

The Constitution

ACT 103 OF 1977

REGULATION XA1

Capable of using energy efficiently while fulfilling user needs

Have a building envelope and services which provides comfort & facilitates the efficient use of energy

REGULATION XA2

At least 50% (volume fraction) of the annual average hot water heating requirement shall be provided by means other than electrical resistance heating

REGULATION XA3

Prescriptive route

Performance route

Reference building route

Three routes to compliance

Regulation XA3 makes provision for three routes which will satisfy the regulations.

1. **The Performance Route** makes use of rational design and energy modelling and is available only for certain commercial and institutional buildings. The figures in the published tables are acceptable energy usage and are used in the Rational Design.
2. **The 'deemed to satisfy' or Prescriptive Route** is used by following the requirements stipulated in SANS 10400XA and certain parts of SANS 204. This is a simple route using calculations and specifications required in the standards. The solutions achieved in this route may result in sub-optimal design.
3. **The Reference Building Route** makes use of energy modelling and is used for all buildings excluded from the performance route. The building as compliant with the Prescriptive route is modelled and the resultant energy performance criteria are used as maximum targets in the revised design. This method can achieve optimal energy design.

We have found that by using energy modelling in buildings we are able to significantly reduce building costs and bring the building into compliance with the regulations with an optimized energy design.