Job Name: Contractor: Date: Array Tilt: Array Orientation: Zip Code of Site: The sun path chart to the right is for a solar electric system located in Salem, Oregon tilted 75 degrees with a 180 degree azimuthal orientation. The annual AC output for a system with these characteristics is about 0.9 kWh/Watt DC per year. For comparison, annual production capacity per Watt of an optimally oriented system (32 degree tilt and 189 degree azimuth) is 1.14 kWh/Watt DC per year. Solo Univ. of Oregon SRML Sponsor: Energy Trust Lat. 44.92; Long: -123.02 (Solar) time zone: -8 Tilt: 75; Aspect: 180 Salem, OR 10h 27 30 31 32 40 40 60 60 60 60 60 60 60 60 60 60 60 60 60	
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year. $7h \sqrt{0.6}$ 1.7 1.9	
Local Production Capacity = 1.14 kWh/Watt DC	
per year. 1.14 kW li/ Watt DC 1.14 kW li/ Watt DC 1.14 kW li/ Watt DC 1.15 li/ 1.15	
At Salem, a system oriented as in the sun path chart	
to the right will produce 79% of the annual	18h
electricity produced by an optimally oriented $0.4 \times 0.4 \times $	
system.	+++
	$\left\langle \right\rangle$ 19h
	-
Draw the horizon on the sun path chart and shade	
obstructed areas. To calculate the percent reduction 60° 90° 120° 150° 180° 210° 240° 270° 30	3000
due to shading, enter the percentage of system power output shown on the sun path chart for areas Solution 150 150 150 240 270 300	
	Period/Hr
1 CHOW/III 3-0 0-7 7-0 0-7 7-10 10-11 11-12 12-13 13-14 14-13 13-10 10-17 17-10 10-17 1 CHOW/III	Jun-Jul
For example, assume the percentage of system	Jul-Aug
power output from 7:00 to 8:00 between September	Aug-Sep
22 and October 21 is 0.470, and 5070 or that period	Sep-Oct
is shaded. Effect 0.276 in the column under 7-8 and	Oct-Nov
	Nov-Dec

Sum of

Hourly

Shading

Sum of

Hourly

Shading

Sum the shading values in each column and enter the total in the bottom row. Sum the bottom row to determine the percent annual shading.

no shading. Note that hours are in solar time.

Percent Annual Shading: