Ecolux - Tricky Questions

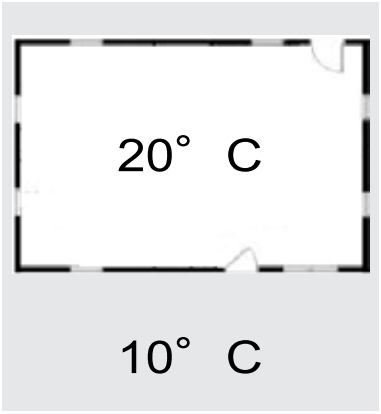
1 Ecolux rejects half the sun's heat, I need that free heat in winter?

Yes, of course free solar heat is great to help warm your home but that's only relevant when the sun is actually ON the window.

We'll use a rectangular house square to the compass.

It's a winter simulation so I will use a lower outside temperature, ie: heat wants to escape.

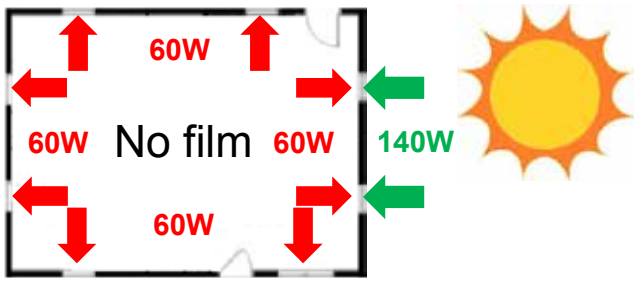
HEAT LOSS =
HEAT GAIN =



Ecolux 70 is installed on all windows so 4 sides of the house in 1 example and no film installed on the other.

The 'W' refers to Watts of heat gained or lost.

