

## Independent Market Operator

### Renewable Energy Generation Working Group

## Minutes

<b>Meeting No.</b>	11	
<b>Location:</b>	Meeting Room 3, Perth Convention Exhibition Centre 21 Mounts Bay Road, Perth	
<b>Date:</b>	Wednesday, 21 April 2010	
<b>Time:</b>	1:00 pm – 4:45 pm	
<b>Attendees</b>		
Troy Forward	Independent Market Operator (IMO)	Chair
Greg Ruthven	IMO	Minutes
Ross Gawler	McLennan Magasanik Associates (MMA)	Presenter
Jenny Reisz	ROAM Consulting	Presenter
Geoff Glazier	Sinclair Knight Merz (SKM)	Presenter
Ian Rose	ROAM Consulting	
Michael Carr	Tenet Consulting	
Matthew Rosser	Pacific Hydro	
Kyle Jackson	Mid West Energy	
John Vendel	Pacific Hydro	
Ken Brown	System Management	
Steve Gould	Landfill Gas & Power	
John Rhodes	Synergy	
Pablo Campilos	DMT Energy	
Anne Hill	Office of Energy (OoE)	
Tom Percy	Western Power	
Shane Cremin	Griffin Energy	
Bill Bower	Renewable Power Ventures	

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Matthew Martin	OoE	
Ian McCullough	OoE	
Andrew Woodroffe	SkyFarming Pty Ltd	
Brad Huppatz	Verve Energy	
Andrew Everett	Verve Energy	
Rob Rohrlach	Energy Response	
Wayne Black	Economic Regulation Authority (ERA)	
Allan Dawson	IMO	
<b>Apologies</b>		
Corey Dykstra	Alinta	
Chris Brown	ERA	
Simon Middleton	Synergy	
Robert Pullella	ERA	
John Libby	New World Energy	
Matthew Fairclough	System Management	
Anwar Mohammed	SunPower	
Stephen Hurley	Department of the Premier and Cabinet (DPC)	
Phil Kelloway	System Management	

Item	Subject	Action
1.	<p><b>WELCOME</b></p> <p>The Chair opened the meeting at 1:05 pm and welcomed all attendees to the Renewable Energy Generation Working Group (REGWG) meeting.</p>	
2.	<p><b>MEETING APOLOGIES / ATTENDANCE</b></p> <p>Apologies were noted as listed above and the following visitors were welcomed:</p> <ul style="list-style-type: none"> <li>• Ross Gawler (MMA)</li> <li>• Jenny Reisz, Ian Rose (ROAM)</li> <li>• Geoff Glazier (SKM)</li> <li>• Allan Dawson (IMO)</li> </ul>	

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	<p>The Chair also introduced Greg Ruthven from the IMO <del>noting that she has been employed as part of the inaugural IMO Graduate Program.</del></p>	
3.	<p><b>MINUTES OF PREVIOUS MEETING</b></p> <p>The minutes of the 25 February 2010 REGWG meeting were circulated to members for review and comment.</p> <p>The following changes were requested by Michael Carr prior to the meeting.</p> <p><u>Agenda Item 8</u></p> <ul style="list-style-type: none"> <li>• <i>Paragraph 2:</i> It was noted that Sinclair Knight Merz (SKM) is meeting with ROAM in Brisbane on 5 March 2010 to discuss <del>whether there is any overlap</del> <u>common issues</u> between Work Packages 3 and 4.</li> <li>• <i>Paragraph 3:</i> <del>Tenet Consulting</del> <u>ROAM</u> has spoken with Brendan Clarke <del>and there were</del> <u>from Western Power</u> regarding problems with checking the model against <u>actual</u> frequency deviations...</li> </ul> <p><u>Agenda Item 9</u></p> <ul style="list-style-type: none"> <li>• <i>Paragraph 2:</i> The development of SKM's model is underway, but is dependent on the <u>preliminary</u> results of Work Package <del>13</del>.</li> </ul> <p>Prior to the meeting, Corey Dykstra also highlighted that he had been listed in the Apologies table, but not in the list of apologies in Agenda Item 2 (p2) of the minutes.</p> <p>No further comments were received during the meeting.</p> <p><i>Action: The IMO to make the changes above and publish the minutes of the 25 February 2010 Meeting as final.</i></p>	IMO
4.	<p><b>ACTIONS ARISING</b></p> <p>All action items were complete except the following:</p> <p><u>Action 9:</u> Data requested from Investec to feed into the WP3 modelling. No response received yet.</p> <p><u>Action 10:</u> ROAM paper on agenda for this meeting.</p> <p><u>Action 17:</u> Results from NIEIR paper on agenda for this meeting.</p>	
5.	<p><b>WORK PACKAGE 2: DRAFT REPORT (INITIAL PLUS SUPPLEMENTARY PAPER)</b></p> <p>The Chair welcomed Ross Gawler from MMA to present to the</p>	

