S1: Cost of Unserved Energy - IRP 2010 Input Parameter

Parameter	**Cost of Unserved Energy (COUE)**
Parameter Value	The COUE should be set at R75/kWh, with a sensitivity test on a lower COUE of R10/kWh.
Rationale	The COUE of R75/kWh is derived from the cost impact on consumers in the marginal sector (where the worst impact of supply interruptions took place). At the lower end the R10/kWh is determined from the electricity intensity (as the value of economic production for each kWh of electricity consumed to produce it).

Responses to Public Inputs

Summary of specific comments	Response
A more comprehensive review of models should be undertaken to better inform the parameter. The use of scenarios and sensitivity analysis in a deterministic approach is flawed. Reliability, demand and COUE are all probabilistic in nature and should be examined using probabilistic models. Concern is not with the values submitted, but in how they are used. (ACMP)	Noted.
The DoE should resuscitate the use of input-output matrix models for this analysis (ACMP)	Noted.
Short run COUE will be extremely high, but in long run will tend to the next best local source of power (potentially diesel generation), although this is an emergency standby and does not constitute a permanent alternative (ACMP)	Noted.
The theory is sound, but no information is provided to support the parameter value of R75/kWh. More information on this is requested, including its relationship with the loss of load probability (CIC, Coega Development Corporation, Private-WB)	In the absence of an industry accepted study, the value from NIRP3 will be used to remain consistent.
Consideration should be made that the lack of investment in the country due to uncertainty of energy supply would have a severe impact on the economy (NIASA)	Noted.
COUE should also include the opportunity cost of not being able to connect new users to the grid (due to insufficient capacity), thus the COUE should be at least R75/kWh (SAWEA)	Noted.
This value will change as the economy grows and therefore should not remain constant (SAWEA, Windlab Developments SA)	The relationship between economic growth and COUE needs to be assessed further.
A range of values for COUE should be considered, possibly R35-R150/kWh as per NIRP. (Windlabs Developments SA)	Noted. The sensitivity will be assessed according to the above.