D5: Price Elasticity of Demand - IRP 2010 Input Parameter

Parameter	**Price Elasticity of Demand (PEoD)**
Parameter Value	This is not considered explicitly in the CSIR or SO demand forecast models.
Rationale	The models do not include the parameter. Price increases in electricity will have two separate impacts on electricity demand: through income effects which will impact on GDP growth (price increases may reduce income and expenditure through the impact on disposable income) and substitution effects which would be a direct impact on electricity demand. The former is captured in the assumptions on GDP growth, the latter in the future electricity intensity.

Responses to Public Inputs

Summary of specific comments	Response
Price elasticity should be broken down into sectors (mining, industry, commercial, residential – high, low, medium income). One size fits all inappropriate. (90x2030, ELA, Exxaro, MainstRenPower, SAWEA, Windlab Developments SA) Include some sensitivity in the final calculation (MainstRenPower, SAWEA)	Noted. Significant research into the price elasticity of demand is required to ensure the appropriate inclusion of this parameter in the determination of electricity demand.
Estimated price elasticity of -0.01 to -0.02 are too low – figure of -0.2 are more reasonable (90x2030, CJN!-WC)	Noted. Price elasticity is almost certainly higher than the original indicated value, but the true value to use for the model is uncertain. This is not explicitly modelled for the current IRP, with additional research being required for later iterations.
Not clear on what basis the shrinkage will occur – will price increases curb absolute growth (ACMP)	The price increases will impact growth through the impact on incomes and production. The extent to which this will reduce growth is uncertain.
Relative elasticity between different fuels may be of greater importance than absolute own price elasticity (CEF)	Noted. This will need to be explored with the integrated energy plan.
DoE should commission research into the PEoD – with emphasis on other comparable developing countries with similar price increases (CIC)	Noted. Additional research will be required before explicitly modelling PEoD in later iterations.
Need to look at implications of carbon tax on electricity prices , as well as regulated increases beyond the 3X25% (Coega Development Corporation)	Noted. Additional research will be required before explicitly modelling PEoD in later iterations.
Reference source data in PEoD table (DoE)	Since the original indicated values are not being used, this is not necessary.
Historic price elasticity not indicative of future price responsiveness (Energy Caucus, Exxaro)	Noted and agreed.
Journal of Science article suggests PEoD of -0.52 (EnergyCaucus)	Noted. Additional research will be required before explicitly modelling PEoD in later iterations.
Users not as price inelastic as suggested (Kuhumelala)	Noted. Additional research will be required before explicitly modelling PEoD in later iterations.
Expected price increases seem too high – pricing model should be reviewed and adjusted (NIASA)	The original indicated values are not being used. Expected price increases will be reviewed when further research is undertaken into PEoD.
Need to include the impact of possible environmental taxes (Private – WB)	Noted.
Update table with actual MYPD2 increases (NIASA, SASOL)	The original indicated values are not being used. Expected price increases will be reviewed when further research is undertaken into PEoD.
Price elasticity in the order of 0.25. Time scale of increases also important – sharp price increases over shorter period give less time to adjust. (SASOL)	Noted. Additional research will be required before explicitly modelling PEoD in later iterations.

IRP INPUT PARAMETERS