COMMERCIAL SOLAR IN WASHINGTON
CLIMATE FOR SOLAR?
SITE CONSIDERATIONS
COMMERCIAL ADVANTAGES

- SHADING
- ORIENTATION
- AVAILABLE SPACE
- ELECTRICAL CONCERNS
- ROOF/CONNECTION TYPE
SHADING

• CONTROLLABLE

• SELF-SHADING
ORIENTATION

• IDEAL = 32° TILT TO THE SOUTH

• <45° FROM TRUE SOUTH

@ 10°T = 7.7% LOSS
AVAILABLE SPACE

- AVAILABLE SPACE
- OBSTRUCTIONS
- SETBACKS
- ACCESS
- COVERAGE RATIO = 30-40%
ELECTRICAL CONCERNS

• CENTRAL INVERTER
  • CHEAPER
  • MANY GRID TYPES

• HIGH USAGE
  • DON’T GO OVER
  • METER AGGREGATION
CONNECTIONS

• MECHANICALLY ANCHORED

• BALLASTED
LOW MAINTENANCE

• REGULAR CLEANING

• ONLINE MONITORING
EXAMPLE 40KW SYSTEM

• 130 SOLAR MODULES
• 2600 FT²
• $100,000
INCENTIVES

• Federal

• State

• Local (Utility) Incentives
FEDERAL INCENTIVES

- INVESTMENT TAX CREDIT (ITC)
  - 30% UNTIL 2019
    - 26% IN 2020, 22% IN 2021
    - 10% ONWARD
  - NO MAXIMUM

EXAMPLE SYSTEM: $30,000 SAVINGS IN YEAR ONE
FEDERAL INCENTIVES

- ACCELERATED DEPRECIATION
  - POST-ITC BASIS
  - 25% TAX RATE
  - 20%
  - 32%
  - 19.2%
  - 11.52%
  - 11.52%
  - 5.76%

EXAMPLE SYSTEM: $3,500 SAVINGS IN YEAR ONE
($17,500 OVER 6 YEARS)
FEDERAL INCENTIVES

• BONUS DEPRECIATION

  • 50% 2016, 2017
  • 40% 2018
  • 30% 2019

EXAMPLE SYSTEM: $8,750 SAVINGS IN YEAR ONE
STATE INCENTIVES

• 75% SALES TAX EXEMPTION

• PRODUCTION INCENTIVE
  • $5,000 ANNUAL MAXIMUM
    • UNTIL 2020
  • $25,000?

EXAMPLE SYSTEM: UP TO $5,000 SAVINGS IN YEAR ONE
UTILITY INCENTIVES

How Net Metering Works
Photovoltaic Solar Example

1. Solar panels convert energy from the sun into electricity
2. An inverter converts the electricity produced by the solar panels from direct current (DC) to alternating current (AC) for use in your home, school or business
3. The energy is used in your home, school or business
4. A bi-directional meter measures energy used and excess energy produced

EXAMPLE SYSTEM: UP TO $3,200 ANNUALLY
UTILITY INCENTIVES

• 60+ UTILITIES IN WA

• DSIREUSA.ORG

• EXAMPLES:
  • SNOPUD
  • OKANOGAN
  • CHELAN
INCENTIVES OVERVIEW

MORE THAN 50% RETURN IN YEAR ONE
INCENTIVES OVERVIEW

MORE THAN 90% RETURN AFTER 6 YEARS

ITC 30%
MACRS 17%
Production 15%
Net Metering 19%
Bonus 9%
10%
CONCLUSIONS

• SUPERIOR SITE CONDITIONS
  • SHADING/ORIENTATION
  • ECONOMY OF SCALE

• MORE INCENTIVES
  • FAST(ER) PAYBACK
  • UPFRONT PAYBACK

• EASY CHOICE FOR WA BUSINESSES