Nant Mithil Energy Park, Powys.
PEDW DNS Application Ref: DNS CAS-01907-D7Q6Z1.

CPRW-ReThink Chapter 1

Introduction

Nant Mithil Energy Park, Powys.
PEDW DNS Application Ref: DNS CAS-01907-D7Q6Z1.

Evidence by CPRW-ReThink on:

Introduction

Application for Planning Permission under the
TOWN & COUNTRY PLANNING ACT 1990 and PLANNING (WALES) ACT 2015

REPRESENTATION on behalf of **CPRW,** the countryside charity, and **RE-think**, a Third-Party Objector Groups of affected local residents, in relation to an application for a 'Development of National Significance' (reference number: CAS-01907-DZQ6Z1), under the Town and Country Planning Act 1990 as amended by the Planning (Wales) Act 2015 and the Developments of National Significance (Wales) 2016 (as amended) and subsequent Regulations, for 'the construction and operation of an energy park including wind energy developments and associated infrastructure and habitat management areas' on land 'approximately 9km east of Llandrindod Wells', Powys.

Prepared by Christopher D. Ford BA, MBA, MSc, PhD, MRTPI.

Table of Contents

1. INTRODUCTION

1.1. This submission provides a **Representation** to the Application for a 'Development of National Significance' (reference number: CAS-01907-DZQ6Z1) (Application), under the Town and Country Planning Act 1990 as amended by the Planning (Wales) Act 2015 and the Developments of National Significance (Wales) 2016 (as amended) and subsequent Regulations, for 'the construction and operation of an energy park including wind energy developments and associated infrastructure and habitat management areas' consisting of 30 wind turbines with a tip height of up to 220m and associated access tracks, known as 'Nant Mithil Energy Park' (Proposal) on land 'approximately 9km east of Llandrindod Wells', Powys (Site). The Application is made by Nant Mithil Energy Park Ltd, a subsidiary of Bute Energy (Applicant) (Applicant's Environmental Statement [ES] 1.10).

1.2. This and the associated submissions form a Representation under the 'Developments of National Significance (Wales) Regulations 2016', the 'Developments of National Significance (Procedure)(Wales) Order 2016', and the appropriate Acts. CPRW and RE-think would like to be treated as an 'interested person' or party in this DNS Application process.

1.3. This Representation is submitted jointly by **CPRW** [1], a charity, established in 1928, which seeks protection and enhancement to the countryside and environment in Wales, and **RE-think**, a Third-Party Objector Group of affected local residents. Whilst both groups support the need for renewable energy to address climate change, they feel that this Proposal does not address that is a way that is sympathetic to and in keeping with the need to sustain nature and the environment. This Representation has been prepared by Dr Christopher Ford, a Chartered Town Planner specialising in the spatial aspects of energy systems and energy policy.

1.4. This Representation introduces a series of submissions prepared by CPRW and RE-think to assess the Proposal, the Application documents and the Applicant's Environmental Impact Assessment. These submissions cover almost every aspect of the Application and the effects which would be caused by the Proposal. Each submission, or Representation, looks at each relevant aspect of the Proposal and the Applicant's documentation.

1.5. The series of submissions, by CPRW and RE-think, is completed by a Concluding Representation which draws the series of submission together. The concluding Representation considers the overall Planning Balance for this case. The planning policies and criteria to be used for assessing the merits of this Application come from Future Wales, the National Plan 2040 (FW2040), Planning Policies for Wales (PPW) and the local development Plan for Powys. These are set out and reviewed in the CPRW and RE-think's 'Planning and Energy Policy' document. CPRW and RE-think's Planning

[1] Campaign for the Protection of Rural Wales.

and Energy Policy submission also reviews UK Energy Policy and recent developments taking place with the energy system.

1.6. Section 3 of this submission, which is also repeated in the CPRW and RE-think Planning Balance and Conclusions submission, lists all of the documents which are being submitted as Representations for the Application at the same time.

1.7. This Introduction to the CPRW / RE-think Representation sets out the parties aims and objectives; gives details of the team preparing the Representation; provides some useful general data relating to the Proposal; and sets out various concerns that the parties have regarding this Application. This Introduction closes with brief conclusions.

2. AIMS AND OBJECTIVES OF THE PARTIES.

2.1. The parties submitting this Representation, CPRW and RE-think, both support the development of renewable energy, including onshore wind farms. They agree that whilst there is an urgent need to address climate change by reducing carbon and other greenhouse gas emissions, this is not the only or sole priority for sustaining the earth and humankind. The need to address climate change arises because humankind has been inattentive to the impacts that we humans have on the planet. But simply placing wind farms arbitrarily is not an adequate answer. Without care in finding suitable locations, it risks further damage to the environment. There are other locations available for wind and other renewable energy developments which are far less damaging to the environment.