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	<p>REGWG on the results in the Work Package 2 draft paper.</p> <p>Prior to the presentation, the Chair explained that the draft report had previously been sent to a number of parties (System Management, Office of Energy, Oates Review Committee, Verve Energy) due to comments that they had lodged. The results in the draft paper were somewhat unexpected, so the IMO decided to provide these parties with an opportunity to review the report prior to its wider release. The Chair noted that the IMO has been criticised for this limited distribution, but noted that this was not part of the formal consultation process. The draft paper and supplementary report were now being provided to the REGWG and the formal consultation process now begins. The IMO intends that all REGWG members will have sufficient time to review the papers, compile questions for MMA, and discuss further as a group before making recommendations.</p> <p>Allan Dawson thanked the <u>members of the</u> REGWG for their patience in waiting for the report. He advised that he had originally received the report on 24 December 2009 and it became clear that the conclusions in the MMA analysis were not as had been expected. Given the strong verbal and written positions in the industry around the contribution of wind power, he felt that it was important to provide the report to the concerned parties for 1 month for them to assess the analysis. He advised the MAC of this approach in January, with the MAC requesting that the original report be retained and any further analysis be detailed in a supplementary report. He reiterated that the consultation process with the REGWG is now starting and welcomed engagement with the working group.</p> <p>John Vendel asked if the paper was only for <del>industry</del> <u>REGWG member</u> comment at this stage and if there would be a media announcement. Mr Dawson said that a media release would be considered in time if it was deemed appropriate. However, the impact for system security would be considered first. Mr Dawson indicated that the analysis yielded a surprising result, reflecting that wind power has historically contributed at times of system peak, but acknowledged that the data set was limited.</p> <p>The Chair welcomed Anne Hill from the Office of Energy. She reiterated Mr Dawson's comments, stressed that system security is the top priority and mentioned that the final method for valuing intermittent generation capacity will need to reflect this.</p> <p>Mr Gawler then gave the presentation, which is attached as Appendix 1.</p> <p>The following questions were asked both during and at the conclusion of the presentation:</p> <ul style="list-style-type: none"> <li>• Matt Rosser asked (during slide 18) whether the peak demand days track with the hottest days shown in this slide.</li> </ul>	

