

Simon Power
Associate (Environment and Planning)
Arup
4 Pierhead Street
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CF10 4QP

With Copy to Jo Smith (WAG)

Dear Mr Power

Comments in relation to meeting of TAN 8 TAG on 09/05/03 and Draft Report

Further to the meeting of the Technical Advice Group (TAN 8 - Renewable Energy) on the 9th May 2003 I would be grateful if you would consider the following comments.

1. In regards section 8 (Review of Planning Approaches) I would make the point that the criteria based approach to wind farm development offers local authorities significant flexibility to deal with applications for wind turbine development, and that this valuable approach should not be discarded. It is accepted that while this approach is useful it is often considered to be the "easy option" since local authorities while providing a criteria based policy are not obliged to provide any additional information which might provide further guidance as to where the local authority would accept the development of wind turbines.

Supplementary Planning Guidance is prepared by many local authorities particularly to more technical and controversial developments such as wind turbines, however such guidance is often focused on the technical specifications of the wind turbine, the layout of such clusters/farms and the design of ancillary buildings. It would be far more useful for the revised Technical Advice Note on energy (TAN) to require the preparation and adoption of Supplementary Planning Guidance (SPG) which would provide indicative advice of where wind turbine development would be required. Such an SPG could be based upon existing Unitary Development Plan (UDP) criteria based policies and would simply build upon current practice as opposed to starting anew which could be more damaging to the existing development plan system.

2. In section 7.1 it would be advisable to include details explaining the 4th Tier. While the 4th Tier is undesignated and considered to be 'white land', the policy approach is to highlight such land as suitable for wind turbine development. However there needs to be more local sensitivity in this approach to proviso the 'white land' area of search as likely to have constraints at a local level. Such constraints will include settlements, general incompatible uses (eg mineral activities), identified interests of conservation importance, and local designations within Development Plans.

3. Finally as my last point I would draw your attention to my comments issued in response to the meeting on the 10.01.03 (see bottom of page) and would ask that you reconsider any proposals in the report to require local authorities to develop their own digital renewable energy planning tool datasets from locally collected information. In the event you do propose this it should be stated that where local authorities are required to develop local datasets that adequate resources be made available by the Welsh Assembly to enable local authorities to meet this task. The report should also make it clear that in the event such resources are not made available then there is significant potential for resource stretched authorities to struggle in contributing significantly to the 4 Terra Watt national target.

Comments from meeting on the 10.01.03

The proposal to include detailed maps displaying indicative windspeeds and potentially policy unconstrained areas of Wales would be extremely useful for Local Planning Authorities (LPA'S). Such a map, together with a system whose overlays can be interrogated would save many LPA's a great deal of time and resources and save a lot of duplication of effort.

In regards the level of detail (constraint maps - high, moderate, weak) it is considered that the key need of LPA's will be to have access to as much information as possible in a form which allows easy access and interrogation. As such the the map within the TAN could focus on key information layers, particularly those which are unlikely to change a great deal or with any frequency to "future proof" the TAN eg National Parks and AONBs; SSSI's; SAC's; SPA's. NNR's; Airports and Buffer Zones; etc..

I hope these comments prove to be useful however in the event you require clarification on any points please feel free to contact me.

Yours Sincerely

Smith, Joanne (TPE)

From: [REDACTED]@care4free.net]
Sent: 23 May 2003 14:07
To: Jillian Hastings @ARUP; Smith, Joanne (TPE)
Cc: [REDACTED] (ISG); [REDACTED] BWEA; [REDACTED] @ NWP;
Subject: TAN-8 [REDACTED] @ Bond-P; [REDACTED] @ WCE; [REDACTED] @ Dulas



BWEA-position-5-03.doc

c

Dear Jillian & Jo,

Apologies for my late response (attached) to the last meeting - too much work (in England!)

Regards,

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23rd May 2003

By e-mail only.

To Jillian Hastings - ARUP
And Joanne Smith - NAW

Dear Jillian (ARUP) and Jo (NAW),

TAN-8 & Facilitating Planning Report

This is in response to your request for feedback on your draft report and the issues discussed at the last TAG meeting. I am writing on behalf of the BWEA as far as consultation within the Association has been possible on this.

We support the comments submitted by [redacted] by e-mail dated 21/5/03. In addition I would like to offer the following comments, which I hope are in line with those made at the meetings.

Page 2 – We accept the aim of the project which was “to develop a decision support tool for use by local authorities”. There has been some conflicting comment suggesting that the ‘tool’ could become a strategic decision-making policy. We would disagree with this as being impractical.

Page 5 – The latest status of the Welsh targets should be given.

Page 6 – As noted in the meeting, the word “spatial” is, we believe, being abused within the TAG in the consideration of the TAN and the planning tool. Many comments are related to ‘locational’ requirements, not ‘spatial’ as accepted in planning terms. The term Spatial should be defined as in the Wales Spatial Plan consultation as (sic) “location of human activities to contribute best to meeting environmental, social and economic needs”

Chapter 4 – We agree that it is necessary to review the TAN in terms of viable forms of renewable energy. This can be done by reference to interpretations by the DTI.

Page 9 –

- [redacted] refers to the need to include approved projects,

- Para 3 - It is worth noting in passing, that the majority of wind farm Public Inquiries in Wales have been due to call-ins by the Planning Department of the Welsh Office and the NAW, sometimes against the advice of the LPA.
- Box - We don't believe that the planning tool is 'required' in policy terms, although it may be as a part of the consultant's brief. The likely purpose and status of the proposed tool should be clarified by NAW.
- Box – third bullet point – I think the word 'consensus' is not appropriate. I suggest the following “an agreed set of criteria would be an important step forward in focussing the debate over possible locations for wind projects, so that the more significant and/or subjective issues can be considered.”

Page 10 – Again the “requirement” for the planning tool is open to discussion. I would suggest 'beneficial'.

Page 13/14 – Tidal – We have seen no assessment which would stand scrutiny on the cost-effectiveness of a tidal projects. If these technologies are to be mentioned in public consultation NAW would need to consult with DTI of their viability. It would be important for NAW to give guidance to planners on which technologies are viable in the timescale of the TAN. Table 4x on page 17 is helpful.

Page 25 – I agree with ' _____' on the definition of the radar zones which are for consultation.

Page 26 – 6.3 – I agree with ' _____' on the first para. This could read “It is considered that an average wind speed of around 7 m/s at hub-height is the lower end of current commercial viability. However, as wind speeds increase with height above the ground and turbines are getting taller (and larger), more areas of land are likely to be viable, albeit only with the larger turbines in marginal areas.”

The NOABL wind model is a DTI dataset available to the public.

Page 27 – It is worth replacing “the grid” with “the local distribution grid”, not the National or 'super' grid which may only be accessed by the larger offshore wind farms. I suggest you swap paras 2 & 3.

Last paragraph; penultimate sentence – Please delete the reference to 'intermittent supplier'. Access to the grid is defined by maximum required capacity and minimum load, not intermittency, since demand is also an intermittency factor.

I would reinforce the point that mapping the distribution system does not imply available capacity – it costs industry several £,000 per project to obtain a connection assessment from the distribution companies.

Chapter 7 –

1. In spite of the time taken to review the TAN and the comments of industry representatives, we are disappointed at the emphasis of the report on negative effects and new constraints, rather than the potential to fulfil the NAW policy on renewables capacity.
2. The second sentence is philosophical but not enlightening. The issue of 'value' is relative and must be balanced in planning against significance and policy.

