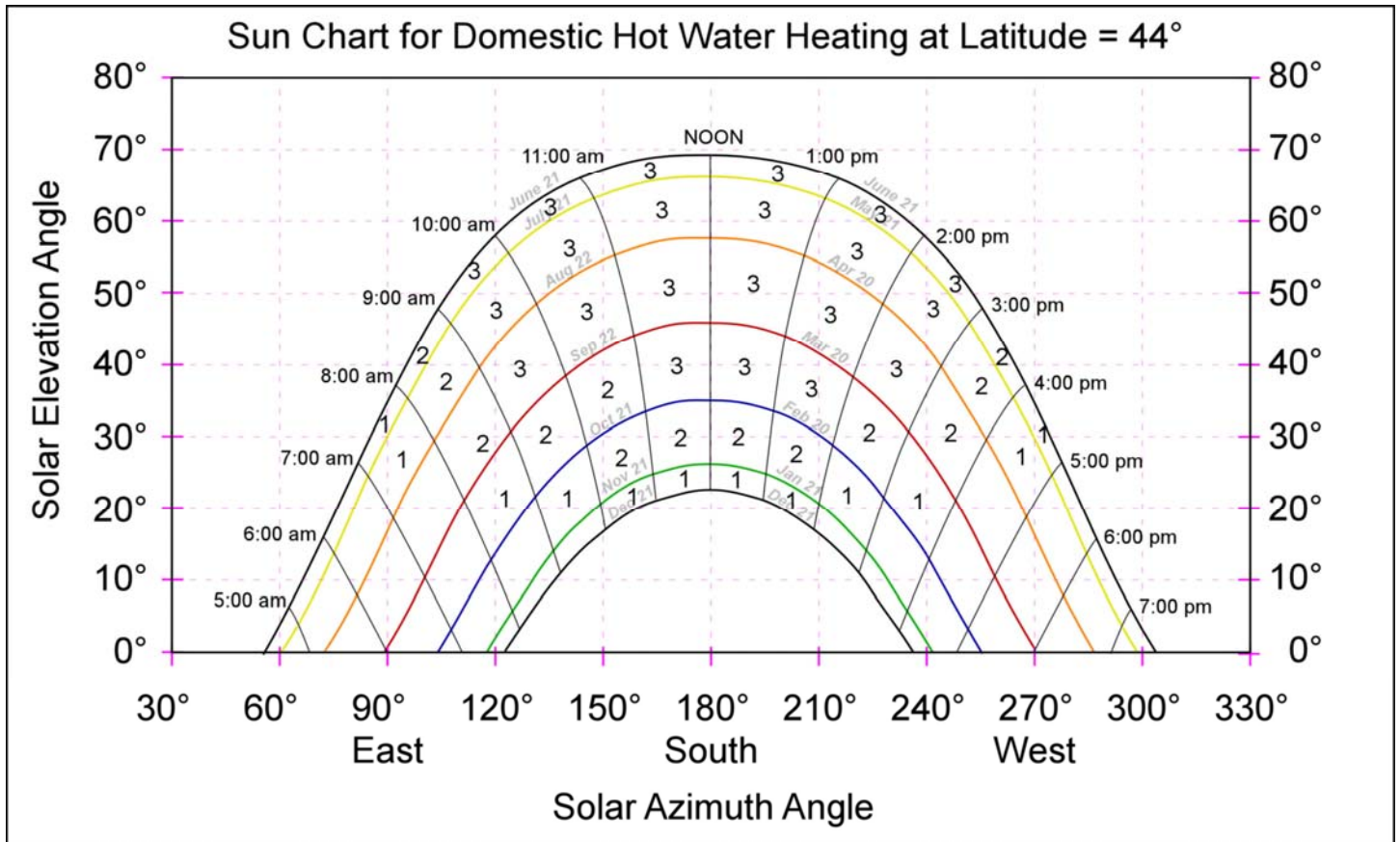




# Sun Chart

For solar water heating and solar electric systems

**Step 1** – From the midpoint of the solar array, draw the skyline on the graph below. Use the elevation angles and solar azimuth angles to determine the location of the obstructions. A solar site assessment tool such as the Pathfinder™, or Solmetric Suneye is recommended for increased accuracy. Energy Trust of Oregon sun charts can be used in lieu of the sun chart below. Draw deciduous trees with a dotted outline and fill with light shading. Year-round obstructions like buildings, or evergreen trees should be drawn with solid outlines and filled with heavy shading.



**Step 2** – Add up the solar fraction numbers in the sections that have shading. For solar electric systems, partial shading in one section must be counted fully (no fractional amounts). Any deciduous tree shading below the Sept 22/March 20 line can be counted at half value to account for the fact that some light will get through these obstructions when the trees lose their leaves. This sum of all these values inside obstructed areas represents the percent of energy lost to external shading.

$$\text{Percent Not Shaded} = 100\% - \text{Sum of obstructed areas} = \underline{\hspace{2cm}}\%$$

**Step 3** – Calculate the Total Solar Resource Fraction using the following equation:

$$\text{Total Solar Resource Fraction} = \text{TOF} \times \text{Percent Not Shaded} = \underline{\hspace{2cm}}\%$$