

## Nuclear power

South Africa has one commercial nuclear power station at Koeberg on the south west coast. The Koeberg power station has two reactors with a total installed capacity of 1,800 MW and an average annual production of 13.6 TWh.

The Integrated Resource Plan (IRP 2010) provides for the installation of 9,600 MW nuclear capacity by 2030. Three potential sites for new nuclear power units have been identified at Thyspunt, Bantamsklip and Duynfontein, which are on the coast in the Western Cape and the Eastern Cape.

### Level 1

In this scenario, no new nuclear capacity installed and Koeberg runs until 2047 after which it is decommissioned.

### Level 2

In this scenario 9,600 MW of new reactors are built and nuclear capacity reaches 11,400 MW by 2030, as per the IRP 2010 'Policy Adjusted Scenario'. Koeberg is relicensed rather than decommissioned. A further 1,600 MW is installed by 2040 and again by 2050 for a total nuclear power capacity of 14,600 MW.

### Level 3

In this scenario the lifespan of Koeberg is extended beyond 2050 and new nuclear installations add 21,000 MW to provide a total of 22,800 MW by 2030,.Installation of a further 6,400 MW provides total capacity of 31,000 MW by 2050.

### Level 4

In this scenario, Koeberg continues to operate beyond 2050 and new nuclear installations by 2030 supply South Africa with a total capacity of 40,000 MW of nuclear power. Nuclear capacity continues to grow steadily to a total of 60,000 MW by 2050 similar to France's current capacity.



Koeberg power station in the Western Cape.  
Source: [www.eskom.co.za](http://www.eskom.co.za)