3. We support the comments by 1. that the planning tool can only be advisory on the technical issues of site selection because of uncertainties and complexities. In particular, effects on properties of noise and amenity are fundamental to approvals, and these cannot be modelled down to this level.
4. We support a tiered approach to the TAN but based on adopted designations and not including technical constraints as policy issues. The planning tool should be an optional facility for use by LPAs.
5. We suggest that LPAs and/or statutory bodies should have the obligation to demonstrate the existence of acceptable alternative sites in lower value tiers.
6. We feel that there could be 4 -5 tiers and that the lowest tier should imply a presumption in favour, the highest tier implying a presumption against. The lowest tier should not be constrained to 'brown lands' which in practice, have other constraints, and are unlikely to provide enough capacity for the targets.
7. We do not support the application of prescriptive buffers. As mentioned in the TAG meeting, planning policy is based on "significant, adverse" effects and these must continue to apply. If buffers are considered, they should be advisory within which different levels of assessment may be necessary, e.g. outside of any buffer areas, EIA may be considered unnecessary.
8. We do not accept that landscape character or 'capacity' should form a prescriptive part of the TAN unless fully assessed and adopted within planning policy. These may form advice to LPA for their own assessment of balance.
9. We object to the consideration of the term 'Wild lands' as these have no definition or basis in current policy.
10. Chapter 8 – We prefer a criteria-based approach to the TAN, similar to NPPG-6. This does not preclude some further 'areas of search' strategies being applied by the planning regions/authorities, as long as these are compatible with policy.
11. We note in 8.3 that the term 'spatial' is again used in place of 'locational' and this needs clarification with respect to the NAW's definition. It is exactly our point that the application of Spatial assessment, as originally proposed, would balance the current debate over landscape issues against those of other environmental issues, e.g. climate change, and social (i.e. local opinion), and economic (rural economy).
12. Chapter 9 – As noted above, we would object to prescriptive buffers and we believe that the technical constraints of radar and airports should be advisory, not absolutes.
13. As discussed in the TAG, the landscape assessor's conclusions on WTG size against effects need some review, although we feel that there may be some useful results from it. The principle suggested that as the landscape flattens, smaller WTGs would be preferred due to increasing visibility. This does not fit in with

experience in flat landscapes in Eastern England where the largest WTGs have been approved. If the reports ideas are to be considered for the tool or the TAN, they could be subject to peer review by other landscape advisors.

Finally, as stated in the meeting, we support the principle of allocating RE targets and implementing the TAN on a regional basis. Strategic Planning guidance has been produced in the past in four existing broad areas, in, we believe - N. Wales, Mid & West, S.East, S.West.

We also believe that the TAN should specify a obligation on LPAs to balance the location of applications and the significance of effects against regional/local compliance with the RE targets. That is, if a region is failing to develop sufficient capacity for its target, then it would have to reduce its application of any criteria.

I hope these help to move forward with the TAN.

Yours sincerely,

A handwritten signature in dark ink, appearing to be 'J. F. ...', with a horizontal line underneath.

Copy: BWEA
NWP
WCE
Dulas

Smith, Joanne (TPE)

From: [redacted]@natwindpower.co.uk]
Sent: 21 May 2003 18:02
To: 'Jillian Hastings'; Simon Power; Smith, Joanne (TPE)
Subject: Comments on draft "Facilitating Planning" report

Dear Jillian, Simon and Jo

Some comments for your consideration. I expect [redacted] and [redacted] will also come back with some more looking at the very idea of the tiered approach.

Pg 5 No doubt others can give you the correct interpretation but to me the report understates the commitment to renewables. The statement by Andrew Davies of 5/3/3 endorses the 4TWh target

Pg 9 Not sure why Cefn Croes is singled out, other unbuilt wind farms with consent include Tir Mostyn and Mynydd Clogau.

Pg 10 The capacities of the N Wales wind farms are, I think, incorrect. I believe N Hoyle to be 60MW and Rhyl Flats to be 90MW. Neil Birch (01628 532300) can give the company line.

Pg 25 74km is the extent of the consultation area not a no-go area. Due to topography much of the area will not even be visible to the ground based radar.

Pg 26 It is not turbine efficiency but reduced installation costs and higher renewable electricity prices that may lower wind speed thresholds. Contrary to popular belief wind turbines have always been pretty efficient.

Chpt 7 As you know, we do not believe a top down, GIS led approach is a sensible way to identify preferred areas or particular sites, or that preferred areas are necessarily useful, although to date there has been little concession to this point of view. Our reasons are;

1. The supporting studies and data rarely look at:-

- * The proximity of nearby houses (ie noise constraints, shadow flicker).

Acceptable separation distances depend upon a number of factors including existing background noise levels and number and type of turbine. Most of the "white areas" that appear on the constraints map are in fact constrained as people live there.

- * Access requirements.

Again dependent on the size of turbine.

- * Grid connection costs and opportunities (in sufficient detail)

These change with time as other generation comes on or off line elsewhere and changes to the distribution system are made.

- * MOD/CAA/NATS objections

All organisations claim that it is impossible to provide maps of go/no go areas and that each proposal has to be considered on its own merits. The MoD alone currently object to around one third of enquiries from developers across the UK.

- * The willingness of landowner to accommodate turbines.

Less likely to be an issue in rural Wales where the diversification opportunities are likely to be welcomed but brownfield and industrial site landowners are often reluctant to tie up land for 20 plus years when more lucrative development proposals may be available.

- * Ground slope.

This can cause the incident angle of the incoming airflow to be outside of acceptable tolerances but is also dependent upon the surrounding topography and turbine height.

2. The economics change with time and are different between developers.

The economic viability of a wind farm depends not only on the windiness of a site but also on the price available for the electricity in the market, the rate of return required by the developer or investors, the number and size of turbines that can be accommodated on the site, the exchange rate with the Danish Kroner or Euro, grid connection costs and the cost of wind turbines. Simply screening sites for a minimum wind speed will not produce either an accurate or long term view of the viability of individual sites.

3. NOABL wind speed data is inaccurate at an individual site level.

NOABL was only ever intended to be useful as a tool for accessing the potential for wind energy in broad terms across the UK and not as a site selection tool. Estimates from NOABL can differ from actual measurements by 1m/s in either direction.

The process itself, as cascaded down to Unitary Authorities, is also fraught with difficulties. There could be long delays and potential negative impacts on public perception as the consultation process could lead to a long, drawn out public debate/argument on where to locate wind farms. The resulting map identifying preferred areas could lead to long delays whilst the minority opposed to wind farm development in any preferred area attempt to defend their patch with corresponding implications for Powys CC resources. In addition, circumstances change much faster than development plans, and zoning strategies would rapidly become out of date.

For these reasons we would encourage the use of GIS systems to illustrate the constraints and opportunities presented by various planning and environmental criteria but to leave individual site identification and justification to

developers based upon their assessment of the technical and economic circumstances prevailing at the time. Many of the criteria affecting wind farm siting, including some planning and environmental criteria, cannot be properly represented on a GIS system alone but the combination of GIS and criteria is likely to result in the clearest, most comprehensive guidance.

If, however you can't be persuaded otherwise, we have the following thoughts on the tiered approach; As discussed at the last meeting, the wording of the tiers needs to be enabling rather than constraint driven. Wind energy development is as dependent upon Govt policy and planning guidance creating a positive attitude as it is on the detail.

We are strongly opposed to buffer zones around existing wind farms, seascapes, National parks, AONBs, and National Trails on four grounds.

* Firstly, such an approach has little evidence to support it despite the subjective opinions expressed in the presentation at the last meeting. Few would say mid-Wales is "dominated" by wind farms even though some would fail the test proposed.

* No account is taken of the importance and number of receptors present in the locations that can see more than one wind farm.

* Even where some receptors are subject to a moderate impact this needs to be weighed against the other merits of the proposal which might be very good in all other respects. This is the very nature of planning. There is no such thing as a perfect site.

* Clearly it makes no sense to say that at 22km there is no issue but at 18km the site is highly constrained. These buffer zones would be more useful as guidelines as to when particular issues should be assessed by EIA if specific proposals come forward in these areas.

If you can't be persuaded to drop buffers then they should all be relegated to Tier 3 as in reality they are highly constraining and will damage the ability to meet targets.

Wildlands appear to be a quickly devised concession to CPRW. However many of the most appropriate sites in the eyes of planners, councillors (the decision makers) and the general public will be on sites that could be described as "wildlands" however defined. These groups may actually prefer them on "wildlands" where wind farms are out of sight and out of mind. Carno is often praised for its siting but its land would be unlikely to be designated by a local authority paying any regard to the "wildlands" concept. Please remove this criterion, the steering group well represents landscape professionals and preservationists who are sympathetic to this idea, but the views of the majority are not represented and they will be more interested in effects on residential amenity where remote sites score highly.

As a footnote, although it has been stated at our meetings that the document is to aid LAs in their plan preparation etc, it will inevitably be used to judge individual applications for two reasons;

* It will be some time before LAs develop their own plans in which time applications will inevitably come forward. This document will carry some material weight.

* Local plans will be drawn up reflecting these criteria and then projects judged against the local plans resulting in projects being evaluated according to the criteria in the document.

