

COMMENTS AND RESPONSE REPORT

Email - mail; ✉ - email; 📠 - facsimile; ☎ - telephone

Respondent & organisation	Issue / concern*	Date	Means of Communication	Comment / Query	Response
Issues and concerns raised during the Scoping Phase and 30-day comment period					

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1) Dr. Anton Odendal. BirdLife Overberg	Request for registration. Impact on avifauna and visual impacts.	30 Nov 09	Email	<p>Concerns:</p> <p><i>Avifauna:</i> Blue Cranes, Denham Bustards, raptors and other endemics flying into rotating blades.</p> <p><i>Visual impacts:</i> The pastoral landscapes of this region should be regarded as its main asset and it is our belief that this should be a critical issue in the EIA process.</p>	<p>The draft Scoping Report is scheduled to be made available within the next few days and all I&APs will be informed accordingly. The project documentation will be made available through a document exchange site, the details of which will also be made available to all registered I&APs. During the review period, GIBB will be holding public meetings and Focus Group Meetings where these issues will be addressed.</p> <p>1. Avifauna: Blue Cranes, Denham Bustards, raptors and other endemics flying into rotating blades.</p> <p>This area of concern raised by yourself was also highlighted within the Avifauna report for further consideration and investigation within the EIA phase of the project. As can be seen from the extract below, taken from that report, the potential impact has been identified and the actual quantitative impact, (i.e. significance, probability etc) will be assessed and reported in the detailed EIA phase of the project.</p> <p><i>‘The natural vegetation in the study area consists primarily of renosterbos, which forms part of the fynbos biome, and is of importance for the Red listed Black Harrier and Denham’s Bustard. The study area has undergone extensive transformation and the majority of the land cover currently consists of dry land cereal crops and pastures. This habitat is of specific importance to the endemic, Red listed Blue Crane, as well as the Red listed Denham’s Bustard, and Agulhas Long-billed Lark.</i></p> <p><i>The following impacts are potentially associated with the wind facility itself:</i></p> <ul style="list-style-type: none"> • <i>Disturbance of breeding birds during the construction phase, particularly Red listed Blue Crane and possibly Denham’s Bustard.</i>

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					<ul style="list-style-type: none"> • <i>Sterilisation of breeding and foraging habitat by the operation of the wind facility, particularly for Blue Crane and Denham's Bustard.</i> • <i>Collisions with the wind turbines during the operational phase, particularly raptors of several species and possibly Red listed Agulhas Long-billed Lark.</i> <p><i>These aspects will be further explored in the EIA phase report, and appropriate mitigation measures will be suggested, where and if necessary/possible.'</i></p> <p>2. Visual Impacts: The pastoral landscapes of this region should be regarded as its main asset and it is our belief that this should be a critical issue in the EIA process.</p> <p>The Visual Scoping Report has described the receiving 'visual' environment and put into context the various circumstances in which the visual intrusiveness of a Windfarm would be of concern.</p> <p>Again, within the detailed EIA phase of the project, the identified potential impacts will be further considered and quantified as far as possible and mitigation measures provided accordingly.</p> <p><i>'The proposed wind farm will visually affect an extensive area that is largely agricultural in nature but also contains several routes that have significance to tourism, such as the N2 between Botrivier and Caledon and the R43 between the N2 and Villiersdorp. Particular emphasis will be placed on visibility from these routes.</i></p>

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					<p>As the site is large enough to be flexible in the placement of the turbines, and because the size of the turbines makes them difficult to screen, the main visual mitigation measure will be their optimal placement as well as to limit the visibility of the access roads and transmission lines.</p> <p><i>The VIA will be based on broad-based computer modeling which will make the assessment and comparison of various scenarios possible. The primary work of mitigation will therefore have to be undertaken during the design stage and in consultation with the technical team. ‘</i></p> <p>Further to the site/project specific Visual Impact Assessment being undertaken, Epispan (Pty) Ltd are engaged in a Regional Assessment together with the Western Cape Department of Environmental Affairs and Developmental Planning (WC DEADP) to ensure that the proposed project conforms with the regional assessment plan of all relevant government authorities. Where necessary and applicable to this project details of that will be provided accordingly.</p>																		
2) Dr. Stuart Shearer	Questions re adverts, timescales and availability of documentation. Concerns regarding visual impacts and impacts on flora, avifauna, tourism, heritage and archaeological sites.	30 Nov 09	Email	<p>1. Found it difficult to make out the project time-scales. Where was the project advertised and when?</p> <p>2. Will GIBB make the relevant documentation available to I&APs for viewing and will it be available for download on your website?</p> <p><u>Concerns</u></p> <p><i>Impact on avifauna:</i> Blue cranes, migrating species, raptors and bats flying into rotating blades.</p>	<p>1) The project was advertised on the following dates in the following newspapers and in the following languages:</p> <table border="1" data-bbox="1304 1049 1969 1317"> <thead> <tr> <th>PUBLICATION</th> <th>DATE</th> <th></th> </tr> </thead> <tbody> <tr> <td>Caledon Kontreinuus</td> <td>19-Nov</td> <td>Afrikaans</td> </tr> <tr> <td>Hermanus Times</td> <td>19-Nov</td> <td>English</td> </tr> <tr> <td>Overberg Venster</td> <td>19-Nov</td> <td>Afrikaans</td> </tr> <tr> <td>Argus</td> <td>18-Nov</td> <td>English</td> </tr> <tr> <td>Die Burger</td> <td>18-Nov</td> <td>Afrikaans</td> </tr> </tbody> </table>	PUBLICATION	DATE		Caledon Kontreinuus	19-Nov	Afrikaans	Hermanus Times	19-Nov	English	Overberg Venster	19-Nov	Afrikaans	Argus	18-Nov	English	Die Burger	18-Nov	Afrikaans
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				<p><i>Impact on flora:</i> Fynbos and remnant renosterveld</p> <p><i>Impact on tourism:</i> The visual impact (see 'Overberg Tapestry' by Howard and Phillips), compounded by noise, of this extensive wind farm could be detrimental to tourism which is being promoted by TWK, Overstrand and Overberg Municipalities for local economic development. Avitourism is an important component of that strategy.</p> <p><i>Impacts on archaeological and heritage sites</i></p>	<p>2) The project documentation will be made available through a document exchange site, the details of which will be made available to all I&APs</p> <p>A list of the I&APs identified and registered to date was sent to Dr Shearer.</p> <p>The BID was sent to Dr Shearer with the request that it be distributed to other I&APs – who will be registered should they wish for us to do so.</p> <p>Initial concerns noted for the Scoping Phase of the Caledon Windfarm EIA.</p>
3) Dr. Stuart Shearer	Questions surrounding alternative sites, proponent, project finance, previous projects, grid integration requirements, impacts on fauna & avifauna.	6 Dec 2009	Email	<p>List of questions:</p> <ol style="list-style-type: none"> 1. Were alternative sites considered before choosing this one? If so, where, and what factors influenced this particular choice? 2. Could you provide more information on the proponent, namely 'Epispan' or 'Caledon Wind'. Are there any other parties or sponsors involved? 3. How is this project to be financed? 	<p>Response:</p> <ol style="list-style-type: none"> 1. Yes, details of the pre-feasibility alternative sites are described in Chapter 4 of the draft Scoping Report and a summary of the ranking provided in Appendix C. 2. Details provided in Chapter 2 of the draft Scoping Report made available for public review. There are no other parties involved in the EIA application. 3. The project is proposed to be financed through a combination of Equity & Debt (Loans) from both International & Local Investors.

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				<p>4. Have the findings and performance of the national demonstration wind farm at Darling, including its rather short but chequered history, been taken into account?</p> <p>5. What downstream grid integration requirements will there be, and with what associated costs?</p> <p>6. The impact on tourism has been mentioned, but apart from that, we would also need to have a formal landscape impact study as has been done for the West Coast.</p> <p>7. I noted potential impact on fauna, but omitted to specify Bat-eared foxes which are found in the Overberg.</p>	<p>4. Where applicable, including the Eskom Klipheuwel facility.</p> <p>5. Details with regards to the grid integration are included within the Scoping Report, with main details available provided in Chapter 3. Further information would have to be obtained from Eskom.</p> <p>6. The applicant is simultaneously undertaking a Regional Study for the area where aspects of landscape impact will be taken into account. Furthermore, a Visual Impact Assessment is being undertaken as part of the EIA process, where landscape issues are also addressed. The Social Impact Assessment will furthermore incorporate and comment on issues related to visual impact/landscape.</p> <p>7. The Bat Eared Fox is not currently listed as a Red Data Species and does not occur in any of the CITES Appendices. Legally it is unlikely that authorities would stop such a project on account of a non Red Data species, as the species status itself would not permanently be affected by the development. They may temporarily move offsite during the construction phase however it is likely that they would return once complete. The Fauna Specialist was furthermore contacted in respect to this query and an official comment from him requested.</p>
4) Brian McMahon Greyton Resident	Request for registration and BID	29 Nov 09	Email	Interest is personal, but very much centered around the tourism industry in the Overberg and in particular in Greyton.	I&AP was registered and BID sent. Comment noted.

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5) Brian McMahon Greyton Resident	1. Financial viability 2. Technical viability 3. Commercial aspects 4. Environmental Impact	21 Dec 09	Email	<p>1. Financial viability Eskom's public reputation for lack of forward planning and funding, and its apparent dithering over nuclear power and very dirty coal technology, has seemingly created this opportunity for the import of wind power technology: Considering the capital value of this project, the general absence of Government policy on the future of the power generation industry and the potential visual impact in the Overberg, just as this has been re-defined as a major tourism destination area, it is of serious concern that there is such a significant absence of information in the Scoping Report.</p> <p>1.1) What is the sustainable unit price payable for wind power by Eskom, and is it variable or fixed? 1.2) How does this price compare with that from the local Palmiet pumped storage scheme (400 MW)? 1.3) Could the Palmiet plant be improved in terms of its power generation performance? 1.4) If so, how would this affect the viability of the Caledon Wind Farm? 1.5) Has Eskom or a Consultant prepared an assessment of the need for local wind power generation? 1.6) On what basis has a decision been taken to locate the plant at Caledon rather than at Darling or another Cape coastal site?</p>	<p>1) Financial Viability: With regards to Government policy on the future of power generation please find herewith attached the following documents which address the current position with regards to energy requirements in the country:</p> <ul style="list-style-type: none"> • Department of Energy's "Integrated Resource Plan" Strategy, December 31, 2009. • South Africa Renewable Energy Feed-in Tariff (REFIT) Regulatory Guideline published by NERSA (26 March 2009). • Electricity Regulation Act of 2006 <p>The White Paper on Renewable Energy (November 2003) can be found on the Department of Energy's (DoE) website at the following address, www.dme.gov.za/energy/renewable.stm Brief extracts of relevant information from these have been included within Chapter 1 of the Draft Environmental Scoping Report for public comment.</p> <p>In terms of visual impact, the Scoping phase of the Environmental Impact Assessment (EIA) is aimed at identifying the relevant aspects, issues and potential impacts to be assessed in greater detail during the EIA phase of the project. The initial step in the Scoping phase entailed the identification of likely aspects to be affected by the proposed project. This included the initial identification of the need to appoint a Visual Impact Assessment consultant at the start of the EIA to address potential visual impacts, concerns and issues. During the Scoping phase, it has been identified that the visual nature of the project is likely to impact on the following:</p> <ul style="list-style-type: none"> • Tourists travelling along the N2 & R43. • The historic visual nature of the Overberg Region. <p>The next step in the process is to quantify these potential impacts and determine their significance in respect of the project and the study area. This detailed assessment is then undertaken in the EIA phase of the process.</p>

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				<p>One of the major criticisms from across the whole industry of large-scale wind power is the uncertainty of the wind source which effectively means that basic generating capacity must be available anyhow so the potential of wind power is not fully realised. How has this been taken into account in verifying the financial viability of the Caledon site?</p> <p>2. Technical viability The Darling Wind farm project was set up to evaluate the process in an area of known wind levels, and there were planned to be 4 other subsequent projects, all in coastal areas, including the Darling Phase 2 project:</p> <p>2.1) How favourable was the reported experience of power generation at Darling?</p> <p>2.2) What levels of efficiency and consistency were obtained at Darling?</p> <p>2.3) What is the comparison of average wind speed between Darling and Caledon?</p> <p>2.4) Where are the detailed tests that were carried out for the Caledon site?</p>	<p>1.1) What is the sustainable unit price payable for wind power by Eskom, and is it variable or fixed?</p> <p>(a) The Unit Price Payable is determined by the National Energy Regulator of South Africa's (NERSA) Renewable Energy Feed In Tariff (REFIT), a copy of which is attached for your consideration.</p> <p>(b) Eskom does not pay the full REFIT rates. National Treasury & Department of Energy contributes substantially towards the NERSA REFIT rates through various mechanisms, the most commonly known of which, is the Carbon Tax levied on fossil Fuels & Electricity (currently R 0,02 / kWh) and Carbon TAX new vehicles, as of 1 March 2010.</p> <p>1.2) How does this price compare with that from the local Palmiet pumped storage scheme (PSS) (400 MW)?</p> <p>For information regarding the "price per unit" of the Palmiet PSS facility, please contact Eskom directly.</p> <p>1.3) Could the Palmiet plant be improved in terms of its power generation performance?</p> <p>Palmiet PSS is owned and operated by Eskom. Please contact them directly for technically related questions.</p> <p>1.4) If so, how would this affect the viability of the Caledon Wind Farm?</p> <p>(a) Palmiet PSS is owned and operated by Eskom. Please contact them directly for technically related questions.</p>

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				<p>3. Commercial aspects Although the site boundary is defined, there is a dearth of other information:</p> <p>3.1) What is the size of each tower's foundations; volume of soil and rock to remove?</p> <p>3.2) What is the total length of underground cabling; is all the soil etc replaced?</p> <p>3.3) On decommissioning, what happens to the foundations of the towers and the underground cables, if the top equipment is not refurbished or replaced after the 20 years life?</p> <p>3.4) What organisation will be responsible for the decommissioning costs?</p> <p>3.5) What is DBSA's role in this project, and is this compatible with their organisational involvement with Theewaterskloof municipality?</p> <p>3.6) What economic benefits accrue to the TWK municipality?</p> <p>3.7) What level of rentals accrue to the landowners for the servitudes, use of land etc?</p> <p>3.8) Who are the shareholders of Epispan (Pty) Ltd? What is the Registration No.?</p>	<p>(b) An improvement in the power generation of the Palmiet Pumped Storage scheme would contribute towards the amount of renewable energy being requested by the government, however, by no means would contribute to the full amount of renewable energy being requested by the government. This would not affect the viability of a wind project as a percentage of renewable energy would still be required to be met as has been put in place by the government. An improvement, furthermore, would require detailed technical planning as well as its own EIA process, and its own viability proven to government accordingly.</p> <p>1.5) Has Eskom or a Consultant prepared an assessment of the need for local wind power generation?</p> <p>The Department of Energy has published a national need for renewable energy, as part of the Integrated Energy mix.</p> <p>1.6) On what basis has a decision been taken to locate the plant at Caledon rather than at Darling or another Cape coastal site?</p> <p>(a) There are currently in excess of 35 proposed wind farm projects in South Africa. Caledon Wind is only 1 of these.</p> <p>(b) A pre-feasibility study was undertaken by Caledon Wind throughout the Northern, Eastern and Western Cape where <i>available</i> (i.e. remaining areas where leases are not currently in place) sites were investigated in terms of; topography, site access, wind resource, connection to the electricity grid, land size, environmental aspects. The results of the pre-feasibility study are provided in Appendix C of the Draft Environmental Scoping Report for public comment.</p>

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				<p>4. Environmental Impact</p> <p>The Transportation Scoping Study states that a traffic impact study will be done, presumably to assess the impact of heavy construction vehicles. If the soil and rock spoil from the site cannot be retained within the site area, what alternative landfill sites are available and do they utilise the local main roads, which are established scenic routes?</p> <p>Three statements taken from the Visual Scoping Study are cause for concern:</p> <ul style="list-style-type: none"> • ‘ ... of particular concern is the potential visibility from the N2 and the R43.’ • ‘ ... the view changes continually creating a very rich visual experience.’ • ‘ It is acknowledged that placement for optimal wind use <i>may</i> take precedence over placement to minimise visual impact.’ <p>It should be recorded that this pristine area is the gateway to the Overberg from the point of view of tourists travelling from Cape Town to the Garden Route and those visiting the attractions off the R43, including access to the beautiful Riviersonderend valley – and this includes the places Genadendal and Greyton.</p>	<p><i>One of the major criticisms from across the whole industry of large-scale wind power is the uncertainty of the wind source which effectively means that basic generating capacity must be available anyhow so the potential of wind power is not fully realised. How has this been taken into account in verifying the financial viability of the Caledon site?</i></p> <p>Wind Energy is part of the Department of Energy's Integrated Energy Mix and NERSA's REFIT strategy. Wind Energy Facilities are being planned throughout South Africa, ensuring that wind-energy will contribute a significant part to Base-load requirements nationally. Financial viability of Caledon Wind has been demonstrated to investors.</p> <p>2. Technical viability:</p> <p><i>The Darling Wind farm project was set up to evaluate the process in an area of known wind levels, and there were planned to be 4 other subsequent projects, all in coastal areas, including the Darling Phase 2 project:</i></p> <p><i>2.1) How favourable was the reported experience of power generation at Darling?</i></p> <p>(a) No reports, nor efficiency data, is available from Darling Wind Farm.</p> <p>(b) According to international standards, any expansion or new Wind Park, further than 10 km away from an existing facility, requires its own dedicated Wind Test Program.</p> <p><i>2.2) What levels of efficiency and consistency were obtained at Darling?</i></p> <p>(a) These figures are not reported, and therefore unavailable.</p>

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				<p>5. Conclusions</p> <p>5.1) The financial and technical need for Wind Power has not been demonstrated at all.</p> <p>5.2) The benefits of Wind Power, as compared with other methods of power generation, are not shown.</p> <p>5.3) Selection of the Caledon site, as compared to the existing Darling site, has not been done openly and transparently.</p> <p>5.4) Alternative power generating methods should be discussed, in particular the use of the Palmiet pumped storage facility.</p> <p>5.5) In addition to the above, there cannot be any real and sustainable justification for creating an unnecessary threat to Overberg Tourism, by constructing such a large visual impact that will stand out so dramatically, for at least 20 years, over such a huge viewshed.</p>	<p>2.3) What is the comparison of average wind speed between Darling and Caledon?</p> <p>(a) Darling Wind Farm does not share its “Pre” or “Post” Operational Real-Time wind speed data.</p> <p>(b) Caledon Wind records, utilises and compares, more than 100 scientific wind-data resources, specific only to this project location, (current and 10 year+ Historic) for an accurate wind energy determination as part of its Due Diligence obligations to Investors & National Government.</p> <p>(c) Wind Modeling is a highly specialised and scientific undertaking, without which no funding will ever become available.</p> <p>(d) Minimum time required by international standards is 12 months (utilizing every “recognized and bankable” technology, by experienced expertise).</p> <p>2.4) Where are the detailed tests that were carried out for the Caledon site?</p> <p>This information is Company Confidential. The detailed tests / wind modeling form part of the Due Diligence to the Department of Energy, NERSA and investors. These include:</p> <ul style="list-style-type: none"> • Min 1 Year on-site tests / data recording with internationally certified equipment and expertise Wind Modeling • Computational Fluid Dynamics • 3D Fluid Dynamics • 10+ Year Historic Wind Data Correlation (National & International sources)

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					<p>3. Commercial aspects</p> <p>3.1) What is the size of each tower's foundations; volume of soil and rock to remove?</p> <p>Schematic and technical information on foundations was provided to the I&AP.</p> <p>3.2) What is the total length of underground cabling; is all the soil etc replaced?</p> <p>(a) To be determined after exact placement of each turbine is finalized.</p> <p>(b) All the soil will be replaced.</p> <p>3.3) On decommissioning, what happens to the foundations of the towers and the underground cables, if the top equipment is not refurbished or replaced after the 20 years life?</p> <p>(a) The business plan is geared towards "Repowering" for a minimum additional 20 years of operation.</p> <p>(b) The foundation removal / covering will be determined by the DEA, yet underground cables may remain due to the possible environmental impact that may result from additional excavation required during removal.</p> <p>(c) The tower's base-plate is removed, and minimum 350 mm soil is replaced to allow normal agricultural activities to continue over the then submerged foundations. Decommissioning details to be further provided in a project specific Environmental Management Plan (EMP).</p>

