

Table 2-5. Energy Goals and Strategies

Prioritize Goals	General Strategies	Detailed Strategies	Recommendations (see Chapter 3)	How-To Tips (see Chapter 5)
Goal 1. Reduce loads on energy-using systems Reduce internal loads Reduce heat gain/loss through building envelope	Equipment and Appliances: Reduce both cooling loads and energy use	Use more efficient equipment and appliances Use controls to minimize usage and waste Educate building staff	Use low-energy computers and monitors; use ENERGY STAR® equipment Turn off or use “sleep mode” on computers, monitors, copiers, and other equipment Provide training, brochures, and other material to encourage energy efficiency	PL1–3 PL3 EL5, DL1, 2, 9
	Lighting: Reduce both cooling loads and energy use	Maximize the benefits of daylighting Use skylights and north-facing clerestories to daylight interior zones Use efficient electric lighting system	Vertical glazing, skylights, interior lighting Skylights and vertical glazing Interior lighting	EN22–32, DL1–10, EL15 EN22, 24, DL3–7 EL1–EL25
	Building Envelope: Control solar gain to reduce cooling load through windows	Use separate controls for lighting in areas near windows Use automatic controls to turn off lights when not in use Use beneficial building form and orientation Minimize windows east and west, maximize north and south Use glazing with low solar heat gain coefficient (SHGC) External shade glazing to reduce solar heat gain and glare	Interior lighting Interior lighting Interior lighting Vertical glazing Vertical glazing, skylights Vertical glazing	DL1, 6–9, EL5, 7–8 EL13, 14 EN26, 28 EN26, 28 EN22–24, 29, 30 EN26

Table 2-5. Energy Goals and Strategies (Continued)

Prioritize Goals	General Strategies	Detailed Strategies	Recommendations (see Chapter 3)	How-To Tips (see Chapter 5)
Reduce heat gain/loss through building envelope (continued)	Control solar gain to reduce cooling load through windows	Use vegetation on S/E/W to control solar heat gain (and glare)	Vertical glazing	EN31
	Reduce solar gain through opaque surfaces to reduce cooling load	Increase insulation of opaque surfaces	Roofs, walls, floors, doors	EN2–20
		Increase roof surface reflectance and emittance	Roofs	EN1
		Shade building surfaces with deciduous or coniferous trees as appropriate for surface orientation		
	Reduce conductive heat gain and loss through building envelope	Increase insulation on roof, walls, floor, slabs, and doors and decrease window U-factor	Roofs, walls, floors, doors, vertical glazing	EN2–20
Reduce air infiltration	Provide continuous air barrier			
Reduce thermal loads	Reduce heat gain or loss from ventilation exhaust air	Use energy recovery to precondition outdoor air	Energy recovery	
Reduce HVAC loads	Utilize passive solar designs	Use thermal storage, trombe walls, interior mass		EN30
	Reduce heat gain and loss in ductwork	Insulate ductwork	HVAC	HV10
Refine building to suit local conditions		No ductwork outside the building conditioned space	HVAC	HV9
	Consider natural ventilation, highest potential in marine climates, high potential in dry climates	Operable windows with screens so that air conditioning and heating are not necessary during transition periods	Vertical glazing	EN27
		For buildings with operable windows, design building layout for effective cross-ventilation	Vertical glazing	EN27