That's all for now, thanks for all your efforts

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Job title	Facilitating Planning for Renewable Energy	Job number	112223
Meeting name & number	Steering Panel Meeting 5 and TAG Meeting	File reference	9.40
Location	Broneirion, Llandinam	Time & date	10.30 9 May 2003
Purpose of meeting	To discuss progress of Arup research and TAG matters		
Attendance	TAG		
Circulation	Those attending Apologies		

Prepared by JH

Date 8 May 2003

Job title		Job number	Date of Meeting	Action
Facilitating Planning for Renewable Energy		112223	9 May 2003	
1.	Apologies			
2.	Minutes of last meeting			
3.	Matters arising			
4.	Overview of progress since last meeting			
5.	Arup report – discussion			
	- policy context			
	- viable forms of renewable energy			
	- siting criteria for viable renewable technologies			
	- significant third party /external constraints			
	- relative significance of siting criteria –(!) on landscape and	
	visual issues			
	- case study findings			
	- planning approaches			
	- proposed ‘decision support tool’			
	- landscape capacity evaluation and design principles			
6.	Suggested use of our work by WAG and local planning authorities			
7.	Conclusions, Next Steps			
8.	AOB			
9.	TAG matters			

Ymgyrch Diogelu Cymru Wledig Campaign for the Protection of Rural Wales

Cadeirydd/Chairman:
Cyfarwyddwr/Director:



Simon Power
ARUP
4 Pierhead Street
Capital Waterside
Cardiff CF10 4QP

31st. March 2003.

Dear Simon,

TAG

We ([redacted] and myself) are currently working on a detailed response to your request in the last TAG meeting. I suppose we have to admit to the fact that, with the postponement of the next meeting to May, we have perhaps not given the task as much priority as we should. I hope you will still be able to receive material in the near future.

This interim letter is to provide a framework for those detailed comments arising from the revised minutes of TAG4 on 12th February. The issues are fundamental and should, we think, be addressed before TAG proceeds further.

5.1 Interpreting the Renewable Energy Targets

In the first paragraph you refer to the so-called 'new targets' which are described as being "(based on the latest EDC report and discussions with TAG members)".

We are not happy about this. We have not been party to any discussion on, or decision to endorse, such radical changes. They appear to emanate from the Email and attached tabulation sent by [redacted] of the WDA to [redacted] of the FOE Cymru on 27th January and simply copied to other members. Then, [redacted] tells me, at the meeting they were presented as a fait accompli to members. Yet your slide presenting the vast increases in on-shore wind and proportionate reductions in off-shore wind and other renewables is entitled 'ISG/WDA views'.

In fact, [redacted] in his notes distributed at the meeting *Targets, Terrawatts and Turbines*, argued against the apportioning of so much of the targets to onshore wind. His concerns that a major departure from the EDC proportions would be "highly controversial and potentially embarrassing" are noted in the next paragraph of the minutes. This was not mentioned at all in the first version of the Minutes sent out to members, despite Chris Morgan's response that this short comment would "open a



whole can of worms". As [redacted] Paper points out, the EDC 33% three way split set has now been changed into 60% onshore wind, 24% offshore wind, and 16% the rest.

In the second paragraph it is said that "[redacted] supported the new targets". Yes, he would, as they appear to be his invention, and clearly he has a vested interest in developing onshore wind because of its assumed economic benefit. As you know, the potential disbenefits in terms of tourism has to be taken on board as well.

The corresponding decrease in offshore wind is difficult to explain rationally, for, as [redacted] Table shows, we are at almost 17% already, in just two recent consents. The so-called 'new' target would only need half of the proposed Scarweather scheme. And it only needs two such proposals at some time within the next seven years to reach the 33% EDC offshore wind target share. Moreover, as the BWEA has just pointed out, nearly 400MW offshore wind was consented this month, more than the onshore development in the whole of the 1990s. Moreover, as I write this letter, the **DTI Press Release of 26th March** ('Wilson announces major boost to Offshore Wind') announced (among others) £4m to Rhyl Flats and two thirds of the £60m promised in the White paper going to Offshore projects. There is thus simply no basis for [redacted] to dismiss offshore wind (Item 6, penultimate paragraph) as being "in the demonstration stage" (and thus having a much-reduced share of the target. This claim seems to us to be solely a consequence of his extravagant upgrading of the on-shore wind share, and it is equally unjustified. Presumably, when offshore applications continue to be consented during the next seven years, this will eventually lead to a corresponding increase in the overall target towards the level advocated by Friends of the Earth.

As far as the other one-third is concerned, there are continuing signs from the government that other technologies are poised for development. Yet within the TAG, the previously vocal representatives of those interests have largely withered away, doubtless because of the disproportionate emphasis upon wind power.

Our main concern is that these so-called 'new targets' seem to be about to be advocated by the TAG disregarding what was proposed in the EDC RE Report viz. the three way split – onshore, offshore wind and other. In his response to the EDC Report, Andrew Davies did not refer to this split therefore, it must be taken that it has been accepted by WAG. I do not think it is up to officials of a NDPB such as the WDA to create their own scenarios in opposition to their political masters, and to influence the TAG, particularly without due debate. CPRW will not go along with agreeing a TAN 8 that accepts targets or splits in targets contrary to what was accepted in the Plenary session of the Welsh Assembly. That was already a great deal further than we wished to go, and was only reached because it was also seen as a contribution to 'economic development'. If the TAG now pushes the most environmentally controversial technology to a level almost double that envisaged by



the EDC, it will be seen to have transcended even that agenda and will lose credibility as a broadly based advisory group..

As I said at the outset, and I are working on a more detailed response to Item 9, Next Steps. There are two fundamental points that I wish to make at this juncture.

9. Any Other Business/Next Steps

'degree of prescription' - Are you suggesting here some degree of presumption in favour in terms of land use planning? This would be highly contentious, even in the circumstances you describe. I would like to refer you to the UK Government's Response to the Environment Audit Committee's 5 Report of session 2001-02, *A Sustainable Energy Strategy? Renewables and the PIU Review* published on March 10th. The Committee's Recommendation 27 set out "actions which should be undertaken by the Government as a matter of urgency" and included:

The Office of the Deputy Prime Minister should revise planning guidance for renewables as matter of urgency, and incorporate a presumption on favour of renewables (para 120).

The Government's response (which clearly applies throughout the UK) was:

"The Government will shortly publish new planning guidance on renewables (PPS 22) for England. But PPS 22 could not set out a presumption in favour of renewables. It is a fundamental principle of planning law that applications are considered on their own merits. Were a 'presumption in favour' to lead to perceptions that renewable projects had not been subject to proper consideration, it would leave councils (and possibly the Government itself) open to a judicial review."

'apportionment' - I presume here you mean apportioning to LAs?

If this is the case, it seems to me we could be trying to carry out two procedures that could well be contradictory.

If we base our approach on the Tier system as has been proposed, then the criteria in the Tier system will give signals to the LAs. Thus, let's say, for argument's sake that a LA (such as Gwynedd) has a high proportion of Tier 1 land: how would this affect its apportionment? Would this mean that its 'environmental capacity' would be severely constrained and therefore its apportionment would thus be significantly lower?

In other words, can we not take the Tier approach without starting down a hugely difficult trail that could well see LAs in conflict with each other and could jeopardise the whole exercise?



Sorry to be so difficult but it seems to me we are about to reach 'the moment of truth' and we have to get things right.

In fact, on consideration, do you think it would be useful if [redacted] and I could meet with you to discuss fully our concerns on the more technical issues? We have concentrated here on 'implementation of renewable energy targets' but there is more to discuss on the relative share of technologies. In addition, [redacted] signalled to you at the meeting that there was room for further discussion of impact buffers and cumulative effects; updating the database; relative weighting of constraints; and the whole question of apportionment. This is not to suggest, in any way, that we are trying to take over any agenda but to make our position absolutely clear to you before the next meeting.

I look forward to hearing from you.

Yours sincerely,

Director

Copy: Chris Morgan
Welsh Assembly Government
Planning Division

Hi Simon,

I'm not sure how to best help with the final stages of the project, since I think we are pretty well in agreement about the approach to the problem. In other words, I don't want to write a load of stuff to push things that you have already taken into account. I will also be away in Barcelona until a day before the next meeting so I won't have time to read the draft report in advance.

If you get the chance to come up here we could discuss any loose ends, and I could arrange for you to see our woodlands officer, who is only slightly less optimistic than [redacted] about biomass, and of course see [redacted] I hope you get the cash from Chris.

In the meantime, I have a few points for your consideration.

One is that we don't seem to have the Wales tourist board amongst our stakeholders. It may be that they would prefer to sit on the fence, but CCW feels uncomfortable stressing the tourism issue, when there is an official body in existence with that responsibility. I am slightly concerned that the final report will appear to have a gap.

