PNW SOLAR FACTS & PASSIVE SOLAR DESIGN

1) PNW solar energy “density” is similar to US average values.

2) Solar is most abundant of all our energy resources.

3) Solar total annual energy potential far exceeds all energy consumed.

PNW Passive Solar Energy:

1) In sunny winter days, south walls receive ~4x the solar energy of E or W walls.

2) For sunny days, south walls receive more solar energy in winter than summer~~. (see table in class online folder)~~

3) For sunny summer days, W or E walls receive ~35% more solar energy than the S wall. S wall advantage is increased with use of eaves on south side.

Passive Solar Design Basics:

1. Design for 12 months of climate: long south facing walls, shorter E-W walls makes for cooler summers, warmer winters indoors
2. Use deciduous trees and/or eaves to shade in summer, and to allow in cooler season sunshine
3. Utilize thermal mass to store heat harvested - to release at night
4. Passive solar design can be cost effective