

Uses of Solar Energy

- **Residential Solar Photovoltaic (PV)**
 - Typically rooftop installations on single or multi family residential properties
 - Capacity: 1-15 kW (average 6 kW)
- **Non-Residential Solar Photovoltaic (PV)**
 - Roof or ground-mounted installations on commercial, industrial, government or non-profit properties
 - Capacity: 1-5000 kW (average 100 kW)
- **Utility-Scale Solar Photovoltaic (PV)**
 - Typically ground-mounted installations in a variety of open spaces (desert, brownfield, grassland, other reclaimed land)
 - Capacity: Over 1 MW (average 12 MW; can be more than 500 MW)
- **Concentrating Solar Power (CSP)**
 - Generates electricity using heat from the sun; generally located in areas with exceptional solar resources
 - Capacity: 75 MW+ (with smaller experimental systems)
- **Solar Heating and Cooling (SHC)**
 - Uses heat from the sun to heat or cool both water and air. Used exclusively in residential and commercial environments.

Residential Solar Photovoltaic (PV)

- **Typically rooftop installations on single or multi family residential properties**
- **Capacity: 1-15 kW (average 6 kW)**
 - Sized to account for majority of yearly household electricity use (but not more than)
- **Normally grid-connected**
 - Uses net energy metering (NEM)
- **Average cost: \$3.60/watt**
 - Average system cost: \$20,000
- **Finance Options**
 - Third Party Ownership (Lease)
 - Debt Financing through installer
 - Self-financed
- **19% Market Share in 2014**



Non-Residential Solar Photovoltaic

- **Roof or ground-mounted installations on commercial, industrial, government or non-profit properties**
- **Capacity: 1-5000+ kW (average 100 kW)**
 - Sizes vary widely depending on project objectives
- **Normally grid-connected**
 - Uses net energy metering (NEM)
 - Commercial entity is electricity off-taker
- **Average cost: \$2.27/watt**
 - Average system cost: ranges widely
- **Finance Options**
 - Third Party Ownership (PPA)
 - Debt Financing through installer
 - Self-financed
- **17% Market Share in 2014**



Utility-Scale Solar Photovoltaic

- **Typically ground-mounted installations in a variety of open spaces (desert, brownfield, grassland, other reclaimed land)**
- **Capacity: 1+ MW (average 12 MW)**
 - Can be as large as 500 MW
- **Sells electricity on wholesale market**
 - Utility or Independent Power Producer-owned
 - Utility is electricity off-taker
- **Average cost: \$1.71/watt**
 - Average system cost: ranges widely
- **Finance Options**
 - Multi-party arrangements
 - Debt, Equity, Tax Equity, Loan Guarantee
- **64% Market Share in 2014**



Concentrating Solar Power

- **Generates electricity using heat from the sun**
- **Systems located in areas with exceptional solar resources**
- **Capacity: 75 MW+**
 - Experimental systems can be smaller
- **Sells electricity on wholesale market**
 - Utility or Independent Power Producer-owned
 - Utility is electricity off-taker
- **767 MW installed in 2014**
 - 1,685 MW installed cumulatively
- **Finance Options**
 - Multi-party arrangements
 - Debt, Equity, Tax Equity, Loan Guarantee

