Solar PV for Homeowners

Factors in ownership
Ownership

• Outright purchase or finance.
• You make the call.
• You get the O & M.
• You get the incentives.
• Could move it or sell it with house – your call.
Electricity: Bills usually show year history – or can be secured from your utility.
• Must know this because net metering currently secures maximum benefit at 100% or lower.
• Consider future as well – number of residents – future sale, electric cars, heat pumps, etc.

Site.
• Consider your resource potential.
• Locational concerns for installation – on roof, on ground, etc.
• Need good sun exposure.
• Can use Tigos or micro-inverters to maximize output.
  • https://matter2energy.wordpress.com/2013/08/01/optimizing-optimizers-tigo-vs-solaredge/
• Consider impacts from abutting properties or trees not in your control – may need to remove some of your own trees.
• Array is installed to minimize shading on southern facing wall.
• Some say ugly – I say wonderful.
• With the proposal – check every number.
• Can look to non-traditional ways to participate with others – see below.
• http://www.plymouthenergy.org/
• http://searei.org/
• http://myenergyplan.net/
• https://www.altestore.com/store/

Understand the price.

• As with any major purchase – get a couple quotes.
• Usually get a free assessment with projections on output and savings – know the variables.
• Additional research:
  • Renewable Energy Initiative.
  • Look to see if your community is participating in a Solarize Campaign.
  • You can check prices of equipment online.
Consider requesting the proposal with 2 – 3 % rate increases over time.
Be wary of 5% or higher.
Check your bill for your actual all in rate for kwh.

- Make sure you get the full price.
- Understand projections and assumptions.
  - Watch out for high escalation assumptions.
  - Watch out for correct kwh price.
- Be aware of potential changes in laws and rules.
Incentives

Check your eligibility BEFORE you install.

- Tax Credit – set to expire at the end of 2016 on residential systems – currently 30% installed cost.
- State Rebate – 0.50$/watt, total $2,500 up to 30% of system cost – limit is 20kw system.
  - NH Electric Co-op has its own program.
- Net metering – full credit at retail rate that can rollover.
- Be aware – soon could change.
- NH Electric Co-op about 3.2 cents below retail rate

- http://www.nhec.com/renewable_energy_programs.php
• Home equity.
  • Low interest.
  • Easy with existing relationship.
• Specialty product.
• Installer may have access to loans (check the interest rate).
• Outright purchase.

Ask for warranty information as part of any quote.

- Panels – usually 25 year output warranty.
- Inverters – 5-15 year warranty.
  - Some have replacement plans or extended warranties.
- Data monitoring – can be free or cost a little.
- Payback:
  - Outright purchase.
  - Financing.
• The law: https://www.nh.gov/oep/energy/saving-energy/incentives.htm
• The list of towns: https://www.nh.gov/oep/energy/saving-energy/documents/renewable-energy-exemptions.pdf
• The form: http://revenue.nh.gov/forms/2013/documents/pa-29.pdf
• Studies are accurate – appraisers are not.
• Study CA: https://emp.lbl.gov/publications/exploring-california-pv-home-premiums
• Study 2 – National Bureau of Economic Research: http://www.nber.org/papers/w17200