2.2. CPRW campaigns to protect the landscape and nature, farming, rural communities, climate change and energy, clean water and air in Wales. The credentials of CPRW in relation to the protection of the rural environment in Wales are impeccable. In the 1930s it opposed a road scheme at Conwy which would adversely impact the town walls, resulting in revisions which avoided these impacts with a new bridge parallel to Telford's road bridge and Stephenson's rail bridge. In the late 1940s, prior to the formation of the Snowdonia National Park [2], it opposed the construction of a complex of eight large power stations, dams, reservoirs and power lines across north Wales leading to deferral and then a substantial reduction in scale. In 1966 when a road scheme at Conway Castle was proposed by the Welsh Government, they successfully advocated the better, accepted, solution of tunnelling under the Conway River. In the 2010s, CPRW was a leading party opposing six wind farm and major transmission lines in Mid Wales considered in the conjoined Inquiry which resulted in only one wind farm re-powering being awarded consent.

2.3. The aims of RE-think is to save the landscape and the environment from large scale wind farms, such as this Proposal, by promoting less damaging alternative forms of renewable generation and energy saving schemes. These alternatives include offshore

[2] Now Parc Cenedlaethol Eryri.

turbines, community energy schemes, solar, wave and tidal and, as the Welsh Government recognises, the most beneficial of all, is reducing energy consumption.

2.4. In relation to the current Nant Mithil wind farm Proposal, CPRW feels that history is being repeated and that the Welsh Government has not learnt the lessons of the past. CPRW's opposition to onshore wind energy is not blind and obstructionist. However, as the conjoin inquiry in the group of wind farm proposals showed, every wind farm scheme proposed is not always suitable. Similarly, in this suite of Representations on the Proposal CPRW and RE-think shows that this Application lacks merit, would least to a high environmental cost for little gain, and should therefore be declined.

3. TEAM ASSESSING THE PROPOSAL

3.1. CPRW and RE-think has assembled a team to review the Application and the Environmental impact Assessment (EIA).

3.2. The chapters of this Representation and the team preparing it consists of the following:

Table 1 – Representation Chapters and Authors

Chapter	Subject	Name	Specialism
1	Introduction	Dr C Ford	Planning & Energy
2	Policy	Dr C Ford	Planning & Energy
3	Project Elements & Description	Dr C Hugh-Jones	
4	Landscape and Visual	Ms K Platt	Landscape Architect
5	Heritage	Mr C Welsh	Archaeologist
6	Ecology & Ornithology	Mr D Woodfield	Ecologist
7	Transport	Mr J Andrews	
8	Hydrology	Dr H Rodda	Hydrogeologist
9	Aviation & Telecoms	Mr J Andrews	
10	Shadow Flicker	Dr C Ford	Planning & Energy
11	Climate Change & Carbon	Dr C Ford	Planning & Energy
12	CEMP & HSE	Mr R Wilson	Geoscientist
13	Public Rights of Way	Ms S Bond	
14	Tourism	Ms M Porter	
15	Forestry	Dr C Hugh-Jones	
16	Noise	Dr C Hugh-Jones	
17	Conditions, PAC & Deficiencies	various	

18	Secondary Consents	Ms S Bond	
19	Cumulative Effects	Dr C Hugh-Jones/Ms J Chryss	
19	Balance & Conclusions	Dr C Ford	Planning & Energy

4. USEFUL DATA ON THE PROPOSAL

4.1. This section provides useful data regarding the Proposal.

4.2. Usually, wind farm developments are located remote from settlements and individual dwellings, which reduces impact on residential property. Unusually, despite being located in Mid Wales, Nant Mithil Energy Park is located close to a high number of dwellings and settlements. The nearest dwelling is approximately 650m from a turbine. Table 2 shows the number of dwellings within radial buffer zones around wind turbines. Within 1 km there are 13 affected dwellings.

Table 2 – Dwellings affected by Nant Mithil Energy Park

Distance from turbines	Number of affected dwellings
Within - 1 km	13
Within - 2 km	134
Within - 3 km	289
Within - 4 km	512
Within - 5 km	784
Within - 10 km	3,442

4.3. The Proposal consists of turbines between 180m and 220m, with most 205m high. A turbine of 205m height at some 650m distance would reach up to an angle of 17.5 degrees on flat ground. However, the turbines are located an hill overlooking the surrounding settlements and dwellings. The nearest turbine to a dwelling is mounted on a hill 140m above the dwelling. Consequently, the tip of the turbines would at a 28-degree angle, above horizontal, above the dwelling.

