The Business Case for Solar

Feb 28, 2012 – Bellevue, WA

Topics for Today

- How Solar Energy Works in Bellevue

- DOE Sun Shot Initiative

- Solar ROI

- Q&A

Speakers

Linda Irvine

Project Manager

Stanley Florek

CEO

Solar in Bellevue

Bellevue is 15% <u>sunnier</u> than Germany, the world leader in solar installations

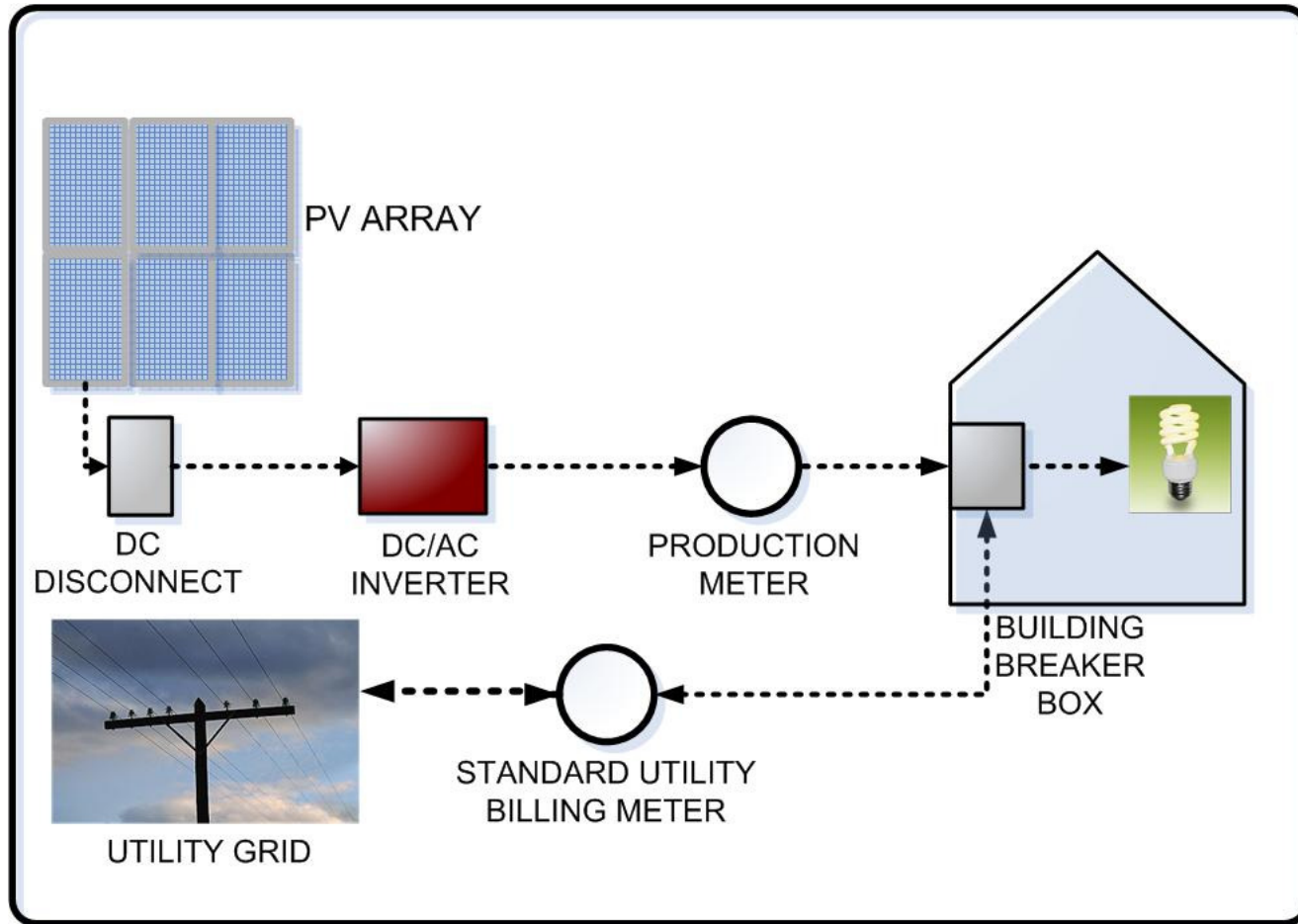PHOTO: DAVID JOHANSEN VASQUEZ

Solar Photovoltaic's Unique Values

- Silent and clean

- Low maintenance

- Long life

- Efficient transmission

- Integrates with the urban environment

