



NCC Energy Efficiency Compliance Checklist

Legal stuff: this energy efficiency compliance checklist has been produced to assist building and construction industry professionals to determine if satisfactory information and evidence has been provided to demonstrate that a Class 1 and/or 10a building satisfies the energy efficiency performance provisions of the National Construction Code 2019 edition Volume 2. While reasonable steps have been taken to ensure that the information provided is correct and accurate, errors and omissions may still occur. This checklist is not endorsed or approved by any authority, and solely represents the views and opinions of the author. Even if you follow all of the recommendations of this checklist, this is no guarantee that energy efficiency compliance will be achieved. Use of this checklist is entirely at your own risk.

For the latest version of this checklist, or to notify the author of any suggestions, errors or omissions, scan the QR code.

Things to look out for with Deemed to Satisfy Elemental Provisions

Building Fabric

- For roofs, check required R-value is correct for specified solar absorptance and climate zone
- Check loss of ceiling insulation calculation eg. is percentage uninsulated less than 5%
- For metal framed construction, check thermal breaks have been specified or are shown on the drawings
- For external walls, check required R-value is correct for climate zone
- If floor has in-slab heating, check to see if slab edge and under slab insulation have been specified or shown on the drawings

External Glazing

- Check correct version of glazing calculator is being used eg. Volume 2 calculator
- Check if air movement is standard or high – calculations should be provided
- Check if floor construction matches drawings eg. suspended or direct contact
- Check correct wall insulation option is being used
- Check floor areas correspond with drawings
- Check height and projection values correspond with drawings
- Check window orientation and dimensions correspond with drawings
- Check if performance values used match with window schedule or specification

Building Sealing

- Check details of building sealing have been shown on drawings or in specification ie. just reiterating NCC clauses only states what needs to be achieved not how it is being achieved

Air Movement

- Check air movement calculations have been provided
- Check air movement matches with glazing calculator

Things to look out for with Deemed to Satisfy Energy Ratings

- Has energy rating been lodged in HSTAR database? Check QR code for Universal Certificate (even ratings completed by non-accredited assessors need to be lodged in HSTAR database)
- Do the total floor areas on the rating correspond with what is shown on the drawings?
- Does stamp state accreditation status and/or ID number of assessor?
- If total heating/cooling loads shown on stamp, do these match up with star rating bands?
- Does the certificate number on the stamp match with the Universal Certificate?
- Check correct heating and cooling loads for NatHERS climate zone as per ABCB Standard (pending)



Things to look out for with Performance Solution Reference Building

- Make sure NatHERS software isn't being used
- Check details of calculation method (software) have been provided
- Confirm calculation method has been validated against ASHRAE Standard 140 (energy analysis software such as DesignBuilder, Hevacomp, Sefaira, IES and anything based on Energy Plus have been validated)
- Check requirements of reference building modelling have been satisfied
- Check glazing dimensions in reference and proposed building are identical

Things to look out for with Performance Solution Other

- Is there sufficient information to explain the methodology?
- Has sufficient documentary evidence been provided?
- Have all of the NCC energy efficiency performance provisions been satisfied? This can be via a Performance Solution, DTS requirements or a combination of both
- If not, request further information until you are satisfied the functional objective is being achieved

Who would be an appropriately qualified person?

Elemental Provisions

- Accredited energy assessor eg. Design Matters (formerly BDAV), ABSA or HERA
- Completed Certificate IV in Thermal Performance Assessment
- Professional Engineer eg. Mechanical
- Builder, architect or building designer with demonstrated expertise in energy efficient building design
- Consultant with tertiary degree in relevant discipline eg. architectural science, environmental design, mechanical engineering, sustainable development

Energy Rating

- Accredited energy assessor eg. Design Matters (formerly BDAV), ABSA or HERA
- Assessor with Certificate IV in Thermal Performance Assessment and complies with current NatHERS Technical Note

Performance Solution (Reference Building or Other)

- Energy Assessor with additional qualification or experience (see examples below)
- Professional Engineer eg. Mechanical, ESD
- Builder, architect or building designer with demonstrated expertise in energy efficient building design eg. peer recognised work, published papers or articles
- Consultant with tertiary degree in relevant discipline eg. architectural or building science, environmental design, mechanical engineering, sustainable development

If in doubt always ask for more information.