5. CONCERNS WITH THE APPLICATION

5.1. CPRW and RE-think have concerns regarding the legitimacy and lawfulness of the Application. These relate to the grid connection, the assessment of cumulative effects, and the Applicant's pre-application consultation process. Details of these concerns are set out here:

GRID CONNECTION

5.2. The Applicant states, at paragraph 2.2.13 of their Planning Statement, that "*the grid connection does not form part of this DNS application and will be subject to a separate application for consent*".

5.3. The Applicant explains that "*the Proposed Development will be connected to the national electricity network (the 'Grid'). Electricity generated by the Proposal will be exported following stepping-up from 33kV to 132kV at the onsite substation. It is intended that the substation will in turn connect into the Green GEN Cymru 132kV Towy Usk project, which will extend to the onsite substation*."

5.4. CPRW/RE-think do not consider this to be a lawful approach to the Proposal. The Applicant's proposed grid connection arrangement also presents other serious electrical engineering and environmental issues.

5.5. Green GEN Cymru (GGC) published documents show that the 132kV 'Towy Usk project' is a proposal for an overhead power line (OHL), between the Proposal and the "*existing 400kV transmission lines near Llandyfaelog in Carmarthenshire".*[3] It is understood this would consist mostly of an overhead line (OHL) on pylons, typically of 30m in height, some 97km in length. It is understood this proposed OHL would: pass through Special Landscape Areas; be located close to a National Park; pass through and affect a recognised Historic Landscapes; would affect the settings of as yet unquantified Listed Buildings; affect scheduled monuments and archaeological remains; as well as other adverse environmental effects.[4]

5.6. The Proposal has a circa 198MW of generating capacity (ES 1.3). That classes it as a 'large power station'.[5] It is therefore required to connect to electricity transmission network rather than the local electricity distribution network. Hence the Towy Usk project connects to the national electricity transmission system (NETS).

5.7. Spatial analysis of the disposition of the Proposal in relation to NETS shows that the proposed 'Towy Usk project' is not the most efficient, or shortest, grid connection for the Proposal. The Brecon Beacons National Park lies some 20km to the south of the Proposal. Whilst the 'Towy Usk project' seeks to connect the Proposal via an OHL near Carmarthen, to the south west, there is also NETS infrastructure to the north, east and south, south east (SSE) of the Proposal. The NETS to the north is 67km away (near Oswestry), to the east the NETS lies 65km away from the Proposal (near Droitwich). The NETS to the SSE lies only 45km away from the Proposal (6km north of Monmouth). These are potential alternative connection points to the NETS for the Proposal. None of these potential alternative OHL paths passes through

[3] Green Gen Tow Usk (https://www.greengentowyusk.com/index.php?contentid=13, accessed 1/12/25).

[4] Green Gen Tow Usk Scoping Report, October 2023. PEDW Green Gen Tow Usk Project Scoping Direction, February 2024.

[5] Under the appropriate Regulations and Codes.

environmentally protected areas.[6] Overall, general assessment shows all of these alternative OHL paths create less adverse environmental effects, than the Towy Usk option.

5.8. The proposed 'Towy Usk project' lies entirely within Wales. The alternative grid connection routes would involve parts of the OHL being located in England. It unclear how this affects the Applicant's choice, since their license is UK wide. Although the branding of Green GEN Cymru suggest it sees itself as a Welsh entity.

5.9. It is plain the Proposal grid connection, using the 'Towy Usk project', is intentionally located solely in Wales. Rather than alternative shorter grid connection route, which would in part be located in England. Aligning grid connection to suit a political boundary is not the most efficient bases for a grid connection, in regard to energy efficiency and economically.

5.10. The Towy Usk project is being proposed as a 132kV line. Whereas the usual network provider [7] would utilise either 275kV or 400kV line. The reason higher voltages are used across the country, throughout the NETS, is that doing so considerably reduces energy losses. The Applicant does not explain why they would use a 132kv line rather than 400kV. However, this is probably because the GGC license is for a 'distribution' licence. Distribution licenses are restricted to the provision of lines at 132kV and below.[8] Although in reality the Towy Usk project, at 97km long, is a transmission asset.[9] See footnote [10] for a general description of UK network arrangements.

5.11. As mentioned, higher voltage lines are more efficient and result in lower levels of energy losses than lower voltages. The transmission losses from the Proposal will be greater on the 'Towy Usk project' when compared to an OHL to either Monmouth or Droitwich because: (a) the 'Towy Usk project' line is far longer (for Monmouth it is double the length); (b) the 'Towy Usk project' would operate at 132kV, whereas the alternative would operate at either 275kV or 400kV. Energy losses for the alternative grid connection option for the Proposal, compared to a 400kV to Monmouth, are set out in Appendix 1. As the calculation shows these produce approximately 36 times greater energy losses for the 132kV Towy Usk project when compared to a 45km 400kV option (to Monmouth). A typical high-capacity transmission line, of 100km,

[6] The path to the North could go west of the Shropshire Hills National Landscape, whilst the path to the SSE would pass east of the National Park.

