

2 The Need for the Proposed Development

This chapter of the EIAR outlines the need for the proposed development – the continued operation of WOP Station and ADF and the transition of that station to exclusive firing with sustainable biomass and all associated development.

This chapter states the needs for the proposed development having regard to the specific remit of the Board in their assessment of this proposal and should be read in conjunction with **Section 5** of the Planning Report (**Document Ref QS-000206-01-R460-005**), which particularly focuses on the project in the context of prevailing policy and the principles of sustainable development. It establishes the rationale for providing a dispatchable source of renewable energy generation, firing on sustainable biomass in the context of meeting Ireland’s 2030 GHG emission target and contributing to meeting our renewable energy generation target. It also clearly sets out the need to transition WOP Station through a co-firing phase with reducing volumes of peat until the end of 2027 to achieve this.

The project is justified having regard to the following:

1. Implementation of ESB’s strategic commitments to decarbonise its electricity generation operations
2. Compliance with EU policies on the renewable energy sector
3. Compliance with national energy policy to decarbonise the sector
4. Meeting established commitments to tackling climate change
5. Minimising the socio-economic impact of the declining peat industry on the Midlands Region
6. Supporting the development of the indigenous biomass industry
7. Improving energy security
8. Supporting the ISEM capacity auction and minimising costs to the Irish consumer
9. Implementing national planning policy
10. Realising objectives set out in Regional guidance documents
11. Delivering on policies and objectives set out in Offaly County Development Plan.

2.1 Implementation of ESB’s Strategic Commitments

The proposed development will convert WOP Station to a low carbon renewable electricity generating station fuelled by sustainable biomass – a significant enhancement to the ESB generating fleet. This delivers on strategic objectives of the ESB and also to the attainment of national and international targets for decarbonisation and renewable energy generation (as further discussed in **Sections 2.2** and **2.3** below).

Decarbonising the electricity generating sector is a key priority for the ESB. The Company's strategy to 2030 as set out in **Connecting to Our Future**¹ (Connecting to Our Future, Page 17) is:

"ESB's Strategy to 2030 (Strategy 2030) follows on from Strategy 2025 and is anchored in ESB's ambition to create a brighter future by leading the transition to reliable, affordable, low-carbon energy."

As cited in that report, the Company has set out Strategic Objectives including (Item 2) the production, connection and delivery of clean, secure and affordable energy, stating that (Connecting to Our Future, Page 21)

"ESB's unique position as a player of scale in both Networks and Generation Markets enables it to take a leading role in the decarbonisation of society.

We will strengthen and adapt our traditional business models, and actively encourage and adopt new business models which leverage existing and new generation and networks assets to develop other products and services."

The Company's strategic document **Ireland's Low Carbon Future – Dimensions of a Solution**² sets out the specific measures the Company will implement to achieve these objectives. The report (Executive Summary, Page 4) 'sets out a roadmap for change that prioritises investment towards those areas that will have the greatest impact on reduction in emissions from energy. It seeks to minimise the risk of stranded assets by looking at the probable shape of our low carbon energy system in 2050 using technologies that exist today and moving towards this in our plans with a "low regrets" series of options. It particularly looks at the transport, heating and electricity generation sectors, which together account for just over 50 per cent of total GHG emissions in Ireland.'

The document outlines ESB's response to the challenges posed by global warming, both in terms of technological innovation and investment. In respect of the existing generating fleet, the document sets out:

- A detailed assessment of the range of technology options for decarbonisation (Section 3);
- A detailed commentary on renewable technology options including biomass (Para.3.2.2.3), noting:
 - Biomass fuelled power generation plant can provide a suitable, low-carbon solution to deliver back-up capacity as well as essential system services and flexibility to the power systems in order to complement variable renewables;
 - The cost of fuel remains uncertain as the market for biomass is small and still developing;

¹ ESB Annual Report and Financial Statements 2017

² Document available at <https://www.esb.ie/brighter-future/emerging-technologies>

- The delivery of real environmental benefits from biomass relies on robust, clear, credible structures that distinguish sustainable bioenergy fuel cycles from those that should be avoided;
- The policy support for generating stations using biomass that generate both electricity and usable heat may be restrictive to the Irish network. Our network needs dispatchable plant for grid stability but any heat that could be potentially generated (such as for combined heat and power (CHP) purposes) is not usable due to the specific locations of the Midland Stations i.e. lack of demand. If strictly applied this policy may have the unintended effect of prolonging the use of fossil fuels.

