



## Nationwide House Energy Rating Scheme

Details of the new Default Windows  
available in software 1 October 2014

Copy of the presentation given at the  
NatHERS Roadshow  
May 2014



## Nationwide House Energy Rating Scheme

### National Fenestration Rating Council (NFRC) conditions

- Change from Australian National Average Conditions (ANAC)
- All current windows available in NatHERS software use ANAC conditions in the background
- The change to NFRC values required major changes to the Chenath engine



## Nationwide House Energy Rating Scheme

Code	Description	U value	SHGC
Generic 1	Aluminium single glazed	7.32	0.77
ALM-001-01 A	Aluminium A Single Glazed Clear	6.70	0.57

Current NFRC values in the software do not align with the new NFRC values



# Nationwide House Energy Rating Scheme

## 88 default windows

There are now 88 default windows with 2 operating groups

- Group A  
Windows
  - Awnings, Casements, Bi-fold, Tilt and Turn



## Doors

- Bi-fold, Entry, Hinged and French





# Nationwide House Energy Rating Scheme

## 88 default windows

- Group B  
Windows
  - Sliding, Fixed, Louvre and Double or Single Hung



## Doors

- Sliding and Stacker





# Nationwide House Energy Rating Scheme

## Groupings

- The main difference between Group A and Group B is the frame fraction which in turn determines the System U and SHGC



# Nationwide House Energy Rating Scheme

Project Data (2 items)

ALM-001-01 A	Aluminium A SG Clear
ALM-002-01 A	Aluminium B SG Clear

System (NFRC values)		Glass (NFRC values)		Frame (NFRC values)	
U-value:	<input type="text" value="6.70"/> W/m <sup>2</sup> .K	U-value:	<input type="text" value="5.88"/> W/m <sup>2</sup> .K	U-value:	<input type="text" value="7.90"/> W/m <sup>2</sup> .K
SHGC:	<input type="text" value="0.57"/>	SHGC:	<input type="text" value="0.88"/>	Frame area:	<input type="text" value="41"/> %
		Shad. Coeff.:	<input type="text" value="1.01"/>		
		Visible trans.:	<input type="text" value="0.90"/>		
		UV trans.:	<input type="text" value="0.86"/>		

Project Data (2 items)

ALM-001-01 A	Aluminium A SG Clear
ALM-002-01 A	Aluminium B SG Clear

System (NFRC values)		Glass (NFRC values)		Frame (NFRC values)	
U-value:	<input type="text" value="6.70"/> W/m <sup>2</sup> .K	U-value:	<input type="text" value="5.88"/> W/m <sup>2</sup> .K	U-value:	<input type="text" value="9.25"/> W/m <sup>2</sup> .K
SHGC:	<input type="text" value="0.70"/>	SHGC:	<input type="text" value="0.88"/>	Frame area:	<input type="text" value="24"/> %
		Shad. Coeff.:	<input type="text" value="1.01"/>		
		Visible trans.:	<input type="text" value="0.90"/>		
		UV trans.:	<input type="text" value="0.86"/>		

A and B values (SG Clear) demonstrating the selection process in AccuRate



# Nationwide House Energy Rating Scheme

## Glazing

- There are 4 glazing types for single and double glazing
  - Clear
  - Tint
  - High Solar Gain Low-E
  - Low Solar Gain Low-E
- There are 2 types of fill for double glazing
  - Air
  - Argon
- There is no further allowance for different types of IGU spacer materials





# Nationwide House Energy Rating Scheme

## Aluminium Group

- ALM-001 Aluminium Group A single glazed
- ALM-002 Aluminium Group B single glazed
- ALM-003 Aluminium Group A double glazed air fill
- ALM-004 Aluminium Group B double glazed air fill
- ALM-005 Aluminium Group A double glazed argon fill
- ALM-006 Aluminium Group B double glazed argon fill



## Nationwide House Energy Rating Scheme

### ALM-001 Aluminium Group A single glazed

Code	Description	U value	SHGC
ALM-001-01-A	Aluminium A SG Clear	6.70	0.57
ALM-001-02-A	Aluminium A SG Tint	6.60	0.41
ALM-001-03-A	Aluminium A SG High Solar Gain Low-E	5.40	0.49
ALM-001-04-A	Aluminium A SG Low Solar Gain Low-E	5.60	0.36



## Nationwide House Energy Rating Scheme

### ALM-002 Aluminium Group B single glazed

Code	Description	U value	SHGC
ALM-002-01-A	Aluminium B SG Clear	6.70	0.70
ALM-002-02-A	Aluminium B SG Tint	6.60	0.49
ALM-002-03-A	Aluminium B SG High Solar Gain low-E	5.40	0.58
ALM-002-04-A	Aluminium B SG Low Solar Gain low-E	5.60	0.41