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					<p>3.4) What organisation will be responsible for the decommissioning costs?</p> <p>Caledon Wind.</p> <p>3.5) What is DBSA's role in this project, and is this compatible with their organizational involvement with Theewaterskloof (TWK) municipality?</p> <p>(a) As a developmental financial institution, (DBSA is a co-funder of the Darling Wind farm) DBSA has issued an "Expression of Interest" for part of the debt requirements to Caledon Wind.</p> <p>(b) The project is inline with DBSA's Strategic Infrastructure Investment mandate, in particular Renewable Energy and Sustainability.</p> <p>3.6) What economic benefits accrue to the TWK municipality?</p> <p>(a) Increased land-taxes. (b) Job creation.</p> <p>3.7) What level of rentals accrue to the landowners for the servitudes, use of land etc?</p> <p>Monthly rentals are paid to respective land-owners. Land Lease Agreements between Land Owners and Caledon Wind are confidential.</p> <p>3.8) Who are the shareholders of Epispan (Pty) Ltd? What is the Registration No.?</p> <p>(a) Registration number 2009/014918/07 (b) The current shareholders are: i. Genesys Wind AG (Swiss) ii. Thuthuka Group Holdings (SA)</p>

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					<p>4. Environmental Impact</p> <p>Detailed specialist studies are underway as part of the EIA, and all additionally identified concerns and impacts will be considered, and included.</p> <p>5. Conclusions</p> <p>5.1) <i>The financial and technical need for Wind Power has not been demonstrated at all.</i></p> <p>(a) Caledon Wind, as part of its Due Diligence to investors and National Government, has to demonstrate and prove both financial & technical viability of the proposed project.</p> <p>(b) Caledon Wind's proposed project conforms to the Department of Energy's National Integrated Energy Mix objectives.</p> <p>(c) Caledon Wind's proposed project will form an integral part towards National Government's goals and commitments towards reducing the impact of climate change caused by CO2 Emissions from predominantly Coal based energy generation (95%) in South Africa at present.</p> <p>5.2) <i>The benefits of Wind Power, as compared with other methods of power generation, are not shown.</i></p> <p>(a) Wind is the only viable utility scale energy resource within the TWK Municipal area.</p> <p>(b) The investment of more than R 7 Billion will have tremendous economic benefit to TWK Municipality and community.</p>

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					<p>5.3) Selection of the Caledon site, as compared to the existing Darling site, has not been done openly and transparently.</p> <p>Company confidential information.</p> <p>5.4) Alternative power generating methods should be discussed, in particular the use of the Palmiet pumped storage facility.</p> <p>(a) Owned and Operated by Eskom, and fully utilized. (b) Caledon Wind is a wind power producing company, specifically responding to Governments request of 10 000GwH renewable energy annually, in the field of wind power. Other generating methods can be discussed and a brief comparison provided, however assessment cannot take place with regards to other generating methods as the knowledge and information is not available. The relevant government departments have the responsibility to consider each application and their viability against each other when deciding to either approve or reject accordingly.</p> <p>5.5) In addition to the above, there cannot be any real and sustainable justification for creating an unnecessary threat to Overberg Tourism, by constructing such a large visual impact that will stand out so dramatically, for at least 20 years, over such a huge viewshed.</p> <p>(a) As illustrated by Eskom's Klipheuvel Test Facility, wind parks generate tremendous interest and tourism in itself. (Detailed list of visitors to the facility available at www.eskom.co.za)</p> <p>(b) A visual impact assessment is being undertaken as part of the EIA process and will assess the significance accordingly in relation to the context of the area and taking into consideration I&AP comments in regards to this aspect and forwarded to the decision making authority accordingly for their consideration and decision making.</p>

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					<p>(c) In terms of climate change and sustainability, wind energy is considered 'green' energy and a sustainable, cleaner alternative to dirty coal fired electricity and controversial nuclear energy. The value of such a project in context with the nature of the proposed study area will be decided through the EIA process.</p> <p>Further to the site/ project specific Visual Impact Assessment being undertaken, Epispan (Pty) Ltd are engaged in a Regional Assessment together with the Western Cape Department of Environmental Affairs and Developmental Planning (WC DEADP) to ensure that the proposed project conforms to the regional assessment plan of all relevant government authorities. Where necessary and applicable to this project, details of that will be provided accordingly.</p>

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6) Brian McMahon Dr Stuart Shearer	Comments on Arcus Gibb's Response to original communication of 21 December 2009	15 Feb 2010	Email	<p>To avoid any confusion, the reference numbers all refer to the original numbered queries and comments.</p> <p>In general, it has been understood that the reason for all I&AP queries and comments being recorded with the other EIA documents is to ensure that everyone, but in particular those mandated to make the final decision to approve the application, <i>have all the information and views available. This EIA seems to be an exception.</i></p> <p>It is unfortunate in this instance that the Consultants responsible for assessing the options and alternatives have decided to ignore a huge amount of public information from across the World, which is several years ahead of South African experience of Wind Farms, that is negative or even hostile to the spurious claims of the equipment manufacturers and suppliers. The published reports etc are garnished with features of wind energy that are seldom objective or balanced, often misleading and inaccurate, and, one has to conclude, actually compiled to deceive the readers.</p>	<p>All comments received from I&APs are recorded in an Issues and Response Report (IRR) which is submitted with each report for either public review or authority review. The IRR submitted to the authority with reports for their review is also made available on the website such that the public can see that their comments have been included accordingly.</p> <p>Research and data for the scoping report was sourced from both national and international Environmental Impact Assessments undertaken for wind farms. It should be noted that the Scoping Report released is only the first stage of the project, in which potential issues are scoped out and identified. The scoping phase of the project is also an opportunity to get valuable comment from I&APs who may, through their knowledge, be able to identify further potential impacts of the project. The identified potential impacts of the wind farm will be assessed in the Environmental Impact Assessment (EIA) phase of the project. At this stage, more detailed information and specialist opinion will be made available in the Environmental Impact Report (EIR). The public will again be given the opportunity to review and comment on the project documentation. We value the comments you have raised in your correspondence and wish to assure you that the issues raised here will be addressed in the EIR.</p>

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				<p>The opening paragraph was intended to set the scene, with the impact on the tourism industry in the Overberg, the lack of any detailed plan beyond the Government's broad strategy, as well as the general environmental impacts, creating such a concern – yet this was not matched by the availability of information in the Scoping Report, which it is considered should assess ALL options, in order to allow a realistic decision to be made. The response was to refer to an Act, a Strategy Plan, a White Paper and a Regulatory Guideline – from which a selection of 'favourable comments' has been taken. The concentration of effort in this EIA on this one Wind Farm, in one selected position, ignoring all other alternative aspects of the Government strategy, and ignoring all the other 50+ Wind Farm applications, some of which are understood to be in this area, is hardly part of an impartial assessment process, that is supposed to incorporate significant public involvement.</p> <p>Our query 1.1 asks what is the sustainable unit price of electricity generated by wind power. We are referred to a Regulatory Guideline. The latter revealed the current feed-in tariff of R 1.25 per KWh unit of electricity, which is about twice the maximum domestic tariff now.</p>	<p>An EIA is a project specific tool and cannot assess the adequacy, relevance and necessity of the EIA applications undertaken for the numerous other wind farms in the country. This is a task for the decision-making authority. The purpose of mentioning Government's broad level strategies was to demonstrate that such a project is potentially in line with government's objectives to supplement conventional power stations with alternative means of energy generation. It was by no means meant to avoid the question of whether this particular energy option is suitable for that area. Energy and site alternatives / options were assessed in the Scoping Report. The pre-feasibility study was undertaken by Caledon Wind throughout the Northern, Eastern and Western Cape where <i>available</i> (i.e. remaining areas where leases are not currently in place). Sites were investigated in terms of; topography, site access, wind resource, connection to the electricity grid, land size and environmental aspects. The results of the pre-feasibility study indicated the area as being suitable for wind energy production. Again, the level of detail required here, regarding impact assessment, will be provided in the EIR. I&APs will be informed of the availability of the EIR for review and comment.</p> <p>DoE has been tasked to develop the Integrated (Electricity) Resource Plan (IRP and IRP2010) within the limits as determined various alternatives, actual costs, South African carbon emissions reduction commitments etc. As part of this process, NERSA has also published the REFIT rates. This project acts within the confines of the existing regulations and does not have any input into specifying the content.</p>

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				<p>Then, it is said that Eskom does not pay this rate alone – contributions come from the Treasury and Dept of Energy through various mechanisms such as the Carbon Tax, which is now R 0.02 per KWh. This is evasion and deception. <i>The Users and Taxpayers pay for this</i>, to the extent that the more Wind sourced electricity that is generated, then the higher the cost to User and Taxpayer.</p> <p>The site selection process was queried in 1.6. The response that pre-feasibility studies were undertaken throughout the Northern, Eastern and Western Cape, which results are reported in Appendix C of the DSR, must be questioned. Only 3 sites are shown, all within a few km of Caledon. Maybe the real reason, which should be put to the public in considerably more detail, is shown in the response to 5.2.a. – wind is the only viable utility</p>	<p>Please view the Carbon TAX document from National Treasury, and the future impact on electricity costs associated if implemented available from: www.doe-irp.co.za (DoE's future Integrated Resource Plan Public site).</p> <p>The unit price of new electricity generation capacity by wind (R 17 million / MW) is just as difficult (or impossible) to accurately determine as the same for other new coal generation (R 29 million / MW, + Fuel + Water, + Infrastructure (Pipelines + transportation) + Carbon TAX) methods. The reason is the varying assumptions regarding currency fluctuations, country of origin, future fuel costs, funding arrangements and gearing and maintenance down time. What is known about wind is that wind has a zero fuel cost for ever, does not use water and does not require an annual shutdown and will not pay carbon taxes. Most of the costs of wind are therefore determined by the financing and insurance options available and utilised.</p> <p>An extensive study was commissioned by the European Wind Energy Association and published in April 2010 under the title "Wind Energy and Electricity Prices"¹. This study found that increased penetration of wind power reduces wholesale spot prices and that consumers pay less. Interestingly this study also showed that a part of wind can replace base load.</p> <p>CaledonWind is applying for an authorisation for a wind farm on this site due to its ranking during the pre feasibility study. CaledonWind has offered yourselves (response 3 March 2010) and I&APs the opportunity to view confidential data should they be willing to sign a confidentiality agreement.</p>

Respondent & organisation	Issue / concern*	Date	Means of Communication	Comment / Query	Response
				<p>scale energy resource within the TWK Municipal area. The final paragraph after query 1.6 questions the results of using an unpredictable and erratic wind to generate electricity for the grid on a financially viable basis. No attempt was made to address this subject, which is still the cause of much debate across the World. Instead, the comment is made that 'the financial viability of Caledon Wind has been demonstrated to investors' – our concern is for the users and taxpayers of South Africa.</p> <p>The final paragraph after query 1.6 questions the results of using an unpredictable and erratic wind to generate electricity for the grid on a financially viable basis. No attempt was made to address this subject, which is still the cause of much debate across the World. Instead, the comment is made that 'the financial viability of Caledon Wind has been demonstrated to investors' – our concern is for the users and taxpayers of South Africa.</p>	<p>This is a question for NERSA. Also note the EWEA study showing that wind reduces cost to the end consumer.</p>

Respondent & organisation	Issue / concern*	Date	Means of Communication	Comment / Query	Response
				<p>The response to query 5.2.b. is that the investment of over R 7 billion will have tremendous economic benefit to TWK municipality and the community sounds good but must be defined in detail, otherwise will be understood to be sales talk of negligible value, at least to the community. The final paragraph states that the Epispan (Pty) Ltd, which has no track record in electricity generation, which is owned by a Swiss-registered company with an unknown history in electrical equipment design and manufacture, together with a SA Company with unknown experience in wind power, are actually engaged with the DEA&DP in a Regional Assessment to ensure conformity with other Government Departments. We are told that details of this will be provided where necessary and applicable to this project. And who will decide this and when?</p>	<p>Other than the construction, maintenance and operations job opportunities created, the proposed Caledon Wind project will arguably become the single largest tax payer to the Theewaterskloof local authorities once the farm is operational. CaledonWind is furthermore well advanced with the structuring and application for funding whereby local communities will buy into a significant equity stake, with the support from Local Funding Agencies, in order to earn dividend from the proceeds of electricity sales. The dividends are planned to be applied to the existing Theewaterskloof Integrated Development Plan. A total of R500 million is expected to be paid to the local authorities and local communities over the 20 year life of the project.</p>

Respondent & organisation	Issue / concern*	Date	Means of Communication	Comment / Query	Response
				<p>The final paragraph states that the Epsispán (Pty) Ltd, which has no track record in electricity generation, which is owned by a Swiss-registered company with an unknown history in electrical equipment design and manufacture, together with a SA Company with unknown experience in wind power, are actually engaged with the DEA&DP in a Regional Assessment to ensure conformity with other Government Departments. We are told that details of this will be provided where necessary and applicable to this project. And who will decide this and when?</p> <p>The DSR contains a large number of 'loaded' comments that support the benefits specifically of wind power for the generation of electricity, at one specific location, to meet one specific</p>	<p>Epsispán (Pty) Ltd is a new company (or Special Purpose Vehicle) registered as the legal entity into which the assets and liabilities of this project will be injected. Before funding the shareholders are GenesyswindAG, a Wind Project Development company based in Switzerland and listed in Frankfurt and Thuthuka Group Limited, a South African Engineering and Construction company. Genesys Wind AG has completed in excess of 15 similar wind farm developments in Europe. See www.genesyswind.com for a company profile.</p> <p>The equipment will be sourced from one of the top world turbine manufacturers and none of the shareholders will be required to do any design work for the turbines. Thuthuka Group Limited is a multi disciplined Construction, Engineering and Electrical company that will be responsible for the development and construction of civil works and electrical grid connection. This is work that Thuthuka does as a matter of course. See www.thuthukagroup.com for the company profile. Turbine Support and Maintenance will be performed by the turbine manufacturer, with training programs to up skill local engineers.</p> <p>Wind Park Operations will be performed by an experienced international wind park operator.</p> <p>The Regional Assessment for the Theewaterskloof region has now been completed. Furthermore, the WC DEADP has now initiated a project to apply this to the entire Western Cape and use as a tool for decision-making on wind farm development and the numerous applications currently in place. Details of the Theewaterskloof Regional Assessment will be reported on in the EIA phase of the project.</p> <p>Arcus GIBB is aware of its responsibility as an independent consultant and has signed a sworn declaration to this effect. Arcus GIBB can therefore be held legally liable if they fail to fulfil this duty. Arcus GIBB has no vested interest in the project and do not stand to benefit from this project in any way, other than for fair</p>

Respondent & organisation	Issue / concern*	Date	Means of Communication	Comment / Query	Response
				Government policy in a broad strategy involving several renewable energy options. It is considered that the environmental and other alternatives and issues are not being properly addressed and that the degree of impartiality of the Consultants has to be questioned.	remuneration for undertaking the EIA. Furthermore, given the interest and importance attached to this EIA, Arcus GIBB would be doing a disservice to itself if it were to undertake the EIA in a subjective manner.

7) Karl Oettler Private Individual	Request for registration and BID so as to ensure he can provide feedback before the 25 Jan 2010 deadline	25 Nov 09	Email	Request for registration and BID so as to ensure he can provide feedback before the 25 Jan 2010 deadline.	I&AP was registered and BID sent.
8) Franco Venturino Kwikspace Modular Buildings Ltd.	Provision of services. Request for registration as an I&AP	19 Nov 09	Email	We would like to offer their services to provide onsite accommodation if required by the client.	I&AP contact details were sent on to the relevant person.
9) Seth Anderson Milkwood Projects	Request for registration as an I&AP. Purchase of turbine.	19 Nov 09	Email	Interested in installing a 2Mw wind turbine in Hermanus to help run commercial interests here. Would like to hear from the individuals involved in the Caledon project with a view to purchasing a turbine.	I&AP contact details were sent on to the relevant person.
10) Johan Goosen Betafence South Africa (Pty) Ltd	Provision of services. Request for registration as an I&AP	18 Nov 09	Email	Would like to offer their service to Caledon Wind with regards to setting up perimeter fencing around the site.	I&AP contact details were sent on to the relevant person.

11) Dr Stuart Shearer	Questions regarding a variety of issues, see Comment / Query Column	06 Dec 2009	Email	<p>Concerns / Questions:</p> <p>1. Were alternative sites considered before choosing this one? If so, where, and what factors influenced this particular choice?</p> <p>2. I have been unable to unearth any information about the developers 'Epispan' or 'Caledon Wind'. Can you provide me with such information? Are there any other parties or sponsors involved?</p> <p>3. How is this project to be financed?</p> <p>4. Have the findings and performance of the national demonstration wind farm at Darling, including its rather short but chequered history, been taken into account?</p> <p>5. What downstream grid integration requirements will there be, and with what associated costs?</p> <p>6. The impact on tourism has been mentioned, but apart from that, we would also need to have a formal landscape impact study as has been done for the West Coast.</p>	<p>1) Yes, details of the pre-feasibility alternative sites are described in Chapter 4 of the EIA and a summary of the ranking provided in Appendix C.</p> <p>2) Please refer to Chapter 2 of the Scoping Report, Pg 1 where details of 'Caledon Wind' is provided.</p> <p>3) Through a combination of Equity & Debt (Loans) from both International & Local Investors</p> <p>4) Where applicable, including the Eskom Klipheuwel facility.</p> <p>5) Details with regards to the grid integration are included within the Scoping Report, with main details available provided in Chapter 3. Further information would have to be obtained from Eskom.</p> <p>6) The applicant is simultaneously undertaking a Regional Study for the area where aspects of landscape impact will be taken into account. Furthermore, a Visual Impact Assessment is being undertaken as part of the EIA process, where landscape issues are also addressed. The Social Impact Assessment will furthermore comment on issues related to visual impact/landscape.</p> <p>7) The Bat Eared Fox is not currently listed as a Red Data Species and does not occur in any of the CITES Appendices. Legally it is unlikely that authorities would stop such a project on account of a non red data species, as the species status itself would not permanently be affected by the development. They may temporarily move offsite during the construction phase however it is likely that they would return once complete. I have furthermore contacted our Fauna Specialist in respect to this query and have requested an official comment from him, which will be forwarded to yourself and included within the Issues and Response Report.</p>
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				7. I noted potential impact on fauna, but omitted to specify Bat-eared foxes which are found in the Overberg.	
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<p>12) A Roux</p> <p>Department of Agriculture: Western Cape</p> <p>Reference: 599 - Caledon</p>	<p>Impacts on Agricultural land,</p>	<p>14 Dec 2009</p>	<p>Email</p>	<p>Concerns:</p> <ul style="list-style-type: none"> • The footprints may interfere with the agricultural land use on these properties. • The proposed development may lead to the loss of high potential agricultural land. • Wind Turbines may impact on the utilization of the remainder of the agricultural land unit. The proposed infrastructure may interfere with the agricultural activities and that of agricultural infrastructure (i.e. centre pivot point irrigation) • The proposed infrastructure may interfere with soil conservation works and cause erosion. The footprint of the disturbed area could cause soil erosion. It is therefore important to know where these turbines would be constructed or utilized. • New roads, upgrading and over utilization of existing roads may cause soil erosion, degradation of veld used for grazing and leave permanent scarring to the resource. It is therefore important to know where these routes would be constructed or utilized. 	<p>The following information was obtained from the Agricultural Potential Specialist Study included in Appendix K in the DESR made available for public review.</p> <p>The major impact on the natural resources of the study area would be the loss of potentially agricultural land due to the construction of the turbines and associated infrastructure. However, this impact would be of limited significance and would be local in extent, and would obviously not be sensible in the irrigated areas.</p> <p>However, this may well not be relevant, since sources such as Google Earth show little evidence of any irrigation within the study area. As far as any non-irrigated cultivation is concerned, the fact that the turbines will be placed far apart would mean that cultivation would still be possible between the structures.</p> <p>The impact can be summarized as follows:</p> <table border="1" data-bbox="1098 808 1986 1141"> <tr> <td>Nature of impact</td> <td>Loss of agricultural land</td> <td>Land that is no longer able to be utilized due to construction of infrastructure</td> </tr> <tr> <td>Extent of impact</td> <td>Site only</td> <td>Confined to areas within the site where turbines (7 m x 7 m), substation (20 m x 25 m), and access roads etc will be located</td> </tr> <tr> <td>Duration of impact</td> <td>Long-term</td> <td>Will cease if operation of activity ceases</td> </tr> <tr> <td>Probability of impact</td> <td>Highly probable</td> <td></td> </tr> <tr> <td>Severity of impact</td> <td>Moderately severe</td> <td></td> </tr> <tr> <td>Significance of impact</td> <td>Low</td> <td>Mainly due to low potential of area, as well as scattered/random nature of infrastructure which allows for almost all agricultural activities to continue on the land</td> </tr> <tr> <td>Mitigation factors</td> <td colspan="2">The main mitigation would be to ensure that as much as possible of the planned infrastructure be confined to transformed land, or use is made of existing roads etc. In addition, the infrastructure could be dismantled at a future stage to return the environment to approximately its original state.</td> </tr> </table> <p>Both Visual Impacts and Avifauna impacts have also been identified as a result of the proposed Caledon Wind Farm, and will be subject to detailed specialist studies within the EIA Phase of the project.</p>	Nature of impact	Loss of agricultural land	Land that is no longer able to be utilized due to construction of infrastructure	Extent of impact	Site only	Confined to areas within the site where turbines (7 m x 7 m), substation (20 m x 25 m), and access roads etc will be located	Duration of impact	Long-term	Will cease if operation of activity ceases	Probability of impact	Highly probable		Severity of impact	Moderately severe		Significance of impact	Low	Mainly due to low potential of area, as well as scattered/random nature of infrastructure which allows for almost all agricultural activities to continue on the land	Mitigation factors	The main mitigation would be to ensure that as much as possible of the planned infrastructure be confined to transformed land, or use is made of existing roads etc. In addition, the infrastructure could be dismantled at a future stage to return the environment to approximately its original state.	
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			<ul style="list-style-type: none"> • Structures may have visual impacts which may subsequently impact on agri-tourism. • Bird life may be impacted on. • This Office would like to view a map of the proposed precise locations of wind turbines in order that more comprehensive comment may be submitted. 	<p>A detailed map of the precise locations of the turbines is not available at present as this will result from the micro-siting results undertaken for each of the various phases of the project. During the EIA phase of the project, a site map will be produced which will indicate all land where turbine positioning will be considered and eliminate those areas of the proposed site which will no longer be considered or identified as highly sensitive. This map will be forwarded to the department for their detailed comment on the land still under consideration.</p>
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13) Christian Schumann Private individual	Visual and agricultural impacts. Safety concerns and job creation opportunities for locals	14 Dec 2009	Email	Visual and agricultural impacts. Safety concerns and job creation opportunities for locals.	I&AP Registered on the I&AP database. Comment noted. Concerns will be addressed through the specialist studies employed for the proposed project.
14) Johan Viljoen TWK Municipality Environmental Manager	Visual Impacts	17 Dec 2009	Email	Stated that windfarm may be "greener" than other forms of electricity but that visual impacts must still be addressed.	I&AP Registered on the I&AP database. Comment noted.
15) Hanneen van der Stoep. Overstrand Local Municipality Senior Town Planner	Visual, Environmental, Agricultural Impacts. Energy benefits for region. Financial Implications	30 Dec 2009	Post	<ul style="list-style-type: none"> • Visual Impacts • Environmental Impacts vs Financial Implications • Energy benefits for the region vs proposed Bantamsklip Development. Which is most effective and beneficial? • Impact on agricultural activities and land availability 	I&AP Registered on the I&AP database. Comment noted. Concerns will be addressed through the specialist studies employed for the proposed project.
16) Mr J. van Niekerk Chairman: Botrivier Ratepayers Association	Financial implications of project. How project is linked to Eskom.	06 Jan 2010	Post	<p>Queries/Concerns:</p> <ul style="list-style-type: none"> • Interested in the financial implications of the project • We want to know how this project is linked with Eskom: <ul style="list-style-type: none"> - Will their cables/lines be used? - Will they make use of underground cables? - How will this project affect the natural scenery of the surrounding area? 	I&AP Registered on the I&AP database. Comment noted. Concerns will be addressed through the specialist studies employed for the proposed project.