Emerging from the document, there is a clear emphasis on the need to increase renewable generation and to complement this with low carbon, dispatchable generation. The proposed development – and the parallel proposal for the transition of ESB’s LRP Station, are key steps in this process. Post 2027, WOP Station will be a dispatchable renewable electricity generating station which contributes to meeting Ireland’s EU target for renewable energy generation. This will assist in the attainment of policy objectives – and also critically ensure the State avoids penalties for failure to meet renewable energy generation targets.

In the case of both WOP and LRP, sustainable biomass has been identified as a means of providing the necessary dispatchable renewable energy generation source – with the key advantage that the existing stations are technically capable of being modified without a requirement for significant development works, associated outages, or significant costs – costs which would ultimately be met by the Irish consumer.

Projects, such as the transition of WOP Station, are therefore key to the delivery of these corporate objectives as well as to a range of other critical steps such as supporting the renewables sector; helping Ireland to achieve its commitment to achieving a targeted percentage of renewable energy generation; and maintaining security of supply through growing use of an indigenous low carbon fuel supply and increased diversification of energy sources utilising existing assets rather than requiring the construction of new infrastructure.

2.2 Compliance with EU Policies on the Renewable Energy Sector

As set out in detail in the Planning Report (**Planning Report, Section 4 and Para. 5.1.2**) the proposed development is strongly compliant with a range of EU policies aimed at enhancing the Community’s renewable energy sector as a key means of reducing greenhouse gas emissions and decarbonising the energy sector.

The development of the renewable energy sector is enshrined in Article 194(1) of the **Treaty on the Functioning of the European Union (TFEU)** which notes the development of renewable forms of energy is a key aim of energy policy.

This strategic objective is then reflected in all EU policy statement on the sector – including:

- the Community White Paper **Energy for the Future: Renewable Sources of Energy** - which prioritised the development of the renewables sector establishing a target of doubling the share of renewables by 2010 thereby setting a positive policy framework at the highest level;
- the **Renewable Energy Roadmap** – which established the context for a mandatory target of a 20% share of renewable energies in the EU's energy mix by 2020 – with that target endorsed by EU leaders in March 2007;
- **2020: A strategy for competitive, sustainable and secure energy** - which set out that by 2020, the EU aimed (based on 2007 targets) to reduce its greenhouse gas emissions by at least 20%; increase the share of renewable energy to at least 20% of consumption; and achieve energy savings of 20% or more ³. It also required all EU countries to achieve a 10% share of renewable energy in their transport sector. The Strategy aimed - through the attainment of these targets, to help combat climate change and air pollution, decrease the EU's dependence on foreign fossil fuels, and keep energy affordable for consumers and businesses. It set out five priorities including implementation of an EU-wide strategy to accelerate the development and deployment of low carbon technologies.
- the **Energy Roadmap 2050** – which was drafted in the context of the EU goal to cut greenhouse gas emissions by 80 to 95% by 2050. The Roadmap sets out four main routes to a more sustainable, competitive and secure energy system in 2050: energy efficiency, renewable energy, nuclear energy, and carbon capture and storage. The Roadmap concluded that decarbonising the energy system is technically and economically feasible, and that, in the long run, all scenarios that achieve the emissions reduction target are cheaper than the continuation of current policies. It also noted that increasing the share of renewable energy and using energy more efficiently are crucial; and that immediate replacement with low-carbon alternatives can avoid more costly changes in the future.

Projects such as that proposed are essential in realising the targets set out in these EU frameworks.

As per the recast Renewable Energy Directive – REDII⁴, the proposed development is a renewable energy project. Its implementation will convert an existing high-carbon peat-fuelled station to a low-carbon, sustainably sourced, biomass fuelled station, without any necessity to construct a new station. This is strongly compliant with the

³ Energy 2020, Introduction, Para. 4. Available at: https://ec.europa.eu/.../ener/files/documents/2011_energy2020_en_0.pdf

⁴ Renewable Energy Directive (2016/0382) known as RED II

European Commission's energy policy, and, in-turn, with policies to decarbonise the energy sector.

The proposed development will assist in the attainment of real targets with respect to the renewable energy sector. It will contribute to improved energy security and also economic competitiveness – at EU level, while also assisting the State in reaching its targets for renewable generation thereby avoiding fiscal penalties.

