l'can
Louisville Climate Action Network

Top Tips for Going Solar

Between record low costs and the 30% federal tax credit, interest in investing in solar power has never been higher. Since most everyone who installs solar power is a first-timer, LCAN offers the following tips for a successful project:

1. Be sure your home or business is as energy efficient as practical. Efficiency is your cheapest power "source." Visit www.louisvillecan.org/action for tips.

2. Understand how net-metering works[i] and lets you skip buying batteries (unless you are in a remote, off-grid location).

3. Avoid over-sizing your system. Most systems are under-sized, as most project owners find more ways to be efficient.

4. Install rooftop or ground-mounted solar panels to face (within 30º of) due south, and not where trees or neighboring buildings will shade them.

5. If your roofing is nearing its useful life, replace it before installing panels. Once installed, an installer will have to remove panels temporarily during re-roofing.

6. Solicit bids from NABCEP certified installers.

7. Ask friends and colleagues who have installed solar panels about their projects:

    a. Was their installer NABCEP-certified?
    b. Did work go smoothly and pass inspection?
    c. Did the installer keep them informed?

8. Locate two-three years of past utility bills. (LG&E will provide copies of your last two years of bills if you didn't keep them.) Share copies with installers from whom you request a bid.

9. Note any significant changes in power use—recent or expected—such as, in the number of people living or working there, any new, more efficient HVAC equipment or the purchase of an electric vehicle.

I can, you can, Louisville CAN!

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10. Make sure your installer:

    a. Confirms your home or building has enough electric service. (Metro Louisville requires residences to have at least a 200-Amp service.)
    b. Designs to meet your actual or expected power demand (see above).
    c. Evaluates your roof's load capacity.
    d. Computes wind-lift forces.
    e. Leaves room for firefighters and roofers to walk on your roof.
    f. Specifies the warranties on the equipment and its installation.
    g. Calculates total project costs before and after the 30% income tax credit,[ii] the simple payback and the return on investment (ROI).
    h. Agrees to acquire all required permits—usually an electrical permit, if not a structural review—from your municipality.
    i. Schedules a final inspection by Metro Louisville Code Enforcement.

11. When evaluating bids, consider the ROI against what your up-front capital costs would earn if left in the bank or other investments.

12. Save your installer's invoices to support your tax-credit claim.

13. Solar power panels have a useful life of at least 50 years. When replaced, racks and wiring can be reused. Expect to replace your inverter(s) in 20-25 years.

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[i] See the infographic at https://www.louisvillecan.org/go-solar.

Solar panels turn sunlight into direct current (DC) electricity. An inverter changes it into the alternating current (AC) you draw from power receptacles. When your solar array produces more electricity than you need, the excess flows backward, to the grid. Your utility sells it to your neighbors. At night, when your panels aren't producing power, you pull power from the utility's grid. This two-way flow of electricity is measured by your two-way ("bi-directional") meter.

Current Kentucky net-metering law requires parity: If you generate more power than you need during a billing period, you receive credit for each excess kilowatt-hour. If you use more power than you generate, any credits on your account must be applied to your bill, meaning you pay for the difference. Ideally, over the first year, you'll generate enough power to cover your yearly needs.

[ii] A tax credit is significantly more valuable than a deduction, because it's taken off your final tax bill. The 30% credit will begin declining in 2020.