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	<p>Mr Gawler replied that synchronisation with the peak was not considered in the plots, only the hot days.</p> <ul style="list-style-type: none"> <li data-bbox="464 363 1206 453">• Ian McCullough asked (during slide 29) how the uncertainty was calculated for the various methods shown.</li> </ul> <p>Mr Gawler stated that there were two separate methods for wind and solar. The correlation of wind outputs was assessed on a trading interval basis up to 3 days apart to calculate the variance of the measure. The correlation of solar resources was assessed within each day and correlation between days was ignored.</p> <ul style="list-style-type: none"> <li data-bbox="464 709 1206 800">• John Rhodes commented (during slide 29) that the Loss of Load Probability (LOLP) results did not seem to line up particularly well, particularly for the WF2 wind farm.</li> </ul> <p>Mr Gawler replied that this was caused by a sampling error. Heavier weighting is applied to high PoE years leading to limited data. He commented that the error bands overlapped with the other methods.</p> <ul style="list-style-type: none"> <li data-bbox="464 995 1206 1085">• Mr Rosser asked what percentage of the peak trading intervals used in the 250, 500 and 750 trading interval methods occurred in summer.</li> </ul> <p>Mr Gawler stated that all of the peak intervals were in summer.</p> <ul style="list-style-type: none"> <li data-bbox="464 1218 1206 1308">• Ian Rose (ROAM Consulting) asked why a damped sinusoid was used to represent correlation between trading intervals and not an asymptotic function.</li> </ul> <p>Mr Gawler replied that all wind farms have negative correlation between night and day. He indicated that a further step in the analysis could be to consider night and day separately with different models, which would improve accuracy. He highlighted that the science is still <del>unexact</del> <u>inexact</u>.</p> <ul style="list-style-type: none"> <li data-bbox="464 1566 1206 1656">• Mr Rosser asked whether any seasonally-based method were considered, and suggested that the methods proposed were based on an average across a year.</li> </ul> <p>Mr Gawler stated that the peak interval methods were focussed on summer.</p> <ul style="list-style-type: none"> <li data-bbox="464 1789 1206 1879">• Mrs Hill asked what was the probability of wind farm delivery of 40% or greater in the peak intervals.</li> </ul> <p>Mr Gawler answered that 50% of the intervals would have wind farm delivery above the 40% average.</p>	

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	<p data-bbox="508 264 1203 323">Mrs Hill asked whether this was an indication of reliability.</p> <p data-bbox="508 361 1203 575">Mr Gawler answered that it was a measure of reliability over the whole of the summer period. Higher wind farm outputs provide protection against small outages, under-forecasting errors, etc. and thus he suggested that it is not meaningful to credit wind farms with only their 90% PoE output. He indicated that day-ahead wind forecasts were important in managing system reliability.</p> <p data-bbox="508 613 1203 890">Ken Brown stated that data indicates when the peak will occur. With wind farms there is a risk of only getting 10% output during peak demand (although sometimes it's 60-70%). In the NEM, wind farm capacity is considered to be what it can reliably deliver 90-95% of the time, which would correspond to 19-20% of name plate output. Experience here indicates that wind farms can have issues at some point after the temperature exceeds 40 degrees.</p> <p data-bbox="508 928 1203 1016">Mr Gawler stated that no data had been made available to MMA about the temperature de-rating of wind turbines.</p> <p data-bbox="508 1054 1203 1142">Mr Rosser suggested that the geographical diversity of wind farms would need to be taken into account, that the temperature shown is from the Perth metropolitan area.</p> <p data-bbox="508 1180 1203 1331">The Chair noted that a wind farm in the mid-west may see higher temperatures than those recorded in the metropolitan area. The Chair asked whether anyone had experience with the temperature de-rating effects that apply to wind turbines.</p> <p data-bbox="508 1369 1203 1520">Bill Bower answered that no single answer fits all turbines, and that they have different shutdown mechanisms. Each type of turbine will have the same shutdown mechanism, but individual performance would vary.</p> <p data-bbox="508 1558 1203 1772">Mr Vendel highlighted that Pacific Hydro had seen <del>significant</del> variation in performance in their facilities in the eastern states, and had experienced some temperature alarms at lower temperature levels. He also pointed out some favourable performance statistics from Pacific Hydro wind farms during the NEM peak day in the recent summer.</p> <p data-bbox="508 1810 1203 1898">The Chair asked the group whether individual turbine operating characteristics should be considered when certifying capacity.</p> <p data-bbox="508 1936 1203 1961">Mr Rosser suggested that observed data would be of</p>	

