

## Technology

The basic technology for solar water heaters systems is very simple. Sunlight strikes and heats an 'absorber' surface within a 'solar collector'. As water flows through the tubes attached to the solar collector it absorbs the heat. Most solar water heaters are installed on the roof. For best results, your roof should receive direct sunlight between the hours of 10 AM to 3 PM. The consumer has direct control over the system, and unlike electric water heaters, hot water is available even during a power outage.


## Sizing Your System \& Cost

Just as you have chosen a 30, 40, 50 gallon electric water heater, you need to determine the right size of solar water heater to install. Sizing a solar water heater involves determining the total collector area and the storage volume required to provide $100 \%$ of your household's hot water needs. Once you recover the higher initial costs of a solar system through reduced or avoided energy costs, your solar system will require expenditures only for maintenance.

| Size <br> (Gallon) | Number of <br> Persons | Lifespan | Approx. <br> Unit Cost <br> (G\$) | Approx. <br> Installation <br> Cost (G\$) | Total Cost <br> (G\$) |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 50 | 2 to 3 | 15 to 20 years | 330,000 | 50,000 | 380,000 |
| 65 | 4 | 15 to 20 years | 353,000 | 50,000 | 403,000 |
| 80 | 6 | 15 to 20 years | 393,000 | 50,000 | 443,000 |

