesses operational noise from the proposed development at the nearest noise sensitive receptors. It concludes that noise levels from the site will be low at the receptor locations and will meet the day and night-time criteria requested by Angus Council. The updated noise modelling based on the amendments to the proposed site layout and boundary treatment confirms that compliance with the noise levels recommended by Angus Council can still be achieved subject to provision of a noise attention barrier within the site adjacent to some of the containers.

**Carbon Assessment** – this document details the carbon saving benefits of the proposal and concludes that project will result in significant carbon savings, helping to decarbonise the UK electricity grid. This is estimated to be within the range of 2,157 to 3,371 tonnes of carbon dioxide equivalent per annum, depending on the methodology used. In addition, this will reduce and ultimately prevent the need for further fossil fuel-based grid balancing technologies, gas peaking plants and diesel generators, which have high carbon impacts.

**Response to Community Council submission** – this document provides a response to the community council consultation response. It indicates the proposal does have a significant environmental benefit in terms of facilitating the further decarbonisation of the electricity system and prevent the emission of over 2,000 tonnes of carbon dioxide per annum. The nature of the development is such that it has to be connected to the grid at main substations which dictates the location of the development. 50MW of generation is the equivalent of 20 to 25 large wind turbines running at their maximum capacity, or the average generation of 60 to 75 such turbines. In relation to safety the site would be managed in accordance with appropriate health and safety best practice. The separate battery containers are anticipated to be of steel construction, and each will include automatic fire detection, venting and suppression systems. The visual impact of the development can be minimised through an appropriate landscaping scheme which can be secured through an appropriate planning condition. Flood risk and drainage concerns are noted however no flooding within the site is anticipated and it would not be vulnerable to extreme flood events due to the topography of

the site. It is suggested that a planning condition could control the final design of the drainage system for the development. It is not considered that the temporary loss of 1ha of agricultural land would have an adverse impact. The recycling of the batteries at the end of the project is not a significant issue with this process currently taking place and expected to evolve over the coming decades.