## Nationwide House Energy Rating Scheme

### ALM-003 Aluminium Group A Double Glazed Air Fill

Code	Description	U value	SHGC
ALM-003-01-A	Aluminium A DG Air Fill Clear/Clear	4.80	0.51
ALM-003-02-A	Aluminium A DG Air Fill Tint/Clear	5.20	0.35
ALM-003-03-A	Aluminium A DG Air Fill High Solar Gain low- E/Clear	4.30	0.47
ALM-003-04-A	Aluminium A DG Air Fill Low Solar Gain low-E/Clear	4.90	0.33



## Nationwide House Energy Rating Scheme

### ALM-004 Aluminium Group B Double Glazed Air Fill

Code	Description	U value	SHGC
ALM-004-01-A	Aluminium B DG Air Fill Clear/Clear	4.80	0.59
ALM-004-02-A	Aluminium B DG Air Fill Tint/Clear	5.20	0.39
ALM-004-03-A	Aluminium B DG Air Fill High Solar Gain low- E/Clear	4.30	0.53
ALM-004-04-A	Aluminium B DG Air Fill Low Solar Gain low-E/Clear	4.90	0.33



## Nationwide House Energy Rating Scheme

### ALM-005 Aluminium Group A Double Glazed Argon Fill

Code	Description	U value	SHGC
ALM-005-01-A	Aluminium A DG Argon Fill Clear/Clear	4.50	0.50
ALM-005-02-A	Aluminium A DG Argon Fill Tint/Clear	5.10	0.32
ALM-005-03-A	Aluminium A DG Argon Fill High Solar Gain low- E/Clear	4.10	0.47
ALM-005-04-A	Aluminium A DG Argon Fill Low Solar Gain low-E/Clear	4.80	0.34



## Nationwide House Energy Rating Scheme

### ALM-006 Aluminium Group B Double Glazed Argon Fill

Code	Description	U value	SHGC
ALM-006-01-A	Aluminium B DG Argon Fill Clear/Clear	4.50	0.61
ALM-006-02-A	Aluminium B DG Argon Fill Tint/Clear	5.10	0.36
ALM-006-03-A	Aluminium B DG Argon Fill High Solar Gain low- E/Clear	4.10	0.52
ALM-006-04-A	Aluminium B DG Argon Fill Low Solar Gain low-E/Clear	4.80	0.34



## Nationwide House Energy Rating Scheme

### Aluminium Thermally Broken Group

- ATB-003 Aluminium TB Group A double glazed air fill
- ATB-004 Aluminium TB Group B double glazed air fill
- ATB-005 Aluminium TB Group A double glazed argon fill
- ATB-006 Aluminium TB Group B double glazed argon fill





# Nationwide House Energy Rating Scheme

## Composite Group

- CMP-001 Composite Group A Single glazed
- CMP-002 Composite Group B Single glazed
- CMP-003 Composite Group A double glazed air fill
- CMP-004 Composite Group B double glazed air fill
- CMP-005 Composite Group A double glazed argon fill
- CMP-006 Composite Group B double glazed argon fill



# Nationwide House Energy Rating Scheme


## Timber Group

- TIM-001 Timber Group A single glazed
- TIM-002 Timber Group B single glazed
- TIM-003 Timber Group A double glazed air fill
- TIM-004 Timber Group B double glazed air fill
- TIM-005 Timber Group A double glazed argon fill
- TIM-006 Timber Group B double glazed argon fill



# Nationwide House Energy Rating Scheme

## Finding products 1 SG Clear example with +/- 10% SHGC


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### WINDOW ENERGY RATING SCHEME

**Manufacturers**

- Capitol Glass
- Capral Limited
- Carison Brothers P/L
- Cedar Windows Pty Ltd

**Materials**

- Aluminium
- Composite
- Timber
- uPVC

**Window Type**

- Awning Window
- Casement Window
- Bi-Fold Door
- Bi-Fold Window

**Glazing Type**

- Single Glazed
- Double Glazed
- Triple Glazed
- Secondary Glazing

**Stars**

Minimum Cooling Star

Minimum Heating Star

**Performance Values**

Maximum U Value

SHGC Value   Exact  +/- 10% of the specified SHGC

Number of Records 20520


Window ID	Glazing ID	Cooling Star	Heating Stars	Cool %	Heat %	Uw	SHGC	Tvw	AI
<b>South Pacific Aluminium Windows Pty Ltd</b>   Aluminium Sashless Double Hung Window - Single Glazed									
ANE-001-05	<a href="#">6EA</a>	★ ★	★ ★ ★	32%	28%	5.1	0.60	0.53	2.23
<b>South Pacific Aluminium Windows Pty Ltd</b>   101.6 ViewMax DoubleHung Window - Single Glazed									
ALS-006-01	<a href="#">6.38CP</a>	★ ★ ☆	★ ★ ★	39%	25%	5.0	0.52	0.60	3.26
<b>South Pacific Aluminium Windows Pty Ltd</b>   101.6 ViewMax DoubleHung Window - Single Glazed									
ALS-006-05	<a href="#">6.38Lam</a>	★ ☆	★ ★	25%	8%	6.5	0.60	0.65	3.26