Another is that I am concerned about a collision between historic landscapes and wind farm proposals. It's not a statutory designation, as you of course know, and we promised it wasn't when we introduced it. But we are trying to increase the weight that is given as a material consideration. We have also lost a wind inquiry where we put forward a fairly strong historic landscape case. (Tir Mostyn). Neath Port Talbot is also historic landscape, and therefore, with Gelli Gaer (withdrawn), my last 4 turbine public inquiries have involved historic landscape.

As you know, I thought it politic not to include historic landscapes in the MLURI study. I agree with you that it should be in, but it needs treating with caution, please. I will ask [redacted] (responsible for Hist L) whether it is possible to provide a dataset that excludes land appropriate for turbines. I doubt whether we can produce it in time for your study.

The latter point applies to SSSIs, i.e. some are ok for turbines (geological ones) but I understand we can't easily exclude them.

I also have a political point to make. I understand what you said about it not being your job to debate or alter the 3 way split in renewable provision. But I would be grateful if you could point to the fact that wind energy, which is already the cheapest form of energy, sells for the same ROC price as biomass energy, which is presently uneconomic. A House of Commons report, which I sent to Jillian, recognises the anomaly. From the viewpoint of your report, this means that the subsidy regime, like grid provision and its cost (deep versus shallow charging), could change overnight, unlike conservation and landscape constraints. We therefore have to be careful about altering 2010 and 2020 targets on the basis of present day conditions. I would also add that, by definition, one can't predict invention, and it is unsafe to assume that other renewables will not respond to a demand imposed by targets. We do know, however, that technology, (and an increase in the market) will decrease the cost of other renewables.

I include passive solar, and solar electric, as well as biomass. Hydro is supposed to be a mature technology, and therefore unlikely to improve, but I don't believe it. Push-bikes keep getting better.

Finally, unless the 3 way split is considered a target, the government is unlikely to respond to the existing anomaly whereby a profitable technology continues to get subsidy. If any renewable will do to meet the target, it actually makes a lot of sense to keep subsidizing wind, since that will encourage a lot of turbines. It is also a more effective way of getting the industrial growth that is a large part of the DTI agenda. But it should be understood that the three way split is intended as a means of avoiding undue environmental costs in one area. Marine wind is clearly seen to have been beneficial in removing some of the pressure on land, which is presumably the reason that it actually has a more favourable subsidy regime than other renewables (massive grants).

Sorry to go on about this, but it's crucial to the debate even if it's not central to your remit. Now I won't need to labour the point at the next meeting, in fact I promise not to debate it, though I might have to touch on it.

On a planning point, I think it would be useful if you dealt head-on with the point that planning does have a legitimate and traditional role in dictating location and type of development, and that's why Britain doesn't look like Texas. Builders don't want to build low-cost housing on brown land, but that's what they have to do, because they can't get permission for what they would prefer. (Sorry about the analogy. I know you understand the point perfectly well, but a lot of people don't)

Similarly that it is courageous of the Welsh Assembly to embrace spatial planning at national level, ie take hard decisions about location instead of setting criteria and leaving it to adversarial procedures to debate individual sites. I would, I am sure, agree.. And one of the major problems seems to me that the wind industry doesn't accept the rules of the planning game, i.e. the basis on which you undertook this study.

Regards

■

Job title	Welsh Assembly Renewable Energy	Job number 112223
Meeting name & number	Steering Panel Meeting No 4 4/03	File reference 9.11
Location	Broneirion, Llandinam	Time & date 11.00am 12 February 2003
Purpose of meeting	To discuss progress of Arup research, and TAG matters	
Present	<p> Andy Bull - WAG Chris Morgan - WAG Joanne Smith - WAG - CCW - NWP/BWEA - University of Wales, Aberystwyth - Dulas LTD. - Bridgend CBC/ WLGA - Flintshire CC/ WLGA - FoE Cymru - RSPB Cymru - WWF Cymru - CNP - CPRW - West Coast Energy - WDA - Environment Agency, Wales Geodata Institute Geodata Institute Simon Power - Arup Lucy Morgans - Arup </p>	
Apologies	<p> - West Coast Energy - White Consultants BWEA RSPB - Forestry Commission - CPRW Jillian Hastings - Arup - ISG </p>	
Circulation	Those present plus Apologies	
Prepared by	, includes revisions by	
Date of circulation	10 March 2003	
Date of next meeting	9 May 2003	

Job title	Job number	Date of Meeting	Action
Welsh Assembly Renewable Energy	112223	12 February 2003	
<ol style="list-style-type: none"> 1. Apologies Apologies were received from Jillian Hastings and 2. Minutes of Last Meeting Several amendments were received shortly after the circulation of the previous meeting's minutes, these had been circulated to TAG members. 3. Matters arising Chris Morgan announced that the date for the next meeting had been postponed to Friday 9th May due to Welsh Assembly elections. informed the TAG group that there would be a windfarm inquiry at Neath Port Talbot in June/July. Arup has yet to discuss the areas of search in the NPTCBC UDP with the Council. 4. Brief Update – Andy Bull – remaining planning authorities Andy Bull has now visited all but two Local Authorities, Merthyr and Blaenau Gwent, once he has visited these the report will be written. He had nothing significant to report other than points raised at previous meeting. 5. Presentation by Arup Team: (See separate PowerPoint presentation) 5.1 Interpreting the Renewable Energy Targets (Simon Power) The new interpretation of the renewable energy targets (based on the latest EDC report and discussions with TAG members) incorporate a larger proportion of onshore wind than previous interpretations, with a smaller contribution made by other renewable energy sources. supported the new targets, explaining that other renewable energies do not have the technological base to make their previous contribution. For example, biomass, particularly the cultivation of energy crops, has been problematic. He suggested that the limited distribution of economic resources for biomass would constrain energy production from this source to approximately 50 MW in the next 7 years. noted that the proposed increase for onshore wind represented around 60% of the 4TWh target, with proportionate decreases in the other components, notably offshore wind. He pointed out that this was almost double the onshore wind proportion in the so-called 'three-way split' recently publicised in the EDC Report and commented that such a change without apparent justification would be highly controversial and potentially embarrassing for both parties. inquired why the contribution of offshore wind energy had reduced. explained that there were currently only two sites around the Welsh shores with planning consent and no more likely to be confirmed in April. The limited amount of offshore development is attributed to the current technological constraints. added, however, that the larger scale of offshore developments 			Arup

Job title Welsh Assembly Renewable Energy	Job number 112223	Date of Meeting 12 February 2003	Action
<p>in comparison with onshore, implies that it would take only one additional development to significantly increase the contribution of offshore wind to renewable energy production. This is a possibility for Wales.</p> <p>_____ stated that energy produced from waste, since it is not a renewable form of energy, had been eliminated from the latest breakdown of the EDC targets.</p> <p>_____ commented on Government subsidies associated with renewable energy development. He made the point that the subsidy regime, like grid provision and its cost, could change overnight, unlike conservation and landscape constraints. He therefore suggested that caution should be taken altering 2010 and 2020 targets on the basis of present day conditions. Additionally, it should not be assumed that other renewables will not respond to the demand imposed by targets and that technological improvements will not reduce the cost of these forms of renewable energy. He asserted that unless the three way split is considered a target, the government is unlikely to respond to the existing anomaly whereby profitable technology continues to receive subsidies. He added that the three-way split is intended as a means of avoiding undue environmental costs in one area. For example, offshore wind is clearly seen to have been beneficial in removing some of the pressure on land and thus receives a large amount of Government subsidy.</p> <p>Many comments were made about the extent to which the planning system could/should at a strategic level influence the nature/scale of the wind farms that will be needed to meet the targets.</p> <p>_____ claimed that market forces would lead to an increase in scale of onshore windfarms. He commented that access to the grid is a fundamental economic constraint, and smaller windfarms are taking a disproportionate amount of government grant available. Hence, the trend in the future, with less government funding available, will be towards larger scale developments.</p> <p>_____ added that the choice between many small, or, few large windfarms will also be a political issue.</p> <p>Regarding wind farm location, _____ stated that the planning system should not dictate the location of future windfarms and that a prescriptive approach could mean missing the 2010 targets. _____ disagreed with this suggesting that a more prescriptive size-criteria based approach would produce greater clarity. _____ reinforced this, stating that the planning system can help achieve targets by taking them into consideration in the planning process.</p> <p>_____ stressed the need for a flexible planning system, which could "plan for all eventualities". He suggested that the planning system should maintain enough flexibility for all scenarios, for example if larger windfarms are not constructed then the planning system needs to be able to accommodate a larger number of small windfarms.</p> <p>6. Planning for Offshore Wind</p> <p>_____ disagreed with a comment in the Arup presentation; that all sites for offshore wind contributing towards the 2010 targets would fall within the DTI 2nd round block. He explained that he had reviewed a proposal for a</p>			