[7] National Grid Electricity Transmission.

[8] Distribution license, as an Independent Distribution Network Operator (IDNO), is being used by GGC in an unusual way

[9] Independent operators are not permitted to hold transmission license.

[10] The usual arrangements of transmission and distribution networks in the UK have been in place since the privatisation of the ESI in 1990 and reflect the pattern of the utilities since before that. Transmission and normal distribution network operators, which cover geographic areas, are 'regulated monopolies'. They are monopolies because it is economically more efficient to have a single provider of each service. This is similar to having a single road network. The transmission network is the equivalent of motorways. Having a second electricity network, like a second network of motorway, is inefficient.

loses approximately 1% of its power, compared to 18% for a similar length 132kV line. Losses are broadly proportionate to length and adjust of losses needs to account of the line length. As well as this inefficiency the Proposal's Towy Usk grid connection would also incur: greater heat loss, voltage drop, stability issues and increased reactive power problems.

5.12. In economic terms the relative cost of the energy loss for the two options would strongly favour 400kV transmission over 132kV. Which is why the UK's electricity transmission operates at 400kV. The wholesale electricity costs are currently around £80/MWh. If the Proposal's 198MW capacity wind farm has a load or capacity factor [11] of 30%, the annual energy output of the wind farm would be worth £41.6m.[12]

5.13. As set out in Appendix 1 the energy losses of the 97km 132KV Towy Usk OHL are estimated as being 36 times greater than for a 45km 400kV OHL. If energy losses are assumed as 1.0% on a 400kV line, as is typical across the UK NETS, then the losses on the shorter 400kV OHL would be worth £0.416m per annum. For the Towy Usk option, with energy losses about 36% of the power output the energy losses would be worth £15.0m (41.6 * 0.36). In other words, approximately 36% of the revenue would be wasted in energy losses by using the 132kV Towy Usk project.

5.14. The revenue for the wind farm will accrue to the Applicant. However, the cost of the Towy Usk project will be socialised and would not borne by the Applicant. Similarly, the cost of energy losses are also socialised and would not be borne by the Applicant or their associate company. Therefore, the additional cost of this inefficient grid connection will fall on consumers, rather than the Applicant and their associate company. Using the Towy Usk project for the Proposal's grid connection would unnecessarily increase electricity costs to consumers.

5.15. Furthermore, the Applicant's intention to use the 132kV for the proposed Towy Usk line, rather than a 400kV line, runs contrary to the planning and engineering lessons learnt in the 1950s and 1960s. It would also be contrary to the Holford Rules. Holford Rule 2 requires the avoidance of high amenity areas, special landscape areas, and listed buildings, which the Towy Usk proposal would affect.[13] Whilst the Holford Rules relate to the choice for routeing of new overhead lines, it is evident that Holford's Rules were based on the principle of using 400kV lines, then known as the 'super-grid', rather than 132kV lines for transmission. As a town planner the then Sir William, later Lord, Holford FRTPI [14], understood the strong merits of using a few taller 400kV lines

[11] The load or capacity is the measure of output a wind farm will produce in a year. With a capacity of factor of 30% this means annual output of, say a 1MW capacity wind farm would be 2628MWh. The calculation is 1MW times 24 hours a day, times 365 days a year, times 30%. For a 198MW wind farm, such as the Proposal, the annual output would be 520,355 MWh per annum. (198 * 0.3 * 24 * 365).

[12] 198MW * 24 hours a day * 365 days a year * 0.3% load factor * £80/MWh.

[13] National Grid, the adapted Holford Rules, 1992.

[14] Responsible for the drafting of the 1947 Town and Country Planning Act, Holford was arguable the father of the modern planning system.

rather than having a proliferation of 132kV lines. When giving his address to the Royal Society of Arts on 'Power Production and Transmission in the Countryside: Preserving Amenity' in 1959, Holford understood that a 400kV line capable of carrying 4GW was far more efficient than twenty 132kV lines carrying 200MW each, both environmentally and electrically. In setting out his rules Holford demonstrated that the routeing of power lines is a planning consideration and something not to considered in isolation from the siting of power stations.

5.16. The absence of the 'grid connection from inclusion in this DNS application', also creates other problems for the Application. Firstly, it unclear whether the 'Towy Usk project' will be approved. The Towy Usk project appears to be controversial and, as mentioned above, the route for the project passes through environmentally sensitive areas. The award of consent for the Towy Usk project therefore seems uncertain.