17) Dave Whitelaw: Chairman: Cape Bird Club	Impact on bird populations	14 Jan 2010	Email	Windfarms have the potential to become a major source of renewal energy. However they are capable of inflicting major damage to certain bird populations. The Caledon district has a large Blue Crane population.	I&AP Registered on the I&AP database. Comment noted. Concerns will be addressed through the specialist studies employed for the proposed project.
18) Marleen de Jonge	Request for background information of the proponent and technical information on wind turbines	15 Jan 2010	Email	Additional information Owners, power company, Turbine suppliers, and licenses for building these machines.	I&AP Registered on the I&AP database. Comment noted.
19) Brian McMahon Greyton Resident Ex Power Generation Engineer	Requested copy of IAP contact details.	13 Jan 2010	Email	Requested a copy of the attendance list for the Caledon public meeting held on 12 January 2010, with the contact details of attendees.	<p>The question regarding I&AP contact details is a common one received during EIA processes. I hereby take this opportunity to explain why as an Environmental Assessment Practitioner (EAP) we are not at liberty to divulge particular contact information.</p> <p>In terms of regulation 57(1) of the EIA Regulations an applicant or EAP must open and maintain a register which contains the names and addresses of, <i>inter alia</i>, all persons who have submitted written comments on the application or have attended meetings with the applicant or EAP.</p> <p>Regulation 57(2) of the EIA Regulations provides that “an applicant or EAP must give access to the register to any person who submits a request for access to the register in writing.” The obligation on the EAP or applicant is thus limited to making the register (names and addresses only) available.</p> <p>The Promotion of Access to Information Act 2 of 2000 ("PAIA") is also directly relevant as it regulates access to information held by both public and private parties. PAIA sets out certain mandatory grounds of refusal in respect of information held by both private bodies and public bodies.</p>

					<p>One of the grounds of refusal is based on the mandatory protection of the privacy of a third party. It provides that a private body or a public body, such as Arcus GIBB, respectively, <u>must</u> refuse a request for access to a record if "its disclosure would involve the unreasonable disclosure of personal information". The term "personal information" is defined in PAIA as including the address and other personal contact details of an identifiable individual.</p> <p>Based on the above, it is Arcus GIBB's viewpoint that:</p> <p>a. Access will be granted to the register in strict compliance with the provision of regulation 57(2).</p> <p>b. No personal information about identifiable individuals, which must be protected in terms of the provisions of PAIA, will be forwarded to I&APs, and any information provided to I&APs in the register may not be disseminated or utilised.</p> <p>c. Access to the register is provided (in the form of a copy of the register) in terms of the mandatory provision contained in regulation 57(2) of the EIA Regulations.</p>
20) Dick Shone Retired Engineer	Request for technical information on wind turbines	13 Jan 2010	Email	Could you provide more information on the make of the turbines, the design wind speed, efficiency and the expected load factor.	I&AP registered on the project database and details forwarded to CaledonWind. The details requested are not available at this stage. When they become available it may require viewing under confidentiality agreement with CaledonWind.
21) Dr Stuart Shearer Greyton Conservation Society	Request for minutes of public meetings held in Botrivier & Caledon in January 2010	14 Jan 2010	Email	Request for minutes of public meetings held in Botrivier & Caledon in January 2010	Arcus Gibb will send the minutes of the Botrivier Public Meeting to you as soon as they are completed.

<p>22) Dr. Stuart Shearer</p> <p>Committee member of the Greyton Conservation and Greyton Historical Societies. Member of BirdLife South Africa and Overberg.</p>	<p>More time should have been made available for notification of Public meetings.</p>	<p>7 Jan 2010</p>	<p>Email</p>	<p>According to NEMA you are required to give 14 (fourteen) days notice of a public meeting to I&APs.</p>	<p>We would like to take this opportunity to address your concern raised with regards to the timeframe given for the public meetings held on 11 and 12 January 2010. Since the promulgation of the new EIA Regulations of July 2006, the compulsory holding of public meetings and associated prescribed timeframes are no longer required within an Environmental Impact Assessment. It is still however in both the applicant's and the Environmental Assessment Practitioners best interest to undertake a credible public participation process and accommodate Interested and Affected Parties (I&APs) accordingly to ensure the main issues at the end of the day are addressed.</p> <p>The lead up to the public meetings in question has included the following:</p> <ol style="list-style-type: none"> 1. Placement of the project Notification advertisement, as per legislation, in the following newspapers: <p>Caledon Kontreinuus: 19-Nov 2009 Hermanus Times: 19-Nov 2009 Overberg Venster: 19-Nov 2009 Argus: 18-Nov 2009 Die Burger: 18-Nov 2009</p> 2. Notice Boards, as per legislation, placed on the various farms forming part of the site, as well as at public venues in the towns surrounding the study area. 3. Distribution of Background Information Documents (BIDs) to all Identified I&APs, newly registered I&APs and within various public venues. 4. Release of the draft Environmental Scoping Report to the public for a period of 30 days from 11 December 2009 until 3 February 2010, excluding the festive season cut-off period as prescribed by the Western Cape Department of Environmental Affairs and Development Planning (WC DEADP). The public meeting dates and venues were provided within this report. 5. Distribution of invitations to all registered I&APs further notifying them of the public meetings.
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23) Paul van der Hoorn - CEO Sirkel Sourcing	Request for information re the possibility of establishing windfarms on farming land.	18 Jan 2010	Email	My company is interested in Wind Farming developments and have clients that are very interested in having a windfarm on their property. Thus I request that you contact me to take this matter further.	I&AP registered on the project database and details forwarded to Caledon Wind.
24) Andy Gubb WESSA: Senior National Conservationist	Public Participation Process. Economic & environmental sustainability	21 Jan 2010	Email	Want to ensure that the public participation process is correctly followed as well as to ensure the environmental and economic sustainability of the project	<p>The Public Participation Process was undertaken in line with the National Environmental Management Act The draft Environmental Scoping Report was made available for review from Thursday 10 December 2009 to Wednesday 3 February 2010. As the proposed review period fell over the December festive period a core period of 30 days was provided from Thursday 10 December until Tuesday 15 December (6 days) and from Monday 11 January to Wednesday 3 February 2010 (24 days).</p> <p>The following activities were undertaken in order to identify relevant Interested and Affected Parties (I&APs).</p> <ul style="list-style-type: none"> • Existing I&AP databases obtained from the client; • Existing I&AP databases for other projects within the study area, • Placement of newspaper advertisements in five newspapers ranging from national to regional and local newspapers. The advertisements were placed between the 18th and 19th of November 2009; • Placement of site notices at the proposed site locations; • Placement of site notices in venues in the surrounding towns; • Distribution of Background Information Documents (BIDs); • Discussions with community leaders and relevant ward councillors; and • Completed comments sheets. <p>I&APs were also encouraged to identify any other relevant stakeholders and submit their details to Arcus GIBB. We would appreciate your input and/or assistance in identifying any further I&APs or NGOs who need to be informed of the project. Arcus GIBB will ensure that these parties are notified once the Final Scoping Report becomes available, and that they are provided with an opportunity to comment during the EIA phase of the project. Please contact Jan-Willem de Jager (021 469 9100) to submit potential stakeholder details.</p>

