

**DEPARTMENT OF TRADE AND INDUSTRY
DEPARTEMENT VAN HANDEL EN NYWERHEID**

No. R. 711

9 September 2011

**NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS
ACT, 1977 (ACT 103 of 1977)**

**INTRODUCTION OF AMENDMENTS TO THE NATIONAL BUILDING
REGULATIONS TO INTRODUCE REQUIREMENTS FOR ENERGY USAGE IN
BUILDINGS**

I, Dr Rob Davies, Minister of Trade and Industry, hereby under section 17 (1) of the National Building Regulations and Building Standards Act (Act 103 of 1977) and on the recommendation of the Board of the National Regulator of Compulsory Specifications, amend the National Building Regulations, as set out in the Schedule, with effect from the date two (2) months from publication of this notice.



Dr R Davies MP

Minister of Trade and Industry

**NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT (ACT No. 103 OF
1977) AS AMENDED**

SCHEDULE

**AMENDMENTS TO THE NATIONAL BUILDING REGULATIONS TO INTRODUCE
REQUIREMENTS FOR ENERGY USAGE IN BUILDINGS**

1 Regulation A7 is amended as follows:

A7 Layout Drawing

Add the following additional requirements:

- (m) where provided, the location, type and capacity of water heating installations; and
- (n) where provided, details of fenestration and insulation required to satisfy the energy usage requirements of Regulation XA.

2 Regulation A19 is amended as follows:

A19 Competent persons

Add the following additional requirement to sub-regulation A19 (1)(a)(i):

XA 3 (b).

Add the following additional requirement to sub-regulation A19 (12):

- (c) Where regulation XA is satisfied by a competent person in accordance with the requirements of SANS 10400 Part XA, the competent person who is responsible for such determination shall on completion of the construction and commissioning of the building submit to the local authority a fully completed Form 4 as contained in SANS 10400-A.

3 Regulation AZ2 is amended as follows:

AZ2 Definitions

Add the following additional definitions to Regulation AZ2:

"building envelope" means the elements of a building that separate a habitable room from the exterior of a building or a garage or storage area;

“certified thermal calculation software” means software certified by the Board of Agrément South Africa in terms of Agrément South Africa’s Energy Software Protocols as being fit for thermal modelling or calculation purposes in terms of these regulations;

“reference building” means a hypothetical building that is used to determine the maximum allowable heating load for the proposed building.

“orientation” means the direction a building envelope element faces, i.e. the direction of a vector perpendicular to and pointing away from the surface outside of the element.

4 Renumber Regulation X (Repeal of regulations) as Regulation AZ5 (Repeal of regulations).

Delete Part X Repeal of regulations and add the following AZ5:

AZ5 Repeal of regulations

The National Building Regulations published under Government Notice no. R 1081 of 10 June 1988 as amended by Government Notice no. R 1726 of 26 August 1988 is repealed from the date of the coming into operation of these regulations.

5 Add the following new regulation Part X:

Part X: Environmental sustainability

REGULATION

XA: Energy usage in buildings

XA1 In order to contribute to the reduction of greenhouse gases buildings, and extensions to buildings in respect of which plans and specifications are to be drawn and submitted in terms of the Act, having A1, A2, A3, A4, C1, C2, E1, E2, E3, E4, F1, F2, F3, G1, H1, H2, H3, H4 and H5 occupancies or building classifications in accordance with regulation A20, excluding garage and storage areas contained within such occupancies, shall be designed and constructed so that they

(a) are capable of using energy efficiently while fulfilling user needs in relation to vertical transport, if any, thermal comfort, lighting and hot water; or

(b) have a building envelope and services which facilitate the efficient use of energy appropriate to their function and use, internal environment and geographical location.

Equipment and plant required for conducting the business of the occupant shall be excluded from these requirements.

XA2 At least 50% (volume fraction) of the annual average hot water heating requirement shall be provided by means other than electrical resistance heating including but not limited to solar heating, heat pumps, heat recovery from other systems or processes and renewable combustible fuel.

XA3 The requirements of sub-regulation XA1 shall be deemed to be satisfied when such building is designed and constructed in accordance with the following requirements:

- a) has an orientation, shading, services and building envelope in accordance with SANS 10400 Part XA; or
 - b) is the subject of a rational design by a competent person, which demonstrates that the energy usage of such building is equivalent to or better than that which would have been achieved by compliance with the requirements of SANS 10400 XA, or
 - c) has a theoretical energy usage performance, determined using certified thermal calculation software, less than or equal to that of a reference building in accordance with SANS 10400 Part XA.
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