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Analysis of energy consumption, economics and management at New Denmark Colliery

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Financial Benefit (Savings) of Electricity Management (Reduction) Forecasts					
	2012	2013	2014	2015	2016
Production (t)	5,134,423	4,942,688	4,754,832	5,336,079	5,314,998
Forecast Electricty Consumption	**89,248**	**88,394**	**87,557**	**90,146**	**90,052**
	Comment: Energy Reduction = Forecast electricity consumption x Electrity reduction target				
	Comment: Energy Reduction = Forecast electricity consumption x 5%				
Energy reduction (kWh)	**4,462,400**	**4,462,400**	**4,462,400**	**4,462,400**	**4,462,400**
	Comment: CO2 eq reduction = Energy reduction x CO2 per Electricity Consumed factor				
	Comment: CO2 eq reduction = Energy reduction x 1.03				
CO2 eq reduction (tons)	**4,596**	**4,596**	**4,596**	**4,596**	**4,596**
	Cost increase = Eskom Tarriffs				
Cost increase	25.8%	25.9%	10.0%	10.0%	10.0%
	Comment: Average Electricity Cost (curent year) = Average electricity cost (previous year) x Cost increase				
Average electricity cost (c/kWh)	R 0.6359	R 0.8006	R 0.8807	R 0.9687	R 1.0656
	Comment: Annual Savings = Energy reduction x Average electricity cost				
Annual savings (R's)	R 2,837,640	R 3,572,589	R 3,929,848	R 4,322,833	R 4,755,116
Cummulative saving (R's)	R 1,543,840	R 5,116,429	R 9,046,277	R 13,369,109	R 18,124,225
	Comment: Cashflow = Annual Savings				
Cashflow (R's)	R 2,837,640	R 3,572,589	R 3,929,848	R 4,322,833	R 4,755,116
	Comment: Total Savings over 5 years = Sum of Cashflow				
Total savings over 5 years	**R 18,124,225**				
Normalised annual savings	**R 3,624,845**				