25) Francois Kotze Overberg District Municipality	Environmental, Technical, Economic, Social, Cultural-historic criteria:	13 Jan 2010	Email	<p>With the consideration of documentation provided, it's recognised that the above mentioned proposed development is a positive step in the development of alternative electricity within the Overberg.</p> <p>This Council is hereby registering as an I&AP and would also like to put forward, the following set of criteria as a minimum requirement to be met and to follow during the evaluation process.</p> <p><u>Environmental criteria</u></p> <ul style="list-style-type: none"> • What influence will the proposed development have on the environmental integrity of the region concerned through threats to habitat types, water catchments, water courses, lakes, flood-plains or excessive utilization of natural resources such as water and soil? • Does the proposed development jeopardize the visual integrity of the region concerned through disruption of natural features, or skylines? • Will ecological processes essential to maintenance of water drainage patterns, groundwater equilibrium, micro-climate, flood-attenuation, or land/sea interactions be disrupted? 	<p>We hereby confirm that the Overberg District Municipality has been registered as an I&AP on our database and will be made aware of all further project notifications.</p> <p>All comments noted and captured accordingly. The environmental, technical economic, social and cultural criteria and issues mentioned here will be forwarded on to the relevant specialists for assessment, consideration and comment upon in their detailed studies and report writing in the EIA phase of the project. These issues will be addressed in the Environmental Impact Report and will be updated in the Issues and Response Report provided in the EIR. The Overberg District Municipality will be made aware of the availability of the EIR for review and comment, in order to ensure that these issues have been adequately addressed. Arcus GIBB will furthermore compile a follow-up letter for yourselves during the EIA phase of the project addressing each query raised.</p>
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			<ul style="list-style-type: none"> • Will the proposed development pose a negative influence on biodiversity, e.g. through: <ul style="list-style-type: none"> - Disruption of terrestrial, estuarine, coastal or marine habitat types; - Pollution, eutrophication or modification of pH of water bodies, groundwater or the sea. - Curtailing of movement of indigenous terrestrial or aquatic fauna; - Endangering of indigenous plant communities or species; - Endangering of genetic integrity of any indigenous life-forms; - Introduction of alien plant or animal species; - Over-utilization of finite natural resources such as water. • What positive influences on biodiversity, e.g. through: <ul style="list-style-type: none"> - Removal of alien vegetation; - Removal of plantations and rehabilitation of areas thus cleared; - Re-instatement of previous water courses and groundwater equilibrium; - Removal of fences and re-introduction of game and other wildlife; - Environmental restoration within realistic cost- and time frames; - Re-instatement of previously disrupted biological communities? 	
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			<ul style="list-style-type: none"> • Will the development create undesirable precedents which could lead to further inappropriate developments? • Will the proposed development have undesirable impacts on regional sense of place through inappropriate location on skylines, rocky outcrops or other highly visible places? <p><u>Technical criteria</u></p> <p>Can the development be carried out in a manner which will:</p> <ul style="list-style-type: none"> - Be aesthetically sensitive in terms of location or through its architectural design? - Avoid unacceptable environmental or visual impacts through the provision of services such as roads, electricity, telephone lines, water, or sewage disposal? - Ensure effective but environmentally and aesthetically acceptable provision for fire-breaks and other fire protection services? - Limit building footprints with due consideration for the ecological and visual characteristics of the region concerned? - Allow staffing requirements and provision of staff accommodation to be kept within limits compatible with the region where the development is to take place? 	
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			<ul style="list-style-type: none"> • Ensure that security can be provided without disrupting visual values by having to resort to unsightly measures such as installation of razor wire, bright lights etc.? • Preclude unacceptable atmospheric pollution? • Preclude unacceptable noise levels? • Preclude generation of unacceptable odours? • Preclude the generation of human health risks • Ensure that crisis situations such as fire or floods or any form of contamination can be handled effectively? <p><u>Economic criteria:</u></p> <p>Is the proposed development:</p> <ul style="list-style-type: none"> • Financially viable and can guarantees be given that it will be constructed and operated in strict adherence to the Conditions of Approval? • In a position to provide guarantees that in the event of its abandonment during construction, financial reserves will be available for rectifying environmental damage? • Capable of contributing to local or regional economies in terms of taxation structures, promotion of tourism, or by any other means? 	
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			<ul style="list-style-type: none"> • In a position to provide sustainable employment, during both its development and operational phases? • Designed in a manner which will be in keeping with available infrastructure such as roads-, or railway and harbour facilities? • Designed in a manner which will ensure that negative impacts upon the rights or capital values of existing neighbouring properties will not occur? • Planned in such a manner that its economic viability will not be at the expense of long-term ecological sustainability and that environmental safeguards will be maintained in the operational phase subsequent to construction? • Designed in a manner which will ensure that existing services such as road infrastructure, water supplies, waste- and sewage disposal will not be overloaded? <p><u>Social criteria:</u> Potential social and environmental impacts of developments usually go hand in hand, irrespective of whether they are residential, industrial or of any other nature. It must therefore be asked whether proposed development:</p>	
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			<ul style="list-style-type: none"> • Be detrimental to the interests of communities dependent upon the natural resources occurring in the region concerned? • Are located in a manner which will ensure that neighbouring communities will not be exposed to hazards such as atmospheric pollution / radio active contamination, noise, dust or fire? • Could have undesirable impacts on neighbouring communities, e.g. through loss of property values or tourism potential, increases in crime rates or any other aspects? • Could generate traffic which can be dangerous or disruptive in residential areas? • If located inappropriately in terms of considerations such as those above, could they be re-located, or is mitigation of undesirable effects possible? <p><u>Cultural-historic criteria:</u></p> <ul style="list-style-type: none"> • As the cultural-historic heritage of any region is of immense value to its sense of place, the pride of local communities, promotion of tourism and the unfolding of its economic potential, can the proposed development: 	
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				<ul style="list-style-type: none"> • Ensure that features of cultural-historic importance such as old buildings and/or landscapes (rural and urban), pre-historic human habitats or dwelling places, rock paintings, shell middens, wrecks of ships (above and below water) or paleontological artefacts, will be protected rather than destroyed? • Preclude unauthorized removal of artefacts from sites of cultural-historic importance? • Contribute to research and educational initiatives aimed at ensuring that the importance of our cultural-historic heritage is not overlooked? • Fit in with the cultural-historic ambience of the region in which it is to be located in terms of its architectural design and the finishes to be used? • In the case of existing developments which do not meet criteria such as those above, are mitigation measures possible through renovation or by any other means? • Help to enhance the cultural-historic integrity of the region over the long term? 	
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<p>26) Rob Fryer Manager, Overstrand Conservation Foundation</p>	<p>Ensure that the proposed development follow the relevant policies, guidelines and strategies contained in the Western Cape Provincial Spatial Development Framework (PSDF).</p>	<p>25 Jan 2010</p>	<p>Email</p>	<p>The Overstrand Conservation Foundation (OCF) fully concurs with the need for the development of alternative energy sources. The OCF also supports the idea of locating a wind farm in the Overberg area to contribute towards meeting the electricity demand of the Overberg. The OCF's support for the proposed Caledon Wind Farm, however, is conditional upon great care being exercised by the developer to fully comply, in both spirit and letter, with all relevant policies, guidelines and strategies contained in the Western Cape Provincial Spatial Development Framework (PSDF).</p>	<p>Thank you for these comments. Arcus GIBB has identified the Western Cape Provincial Spatial Development Framework as one of the more important planning documents applicable to the project (Chapter 5, Section 5.2.4 of the Scoping Report). The PSDF and its objectives will be considered further in the Impact Assessment phase of the project and provided to each of the specialists appointed for the project for consideration and comment in their detailed EIA phase report writing.</p>
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			<p>Specialists appointed to undertake specialist studies to inform the EIA process should be required to show that they have carefully considered the wind farm proposal in the light of each of the PSDF objectives and that they have put forward recommendations that give effect to the intent of the PSDF (appropriately interpreting PSDF principles and guidelines that do not specifically refer to wind farms so that the intent of the PSDF is achieved).</p> <p>Four PSDF objectives provide some examples (specialists should, however, apply their minds to all 9 PSDF objectives and the associated principles and guidelines):</p> <p>1 Objective 5 - Conserve and strengthen the sense of place of important natural, cultural and productive landscapes, artefacts and buildings</p> <p>2 Objective 6: End the apartheid structure of urban settlements</p> <p>3 Objective 7: Conveniently locate urban activities and promote public and non-motorised transport</p> <p>4 Objective 8: Protect biodiversity and agricultural resources</p>	
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			<p>1 PSDF Objective 5: Great care needs to be taken to ensure that the sense of place, sense of form and sense of scale principles are adhered to as far as is possible. Section 2.3.14 of the PSDF, Transmission lines, pipelines, telecommunications masts and wind farms, contains policy HR27, states that “wind farms should be located where they will cause least visual impact taking into consideration the viability of the project.” Wind turbines should be positioned where, when viewed from roads that regularly carry tourist traffic, they do not break the skyline of the landscape and appear small in proportion to the size of the background topography. Paint colour and finishes should blend with the landscape and be reflective to reduce light reflection.</p> <p>2 PSDF Objective 6: The placement of wind turbines must not frustrate the future integration of urban settlements that are fragmented due to past apartheid practices; turbines must not be positioned on land between former apartheid township and white settlements.</p> <p>3 PSDF Objective 7: The proposal should include the development of a local wind turbine operational & maintenance / servicing infrastructure in Caledon so that the local urban economy benefits from the ongoing operation and maintenance of the turbines.</p>	<p>These issues will be considered in the impact assessment phase of the project, specifically within the heritage and visual impact studies currently underway as part of the EIA phase of the project.</p> <p>A social impact assessment has been commissioned as part of the EIA. This issue will be forwarded to the specialist for consideration as part of the impact assessment phase of the project.</p> <p>These issues will be considered and addressed in the Impact Assessment Phase of the Project. Interested and Affected Parties will be informed once the Environmental Impact Report (EIR) becomes available for review.</p> <p>It should be noted that every attempt will be made to use local labour and services where possible, so as to assist with economic and skills growth in the area.</p>
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			<p>4 PSDF Objective 8: Wind turbines should be located so that Objective 5 is satisfied and the following are observed (amongst others; this is not an exhaustive list and specialists should add to it in the course of their investigation):</p> <p>4.1 Road access and subterranean cable routes should be the shortest possible and cross only previously ploughed land;</p> <p>4.2 Aerial power transmission lines routes should be in accordance with the PSDF Section 2.3.14.</p> <p>4.3 Turbines should not be placed within islands / vestiges of indigenous vegetation or in wetland or riparian or other ecologically sensitive areas;</p> <p>4.4 Turbines should not be positioned close to areas where birds habitually breed and particular care must be taken to avoid increasing the mortality rate of any species (specifically that of blue cranes must not be increased).</p>	<p>These issues will be addressed in the specialist studies and within the EIR. It is the applicant's intention to comply with these conditions as far as possible. These activities will not be undertaken without the relevant authorities being consulted and authorisation being obtained. An avifauna, flora, fauna and transportation study have been commissioned as part of the EIA to ensure that potential impacts to these features are identified and avoided or mitigated to acceptable levels.</p> <p>We hereby confirm receipt of your comments and hope that you find they have been sufficiently addressed for this stage of the project. Please note that further information will become available once the specialists have completed their detailed studies. The Overstrand Conservation Foundation will be informed of the availability of the EIR once it becomes available for review and comment.</p>
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27) Mr Deugald Jephtha, Department of Water Affairs	Water use entitlements; Pollution, Waste and Sewage; Storm water and erosion control	20 Jan 2010	Post	<p><u>Water use entitlements</u></p> <p>Based on the information at hand the proposed development's activities are within the extent of a watercourse i.e. within the 1:100 year floodline or riparian habitat, whichever is the greatest.</p> <p>Any proposed development which may take place within the extent of the watercourse constitutes a section 21 water use in terms of chapter 4 of the National Water Act, 1998 (Act no.36 of 1998) NWA and requires a water use authorization obtained from the Department of Water Affairs (DWA).</p> <p>Department through the relevant Regional Office must be consulted to discuss the appropriate permissible use depending on the scope and full extent of the proposed activities.</p> <p>In addition, the applicant should provide the Regional Office with the documents/information listed below once compiled/completed to assist with the decision making process thus allowing a timeous response to the application:</p> <ul style="list-style-type: none"> • Clear and legible detailed locality plans or maps (not 1:50 000 scale) indicating all affected water resources. 	<p>These conditions will be adhered to. The wind turbines and associated infrastructure are not expected to have a significant impact on water pollution due to their relatively low density and small surface areas required for each turbine on the site. The issues of storm water management, water pollution and waste raised here will however be considered within the EIA. The Environmental Impact Report (EIR) will include at least one plan indicating the positions of the floodlines and wind farm infrastructure. The department will be notified of the availability of the EIR for review, in order to ensure that these issues have been adequately addressed.</p> <p>All relevant water agreements and documentation required for the proposed Caledon Wind Farm will be compiled and forwarded to the Department of Water Affairs accordingly prior to any construction activities or water use activities taking place.</p>
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			<ul style="list-style-type: none"> • Technical reports such as environmental impact assessment reports (with details regarding the proposed development's effect and/or impact on the water resources in the vicinity including alternatives and mitigation measures or a comprehensive environmental management plan. <p><u>Storm water and erosion control</u></p> <ul style="list-style-type: none"> • Appropriate measures should be implemented to avoid or minimize damming or ponding of water, as well as soil erosion and scouring as a result of increased and concentrated water run-off. • The storm water drainage should not concentrate flow and should have multiple discharge points to diffuse flow, at discharge points. • Monitoring should be done in respect of erosion control and an energy dissipater should be implemented where needed. <p><u>Pollution, Waste and Sewage</u></p> <ul style="list-style-type: none"> • Please ensure that materials with a pollution potential are disposed of appropriately at a permitted waste disposal site. 	
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28) Mark Townsend Bot River Aesthetics Committee	Location of the windfarm, off-peak electricity demand and storage, land use, visual impacts.	2 Feb 2010	Email	<p>I would like to mention the following:</p> <p>With regard to the location of the wind farm, it does appear necessary for a rational public discourse on the subject to be fostered locally - so it is unfortunate that the questions from the Sonderend Friends of WESSA could not be accommodated. The issue is not really about trade secrets, as CaledonWind seems to suggest. Surely DME will require considerable motivation before they are convinced? Related to the location data debate is the question of whether this is the best place to have the wind farm, and so far I am unable to find any convincing reason for it to be located here. If the location of mining, sand-winning, and other land uses are matters that are open to public debate, surely wind farms should be as well.</p> <p>Related to the location issue, is the question about when the wind blows in this vicinity. The information provided at the public meeting gave global electricity demand estimates, but did not deal with peak and off-peak electricity demand at all. From experience, I would suggest that the sudden calming of the wind in the evening (when the peak electricity demand is experienced) suggests that the wind farm is unlikely to be able to help solve the common evening peak demand crisis.</p>	<p>A pre-feasibility study was undertaken by Caledon Wind throughout the Northern, Eastern and Western Cape where available (i.e. remaining areas where leases are not currently in place). Sites were investigated in terms of; topography, site access, wind resource, connection to the electricity grid, land size, environmental aspects. The results of the pre-feasibility study are provided in Appendix C of the Draft Environmental Scoping Report, which has been made available for public comment. The study indicated the site as being favourable for the construction and operation of a wind farm. This issue will be further addressed in the EIR. All public comments and opinions on the project are welcome. Comments from the public will be noted, recorded in the reports and responded to accordingly. All public issues and concerns are made available for the decision-making authority's consideration.</p> <p>Your objections have been noted. A visual impact assessment specialist has been commissioned to assess these concerns. Public meetings will be held once the specialists have completed their studies and Draft Environmental Impact Report becomes available for review. BRAC will be informed of, and invited to attend, the meetings.</p>
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			<p>Nor is there a good way to store the electricity generated at other times. From the information provided so far, I do not get a sense of how the wind farm will fit into the grid and boost the capacity at times of need. Furthermore, our information is that over 30% of the power will be lost due to the friction of distance from Caledon to Cape Town. This suggests that the amount of power available to the Cape Town market will be much smaller than originally estimated, and it will not help resolve our peak demand problem.</p> <p>What kind of industrial zone would be required for the area around each turbine's base? Would such land be suitable for settlement or other uses in the long run? As it is common knowledge that settlement under powerlines is not a good idea, what effects would the turbines pose to the health of local residents, and is there a certain distance that settlement should be kept away from the turbines? Is there a certain distance such huge turbines should ideally be placed from each other? From the international windfarm experience in places like Denmark and South Australia, this information should be freely available.</p> <p>The core of the concern of the Bot River Aesthetics Committee naturally revolves around the visual impact that the wind farm will have on our area. The impact of a 100m high turbine is not something that is easy to imagine with any clarity.</p>	<p>These issues will be addressed in the EIR. A Social Impact Assessment has been commissioned as part of the EIA. Your issues will be forwarded to the specialist for consideration.</p>
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			<p>If the top of the Houwhoekberge is 850 metres, and the village of Bot River is located at about 150 metres above sea level, a 100m high turbine located on Langhoogte farm will tower over the whole landscape. And the fact that there will be 150 turbines sounds like overkill in terms of numbers. If there are only 4 small (40m) turbines at Darling, and they can be seen from so far away, we all know that the impact of the Caledon turbines will be much more dramatic.</p> <p>BRAC would therefore like to register its objections to the proposed development, especially as Bot River is the nearest town to the proposed windfarm, and will therefore be most affected. We urge you to engage in public discussions with the local residents and community organisations on the matter.</p>	<p>Your objections have been noted. A visual impact assessment specialist has been commissioned to assess these concerns. Public meetings will be held once the specialists have completed their studies and Draft Environmental Impact Report becomes available for review. BRAC will be informed of, and invited to attend, the meetings.</p>
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<p>29) Dr. Edward Bodsworth</p> <p>Windrush Ecology</p>	<p>Expert opinion, consultancy, direct business, research.</p>	<p>3 Feb 2010</p>	<p>Email</p>	<p>We are consultant ecologists, specialising in bat ecology and the impact of wind farm development on bats. We have extensive experience of wind farm projects in the UK and strong links with researchers at the forefront of bat conservation and wind farms.</p> <p>Bats are a key consideration in the planning and development of wind farms. The Scoping Report for Caledon concludes that the impacts on bats through direct strike and barotrauma are 'likely to be the most important impacts on threatened animal species'</p> <p>We feel that further detailed research and survey work is required for the proposed new wind farm to fully inform the EIA on bat species. We would welcome being involved as consultants on this project.</p>	<p>Thank you for your response, we have added your details to our Interested & Affected Parties list and placed your comments in our Issues & Response Report. Please find attached the Background Information Document which will provide you with a brief background on the proposed development. The EIA is now in the scoping phase and we have completed a Draft Scoping Report which is accessible on our company website under: http://projects.gibb.co.za/Projects/CaledonWindDSR.aspx</p> <p>As shown in the DRS, we have appointed a local fauna specialist to investigate the possible impacts of the proposed windfarm on bat populations in the area.</p> <p>The purpose of the Scoping phase of the project is to first identify the potential impacts and then quantify them in detail within the EIA phase of the project. Further detail on the extent and significance of the impact on bats as a result of the proposed Caledon Wind Farm will be provided within the draft EIA report, which will again be made available for public review. Please feel free to provide further comment once this report become available.</p>
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<p>30) Samantha Ralston CapeNature</p>	<p>Potential impacts on avifauna, Botanical site assessments. Stewardship agreement.</p>	<p>2 Feb 2010</p>	<p>Email</p>	<p>CapeNature would like to thank you for the opportunity to comment on the above report. The comments below have been informed by input from various CapeNature staff members, including CapeNature's ornithologist, Kevin Shaw.</p> <p>In particular, we are pleased to note that there will be further botanical, faunal and avifaunal assessments and we look forward to commenting on these reports once they have been made available for review. We also suggest that if any impacts aquatic ecosystems are anticipated, an aquatic ecology specialist should be consulted.</p>	<p>Arcus GIBB appreciates CapeNatures input into the EIA process for the proposed Caledon Wind Farm, and particularly on the Draft Scoping Report for Public Review. The attached letter referred to, titled '<i>CapeNatures requirements and recommendations with respect to applications for environmental, mining agricultural, water and planning-related authorisations</i>', has been received accordingly and forwarded onto all specialists, as well as the applicant for consideration within the EIA phase of the project.</p> <p>Comment noted.</p>
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			<p>CapeNature's primary concern with the proposed development relates to the potential impacts on avifauna, particularly the vulnerable Blue Crane. There has been little experience or research in South Africa regarding the impacts of wind turbines on birds, but the U.S Fish and Wildlife Service's Issue paper on Whooping Cranes and wind farm development indicates that whooping cranes within 2 to 5 miles of the windfarms may collide with the blades if they do not avoid the windfarm. Here they are referring to stopover areas along a migration route. We are concerned that the proposed site is situated in the area where Blue Crane density is the highest of all areas in South Africa, with crane densities of around 100 cranes per km, all year round. There are therefore a lot of cranes moving over short distances every day. Such a dense resident population of Blue Cranes could have a much higher risk of colliding with the blades. While we recognize that the dearth of existing examples in South Africa makes these impacts hard to predict, it is unlikely that the impacts of only 4 turbines and one resident pair of cranes in Klipheuwel (as mentioned in the avifaunal report) will be comparable to a situation where there are 150 turbines in an area densely populated with cranes. In light of the above considerations, CapeNature urges that a precautionary approach be adopted.</p>	<p>The above comment is a valid comment and very pertinent to the project. This comment will be forwarded to the avifauna specialist for comment and consideration within the EIA phase of the project.</p>
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			<p>We recommended that among the alternatives considered is a phased approach, where the impacts of a smaller “test” wind farm are rigorously monitored and evaluated over one or two years before the establishment of the larger proposed wind farm is considered. This area has a high occurrence of mist, which would potentially make visibility of the turbines a bigger issue as mist does not usually stop the cranes flying. We suggest that number of mist days should be recorded and this should be factored into the assessment of the potential impacts. Wind may also affect the potential for birds to collide with the turbines and this should also be considered further in the avifaunal impact assessment. In particular, birds with a high wing load factor like cranes find it difficult to maneuver out of a collision situation if they perceive the threat too late. This is why they collide so often with powerlines. High wind velocities exacerbate this. The layout of the turbines may also significantly alter the potential impacts on avifauna and we urge that the details of this are provided so as to help ensure a more accurate impact assessment. We also suggest that alternative turbine designs be considered, for example vertical axis turbines, which may reduce the potential for bird collisions.</p> <p>With regards to the botanical assessment, we suggest that, unless there will be no loss of indigenous vegetation, further more detailed botanical site assessments will be required.</p>	
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<p>31) Dr Petrus Strijdom</p> <p>Director: Centre For Leadership Ethics In Africa</p>			<p>This is the best news I have heard in a very long time – congratulations to those who are responsible and involved!</p> <p>I own a farm in Papiessvlei between Stanford and Elim and would be very interested to know whether:</p> <ul style="list-style-type: none"> • I would eventually be able to benefit from this wind farm development • You could refer me to anyone who could advise on the feasibility of smaller scale wind energy development in my region. 	<p>I&AP registered on the project database, comment noted and details forwarded to CaledonWind.</p>
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<p>32) Arthur Abercromby</p>	<p>Working life of turbines; replacement by new technology; cost of manufacture, installation and maintenance; connection to electricity grid; noise, visual and avifauna impacts.</p>	<p>6 Feb 2010</p>	<p>Email</p>	<p>Wind turbines in their present form are relatively new and so a lot of the costings are unproven as it has not yet been established what is their true working life. Estimates vary from 20 to 40 years, a range which has a huge impact when comparing cost of this form of electricity generation to more accepted forms. With regard to their life expectancy, it is difficult not to imagine that technology will not overtake them within the time period used to amortise their cost. 40 years ago , trains were pulled by steam engines, 20 years ago few people envisaged having a mobile phone , 10 years ago few people used email or the inter net so it is very unlikely wind turbines as currently installed will enjoy the life projected by their supporters. On the subject of cost, wind turbines are expensive to manufacturer , expensive to install and because of remote locations costly to maintain and difficult to connect to the electricity grid. They also require a huge amount of land allocation as compared to a traditional power station. Because of all these costs, they are heavily subsidised by governments. In addition , they cannot replace existing power stations as with no wind they cannot operate and so one must have conventional back up. They therefore represent additional costs which are hidden from the consumer but subsidised by the tax payer who is also a consumer!</p>	<p>The financial viability of Caledon Wind has been demonstrated to investors. Further, Wind Energy is required as part of the Department of Energy's Integrated Energy Mix and NERSA's REFIT strategy. Wind Energy Facilities are being planned throughout South Africa, ensuring that wind-energy will contribute a significant part to electricity supply and indeed base-load requirements nationally. Wind energy is not meant to replace conventional power stations, but rather to support them in meeting the country's energy needs, while decreasing its dependence on coal fired power stations with their associated impacts such as air pollution.</p> <p>A pre-feasibility study was undertaken by Caledon Wind throughout the Northern, Eastern and Western Cape where <i>available</i> (i.e. remaining areas where leases are not currently in place). Sites were investigated in terms of; topography, site access, wind resource, connection to the electricity grid, land size, environmental aspects. The results of the pre-feasibility study are provided in Appendix C of the Draft Environmental Scoping Report, which has been made available for public comment. Additional information relating to the financial and technical viability of the project will be made available in the Environmental Impact Report. I&APs will be informed of the availability of the report.</p> <p>It should also be noted that an existing power line is located within the eastern portion of the site. The proposed wind farm will connect to this network and will therefore not result in exorbitant costs with regards to connection to the national electricity grid, as the necessary infrastructure has already been established.</p>
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			<p>Furthermore , they are not always able to operate in high winds and their availability in practise has not reached the availability assumed in their initial cost justification. Wind turbines are not a cost effective solution.</p> <p>With regard to the environment , turbines introduce wind pollution and people living up to 3 miles away have been found to suffer from sleeping disorder. The Overberg is an area of outstanding natural beauty and many tourists flock to the area. It is difficult to estimate the potential damage to the important tourist industry the introduction of these "eyesores" would cause.</p> <p>Another consideration would be the impact on the local bird population. The Overberg is a "birders" paradise and is home to a significant percentage of SA's population of Blue Crane ,the national bird. Wind Turbines installed in Southern Spain are known to have interfered with the migratory route of Griffin Vultures on their passage from North Africa to Southern Europe resulting in birds being sucked into the turbine and being decimated by their flaying arms. The impact on of all birds , but particularly the Blue Crane must be a major consideration.</p> <p>In summary, their installation can be attacked on both cost and environmental grounds.</p>	<p>In undertaking an Environmental Impact Assessment (EIA) the above concerns are being addressed and will be reported on and presented to the National Department of Environmental Affairs for decision-making. Detailed specialist studies, including noise, visual and avifauna impact assessments, are underway as part of the EIA, and all additionally identified concerns and impacts will be considered, and included in the draft Environmental Impact Report, which will be made available for public review.</p>
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33) Brian McMahon, Stuart Shearer, Dr J Wynne-Edwards	Comments on Draft Environmental Scoping Report for Public Review.	15 Feb 2010	Email	<p>Summary on the scoping process:</p> <p>The general objectives of integrated environmental management laid down in NEMA include “to ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment”.</p> <p>To date, the performance of the EAP unfortunately has already lead to loss of confidence in their desire or competence to satisfactorily manage this particular EIA process in line with this NEMA objective. A large-scale Wind Farm, the subject of this proposal, has not yet been constructed in SA, so the only understanding the public can have of the implications and impact of such a facility comes from the media or from the EIA process. It is regretted that in this case the EIA Scoping process has been very one-sided, selectively presenting material favourable to wind power. The worldwide population of tens of thousands of large wind turbine generators has created such an intensity of environmental, technical and economic argument that the approval of each proposed facility must only be given after highly competent and professional consideration. In this case, it is considered totally unsatisfactory to evaluate the Caledon Wind Farm only, and to ignore other options that could meet the defined needs for renewable energy.</p>	Thank you for your comments on the Draft Environmental Scoping Report (DESR) for Public Review and the EIA process to date. We have worked through your issues and concerns and addressed these in the subsections that follow.
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			<p>Furthermore, although it is generally accepted that electricity generation, transmission and consumption in SA are in dire need of major restructuring, and that renewable energy sources are of crucial importance, the opportunity to evaluate the whole situation, particularly in the Western Cape, must be taken.</p> <p>It is therefore considered essential that the draft Scoping Report is fundamentally enhanced to include a proper understanding of Government Energy policies, the implications of the latest NERSA feed-in tariffs, the consequences of current Eskom/Government consumer price negotiations for users, changes to the selective energy subsidies to South African industry, and the sustainability of Wind Farms in general.</p> <p>In order to carry out the necessary requirements for the EIA process, taking into account the above comments, it is considered that a more professional approach should be taken by the EAP than so far has been apparent, for example:</p> <ul style="list-style-type: none"> • The Issues and Responses Report on the website was last updated in November 2009. 	<p>All relevant government policies are mentioned and discussed in Chapter 1, Section 1.3.</p> <p>Comments are solicited throughout the EIA process and updated into an Issues and Response Report (IRR) accordingly. This IRR is a requirement in terms of the DESR for public review, in which it was made available in December 2009. The IRR will be updated and furthermore included within the Final Environmental Scoping Report, Draft EIA Report and Final EIA Report, as per the EIA Regulation Requirements.</p>
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			<ul style="list-style-type: none"> • The public meetings in Botrivier and Caledon were not advertised properly. • Circumstances of the Botrivier public meeting need explaining. • Minutes of the January 12 public meeting have just been received, one day before the original deadline for comment on the DSR (now extended). • Copies of the attendance record at the Caledon meeting, including the contact data, have been refused. • Contact data, that would have been provided in order to register as I&APs, has been excluded from the relevant list (Appendix D to the Draft DSR) that is published. • Information on various parties connected with the proposed Wind Farm has been refused. <p>Background</p> <p>The DEA&DP Energy Plan of November 2007 for the Western Cape was a definitive report on the state of SA Electrical power generation, in the absence of realistic national policies from Eskom or the Government. Whilst the World's industrialised countries were rushing ahead with a huge number of wind farms, South Africa was 'experimenting' with the idea.</p>	<p>Details regarding the advertisement of the public meetings is included under Issue 22 in this Issues and Response Report as a response to an earlier query from yourselves.</p> <p>The minutes of the Botrivier Public Meeting are included in the Final Environment Scoping Report (FESR) for authority review and attached hereto for your inconvenience.</p> <p>The meeting of 12 January 2010 and comments on the minutes are independent of the comment period for the DESR. These meeting minutes and any comments are included in the FESR for authority review.</p> <p>The attendance record was included as an attachment to the meeting minutes. Contact details of Interested and Affected Parties (I&APs), as explained in response of your query received on 13 January 2010 and included in this IRR under Issue 19, are protected from public distribution by law.</p> <p>Details of the applicant have been provided accordingly in Chapter 2 of the DESR.</p> <p>No Comment. Information provided has been noted accordingly. If possible, when providing excerpts and statistics from literature documents, please could we request references are supplied, such that GIBB can locate and provide comment thereon.</p>
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			<p>Wind power worldwide has grown by an average 29% per annum for the last 10 years. In the UK, there are 6229 turbines installed or in progress, with a total generating capacity of 13348 MW (gross), but an actual contribution to the grid of maybe 4000 MW.</p> <p>In the planning stages, there are a further 3470 turbines that will maybe contribute 3000 MW more. In total, this capacity is claimed to be equivalent to saving the need for 2-3 large conventional power stations.</p> <p>In the Cape, Eskom's demonstration wind plant at Klipheuwel is only about 3 MW, and has only been generating successfully for 10% of winter and up to 35% of summer months. The installation at Darling is a private venture of about 7 MW (gross) size, due to be expanded later with 16 additional machines, and is under contract to Cape Town Municipality; electricity will be 'wheeled through the grid' for discerning industrial users prepared to pay a hefty surcharge. Eskom's proposed 200 MW farm near Vredendal is currently expecting environmental approval. The SA national target is 10,000 gigawatt-hours, (which is equivalent to about 1141 MW of generation capacity), contribution by 2013 from renewable sources, with the possibility of achieving 50% of this target by solar water heating alone.</p>	
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The Western Cape

Available power from the local grid in 2007 was given as 2500 MW, plus 1000 MW extra power specially to meet peak needs. Up to 2500 MW is also available from the national grid.

