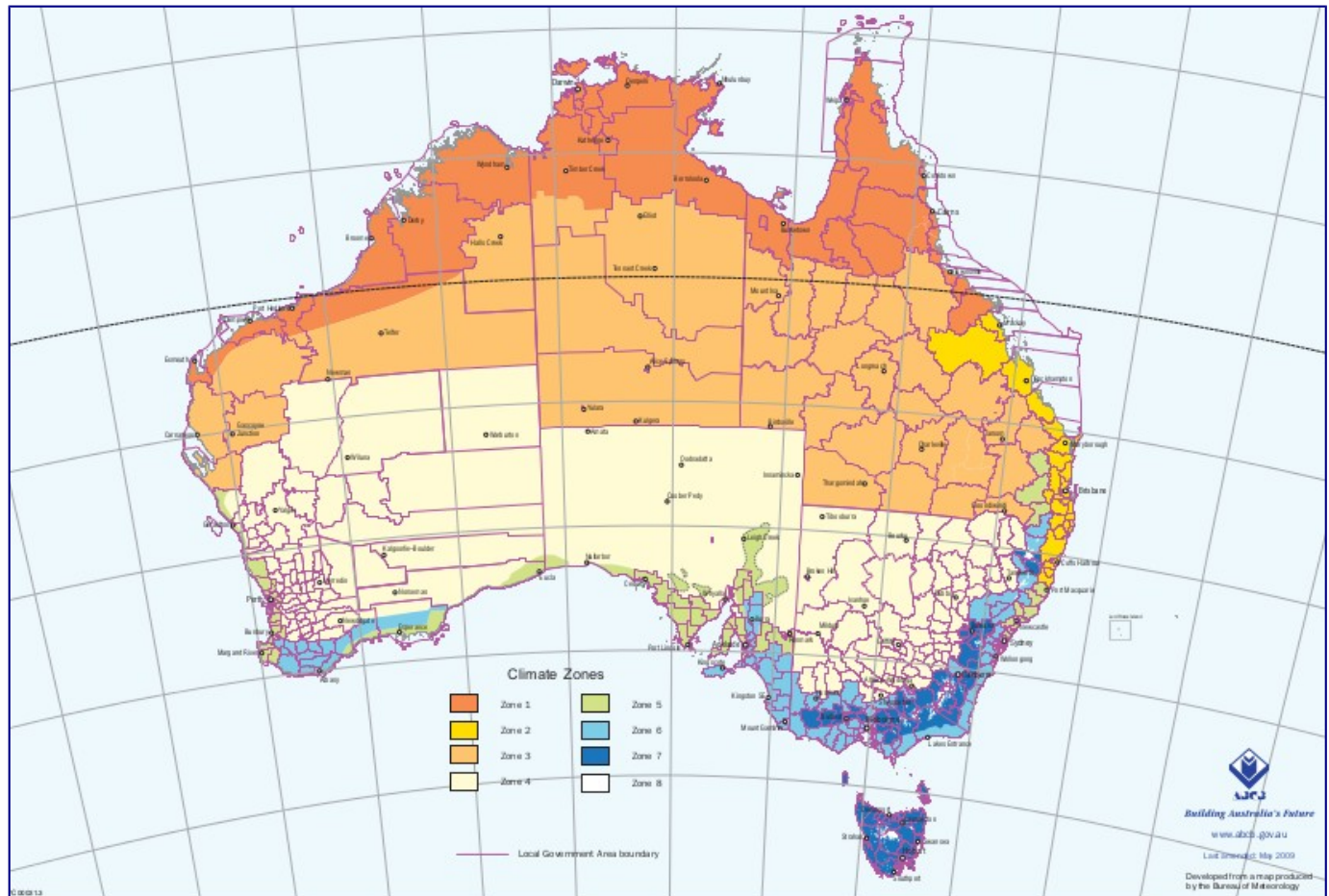


## Appendix 2: Climate Zone categorisation

Representative climate zones for heating and cooling loads in this study use two different methods for calculation. Residential buildings follow the method used in the DEHWA 2008 study: Energy Use in the Australian Residential Sector 1986-2020. Non-residential buildings follow the method described below.