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	<p>most value. He suggested that wind performance is not random and that wind farm site selection is based on observed wind data to capture good wind resources. He indicated that it would be good to get the input of a meteorologist who could assist MMA by linking wind speeds to the drivers behind system peak.</p> <ul style="list-style-type: none"> <li>• The Chair pointed out that a number of elements were likely to come from members' responses to this paper. He asked the group to assess whether the technical aspects of the analysis were right or whether there was more to add. From a risk perspective, he asked that members help the IMO as policy makers to understand the risks (political risks, volatility risks, modelling risks).</li> </ul> <p>Mr Rosser stated that it would be helpful for the group to see also how thermal plants would be treated from a reliability point of view.</p> <ul style="list-style-type: none"> <li>• Pablo Campilos asked what data was used for the assessments of solar plant.</li> </ul> <p>Mr Gawler answered that the solar data consisted of simulated outputs for the 5 modelled years, with projections of plant output provided by proponents based on actual solar radiation at their sites.</p> <p>Mr Bower asked whether the solar PV data included temperature de-rating.</p> <p>Kyle Jackson pointed out that temperature performance was different between solar PV and solar thermal, with solar thermal performance linked to the size of the field.</p> <p>Mr Brown stated that the key issue with solar PV is that peak demand is typically in the late afternoon, by which time the sun is at a lower angle.</p> <ul style="list-style-type: none"> <li>• Mr McCullough asked whether the RM7 case in the analysis was close to the current reserve margin mechanism.</li> </ul> <p>Mr Gawler confirmed that it is.</p> <ul style="list-style-type: none"> <li>• Mr Vendel commented that the Office of Energy had proposed a moving average approach to reduce volatility. He asked whether this was considered in the analysis</li> </ul> <p>Mr Gawler stated that he didn't think that the measures of volatility are robust enough to use commercially, but that he has no problem with the use of a moving average to smooth it. He does not agree with discounts that are based on volatility. He suggested that it would be arguable whether one would consider the last 3 years or</p>	

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	<p>focus on the 10% and 30% PoE years, perhaps giving these higher weighting.</p> <ul style="list-style-type: none"> <li>Brad Huppatz asked how the 750 interval method would change with increasing wind farm penetration.</li> </ul> <p>Mr Gawler explained that the intervals selected use the peak load for scheduled generation. Thus, as wind farm penetration increases, these intervals <del>would</del> may shift from the intervals of maximum demand to intervals of lower intermittent generation. This would help to offset the impact of higher penetration. Wind farm proponents would then see value in finding wind resources that do not correlate with existing facilities.</p> <ul style="list-style-type: none"> <li>Mr Jackson suggested that a peak interval method could be used as an interim measure, with the LOLP method being adopted when more data was available. Given this possibility, he asked whether <u>there</u> would be thought for a grandfathering approach to reduce uncertainty for investors.</li> </ul> <p>Mr Dawson stated that grandfathering doesn't feature in the market currently, and that he would be reluctant to embark on this. He stated that it is a requirement for consistent rules to apply without any distortion of market outcomes.</p> <ul style="list-style-type: none"> <li>Mr Brown stated that he has difficulty with the use of averaging methods as a measure for system reliability. He indicated that no other power utility does this (stated New Zealand, PJM, NEM, Ireland examples). From a system security standpoint he is concerned about the times when only 10-15% output is achieved, He stated that the "95%-of-time" output measure used by NEM was the result of research. He was unhappy when the current regime was implemented and still disagrees with it, particularly as the penetration increases. He indicated that has no issue with other measures being employed to incentivise wind power, but the capacity market is centred on system security. He stated that he will support a conservative approach.</li> </ul> <p>Mr Gawler stated that the numbers that he presented are probably slightly optimistic for wind farms as temperature derating was not taken into account. He said that this work would need to be completed first, and indicated that a discount to the current method was possible once this was taken into account. He said that he considers system security from the operating point of view to be the next couple of days, with forecasting being a critical planning tool. In the long term, he considers that the average unserved energy (USE) is fine, but that if this does not adequately characterise the reliability objective then the reliability criterion may need to be changed.</p>	