The Cape's total demand was 19,000 Gigawatt-hours, initially expected to grow by 6% per annum, now reduced because of the global situation.

Targets were set for 12% of total electrical consumption by 2013 to be generated from renewable sources (to be increased to 18% by 2020). Institutions (including Municipalities) will be expected to use 15% minimum of their energy from renewable sources:

	2013	2020
Forecast demand: gigawatt-hours	26,000	31,000
Capacity needed: MW	2922	3562
Targets for renewable power	350	640

The Western Cape already has 2 major renewable sources, namely Palmiet and Steenbrass pumped storage systems, with a total capacity of 580 MW, both used primarily to meet peak power needs, but also for pumped supply of water to Cape Town. Two additional potential sites have been identified, totalling 1800 MW.

Comment and information provided has been noted accordingly.

Palmiet is not a renewable source of energy. Palmiet relies on electricity generated by other means (i.e. it consumes energy) to pump water to a height where it is then stored (i.e. like a 'battery') and used at a later stage to generate electricity as and when needed.

			<p>The target for 2020 would be met by 8 Wind Farms of the same nominal 300 MW gross size as the proposed one near Caledon. There are currently between 40 and 50 applications pending for Wind Farms, several of them in the Overberg area.</p> <p>The national grid</p> <p>Eskom's Annual Report for the year to end of March 2009 reveals some interesting data:</p> <ul style="list-style-type: none"> • Nominal capacity: 44,000 MW, reduced to 40,500 MW net capacity (repairs etc). • Total electricity sales 214,850 gigawatt-hours, equivalent to 24,500 MW. • Average cost of electricity 27.63 cents per KWh; previous year was 19.78 cents/KWh. • Average Selling Price of electricity 24.97 cents/KWh. Loss for year was R 10.2 million. • Over 40% of total consumption is by industry. <p>Capital expenditure for the year was R 47,100 million. Generating capacity commissioned in the year was 1770 MW (previous year was 1061 MW).</p> <ul style="list-style-type: none"> • Target for 2013: 50,510 MW, an increase of 15%. • Target for 2017: 56,560 MW, a further increase of 15%. 	<p>Comment and information provided has been noted accordingly.</p>
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			<p>To meet the needs of 2013, the capital budget will be over R 385,000 million, partly funded via a direct Government loan of R 60,000 million, a further R 176,000 million in loan guarantees, external debt, and shareholder investment.</p> <p>Last December, Eskom signed up with 5 French banks to borrow over R 12 thousand million for the turbines for the 2 large coal-fired stations (9564 MW) at Kusile and Medupi, which are due on stream in 2016-17.</p> <p>There is also the current NERSA investigation of Eskom's demand for a 35% price increase for each of the next 3 years. It is not known how it is intended to apportion these increases.</p> <p>The Department of Energy's Integrated Resource Plan of Dec 2009 emphasises the need to improve on the total 2000 MW saved since 2003, when the Demand Side Management policy was initiated, to 3056 MW by 2013. This includes such as solar water heating, solar photo-voltaic cells, smart geysers, user wind power generators, buildings insulation etc.</p> <p>Need and justification for the project</p> <p>This section of the DSR is crucial to the EIA process.</p>	<p>Caledon Wind's proposed project is being developed in response to the national energy and related policies (IRP1 etc).</p>
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			<p>Although the national energy situation is reported on to a small extent, the information is very selective. Some very strange figures are used to emphasise claimed financial benefits, such as an increased GNP of up to R 1,000 million per annum.</p> <p><i>The Government has given cogent arguments supporting their policies to replace as much as possible of South Africa's coal-fired electricity generating plant, with sustainable renewable energy resources. This seems to be acceptable to the public in general terms, and represents a broad and adequate description of the basic medium term need.</i></p> <p>The proper assessment of need and desirability in the EIA decision-making process requires consideration of the strategic context of the proposal along with the broader societal needs and public interest. In this case, the electrical generation and distribution system in South Africa uses capital plant that affects the public environment, uses funds provided by the public and industry/business, and provides a viable consumer service that should benefit all of the public. NERSA has evidently listened to submissions made after the REFIT 1 proposals of December 2008, and made significant adjustments, which are largely responsible for the recent deluge in applications by Independent Power Producers to construct Wind Farms.</p>	<p>Other than reacting to policy and taking part in the various related public participation processes, Caledon Wind cannot comment or effect further policies in place. For particular queries or concerns with regards to the programme as defined by NERSA, submissions should be sent to them directly.</p> <p>The 'Need and Desirability' therefore, one, makes reference to the National Policies as being planned by Government and, two, is discussed on a secondary level more specific to the proposed project location, that being Theewaterskloof Municipality and the area itself. Further assessment of the</p> <p>Details of the NERSA REFIT 1 are provided in the report to inform the general public of the reasons for adopting this programme from a National perspective and on a high level, with respect to proven benefits.</p> <p>Furthermore, 'benefits', as they are, to Theewaterskloof are presented. These benefits are considered socio-economic benefits, which play testimony to the Social Impact Assessment being undertaken as part of the EIA process.</p> <p>The impacts on tourism have also been identified as part of the scoping phase. Each of these aspects will be quantified and comparatively assessed in the EIA phase of the project to determine the 'real' impact, from which to make a decision to proceed with the proposed project or not.</p> <p>The actual 'need' for wind power should be addressed to NERSA, as they have requested applications for renewable energy, in all forms. In the decision-making process when granting licenses, the various renewable projects being applied for by various potential Independent Power Producers (IPPs) will be evaluated in terms of commercial and financial viability by Government. Only projects which have shown to display environmental feasibility will be considered at this stage.</p>
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			<p>The costs, together with the related benefits must be properly assessed in order to <i>define the real need</i> for the program, <i>and not just one individual Wind Farm near Caledon.</i></p> <p>The need must also be quantified in terms of the benefit to the public in general, who will be bearing most of the costs, and to those other sectors which are effectively subsidised. At the moment, huge municipal debt for services, including electricity, are not accurately reflected in Eskom's financial statements. The current NERSA discussions on Eskom's proposed price increases may lead to a fundamental shift in some government policies, that might seriously impinge on this particular EIA process. It is noted, and regretted, that a large portion of section 1.1.1 of the DSR is a copy (virtually word for word) of the NERSA REFIT Explanatory Memorandum (Appendix A), which describes ten or more socio-economic benefits, which are equally applicable to other renewable energy forms. It is further stated that Wind Energy is highly desirable in terms of minimising the impact on the environment and then lists a further nine 'typical benefits', many of which are repetitive and none of which is quantified. The general impression given is one of a totally subjective and rather naïve interpretation of the reality of wind power.</p>	
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			<p>Furthermore, although hardly mentioned in the DSR, there are potential benefits from the point of view of Theewaterskloof Municipality, which relate totally to the financial investment itself rather than resulting from the specific nature of a wind farm:</p> <ul style="list-style-type: none"> • Land taxes and fees from rezoning of the parcels of land for the wind farm, the access roads etc. • Creation of a brand new sector to attract outside business interests, plus some spin-off maybe for local employment. • Sustainable investment in TWK area from a high profile operation – commercial, educational and Government high level visits. <p>These aspects should be evaluated against the potential damage to the incipient tourism industry in the Overberg.</p> <p>To summarise this section, it is considered that there is no actual 'need' for this specific Wind Farm in order to meet the accepted Government or Provincial policies for increased use of renewable energy generation. Even if the wind parameters in this area did indicate a higher turbine efficiency and therefore economic performance and even if the proximity to useful transmission lines was financially quantified, it should then still become necessary to evaluate all the alternative locations.</p>	<p>To be included in EIA Phase of the proposed project.</p>
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			<p>Furthermore, the current Spatial Development Frameworks for Western Cape Province and Theewaterskloof Municipality do not indicate any strategic need for either a large number of viable wind farms or indeed any specific locations.</p> <p>The IDP only mentions a potential partnership between DBSA and private investors around a possible wind farm.</p> <p>There is certainly <i>no defined need or desirability</i> for 3500 ha of pristine agricultural hill country to be marred by a 'factory facility' with no beneficial local relevance whatsoever.</p> <p>Project alternatives</p> <p>The EIA Regulations state that all identified, feasible and reasonable alternatives are required to be assessed in environmental, economic, technical and social terms. 'Alternative' is defined as different means of meeting the general purposes and requirements of an activity. <i>The current DSR does not comply with these requirements and, in fact, goes so far as to declare that it will only consider alternatives to the specific Caledon Wind Farm, and will not evaluate any other power generation options (section 4).</i> The alternatives identified so far that will be evaluated are turbine rating, turbine blade size, and of course the positioning and alignment of the machines themselves and the transmission lines.</p>	<p>Comment noted. The content and status of the latest Western Cape Spatial Development Framework (SDF) and relevant Integrated Development Plans (IDPs) will be discussed in the EIA Phase of the project.</p> <p>The activity in question is that of electricity generation. In terms of feasible and reasonable means in achieving this activity, CaledonWind can not consider technological alternatives as they do not have the knowledge, skill and capability to generate electricity through other means.</p> <p>Through a combination of assessing the Government legislation and policy planning in place together with EIA applications for electricity generation in all forms, all the alternatives will ultimately be assessed and an energy-mix decided upon which meets both electrical needs and environmental obligations.'</p>
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			<p><i>It is evident that the actual need or activity that is supposed to drive this EIA process is the need to significantly reduce the carbon footprint of South Africa's power generation plant, to hugely increase the utilisation of renewable energy resources in relation to total usage, and to continue the process of reducing household and industrial electrical consumption.</i></p> <p><i>Wind Farm power is just one of many means of achieving the objectives above. Some of the others that should be considered certainly in the context of the Western Cape area:</i></p> <ol style="list-style-type: none"> 1. Coastal locations of Wind Farms with lower environmental considerations to mitigate. 2. Small, remote applications for individual wind generators. 3. More efficient use of the 2 local pumped storage generators for meeting peak demand. 4. Smart tariffs to reduce energy usage across all municipal services. 5. Solar power generation and water heating. 6. Building design and space heating. 7. Transport systems. <p>When questioned as to the benefits of Wind Power compared with other methods of power generation, the Consultants admitted that:</p>	<p>This statement is correct, however this proposed project is investigating the proposed Caledon Wind Farm as one form of contributing to the National objectives. There are simultaneously projects investigating the feasibility of generating electricity through other means, such as those mentioned here, which are undergoing their own EIA processes.</p>
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			<p><i>"Wind is the only viable utility scale energy resource within the TWK Municipal area".</i></p> <p>To paraphrase the DSR, the pre-feasibility site selection process, which "included a complex and detailed study of alternative locations within the Northern, Eastern and Western Cape by leading international wind engineers, concluded that only one site was viable":</p> <ul style="list-style-type: none"> • Only 3 sites were on the recorded list of all evaluated sites (Appendix C). • None of the sites was near a coastline with a known wind performance. • All 3 sites are within a few km of Botrivier in the Theewaterskloof Municipality. <p>Some of the aspects of Government policy that should have been considered during the Scoping Process, which were not, but which should now be included in the EIA for detailed assessment are:</p> <ul style="list-style-type: none"> • Eskom's prices as and when agreed at NERSA, in particular their social, industrial and resale prices (to municipalities etc). • Costs for Eskom to upgrade the existing coal-fired stations to various levels of carbon footprint. • Costs for Eskom's possible new nuclear plant of about 3000 MW (same generated output as at least 37 Wind Farms similar to the Caledon one). 	<p>The pre-feasibility site selection process was undertaken for sites available to CaledonWind as an IPP. As eluded to previously, there are approximately 50+ applications for wind farms within the Western Cape. For each of these applications and their alternatives being considered the project developers have 'Options to purchase' in place, which eliminates them from being accessible to all other IPPs.</p> <p>These issues are issues for the DOE. Caledon Wind does not have access to the research and information that led to the DOE decision to include 400MW of wind into IRP1.</p> <p>Should further details of the particular Government policies become available and in a format suitable for public dissemination this will be included in the EIA phase of the project where appropriate and required.</p> <p>Where information is available regarding costs associated with Eskom planned infrastructure this will be included within the EIA Report for public review. To obtain up-to-date and relevant information pertaining to these issues it is also suggested to contact Eskom directly.</p>
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			<ul style="list-style-type: none"> • Establishment of the real load factors, and hence the real costs, for Wind Farms in relation to standby power needed to compensate for the variability and unpredictability of wind. • Comparative benefits to South Africa in general, the people in particular, and also Eskom, by concentrating financial resources on accelerated Demand Management and renewable energy such as water heating and solar panels. <p>On the other hand, if there is a reluctance to assess, not just this particular Wind Farm but all the others now in the approval process, on a more strategic and realistic level then it must be strongly suggested that the preferred alternative for the Caledon Wind Farm should be the No-Go one.</p> <p>Specific environmental impacts</p> <p>Noise:</p> <p>It is interesting to note that the Noise Impact section in the DSR does not include any published figures for cumulative wind farm noise levels. Nevertheless, the noise spectrum of the whole facility will be plotted in order to determine the impact of noise on the local residents at their places of residence – too late if there is any problem.</p>	<p>The Western Cape Department of Environmental Affairs and Development Planning (WC DEADP) has initiated a project for the strategic environmental assessment of wind farm development within the Western Cape. This project is being undertaken simultaneously with EIA applications underway for proposed wind farms in the province. For further details on this SEA please contact the WC DEADP. It is understood this SEA will be utilised as a tool to make informed decisions on all the wind farm applications currently in place in the Western Cape.</p>
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			<p>However, what is included in the DSR, and referred to below, is very interesting and very disturbing:</p> <ul style="list-style-type: none"> • "Vigorous community action would be expected" if there is more than 15db differential between usual background noise and any imposed external noise. • Residential areas background noise levels may be 45 – 55 DB, whereas rural communities are said to be 35 – 45 DB. • Wind noise levels of 45 – 100 dB are reported in the low and mid frequency spectrum. • The report states " The new sound to be created by the wind turbines will become part of the noise regime and the wind noise will mask the <i>alleged</i> noise by the wind turbines." <p>It is just this sort of reporting that has caused communities throughout the world to start demanding Government action to prevent wind farms being placed near to residences. There are numerous reports in the media concerning symptoms of sleeplessness, headaches and 'stress', suffered by residents and workers near to the turbines. This should be of enough concern for the farmers in the area and their employees to be informed and warned. Maybe, the proposed turbines have a much lower noise profile than those associated with the complaints? Noise emission specifications for each of the turbine models under consideration should be provided.</p>	<p>During the scoping phase of the process areas of concern are highlighted as the exact position of the wind turbines is not known. There are also other sources of noise such as national and provincial roads which were not taken into consideration during this phase. All the relevant data such as farm houses and roads will be included into the next phase and the recommended noise levels per district will then remain recommended levels whereas the noise survey will give the applicable ambient noise levels of the study area and noise sensitive areas. It is therefore premature to make conclusions before the noise survey is completed.</p> <p>The aspects such as sleepiness, headaches and stress will be addressed when the prevailing ambient noise levels are known and the projected noise levels of the turbines are overlaid on the areas of concern.</p> <p>The data from overseas are applicable only if the same conditions exist such as distance from the turbine, location of turbines, topography, ground conditions are the same as in the specific area where the turbines will be located.</p> <p>The noise regime of the area will be identified once the next step of the study is completed and that is well before the turbines will be erected.</p> <p>The remark regarding the "wind farms that will be near residence" cannot be addressed at this stage as the specific location of the wind turbines are not known. This statement is premature and in the noise report such problems will be addressed by means of recommendation on mitigatory measures.</p> <p>The aspect about the 2000m cannot be commented on as the topography of the area is very hilly and it may be that a residence/farm house is within the 2000m radius but such house could be in a valley whereas the turbines will be positioned on top of the hills. Recommendations will also be made once the noise study is completed.</p>
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			<p><i>Real Value of wind-generated power:</i></p> <p>It is evident that, more especially when wind power becomes a significant mix % of total power, the absence of sufficient wind to generate electricity at a particular time must be compensated for by additional standby capacity from the grid – otherwise there are outages. The grid must therefore be controlled to respond at the same rate as the change in wind power. To an extent, this must entail the parallel running of the same total power level as that anticipated from wind generation, or alternatively having high response standby equipment available continuously.</p> <p>The proponents of wind power are still bound to their advocacy for the replacement of base load power (coal or nuclear) by wind power, but with no evidence to substantiate the claim. One view of the German industry is a projection that 48,000 MW of installed wind power would actually replace 2000 MW of conventional power (all other aspects being equal).</p> <p><i>As there is no mention of this fundamental problem in the DSR, nor discussion of its solution, the whole purpose of the EIA will be negated unless this subject is included in the assessment of alternatives.</i></p>	<p>This is an item for Government consideration when justifying and promulgating Energy Policies and not considered within the scope of this single wind farm EIA application.</p>
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			<p>Local Employment:</p> <p>The employment situation in South Africa is so bad that any strategic decision to significantly address this preferentially should surely be considered. The published figures show that employment in the conventional base load generating industry is 2 people per MW capacity, 5 for wind power and 35 for solar heating (CABEERE project 2005). As most of the employment benefit from Wind Farms seems to relate to manufacture of the machines and control equipment, and most of this appears to be in Europe, questions need to be asked concerning priorities. Many other renewable energy sectors, both for generating electricity and for reducing its consumption, such as the biofuel, biogas and solar water heating sectors, offer much higher employment opportunities for South Africa, particularly for the unskilled and semi-skilled. With limited Government funding available, maybe some of these options should be prioritised.</p> <p>Visual Impact:</p> <p>However cosy the feelings that some people have for Wind Farms, the resulting factories of turbine towers remain for many years as a monument to the loss of wonderful scenic views. This is after all an area of largely 'contour' farming, typical in the hilly parts of the Overberg.</p>	<p>Comment and information provided noted accordingly.</p> <p>Assessment of impacts associated with employment will be addressed in further detail with the EIA phase of the project.</p> <p>Mitigation measures to reduce the visual impact as much as possible include the following:</p> <ul style="list-style-type: none"> • Site specific placement of turbines; • Height of the turbines; and • Number of turbines.
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			<p>It is very unlikely to become a tourism destination when huge areas of the countryside are covered with hundreds of shiny white metallic towers up to 100 metres high with the added height of 40 to about 60 metre long turbine blades. The only mitigation would be to install the towers as far down the slopes as possible, and as far as possible from the road view points (R43, N2 and R406) – with less power availability and therefore less profitability. Routing of the service roads so that a minimum only can be seen from the R43 and N2 main roads would also mitigate the visual impact to an extent.</p> <p>Impact of Construction Process:</p> <p>The DSR gives conflicting information on the sizes of the tower foundations – from 17m diameter by 2.5m deep, giving approximately 570 cubic metres of rock and soil to dispose of, to a rectangular platform of 36m X 49m, which is about 4400 cubic metres. How much of this spoil will be used in road construction? Where will the surplus be trucked to?</p> <p>As stated in the DSR, with the rocky nature of much of this area, blasting may have to be used for the foundations and part of the trench system for cables. The extent of this needs to be determined.</p>	<p>The visual impact assessment will include a viewshed analysis which will indicate the extent to which the structures will be visible and from this, combined with viable and efficient placements, the most suitable combination will look to be adopted to satisfy both efficiency and visual impact as best as possible.</p> <p>Depending on the size of the turbine and specific geotechnical survey results, foundations are between 17 m and 22 m in diameter and 2 and 3,5 m deep. The platform is a temporary horizontal laydown area and mobile crane stand that requires no net import or export of material and is shaped and rehabilitated after construction.</p> <p>Site specific mitigation measures will be included within the Environmental Management Plan (EMP) for the proposed project. It is preferable not to remove soil and rock from the proposed site, and where possible replace or re-use accordingly.</p> <p>No blasting will be required for the proposed project.</p>
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			<p>Safety Aspects:</p> <p>How much of the site will be fenced and patrolled, during construction and operation? Is cable theft or vandalism perceived to be a problem?</p> <p>Most wind Farms are in remote country and coastal areas. The proposed one is alongside a main road and within easy sight of the N2, both being main tourism routes. There needs to be a full analysis of the impact on vehicle drivers and passengers of the unexpected appearance of metallic towers, flickering reflections and, at night, an array of red lights.</p> <p>Avifauna:</p> <p>The Overberg Wheatbelt (ZA094) is an internationally designated and recognised 'Important Bird Area' (IBA). With a number of Red Listed species in this area, and a wide variety of soaring birds, a determination of the existing bird populations throughout the year should be made. Any evidence of migration routes, local flight paths, preferential wind currents, and also ridges or valleys where birds may concentrate, should be determined urgently. Research has shown that there should be at least a 2 year study period before installation, and a longer period afterwards to assess the actual impact.</p>	<p>During construction, only the construction laydown area close to the existing farm house will be temporarily fenced. Existing fences will be left intact with the main function of controlling the movement of sheep.</p> <p>The electrical sub station will be fenced as prescribed by ESKOM. Due to the robust nature of the installed turbines, no additional fencing is envisaged during operation.</p> <p>Cable theft and vandalism is a risk item and security measures will be implemented commensurate with the risk. Benchmarking in South Africa (Darling, Klipheuwel and Coega) indicates that this risk is not significant at this stage. Security measures will include a combination of crime intelligence gathering, electronic monitoring and armed response. It is not foreseen that large areas will need to be fenced and patrolled.</p> <p>A full Visual Impact Assessment (VIA) will be undertaken during the EIA phase of the project, as well as a Traffic Impact Assessment (TIA) which will provide the visual specialist with an indication of the number of road passengers expected annually within the study area.</p> <p>The avifauna specialist referred to Shaw and Bidwell as well as the SABAP2 project, and will use CAR as well for the EIA phase. Actual monitoring data will however be by far the most important data source for the micro-siting of the turbines.</p>
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			<p>The area in question has in recent years seen an enormous ingress of Blue Cranes, far more in the proposed area than closer to Caledon. There is no reference to <u>recent</u> data in the specialist report, although reference to SABAP2 is made in the body of the DSR, but not other long term projects such as CAR and SAFRING available from the Animal Demography Unit in Cape Town.</p> <p>Have other migrant species been considered? Has the African-Eurasian Migrating Waterbird Agreement, to which South Africa is contracted, been considered? See http://www.unep-aewa.org/about/introduction.html</p> <p>Constant red lights on turbines may affect migrating birds. It has been estimated that a 70% reduction of avian mortality can be achieved by using blinking lights – perhaps special dispensation could be sought from the CAA for installations such as this?</p> <p>Fauna:</p> <p>In the Western Cape all lizards, frogs, toads, tortoises and snakes of the families Typhlopidae, Leptotyphlopidae and Colubrinae are protected animals. However, only the Yellow Bellied House Snake is mentioned. There is also no mention of Cape Dwarf Chameleons.</p>	<p>This would have to be negotiated with the CAA as currently only blinking lights are permitted in South Africa.</p>
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			<p>Mortality of bats through <u>barotrauma</u>, in addition to direct impacts, has not been carried over to the summary in the DSR from the specialist report.</p> <p>Flora</p> <p>The remnant renosterveld is in areas which will may be found suitable for the optimum positioning of turbines. However, Caledon Wind's commitment to "avoiding at all costs the placement of turbines within Renosterveld vegetation occurring within the proposed study area, regardless of the wind data in those regions' is stated. Exactly how will this commitment be put into practice? Does the same undertaking apply to <u>all</u> the infrastructural elements of the project?</p> <p>Has CapeNature actually been approached regarding the possibility of a Stewardship Programme for protection of the Renosterveld? If so, has there been any sort of planning and consultation with landowners? The final Scoping Report should include this proposal, or ignore it with specified arguments.</p> <p>Cumulative environmental impacts</p> <p>Because of the absence of any proven 'need' for Wind Farms in general, and the Caledon one in particular, it is considered that the cumulative affect of many significant impacts may discourage the approval of the Caledon Wind Farm:</p>	<p>The impacts that can be expected on bats as a result of wind turbines has been discussed in the DESR, as well as the FESR in Chapter 8, page 4.</p> <p>No placement of turbines will take place in the Renosterveld Vegetation. Where absolutely required, access roads and underground cabling may be required to traverse small sections of the Renosterveld. These will be done within the same servitude to minimise disturbance as well as within existing access roads already on the proposed site.</p> <p>CapeNature has been actively involved with the developer and land owners. The land owners have committed to signing up to the stewardship program provided the wind farm development takes place.</p>