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<p>site outside this area.' _____ supported this suggesting that developers are currently considering all sites and not only those in the 2nd round block.</p> <p>_____ led that the large number of constraints such as bathymetry, 12-nautical mile limit and cumulative impacts, makes it improbable that developers would constrain the location of offshore development to these blocks. _____ stated that the exact location of the North Wales DTI 2nd round block was itself flexible and subject to modification following the consultation.</p> <p>Regarding offshore development interests, _____ said that offshore wind is still in the demonstration stage and highly grant dependent. There are currently no commercial stand alone projects due largely to the prevailing technological and commercial constraints. Since the next round is unlikely to be grant aided he suggested that there would be minimal interest in offshore development due to the high financial risk.</p> <p>There was debate over whether a strategic constraint map was needed for offshore wind. _____ suggested that although the 2nd round blocks would be subject to SEA's, the block locations were predetermined. A wider SEA would be needed to determine if the 2nd round block locations were the right ones/only ones that should be considered. Chris Morgan agreed, asserting that a strategic analysis could identify other areas with development opportunities. _____ supported this. Arup would consider an appropriate approach.</p>			Arup

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7. Planning for Onshore Wind			
7.1 Policy Tiers			
<p>_____ inquired as to whether all sites within each tier should be used before moving onto the next tier. Simon Power responded by saying that he had not interpreted the tiers to be this prescriptive and that Local Authorities should have more flexibility than this.</p>			
<p>_____ said that wording for the policy tiers should be made more clear. She suggested that tier 3 must put the onus on the Local Authority to show that there is very good reason for refusal and that without this there would be a presumption in favour of planning. Tier 4 should put the onus on the developer to show that significant local impacts do not outweigh the renewable energy provision and meeting of targets.</p>			
<p>_____ voiced concern over whether the TAN could be incorporated into Unitary Development Plans before the 2010 deadline. Chris Morgan stated that this would not be a problem.</p>			
7.2 National Sequential Test			
<p>_____ criticised the national sequential test and the associated constraints map. He claimed that the 'draft' map would not provide certainty and the tier system would be too crude to direct developers.</p>			
<p>He supported this by stating that land which is 'unclassified' may not have appropriate windfarm sites. This could be because the tier system has not taken account of other influential factors, such as:</p>			
<ul style="list-style-type: none"> • noise or distance from residential locations (a 600m buffer zone was suggested); • access requirements; • landowner willingness; • influence of ground slope on incident wind direction; • common land; • the grid; • economics changing with time and not solely depending upon wind speed; and • the accuracy of NOABL is not sufficient for site prospecting. 			
<p>The result would be that the 2010 targets would not be achieved. _____ instead proposed that the Welsh planning policy should follow that of Scotland. This approach presents each site on its own merits and educates Local Authorities on the issues associated with windfarm development so that they have the knowledge to accept or reject individual planning applications.</p>			
<p>_____ responded to this by suggesting that many of the constraints referred to would be approached in the EIA which is undertaken in association with any windfarm planning application. He also stated that only a very small area is needed to reach the 2010 targets, thus finding windfarm sites within the tiers would not be cause for concern. _____ added that landowner willingness is not usually an issue with windfarm developments because of the compensation that is offered. _____ said that development should not</p>			

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<p>be left to the market, she supported the sequential approach since it provides certainty.</p> <p>_____ disagreed claiming that the sequential approach is fraught with technical problems and would not lead to the location of suitable windfarm sites. _____ agreed with this saying that there is a need to include other factors into the constraint process.</p> <p>Simon Power responded by saying that a totally unconstrained site can never be found. The tier system is not absolute and does offer a degree of flexibility.</p> <p>_____ suggested that Special Landscape Areas (SLAs) could be included in the sequential criteria. He informed the TAG Group that there was a meeting in Aberystwyth on February 25th concerning the inadequacies of SLAs in Wales. _____ made the point that some Local Authorities do not have SLAs. _____ responded by stating that national cover was not necessary for all individual authorities to include them if they wanted to. _____ stated that SLAs were vitally important in LPAs without national designations but had complete inconsistency at the national level and that this difficulty should be overcome before they could be considered as a strategic constraint.</p>			
7.3	<p>Visual Impact of Onshore Wind Developments</p> <p>Comments were made regarding the buffer zones and the treatment of cumulative impact of windfarm developments. _____ suggested that cumulative impact should be decided on a site-by-site basis. _____ stated that the visual impact of windfarms when moving through the landscape should be considered as well as the impact of an individual site. _____ defined this as the difference between sequential impact and simultaneous impact, respectively.</p> <p>There was a consensus that the buffer zones needed to be reviewed.</p>		
8.	<p>Progress on GIS and Datasets _____ and _____</p> <p>_____ illustrated the ArcView GIS being developed for the project and the associated datasets contained therein.</p> <p>Inquiries were made into why urban areas were not viewed as a constraint and buffered. _____ explained that the higher the level of background noise the closer windfarm developments could be located, thus a buffer is not appropriate around urban areas. Arup would consider adding a '4a' Tier indicating that urban areas/brownfield sites should be considered positively for windfarm development before the 'unclassified' areas. _____ responded, saying that the issue requires further discussion and it should not be concluded that urban areas should have preference. The debate is whether the increased impact of wind farm development on thousands of people is outweighed by reduced landscape impact. He stated that in practice most brownfield sites are not suitable because they are not windy enough, located too close to residences, or the landowner has alternative plans and is not willing to allow windfarm development.</p> <p>The GIS data was criticised not having the 11 KV grid map of Wales, which is particularly relevant for the smaller 'windworks' type developments.</p>		

Job title	Job number	Date of Meeting	Action
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<p>It was suggested that mapping of the grid should not only include the grid location but also the grid capacity, since this is fundamental to onshore wind development. However, it was explained that mapping grid capacity was an impossibility; as there is no way of knowing which part of the grid has been 'booked', and thus how much grid capacity remains in any one area.</p> <p>There were questions concerning the validity/accuracy of the airfield dataset and the wind speed map of Wales. It was also noted that the GIS spatial mapping of datasets were lagging behind that of Arup.</p>			
9.	<p>Any Other Business / Next Steps</p> <p>A number of further actions were suggested:</p> <ul style="list-style-type: none"> the GIS data should be refined and brought up to date with Arup's current data set; and further work is needed on the strategic planning constraints for offshore wind. <p>Simon Power suggested that responses to the meeting could focus on certain issues including:</p> <ul style="list-style-type: none"> the relative weight of constraints; implementation of renewable energy targets and associated planning guidance; the degree of prescription that should be recommended; the size of the visual impact buffer around onshore windfarm developments; the marine environment; and apportionment (eg. whether this should be based on environmental capacity/wind resource/ population density/ electricity consumption) <p>Comments to be received by 4 March 2003.</p> <p><i>Post-meeting note: this date has now passed and very few responses have been received. The group should send any further comments to Arup as soon as possible.</i></p>		Arup
10.	<p>TAG matters</p> <p>Any comments regarding this meeting should be made by February 26th.</p>		TAG

Note to the TAG Group from CPRW: 12th February 2003

Targets, Terrawatts and Turbines

At present Wales *uses* c 16TWh pa but *generates* c 32TWh from all sources, half of which is exported to England. The projected WAG benchmark for 2010 of 4TWh of all renewables (EDC Review 4.11 p18) therefore represents c12.5% of today's generation, or c 25% of today's demand. By 2010 demand will inevitably increase, with the result that 4TWh could be nearer to 20%. This was recognised by *Planning Magazine* in its report (31 Jan p4) where it noted that 20% of consumption was "twice the UK government's aim". This represents an almost **seven-fold** increase in the proportion of electricity generation from renewable sources from 3% now to 20% in 2010 – a rise of 17 percentage points. By comparison, Scotland, long thought of as having an ambitious target, aims to increase its present 12% to 18% - 6 percentage points or only **one half** as much again.

The EDC Review suggests (4.11 p18) that onshore wind, offshore wind and other RE would contribute equal thirds of the 4TWh (i.e. 1.33TWh each) and that in the longer term the proportion of onshore wind would reduce.