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	<p>Mr Brown stated that the 0.002% USE criterion is currently irrelevant for the SWIS due to the high peaks in demand.</p> <p>The Chair suggested that the use of averages is fine for an over-supplied system, but that low wind would create a risk for the system if the reserve capacity target was just matched. He indicated that the 5-yearly review of the reliability criteria should take this into account, as there was no expectation of high intermittent penetration when the original criteria were developed.</p> <p>Mrs Hill supported Mr Brown's comments about the risk of using averaging approaches. She likened this to turning on a light switch with a 50% chance of the light turning on, and suggested that this may not be good enough for System Management or the public. When asked by Mr Gawler if this was a major problem if it occurred for 15 minutes every 10 years, she said that it was.</p> <p>Mr Brown pointed out that the power rationing for 3-4 hours during the 2004 gas event was regarded as a sign of poor planning.</p> <ul style="list-style-type: none"> <li>• Shane Cremin highlighted that reliability and cost efficiency were both key market objectives. He asked whether infinite cost should be tolerated for improvements in reliability.</li> </ul> <p>Mr Brown suggested that people in other markets think that wind power is currently over-valued in the SWIS.</p> <ul style="list-style-type: none"> <li>• Mr Rosser asked whether consideration was being given to applying a different factor for individual projects.</li> </ul> <p>The Chair suggested that the ideal scheme would sit somewhere between uniform and individual capacity values.</p> <ul style="list-style-type: none"> <li>• Mr McCullough observed that the notion of reliability is split between the reserve capacity market and load following. He suggested that higher load following would be recommended by ROAM, with a significant proportion of the cost being apportioned to wind farms, thus discounting their capacity value. He suggested that concerns expressed here are valid, but that the two work packages need to be viewed together.</li> <li>• The Chair proposed that members be given time to review the reports and then come back to the Working Group with a set of questions. He suggested that the IMO compile questions from members, bring them back to the Working Group for discussion, then put them to</li> </ul>	

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	<p>MMA for response or any further analysis requested. He asked how long people needed to respond. Mr Jackson suggested that 2 weeks would be appropriate and the group agreed.</p> <p>The Chair indicated that the process from here would be to generate a consolidated list of questions, identify a programme of further work, commission that work, meet again to review, consolidate recommendations to the MAC, and implement any resulting rule changes.</p> <p>Mr Campilos asked whether the OoE could issue a recommendation between peak or average measures.</p> <p><del>Mr McCullough noted that the consultation on this Work Package item had just commenced and the OOE would be very interested in the outcomes of this process. Mr McCullough advised that the OoE was viewing this analysis closely and was also open to consultation, but that a decision had not yet been made.</del></p> <p>Mr Gawler pointed out that the paper in its current form met the original IMO objectives, and asked the members what further details were required to make this a robust process. He noted that there were other questions raised about the reliability criterion and pointed out that load following is a separate issue. The answer provided meets the rules for the current reliability criterion. He stressed that further analysis was required to finalise the exact value attributed to intermittent generators, but that the method presented will deliver sensible results within the rules. He advised that the Market Rules should be changed if this method failed to deliver system security.</p> <p>At the conclusion of the discussion, the Chair suggested that consultation should be limited to group members at this stage, as members were appointed as a technical working group under the MAC. The working group will make recommendations to MAC who will have a separate consultation process. He pointed out that that consultation will be open to everyone and that this would be a better time to bring key external stakeholders (eg. Equipment manufacturers, joint venture partners) into the process.</p> <p><i>Action: Members to compile questions and comments on the draft report by Wednesday 5th May.</i></p> <p><i>Action: The IMO to compile questions and comments provided by members in time for distribution prior to the next REGWG meeting.</i></p> <ul style="list-style-type: none"> <li>• Mr Jackson asked the Chair whether the process was likely to be completed by the end of the year.</li> </ul>	<p><b>Members</b></p> <p><b>IMO</b></p>

