Solar Electric System – Purchasing Tips and Resources

1) Solar is best installed on a roof in good condition because the solar panels must be removed when you reroof. ~60 square feet (6 x 10) needed for 1 kilowatt (DC) of power. High efficiency panels cost more, but use less space
2) The optimal order for selecting the best roof direction is South, South West, South East, West and then East.
3) Interview three solar installers and get three bids for comparison. Installers should provide a written statement of the system components as well as a schedule for payments.
4) Compare energy production (kWh) across different designs at California CSI-EPBB.com or PVWatts.nrel.gov (easiest)
5) The installer should do a shading analysis that tells you the percentage of annual solar energy blocked by shade.
6) $1, 000 is the maximum down payment by law. Don't pay more until you receive the panels and work begins.
7) Withhold a significant percentage of the payment until the job is done and signed off by your city inspector.
8) Installer should manage city permit, inspection process and working with PG&E for final signoff.
9) Installers should have state contractor's license & liability insurance. NABCEP solar certification is a plus.
10) PG&E customers – Required to use Time-of Use rate (e.g. E-TOU-A) which can increase the financial benefit up to 6%. Net Energy Metering rules (Dec 15, 2016) add ~$145 connect fee (one time) & reduces the value of electricity sent back to grid by 2.3 cents/kWh. This reduces overall payback between 5% & 10%. For more info go to tinyurl.com/nvf92eb
11) Check other customer experience from people you trust and from web sites including:

a. EnergySage.com/p/SunWork - free solar marketplace with side by side quotes from installers along with reviews. By using this link & going solar with EnergySage's marketplace, SunWork receives funds supporting our local efforts.
b. solarreviews.com - free - locates installer with detailed information provided by the customers & installer
c. yelp.com - free - some homeowner feedback on local installers
d. sanjose.bbb.org - Silicon Valley Better Business Bureau to check on business reliability rating & license
e. diamondcertified.com (free - but only highlights three vendors per area & vendors pay for listing)
f. angieslist.com – free - solar reviews by members with added checks

Other considerations:

- PG&E customers pay a minimum monthly fee of $10. You get a monthly statement, but only pay the cumulative total after a full year of operation. This is called a True-Up bill. If you use at least $120 of electricity distribution charges over the year, you get credit for paying this on the True-Up bill.
- If you have don't have space for a 240 Volt breaker in your electrical panel, you may need an upgrade at additional cost.
- Solar PV systems are virtually maintenance free although the inverter may need to be replaced after 10+ years. Hosing off solar panels increases solar output about 5% after cleaning (only put water on a panel, when panel is not hot)
- Get warranties for panels, inverter & installation in writing & ask if it provides full replacement versus prorated.
- Leasing can be a good option if you don't have access to funds. Typically, if average monthly electric bill is over $130, you can reduce the net monthly cost. Look at transfer costs if you plan to sell home before the lease is over.
- Federal tax credit is 30% of system cost & can be carried forward. 26% in 2020, 22% in 2021. Enter credit on your tax return.
- State residential solar rebates have ended
- If you produce more kWh than you use in a year, PG&E will credit ~$.03/kWh ($.072/kWh in PA) for the extra kilowatt-hours
- Check Silicon Valley Toxic Coalition PV Survey for solar panel ratings at solarscorecard.com/2016-17

Other resources:

ebenergy.org/smart-solar-program (510)981-7788 for free guidance on solar and energy efficiency from a nonprofit
www.pge.com/solar for PG&E specific information relating to solar plus excellent free information and courses
google.com/sunroof for solar calculator integrated with google maps that sizes a solar array for a home with shade analysis
http://www.norcalsolar.org/solar-101 for general information on solar energy
www.californiasolarstatistics.ca.gov - searchable database of solar installs by city
www.sunwork.org - low cost option if electric bill averages less than $100 per month; volunteers help with installation