5.17. That raises considerable doubt about the merits of this Proposal (the Nant Mithil Energy Park). A power station without a grid connection is effectively <u>not</u> a power station. The purpose of a power station is to generate electricity. If the power is not used the Proposal does not serve a need. The Applicant's Planning Statement states the "*benefits of the Proposed Development*" is "*renewable energy*" to "m*ake a valuable contribution to the attainment of the UK and Welsh Government policies of … renewable energy*" (5.3.2). The Statement says carbon savings would be derived from this. However, none of these claimed benefits of the Proposal could be achieved without a grid connection to export the energy. The considerable doubts over the 'Towy Usk project' therefore directly impacts on the merits of this Proposal.

5.18. Furthermore, there is also considerable doubt over the legality of considering any proposal for a wind farm without its grid connection being considered at the same time. Given the required 97km OHL and the doubt over whether that would be awarded consent, the grid connection for the Proposal could hardly be considered 'de minimis'. However, given the circumstances set out, Wednesbury Principles may apply.[15]

5.19. Also, environmental law requires that an 'EIA Development' is appropriately defined and the full effects arising from a proposal are assessed in the EIA. The Courts have recognised that "*what is colloquially known as 'salami slicing' – the device of splitting a project into smaller components that fall below the EIA threshold - thereby avoiding the requirement to carry out an environmental assessment*" has been detected by the courts [16].

5.20. The EIA Regulations [17] identify that the "*harnessing of wind power for energy productions (wind farms)*", where "*the development involves the installation of more*

[15] Associated Provincial Picture Houses Ltd v Wednesbury Corporation (1948) 1 KB 223.

[16] Lang J. in Wingfield v Canterbury CC. EWHC 1975 [2019], (Wingfield) para. 51, 71

[17] Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017.

than 2 turbines; or the hub height of any turbine or height of any other structure exceeds 15 metres" falls under Schedule 2. It therefore has to be assessed under Schedule 3 of the Regulations. In this case the Proposal has been identified as "EIA Development".

5.21. Whilst the amended EIA Regulations [18] makes provision for overhead power lines "*with a nominal value of 132 kilovolts*", such as the 'Towy Usk project' to be treated as EIA Development under Schedule 2 after applying the screening criteria under Schedule 3, there is no automatic statutory assurance the 'Towy Usk project' will be treated as EIA Development. There is also no statutory assurance that the environmental effects arising from 'Towy Usk project' will be assessed at the same time as the Proposal or that any combined effects, such as the combined landscape and visual effects, will be considered.

5.22. It is noted that the Applicant's Planning Statement, refers to a "*separate application for consent*" (2.2.13) for the grid connection. The Applicant's approach is to avoid treating the Proposal and its grid connection as one EIA development. Therefore, the combined environmental effects of the two parts will not be considered at the same time. Thus 'salami slicing' arises as the Applicant is 'splitting a project into smaller components'.

5.23. The approach being taken by the Applicant avoids the environmental effects arising from the combination with the 'Towy Usk project' being considered within this Proposal, for the Nant Mithil Energy Park. That has doubtful legal standing. The caselaw given in 'Wingfield' and elsewhere identities four factors which are relevant to cases where EIA Developments are improperly defined. These are: i) common ownership; ii) simultaneous determinations; iii) functional interdependence; and iv) stand-alone projects.[19]

5.24. Given the ownership link between the Applicant and Green Gen Cymru 'common ownership' applies. Whilst 'simultaneous determinations' does not apply, that appears to be due to the choice by the Applicant, to split the project into two applications. 'Functional interdependence' definitely applies. The Court defines this as "*where one part of the development could not function without another*" [20]. A wind farm without a grid connection could not function and would not be able to fulfil its purpose of producing electricity. 'Stand-alone' projects do not apply, as a wind farm cannot operate and perform its function without its grid connection. And vice versa.

5.25. Common sense says that the grid connection for a wind farm is an integral part of the development. Therefore, under the EIA Regulations and the caselaw, the Applicant's

[18] Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2019

[19] See Wingfield paragraph 64.

[20] Op cit.

proposed Towy Usk OHL project should be considered within this Application, as part of a single overall 'EIA Development' project.

5.26. In the event the Applicant claims that the elements of the OHL project are unknown in sufficient detail at this time, then the principles of a Rochdale Envelope [21], and supporting guidance [22], should be applied. This requires the worst-case scenario is assessed.

5.27. Accordingly, the environmental effects arising from the 97km 132kV OHL Towy Usk OHL on pylons should be considered within the determination of this Application.

5.28. In summary, the grid connection for the Proposal, as proposed by the Applicant, would result: (a) in greater local environmental effects compared to the alternatives, due to the far longer path and affecting environmental protection on their chosen route; (b) result is greater energy losses compared to the alternatives, which means that (i) less power is available to consumers and a large proportion of the energy output from the Proposal would be wasted, and (ii) the resultant energy loss will add to adverse climate change effects [23]; (c) that the cost to consumer would be unnecessarily greater; (d) contradict the law on salami slicing and, by excluding consideration of the OHL, means that the effects of this Proposal are not properly assessed under the EIA Regulations.