2.3 Compliance with National Energy Policy to Decarbonise the Sector

As set out in detail in the Planning Report (**Planning Report, Section 4 and Para. 5.1.3**) the decarbonisation of the energy sector is a fundamental objective of National, Regional, and local sectoral policy documents and a key element to tackling the challenges posed by climate change. As noted therein, support for this project is clearly set out in policy statements including:

- the **2007 Energy White Paper**;
- The **National Renewable Energy Action Plan (NREAP)** which emphasised the need to reduce dependency on fossil fuels; improve security of supply; reduce greenhouse gas emissions and promote the green economy – all of which are supported by this proposal;
- the **Strategy for Renewable Energy** which emphasised the role REFIT 3 played in providing certainty and confidence to the sector and explicitly identified co-firing as a supported technology;
- The **White Paper, Ireland's Transition to a Low Carbon Energy Future** which dealt with the key timeframes for achieving targets for 2020 and 2030, providing a detailed context for the energy sector in terms of meeting reduction targets, identifying bioenergy as a potential fuel source for heating, transport and power generation;
- The **National Mitigation Plan** which notes that an interim feasibility review will be prepared in 2022 dealing with the timeline for the transition from peat – indicating that there was an acceptance of on-going peat-fuelled generation in the interim with the 2022 document to provide a context for the final stages of the transition, noting that this would be completed in advance of the 2030 date consistently referred to across policy documents;
- The **National Peatlands Strategy** which established an extremely proactive context for co-firing – having regard to the need to manage and protect the peatlands, while accepting that there is a strong local and Regional economy that depends on exploiting that natural resource – albeit in the most responsible way possible and while facilitating a move away from large-scale commercial peat harvesting. The document provides a positive context too for biomass, anticipating the stimulating effect the transition of the peat-fired stations would have on the indigenous biomass sector;

- **EirGrid's All-Island Generation Capacity Statement 2017-2026** which clearly indicates the Transmission System Operator (TSO) itself anticipated that biomass will play a role in diversifying the energy system and meeting targets for the energy generation sector; and
- The **REFIT3** support mechanism which financially supports biomass by guaranteeing biomass renewable generation a minimum price for electricity exported to the grid. The express purpose of the support is the addition of 310MW of biomass renewable electricity capacity to the Irish grid including explicitly the support for biomass generation in the peat fired stations to the end of 2030 – noting that the proposal before the Board will actually see co-firing (peat and biomass) to the end of 2027 with biomass only thereafter. The mechanism explicitly supports fuelling by means of peat and biomass and represents significant public financial support for the phased replacement of peat with renewable biomass.

As noted in relation to EU policies, the proposed development is necessary to achieve targets set out in national policy documents in relation to the decarbonisation of the energy sector. The proposal is strongly compliant with, and supported by, public policy – as evidenced by the availability of a key fiscal support – REFIT 3.

2.4 Meeting Existing Commitments to Tackle Climate Change

Electricity demand across the National grid is met by a range of energy generation sources. These include conventional dispatchable energy plants - such as gas, oil, peat, biomass, coal-fired and hydroelectric generating stations; and renewable energy in the form of solar and wind. Dispatchable generation refers to sources of electricity that can be dispatched at the request of power grid operators or of the plant owner according to market needs. These facilities can literally dispatch electricity to the grid at the press of a button. They can be turned on or off, or can adjust their power output as required and can provide additional grid services which are not readily available from traditional renewable technologies. By contrast, non-dispatchable renewable energy sources such as wind, cannot be controlled by operators during all operating conditions. They are, by their very nature, intermittent and variable.

To meet electricity demand EirGrid draws on both non-dispatchable and dispatchable plants. This is done on a priority dispatch basis on the merits of the generation source. Renewable (non-dispatchable) sources are awarded first priority, reflecting the support for low-carbon generation sources. If sufficient renewable energy is not available, dispatchable sources are needed to meet demand.

In order for the national grid to accommodate non-dispatchable generation sources, there is a requirement for the availability of reliable dispatchable energy to compensate for those times when insufficient renewables are available to meet demand. As the proportion of renewable generators on the system increases – in-

line with the progressive move towards increased reliance on renewables, the availability of those reliable dispatchable sources becomes increasingly important. The availability of support services, such as batteries, also becomes increasingly critical. This is reflected in the emphasis placed on the sourcing and securing of grid services by EirGrid.