CPRW submitted that a 2TWh target should be adopted because it would represent c10% of Welsh consumption. On the other hand FoE Cymru argued for a target of 6TWh. On the basis of a 4TWh target (or "benchmark") and a three-way equal split, it is a straightforward matter to calculate what is needed using the following method to address the question of *how many turbines does it take to produce a TWh?*

Assume a typical 1 MW capacity *land turbine* (c 75m - 246ft to tip).

It has 8760 hours in a year available to work in.

(365 x 24 = 8760 not allowing for leap years!)

Because wind blows intermittently it produces around 30% of this.

Thus - 2,628 MWh per annum (8760 x 30%)

or 2.628 GWh or 0.002628TWh. (1000MW = 1GW; 1000GW = 1TW)

So, **1TWh needs 380.5MW of Installed Capacity** (1 divided by 0.002628)

(Multiply back - 380.5 x 8760 x 30% = 1,000,000MWh = 1,000 GWh = 1 TWh)

This is 380 x 1MW turbines c75m -or 190 x 2MW turbines c120m

For *sea turbines* a Capacity Factor of 40% can be expected. Thus -

1 x 8760 x 40% = 3,504 MWh pa = 0.003504TWh per MW installed

So, **1TWh needs 285MW of Installed Capacity** (1 divided by 0.003504)

This is 142+ x 2MW turbines c120m or 79+ x 3.6MW c 135m

The Tables below show that **land turbines** built or consented at February 2003 would produce 0.693TWh, just over half way to the target. The remaining 0.637TWh would require a further 242MW installed capacity = 161 x 1.5MW turbines or 285 x 850kW turbines.

ONSHORE WIND BUILT	Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
Rhydygroes	1992	24	300	7.2	46.5	
Llandinam	1992	103	300	30.9	45.5	
Llangwrylfon	1993	20	300	6.0	41.5	
Taff Ely	1993	20	450	9.0	53.5	
Bryn Tili	1994	22	450	9.9	48.5	
Dyffryn Brodyn	1994	11	500	5.5	53.5	
Trysglwyn	1996	14	400	5.6	43.5	
Carno	1996	56	600	33.6	53.5	
Rheidol	1997	8	300	2.4	46.5	
M Glandulas	1997	1	600	0.6	60.0	
Llyn Alaw	1997	34	600	20.4	53.0	
M Gorddu	1998	19	5/600	10.2	55.5	
Hafotty Ucha	1998	1	600	0.6	60.0	
Parc Cynog	2001	5	600	3.6	67.5	
Blaen Bowi	2002	3	1300	3.9	76.0	
Cemaes C	2002	18	850	15.3	66.0	
Moel Maelogen	2002	3	1300	3.9	76.0	
Hafotty Ucha 2	2002	2	850	1.7	70.0	
TOTAL BUILT	2.03	364		170.3		0.448

ONSHORE WIND CONSENTED	Est Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
Tir Mostyn	2003	25	850	21.2	75.0	
Mynydd Clogau	2003	17	600	10.2	68.5	
Cefn Croes	2004	39	1500	58.5	99.7max	
Llangwrylfon *	2003	9	850	13.35	66.0	
TOTAL CONSENTS		72		93.25		0.245

* Net change after demolition of existing turbines

ONSHORE WIND	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
		Each (kW)	Total (MW)		
TOTAL BUILT	364		170.3		0.448
TOTAL CONSENTS	72		93.25		0.245
BUILT & CONSENTS	436		263.55		0.693

ONSHORE WIND	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
		Each (kW)	Total (MW)		
BUILT & CONSENTS	436		263		0.693
TARGET			495		1.330
SHORTFALL			242		0.637

Existing applications in the planning process give some guide to the implications of bridging this gap, which could be 242 x 1MW, 161 x 1.5MW or 121 x 2MW:

ONSHORE WIND PROPOSED	Est Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
Llandinam ext	2004	23	1000ma x	21.0	77.0	
Pentre Tump	2004	3	1300	3.9	91.0	
Steynton	2004	1	300	0.3	59.0	
Ffynnon Oer	2005	16	1300	20.8	910	
Crynant	2004	2	300	0.6	55.0	
Margam	2004	11	850	9.35	75.0	
TOTAL PROPOSALS		56		55.95		0.147

Other projects known to be in preparation are:

ONSHORE WIND PROJECTED	Est Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
Camddwr		165	2000	330.0	120.0	0.867
Moel Maelogen 2		11	1300?	14.3	76.0	
Aman Awel Tawe		5	1000?	5.0	80.0	
TOTAL PROJECTED		181		349.3		0.918

Total proposed and projected is thus 1.758TWh, which exceeds the shortfall by c50%. If Camddwr is excluded, 0.442TWh still remains (requiring 168MW capacity).

ONSHORE WIND PROPOSED & PROJECTED	Est Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
	2004- 5	237	2000 max	405.25	120 max	1.065
Total with Camddwr				669.1		1.758
Total without Camddwr				339.1		0.891

It is clear that one way or another there would be considerable landscape impact and substantial resistance within existing planning policies to reaching any further substantial increment of the onshore target.

OFFSHORE WIND

The North Hoyle and Rhyl Flats consents already represent almost exactly half of the target at 0.665TWh, due for completion by 2004. The combined built and consented wind total is thus 1.358TWh, halfway to the overall wind target of 2.666TWh.

The other proposed offshore installation at Scarweather Sands would, if consented, take that total to 1TWh, and a further similar scheme would pass the target, as follows:

OFFSHORE WIND CONSENTED & PROPOSED	Est Date	No.	Installed Capacity		Overall Height (m)	Output (TWhpa)
			Each (kW)	Total (MW)		
North Hoyle	2004	30	3000	90.0	130.0	0.315
Rhyl Flats	2004	30	3000+	100.0		0.350
CONSENTED		60		190.0		0.665
TARGET						1.333
Scarweather Sands	2005	30	3600	108.0		0.378
CONSENTED & PROPOSED		90		298.0		1.043
Requirement		27+	3000	82.6		0.290

So by 2004, according to the developers' timescale, half the Offshore Wind target should be reached, and with one more consent in addition to Scarweather or its equivalent, it is not unreasonable to expect it to be reached by 2007, three years before 2010. It is significant that this would be done inside about 5 years by perhaps four projects, with relatively little controversy and difficulty as compared to onshore proposals. It is not inconceivable that other projects could be established by 2010, possibly reaching 2TWh with relatively little difficulty. Added to the current level of built and consented onshore turbines (0.7TWh) this would attain the total wind share of the 4TWh target without further onshore development.

'THE OTHER THIRD'

At present there is little movement towards establishing significant capacity of other renewables in addition to the 0.3TWh from established hydro, but it is important to remember that there are still 7 years to go. Assuming that the EDC is realistic, or even sincere, in its aspirations of a three-way split, then there must be assumed to be good technical grounds for building up other technologies, especially given the EDC's references to a decline in the amount of onshore wind after this date. For example, publicity for marine current turbines, whether in sea-bed or tidal lagoon installations, suggest that some progress could be made towards large-scale installations by 2007 onwards. Biomass may be slow to develop, but there are industry estimates of 0.4TWh by 2010.

Mr [REDACTED] of the WDA Emailed Mr [REDACTED] on 27th January (copied to other members) expressing unease that 200 (?extra?) turbines would "constrain our ability to meet any target set" ... (which might mean the EDC 4TWh or the FoE 6TWh). He then refers to an additional 600MW from onshore wind. In the tabulation attached he spells out a scenario of adding rather more, 660MW (= 1.73TWh), augmenting the 101MW (0.27TWh) which he identifies being "planned and committed" capacity. This gives a 2010 total for onshore wind of 2.4TWh which is easily recognised as 60% of 4TWh. He takes a very cautious view of the prospects for offshore wind, limiting it to 270MW (0.95TWh) (compared to the 0.66TWh already consented in the first two projects alone). That represents only one more installation such as Scarweather Sands and no more for the rest of the decade. Other renewables are forecast as 0.35TWh biomass alone, augmenting the present 0.3TWh of hydro. This is astonishingly at variance with the three-way split indicated by the EDC and conflicts with the trends apparent in every technology which may be said to compete with onshore wind. The components are set out in the comparative table below, which indicates three ways of approaching the 4TWh target, or 'benchmark'.