- **Free fuel!**

How PV Works: System Diagram

PV ARRAY

DC DISCONNECT

DC/AC INVERTER

PRODUCTION METER

BUILDING BREAKER BOX

STANDARD UTILITY BILLING METER

UTILITY GRID

How PV Works: Units & Scale

☐ kilowatt (kW): instantaneous power

☐ kilowatt-hour (kWh): energy over time

☐ Installations are measured in kW

☐ Production is measured in kWh

☐ 1 kW of PV makes 1,000 kWh/yr

25 kW System

A small business could be zero net energy with a 25 kW system

How PV Works: Site Matters
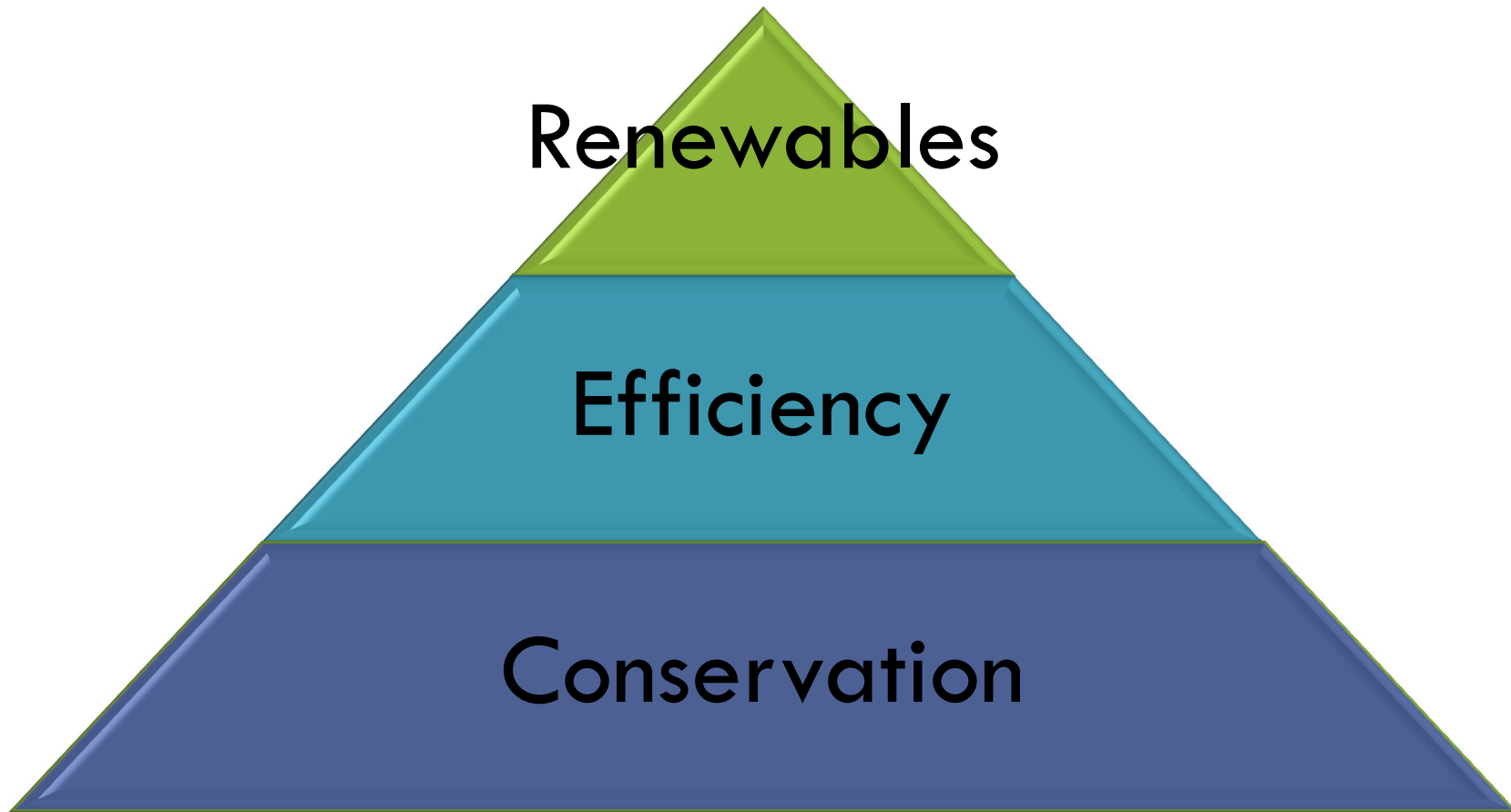