Grid and energy system balancing takes place every day but it is at its most noticeable during extreme weather events. During the severe cold weather events of February / March 2018 - when wind energy was not available, demand across the grid was high. Equally during good weather conditions – such as the prolonged period of good weather in late June / early July 2018, dispatchable sources of power become strategically essential with wind energy providing only a low percentage of the actual requirement. An example of this is provided in **Figure 2-1** below. This shows the actual electricity required to meet the system energy demand for the period 28th June to 4th July and the percentage of this provided by renewable wind energy.

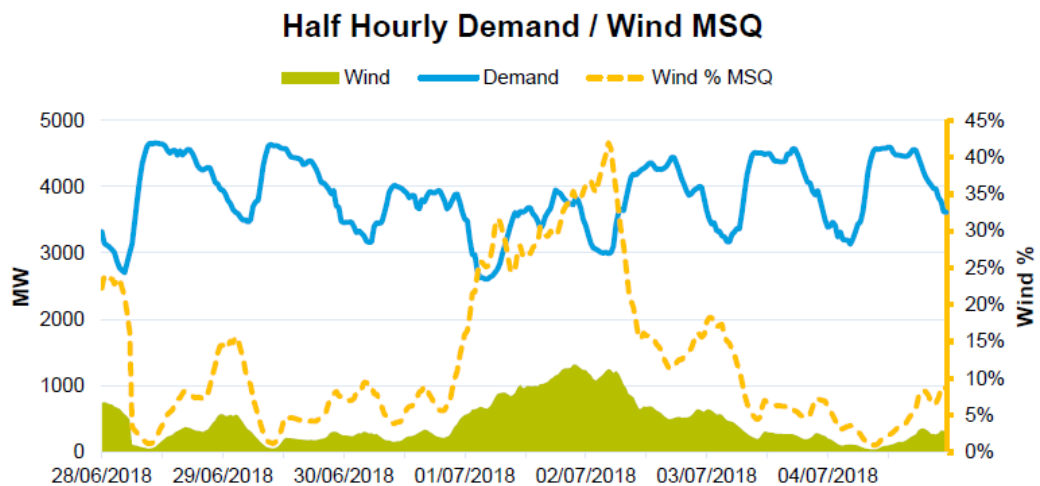


Figure 2-1: System Electricity Demand and Wind Energy Generation

This was notably attributable to calm wind conditions at that time. During events such as these, the availability of a diverse range of dispatchable energy sources located across the grid is essential in supporting the non-dispatchable renewable energy sector.

Fuelled by biomass, WOP Station would provide renewable dispatchable generation to a transmission system that will have increasing amounts of intermittent generation such as wind, solar and interconnectors. This is a key advantage of WOP post-2020 because dispatchable generation ensures the grid can facilitate additional renewable generation – thereby supporting the build-out of the latter type of generation, in particular wind and solar.

The transitioning of WOP Station through a co-firing phase leading to fully renewable generation on sustainable biomass will both support and contribute to Ireland’s targets for renewable energy generation as follows:

- In the period 2020 to 2027, peat combustion at WOP Station will contribute positively to the business case for the project. Without this initial stage the proposed development is not commercially viable.
- WOP Station provides renewable dispatchable generation to an electrical system that will have increasing amounts of intermittent generation such as wind, solar and interconnectors. Dispatchable generation facilitates and supports the build-out of the latter type of generation, in particular wind and solar.
- The biomass portion of the generation at WOP Station would contribute directly to Ireland's renewable electricity (RES-E) targets, and by definition the country's renewable energy targets.
 - The most recent official data from SEAI is that 27.2% of electricity was generated from renewable sources in 2016⁵. Ireland's RES-E target for 2020 is 40% which in turn is a component of Ireland's overall renewable energy target of 16% in 2020. The country could potentially be subject to fines or additional costs if the 16% target is missed. The SEAI currently projects that Ireland will achieve between 13.2% and 15.4%. Operating as a co-fired station WOP would contribute a little over one percentage point to the RES-E target of 40%, thereby helping the country to get closer to the overall renewable energy target, and potentially reduce any fines or additional costs that would accrue.
 - Although no official RES-E target for 2030 has yet been set, the Government of Ireland⁶ and EirGrid⁷ have both given some consideration to 2030 RES-E targets of up to 55% in recent publications. Ireland has limited options for low- to zero-carbon dispatchable generation towards the end of the next decade. There are technical limitations on the range of alternative dispatchable generation options. For example nuclear power generation is precluded; and there are unresolved technical challenges facing generation with carbon capture and storage. Biomass is one of the few low-carbon dispatchable generation options available to Ireland. By the end of 2027, when WOP Station is fuelled exclusively by biomass, it could potentially contribute over two percentage points towards whatever 2030 RES-E target has been set.
- The biomass used at WOP Station, which is considered a zero-carbon fuel, would displace fossil fuel energy generation.

