

Tangent Mining (Pty) Ltd

- **Shortly to return Bloemfontein Power Station to service (the 103Mw in plan)**
- **We plan to build a new coal fired power station in addition to Eskom's new build, we have been proposing this since 2005 and have now applied for a generating license (2000Mw) now that the regulatory framework is amenable to an IPP**
- **We propose the return to service of a further 531Mw of generating capacity (not in plan)**
- **We support new alternative supplies and energy storage technology and believe we must be active in encouraging them to happen, to bridge the energy gap that will result from low reserve margins**

Tangent Mining (Pty) Ltd

Projection is based on a very flawed concept that could have disastrous implications

- 1. The 2008/2009 down turn is a permanent feature and there will not be a corresponding recovery**
- 2. This assumption could result in the Reserve Margin that is currently being projected at 14 or 15% dropping quickly to 7 or 8% and this is unhealthy for all aspects of the economy**

Basis for our Position

Economic activity is increasing already and Eskom has an excellent track record in long term projections but unfortunately has not stuck to its original long term forecasts

The Result

Unless the plan improves and new power sources come on line sooner SA may have to slow down the economy until there is sufficient electrical power for economic growth

Tangent Mining (Pty) Ltd

- **IRP 11 Problems (Secondary)**
 - **The plan is largely Eskom generated and this potentially leaves some contributors ideas relegated to a secondary position, this Eskom ‘group think’ leads to a plan being presented that has a NIH (Not Invented Here) undercurrent**
 - **Eskom in presenting information also has a bias and philosophy that stem from the company defending its historical dominant energy position and we believe this is very shortsighted, the current plan is an Eskom plan first scenario and everyone else must then follow**

Tangent Mining (Pty) Ltd

- **Features that must be changed**
 - **The economy will continue to bounce**
 - **Electricity consumption will bounce even faster**
 - **Other Supplies (RTS, Coal and Renewable) need to happen sooner**
 - **The Electricity Supply Industry needs to be changed in focus away from only Eskom to many new, often small and quick supply sources**
 - **‘Dual function’ thinking needs to become part of the nature of the plan**

Dual Function Thinking

- **Bio Gas use can be an additional supply of electrical energy but will also help with cleaner water with less raw sewage going to the rivers and also reduces methane emissions**
- **Carbon Capture and Recycling should result in lower greenhouse gas taxes (Research)**
- **Alternatives to petrol and diesel (bio-fuels) are carbon neutral and can change the county's carbon profile and hence the carbon targets for electrical energy planning**
- **Electric Vehicles are within years of widespread acceptance which will also change the carbon production profile and may increase future electrical energy needs**
- **Energy storage on a smaller (lithium-ion) and larger (vanadium redox) battery scales are technologies that can help balance the time of supply and use (peak demand problems)**

A better scenario

- **Solar Electrical Energy and Electric Vehicles will become a more noticeable feature in the review period**
- **Solar Water Heating needs a better funding model for quicker implementation and this should help to reduce demand problems**
- **A more open market with less Eskom dominance is a good thing and will result in a plan that brings new supplies in sooner**
- **Two tier tariffs need to be made available to all to encourage the use of energy storage by households**

Required Actions

- **Another review of the plan**
- **Action from Nersa and Eskom who together need to promote a better funding model for solar water heating (liaise with the banks)**
- **The general acceptance that additional supplier/s of coal fired generation need to come quickly to reduce financial pressures in Eskom (potentially allowing the slow build for Kusile) but also to ensure stable energy supplies**
- **Renewable energy from bio-gas, solar and wind need active support by PPA agreements not just refit tariffs, thus allowing renewable power to become part of the energy mix much sooner**
- **Bio gas needs to be a much bigger part of the energy plan (India has the equivalent of 51 000Mw of bio gas capacity and SA has almost none)**