

Entities	(i)	(ii)
<b>Africa Institute of South Africa (AISA)</b>	An awareness programme on energy efficiency has been implemented by the AISA.	<ul style="list-style-type: none"> <li>• All offices were fitted with light switches that can be switched off manually upon departure; and</li> <li>• Other offices were fitted with light switches that can light up one side when needed.</li> </ul>
<b>Council for Scientific and Industrial Research (CSIR)</b>	<ul style="list-style-type: none"> <li>• An awareness programme on energy efficiency has been implemented by the ASSAf.</li> <li>• Energy saving tips have been posted on the CSIR's internal website and on notice boards accessed by staff;</li> <li>• All lights and air conditioners are switched off when meeting rooms and offices are not in use;</li> <li>• Geysers have been set at lower temperatures, switched off when not actively being used or decommissioned;</li> <li>• Ongoing monitoring, auditing and reporting of electricity usage on CSIR buildings is implemented; and</li> <li>• An internal CSIR guide on Green Buildings has been developed and is incorporated into the design of all new buildings.</li> </ul>	Old energy intensive light bulbs have been replaced with efficient light bulbs.
<b>Human Sciences Research Council (HSRC)</b>		
<b>Pretoria Offices</b>	<ul style="list-style-type: none"> <li>• More stringent load shedding measures have been introduced by switching off office air conditioning at 10h00 and 12h45. Where</li> </ul>	The building has a BMS that has been operational for 15 years already. The system switches off all air conditioners and chillers in the building at 17h00, and

	<p>offices are unattended, air conditioning will be off until switched on again by the occupant; and</p> <ul style="list-style-type: none"> <li>• Mobile heaters are not allowed in the building.</li> </ul>	<p>office lights, parkade lights, boardroom/conference room lights and basement extractor fans at 18h00. Office and parkade lights can be switched on manually if necessary by the occupant and will stay on for an hour at a time.</p>
<b>Cape Town Offices</b>	<ul style="list-style-type: none"> <li>• Office and boardroom lights for each individual floor are switched off at a central point for each floor by the last staff member to leave the office floor.</li> </ul>	<p>There are timers on all air conditioning supply circuits in the distribution boards and air conditioning supply is automatically switched off at 18h00 during weekdays.</p>
<b>Durban &amp; Pietermaritzburg (Sweetwaters) Offices</b>	<ul style="list-style-type: none"> <li>• Staff switches off lights and air conditioning as they leave the office; and</li> <li>• At 18h00 security staff patrols the building and switch off all office and boardroom lights, hydroboils, non-essential equipment, as well as air conditioners they find not have been switched off.</li> </ul>	<p>Testing of new light emitting diode (LED) tubes for offices is underway.</p>
<b>Port Elizabeth and Umthatha Offices</b>	<p>In both these offices the last staff member that leaves the office switches off air conditioning, office and boardroom lights.</p>	<p>Testing of new light emitting diode (LED) tubes for offices is underway.</p>
<b>National Research Foundation (NRF)</b>		
<b>Research and Innovation Support and Advancement (RISA)</b>	<p>Investigation is underway to determine whether the rest of the RISA building can be retro-fitted with energy-saving devices</p>	<p>The new building extensions were fitted with:</p> <ul style="list-style-type: none"> <li>• Light motion detectors; and</li> <li>• A variable refrigerant volume (VRV) air-conditioning systems which services multiple offices at varying temperatures from a single unit.</li> </ul>
<b>iThemba LABS</b>	<p>An awareness programme on energy efficiency has been implemented by the facility.</p>	<ul style="list-style-type: none"> <li>• Voltaic panels were installed;</li> <li>• Lighting in the buildings was</li> </ul>

		<p>changed to solar powered light-emitting diode (LED);</p> <ul style="list-style-type: none"> <li>• A heat pump geyser system was installed;</li> <li>• The old cooling towers were replaced with higher efficiency towers resulting in savings of over R100 000 per month on the overall monthly electricity bill; and</li> <li>• The components of the cooling system were re-arranged resulting in reduced losses of energy.</li> </ul>
<b>South African Astronomical Observatory (SAAO)</b>	Chillers operations are shifted to time off-peak periods.	<ul style="list-style-type: none"> <li>• Ceilings in buildings were insulated; and</li> <li>• Geysers were blanketed.</li> </ul>
<b>The South African Institute for Aquatic Biodiversity (SAIAB)</b>	<ul style="list-style-type: none"> <li>• Spring water is collected for drinking water;</li> <li>• Geysers and other equipments are switched off over weekends; and</li> <li>• A new boat that has low emission engines was obtained.</li> </ul>	<ul style="list-style-type: none"> <li>• Efficient bulbs are used; and</li> <li>• An active research chemical recycling programme is run.</li> </ul>
<b>National Zoological Gardens (NZG)</b>	An awareness programme on energy efficiency has been implemented by the facility.	<ul style="list-style-type: none"> <li>• All lighting devices were replaced with Eskom's energy efficient lights; and</li> <li>• Solar panels have been installed to reduce costs.</li> </ul>
<b>The Square Kilometre Array (SKA SA) project</b>	<ul style="list-style-type: none"> <li>• Boreholes are propelled by Solar power pumps;</li> <li>• Solar heating is used for geysers; and</li> <li>• Energy saving lights are used.</li> </ul>	A master switch to switch off all lights when buildings are not in use is used.
<b>South African National Space Agency (SANSA)</b>		
<b>SANSA Space Operations: Hartebeeshoek facility</b>	The facility has replaced 90% of incandescent lights with <i>Compact Fluorescent Light</i> (CFL)	Two antennae were upgraded in the last two years with a saving of at least 60% power

<b>SANSA Space Science: Hermanus facility</b>	bulbs. <ul style="list-style-type: none"> <li>• Wherever possible, incandescent lamps, which are normally between 60 and 150 Watts each, have been replaced with energy saving 14 – 21 Watt lamps, making around 65% saving per lamp.</li> <li>• Where practical, double fluorescent luminaries have been replaced with single tube units; and.</li> <li>• As <i>Cathode Ray Tube</i> (CRT) monitors become unserviceable, they are replaced with <i>Liquid Crystal Display</i> (LCD) screens, typically a saving of <math>\pm 50\%</math>.</li> </ul>	consumption on them. <ul style="list-style-type: none"> <li>• External security lighting has been automated with day/night switching to eliminate the wasteful human factor;</li> <li>• Hot water cylinders have been removed in non-essential applications (1500W elements); and</li> <li>• Radiant heaters in offices and residences were replaced with convention panel heaters, which typically use only 30% of a radiant heater.</li> </ul>
<b>Technology Innovation Agency (TIA)</b>	Creation of awareness among staff on energy saving.	New, digital and calibrated power meters were installed.

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