# Solar PV Technical Sales Prep

Free Practice Test — 30 Real Exam-Style Questions

with full answer key & explanations

# Practice Questions

Try all 30 first, then check the answer key at the back.



**1. When analyzing a customer's electric bill to determine appropriate PV system size, which factor is most important to identify?**

A. Customer account number
B. Payment methods accepted by the utility
C. Utility company name and logo
D. Historical kWh usage patterns

**2. Which approach is most effective when initially qualifying a potential solar customer?**

A. Showing them pictures of previous installations
B. Immediately providing the lowest possible price
C. Determining their primary motivation for going solar
D. Explaining technical specifications of solar panels

**3. When performing a remote site assessment for a potential solar installation, which tool is most valuable?**

A. Customer credit report
B. Satellite imagery
C. Local weather forecasts
D. Neighborhood property values



**4. What is the primary purpose of analyzing seasonal energy usage patterns when qualifying a solar prospect?**

A. To properly size the system for year-round performance
B. To determine the customer's vacation schedule
C. To estimate the age of their HVAC equipment
D. To calculate their internet bandwidth requirements

**5. What information should be gathered about a customer's utility rate structure during the qualification process?**

A. Names of utility company executives
B. Customer satisfaction ratings for the utility
C. Utility company stock performance
D. Time-of-use rates, demand charges, and tier structures

**6. When discussing battery backup options with a potential customer, what is the most important expectation to set?**

A. The manufacturing process for lithium-ion cells
B. Battery color and aesthetic appearance
C. Realistic backup power duration and critical load limitations
D. Battery installation noise levels



**7. Which financing mechanism typically has the highest return on investment for a customer who can utilize tax benefits?**

A. Power Purchase Agreement (PPA)
B. Cash purchase
C. Leasing
D. Property Assessed Clean Energy (PACE) financing

**8. What is a key consideration when providing a preliminary cost estimate during prospect qualification?**

A. Including price adders for potential complications
B. Always providing the lowest possible price
C. Matching competitor quotes without verification
D. Focusing only on monthly payment amounts

**9. When a customer is primarily motivated by environmental benefits, which metric is most valuable to include in the qualification discussion?**

A. Number of trees used to produce marketing materials
B. Panel color options
C. Installer uniform design
D. Estimated $$CO_{2}$$ emissions reduction

**10. What information about permitting requirements should be discussed during the qualification process?**

A. History of the building permit process
B. Personal relationships with permit officials
C. Potential timeline impacts based on local jurisdiction
D. Paper type used for permit applications

**11. Which aspect of a customer's roof should be preliminarily assessed during remote qualification?**

A. Roof color preferences
B. Orientation and tilt
C. Gutter brand
D. Chimney ornamental features

**12. What is the most important warranty information to explain during prospect qualification?**

A. Differences between product, performance, and workmanship warranties
B. Warranty document font size
C. Warranty certificate frame options
D. History of warranty law



**13. When qualifying a prospect who is considering a battery system, which factor is most important to assess?**

A. Battery color options
B. Battery brand preference
C. Customer's electrical engineering background
D. Critical loads that need to remain powered during an outage

**14. Which approach is most effective when explaining potential solar savings during the qualification process?**

A. Avoiding all discussion of financial returns
B. Promising the highest possible savings
C. Using conservative estimates for system production and utility rate increases
D. Using complex financial terminology to impress the customer

**15. What information about net metering is most important to verify during prospect qualification?**

A. The history of net metering legislation
B. Current policies and any scheduled changes
C. The personal opinions of utility executives
D. The brand of meter being used



**16. Which factor should be prioritized when assessing a customer's motivation for battery storage?**

A. Primary purpose (backup power, self-consumption, or time-of-use optimization)
B. Battery aesthetic appearance
C. Neighbor's battery ownership
D. Battery manufacturing country

**17. When conducting a preliminary economic analysis for a solar prospect, which financial metric is typically most valuable to homeowners?**

A. Discounted cash flow analysis
B. Internal Rate of Return (IRR)
C. Modified Accelerated Cost Recovery System (MACRS) depreciation
D. Simple payback period

**18. What is the most important jurisdictional requirement to check during remote qualification?**

A. Community festival schedules
B. Local sports team affiliations
C. HOA or historic district restrictions
D. Neighborhood holiday decoration policies