TWhpa	2003		2005	2010		
	CPRW*	WDA	CPRW*	CPRW*	WDA	EDC
ONSHORE WIND	0.45	0.40	0.70	0.90	2.40 60%	1.33 33.3%
OFFSHORE WIND	0.00	0.00	1.00	1.60	0.95 23.75%	1.33 33.3%
OTHER SOURCES	0.30	0.30	0.30	1.00	0.65 16.25%	1.33 33.3%
TOTAL	0.75	0.70	2.00	3.50	4.00	4.00

* CPRW's published preference is for a 2TWh target which equates to 10% of consumption.

Even if a 4TWh (or 20%) target is aimed for but not fully attained, there is a realistic way of striving for a balance between technologies which does not concentrate so heavily on the most environmentally contentious technology. CPRW would not be happy with the consequences of doubling the present onshore wind output to 0.9TWh but accepts that it is probably impossible to constrain it to any lower level given the extent of investment and expectation within the sector. If 'only' 3.5TWh is attained (still 17.5% of expected consumption in Wales) the years beyond 2010 are likely to see an accelerating increase in other technologies. In the longer-term context the consequences of missing 4TWh by a few years are unimportant.

This illustration is also intended to show that even aiming for a 4TWh target the WDA variant is way out of line with the indications provided by the EDC Review, as the relevant percentages show. CPRW does not accept the need (other than the economic interests of developers) for an onshore target of 60% - almost double that indicated by the EDC - not does it see the evidence for restricting the offshore wind target to 24% (roughly equal to the two consented projects plus one more).

Job title	Welsh Assembly Renewable Energy	Job number 112223
Meeting name & number	Steering Panel Meeting No 4 4/03	File reference 9.40
Location	Bronerion	Time & date 11.00am 12 February 2003
Purpose of meeting	To discuss progress with Arup research and TAG matters	
Attendance	TAG Group	
Circulation	Those attending Those invited	

1. Apologies
2. Minutes of Last meeting
3. Matters Arising
4. Brief Update – Andy Bull – remaining planning authorities
5. Presentation by Arup comprising:-
 - **Interpreting the renewable Energy Targets** – where this leaves each of the renewable energy technologies, what this now means for planning for wind in the offshore and onshore environment for wind
 - **Planning for Offshore Wind** - Marine Constraints Mapping :-is offshore wind an issue to worry about– Issues arising – DTI sites ? -
 - **Planning for Onshore Wind** –
 - Constraints/opportunity mapping in the onshore environment – update and the TAN maps –eg. constraints, wind, grid, MOD interests. What is still missing?
 - Scenario modelling – a practical interpretation of the onshore renewable energy targets –
 - Introducing realism - The need for a Mid Wales Case study and Landscape Issues–
 - Using the constraints/opportunity maps in the UDP process –ideas and questions - Jillian Hastings/Simon Power
 - **Progress on GIS and datasets** – 1
6. Any Other Business/Next Steps
7. TAG matters

Prepared by Simon Power

Date 4 February 2003

Smith, Joanne (TPE)

From: Jillian Hastings [jillian.hastings@arup.com]
Sent: 16 January 2003 17:55
To: @ccw.gov.uk'; @care4free.net';
@westcoastenergy.co.uk'; @rspb.org.uk';
@britishbiogen.co.uk'; @cprw.org.uk'; @dulas.org.uk';
@wwf.org.uk'; @pembrokeshirecoast.org.uk';
(ISG); @wda.co.uk';
Cc: Morgan, Chris G (TPE); Smith, Joanne (TPE); 'Andy Bull'; Simon Power;
.soton.ac.uk';
Subject: Facilitating Planning for Renewable Energy - minutes 10-01-03



0006Minutes
10-01-03.doc

Dear All,

I enclose the draft minutes of the TAG meeting last Friday at Broneirion - corrections to me please by 22nd January.

<<0006Minutes 10-01-03.doc>>

Electronic versions of the powerpoint presentations will follow; some of these may be quite large so I will send them individually. If you are especially concerned about your mailbox size, please let me know and we will make alternative arrangements for getting the information to you.

I would like to remind you all that the next meeting is on Wednesday 12th February and ask you to please confirm whether you will be attending, so that we can get the catering arrangements right.

(Jo, please forward this to)

Regards,
Jillian

Jillian Hastings
Planner
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Job title	Facilitating Planning for Renewable Energy	Job number 112223
Meeting name & number	Technical Advice Group / Steering Panel Meeting 3	File reference 9.11
Location	Broneirion, Llandinam, Powys	Time & date 10.30am 15 January 2003
Purpose of meeting	To discuss progress	

Present	<ul style="list-style-type: none"> • RSPB • CPRW • Council for National Parks • EA • WDA • ISG Joanne Smith - WAG Chris Morgan - WAG Andy Bull - WAG / Powys • FoE Cymru West Coast Energy • BWEA • - Aberystwyth Uni WWF Cymru • WLGA / Flintshire • CCW • Forestry Commission (part) GeoData Institute • White Consultants Simon Power - Arup Jillian Hastings - Arup • EMU Ltd (part)
Apologies	<ul style="list-style-type: none"> • WLGA / Bridgend • Dulas

Circulation	Those present plus Apologies
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Prepared by	Jillian Hastings
Date of circulation	16 January 2003
Date of next meeting	12 February 2003 at 11.00am, Broneirion

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<p>1. Apologies Apologies were received from [redacted] and [redacted].</p> <p>2. Matters arising Much work has been undertaken by the project team since the last meeting, focusing on the production of constraints mapping and associated issues. This is the emphasis of today's meeting.</p> <p>This work has been informed by [redacted] consultation with planning officers in most of the Welsh planning authorities.</p> <p>[redacted] reported that WWF has now published its report on offshore issues; document available from WWF at £12, or online (free) 'Turning the Tide'.</p> <p>With regard to 'areas of search' for renewable energy, potentially included in the Dyfed Structure Plan (ref: point 4 of last minutes), we do not know whether these were actually included or not. (Consultation with Ceredigion CC did not raise this subject, so it is assumed not).</p> <p>3. Minutes of last meeting Several amendments were received shortly after the circulation of the previous meeting's minutes; further comments received today will instruct final changes.</p> <p>4. Preamble Chris Morgan emphasised that finding an appropriate mechanism by which to deliver on the RE targets was the most important task for the TAG today.</p> <p>5. Consultation with planning officers (Andy Bull) AB has visited 18 of the 25 planning authorities in Wales to discuss the WAG approach with (strategic UDP and Development Control) planning officers. Discussions have been dominated by onshore wind issues.</p> <p>AB has been asking planners 'what if...?' questions: what if TAN 8 had a very prescriptive approach to identifying areas of search, split into regions, and expected local planning authorities to hit certain targets? 17 of 18 responded that something like this is required if the targets are to be met, as council members are likely to refuse planning permission – most are opposed to onshore wind. A 'mechanism for banging heads together' is required!</p> <p>AB has found an almost universal view that the current system is unsatisfactory; planning officers would welcome greater certainty as they don't currently know how to respond to applications – don't know how individual applications might fit in with the bigger picture, or if more suitable sites exist elsewhere.</p> <p>AB believes that planning officers would support a fairly prescriptive approach. Council members of Planning Committees would complain but would find that there was another agency (i.e. the WAG) to act as a focus for objectors.</p> <p>CM supportive of AB's work and confirmed the WAG view that a prescriptive</p>			Arup

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<p>approach would be good.</p> <p>Also supportive; planners need policy guidance; new policy needs benchmarks or targets – ‘something to aim for’. Developers want a mechanism for developing RE in Wales without the need for planning appeals.</p> <p>AB expects guidance to be strong on locations and targets.</p> <p>Re: biomass– AB has told planners not to expect any SRC within the TAN period (next 5 yrs) as not considered realistic: biomass from other sources than dedicated growing operations is expected to be used first. Has yet to visit the main forestry areas’ councils, however.</p> <p>Forestry Commission’s Salix project into potential for SRC species growth has recently begun – will report in 4-5yrs; reporting required before grant schemes (currently vital to success of SRC proposals) will be considered, so this assertion is valid.</p> <p>Neath Port Talbot BC currently considering a spatial plan approach to RE in their UDP – areas of search idea. Arup to investigate to validate their work.</p>			Arup
<p>6. Interpreting the renewable energy targets (Simon Power)</p> <p>The 4 TWh target refers to electricity generation (comprising existing production and new output); additional 1TWh target for heat. ‘Existing’ constitutes anything which is operational by the time the 4TWh target is confirmed by WAG.</p> <p>The gap between current production and 4TWh is effectively in the region of 1000MW of installed capacity. 1000MW could mean 500 x 2MW turbines, assuming all the new capacity to be generated by wind.</p> <p>Aware of 3 small biomass schemes (23MW total) in planning; potential for perhaps 60MW more; Camddwr onshore wind scheme could be 300MW; one major speculative offshore scheme may be in the pipeline, hence meeting the 4TWh target could be relatively straightforward.</p> <p>EDC review of targets due out w/c 13th January 2003. Forthcoming Energy White Paper expected to commit UK to further target of 20% renewable electricity by 2020.</p> <p>Arup estimate that the gap between current production of wind power and the proportion of the 4TWh target to be met by on-shore wind could be provided by just 25km² in whole of Wales.</p>			
<p>7. Planning for onshore wind</p> <p>Three planning options currently discussed re: planning for wind:</p> <ul style="list-style-type: none">a) criteria-based planningb) areas of searchc) preferred areas <p>Of these, a) is preferred by industry, and works in areas which have greater capacity to accommodate further windfarm development (e.g. Scotland) but would be less effective in somewhere more constrained (e.g. Wales). BWEA are opposed to b), but not totally against option c).</p>			

