



## Generating Plant Location - IRP 2010 Input Parameter information sheet (Supply input)

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.

Parameter	Generating Plant Location
Purpose	<p><b>NB: Due to time constraints Generating Plant Location will not be an input consideration to this IRP 2010 plan.</b></p> <p>Notwithstanding that, it was considered prudent to point out the impacts that location of new Generating plant may have for example on the grid stability and further investments that may have to be made if required to upgrade the Grid i.e. line power transfer capacity and substation upgrade.</p> <p>Also the provision of additional resources such as water for steam turbines and cooling will require more investment if such water is not immediately available. It is therefore important to consider generation location when evaluating new investments.</p>
Impact on the IRP	<p>IRP 2010 is primarily a Supply Side planning document that identifies an appropriate new generation capacity plan and does not address any investments which may be necessary to enable the plant to deliver its power to the consumer such as transmission, distribution or water infrastructure.</p> <p>National Spatial development plans need to be understood to decide the merits of plant location. Concentration of coal deposits in specific areas in SA has resulted in a concentration of coal power stations and long EHV transmission lines to transfer the power. Historical coal prices justified the power transfer economics. The future price of coal and carbon tax may require a rethink of these</p>



	<p>economics.</p> <p>The final decommissioning costs must be included in the economics of location analysis.</p>
<b>Assumptions included in establishing the parameter values in this sheet</b>	
<b>Parameter Value</b>	<p>Generation plants located in a distributed manner in the Grid provide stability and reduce line losses in power transfer. The economics of Transmission, Distribution, water upgrade and line losses need to be weighed up against the location of the Generation plant . The value of water in a specific location also has to be assessed.</p>
<b>Range of Parameter Value</b>	<p>The total of country investments for power infrastructure are the sum of Generation, Transmission, Distribution, water and other related infrastructure.</p>
<b>Preconditions necessary to make possible for this parameter to be included in the IRP</b>	
<b>Parameter Owner</b>	<p>Department of Energy</p>