



RES Southern Africa

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For the attention of: Ms Madubela
Submitted by e-mail to: tmadubela@parliament.gov.za

20th October 2011

Re: RES Southern Africa's Comments on the National Climate Change Response White Paper (October 2011)

Dear Ms Madubela,

RES Southern Africa thanks the Department of Environment and welcomes this opportunity to comment on the White Paper. The National Climate Change Response White Paper 2011 is an important document and the policies formed should deliver the significant carbon reductions required to reduce future catastrophic environmental disasters. It is vital that this Government policy is fit for purpose, and we appreciate the efforts of the Department to see that it is.

RES Southern Africa is a renewable energy project developer based in Cape Town. It is part of the RES Group, one of the world's leading international renewable energy developers. Drawing on decades of experience in the renewable energy and construction industries, we have the expertise to develop, construct and operate projects of outstanding quality on time and on budget. In South Africa we focus our activities on the development of wind power plants that will contribute to the twin challenges of the nation's future energy supply security and of global climate change.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'D Ayling', written in a cursive style.

Duncan Ayling

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RES Southern Africa's comments on the National Climate Change Response White Paper 2011

Our initial comment relates to the **very short time frame for responses to be submitted** on such an important White Paper. The national Climate Change Response White Paper was issued on the 12 October 2011 and written responses are expected back no later than the 20 October 2011. This is a mere 6 working days later which is not giving anywhere near enough time for stakeholders to submit their concerns on such a tremendously significant paper as the National Climate Change Response White Paper.

Section from the White Paper	Comment
<p>1. Introduction</p> <p>'it is also recognised that South Africa is a relatively significant contributor to global climate change with significant GHG emission levels from its energy- intensive, fossil- fuel power economy. '</p> <p>' we have to urgently strengthen the resilience of our society and economy to such climate change impacts and to develop and implement policies, measures, mechanisms and infrastructure that protect the most vulnerable.'</p>	<p>We welcome the South African Government's acknowledgement of its share to global climate change and its awareness of the urgency to act.</p>
<p>3. Principles</p> <p>'The Polluter Pays Principle- those responsible for harming the environment paying the costs of remedying pollution and environmental degradation and supporting any consequent adaptive response that may be required.'</p>	<p>We agree with the Government's recognition of the Polluter Pays Principle. It is therefore important, that effective measurement and monitoring are implemented to ensure polluters pay their fair share of any external cost to society.</p>
<p>4. The South African Climate Change Response Strategy</p> <p>4.1 Overall Approach</p> <p>'Developmental- prioritising climate change responses that have both significant mitigation and adaptation benefits and that also have significant economic growth, job creation, public health, risk management and poverty alleviation benefits</p> <p>Transformational, empowering and participatory- Implementing policies and measures to address climate change at a "scale of economy" that enables and supports the required level of innovation, sector and skills development, finance and investment flows needed to reap the full benefit of a transition to a lower-carbon, efficient, job- creating, equitable and competitive economy.</p> <p>Dynamic and evidence-based... scaled-up roll-out of those existing successful policies and measures, which have successfully completed a demonstration phase... Implementation of</p>	<p>We agree with the Government policy to develop a 'win-win' strategic approach that develops the economy alongside combating climate change. To this end, the success of the renewables industry would be crucial.</p>