⁵ Energy in Ireland 1990 – 2016, SEAI, December 2017

⁶ Renewable Electricity Support Scheme (RESS) High Level Design, July 2018

⁷ Tomorrow's Energy Scenarios Report 2017

- Biomass co-firing at WOP Station and other generating stations will serve to stimulate the development of an indigenous biomass industry, providing participants in that sector with a stable and expanding market.

By contrast, in the 'Do-Nothing' scenario the closure of WOP Station could be detrimental to the achievement of Ireland's committed renewable energy targets. There would be no contribution to achieving this renewable energy target level from the proposed development if it did not go ahead. No displacement of carbon emission arising from the biomass firing element would arise and the potential for increasing diversification of energy supply and hence contributing to its security would be lost.

The energy demand would still exist and this would likely be met by an alternative fossil fuelled gas fired generating station - particularly during periods of low or no renewable generation, as for example in the period June/July 2018. An alternative fossil fuel plant would emit carbon dioxide in the generation of the electricity - albeit at a lower intensity than the co-fired stations. If this need was met by the construction of a new generating station (such as a gas fired station), this would give rise to additional costs to the consumer as the new station construction costs would likely be an order of magnitude higher than transitioning the existing WOP Station with consequential higher electricity prices and could take up to ten years to develop, construct and put into operation.

In addition, the peat supply bogs do not function as active carbon sinks as they have been drained and are bare of vegetation with no actively growing layer to absorb carbon. Therefore, although peat harvesting to supply WOP Station would cease, emissions of greenhouse gases Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O) would continue to arise from the active peat production surface areas and drainage system through the oxidative loss of carbon due to exposure to the atmosphere and emissions of other GHGs. These greenhouse gas losses would continue for a period until rehabilitation of the bogs is undertaken. The level of emission have been estimated (See Chapter 10 of this EIAR) based on the area extent of peat bogs serving WOP Station and using the IPCC Supplementary Guideline for Wetlands (Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands. Intergovernmental Panel on Climate Change, 2013⁸, Tier 1) emissions for boreal zone (i.e. sub-arctic) and temperate wetlands in peat production. Using these values and gross production surface areas it has been estimated that annual greenhouse gas emissions from the bare peat harvesting areas would generate 137,474 tonnes of CO₂, 799 tonnes of CH₄ and 12.6 tonnes of N₂O in the worst case scenario. The greenhouse gas effects of methane and nitrous oxide are significantly higher than that of carbon dioxide. These emission would continue on an annual basis until such time as complete oxidisation of the peat harvest areas has occurred or rehabilitation has been successful.

⁸ IPCC 2014, 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands, Hiraishi, T., Krug, T., Tanabe, K., Srivastava, N., Baasansuren, J., Fukuda, M. and Troxler, T.G. (eds). Published: IPCC, Switzerland.

Alternatively, where the transition to biomass is implemented, the station will enter the co-firing phase in early 2020. From this point there will be an immediate reduction in CO₂ emissions due to reduced peat burn, with additional displacement of CO₂ from the biomass firing element. Peat burn will continue to reduce to the end of 2027 when the station is fully transitioned to biomass. At this point energy production from WOP Station will be accounted for as “low-carbon” under the EU Rules whereby biomass is considered carbon neutral. This will be reflected in the GHG certificates for the Station.

The energy generated by this dispatchable renewable biomass fuelled station will contribute significantly to achieving Ireland’s GHG emission targets for 2020 to 2030.

On the broader scale, the perceived and real impacts of the ‘Do-Nothing’ are also worth considering. The perception may be that the ‘Do-Nothing’ scenario i.e. the closure of WOP Station, would positively contribute to the achievement of targets set for the EU Emissions Trading Scheme (ETS). However, as outlined in the Planning Report (see **Para. 3.3.2.1**) where the station either closed or transitioned directly from 100% peat to 100% biomass on day one (an alternative that the ESB confirms is not economically viable), the overall EU level carbon allowances available under the ETS would not be reduced. The EU CO₂ allowances are on an agreed downward trajectory to achieve the GHG reduction targets to 2030. The ETS has also been strengthened by recent reforms to ensure this trajectory and final GHG level will be met. Simply put, in a scenario where the Station closes or is required to immediately convert to 100% biomass, the unused carbon credits would be available for another CO₂ emitter in the EU. There would be no overall reduction in the GHG emissions and no beneficial impact on climate change. Whereas there would be no environmental gain there would (see **Section 2.5** below) be a significant, negative and immediate socio-economic impact on the Midlands Region where job losses would result – an impact that can be minimised by an orderly transition away from peat being permitted.