5.29. CPRW and RE-think reserve their legal position in respect to this issue.

Cumulative Effects Assessment Projects

5.30. The Applicant sets their view of the other projects that are included in the cumulative effects assessment. They claim to have applied the PINS AN17 process and that in respect to Landscape "*this approach and the list of schemes to be considered in the cumulative assessment has been agreed with PCC and PEDW as detailed in ES Chapter 2*" (ES 5.135). However, contrary to the impression given by the Applicant, the 'list of scheme to be considered' and 'the approach' are not the same as a final judgement as to which schemes or projects should be included for assessment for Cumulative Effects Assessment (CEA). That is a matter which the Applicant has decided, in the first instance. The Inspector and decision maker may have a different view. Ultimately it would be for the court to decide whether law has been applied correctly.

[21] R. v Rochdale MBC ex parte Milne (No. 1) and R. v Rochdale MBC ex parte Tew [1999] and R. v Rochdale MBC ex parte Milne (No. 2)[2000].

[22] Planning Inspectorate NSIP Advice Note Nine: Rochdale Envelope. (https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope/nationally-significant-infrastructure-projects-advice-note-nine-rochdale-envelope, accessed 1/12/25)

[23] Electrical energy losses generally result in the emission of heat into the atmosphere. Whilst extremely small this would contribute to global warming.

5.31. CPRW and RE-think note that the Applicant has excluded from cumulative assessment, for Landscape, the Aberedw wind farm, the Bryn Gilwern wind farm and the Towy Usk OHL. As set out above and in the ES the Towy Usk OHL is stated by the Applicant to be the grid connection for the Proposal, to link it to the NETS.

5.32. The Application Scoping Direction refers to the Applicant's suggestion that " *the Scoping Report states that an assessment will be made of the likely significant cumulative effects in combination with other developments considering schemes which are subject to a planning application but not yet determined, consented schemes, schemes under construction or that are operational*". The Direction also says "*best practice is to include proportionate information relating to projects that are not yet consented, dependent on the level of certainty of them coming forward*". Whilst the Scoping Direction does not give a definitive view, the Direction refers to 'not yet consented' and the level of certainty of them coming forward. 'Coming forward' means as proposed projects rather than consented projects.

5.33. The Scoping Direction also points to the Planning Inspectorate Advice Note 17 on Cumulative Effects (AN17). This has been updated with the latest version published in March 2025. The Scoping Direction effectively makes AN17 the authoritative source for this issue.

5.34. AN17 rehearses the usual regulations and guidance. It quotes the EIA Regulations [24], where it says "*taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*".

5.35. The Applicant appears to have taken a minimalist approach to identifying CEA projects. Consequently, in the ES Appendix 2.6 they exclude Aberedw WF, Bryn Gilwern WF and the Towy Usk OHL on the basis of "*no planning application submitted*". In respect to Landscape, they confirm "*Aberedw WF, Bryn Gilwern WF and Green Gen Towy Usk overhead transmission line have not been considered in the cumulative effects*" (ES 5.135). In this paragraph the Applicant makes clear that they are treating these three projects and other as 'Tier 2' in terms of AN17 regarding the 'assigning certainty to other existing and, or approved development' (N17 p14). All three of these projects have been issued with Scoping Directions.

5.36. However, AN17 says "*In this advice, 'other existing and, or approved development' is taken to include existing developments and existing plans and projects that are 'reasonably foreseeable'* ". Within the terms of AN17 '*existing plans and projects that are reasonably foreseeable',* clearly includes the Aberedw and Bryn Gilwern WFs as these have been through EIA scoping. The Towy Usk OHL is effective part of this EIA Development. As such it should be treated, as a minimum, as a cumulative

[24] Whilst AN17 refers to the UK EIA Regulations, the Welsh EIA Regulations, following EU Directives, are consistent

development for this. To argue that Towy Usk OHL is not 'reasonably foreseeable' when this Proposal cannot operate without it is absurd and is not credible.

5.37. Therefore, it is CPRW and RE-think's view that these known projects should be included in the Cumulative Effects Assessment.

Pre Application Consultation and Response

5.38. CPRW and RE-think have concerns regarding the validity of the Applicant's the Pre-Application Consultation (PAC) process and reporting. The implications of this are discussed below. The issues with PAC are demonstrated here by one example.

5.39. The Applicant sets out their response to the Pre-Application Consultation in their Final Report, 2024. In respect to "*concerns that the proposed energy park doesn't feel sympathetic in form and scale to the local landscape,* and *concerns that the size of the turbines is untested in the UK …*" (Chapter 5: Landscape and visual amenity, p60) the Applicant refers to turbines of 200m and 220m elsewhere. They refer to wind farm developments at Kype Muir and Cumberhead. They also refer to other consents but do not give details. This response is intended to address concerns that the Proposal turbines, of 180m, 205m and 220m are unsympathetic to the scale of the local landscape.