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	<p>The Chair indicated that the group should be in a position to have most of this work tidied up by the end of 2010, although it may continue into 2011 due to the 4-month rule change process. He indicated that a finite amount of money had been budgeted for this work, and that he is rolling any remaining budget over from one financial year to the next.</p>	
6.	<p><b>WORK PACKAGE 3: PRESENTATION ON DRAFT REPORT</b></p> <p>The Chair welcomed Jenny Reisz from ROAM to present to the REGWG on the results in the Work Package 3 draft report, attached as Appendix 2. He advised that the comprehensive draft report had been provided to the IMO and that this will be distributed to members after it had been reviewed.</p> <p>He also indicated that there was less time pressure to implement any recommendations from this report, as capacity credit assignment will be relevant for investors entering the 2010 cycle.</p> <p>The following questions and comments were raised both during and at the conclusion of the presentation:</p> <ul style="list-style-type: none"> <li>• Mr Brown asked whether some of the numbers in the analysis were based on all coal-fired plant being turned off, highlighting that this is impractical.</li> </ul> <p>Ms Reisz advised that this was assumed in the analysis, but that it reflected a rare scenario where all wind farms were operating at full capacity.</p> <ul style="list-style-type: none"> <li>• Ian Rose commented that the review has been conducted from first principles, with some consultation with System Management. Given that it covers a complex range of issues, compromises will likely be required, but they should lie within the work that has been performed.</li> <li>• The Chair advised the group that this work will need to be linked to other ongoing work under the Oates Review and the Market Rules Evolution Plan, both of which are looking at Ancillary Services. He advised that a Market Rules Design Team is being established under the Oates Review and is reviewing around the transparency and efficiency of dispatch. He indicated that he may ask ROAM to give the same presentation to that team due to the overlap in the work scopes.</li> </ul> <p><i>Action: The Chair to arrange ROAM presentation to Oates Review Market Rules Design Team.</i></p> <ul style="list-style-type: none"> <li>• Mr Rosser asked what ramp rates were used in the analysis. He said that 1-minute BOM data is commonly used, then smoothed due to inertia. He asked whether</li> </ul>	<p style="text-align: center;"><b>Chair</b></p>

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	<p>that function was available.</p> <p>Ms Reisz said that it was, but that it is somewhat subjective to try to match wind farm data to BOM data. She indicated that they changed time scales and relative scaling to try to get the best approximation.</p> <p>Mr Rosser raised concern that this could make wind look more variable than it actually is.</p> <p>Mr Rose stated that the smoothing was based on actual recordings from wind farms and the BOM to get best approximations to represent a wind farm around a small region, and that the output was not as variable as wind gusts. Ms Reisz added that the data was calibrated specifically on load following.</p> <ul style="list-style-type: none"> <li>• Mr Rosser asked if historical cases had been analysed to evaluate load following quantities before and after wind farm entry.</li> </ul> <p>Ms Reisz stated that they did not have data dating back that far, but that System Management publishes it. Currently there is 20-30 MW of load following due to load fluctuations with the remainder due to wind.</p> <p>Mr Brown indicated that system frequency deviations are much more common than before the entry of wind power into the SWIS. He stated that he did not envisage that coal plants could be turned off and expected to reliably restart.</p> <p>Mr Huppatz suggested that price signals in an ancillary services market could take this into account.</p> <ul style="list-style-type: none"> <li>• Mr Brown suggested that it was inaccurate to have the spinning reserve overtaken by load following. He said that we currently run on 70% of the largest unit, but noted that this depended on how you interpret 70%. He also suggested that 300 MW of regulating is insufficient, that the capability would be lost if the largest machine drops out.</li> </ul> <p>Ms Reisz stated the variability is accounted for in the load following requirements, with spinning reserve being for sudden loss such as a transmission event.</p> <p>Mr Brown highlighted the variability of wind, stating that there have been occasions where all wind capacity is lost (particularly in high wind shutoff scenario).</p> <ul style="list-style-type: none"> <li>• Mr Vendel asked how increasing wind penetration was handled in the modelling and whether diversity of new plant was considered.</li> </ul>	