2.5 Minimising the Socio-Economic Impact on the Midlands Region

As set out in detail in the Planning Report (**Planning Report, Para.5.1.5**) the proposed development – and particularly the gradual and orderly transition away from a reliance on peat, is vital in minimising the socio-economic impact of the declining peat industry on the Midlands Region.

The continuation of generating activity on the site and the transition of WOP Station to biomass, represents a significant investment in the Midlands region. This ensures a continuation of employment and economic activity associated with the Station and associated fuel supply operations, including maintenance of the rates base within the County.

During the initial co-firing stage i.e. to the end of 2027, peat would continue to be used as a fuel – albeit at a significantly reduced level. During this time the employment and economic activity around that industry would change – but this

change would be at a significantly reduced pace than a scenario where the plant closes or where the use of peat as a fuel ceases immediately.

The socio-economic impacts arising from the phased transition away from peat to renewable biomass would be:

- a far reduced impact on employment than that outlined above, with total employment reducing from 376 Full time equivalent (FTE) jobs in 2018, to 320 in 2020, 310 in 2025 and 302 post-2027; as compared with the loss of all 376 FTE jobs directly at the end of 2020.
- a gradual reduction in the number of people directly employed by Bord na Móna in peat supply activities. This would coincide with an increase in the numbers employed in the indigenous biomass supply chain and activities associated with the supply of imported biomass. It is estimated that at 100% biomass there would be a requirement for 52 road hauliers.
- activity on the Station site itself would remain relatively consistent – with a presumption that those 11 people currently engaged in fuel handling by Bord na Móna at WOP Station site are assumed to have direct equivalents during and after the transition to Biomass.
- the transition to renewable biomass will also temporarily result in an increase in employment due to the construction works associated with the proposed development. It is estimated that up to 34 FTE external contractors will be employed in construction works associated with the transition. An additional 2 FTE ESB employees would have a site presence during these works.

There is a marked contrast to the scenario where the station closes, or the transition to biomass is immediate, whereby significant and sudden job losses would have significant socio-economic impacts.

2.6 Supporting the Development of the Indigenous Biomass Industry

As set out in detail in the Planning Report (**Planning Report, Para.5.1.6**) the proposed transition of WOP Station to sustainable biomass is likely to stimulate and support the development of an indigenous biomass industry by providing a ready market for its output. This is particularly important to the agricultural and forestry sectors within an economic transport distance from WOP Station – and the other two Midlands stations, who will benefit by securing long-term supply contracts backed by a state owned commercial company, ESB, thereby creating a stable biomass market. As set out in the Planning Report, this has added benefits with respect to related industries including the renewable heat market, which will be able to avail of the increasing availability of indigenous biomass.

2.7 Improving Energy Security

The proposed development of dispatchable, lower carbon renewable generating capacity is important in guaranteeing energy security, by utilising an alternative sustainable fuel for energy generation.

Energy security is predicated on two things – fuel security and fuel diversification.

As noted in **Section 4** of the **Planning Report**, the SEAI's report on energy security (2016) noted the growing reliance on imported energy sources, referring to this as reducing overall energy security. At that time the assessment noted the indigenous fuel contribution – with peat accounting for 47% of that sector. The more recent SEAI publication (2017) indicates that while dependency on imported gas has reduced due to the impact of the Corrib Gas Field, this is fossil fuel based and finite in nature. That report recommends that alternative renewables should be developed to further reduce imports and improve energy security.

The decline of the commercial peat sector is inevitable and as this takes place the proportion of fuel from indigenous sources will sharply decrease – unless an alternative source is identified. This will ultimately affect fuel diversification and reduce energy security by increasing the reliance on imported fuels to compensate.

The proposed transition of WOP Station to sustainable biomass increases the contribution to the generating sector from biomass, thereby increasing fuel diversity. This has a direct and positive impact on energy security and diversity of fuel type.

