



energy

Department:  
Energy  
REPUBLIC OF SOUTH AFRICA

## Carbon Tax - IRP 2010 Input Parameter Data Sheet (Externality)

This sheet is to be used as the primary stakeholder engagement tool. This document provides the information that will allow the stakeholders to make a meaningful contribution to the IRP Input parameters

<b>Parameter</b>	<b>Carbon Tax</b>
<b>Purpose</b>	An important component to meet the “Required by Science” scenario developed within the Long Term Mitigation Scenarios commissioned by the Department of Environmental Affairs is the introduction of a carbon tax. National Treasury has since stated their intent to introduce a carbon tax as early as February 2011. Therefore the IRP 2010 will have to take this in account.
<b>Impact on the IRP</b>	The introduction of a carbon tax will shift the economic and generation balance in favour on non-carbon technologies and probably higher initial capital costs as a trade off against future increased operating costs (tax).
<b>The assumptions included in establishing the parameter values in this sheet</b>	<p>IRP 2010 must cater for the carbon tax. From the LTMS, the carbon tax is assumed to start at a R100/ton (current money) of CO<sub>2</sub> emitted and to escalate thereafter.</p> <p>Based on Eskom’s average price of electricity in 2009, this would imply an immediate 41% increase in the price of electricity.</p> <p>With the introduction of carbon tax the electricity generation sector will not be exempted from this tax, in spite of the potentially devastating impact on electricity prices.</p>
<b>Parameter Value</b>	From the LTMS, the carbon tax is assumed to start at a R100/ton of CO <sub>2</sub> emitted.
<b>Range of Parameter Value</b>	The LTMS value for the carbon tax started at R100/ton (2003 money) of CO <sub>2</sub> and ramps up to R750/ton of CO <sub>2</sub> in a 50 year period.



	<p style="text-align: center;"><b>co2 tax rands per ton</b></p> <table border="1"><thead><tr><th>Year</th><th>CO2 Tax (Rands per ton)</th></tr></thead><tbody><tr><td>2003</td><td>0</td></tr><tr><td>2004</td><td>0</td></tr><tr><td>2005</td><td>0</td></tr><tr><td>2006</td><td>0</td></tr><tr><td>2007</td><td>0</td></tr><tr><td>2008</td><td>100</td></tr><tr><td>2009</td><td>125</td></tr><tr><td>2010</td><td>150</td></tr><tr><td>2011</td><td>175</td></tr><tr><td>2012</td><td>200</td></tr><tr><td>2013</td><td>225</td></tr><tr><td>2014</td><td>250</td></tr><tr><td>2015</td><td>250</td></tr><tr><td>2016</td><td>250</td></tr><tr><td>2017</td><td>250</td></tr><tr><td>2018</td><td>250</td></tr><tr><td>2019</td><td>250</td></tr><tr><td>2020</td><td>250</td></tr><tr><td>2021</td><td>250</td></tr><tr><td>2022</td><td>250</td></tr><tr><td>2023</td><td>250</td></tr><tr><td>2024</td><td>250</td></tr><tr><td>2025</td><td>250</td></tr><tr><td>2026</td><td>250</td></tr><tr><td>2027</td><td>250</td></tr><tr><td>2028</td><td>250</td></tr><tr><td>2029</td><td>250</td></tr><tr><td>2030</td><td>250</td></tr><tr><td>2031</td><td>300</td></tr><tr><td>2032</td><td>350</td></tr><tr><td>2033</td><td>400</td></tr><tr><td>2034</td><td>450</td></tr><tr><td>2035</td><td>500</td></tr><tr><td>2036</td><td>550</td></tr><tr><td>2037</td><td>600</td></tr><tr><td>2038</td><td>650</td></tr><tr><td>2039</td><td>700</td></tr><tr><td>2040</td><td>750</td></tr><tr><td>2041</td><td>750</td></tr><tr><td>2042</td><td>750</td></tr><tr><td>2043</td><td>750</td></tr><tr><td>2044</td><td>750</td></tr><tr><td>2045</td><td>750</td></tr><tr><td>2046</td><td>750</td></tr><tr><td>2047</td><td>750</td></tr><tr><td>2048</td><td>750</td></tr><tr><td>2049</td><td>750</td></tr><tr><td>2050</td><td>750</td></tr></tbody></table>	Year	CO2 Tax (Rands per ton)	2003	0	2004	0	2005	0	2006	0	2007	0	2008	100	2009	125	2010	150	2011	175	2012	200	2013	225	2014	250	2015	250	2016	250	2017	250	2018	250	2019	250	2020	250	2021	250	2022	250	2023	250	2024	250	2025	250	2026	250	2027	250	2028	250	2029	250	2030	250	2031	300	2032	350	2033	400	2034	450	2035	500	2036	550	2037	600	2038	650	2039	700	2040	750	2041	750	2042	750	2043	750	2044	750	2045	750	2046	750	2047	750	2048	750	2049	750	2050	750
Year	CO2 Tax (Rands per ton)																																																																																																		
2003	0																																																																																																		
2004	0																																																																																																		
2005	0																																																																																																		
2006	0																																																																																																		
2007	0																																																																																																		
2008	100																																																																																																		
2009	125																																																																																																		
2010	150																																																																																																		
2011	175																																																																																																		
2012	200																																																																																																		
2013	225																																																																																																		
2014	250																																																																																																		
2015	250																																																																																																		
2016	250																																																																																																		
2017	250																																																																																																		
2018	250																																																																																																		
2019	250																																																																																																		
2020	250																																																																																																		
2021	250																																																																																																		
2022	250																																																																																																		
2023	250																																																																																																		
2024	250																																																																																																		
2025	250																																																																																																		
2026	250																																																																																																		
2027	250																																																																																																		
2028	250																																																																																																		
2029	250																																																																																																		
2030	250																																																																																																		
2031	300																																																																																																		
2032	350																																																																																																		
2033	400																																																																																																		
2034	450																																																																																																		
2035	500																																																																																																		
2036	550																																																																																																		
2037	600																																																																																																		
2038	650																																																																																																		
2039	700																																																																																																		
2040	750																																																																																																		
2041	750																																																																																																		
2042	750																																																																																																		
2043	750																																																																																																		
2044	750																																																																																																		
2045	750																																																																																																		
2046	750																																																																																																		
2047	750																																																																																																		
2048	750																																																																																																		
2049	750																																																																																																		
2050	750																																																																																																		
<p><b>Preconditions necessary to make possible for this parameter to be included in the IRP</b></p>	<p>None. This is a tax that is likely to be imposed by Government and will have to be incorporated in planning.</p>																																																																																																		
<p><b>Parameter Owner</b></p>	<p>Department of Environmental Affairs and National Treasury</p>																																																																																																		