MORNING



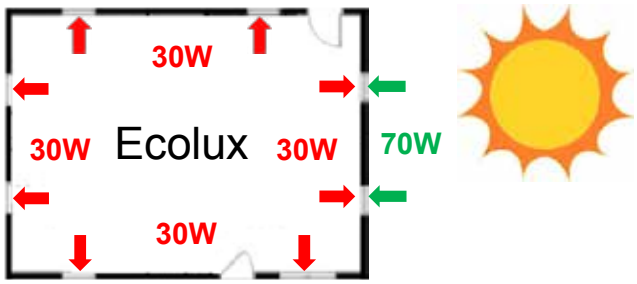
Max heat loss N,E,W,S

Max solar heat gain E

Heat loss, 4 x 60W = 240W

Heat gain, 1 x 140W = 140W

Resultant heat loss = 100W



½ the heat loss N,E,W,S

½ the solar heat gain E

Heat loss, 4 x 30W = 120W

Heat gain, 1 x 70W = 70W

Resultant heat loss = 50W

MIDDAY

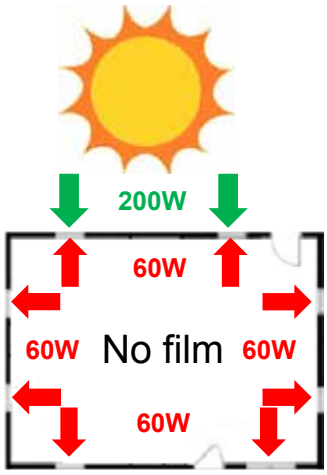
Max heat loss N,E,W,S

Max solar heat gain N

Heat loss, 4 x 60W = 240W

Heat gain, 1 x 200W = 200W

Resultant heat loss = 40W



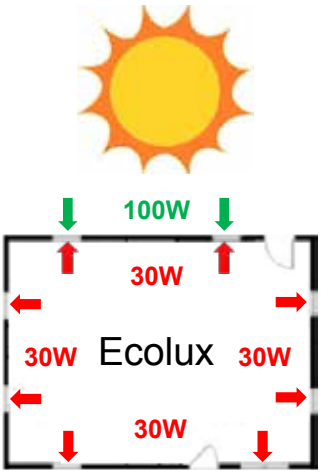
½ the heat loss N,E,W,S

½ the solar heat gain N

Heat loss, 4 x 30W = 120W

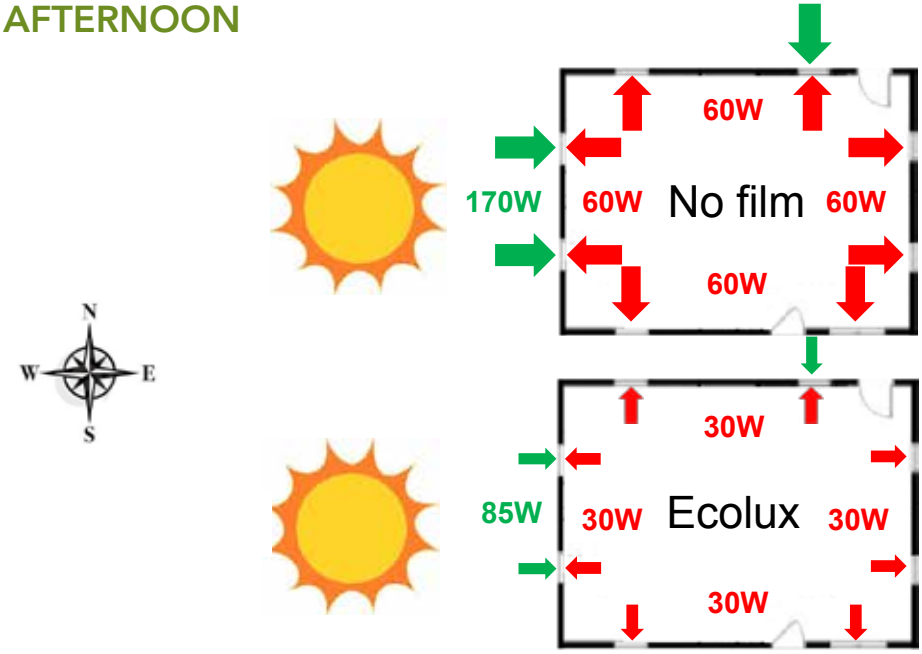
Heat gain, 1 x 100W = 100W

Resultant heat loss = 20W



Solar Gard® SAINT-GOBAIN

AFTERNOON



Max heat loss N,E,W,S

Max solar heat gain W

Heat loss, 4 x 60W = 240W

Heat gain, 1 x 170W = 170W

Resultant heat loss = 70W

½ the heat loss N,E,W,S

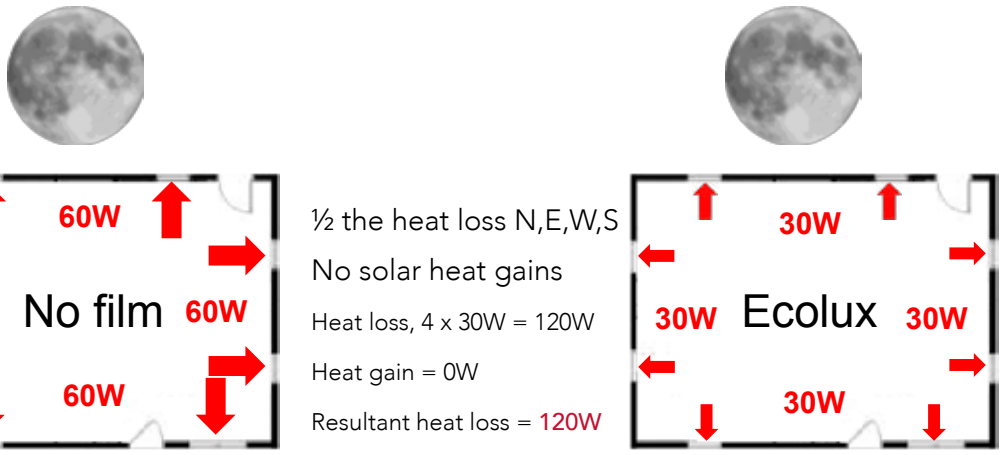
½ the solar heat gain W

Heat loss, 4 x 30W = 120W

Heat gain, 1 x 85W = 85W

Resultant heat loss = 35W

NIGHT-TIME



Max heat loss N,E,W,S

No solar heat gains

Heat loss, 4 x 60W = 240W

Heat gain = 0W

Resultant heat loss = 240W

½ the heat loss N,E,W,S

No solar heat gains

Heat loss, 4 x 30W = 120W

Heat gain = 0W

Resultant heat loss = 120W

SUMMARY

The net heat losses over the full winter day:

	No film	Ecolux	Ecolux Saving
Morning =	100W	50W	50W
Midday =	40W	20W	20W
Afternoon =	70W	35W	35W
Nighttime =	240W	120W	120W
Total	450W	225W	225W

HALF THE HEAT LOSS OVER THE DAY

So... yes it's true you will give up some free heat, but when the sun is on one wall it is not on the other walls so there is no free heat you are missing out on there.
