



















уре	Electricity cost	Savings	money	Harris Charles
	Annual (Rs)	Annual (Rs)	%saving	pro la la la la
GU				
ase case - ECBC	23091954.1			
	18365575.2	4726378.9	20.5	
Solar control Low E glass	18229707.1	4862247.0	21.1	
	17901711.5	5190242.6	22.5	
	17345102.2	5746851.8	24.9	
				Using low e glazin reduces the coolin loads of the buildin and hence tot Electricity consumptio reduces by 20 - 25%.



Innovative Techniques Technology and Techniques go hand in hand. Developing new products and technologies alone cannot solve all the issues, their installation techniques and applications are equally important. **Double Skin Façade** Case School, Mumbai Total Electricity Electricity Savings Cost Consumption Туре Annual Double skin facade – Combination (Mwh) (in lakhs) of perforated aluminum sheet & thousands) glazing Non - ventilated cavity Base case - 12mm AIS 871 52 Clear 12mm Ecosense Spring 884 53 -78.88 12 mm Ecosense Dawn 876 52 -27.80 SC (Ecosense Dawn) 876 52 -27.80 SC + LE (Ecosense 876 52 -27.80 Clear Vision) The non-solar heat gets trapped between the Ventilated cavity perforated aluminium façade and inside skin 12mm Ecosense Dawn 921.07 718 43 when using a low-E glass. Ecosense Dawn DGU 921.07 718 43 Non-solar heat gain is the reason for increase in Ecosense Clear Vision 718 43 921.07 DGU heat gains.



Case 3 Inclined Facades Office , Mumbai

Daylight Analysis:

For a corporate building in Mumbai, daylight analysis was done for Clear Glass (VLT = 78%) and the high performance glass (VLT = 21%). Both the glasses performed identically in terms of achieving the optimal lux levels. Clear Glass, in fact, caused glare in certain portions of the building.



Pink region shows area which will have glare and Grey indicates sub-optimal lighting In 2nd case, we can see reduction in glare area without reducing optimum Lux level.



- Daylight analysis is important as it prevents overdesigning of the building and at the same time optimizes VLT requirement.
- In the case mentioned, we can use high performance glass which will reduce cooling load without compromising on lighting load

Learning :

- The same fenestration behaves differently depending on the specific design.
- It should not be assumed that products with Low U-value and SHGC are the best and universal solution.
- For shaded windows, products with lower U-values perform better.
- For windows receiving high amount of solar radiation, products with low SHGC would perform better.
- Hence glazing should be selected after thoroughly considering the design.