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			<ol style="list-style-type: none"> 1. The economic benefits of wind farms, although they do exist, are not believed to be as significant as the proponents state. There is a known demand for integrated wind/solar/water pump applications in remote places and for specific applications, beyond the 20,000 windmills already reported to have been installed in South Africa. 2. The very positive impacts of other renewable energy resources and means of reducing demand must be taken into account here, not least because of the additional impacts these could have in the poorer sections of the community, namely employment and lower living costs. 3. The technical and economic problems of feeding wind power into an existing grid are negative impacts that have not been addressed realistically by proponents of Wind Farms who persist in quoting unrealistic amounts of power replaced by the wind turbines – as if the wind was regular, constant, predictable, not too gusting etc. 4. With the relatively sudden demand for Wind Farm applications in the Western Cape, probably many times the target figures, there is a chance that the situation in other countries will be repeated here – free-for-all in the market place, reduced attention to environmental issues, huge increases in consumer costs and less capacity for socio-economic reform. 	<p>Caledon Wind is responding to the national energy policies calling for utility scale wind energy generation in SA. There may well be a need for off grid-energy generation capabilities, but this is outside the scope of this project.</p> <p>In terms of the Integrated Resource Plans as published by NERSA, the increase of energy efficiency is crucial to the better use of available scarce resources.</p> <p>The technical and economic grid connection plan for the Caledon Wind project is jointly being developed with ESKOM with support and advice from existing European network operators and equipment suppliers. This project has been involved in the development of the technical grid connection code for wind farms to the national grid.</p> <p>South African legislation, and more specifically NEMA and the NERSA licensing requirements was and is being developed to prevent this scenario from happening.</p>
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			<p>5. The countryside in all its forms, especially in the Western Cape, is one of the main magnets for tourism and therefore for an increasing and sustainable quality of life and employment for local people. As much as some people see a degree of mechanical art in a factory of wind turbines, the reality for most, and certainly for the paying tourist, is that Wind Farms are a massive visual intrusion with little or no community benefit</p>	<p>According to scientific research, tourism is minimally affected by wind farm developments globally. See</p> <p>http://www.scotland.gov.uk/News/Releases/2008/03/12133622 http://www.scotland.gov.uk/Publications/2008/03/07113554/0 http://www.planningrenewables.org.uk/resourcebank/wind/tourism/index.cfm http://www.windri.org/survey/references/tourism.pdf http://www.eon-uk.com/generation/tourism.aspx</p> <p>Also see comments from Manager: Local Economic Development & Tourism, Theewaterskloof Municipality:</p> <ul style="list-style-type: none"> • Actual tourist numbers to the Theewaterskloof area per month/annum : hard figures are difficult to obtain, as establishments are not updating their stats regularly , however we are working on the numbers based on Cape Town Routes Unlimited (CTRU's) data, approx : 4000 visitors per quarter = 12 000 per annum • Main tourist destination/s within the TWK area: we are in a process of positioning ourselves as a tourism destination (the Cape Country Meander), however in terms of attractions, the area is known for: adrenalin/adventure tourism (mountain biking/hiking/waters sports), food and wine, history and culture, fresh local produce. • Plans for future tourism development in TWK (high level) : launch of the destination and its brand (The Cape Country Meander) , implement the marketing plan for the Meander based on the 4 themes : 1) Food and Wine Taste Sensations 2) Adrenalin Adventure 3) Journey into History and Culture 4) Freshest Local Produce • Forge ahead with the Vintage Rail Project : between Elgin and Botriver Stations (one of the catalysts for the area) • increase product offering on the dams (Eikenhof and Theewaterskloof Dam), • develop a sustainable/green route : currently it is not a distinct enough offering in the region to be a standalone route, however with more and more establishments becoming committed to responsible tourism (sustainable practices) , the 'green' brand will become more of a stand alone expectation rather than a differentiator. • It is envisaged that when additional green product becomes available in the region (e.g. wind farm, manufacturing of solar components etc) the critical mass of these will make TWK a stand out as a hub for green activity – in the mean time, the green theme will be woven into other themes e.g. organic farming, permaculture, lower carbon travel via bicycles etc, positioning The Cape Country Meander as a sustainable Route.
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			<p>Specific technical questions requiring answers from the EIA process</p> <p>(T1) Assuming that the claimed 2km minimum distance between housing and the nearest turbine becomes a legal requirement, to obviate the potential noise disturbance, this will have an effect on the land coverage of this and other similar wind farms. Are the resident households in the area aware of this problem, and that it has become a factor in more developed Wind Farm markets?</p> <p>(T2) It has been stated that the particular positioning of the Caledon Wind Farm, in relation to the wind parameters in the specific area, will allow an improved electricity generation performance compared to the normal minimum for a sustainable facility. The latter is normally quoted to be 25% - 30% load factor. What is the anticipated range and distribution of usable wind speeds? In addition, is there any pattern to the incidences of wind conditions being too low for power generation, in terms of season, day/night, other cycle etc? We have been promised access to this wind data, subject to signing of a non-disclosure and confidentiality Agreement.</p>	<p>The aspect about the 2000m cannot be commented on as the topography of the area is very hilly and it may be that a residence/farm house is within the 2000m radius but such house could be in a valley whereas the turbines will be positioned on top of the hills. Recommendations will also be made once the noise study is completed in the EIA phase of the project.</p> <p>A full wind assessment and modelling was conducted to prove the viability of the wind farm given the local conditions. This in detail assessment is required to prove the business case to the developers and funders. The Caledon Wind site has adequate wind resource to develop a viable project. Although the average wind blows throughout the day and night as well as summer and winter, there is an average increase from mid afternoon to mid evening, coinciding with the national peak demand.</p>
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			<p>(T3) Because electricity from wind energy cannot yet be stored, and nor can its generation at a particular time be assured, because of the natural variability and unpredictability of wind, how is it possible to replace any base load plant at all, bearing in mind its very slow response (several hours)? Is there a value used to define the extent of this duplicated capital equipment?</p> <p>(T4) Similarly, taking into account the better response times, what amount of peaking power can be replaced with generated wind power?</p> <p>(T5) Following the same argument as above, how responsive is base load power output control in relation to smaller but still significant changes in wind power generation? In other words, how much fuel (coal etc) can be saved per gigawatt-hour by controlling the power stations to match? What is the financial value of this?</p>	<p>See response to "Real value of wind".</p> <p>Caledon Wind is not a systems operator and not privy to the information required to respond to this question.</p> <p>In terms of the UNFCCC methodology for carbon credit registration, which has stood the rigours of European legislators, 100% of wind energy production is credited to carbon reduction. As a wind energy developer, Caledon Wind does not have access to further detail information in this regard.</p>
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			<p>(T6) Furthermore, as the relative proportion of generating capacity that derives from wind power significantly increases, it is evident that grid dependence on this extra capacity will also increase, to the extent that a sudden drop in wind across a large area can de-stabilise the grid enough to get a cascading effect and blackouts. What level of backup does Eskom consider suitable and what is the cost effect? The UK grid's target is to maintain instantly accessible backup power equal to 20% of peak demand.</p> <p>(T7) In the event that Eskom has a surplus of total power available at a particular time, and the wind power sources increase significantly and rapidly, is Eskom's contract such that the electricity from this superfluous generation still has to be taken at full cost?</p> <p>(T8) How will utilisation of both the pumped storage power stations at Palmiet and Steenbrass (580 MW) alter with the new Berg River scheme in full operation? How much change will there be in their availability to meet peak power generation needs?</p>	<p>From Wind Energy, The Facts, European Wind Energy Association http://www.ewea.org/fileadmin/ewea_documents/documents/publications/WETF/1565_ExSum_ENG.pdf: Wind power varies over time, ranging from seconds to years. Electric power systems are inherently variable, in terms of both supply and demand. However, they are designed to cope effectively with these variations through their configuration, control systems and interconnection. In order to reduce the variability, wind plant output should be aggregated to the greatest extent possible. As well as reducing fluctuations, geographically aggregating wind farm output results in an increased amount of firm wind power capacity in systems.</p> <p>The established control methods and system reserves available in Europe for dealing with variable demand and supply are more than adequate for dealing with additional variability at wind energy penetration levels of up to 20%</p> <p>Same as comment above. This is a network management issue and yes, in order to achieve carbon emission reductions, wind energy is planned to receive preference over fossil based power.</p> <p>CaledonWind as an IPP does not have access to this information. Queries related to Eskom infrastructure and the National Grid should be directed to Eskom, NERSA and the DoE accordingly.</p>
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			<p>T9) What are the manufacturers' names and model Nos. of the turbines, where are they already in use, what Standards(do they comply with, and what particular factors governed their selection? Are there SABS specifications for these machines?</p> <p>(T10) What is the nominal electrical consumption of the machines when running up to the lower cut-off wind speeds, and when feathered above the maximum operation wind speeds? Is this power taken from the grid?</p> <p>T11) One of the major quoted benefits from local generation of electricity, from Wind Farms(for example, was the reduction in transmission losses because the generators and users are in the same area. In the UK, losses of about 1.5% are quoted in the main supergrid lines, whereas it is in the existing local distribution lines where the losses are typically 5%-9%. Plugging in extra sources of power throughout the Cape, where the wind is supposed to be, but where the users are mostly not, would mostly incur increased losses. Perhaps, the Consultants can explain otherwise?</p>	<p>The preferred supplier for the manufacture of the wind turbines has not been procured yet. All potential manufacturers will be required to produce the turbines in line with International Standards for turbine production.</p> <p>It depends on the model but is between 0.15MW and a maximum of 5,1MW for 300MW or 1,7% of maximum output. The power used does not affect the 300MW output rating. Yes the power comes from the grid but each unit has an Uninterruptible Power Supply if grid connection is lost.</p> <p>The Western Cape has a net power deficit of approximately70% of total requirement and additional power generating capacity in the Western Cape would decrease the amount of electricity transmitted from the coal fired stations to this area and the resulting transmission line losses. It is therefore unlikely that electricity would flow from the Western Cape to the rest of the country. The detail is not Further detail can be answered by the national network operator.</p>
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			<p>Specific environmental questions requiring answers from the EIA process</p> <p>(E1) What is the carbon footprint of a 300 MW (gross) wind farm, including the power it takes? How does this relate to the carbon footprint of the standby generating plant (see T2 and T3)?</p> <p>(E2) Assuming an optimum position for each turbine tower, in terms of electricity generation, what level of output reduction will be acceptable to mitigate the visual impact of the total farm?</p> <p>(E3) How is it possible to effectively ignore all the threats to wildlife in the area, and to destroy the views that create a very rich visual experience for local people and tourists, just in order to construct a factory where there is no need for one, to produce electricity at an unacceptable cost? arrangements with the farmers allow permanent and regular access for post-installation environmental monitoring</p> <p>(E4) Will the contractual of all the Wind Farm areas to accredited experts and organisations in order to assess any threats or damage to any aspect of the flora and fauna system and for their findings to be made freely available to the public?</p>	<p>Electricity from wind energy has one of the lowest carbon footprints. As with other low carbon technologies, nearly all the emissions occur during manufacturing and construction phases, arising from the production of steel for tower, concrete for foundations and epoxy/fibreglass for rotor blades. These account for 98% of the total life cycle CO2 emissions. Emissions generated during operation of wind turbines arise from routine maintenance inspection trips. This includes use of lubricants and transport. Onshore wind turbines are accessed by vehicle. The manufacturing process of an onshore wind farm is 4.64gCO2eq/kWh. No additional standby plant is required as the wind farm will be linked to the national grid which is already set up to manage fluctuations. All power generated leads to reduced carbon emissions.</p> <p>As wind turbines are costly, this project needs to compete in a competitive electricity supply market and common wisdom dictates that landscapes are not unnecessarily dotted with an excess of badly placed wind turbines, minimal latitude exists to mitigate impacts at a reduce output. The turbines can however be repositioned to mitigate impacts as long as the output doesn't reduce.</p> <p>CaledonWind is cognisant to the wildlife and are planning the wind farm accordingly. The EIR will provide an opinion on the relative positive and negative impacts of this development.</p> <p>Yes. Caledon Wind will have the rights to access and access by other parties can be arranged through Caledon Wind. Dion – is this true?</p> <p>Caledon Wind is expected to be legally subjected to an Environmental Management Plan which will be developed as part of the EIA.</p>
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			<p>(E5) Can it be confirmed just exactly how much visual 'evidence' of the Wind Farm will be permitted to remain after decommissioning – for example, the temporary hard standings, 4m roadways, 10m roadways, and the tower foundations? Where will the spoil be dumped?</p> <p>(E6) The DSR states that the cables between the towers will be buried, but will need cathodic protection measures to inhibit corrosion. Will this amount of protection have any effect on the composition of ground or storm water, or indeed on the quality of the soil, short or long term?</p> <p>(E7) Currently, there is a proposed Conservancy in the process of being set up on a number of nearby farms. Will their involvement and views be considered during the EIA process in connection with all environmental aspects?</p> <p>Specific financial questions requiring answers from the EIA process</p> <p>(F1) How much of the tower and turbine equipment would be manufactured in SA? How many jobs?</p>	<p>A detailed Visual Impact Assessment will be undertaken in the EIA phase of the project which will determine the visual impact of the structures. The manner in which spoil will be dealt with will be detailed in the Environmental Management Plan for the proposed project, depending on the nature and amount of spoil.</p> <p>It is normal practice for Sub-terranean infrastructure, and will be assessed as part of the EIR.</p> <p>Registration as I&AP's is open to any party.</p> <p>This information is unknown to-date, as this depends on Government policies and decision-making which may impact on whether turbine manufacture is initiated locally.</p>
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			<p>(F2) How many of the estimated 20,500 new jobs, that will arise from meeting the 2013 target of 10,000 gigawatt-hours of renewable energy, will come specifically from the Wind energy sector in South Africa? Can these figures be substantiated?</p> <p>(F3) The DSR also reports a potential annual benefit to SA of R 1000 million GDP – this would be about 2.5 times Eskom's total budget for capital plant needed to meet the 2013 target for renewable energy. How would this total be made up?</p> <p>(F4) At the Renewable Energy Summit in 2009, the Department of Energy and Minerals gave the figure of R 1,000 subsidy per KW of connected renewable energy source. This translates to R 81 million for a 300 MW Wind Farm (assuming 27% availability). Is this the full capital subsidy (12%) currently being provided?</p> <p>(F5) The latest NERSA renewable energy lead-in tariff for wind power is R 1.25 per KWh of generated electricity, which is about twice the levelised cost from base load coal. What would be the contractual obligations for Eskom to purchase all excess wind power electricity preferentially, assuming a significant surplus of the latter?</p>	<p>Further research required and relies on information from each wind farm application and methods they will adopt.</p> <p>As referred to in the report, this number was determined during DME's macro economic study of renewable energy. The detail can be found on http://www.dme.gov.za/energy/efficiency_projects.stm.</p> <p>The only subsidy for this project will come in the form of a REFIT tariff as published by NERSA.</p> <p>NERSA is coordinating the development of a REFIT Power Purchase Agreement regulating issues such as this. It is up to NERSA to disclose information accordingly.</p>
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			<p>(F6) Assuming the huge interest in Wind Farms in the Cape continues at the current rate, does the Government undertake to fund their construction, and pay for the generated output, regardless of economic demand?</p> <p>(F7) What would be the increase in base load costs per generated KWh and will this data be used to compare with Wind Farm costs:</p> <ol style="list-style-type: none"> 1. Using a higher quality grade of coal? 2. Using the standard fuel gas purification processes available? 3. Using an economically optimum combination of fuel and fuel gas purification? <p>Specific commercial questions requiring answers from the EIA process</p> <p>(C1) Investments of this size usually require open disclosure of information. The following is requested:</p> <ol style="list-style-type: none"> 1. What is design and manufacturing expertise and experience of Genesys Wind AG and Thuthuka Group? 2. Which other wind farms operate the turbine generators that Caledon Wind will use? 3. Where are these machines, or their major components, manufactured? 	<p>Other than the REFIT tariff in quantities as published in the Integrated (Electrical) Resource Plan, the Government does not fund or “support” wind projects.</p> <p>Caledon Wind does not have access to the information required to properly answer this question. This question should be directed at ESKOM who generated coal based electricity.</p> <p>Genesys Wind is a European wind development company that has developed in excess of 20 wind farms. Thuthuka has experience in engineering and construction including a 10MW diesel power station with national grid connection. Other than grid connection and local civil work, all engineering on the wind turbine will be done by the supplier.</p> <p>Caledon Wind will only use wind turbines that have been thoroughly tested with hundreds of similar models operating worldwide, manufactured by well known and reliable wind turbine manufacturers, and according to International Standards.</p> <p>Germany or Denmark</p>
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			<p>(C2) The composition of the joint venture suggests that there could at some time be benefits, for example from some form of Tradable Renewable Energy or Carbon Certificates/Credits, that could accrue to parties outside of South Africa. How can the SA taxpayers be assured that this does not happen to their disadvantage?</p> <p>(C3) How is it intended that the full costs of the decommissioning stage will be guaranteed by Caledon Wind? Will the procedures be included in an Environmental Management Plan that will be agreed as part of the EIA process?</p> <p>(C4) The DSR suggests that tourism will benefit, for example from visitors directly interested in Wind Farms. The Visitor Record for the Darling site (several hundred people, from schools, Government Departments, Eskom, etc) really does not encourage much optimism. What evidence exists to suggest the contrary?</p> <p>(C5) Property prices in the Overberg, especially for those in the Tourism industry, will certainly be affected by the visual impacts and also by the current situation whereby the expectation throughout the area of more Wind Farms to be constructed will grow hugely.</p>	<p>Existing Tax and company laws</p> <p>Yes. Decommissioning will be addressed in the EMP and associated costs quantified upfront and guaranteed before commencing with the proposed project.</p> <p>Eskom Klipheuwel Visitors List (2003 only) available at:www.eskom.co.za/content/RW002Kliphdatasheet.xls.</p> <p>CaledonWind is not aware of evidence to suggest this to be true. In terms of the Spatial Development Framework limitations have been proposed but not signed into law yet.</p>
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			<p>Can the Government Departments produce a plan for place and size of all the potential Wind Farms in the planning stages in the Overberg? Will a total limit be set?</p> <p>(C6) Has Eskom actually been officially approached by 'Caledon Wind' to establish whether connection to the grid will be allowed, whether the electricity will be purchased, and on what terms, and whether Eskom will upgrade the Houwhoek substation and infrastructure for the second, and larger phase of the project? If so, what commitments have been made by Eskom?</p> <p>Conclusions</p> <p>Whilst the overall objectives to significantly improve the use of renewable energy is very reasonable, it is evident that experience from the rest of the world is being ignored so that the funding and production subsidies for Wind Farms have been advanced out of times higher than Government targets, with huge unsustainable impacts on the SA environment. The broad Government need has been defined, but the EIA process put into practice by this applicant for this particular project, that is a plant to generate renewable electricity for the grid, has been deliberately constrained so as to ignore many crucial aspects.</p>	<p>Yes.</p> <p>Thank you again for your comments on the Draft Environmental Scoping Report for public review. These have been transferred accordingly into the Issues and Response Report submitted together with the Final Environmental Scoping Report to the DEA for their consideration and decision-making.</p>
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			<p>The EAP Consultants have not acted in a proper fashion to ensure widespread consultation with interested and potentially affected persons or institutions, such as Eskom, NERSA, Western Cape Provincial Government, Department of Energy etc. The public views of those who hold obviously different opinions are being totally ignored, and attempts even made to prevent reasonable communications between the body of I&APs (by refusing to pass on contact data). Alternatives, in their widest sense, have been ruled out and ignored. The preferred activity has been stated to be the Caledon Wind Farm in an already designated area and the No-Go alternative has been defined quite simply as not having the Caledon Wind Farm, therefore not being able to meet the Government objectives. This approach seems somewhat simplistic and naïve and unfortunately suggests considerable accord between EAP and applicant.</p>	
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			<p>Nevertheless, the Department of Environmental Affairs has been mandated by Government to be the prime decision maker for this process. The EAP surely has to take the responsibility to ensure that their part in the process is carried out properly and accurately. The huge number of current and pending applications for large Wind Farms, primarily in the Western Cape, if approved, could have major implications:</p> <ul style="list-style-type: none"> • <i>The targets for renewable energy for 2013 and 2020 will be hugely exceeded, which may not be sustainable.</i> • <i>Such an accelerated rate of over-development of prime agricultural land and tourism destination areas will prejudice future economic growth of the Overberg.</i> • <i>An overall concern is that there does not appear to be a holistic oversight of this and many other projects for large Wind Farms in the pipeline by the National and Provincial Departments of Environment and the Department of Energy. The resultant environmental and visual consequences are likely to be very much more than the sum of the individual projects.</i> 	
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			<p>Our final plea is to put a hold on all applications for commercial Wind Farms in the Western Cape until:</p> <ol style="list-style-type: none"> 1. <i>The Wind Data is fully completed and detailed, to allow confirmation of the most suitable places for the location of Wind Farms, from a technical and environmental point of view.</i> 2. <i>There is a full technical and economic understanding of electricity generation from Wind Farms and its control within the grid system.</i> 3. <i>There is full understanding of the economics of wind energy in replacing conventional plant generating capacity, and consequently reducing the consumption of carbon fuels.</i> 4. <i>There is therefore a better basis for alternative decisions to be made on possible redirection of funds to areas, for example, with more sustainable societal benefits such as water heating where electricity savings are huge.</i> 5. <i>Until there has been sufficient time, preferably two years, for professional and independent baseline faunal and avifaunal studies of the study area to be completed and analysed.</i> 	
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<p>34) Francisco Daams, Department of Local Government and Housing: Provincial Disaster Management Centre</p>	<p>Disaster Risk Management</p>	<p>Email</p>	<p>7 Jan 2010</p>	<p>1. According to analysis of Geographical Information Systems (GIS) data from the Provincial Risk and Vulnerability Assessment (RAVA) for the Overberg Region, the following findings for the area covering the windfarm were reached:</p> <ul style="list-style-type: none"> • Western Cape Fire Density: Class value 3 (out of 6); • Environmental Vulnerability: Class value 1 (out of 3) • Social Vulnerability: Class value 1 (out of 3) • Total Vulnerability: Class value 1 (out of 3); and • Total Hazard and Risk: <p>For more information on fire risk reduction, consult the Head of the Overberg Disaster Management Centre, Mr. Reinhard Geldenhuys.</p>	<p>Thank you for this information. It will be assessed in the detailed specialist studies, currently underway as part of the EIA. Mitigation measures for fire and hazard risks will be included in the report and the Department will be notified of the availability of the Environmental Impact Report for review, in order to ensure that these issues have been adequately addressed.</p>
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BOTRIVIER PUBLIC MEETING HELD 12 JANUARY 2010					
34) Anthony Appel	Placement of control room	Public Meeting	12 Jan 2010	Why is the control room proposed to be in Caledon as opposed to Botrivier?	The placement of the control centre in Caledon as opposed to on-site or Botrivier is for logistical and structural reasons. The control room will require access to telecommunications infrastructure, fire management infrastructure. Furthermore it is not necessary to be on site and as such will also reduce the need for the operators to travel to site daily.
35) Anthony Appel	Trucks required per MW			How many trucks will be required per 50MW?	There will be approximately 25 turbines delivered per 50MW. Each turbine will require approximately 5 trucks, and all in all approximately 175 trucks will be required per each 50MW.
36) Anthony Appel	Use of Hawston View Road			Hawston View Road will be utilised during the construction of the new substation. Will CaledonWind consider tarring this road as that road has a tendency to become corrugated when over utilised?	It is not proposed at this stage to tar the Hawston View road as currently the soil conditions on that road are suitable (hard and compact) for transportation of the substation components. The road condition, however, will be improved prior to construction and returned to the same state once construction is complete.
37) Dirk Moolman	Response from farmers			What has been the response from the directly affected farmers?	The responses from the farmers who have entered into lease agreements have been generally positive as they will receive additional income as a result of the project.
38) Bernard Vollenhoven	Size of the windfarm			What is the size of the Windfarm?	The total size of the proposed study area is approximately 3700ha, which is roughly 8km by 3km. The turbines however will be around 200m apart and therefore not all of the space will be used.
39) Dirk Moolman				How advanced are the other competitors in their processes?	Currently there are about two or three competitors who are more advanced in their processes elsewhere in SA. CaledonWind is currently third or fourth furthest in terms of progress nationally.
40) Anthony Appel				Have CaledonWind considered the following sites: 1. Sir Lowry's pass on the Grabouw side 2. Kleinmond, just above Arabella	Sir Lowry's Pass, Grabouw: The wind speeds may be good, however due to the topography of the site the wind is very turbulent and not suitable for a wind farm. Arabella: The area surrounding Arabella is a conserved biosphere and is therefore a no-go area in terms of development.

