S3: Discount rate - IRP 2010 Input Parameter

Parameter	**Discount rate**
Parameter Value	The discount rate should be set at a real (after inflation) rate of 8% p.a. Sensitivities should be calculated at 3% and 13%.
Rationale	The discount rate serves as a proxy for the financing of projects. Any reduction in the discount rate (either overall or for specific technologies) implies a subsidy by government with needs to be accommodated in the fiscus. The 8% real discount rate reflects the regulatory approved (NERSA) rate for SOEs (Eskom, Transnet).

Responses to Public Inputs

Summary of specific comments	Response
Using a constant discount rate for all projects ignores the fact that renewable energy may attract a more favourable interest rather than coal-fired generation – thus one interest rate for all is flawed. (ACMP)	Due to differing risk profiles for different technologies there may be a strong case for different discount rates to account for this. However the IRP will be investigating risk profiles across the technologies in the criteria thus a constant discount rate is not entirely unseemly at this point.
A separate discount rate for each technology should be calculated. (ACMP, DoE, Exxaro, SAWEA, Windlab Developments SA) Discount rates reflect the current and future cash flow uncertainty for each generation technology, plant with reduced future uncertainty (free fuel or zero emissions) should have lower discount rates than coal, nuclear and oil equivalents (SAWEA).	See above response.
Clarification is required whether these discount rates are real or nominal (ACMP)	The discount rate applied in the IRP is a real rate.
Use of the Eskom WACC is questionable as it gives preference to the cost of capital situation of the dominant industry player. (CIC, Coega Development Corporation, Private-WB, SAWEA)	Noted.
A real discount rate of 10% appears very high – a rate of 6% would appear more realistic and prudent for the IRP (CIC)	Noted. The NERSA rate of 8% real is applied.
Appropriate annual amounts should be budgeted for each technology to allow for the provision of a decommissioning fund (CSP Developers)	Noted.
Real discount rates of zero to 3% for modelling levelised costs of generation, but 10-15% when calculating appropriate feed-in tariffs for renewable. (CSP Developers)	This assumes some level of cross-subsidisation from consumers to renewable developers if the lower discount rate reflects reality. Since the IRP is only concerned with the modelling of costs (as opposed to feed-in tariffs) the discussion can be taken up elsewhere.
Costs of externalities should be internalised in life cycle costing (Energy Caucus) But these externalities should not be subject to a non-zero real discount rate, as the impacts accumulate over time rather than diminish (in particular nuclear waste). (Energy Caucus)	Externalities will be included after the modelling as part of the criteria determination, assessing different scenarios based on the full cost (inclusive of externalities)
Clarity is required on the provision for country risk in the determination of the discount rate (Exxaro)	This is a standard approach to WACC calculations. The value assigned to the country risk is open to debate.
The 10,3% estimate strikes a good balance between industrial and semi-state practice. (IPC)	Noted.
Sensitivities on discount rates at different levels is supported. Discount rates should place equal value on future generations (avoiding intergenerational discrimination). (Just Energy)	Noted. Very low discount rates which would avoid intergenerational discrimination are problematic in terms of the opportunity cost of capital approach used in determining these rates.

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	For longer term strategic projects lower discount rate could be motivated (SASOL)	Noted.	
	There is considerable debate regarding the appropriate discount rates for long-term planning, however a real discount rate of 7-10% is generally used for power sector planning. (SAWEA)	Noted.	
	Critical that IRP takes into account that capital expenditure required upfront for construction of wind energy projects is fully funded by private sector at no additional cost to Eskom (SAWEA)	Funding considerations will be dealt with after the conclusion of the IRP as the IRP does not specifically talk to funding constraints. This is covered in the feasibility assessment post-IRP in determining who should be building the technology to meet the IRP requirements.	