The proposed transition of WOP Station to sustainable biomass is predicated on an initial reliance on imported biomass. However, even from the earliest days of the transition, between 20 and 40% of biomass will come from indigenous sources and this will, to a substantial degree, compensate for the loss of peat from the indigenous proportion of total fuels. This has a direct and positive impact on fuel security and diversity by addressing the decline in the contribution of indigenous fuel to the national fuel mix.

As noted above, it is anticipated that the transition of WOP Station (and that of its sister facility at LRP) will stimulate and support the development of an indigenous biomass industry. On that basis, the increased availability of an indigenous biomass source in the medium-term – will not only serve to displace high-carbon peat as a fuel but also further improve energy security by increasing the contribution from the indigenous fuel sector in a sustainable way. This will have a positive impact on energy security.

2.8 Supporting the ISEM Capacity Auction and Minimising Costs to the Irish Consumer

In order to align with the European target model for cross border electricity trading the Single Electricity Market (SEM) Committee in 2014 set out their high level design for a revised market framework for the all-island SEM. Part of this revised framework provided for the development of a competitive capacity mechanism where existing

and new generators would compete through an auction process for contracts to ensure sufficient capacity is available to meet Ireland's peak demand.

In the Do-Nothing scenario electricity generation at WOP Station ceases and this generation source would therefore not be available to participate in the auction process. EirGrid would then have to go to the energy market to procure capacity from a new entrant earlier than planned. This would result in a higher auction clearing price for that energy – a cost which would ultimately be borne by the consumer.

As well as potentially raising the costs within the capacity mechanism there may also be an impact on the energy price. The economic impact is difficult to estimate but given the capital costs associated with the development of a new station, that capacity could be at a higher cost than energy sourced from the existing station – and this increase could prevail for an extended period. Ultimately these costs will be borne by the end user – the energy customer.

The proposed development will see full utilisation of an existing station, the capital costs of which have been met by the energy consumer through the PSO. The proposed development avoids any requirement to develop a new station and provides a source of energy generation at a lower cost than a new station could. It therefore supports the ISEM Capacity and reduces costs to the Irish consumer.

Finally, the continuation of generation at WOP and at LRP enables renewable generation to be added to the system without the construction of new overhead lines or transmission stations. Re-utilising the existing transmission system infrastructure reduces the environmental and economic impact of connecting the same volume of renewable generation elsewhere on the island of Ireland.

2.9 Implementing National Planning Policy

As set out in detail in the Planning Report (**Planning Report, Para. 5.1.9**), the proposed development– in respect of both the continuation of generation on the site and also the transition to sustainable biomass, is strongly supported and in-line, with National Planning Policy.

This is reflected in the strong compliance with principles set out in **The National Planning Framework (NPF)** with respect to the availability of supports (such as REFiT3 for the renewables sector); and also National Policy Objective 53 which refers to the potential of the bio-economy – to which the indigenous biomass industry would contribute. The proposal also complements National Policy Objectives 21 and 23 by promoting innovation in the rural economy including support for those industries addressing climate change and sustainability; and the growth of the bio-economy which includes the forestry, energy and bio-energy sectors; and National Policy Objective 55 with respect to the decarbonisation of society.

Complementary to the broad objectives of the NPF, the National Development Plan (NDP) provides the context for the permitting of projects such as that proposed. The NDP identifies the conversion of peat power plants to more sustainable low-carbon technologies by 2030 as a priority investment for the commercial and private sector.

It further notes the imperative to decarbonise the energy sector again identifying 2030 as the date by which peat will no longer be used as a fuel for generation purposes.

2.10 Realising objectives of the Regional Guidance Documents

As set out in detail in the Planning Report (**Planning Report, Para. 5.1.10**), the proposed development– in respect of both the continuation of generation on the site and also the transition to biomass, is strongly supported and in-line with the Midlands and Eastern Regional Planning Guidelines (RPGs).

Those RPGs establish a positive context for the development of the renewables sector including setting a positive context for the development of an indigenous biomass sector. The RPGs establish a direct policy connection (Policy TIP33) between the transition away from peat and the move towards increasingly sustainable renewables, noting that the Authority supports this transition. The proposed development would also assist the Regional Authority by continuing the operation of key infrastructure – namely power generation infrastructure while overseeing the transition of that facility to an increasingly sustainable fuel type, thereby mitigating against significant and negative socio-economic impacts that would arise where the station closes.