**19. Which approach is most appropriate when discussing system maintenance expectations during qualification?**

A. Promising that no maintenance will ever be required
B. Explaining typical maintenance requirements and their associated costs
C. Avoiding all discussion of maintenance
D. Exaggerating maintenance complexities to sell service contracts

**20. What is the most effective approach when a preliminary qualification suggests a customer's site may not be ideal for solar?**

A. Honestly explaining the limitations and suggesting alternatives if appropriate
B. Ignoring the issues and proceeding with the sale anyway
C. Blaming the customer for having an unsuitable property
D. Suggesting they move to a different house

**21. What federal tax incentive provides the most significant financial benefit for most residential solar installations?**

A. Solar Renewable Energy Certificates (SRECs)
B. Modified Accelerated Cost Recovery System (MACRS)
C. Production Tax Credit (PTC)
D. Investment Tax Credit (ITC)



**22. Which financial metric represents the cost per unit of electricity generated over the lifetime of a solar system?**

A. Return on Investment (ROI)
B. Internal Rate of Return (IRR)
C. Levelized Cost of Energy (LCOE)
D. Net Present Value (NPV)

**23. When calculating payback period for a commercial solar installation, which of the following must be included?**

A. Residential tax exemptions
B. Depreciation benefits
C. Homeowner's insurance savings
D. Personal carbon offset credits

**24. Which net metering arrangement allows customers to receive retail rate credits for excess production within a billing period, but compensates at a lower wholesale rate for annual excess generation?**

A. Modified net metering
B. Standard net metering
C. Feed-in tariff
D. Value of solar tariff



**25. Which financing option typically results in the highest return on investment for a customer who has sufficient tax liability and available capital?**

A. PACE financing
B. Power Purchase Agreement (PPA)
C. Solar lease
D. Cash purchase

**26. What is the primary advantage of a Power Purchase Agreement (PPA) for a customer?**

A. Highest long-term financial returns
B. Customer owns the system immediately
C. No upfront capital investment required
D. Guaranteed performance with no maintenance costs

**27. Which depreciation method allows businesses to deduct a larger portion of the cost of a solar system in the earlier years of its service life?**

A. Straight-line depreciation
B. Modified Accelerated Cost Recovery System (MACRS)
C. Sum-of-years-digits method
D. Production-based depreciation

**28. In a financial analysis for a solar proposal, which of the following represents an ethical approach to energy production estimates?**

A. Using PVWatts or similar industry-standard tools with conservative degradation factors
B. Promising maximum theoretical output without accounting for losses
C. Using the highest production values from the past 10 years of weather data
D. Calculating based on optimal conditions year-round

**29. Which utility rate structure typically provides the greatest financial benefit from solar installation?**

A. Declining block rates
B. Fixed flat rates
C. Demand-based rates
D. Time-of-use (TOU) rates

**30. When calculating the value of Solar Renewable Energy Certificates (SRECs), what is the most critical factor to consider?**

A. Module manufacturer
B. System age
C. Market price volatility
D. Inverter efficiency

# Answer Key & Explanations



**1. D — Historical kWh usage patterns**
Historical usage patterns provide the foundation for properly sizing a PV system. Without knowing how much electricity the customer uses throughout the year, it's impossible to accurately calculate the appropriate system size that will meet their needs.

**2. C — Determining their primary motivation for going solar**
Understanding the customer's primary motivation helps tailor the sales approach to their specific needs and goals, whether they're interested in environmental benefits, financial savings, energy independence, or other factors.

**3. B — Satellite imagery**
Satellite imagery provides a preliminary view of roof orientation, potential shading issues, available space, and other key factors needed for initial qualification without an on-site visit.

**4. A — To properly size the system for year-round performance**
Analyzing seasonal patterns helps determine if the system needs to be sized for peak usage periods or if net metering can effectively balance production and usage throughout the year.

**5. D — Time-of-use rates, demand charges, and tier structures**
Time-of-use rates, demand charges, and tier structures can significantly impact potential solar savings and system design, making this information critical for accurate financial analysis.

**6. C — Realistic backup power duration and critical load limitations**
It's essential to clarify what will and won't remain powered during an outage based on the battery capacity and critical load selection, as many customers have unrealistic expectations about backup power capabilities.

**7. B — Cash purchase**
Cash purchase allows the customer to directly own the system and receive all available incentives and tax benefits without paying interest or fees, typically resulting in the highest ROI.

**8. A — Including price adders for potential complications**
Including price adders for potential complications ensures the estimate is realistic and accounts for site-specific challenges that might increase costs beyond the basic system price.