### Residential Buildings

Residential Building heating and cooling zones adopted the method outlined by Energy Efficient Strategies for DEHWA (2008) which profiles heating and cooling loads Australia-wide in AccuRate and nominates representative population centres for each for the purpose of calculations. The ten heating and cooling zones for residential buildings designed by EES is summarised in the following table, full details of their method is published in Table 51 of the report: Energy Use in the Australian Residential Sector 1986-2020.

BCA Zone number	Characteristics	Designated AccuRate Climate Zone (to represent group)	Grouped Zones (from EES 2008)	Sample dwelling Heating Load (MJ/m <sup>2</sup> )	Sample dwelling Cooling Load (MJ/m <sup>2</sup> )
1	Cooling Dominated – Humid	Darwin [1], (Townsville [5])	H1, H2, C9, C10	H1=0	C10=577
2	Low Demand	Brisbane [10]	H3, C7	H3=54	C7=67
5	Balanced Moderate Demand	Mascot [56], (Adelaide [16])	H4, H5, C4, C8	H4=115	C4=44
6	Heating Dominated	Tullamarine [60], (Melbourne [60], Moorabin [62])	H6, H7, H8, C2, C3, C6	H8=358	C3=36
7	Heating dominated High demand	Orange [65], (Canberra [24])	H9, H10, C1, C5	H10=568	C1=36

## Non-Residential Buildings

Addressing three BCA climate zones represents the buildings stock of over 70% of Australia's current population (refer table below).

ZCA climate/location	Designated AccuRate Climate Zone (to represent group)	Grouped Zones	Sample Heating Load (MJ/m <sup>2</sup> )	Sample Cooling Load (MJ/m <sup>2</sup> )
b. Heating Dominated	Tullamarine [60]	H6, H7, H8, C2, C3, C6??	H8=358	C3=36
d. Balanced Moderate Demand	Mascot [56]	H4, H5, C4, C8??	H4=115	C4=44
e. Low Demand	Brisbane [10]	H3, C7??	H3=54	C7=67

## Australia's Population Centres related to BCA Climate zones

Statistical Division	State	Climate	% of Australia's total population in this Statistical Division	% of Australia's total population in this (Non-Resi) Climate Zone
Townsville	Qld	High humid summer, warm winter (Zone 1)	0.77	2.01
Cairns	Qld	High humid summer, warm winter (Zone 1)	0.67	
Darwin	NT	High humid summer, warm winter (Zone 1)	0.57	
Brisbane	QLD	Warm humid summer, mild winter (Zone 2)	9.18	12.95
Gold Coast-Tweed	QLD	Warm humid summer, mild winter (Zone 2)	2.65	
Sunshine Coast	QLD	Warm humid summer, mild winter (Zone 2)	1.12	
Albury-Wodonga	Vic	Hot dry summer, cool winter (Zone 4)	0.48	0.48
Sydney	NSW	Warm Temperate (Zone 5)	20.64	38.07
Perth	WA	Warm Temperate (Zone 5)	7.6	
Adelaide	SA	Warm Temperate (Zone 5)	5.44	
Newcastle	NSW	Warm Temperate (Zone 5)	2.48	
Wollongong	NSW	Warm Temperate (Zone 5)	1.32	
Toowoomba	Qld	Warm Temperate (Zone 5)	0.59	
Melbourne	Vic	Mild Temperate (Zone 6)	18.3	19.52
Geelong	Vic	Mild Temperate (Zone 6)	0.81	
Bendigo	Vic	Mild Temperate (Zone 6)	0.41	
Canberra-Queanbeyan	ACT	Cool Temperate (Zone 7)	1.85	3.73
Greater Hobart	Tas	Cool Temperate (Zone 7)	0.97	
Launceston	Tas	Cool Temperate (Zone 7)	0.48	
Ballarat	Vic	Cool Temperate (Zone 7)	0.43	
The rest			21.62	21.62
Total			100	100

[Media:Dec 2010 ABS and June 2010 Population Distribution.xlsx](#) [File:Population and Climate table.pdf](#)