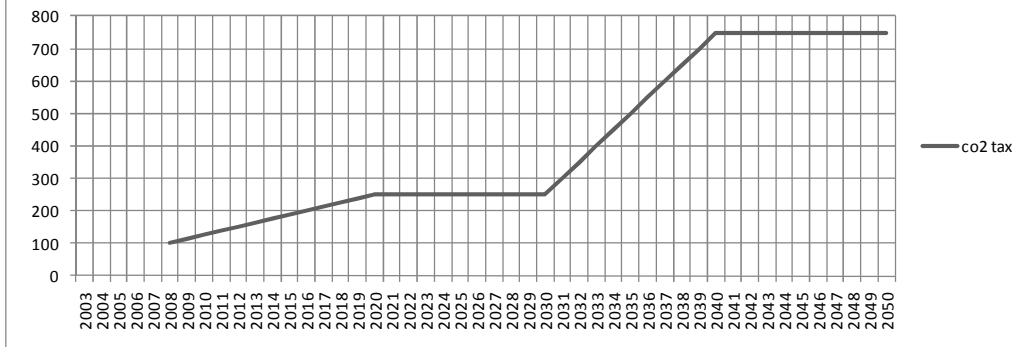


IRP INPUT PARAMETERS

Ex2: Carbon Tax - IRP 2010 Input Parameter

Parameter	Carbon Tax																																																																																																			
Parameter Value	<p>The LTMS numbers (indicated in the graph below) will be used in a scenario, with the cost escalated to 2010 numbers.</p> <div><p>co2 tax rands per ton</p><table border="1"><caption>co2 tax rands per ton</caption><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>350</td></tr><tr><td>2032</td><td>450</td></tr><tr><td>2033</td><td>550</td></tr><tr><td>2034</td><td>650</td></tr><tr><td>2035</td><td>700</td></tr><tr><td>2036</td><td>750</td></tr><tr><td>2037</td><td>750</td></tr><tr><td>2038</td><td>750</td></tr><tr><td>2039</td><td>750</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></div>		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	350	2032	450	2033	550	2034	650	2035	700	2036	750	2037	750	2038	750	2039	750	2040	750	2041	750	2042	750	2043	750	2044	750	2045	750	2046	750	2047	750	2048	750	2049	750	2050	750
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Rationale	The carbon tax is included as a scenario as there is some uncertainty regarding the implementation of the carbon tax, especially the level of the tax and its expected escalation. The scenario also provides some indication of the impact of the tax in terms of technology choice between this and the base case.																																																																																																			
Responses to Public Inputs	Summary of specific comments	Response																																																																																																		
	Carbon taxation on the entire value chain should be included (e.g. transport, mining), not just electricity generation (90x2030, ELA)	Noted. Future iterations must include this, but data regarding this has not been provided for this IRP.																																																																																																		
	If carbon tax considered inevitable, should be included in the base scenario rather than a separate scenario / parameter (90x2030, CJNI-WC, Windlab Developments SA)	While the carbon tax may be almost certain, the level and phasing is not. The scenario will provide an assessment of the impact of the carbon tax.																																																																																																		
	Further analysis of the impact of the carbon tax – and its level and phasing – needs to be undertaken. (CIC)	Noted.																																																																																																		
	Application or not of the carbon tax to imported coal-fired power needs to be confirmed (CIC)	This is uncertain at this stage. In the scenario only domestic coal-fired generators will face the carbon tax.																																																																																																		
	Change current money to present value (Exxaro)	The LTMS numbers will be escalated from 2003 rands to 2010 rands. The IRP uses 2010 rands for all costs (real terms).																																																																																																		
	Carbon tax is not affordable if applied to electricity. Cognisance needs to be taken of our manufacturing competitiveness in global markets (IES)	Noted.																																																																																																		
	This will help to bring fossil fuel prices up (and make allowance for the lack of externality costing in this technology) to the point where RE is competitive. (Mbani Wesizwe)	Noted.																																																																																																		
	Any income from the carbon tax should be balanced against an equivalent expenditure on investment in (or R&D into) clean energy, energy efficiency and DSM (NECSA)	Noted. The IRP does not talk to the use of the additional government revenue from the carbon tax, only the impact on technology choice.																																																																																																		
	The environmental levy of 2c/kWh is already levied and should be covered in this section. (Private-WB, SASOL) The carbon tax needs to be related to the going rate for carbon credits and should be introduced in phases. (Private-WB)	The environmental levy is an existing tax that is added to the cost of existing fossil fuel generation. The additional carbon tax is included as a scenario (assumed over and above the existing levy).																																																																																																		
	The carbon tax needs to demonstrate that it will deliver reductions in CO2 and not just raise additional revenues for the state (Alstom, SASOL)	Noted.																																																																																																		



energy

Department:
Energy
REPUBLIC OF SOUTH AFRICA

IRP INPUT PARAMETERS

	There is a clear trade-off in the introduction of the carbon tax between low cost electricity and avoiding catastrophic climate change. The former should yield. The revenue from the carbon tax should be ring-fenced for clean energy. (SAWEA)	Noted.
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