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<p>proven “no-regret policies and measures” in the immediate and near-term, particularly those that are well researched or understood, have socio-economic developmental and job creation benefits, and have negative-cost, zero-cost or low-cost implications for the economy and society...’</p>	
<p>6.1.2 Identifying desired sectoral mitigation contributions ‘Defining desired emission reduction outcomes for each sector and sub-sector of the economy within two years of the publication of this policy-based on an in-depth assessment of the mitigation potential. ‘</p> <p>6.5 The Carbon Budget Approach ‘CBs will be drawn up within two years of the publication of this policy for relevant economic sectors and subsectors, particularly in the major energy supply (electricity and liquid fuels) and use (mining, industry and transport) sectors. ‘</p> <p>10.2 Roles and institutional arrangements. 10.2.1 Parliament ‘The Committees will work with the DEA and the IMCCC to draft any Bills, or an amendment to NEMA, that may be required within three years of the publication of this policy. ‘</p> <p>12.3 Monitoring responses ‘To this end, South Africa will, within two years of the publication of this policy, design and publish a draft Climate Change Response Monitoring and Evaluation System. ‘</p>	<p>It has been repeatedly stated that the details of mitigation and adaptation measurements and approaches would be published within two to three years of the publication of the White Paper. It is important for the Government to combat climate change in a timely and urgent fashion, as it has correctly recognized. We believe that a two to three years time frame for detailed mitigation and adaptation measurements and approaches is too generous and is at a great opportunity cost to the country. We therefore, recommend the Government to set up, as well as a sooner deadline (one year), a timeline for each mitigation and adaptation measurement and approach to be finalised. As a result, related industries can monitor their development and audit if progress has been conducted on time.</p>
<p>6.6 Sectoral mitigation and lower-carbon development strategies ‘Under the leadership of the relevant national sector government department, each significantly emitting economic sector or sub-sector will be required to formulate mitigation and lower-carbon development strategies. ‘</p>	<p>It is important that the definition of ‘significantly emitting economic sector or sub-sector’ is clearly stated. If loosely defined, loopholes would exist for carbon-accountable sectors of the economic. For the energy sector, such definition should be based on measures such as tons of CO₂ emitted per MWh of electricity generated. If such measures are not strict enough or room for improvement is too easy to fulfil, the objective of the National Climate Change Response White Paper would be undermined.</p>
<p>7. Managing Response Measures. ‘As a significant global emitter with a heavy reliance on coal-based energy, South Africa may be economically vulnerable to measures</p>	<p>It may be the case that carbon intensive sectors would be economically vulnerable to measures taken both internationally and nationally to reduce GHG emissions, however it is important to acknowledge that</p>

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<p>taken both internationally and nationally, to reduce GHG emissions.</p> <p>Government will take a multi-pronged approach to addressing and managing response measures, especially in respect of response measures that may have negative economic impacts.'</p>	<p>this is not a country specific issue, rather an industry issue. It is essential that the Government does not fall into protectionism or start to defend any pollutant industry where urgent changes are needed.</p> <p>The earlier the Government addresses behaviour changes required, the quicker the country transforms to a low carbon economy and the more competitive it would be in the international sphere where low carbon criterion is increasingly emphasised in trade.</p> <p>We agree that some measures to combat climate change 'may have negative economic impacts' to the extent that such impacts would only be short term. Indeed, it is important to recognize that an economical behaviour change only create a transfer of resources, in capital, employment and resources. To the economy as a whole it would have limited negative impact, especially when taking into account of avoided long term cost of no action taken against climate change. The social and environment benefit of acting urgently outweighs limited negative short term negative impact on some sectors that require radically change.</p>
<p>8. Near Term Priority Flagship Programmes 8.3 The Renewable Energy Flagship Programme 'The Programme will be enhanced by domestic manufacturing potential...'</p>	<p>It is important that the Government recognize that any domestic manufacturing potential require strong and sustainable domestic incentive, without which the manufacturing potential, technology transfer and job creations would only be realised elsewhere in the world.</p> <p>In the case of renewables it is of utmost importance that the South African Government continues along the path it has started by the announcement of the Renewable Energy IPP Procurement Programme in early August 2011. A subsequent programme and time frame for additional RFP's, showing the Government's commitment to the IRP2010, is essential for a continuous out build of renewables which would bring with it manufacturing potential, technology transfer and last but not least creation of much needed jobs.</p>
<p>8.5 The Transport Flagship Programme 'It will encourage new efficient-vehicle, such as electric vehicles...'</p>	<p>Promotion of efficient-vehicle technologies such as electric vehicles is a step forward to promote low carbon in the transportation and logistics sectors. However, without greater change in the electricity generation sector, the fundamental problem of sourcing pollutant and high carbon fuels would not be solved. Indeed, by promoting electric vehicles alone would only increase demand for electricity which is in South Africa 98% generated by coal. Urgent promotion</p>