41) Anthony Appel				The presentation refers to the influx of job seekers and associated diseases into the study area. Please note this will be considered as a very sensitive and racial issue towards poorer, black people.	Comment noted.
42) Anthony Appel				I support a balance between environment and development and am therefore not opposed to the project.	Comment noted.
43) Anthony Appel				Will it be Foreign Direct Investment (FDI)?	Yes, majority of funding will be FDI as there is not enough money in the South African banks for such a project.
44) Anthony Appel				What will be the cost for this project?	Approximately R7 billion, depending on the exchange rate at the time, for the entire 300MW.
45) Anthony Appel				This project will require approval from the government. Are there any requirements to comply with BBBEE? At the relevant point I would like to engage in detailed discussions on this point.	There will be a time and forum during which such discussions will take place, however they do not form part of the EIA process. CaledonWind note accordingly your request to be informed and involved in those discussions.
46) Dirk Moolman				Agree with Anthony Appel's statement regarding project buy-in with BBBEE and local groups.	Comments noted.
47) Dirk Moolman				Thanked the participants of the meeting and the project team for the opportunity to interact with regards to the project.	Comment noted.
48) Anthony Appel				Finds it interesting to have one-on-one discussions with the project team, as well as other key roleplayers, such as investors.	Comment noted.
LANDOWNER/ AGRICULTURAL FOCUS GROUP MEETING 13 JANUARY 2010					
49) Thys Roux				When will the EA phase take place?	Arcus GIBB will be submitting the Draft Scoping Report (DSR) at the beginning of February 2010. The Department of Environmental Affairs (DEA) will then have a month to study the DSR and indicate whether they would require any additional information. The EA phase will thus likely start in March. As discussed in the Caledon Meeting on 12 February 2010, Arcus GIBB can provide the contact details of the specialists should I&APs wish to contact them.

50) Thys Roux				Do the specialists give recommendations as well? If so, will they be able to recommend that the project must not continue. Will such a recommendation be taken seriously by the authorities?	In many cases specialists will provide recommendations such as, for instance, an indication of where 'no-go' areas are situated. For instance the fauna specialist would state that turbines must not be placed in renosterveld. These recommendations are taken seriously by the authorities. The specialists are also able to indicate if there are any fatal flaws. An example of a fatal flaw is, for instance, a finding that the development will contribute to the extinction of an entire species. Once the report is finalised, the authorities must weigh up the recommendations of each of the specialists and reach a final decision.
51) Thys Roux				Will the specialists give an honest assessment of the potential impacts, seeing that they get paid by the Arcus GIBB who is in turn employed by the developer? If, for instance, they were to provide a negative assessment, will they be hired for future projects? Will this affect their decision making?	Taking previous EIAs into consideration, specialists tend to have a good track record in terms of providing honest feedback. This is partly due to the fact that EIAs are process driven. The process requires the provision of opportunities for I&APs to challenge information provided in the DSR and Draft EA reports, which will place the authorities under pressure to decide on the information they are evaluating. Should the authorities request an additional study or ask that a study be revised, this can extend the entire EIA process and put the specialist in a negative light.
52) O'Nel Roux				Could the EA report not provide a visual map of how the area will look should the wind turbines be erected?	This request will be forwarded to the visual specialist for their consideration in the EIA phase of the project.
53) I&AP				Should this project be approved, could it put the Bantamsklip project on hold?	<p>RT: No, the Bantamsklip and CaledonWind projects are both in a response to two different requests from government, namely a request for Baseload capacity electricity generation and renewable energy generation. The CaledonWind project is in response to the government's request for 1700MW renewable energy in year 1 and therefore has no relation to the Bantamsklip projects, which is in response to the government's request for baseload generating capacity.</p> <p>Dion Wilmans (DW): South Africa currently requires a lot of energy and Eskom are currently building new coal-based power stations at a cost approximately R400 billion. The real problem lies in the fact that many of Eskom's current coal-based power stations will have to be retired and replaced within the next 20 years.</p>

				<p>The government has therefore requested that independent renewable energy projects be implemented to boost the country's energy supply.</p> <p>With regards to Eskom's planned nuclear power stations, the biggest one costing approximately R1.3 trillion, the government does not have the needed funds to build them. Thus it is in South Africa's best interests to obtain as much energy as possible from alternative sources.</p>
54) Thys Roux			<p>Should this project go ahead it will ruin the visual beauty of the Overberg area and have a severe impact on the tourism industry. Tourists visit the area to enjoy the natural landscape, not to come and look at wind turbines.</p>	<p>DW: It should be noted that everybody's concerns have to be taken into consideration, including the concerns of the national government, who is worried about the impact of a reduced energy supply on the South African economy. However, the government has instituted the EIA process to ensure that everybody's concerns are noted and taken into consideration before a final decision is made. With regards to people's interest in wind turbines, Eskom has kept a log of visitors to their Klipheuwel wind farm facility, which they published on their website. The visitors number 13 000 and all of them had to contact Eskom to arrange a special visit to their facility.</p>
55) Thys Roux			<p>Would the government take our concerns seriously? Should the wind farm be approved, is it possible for us to appeal that decision?</p>	<p>RT: A main concern of many I&APs is that they feel their concerns will not be taken into consideration. However, it is my duty as an EAP to inform you that you can lodge an appeal against this development, should the government decide to approve the project. However, as part of the appeal process you will be required to provide a motivation as to why you believe the development should not go ahead. The appeal process is taken seriously by the authorities.</p>
56) Thys Roux			<p>Who is responsible for measuring the potential impacts on the tourism industry?</p>	<p>RT: The Social Specialist appointed to this study.</p>

57) I&AP				Can these towers be used for other purposes, such as for telecommunication networks?	DW: Explained that turbines can not be used as cellphone towers. However, the turbines are linked by fibre optic networks. An agreement has been reached with Telkom in that they have to improve their data telecommunications network in the Caledon area. CaledonWind will also be one of their biggest customers. Furthermore, as a backup, CaledonWind will have to make use cellphone networks, so an agreement has also been reached with cellphone operators to upgrade all their existing towers in the area to ensure better 3G quality.
58) I&AP?				Is there an indication as to where the Bantamsklip Lines will go?	Jan-Willem de Jager: The Bantamsklip Transmission Lines EIA is only in the Scoping phase so there is still uncertainty as to where the potential lines will be placed. The specialists employed for the project are also currently working on new alternative routes based on information that have been received from the Multi-Stakeholder Workshops held in the area.
CALEDON PUBLIC MEETING 12 JANUARY 2010					
59) Dr Stuart Shearer				What are the height of the towers and the length of the blades for a 3.6MW wind turbine?	A 3.6MW Turbine, which is the maximum size considered, has a tower height of up to 100m and a blade length of up to 58.5m, dependant on the final technical analysis performed by our (Swiss) expertise. This information has been made available in the Draft Scoping Report currently out for public review.
60) K. Bobantz				When will the final positions of the turbines be determined? Will this be after the Draft Impact Assessment has been issued? Will I&APs be able to comment on the positioning of the turbines?	Rebecca Thomas (RT) and Hans Boer (HB) replied that information will be made available in the Draft Environmental Assessment report. I&APs will have an opportunity to review the Draft Environmental Assessment report and comment on the positioning of the turbines. It should be noted that the wind farm falls within an area of 3700ha, providing enough flexibility to place the wind turbines in optimal positions, meeting both technical and environmental requirements.

61) Dr Stuart Shearer			Considering that some studies have shown that birds are attracted to a constant red light placed on top of high structures such as wind turbines, could the proponent not make use of blinking lights? If Aviation Authorities have put in place legislation prohibiting developers to place blinking lights on top of such towers, could Caledon Wind not apply for an exemption?	Dion Wilmans (DW) said that according to legislation set out by the relevant national authorities, including the Civil aviation authorities, the masts must be topped with a constant red light, not a flickering one. This also applies to other masts such telecommunication towers. The proponent may not deviate from this legislation and also stated that a flickering light has a disruptive visual effect that is not well received by people living adjacent to wind farms. However, specialists have been appointed to assess the impact of the wind turbines on bird populations in the area and they will recommend mitigation measures which will have to be considered by the authorities
62) I&AP			Is it possible to continue with normal farming activities over the underground cables?	DW: Yes, the underground cables will be buried at a minimum of half a metre below the ground within dedicated conduits, after careful consultation with farmers. Preferably, they will be buried one meter below ground.
63) Mrs. O Roux			When will there be certainty on issues surrounding the placement of turbines, the depth at which cables will be buried, heights of transmission lines, and other technical issues. Will I&APs be able to comment on these issues?	RT/DW: The Final Scoping Report will indicate the proposed placement of turbines, including the electrical layout of transmission lines. Specific guidelines are set by National Governmental Agencies, together with Technical requirements that determine the minimum & maximum heights, and these will be adhered to accordingly. The EIA is currently in the scoping phase. Scientific & specialist studies will be undertaken that will provide an indication of where turbines and other infrastructure should be placed. The proponent is also engaging with various government departments, such as the Department of Environmental Affairs (DEA). In the process of these deliberations, these departments will set out guidelines that the proponent will have to follow in the design, construction and operational phase, should the EIA be approved. The EIA is an inclusive process that aims to incorporate the concerns/issues raised by I&APs as well those from government departments.
64) Dr Stuart Shearer			Asked whether Arcus GIBB will incorporate the comments provided by I&APs on the Draft Scoping Report in the Draft Environmental Assessment Report.	RT: All comments received during the public review period for the draft Scoping Report would be included in the Final Scoping Report to made available to the authorities for decision-making before proceeding to the EIA phase of the project.

65) Brian McMahon			Stated that correspondence was sent to Arcus GIBB in which issues were raised regarding the commercial aspects of the proposed project. Could these issues form part of the discussion for the Caledon Windfarm EIA?	RT: The purpose of the EIA is to assess the Environmental Impact of the proposed project. Commercial aspects are for investors. Arcus GIBB, as the appointed independent EAP practitioners, does not have access to certain commercial information. There are two government departments which have to ultimately decide whether the project is to be approved. Firstly, the DEA will decide if the project is viable taking into consideration the environmental impacts associated with the development as prescribed in the Environmental Assessment Report. The National Energy Regulator of South Africa (NERSA) and the Department of Energy (DoE) will consider the commercial aspects of the proposed project to determine whether it is financially and economically viable. Certain information shared with NERSA and DoE is confidential and does not form part of the EIA process.
66) Brian McMahon			Stated that the topic of sustainability is an important issue and has not been discussed thus far. He further stated that the Caledon Wind Farm project has only been initiated due to the worldwide recession and the fact that Eskom has increased the cost of electricity.	RT asked that the question be answered by Mr. Dion Wilmans after the conclusion of the presentation during which a discussion session will be held. This was accepted by all attendees. DW introduced himself as a Member of the Board GenesysWind AG and thanked the I&APs for attending. He explained that it is customary for a company to name an operating entity after the leading town closest to the development, hence the proposed project's name 'Caledon Wind'. Regarding Mr. McMahon's question regarding sustainability, South Africa hosted the World Summit on Sustainable Development in 2002 where the issues of climate change and sustainable development was addressed. Subsequently the then Department of Minerals & Energy (DME) issued a white paper requesting private developers to provide an initial 10 000 GWh of electricity per year utilising renewable energy (IRP1). He furthermore explained that Caledon Wind has been busy for the last three years doing background research for the project in which the first year was spent assessing different sites in SA utilising various sources, including at least 10 years historical data from reputable sources. Satellite data from a variety of sources were also utilised, including data received from NASA World Wind Atlas. Caledon Wind then identified 3 sites and short listed Caledon as the most suitable option due to a number of technical and infrastructural criteria as discussed in the presentation.

					Specialist Swiss Wind Engineers conducted a 6 week detailed analysis on the specific site, to assess whether the site was suitable for wind generation. A test mast was then erected in March 2009 to collect additional information. In total, Caledon Wind has used in excess of 100 data sources to determine the viability of the site.
67) Brian McMahon				Inquired as to whether the report providing the above mentioned data will be made available to the public.	DW replied that subsequent to the EIA process, Caledon Wind has presented the abovementioned information to the Relevant Governmental Departments as well as local and international financial institutions, who will have to make the final decision as to whether Caledon Wind should be allowed to generate electricity or receive the necessary financial backing. Caledon Wind is under a legal obligation to NOT make commercial information available to the public, as it contains competitive information. However, Mr. Wilmans stated that Mr. McMahon may view the Company Confidential report as provided he is willing to sign a non-disclosure and confidentiality agreement.