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<p>— identifying 'no-go' criteria / areas is OK for technologies such as wind, but less applicable to hydro. Re: grid connection issues Should grid availability influence identification of 'preferred areas'? — (DTI to) consider whether it would be better to grant permission to a number of major projects in one area, to support new grid infrastructure installation, or to use existing 11kW cable network and attach small schemes (single turbines?) in many areas.</p>				
8.	<p>Visual and cumulative landscape impacts of wind power</p> <p>— review of published research identified that windfarms can be said to have moderately significant landscape impacts up to 7km away (high significance within 4.4km). This translates as 15km separation distance required between windfarms if we are to ensure that landscape does not become a 'windfarm landscape'. Scope for debate on this but we believe that 'windfarm landscapes' are not a desirable outcome for all of Wales.</p> <p>Preferred locations for windfarms might be landscapes which already have vertical elements and industrial elements present. Vertical elements include pylons, trees, etc.</p> <p>— Dulas research on visual impact looked at smaller windfarms than those developed today: significance likely now to be higher.</p> <p>— discussion of average distances difficult – impact will depend on landscape types. Smaller scale landscape in Wales (than in e.g. Scotland), and the need to conserve more as there is so little of it left in relatively 'natural' state already.</p> <p>landscape quality is very important. Camddwr proposal is in 'green desert' and this is seen as an advantage by developers.</p> <p>— WAG/TAG must decide the proportion of 'wilderness'/other landscape types which it is permissible to develop for windfarms – decisions must be made sooner rather than later.</p> <p>Countryside Agency advocate a sequential approach in England: influence on thinking in Wales? SP: brownfield sites are not necessarily best for windfarms (cost of development high; potential for more lucrative land uses more attractive to landowners), but perhaps Arup to consider further. — sequential approach not appropriate for wind energy.</p>			
9.	<p>Constraints mapping (Simon Power)</p> <p>Arup produced series of overlay maps, grouped by 3 levels of constraint significance – high / moderate / slight; see handout for further details. Panel consulted on significance of each constraint layer; several suggestions for amendment will be taken forward by Arup.</p> <p>Specific comments include --</p>			Arup

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<p>Purpose of 'unconstrained' map: to be the basis for discussions, nothing more prescriptive. ∴ areas of E Wales marked as 'unconstrained' have insufficient wind resource to be developable. SP – not convinced on this point, Arup to consider</p> <p>If we are looking for one major windfarm site and many little sites, different considerations apply: grid is an issue for smaller sites but not such a constraint for larger ones, as economy of scale would enable new grid connection to major site.</p> <p>Area required for windfarms to meet target: 25km² considered sufficient – a much smaller area than currently marked 'unconstrained' on map. What proportion of 'unconstrained' area would actually be required?</p> <p>∴ findings should maximise 'green'/'unconstrained' areas, to ensure that TAN meets the targets.</p> <p>∴ the 'unconstrained' areas focus attention in only those areas – wrong message to industry; focuses planning and political interest only in those areas.</p> <p>Special Landscape Areas: these are not included as a) the reasons for their designation vary between LPAs and therefore are not consistent at all-Wales level and b) the reasons for their designation make not be directly relevant to onshore wind. ∴ but they are often crucial at Public Inquiry.</p> <p>Arup to consider further, recommend position to TAG at next meeting</p> <p>∴ developers (and planners) will need to refer to both TAN and relevant UDPs – if SLAs are already in UDP, why duplicate in TAN map?</p> <p>'Wildlands' concept: the remotest areas of Wales, furthest from human influence, and a key element in attracting tourists to Wales (but also a major target for windfarm developers because of this: fewer local amenity objections likely to be raised). What proportion of these should be protected from windfarm (or other RE) development?</p> <p>Buffer zones: need for a policy steer on these. 25km² of windfarms will require much more area than this if buffers are to be maintained ∴).</p> <p>Visibility: assuming that visibility of a windfarm is a negative thing? (∴)</p> <p>MOD low-fly Tactical Training Area: unless the MOD permits windfarm development within the TTA, Wales will not meet the 10% target ∴).</p> <p>Not included: national grid or wind speeds – uncertainties over wind speed modelling, technical requirements, technological developments within plan period, etc.</p> <p>∴ most RE generated goes into Regional Area Network, not National Grid, Arup to consider.</p> <p>∴ Arup maps must refer to NOABL windspeed data and grid. Map of Regional Area Network required from industry. Consideration of charging 'shallow connection costs' to developers (as in Scotland) ?</p> <p>∴ for Scottish PAN, showed grid network and the upgrading that would be required in a separate sister report. (∴ doubtful that sister report would ever appear).</p>			<p>Arup</p> <p>Arup</p> <p>Arup</p> <p>WAG</p> <p>Arup</p>

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<p>Level of constraint assumed: what about Anglesey? The 'unconstrained' map does not show it as developable, but we know that windfarms are there already (). And Anglesey keen to promote itself as a leader in field of RE (JS).</p> <p>Relating this work to the TAN: what should be included? How many layers of constraint? (CM)</p> <p>Arup to consider: prepare slides for next TAG showing grid and wind (7m/sec) constraints.</p> <p>planners would find a map in TAN very useful.</p>			Arup
10.	<p>Planning for offshore technologies</p> <p>Offshore issues are relevant to the TAN study in that they illustrate the potential for a % split between on- and off-shore wind, but the scope of planning officers to influence the offshore environment is limited.</p> <p>Crown Estate WindBase information (results, not datasets) now available online.</p> <p>Offshore wind has been developer-led, to date.</p> <p>SEA of offshore proposals in Liverpool Bay expected to report shortly, and may offer more insight, although it is less of a true Strategic assessment as the broad site areas have already been chosen: more of a glorified EIA.</p>		
11.	<p>The role of GIS in the process</p> <p>Production of 'GIS tool' has been delayed due to policy discussions / considerations. It is considered that the 'tweakability' initially envisaged for LPAs may not be helpful – LPAs lacking skills and time / resources to make meaningful use of the tool if distributed for them to use in order to meet targets.</p> <p>Issues yet to resolve:</p> <ul style="list-style-type: none"> - what to put in TAN itself? – paper map, or more sophisticated? - Distribution method – CD? Internet? (Internet more appealing to WAG) - Content to be distributed – the data? The tool itself? Only the output (as per WindBase)? - Who to use? – WAG to look at strategic issues with it, examining the practicality of certain areas' ability (or not) to meet the targets. WAG to use tool at high level, make policy (i.e. produce TAN), then distribute tool to LPAs to use further (limiting 'tweakability' to moderate and slight constraints only)? - The GIS cannot currently deal with landscape issues at all: how to address these in policy development? 		All to consider
12.	<p>Next steps</p> <p>Arup to circulate powerpoint presentations</p> <p>Panel to comment by 22nd January</p> <p>AB: Soon, a decision <i>must</i> be made as to the split between areas and types of development, i.e.:</p> <ul style="list-style-type: none"> - technological split – onshore/offshore/biomass - scale of development – how many large windfarms are considered desirable and how much of total should be met by smaller scale schemes? - areas for development – how much of a particular landscape type is it 		Arup Panel ALL / WAG

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acceptable to develop for wind power?			Arup
Arup to undertake a case study of Ceredigion / Powys at 1:50 000 scale, as a 'reality check' for concepts explored today, including 'wildlands'.			
Date of next meeting confirmed as 12 February 03 at 11.00 at Broneirion.			