5.40. The Applicant also states that "*turbines of up to 250m was modelled and has been deemed acceptable within the Pre-Assessed Areas*". The bulk of the Site is not in the Pre-Assessed Areas (PAA). Even within PAAs that Report says these area "*still contain constraints and there are a number of sites specific issues which cannot be dealt with a national level*" [25]. Accordingly, the PAA requires appropriate evidence to inform decision making, does not presume entire coverage of the PAA and does not provide a carte blanche for 250m turbines across these assessed areas.

5.41. Unfortunately, the way the Applicant refers to the Kype Muir and Cumberhead cases in their PAC response shows that the Applicant does <u>not</u> understand how the cited cases have used 200m and 220m high turbines in sympathy with the landscape. The cited cases also highlight that this Proposal is not sympathetic to the local landscape. The Kype Muir site has turbines varying in height of 156m, 176, 200m and 220m. The turbines step up in height as they go further away from the nearest public road and publicly accessible open valley below. The nearest turbines, of 156m, are about 3km from the road. There is very little habitation in the valley with only sporadic sheep farms. The higher turbines are situated over the should of the hill and are therefore out of sight from the valley below. At Kype Muir the 200m and 220m are some 4km from the public road and the valley, and therefore not visible from the areas frequented by the public. The landform is such that the only location where the 200m

[25] Welsh Government, Stage 2 Refinement of Priority Areas for Wind and Solar Energy, 2019.

and 220m turbines can be seen from public areas is from long distance of about 11km. In these locations they are seen as part of a group of wind farms in the 'far distance'.

5.42. Similarly, the Cumberhead wind turbines are a long way from and far removed from any area where the public would usually be [26]. The nearest publicly accessible areas, with visibility, are 5km away. This author's experience is that the local landform means these turbines are not visible for publicly accessible areas. Both of the 200m and 220m high turbines wind farm developments, cited by the Applicant, are wholly different in visual effect, scale and prominence compared to the Proposal. The cited developments demonstrate how larger turbines can be located sympathetically to the local landscape and with carefully siting, be blended within the topography. They are in very remote locations where wind farms, well placed away from public view, occupy Plateau Moorland landscape character types often with blanket bog.

5.43. In marked contrast to the examples cited by the Applicant the Proposal locates turbines over 200m as a close as only 650m, in the south west of the Site, to a major road (the A44) and public areas, and 1km to the north of the Site. These 200m plus turbines are proposed to be located prominently on hills of 150 above the surrounding valleys. Their tips would therefore 355m above the surrounding valley, which would be some 500m to 1,000m away. The turbines would therefore have a domineering presence over the surrounding valley areas. The areas around the Proposal have a far larger local population, than those cited. In the cited examples the resident population and public travelling on local roads are many kilometres away.

5.44. It is evident from the Applicant's response that they do not understand that the effects that the Proposal and how it is entirely unsympathetic to the local landscape and the experienced visual effect. Furthermore, their response shows that the Applicant is not competent to provide the PAC response they have made. However, the implications of this go well beyond the one example given here.

5.45. The Applicant's PAC Report makes various claims and gives what is stated to be the "*Applicant's Response*". These are false and misleading. As the example here shows, the PAC Report's authors do not give any evidence or demonstrate that they are competent to give the responses they provide. Assessment of public engagement is not a public relations exercise of painting a picture or making up the story that the Applicant wishes to present. Accordingly, the Applicant's PAC Report should be set aside as unreliable and inaccurate.

5.46. The DNS process relies on a front-loaded public consultation where developers are expected to undertake genuine meaningfully public participation, which is then taken into account to adjust proposals, before progressing to the application stage. The intention is that by the time the proposal reaches the application stage it is mature and appropriate changes applied to take account of public and consultee responses. In

[26] Unless the public specifically choose to walk a few kilometres across extremely rough moorland to the wind farm.

using public relations consultants, who are not professionally qualified to assess public responses, especially on technical topics like landscape architecture, the Applicant has shown that they have not appropriately engaged with the DNS process. Instead, the Applicant presents the PAC report as a 'sales' document. Consequently, the Applicant's application of the DNS pre-application process should be treated as not fit for purpose.