2.11 Delivering on Policies and Objectives set out in Offaly County Development Plan

As set out in detail in the Planning Report (**Planning Report, Para. 5.1.11**), the proposed development– in respect of both the continuation of generation on the site and also the transition to biomass, is highly compatible with the Offaly County Development Plan (CDP), 2014 – 2020.

The proposal is compliant with the principles of development set out in the Core Strategy and Strategic Objective 8 dealing with economic development and employment generation, in that it provides direct and indirect economic support to the local economy in terms of employment; commercial transactions; ancillary services and critically, contributions to the County's rates base.

The CDP establishes a framework to accommodate the next stage of renewable energy generation anticipating – and providing a positive policy context for, the switch over to renewable fuels, specifically referencing the move to biomass. The proposal is also highly compliant with objectives set out in relation to the Rural Strategy, Rural Development, Renewable Energy and Energy Strategy.

The Plan envisaged a co-fuelling stage at each of the Midlands stations, noting explicitly that this is an activity supported by the Planning Authority:

The process of burning peat in Edenderry and Shannonbridge is likely to migrate to a co-fuelling process over the lifetime of the plan. Offaly County

Council supports the continued operation of power generation facilities at these sites.'

As shown, the CDP policies are strongly supportive of the proposed development; and the proposed development would assist the County in the attainment of key Plan objectives.

2.12 Conclusion

The WOP Station is a highly maintained, operational electricity generating station. Its development and maintenance has been facilitated by the publically funded PSO. It represents a significant asset – both to the ESB and the Midlands region.

Under existing operating conditions, there is no rationale for the demolition of the station. Its operation is limited only by consent – namely (as set out in the attached Planning Report) the end-date specified in the original grant of planning permission. There are no technical reasons for the station to be decommissioned. It is fit-for-purpose as a continued asset in the ESB's generating fleet.

Maintaining the WOP Station as a peat-fuelled station conflicts with ESB corporate policy and also EU and State policies, which strongly favour the decarbonisation of the energy sector as a key means of addressing climate change.

The ESB has therefore developed an alternative model for the station – namely a transition to a sustainable, renewable fuel - biomass. The timeframe for this transition is limited by two factors – the need to manage the socio-economic impact of the move away from peat on the Midlands Region, and the financial feasibility of the transition. Having regard to these considerations, ESB can implement an immediate reduction in the volumes of peat consumed (from early 2020), with a complete transition to biomass by the end of 2027. From that date WOP Station can operate as a fully renewable energy station.

The transition of WOP Station requires consent for the continued operation of the existing station, ADF and all associated development. This is highly justified due to the on-going viability of the station which has been the subject of continued investment and maintenance by the ESB throughout its operational life.

Because WOP Station is fit-for-purpose to operate as a co-fired and exclusively biomass fuelled generating station, the transition to biomass requires minimal works on the station site and an extension to the existing dedicated ADF. The transition therefore represents a highly logical use of existing infrastructure – and a realisation of the investment of resources that have been funded by ESB and the State, through the PSO, to deliver renewable energy generating capacity. Arising from the minimal scale of the development works, the environmental impact associated with the development is less than that which would arise were a new station or new transmission system assets to be constructed. This is a key consideration in the justification of the project – both for the ESB and the consenting authorities.

In terms of policies and supports, the delivery, within a relatively short-time frame, of dispatchable renewable energy generation, is a critical step in realising objectives

and targets for the functioning of the energy sector, and tackling climate change as identified by the ESB, the EU, the State and Regional and local Authorities.

The proposed development is a key element of ESB's move towards decarbonising its generating fleet and the energy generation sector – as part of the Company's commitment to addressing the challenges posed by climate change. The phased nature of the conversion will ensure that this strategic development occurs while minimising and managing the socio-economic impacts of the transition away from peat. This is in-line with the Company's on-going commitment to the Midlands region. The Company's strategy is strongly supported by both EU and National policies. This is reflected in a wide range of policy documents and – critically, by the availability of fiscal supports – namely REFIT3. The development will contribute towards energy security and diversification of fuel sources – key to the EU and the State's policies on the energy sector. In addition to assisting on the attainment of policies and targets, the transition of the WOP Station (and its sister facility at LRP) to biomass has the potential to stimulate the development of the indigenous biomass industry. This can assist in the diversification of the rural economy and also support initiatives such as renewable heating initiatives.

The proposed development represents a significant, logical and positive step towards addressing the challenges facing the energy sector, as ESB and broader society tackle the threat of climate change.

2.13 References

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