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	<p>Ms Reisz stated that diversity was not taken into account.</p> <p>Mr Vendel highlighted that forecasting of wind was a key issue.</p> <p>Ms Reisz stated that the current methodology in the modelling assumes that the wind is not known ahead of time, but uses a rolling average based on the previous 30 minutes.</p> <p>Mr Brown pointed out that System Management and their NEM counterparts are getting involved in wind forecasts, but that these are still only 20-50% accurate, with timing being a particular issue.</p> <p>Mr Vendel pointed out that forecasting was not mentioned in the presentation and asked about ROAM's perspective on forecasting and its importance in delivering cost efficiency.</p> <p>Ms Reisz indicated that forecasting was not taken into account but that (somewhat accurate) forecasts could significantly reduce the load following requirement. She suggested that the current technique works quite well but that ROAM have not looked at how the effects of forecasting on load following would be quantified.</p> <p>Mr Rosser asked whether this could be explored further by ROAM.</p> <p>The Chair agreed to discuss this with ROAM but suggested that it is unlikely that such analysis could be delivered within the short time frame, suggesting that this could be done in parallel.</p> <p><i>Action: The Chair to discuss with ROAM the possibility of further analysis of the effect of wind forecasting on load following requirements.</i></p> <ul style="list-style-type: none"> <li>• The Chair stopped the discussion at this point, with members to review the report when it is issued. He indicated that a similar review process will apply as for Work Package 2.</li> <li>• Mr Gawler suggested that the analysis may be pessimistic given the use of 30-minute data rather than 1-minute data, and the proportionality to load growth. He commented that load blocks are not getting bigger.</li> </ul> <p><i>Action: Members to review the draft report once distributed, prepare comments and questions for next REGWG meeting.</i></p>	<p style="text-align: center;"><b>Chair</b></p> <p style="text-align: center;"><b>Members</b></p>

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7.	<p><b>WORK PACKAGE 4: PROGRESS UPDATE</b></p> <p>The Chair welcomed Geoff Glazier from SKM to present to the REGWG on the progress of Work Package 4. The presentation is attached as Appendix 3.</p> <p>The following questions and comments were raised both during and at the conclusion of the presentation:</p> <ul style="list-style-type: none"> <li>Mr Bower asked whether SKM looked at what was considered to be a credible contingency event, such as a post-voltage excursion.</li> </ul> <p>Mr Glazier suggested that this relates more to ride-through capability, whereas this is more about a voltage event.</p> <p>Tom Percy stated that voltage control is required in the Technical Rules. Mr Glazier thought that this wasn't the case, or perhaps that this relates to the connection agreement. They agreed to discuss after the meeting.</p> <p>Mr Bower said that he thought that communication for turning plant down (including wind farms) was covered in the Market Rules.</p> <p>Mr Brown said that he thought SCADA data could be used for this purpose.</p> <p>Mr Glazier stated that the ability to dispatch from System Management is not covered in the Technical Rules.</p> <p>Mr Bower said that the ability to turn down was covered in the dispatch side of the market.</p>	
8.	<p><b>GENERAL BUSINESS</b></p> <p>Due to time constraints, the Chair opted not to show the presentation that was prepared showing the NIEIR long term forecasts and base load estimates.</p> <p>The Chair advised that the IMO had asked for overnight load modelling as an input to the Work Package 3 analysis. He commented that though there was no visibility on new large overnight loads in the later years of the study, this approach would be better than ignoring new known block loads.</p> <p>Michael Carr mentioned that this adjustment had not been taken into account in Work Package 1. The Chair noted this and recalled that this had been mentioned in the last REGWG meeting, with the possibility that revision of Work Package 1 may be required.</p> <p>Mr Jackson asked if members could be provided with the profile</p>	

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	<p>of the loads used in Work Package 2. Mr Gawler advised that this could be provided.</p> <p><i>Action: MMA to provide load profile information to assist members with their review of Work Package 2.</i></p>	<b>MMA</b>
<b>9.</b>	<p><b>NEXT MEETING</b></p> <p>The next meetings are scheduled for:</p> <ul style="list-style-type: none"><li>• Thursday 27 May 2010</li><li>• Thursday 24 June 2010</li><li>• Thursday 22 July 2010</li></ul> <p>The Chair apologised for the late cancellation of the last meeting. He advised that some of the material was not ready at that time and thanked members for their patience.</p>	
<p><b>CLOSED</b> The Chair declared the meeting closed at 4.45 pm.</p>		