68) Dr John Wynne-Edwards			<p>Stated that he would like to object to Mr. Wilman's response to Mr. McMahon's question. He stated that the purpose of the meeting was not for I&APs to receive a lecture on various items regarding wind power. Stated that he is a member of WESSA as well as a doctor and an oceanographer. Requested that Mr. Wilmans not 'sell his product' at the public meeting as it forms part of the EIA process. Further stated that the national implications of the project were not discussed and that no meteorological data was provided except for a reference to NASA studies. Indicated the he has previously worked with NASA and that Mr. Wilmans is mistaken as NASA would not release 9 years of meteorological data for the Caledon area. Further stated that the proposed Caledon Wind Farm development is "all about money". Dr Wynne-Edwards further stated that 15% of the 19 000 wind turbines of the Denmark coast are not producing power and that If the turbines for the Caledon Wind Farm do not run continually and continuously the proponent will find itself bankrupt in future.</p>	<p>A response was unable to be provided as Dr. John Wynne-Edwards, Brian McMahon and Dr. Stuart Shearer left the meeting after this statement. A written response was provided, following the meeting, addressing the correspondence that was sent to Arcus GIBB mentioned by Brian McMahon.</p>
69) Mr. Gert Koegelenberg			<p>Posed a question to Mr. Wilmans: What are your planned social investments for the Overberg area, excluding the benefits landowners will receive? What part of your earnings will be given back to the community and what will that money be spent on?</p>	<p>DW replied that over the past year Caledon Wind has been working with the Development Bank of Southern Africa (DBSA) to establish an investment instrument for community participation in the project. The returns of this investment are envisaged to contribute primarily towards critical infrastructure improvement. In addition, Caledon Wind will contribute substantially towards Rates & Taxes on the land that the project will occupy, thereby reducing the impact of future increases on all land owners taxes in the greater TWK municipal region. In addition, further investments will be made available for social investment which will go towards the development of training, tourism and energy efficiency initiatives</p>

70) Mr. Gert Koegelenberg			Wanted to confirm that the funds made available by Caledon Wind not only be spent on new infrastructure projects but also on social upliftment projects, such as supporting schoolchildren and schools in the area; and that the funds that are made available for these projects be allocated not only to the local government, but to local organisations that are involved in the upliftment of the community.	DW explained that, should the project be completed, Genesys Wind Switzerland, has a corporate policy to reinvest 3% of it's profits into local economic upliftment. These funds will not be given to local government, but directly administered by GenesysWind, to be invested in projects related to, for instance, the upliftment of education. RT added that should the project be approved by government, the proponent may be required to produce a Corporate Social Investment plan that is to be developed in consultation with the local municipality; during which decisions will be made on how the company is to contribute to social upliftment in the area.
71) Mrs. Onel Roux			Indicated that earlier statements have been made by other developers which promised that funds will be made available for social upliftment. However, according to the I&AP nothing has come of these promises and in some cases the proposed projects had a negative influence on the local community, such as, for instance, the development of a casino in Caledon.	Comment noted.
72) Jan Visagie			Agrees that there have been empty promises made by developers in the past regarding funds being made available for social upliftment projects in the area. However, Mr. Visagie pointed out that there has been a change in policies that now allows municipalities, once a project has been approved, to ensure that social investments within the TWK region will takes place. In terms of the LUPO (Land Use Planning Ordinance, Ordinance 15 of 1985) the Council may as part of the approval procedures lay down conditions that will / can ensure that social development and bulk infrastructure payments takes place. People involved in the EIA and LUPO applications can rest sure that Council will not approve of the	Comment noted.

73)				<p>application and not ensure that payment and or the social contribution will be enforced as part of their (the developers) contributions to the community. Mr. Visagie also explained that the property tax for those landowners whose land will be leased to Caledon Wind will also increase, providing additional income for the municipality. This will be done by way of normal valuation process, to determine the value of the property with the additional land use rights on it and is done by professional private companies.</p>	
74) Mr. Thys Roux				<p>Why were other areas not identified for wind farm development as the Overberg region is known for its scenic beauty and the wind farm will have a negative visual impact and thus negatively affect tourism in the area. Asked why CaledonWind not rather build wind farms in mountainous areas or in the Karoo where they may not be as visible? Also stated that the West Coast would be more suitable for wind farm developments.</p>	<p>DW responded that mountainous areas are not suitable for wind farm developments as there are many challenges, including logistics and wind turbulence in these areas. He stated that the majority of available land along the West Coast is unavailable, as most of the optimal sites for wind generation have already been selected by other wind farm developers.</p>
75) Jan Visagie				<p>In response to Mr. Roux's comment, Mr. Visagie stated that there are a number of applications for Wind Farms in the Karoo area. Gave the example of three wind farms being planned adjacent to Beaufort West. Said that such developments depend on the availability of suitable sites for wind farm developments.</p>	<p>Comment noted.</p>
76) Mr. Thys Roux				<p>Could the visual impact specialist's details be made available to him as he would like to provide direct input for visual impact assessment?</p>	<p>RT replied that she could put the I&AP in contact with specialist or if it is preferred, Arcus GIBB could act as an intermediary.</p>
77) Mr. Thys Roux				<p>Are there any other wind farms operating in South Africa at the moment?</p>	<p>DW responded that there are two wind farms operating at the moment, both of which are demonstration farms. The first, Darling Wind Farm only has 4 turbines and Eskom's Klipheuwel Windfarm only has 3 turbines. Stated that there are 135 wind farms planned within South Africa of</p>

				which 35 is likely to be approved.
78) I&AP			Regarding the issue of rates and taxes, the I&AP wanted to confirm that the same situation regarding SAB's property, which is located within the TWK municipality, will not be repeated. Stated that SAB owns a property with a value of approximately R300 million and that SAB is only paying a rate of 3million per year. Stated that rates and taxes must not be negotiated with politicians but be determined by means of the actual value of the land.	Comment noted.
79) Jan Visagie			Rates and taxes are determined separately from each other. You are being taxed on the value of the property, buildings and land value. These valuations are done independently by private professional valuers appointed by Council. These people determine the value of the property. Rates are a separated issue and are not linked to the value of the property and cannot be seen as tax. A rates bill only shows for instance the water consumption for a month. Council does implemented in July 2009 the new general valuation roll and Council believes that due process was followed in terms of the valuations.	Comment noted.
80) Martie Koegelenberg			How many wind farms are currently being planned for the Caledon area?	Mr. Jan Visagie replied that there are 2 wind farm developers that are now applying for an EIA (including the basic assessment for the erection of windmasts) as well as 2 other wind farms developments that are still in the planning stages.
81) Martie Koegelenberg			Stated that the combination of 4 wind farms will have a considerable impact on tourism in the area. Tourism is a sustainable industry and a major employer for the Overberg region. The construction phase will only employ approximately 150 people	DW explained that once a wind farm is operational it employs a number of people. Labourers will be needed to maintain the transmission lines and other associated infrastructure but they will be employed by the TWK Municipality. Eight to twelve permanent specialised engineers, service technicians and operational staff will be employed to manage the wind farm once it is operational.

			<p>over a 60 month period, many of whom will be skilled workers that will be brought in from other areas and not necessarily sourced from the Caledon area. How many people will be managing the wind farm once it is operational and what processes will Caledon Wind put in place to train local people to eventually manage the wind farm?</p>	<p>CaledonWind aims to train and employ South African engineers, technicians and operators.</p> <p>DW further stated that any new planned commercial, industrial and residential developments require electricity to continue. The South African electrical generating capacity is currently 40 000MW and the South African economy is short of up to 9000MW. The lack of power hinders development and creates lost employment opportunities. CaledonWind met with local developers from the Caledon area who were told by Eskom that there is not enough power available to support their developments, which not only affects their businesses but the entire construction industry. Furthermore, there are industrial nodes planned for the Overberg area but these developments cannot continue due to a lack of power. DW stated that Eskom will only be able to supply additional power for this region in 7 years' time. DW explained that this will curb development in the area and will affect all industries, including tourism.</p>
82) Mr. Gert Koegelenberg			<p>What is the average noise generated by a typical wind turbine and what is the distance at which this noise becomes audible? What will be the noise generated by such a wind turbines on a 'slow day'?</p>	<p>DW responded by stating that it depends on the wind speed. The maximum generating capacity of a wind turbine is at 55km/h creating approximately 50 DB of noise. He further stated that the wind noise itself at 55km/h is approximately 79DB and that on a slow day the noise generated by the wind is louder than the noise generated by the turbine over a distance of 1km. RT added that this information, however, can only be confirmed once the noise study has been completed for the EIA.</p>
83) I&AP			<p>Ten to fifteen years from now, will there not be new technology that could replace wind energy and which may have less of a visual and noise impact?</p>	<p>DW responded Research & Development in the field of energy generation currently enjoys the biggest budgets of all industries, and that it is conceivable that new technologies may supersede all current power generating technologies. Eskom currently operates 15 coal-based power stations with the last one having been built in 1985. These power</p>

				<p>stations can not operate indefinitely and by 2015 some of the older coal-based powers stations will have to be replaced. At the moment Eskom is building two new coal based power stations and in order to help finance this development they are proposing increasing electricity rates by 35% over the next three years. This will only provide funds for the currently planned 2 new coal power station, the costs are reportedly estimated to be approximately R400 billion. In order to build an additional power station Eskom would need to further increase the cost of electricity. There is not enough money in the South African economy to fund a new power station and that parliament has already stated they are not able to fund such developments. Eskom have thus approached local banks as well as European banks for funding. Eskom recently secured €1.2 billion (R12.71 billion) from Europe. President Jacob Zuma has also written a personal letter to the World Bank for assistance in funding.</p>
84) I&AP			How much electricity do towns such as Hermanus and Caledon consume?	<p>Hermanus currently uses approximately 80MW and Caledon 7.5MW. Cape Town consumes 4900MW, of which according to Eskom 70% is imported from outside the province.</p>
85) I&AP			Are wind farms viable considering the capital costs involved for these projects?	<p>DW answered yes. Furthermore, he explained that the latest coal-based power station that Eskom is planning has a maximum generating capacity of 4800MW. With a cost of R143 billion, that works out to R30 million rand per MW, which does not include the procurement and transport costs of coal needed to operate the power station. The cost of supplying water for these power stations is also not included. In comparison it costs R20 million per MW to build a wind farm. However, because wind turbines are not always operational it must be ensured that they be positioning in the best possible location, in order to ensure optimum generating capacity. The advantage of coal-based power stations is that they can run continuously. However, it also means they have to be supplied by coal and water on a continuous basis, and the price of coal fluctuates.</p>

86) K. Visser			Wished to have it noted that if I&APs stand in the way of wind energy, they effectively endorse projects such as the Bantamsklip Nuclear Power Station. The long term dangers associated with nuclear power are far greater than the impacts associated with wind generation. If I&APs rather choose to go with Eskom's development plans then they will have to deal with a nuclear power plant in their region, which will have an even bigger impact on tourism.	Comment noted.
87) I&APs			Is it possible to combine wind and solar power so they supplement each other, thereby lowering fluctuations in energy supply?	DW replied that a perfect example already exists in Switzerland for the combination of solar and wind, as well as Denmark and Sweden for Hydro and Wind. However, in order for a solar farm to generate the same amount of electricity as a single 2MW wind turbine, it will cover an area of 3.6km ² . The capital cost of solar generation plants are at minimum 2.5 times higher than equivalent wind plants, as evident by the approved Cost / kWh published by NERSA of R 3.14 and R 3.94 for Concentrated / PV solar systems.
88) I&APs			Could thin-film solar panels, which do not require as much area space, be used to supplement wind power?	DW explained that the costs of thin-film solar are high. When NERSA determined what prices they will pay under the Renewable Energy Feed-In tariff they did a very accurate calculation of what it would cost per kWh. Wind was calculated at R1.25 and solar photo voltaic at R3.94. (NERSA announcement 2 Nov 2009)
89) K. Visser			What will the capacity of the transmission lines to be used for the Caledon Wind Farm be in comparison with the Bantamsklip Power Station which are 400KV and 765Kv?	DW replied that the proposed 300MW wind facility will be less than 5% of the proposed 6000MW proposed Bantamsklip nuclear power station.
90) K. Bobantz			Stated that a great advantage of the Caledon Wind Farm is the fact that they will be using underground cabling between turbines, and connecting to the existing overhead Overberg transmission lines.	Comment noted.

91) Martie Koegelenberg			Stated that the issue surrounding our responsibility towards the environment has not been discussed. Stated that at “the end of the day we have to lose a little to gain a lot”.	DW agrees, stating the Caledon Wind Farm will prevent almost a million tonnes of CO2 annually to be released into the atmosphere.
92) Martie Koegelenberg			Stated that this fact (raised by DW above) should be stated in the EIA presentation.	Comment noted.
93) K. Visser			Asked whether 3% of Bantamsklip's profits with also be provided to local community project?	
94) J. Visagie			In response to the above question, Mr Visagie explained that the Municipality cannot form part of the process or become directly involved in any private company. A Legal Entity (Municipal Entity) may be formed to undertake a specific commercial activity. Currently the DBSA is funding the forming of such Municipal Entity for another specific project that Council is undertaking. The MFMA (Municipal Finance Management Act) stipulates and regulates the forming of such ME's and gives direction in terms of board members and the auditing of the book. It needs to be audited separate from that of the Municipality. The Municipal Manager will still be the accounting officer of the Municipal Entity, but other than that the rules and board members provide the direction in which the ME may consider doing its business. The guidelines stipulate how the money should be spent, applying specific methods and following agreed principles. The Auditor General will audit their financial statements together with private auditing firms. The municipality benefit from an increase in rates and taxes only. The municipal entity however may be part of such a commercial venture.	

			<p>Secondly, in terms of Genesys Wind's contribution of 3% of their profits, they will have to provide a statement every year indicating on which projects these funds were spent. The Municipality will not get involved in this process other than to provide a Need Assessment undertaken during the IDP process. GenesysWind will hopefully adhere to the requirements identified during this assessment, simply because those needs were identified by the community. The municipality will be able to assess how much of these funds were spent and on what, for example, the upliftment of schools or on other projects that addresses the needs of the local community. Also, if they don't spend the entire amount allocated for that year, the remaining funds may be placed in a trust fund. The trust fund will be managed by themselves or a body that Genesys Wind may still form but definitely not by the local municipality. Genesys Wind must follow due process, and the Process principles are set by the Western Cape as well as National and local policies. JV said that Bantamsklip is outside of the jurisdiction of TWK, and Eskom is a state entity there will probably be no social contributions made.</p>	
95) K. Visser			<p>According to Eskom South Africa will need an additional 20 000MW by 2020. So as to ensure that they do not continue building nuclear and coal-based power stations after 2020, we as citizens have to push for renewable energy.</p>	Comment noted.

96) Jan Visagie			Jan Visagie responded stating that renewable energy is not the only solution. Solar and wind energy will not provide South Africa with enough energy. Coal will eventually run out, if the only alternative is nuclear what can we do? Eskom has not put in place tariffs and policies that support renewable energy thus far, giving nuclear an advantage over renewable energy supply.	
97) K. Visser			If we improve our efficiency with 25% and combine that with renewable energy, we could prevent additional nuclear power stations to be built.	Comment noted.
98) Jan Visagie			Jan Visagie responded stating that even if we improve our efficiency with 50% we will still need additional power. Stated that he also does not wish to support nuclear power but that local communities, if they are against such developments, should then push for alternatives. Further explained that the Western Cape provincial government is currently in the process of developing a provincial assessment looking at all the possible wind farm developments. The availability of wind is not the only criteria. There are 8 other criteria that needs to be considered. Proximity to towns, airports, wetlands, flight past of birds, topography, etc. Zones will thus be put in place. In this way, local government is able to direct future developments and stop unwanted developments from taking place. Furthermore, Eskom will not negotiate with Wind Farm developments if their planned output is lower than 25MW.	
99) Jan Visagie			Asked that RT make a change as the figure illustrating the EIA process showed the last phase as "DEA Approval".	Comment noted. Will be amended accordingly to say DEA authorisation.

100) Martie Koegelenberg			Stated that in a previous visit overseas she drove past a wind farm and could not hear any noise coming from the turbines. She stated that the impact of greenhouse gasses released into the atmosphere by Coal-based power stations are far worse than the impacts associated with Wind Farms. However, she stated that the tourism industry will be negatively affected by these wind farm developments and solutions must be found to address this issue.	Comment Noted.
101) K. Bobantz			Replied stating that the Overberg's biggest asset is its natural resources, which include its wind. Stated that overseas tourists will have a positive view of the Overberg area if it markets itself as a 'green area'	Comment Noted.
102) Martie Koegelenberg			Stated that the Overberg area does not necessarily cater for overseas tourists but rather local tourists who prefer more affordable holiday destinations. She asked whether, for instance, local tourists would be willing to pay a premium for staying in a guest house that makes use of solar geysers.	Comment Noted.
103) K. Bobantz			Stated that South Africans still need to undergo a paradigm shift and that people should start supporting energy efficient housing developments.	Comment Noted.
104) K. Visser			Stated that citizens should put pressure on government to put in place legislation supporting the installation of solar geysers.	DW explained that Eskom has an existing programme that for part of their Demand Side Management strategy.
105) K. Bobantz			Stated that citizens should put more pressure on government and that public participation processes provides a means for them to do so. Said that 'we must get people talking' and make demands for rates and taxes supporting renewable energy.	Comment Noted.

106) Jan Visagie			<p>Stated that there will always be resistance to any project, including renewable energy projects such as wind farm developments. However, he stated that people should not look at only the physical footprint of such developments. For instance, should one view the actual footprint of the Bantamsklip Power Station against the total map area of the Overberg area – it would appear, for instance, that the impacts on the area will be minimal. However, this does not indicate the areas that will be affected by the storage of nuclear waste.</p> <p>RT questioned if TWK would consider incorporating all the potential planned windfarms and market the area as a 'clean energy region'? This was considered as a potential idea which could be incorporated into the Local Economic Development Plan.</p>	Comment Noted
107) Rebecca Thomas			<p>Expressed concern that the local community is not aware of the other 6 wind farm developments in the area. Jan Visagie replied that the EIA processes for the wind farms have not been initiated, stating that only three of these developments are now applying for Basic Assessments in order to erect wind masts.</p>	
108) Mr. Gert Koegelenberg			<p>Stated that the Overberg area could be marketed as the "Origin of Wind"</p>	<p>DW further suggested that the area could target paragliders and market the Theewaterskloof Dam to kite surfers.</p>

109) K. Visser				Stated that if people 'apply their minds' we could come up with solutions that would enable us to come up with solutions that are cheaper than coal-based power generation. Further stated that the reason for the slow development of the renewable energy market is due to a lack of commitment from government officials who are all "afraid of losing their positions" Also stated that people should rally others to make them aware of meetings such as these, driving through towns using megaphones.	
110) Mr. Gert Koegelenberg				Suggested that some of the wind turbines be painted bright colours to further enhance to make them more appealing to tourists	DW replied saying that this could have a disruptive visual effect and that the turbines are all produced in an industry standard white colour.
111) I&APs				How do developments such as these impact on airports and low flying airplanes?	
112) Jan Visagie				Replied stating that the TWK Municipality takes into consideration the flight paths of helicopters and crop sprayers in the area, as well as the vicinity of Caledon's airfield.	
113) K. Bobantz				Asked whether Caledon Wind will provide bursaries to South African citizens so they are able to receive training and eventually manage wind farms developed in South Africa.	DW replied explaining that Caledon Wind will train and employ local engineers as they are more multi-skilled than engineers sourced from overseas, which are usually very focused on a particular field. Further explained that Genesys is planning to expand their operations in the Africa and would prefer to employ South African engineers to manage these wind farms on the continent. The company will not be training these engineers but they will provide bursaries to have them trained in accredited facilities. Furthermore, as part of their contract with the manufactures of their wind turbines, they have to ensure they transfer skills to local engineers.
114) K. Visser				Asked what the difference in costs are between wind farms built in the sea versus wind farms built on land.	DW stated that a wind farm built on land costs approximately R20m per MW whereas a wind farm built in the sea costs approximately R45m per MW, the largest of which, the London Array of 1060MW, currently being constructed off the shores of the UK.

<p>115)</p> <p>Vuyo Mzini. Research Analyst with Basileus Capital</p>	<p>Loss of power during transmission</p>	<p>Email</p>	<p>7 July 2010</p>	<p>I a recent article referring to the Caledon Wind Farm, I read that “Approximately 70% of the Western Cape’s electricity is imported from Mpumalanga via transmission lines. Energy losses on long distance power transmission adds around 6 to 8% to the cost of electricity and some 25% to the delivery costs of electricity.”</p> <p>I was wondering if perhaps you know how much power is lost in transmission from Mpumalanga to Cape Town in MW? Or perhaps on a percentage basis (i.e. what percentage of the 70% electricity imported from Mpumalanga is lost in transmission). I am doing research on electricity consumption in the Cape Town region and would appreciate the help. Please let me know if you can help with the above or perhaps if you know anyone who might be able to. I have been trying to get an answer from Eskom but with little luck.</p>	<p>Eskom does not report specific losses to a region in their annual report, only the general losses experienced across their entire network. It is debated, however, that the losses on the existing 400Kv infrastructure linking the two areas could amount to between 15% to 20% to the Western Cape.</p>
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