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	<p>of renewables in the electricity generation sector is a pre-requisite for a success in achieving the objectives of the Transport Flagship Programme.</p>
<p>9. Job Creation 'Climate change and responses thereto, will affect employment, job creation and living standards and, in many instances, this affect may be negative.'</p>	<p>We question the claim that responses to climate change affect employment, job creation and living standards negatively and recommend the Government to publish its finding or evidence of such claim.</p> <p>Several studies have been performed in a range of countries (including, but not limited to, US, Germany and China) which shows examples of the social benefit brought to a country by responses to climate change and we are ready to bring such independent/third party studies to the Government's attention upon request.</p> <p>Much to the contrary of this claim, it is rather <u>the delay</u> in responses to climate change that would affect employment, job creation and living standards negatively.</p>
<p>9.1 Policy outcomes 'the short-to medium-term objective of the National Climate Change Response Policy is to limit employment contraction to those areas of the economy where excessive carbon intensity is considered unsustainable... Growth in new sectors alone will be no guarantee of net job creation...'</p>	<p>The implication of this claim is profound. It may be interpreted as, so long as an area of the economy can prove that its excessive carbon intensity is sustainable, the National Climate Change Response Policy is there to protect its employment, most likely through policies that shield such company from paying its fair share of its environmental cost to the society and guarantee its production at the cost to the rest of the society.</p> <p>We argue that it is precisely these areas of the economy, where excessive carbon intensity is currently sustainable, that radical urgent changes are required. The Government should, instead, ensure that appropriate measures are in place for transfer of skills so that employment in such areas of the economy (where excessive carbon intensity is currently sustainable) can be transferred to industries such as the renewable sector in the soonest possible timescale.</p> <p>We urge the Government to publish evidence of its claim that 'growth in new sectors alone will be no guarantee of net job creation'.</p> <p>Our internal study based on external findings shows that South Africa has the opportunity to create large number of jobs. Please see the attached Appendix for our study. Furthermore, a recent study conducted by Global Climate Network, shows that South Africa could create 36,400 new direct jobs and 109,100 indirect jobs in the renewable sector.</p>

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<p>10. Mainstreaming Climate-Resilient Development 10.7.1 Carbon Pricing ' The National Treasury's carbon tax policy will seek to primarily stimulate behaviour change through the price mechanism, and as a secondary benefit, generate a revenue stream that may allow fiscal decisions over time that support climate change policy and broader sustainable development objectives.</p>	<p>We welcome the Government recognition that revenue generated by carbon taxation should be allowed to support climate change policy, including any incentive on renewable energy development.</p> <p>It is important to remember there is a need to ensure that revenues from carbon taxation will not be used for non-environmental purposes. In fact, they should be used for meeting environmental goals of lower GHG emissions, energy efficiency and deployment of low-carbon technologies.</p>
<p>10.7.2 Carbon Market 'Carbon markets are mechanisms for exchanging emission reductions between entities, thereby optimising efficiency and minimising cost in controlling pollution levels. They include both cap-and trade mechanisms and offset schemes where actors voluntarily pay compensation for emission.</p> <p>In respect of carbon markets, the National Treasury will investigate the feasibility of an emissions trading scheme as a medium to long term response to climate change. '</p>	<p>The vast majority of South Africa's CO₂ emissions are produced by the electricity and the metal industries. These two markets are not fully competitive, since they are dominated by large oligopolistic players. Hence, as far as a gradual phasing-in of a carbon tax makes sense, the initial very low tax rate is not justified in the light of weak competition between major GHG emitters. Furthermore, a cap-and-trade mechanism is a market based instrument that requires a liquid market. The current generation, transmission and supply market of electricity is dominated by ESKOM who would have substantial leverage over setting the market price. To ensure the success of carbon market, an electricity market reform that would liberalize this monopolistic market is essential.</p>

Appendix: Wind Industry Employment Studies

Wind power is a key contributor in terms of combating climate change, improving the security of energy supply and addressing the need for new electricity capacity. Beyond those merits, wind energy is also a major contributor to economic welfare. Wind Energy is a job-intensive industry. Various countries have recognized it as an industry capable of significantly stimulating their economy.

