

Chapter 6: Conclusion and recommendations

6.1 Conclusion

The South African water management framework forms a sound base for water management in South Africa as long as water is managed as a key business asset in terms of social, environmental and economic value. Business processes underpinning water management on power station level requires commitment of the power generation sector to be a main driving force in optimising the usage of South African water resources.

The implementation of effective water management within the power generation sector is not a simple process though. Various laws, policies and standards must be adhered to for water management to be effective and in line with the South African water management framework. The adoption of a standard throughout the different power generating facilities is of great importance if accurate accounting and improved practises want to be achieved.

Older power stations, making use of excessive amounts of water for cooling and ash removal systems, are still in operation and will be in operation for at least the next twenty years. Optimisation of the water consumption in these systems are required to reduce the impact Eskom has on South African water resources and not negatively impact water availability and quality for the future. This should be done by implementing technologies like Reverse Osmosis (RO) to recover water, even if it does not seem economically feasible from a production point of view.

Water management at older power stations must be regarded as one of Eskom's topmost priorities. The maintenance and efficient operating of water systems are of critical importance and must be managed according to standards and within target, even if it results in reduced power production. Training of all personnel in terms of water conservation awareness and water plant knowledge is important to ensure any related problems are reported and managed in line with the South African water management framework.

Recognising that water is a scarce, invaluable natural resource, the South African water management framework should be applied to the power generation sector as part of a committed approach to address the water quantity and quality issues of South Africa. With

appropriate management, our water resources could be utilised in such a way that it supports a healthy power generation industry, a growing population and a developing economy.

6.2 Recommendations

It is recommended that the water management systems of all Eskom wet cooled power stations are evaluated to ensure they are in line with the South African water management framework. Water treatment and recovery systems must be implemented and optimised at all power stations to contribute to the goal of water management which is to ensure constant supply of good quality water for all users in South Africa.

Water management on business unit level must be enforced more effectively by commitment and positive attitude from managers on corporate and executive level to ensure compliance and effective contribution on all levels of water management within the power generation context.