**9. D — Estimated $$CO_{2}$$ emissions reduction**
Estimated $$CO_{2}$$ emissions reduction provides a tangible measure of the environmental impact that environmentally-motivated customers typically value highly.

**10. C — Potential timeline impacts based on local jurisdiction**
Potential timeline impacts are important to discuss early, as permitting delays can significantly affect project schedules and customer expectations should be set accordingly.

**11. B — Orientation and tilt**
Orientation and tilt significantly impact system production and are essential factors in determining if a site is suitable for solar installation.

**12. A — Differences between product, performance, and workmanship warranties**
Differences between product, performance, and workmanship warranties need to be clearly explained so customers understand what is covered, for how long, and by whom.

**13. D — Critical loads that need to remain powered during an outage**
Critical loads that need to remain powered during an outage determine the required battery capacity and system design, making this assessment crucial for proper system sizing.

**14. C — Using conservative estimates for system production and utility rate increases**
Using conservative estimates for system production and utility rate increases prevents overpromising and builds credibility, leading to more satisfied customers.

**15. B — Current policies and any scheduled changes**
Current policies and any scheduled changes can significantly impact the financial return of a solar system, as changes to net metering can alter how excess production is credited.

**16. A — Primary purpose (backup power, self-consumption, or time-of-use optimization)**
Primary purpose (backup power, self-consumption, or time-of-use optimization) determines the appropriate battery size, configuration, and economic value proposition.

**17. D — Simple payback period**
Payback period provides a simple, easy-to-understand timeframe for when the system will have paid for itself, which is often the most intuitive financial metric for homeowners.

**18. C — HOA or historic district restrictions**
HOA or historic district restrictions can completely prohibit or severely limit solar installations, making this an essential early check to avoid wasting time on unviable projects.

**19. B — Explaining typical maintenance requirements and their associated costs**
Explaining typical maintenance requirements and their associated costs provides transparent information that helps customers make informed decisions and sets realistic expectations.

**20. A — Honestly explaining the limitations and suggesting alternatives if appropriate**
Honestly explaining the limitations with alternative recommendations maintains professional integrity and may lead to future referrals, even if the current sale isn't possible.

**21. D — Investment Tax Credit (ITC)**
The Investment Tax Credit (ITC) is typically the most significant federal financial incentive for residential solar installations, allowing homeowners to deduct a percentage of their solar installation costs from their federal taxes.

**22. C — Levelized Cost of Energy (LCOE)**
Levelized Cost of Energy (LCOE) calculates the present value of the total cost of building and operating a power plant over its lifetime divided by the total energy output, providing a per-kilowatt-hour cost figure for comparing different methods of electricity generation.

**23. B — Depreciation benefits**
Depreciation benefits are a critical component of commercial solar financial analysis as they allow businesses to recover the cost of their solar investment through tax deductions, significantly impacting the payback period calculation.

**24. A — Modified net metering**
Modified net metering typically provides retail rate credits for excess production within a billing period but compensates at a lower wholesale rate for net excess generation calculated on an annual basis.

**25. D — Cash purchase**
Cash purchase typically results in the highest return on investment because there are no financing costs or third-party ownership fees, allowing the customer to directly benefit from all incentives and all energy savings over the system's lifetime.

**26. C — No upfront capital investment required**
A Power Purchase Agreement requires no upfront capital investment from the customer, allowing them to benefit from solar energy without purchasing the system, which is particularly advantageous for those without sufficient capital or tax appetite.

**27. B — Modified Accelerated Cost Recovery System (MACRS)**
The Modified Accelerated Cost Recovery System (MACRS) allows businesses to deduct the cost of solar assets over a shorter period than the system's useful life, accelerating the tax benefits in the early years of ownership.

**28. A — Using PVWatts or similar industry-standard tools with conservative degradation factors**
Using PVWatts or similar industry-standard tools with conservative degradation factors represents an ethical approach to energy production estimates because these tools use validated algorithms and historical weather data to provide realistic production values.

**29. D — Time-of-use (TOU) rates**
Time-of-use (TOU) rates typically provide the greatest financial benefit from solar installation because solar production often coincides with peak rate periods, allowing customers to offset the highest-cost electricity.

**30. C — Market price volatility**
Market price volatility is the most critical factor when calculating SREC value because SREC prices can fluctuate significantly based on supply, demand, and regulatory changes, directly impacting the projected return on investment.

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