Here, we wish to present the potential employment benefits of wind power development for South Africa's economy and to the benefit and welfare of its citizens.

South Africa has the opportunity to create a large number of jobs. A recent study, conducted by Global Climate Network, shows that South Africa could create 36,400 new direct jobs and 109,100 indirect jobs in the renewable sector. However, we will show below that stable support mechanism, coupled with ambitious national renewable energy targets are two key factors determining the development of a job intensive wind industry. They will give stakeholders the required confidence that South Africa can become a sizeable renewable energy market worth investing in. Only renewable energy markets that have reached a critical mass can attract manufacturers' investment in local production facilities.

1. A comparison of the number of jobs offered by wind to fossil fuel and nuclear power

In 2007, *Wind Energy and Job Creation* by the European Wind Energy Association (EWEA) analysed the impact of the wind industry on employment. It concluded that a total number of 15.1 jobs would be created per every megawatt of new wind power installation.

Employment/MW (2007)	Jobs	Jobs/ Annual MW	Jobs/ Cumulative MW	Basis
WT manufacturing- Direct	64,074	7.5		Annual
WT manufacturing- Indirect	42,716	5.0		Annual
Installation	10,665	1.2		Annual
Operations and maintenance	18,657		0.33	Cumulative
Other direct employment	15,204	1.3	0.07	75% annual/ 25% cumulative
Total employment	151,316	15.1	0.40	

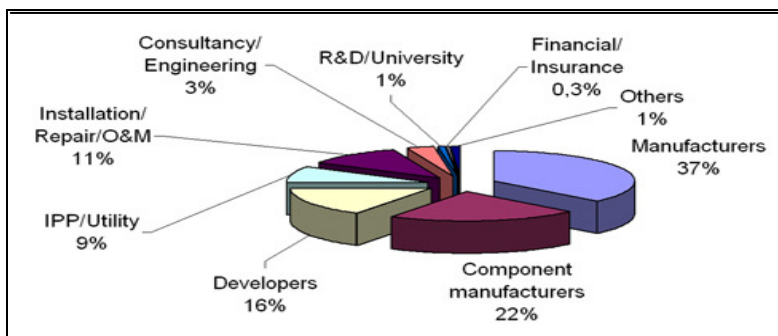
Source: EWEA

This study shows that wind industry creates a substantial number of jobs. The majority of the jobs created by wind can be local and highly skilled provided that a strong, long term supportive policy is in place as discussed below in *Section 2*.

2. Turbine Manufacturing jobs- the backbone of wind industry's employment

The same report shows that the majority of the employment (nearly 60% of the jobs) in the wind industry comes from manufacturing (Figure 1).

Figure 1 EU Direct Employment in Wind Energy Sector by Type of Company in 2007



Source: EWEA

Therefore, it is essential to attract international turbine producers to set up local factories should South Africa wish to secure more future employment in this sector for its citizens. We have therefore studied the top 11 international wind turbine manufacturers that accounted for 85% of the global turbine delivery in 2009 and the

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countries where their factories are located in the effort to analyze the reason behind their decision in setting up manufacturing plants in certain countries.

Table 4 shows the top 11 wind turbine manufacturers in the world and the current location of their factories, which are located in the 13 countries including Denmark, Germany, the US, China, India, Norway, Sweden, Italy, Spain, Canada, Portugal, Turkey and Brazil.