At the same time ALL facings are losing heat.

Then think about night time…

OTHER CONSIDERATIONS:

- The no film case is very unbalanced, hot one area, cold the rest. Ecolux helps balance the temperatures meaning more comfort overall
- If the curtains are closed you are missing out on all the heat gain
- Often a west face can still be too hot in winter, the film TSER helps
- Without the film you're getting full fading
- At night you are losing all your day's heat without Ecolux.

2 Won't Ecolux stop heat escaping in summer, making my house heat up more?

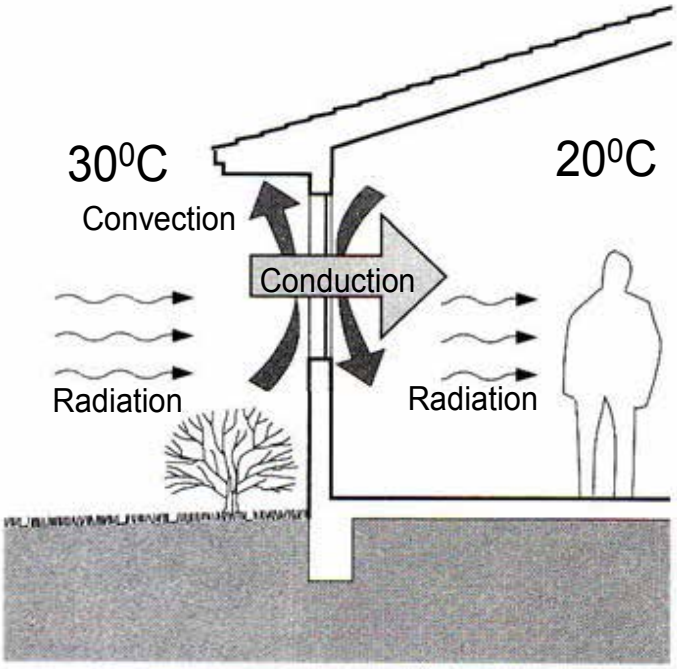
No - for two reasons:

1. **Ecolux rejects about half the sun's energy so that's a no brainer, it will stop half that solar heat load and keep you cooler through its TSER.**
2. **The low U Value performance is also an advantage in summer as U Value (insulation) works both ways...**

Like in winter or at night when it is cold outside heat still moves in summer, just the other way.

The heat in your home can't be trapped inside because it's warmer outside and energy (heat) ALWAYS moves from hot to cold.

Ecolux with its low U Value is a blessing to stop you gaining even MORE heat from the hot air outside.



www.solargard.com.au
Saint-Gobain Performance Plastics
1/6 Stanton Road Seven Hills NSW 2147 Australia
Tel: 02 9838 8888
Email: SGAus-Sales@saint-gobain.com

www.solargard.co.nz
Specialty Window Films
New Zealand
Tel: 09 441 0040
E-mail: sales@swfilms.co.nz

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