6. CONCERNS WITH THE DNS PROCESS

6.1. CPRW and RE-think also have concerns regarding accessing the Application information and the Development of National Significance Application process applied to this case. This includes problems such as accessing the Application documentation due to PEDW's web portal, issues with the application documentation, such as a lack of tables of contents, and redactions. Redaction has included text within the Applicant's Non-Technical Summary (NTS). Despite reviewing a great many EIAs (estimated at over 250) this author has never previously seen redaction in an NTS. NTSs are intended to be easily accessible short public summaries of the Environmental Assessment. Following communications redactions in the NTS were eventually removed. Whilst this has handicapped CPRW and RE-think's ability to make representations on the case, wherever possible the Groups have worked around these issues. The Groups are grateful for the assistance provided by PEDW.

6.2. It is noted that the ES Volume One Written Statement consisting of 1,112 pages containing various chapters with no Table of Contents. Presenting the ES in this form is extremely unusual. It inhibits accessibility for the public and readers.

Due Process

6.3. One issue where the Groups have been unable to make satisfactory progress relates to redactions of sensitive ecological information in the ES. Dependent upon the location, major developments can be affected by ecology which is sensitive. That can cause issues with putting sensitive ecological information into the public domain. The Groups understand and respect that. However, on other occasions, where similar sensitive information has been involved, the usual solution is to facilitate public consultation by allowing appropriate qualified professionals and specialists to access the sensitive ecological information, whilst retaining general public confidentiality. CPRW and RE-think have proposed this solution to PEDW for this case. Unfortunately, PEDW has not accepted this approach.

6.4. Consequently, CPRW and RE-think are unable to view, assess and take into account the sensitive ecological information contained with the EIA, due to PEDW redactions. That is regrettable. It means that the public's right to meaningful 'public participation'[27] is

[27] Aarhus Convention 1998, Article 6.

being inhibited. Accordingly, CPRW and RE-think reserve their rights to challenge any decision to grant permission for the Proposal which is based on the withheld ecological information.

7. SUMMARY

7.1. In summary, this representation is an introduction to a collective suite of documents on behalf of CPRW and RE-think. These documents cover almost every aspect of the Application documentation. This series of representations are drawn together in a concluding Planning Balance and Conclusions documents. All of these documents should be read together as joint representation by CPRW and RE-think.

7.2. Within this Introduction we are also raising important concerns regarding the Application. These relate to the lawfulness and efficacy of the grid connection required to deliver any benefits of the Proposal, the Cumulative Effects Assessment, and the Pre-Application Consultation response. CPRW and RE-think are also raising concerns about the Application and the DNS process. Several aspects of the issues raised here question whether this Application is correctly founded and whether a decision on this case, given these issues, would be lawful.

CDF
for CPRW & RE-think
February 2026

APPENDIX 1: Energy Losses.

Comparison of energy losses of a 97km 132kV AC overhead power line (OHL) against a 45km 400kV AC OHL carrying the same power:

The engineering relationship for electricity is set out in Ohms Law: *This states that the electric current through a conductor between two points is directly proportional to the voltage across the two points. Applying a proportional resistance, the following equations describe the relationship between these:*

$$As \quad V = I \,.\, R, \quad or \quad I = V / R, \quad or \quad R = V / I$$

where V is Voltage [measured in Volts], I is current [amps] and R is resistance [ohms].

The power flow in an electric circuit is determined by the voltage and the current flow through it.

$$Power\ Flow = V \,.\, I$$

Therefore,

$$Power\ losses\ in\ transmission = I \,.\, I \,.\, R$$

Consequently:

For the same power flow Power Flow = V x I therefore for the same power flow if voltage is increased by a factor of 3 the current will be reduced by a factor of 3.

Reducing the current by 1/3 reduces the losses by a factor of 9 (3 x 3)(P=I.R), for the same length of a 400kV line.

Being Alternating Current (AC) circuits, as well as resistance, the powerlines will also incur losses due to ‘impedance’. The impedance of a 400kV powerline is about half that of 132kV powerline for the same length.

Therefore, for a common length of 132kV OHL the power loss is about 18 times greater than the same length of a 400kV line (9 x 2).

This is based on a common length of OHL and it is necessary to take account of the different OHL length. In the alternative path option cited here, the Towy Usk project is about twice the length of the shortest available 400kV route (to Monmouth). Therefore, the power loss on the longer 132kV OHL will be about twice that of the 400kV OHL of about half the length.

In all therefore the energy loss on the 132kV OHL will be approximately 36 times the energy of the shorter 400kV OHL.

If we assume that the power loss on the 400kV line is 1% of the power transmitted, which is typical of the NETS, therefore the energy loss on 97km 132kV AC will be about 36% of the power output of the 198MW wind farm.

Whilst this is a considerable level of power loss the cost does not fall on the developer because network costs are socialised and paid for by electricity consumers.

Furthermore, the transmission of this scale of power at 132kV over long distances (such as 97km) is exceptional in the UK, where 132kV circuits are limited to a few kilometres.

Source: Richard Martin BSc MIET, a retired former NGESO Electrical Power Systems Engineer.