Table 4 Top Wind Turbine Manufacturers and Their Plants Locations

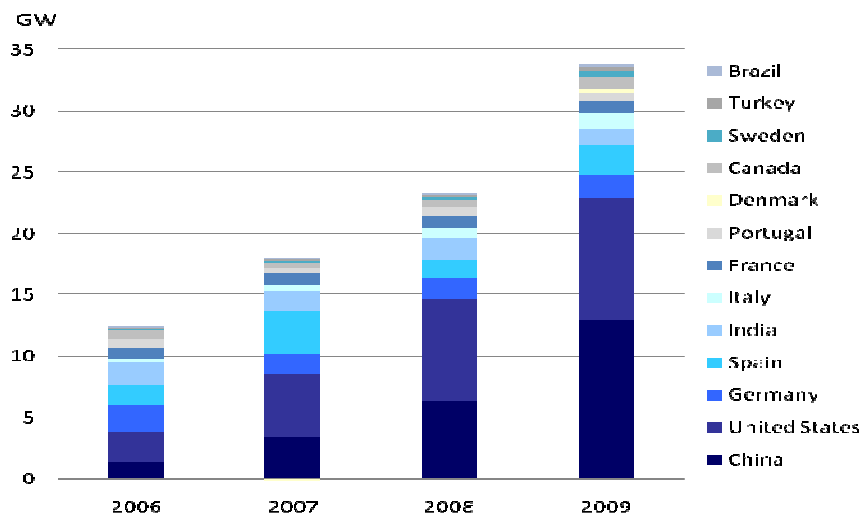
Top 11	2009 Market share %	Europe	North America	Asia Pacific	Other
Vestas	13.5%	Denmark, Germany, Norway, Sweden, Italy, Spain	US	China, India	
GE Energy	13.5%	Spain, Germany, UK (planned)	US, Canada	China, India (planned)	Brazil (planned)
Gamesa	7.2%	Spain	US	China, India	
Enercon	8.9%	Germany, Portugal, Sweden, Turkey	Canada	India	Brazil
Suzlon	6.9%		US	China, India	Brazil (planned)
Siemens	6.4%	Denmark, Germany, UK (planned)	US	China (planned), India (planned)	
Sinovel	9.6%			China	
Goldwind	7.7%			China; Australia (planned)	
Nordex	3.0%	Germany	US	China	
Dongfang	5.8%			China	
REpower	3.0%	Germany	Canada		

Assembly Assembly and components

Source: IHS Emerging Energy Research

From Figure 2, we can see the annual added capacity for the 13 countries that have successfully attracted the top 11 turbine suppliers. Their rate of growth in annual installation has been increasing steadily, in essence offering enough potential pipelines for the manufacturers.

Figure 2 Annual Installed Capacities for Countries with Manufacturing Base From the Top 11 International Turbine Suppliers



Source: GWEC

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Table 5 shows that by the year 2009, 10 out of the 13 countries that have successfully attracted wind turbine manufacturers have achieved above one gigawatt accumulated wind power installation. It is clear that the countries' national wind and renewable policies momentum is behind such rapid development and the fact that they have successfully attracted investment in the manufacturing sector.

Table 5 Total Installed Wind Capacity and the National Wind/Renewable Targets

Countries	Total Installed Wind by 2009 MW	National Target
Denmark	3,465	30% of renewable by 2030
Sweden	1,560	49% of renewable as a percentage of final consumption by 2020
Norway	431	30,000 GWh of increase in renewable from 2001 to 2016
India	10,925	10.5GW of wind by 2012
Spain	19,149	20.15GW of wind by 2020
Italy	4,850	25% of renewable in electricity consumption by 2010
China	25,104	150GW of wind by 2020
Germany	25,777	18% of renewable by 2020
United States	35,159	20% of wind for electricity by 2020
Canada	3,319	14,300 GWh of renewable by 2020
Portugal	3,535	31% of final energy consumption from renewable energy
Turkey	801	10% of wind and solar for electricity by 2020
Brazil	606	4.3% of wind for electricity by 2012

Source: Figures from GWEC

Conclusion:

The wind power industry has the potential to make a significant contribution the local employment sector in South Africa and has the ability to offer more jobs than the conventional energy industry should the South Africa government's political will and support prove to be sufficient, since countries with strong, long term political will and substantial pipeline are able to attract international turbine producers.

We strongly advise that should South Africa wish to create jobs in the capital intensity renewable energy sector, a strong, long term incentive without a cap on the industry is crucial.