# Nationwide House Energy Rating Scheme

## Finding products 2 Refining search to awning windows



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### WINDOW ENERGY RATING SCHEME



Manufacturers	Materials	Window Type
<input type="checkbox"/> Capitol Glass <input type="checkbox"/> Capral Limited <input type="checkbox"/> Carison Brothers P/L <input type="checkbox"/> Cedar Windows Pty Ltd	<input type="checkbox"/> Aluminium <input type="checkbox"/> Composite <input type="checkbox"/> Timber <input type="checkbox"/> uPVC	<input checked="" type="checkbox"/> Awning Window <input type="checkbox"/> Casement Window <input type="checkbox"/> Bi-Fold Door <input type="checkbox"/> Bi-Fold Window
Glazing Type	Stars	Performance Values
<input checked="" type="checkbox"/> Single Glazed <input type="checkbox"/> Double Glazed <input type="checkbox"/> Triple Glazed <input type="checkbox"/> Secondary Glazing	Minimum Cooling Star <input type="text" value="0.0"/> Minimum Heating Star <input type="text" value="0.0"/>	Maximum U Value <input type="text" value="6.7"/> SHGC Value <input type="text" value="0.57"/> <input type="radio"/> Exact <input checked="" type="radio"/> +/- 10% of the specified SHGC
<input type="button" value="Apply"/>		

Number of Records 2613


Window ID	Glazing ID	Cooling Star	Heating Stars	Cool %	Heat %	Uw	SHGC	Tvw	AI
<b>Riverland Glass</b>   101.6mm McArthur Centre Pocket Framing with ASW44 Awning Sash - Single Glazed									
ALS-018-01	<a href="#">6Clr</a>	★ ★	★ ★ ★ ★	35%	36%	5.8	0.52	0.53	0.08
<b>Riverland Glass</b>   50mm Carinya Classic Awning Window - Single Glazed									
ALS-026-12	<a href="#">638CPGn</a>	★ ★ ☆	★ ★ ★ ★ ★	39%	51%	4.7	0.53	0.61	0.02
<b>Riverland Glass</b>   92mm Carinya Classic Awning Window - Single Glazed									
ALS-030-02	<a href="#">5Clr</a>	★	★ ★ ★ ☆	22%	29%	6.7	0.61	0.62	0.02





# Nationwide House Energy Rating Scheme

Finding products 3  
Further refining search to an individual manufacturer



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## WINDOW ENERGY RATING SCHEME

**Manufacturers**

Capitol Glass

Capral Limited

Carison Brothers P/L

Cedar Windows Pty Ltd

**Materials**

Aluminium

Composite

Timber

uPVC

**Window Type**

Awning Window

Casement Window

Bi-Fold Door

Bi-Fold Window

**Glazing Type**

Single Glazed

Double Glazed

Triple Glazed

Secondary Glazing

**Stars**

Minimum Cooling Star  0.0

Minimum Heating Star  0.0

**Performance Values**

Maximum U Value  6.7

SHGC Value   Exact  +/- 10% of the specified SHGC

Number of Records 6

Window ID	Glazing ID	Cooling Star	Heating Stars	Cool %	Heat %	Uw	SHGC	Tvw	AI
<b>Capral Limited</b>   Genesis Awning Window - Single Glazed									
CAP-006-01	<a href="#">4Clr</a>	★ ☆	★ ★ ★ ☆	24%	29%	6.6	0.59	0.60	0.00
<b>Capral Limited</b>   Capral 582 Series Awning Window - Single Glazed									
CAP-032-06	<a href="#">6.38CPClr</a>	★ ★ ☆	★ ★ ★ ★ ★	39%	51%	4.7	0.53	0.61	0.08



## Nationwide House Energy Rating Scheme

### SHGC +/-10% allowance

- If a custom window is selected, those performance values are applicable and **the SHGC +/- 10% allowance no longer applies**



# Nationwide House Energy Rating Scheme

## Items to remember

- New Default NFRC values are different to those in the current software
- From 1 October 2014 88 Default Windows to choose from
- One aluminium frame type
- Introduction of Thermally Broken and Composite windows
- 4 glazing types in each group
- Air and Argon fill for IGU's
- Operating type is now important and must be used
- Window performance values are the ultimate determiner
- Looking at online training for Accredited assessors around September 2014