Lots of shade = Not Good

Future shade = Not Good

Roof in good condition = Good!
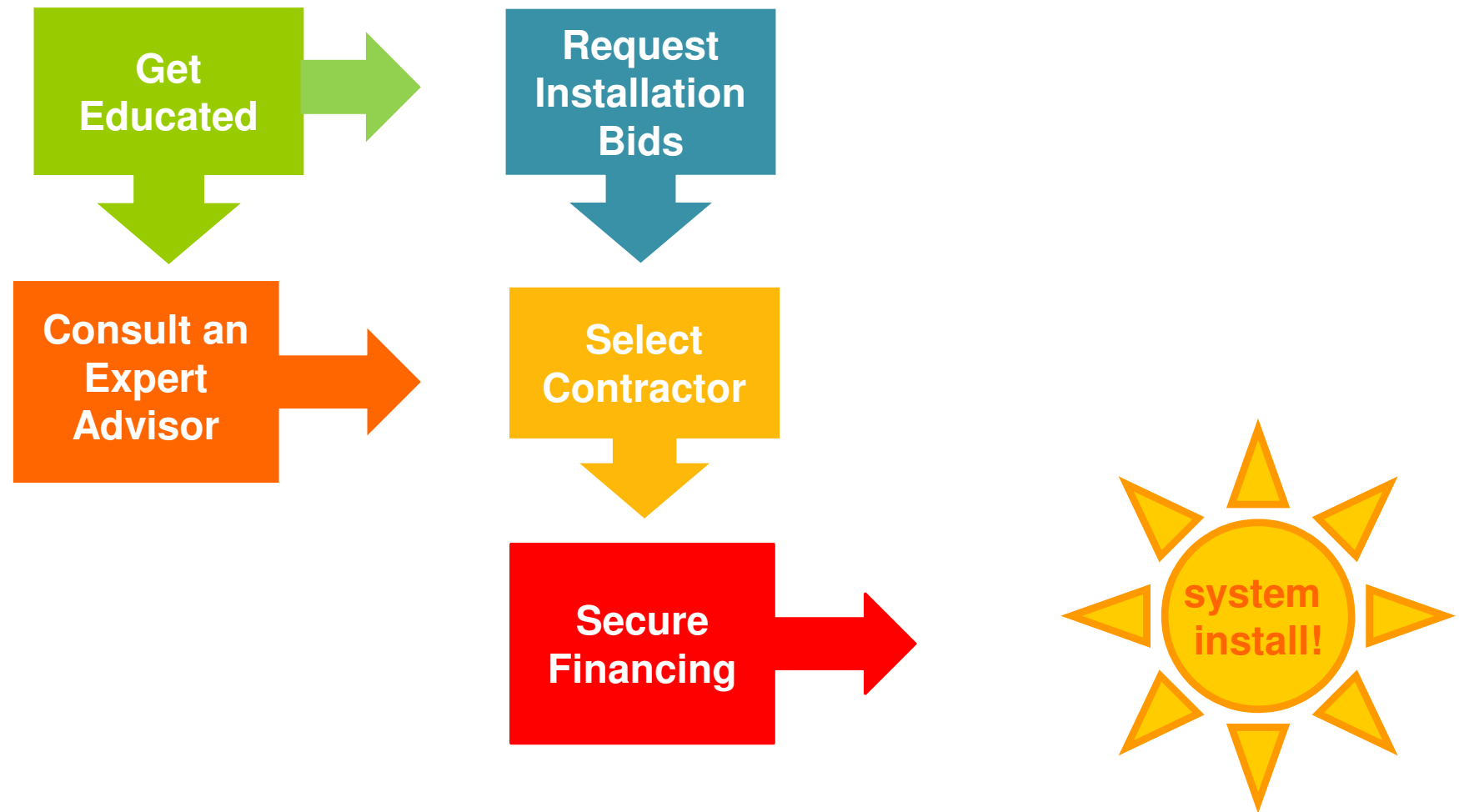
Facing South, East, or West = Good!

Solar is *part* of your energy solution

Renewables

Efficiency

Conservation

Northwest SEED - 2012

The Process of Going Solar

Get Educated

Consult an Expert Advisor

Request Installation Bids

Select Contractor

Secure Financing

system install!

Northwest SEED - 2011

DOE SunShot Initiative

- Improve Components and Supply Chain

- Reduce Grid Integration Costs

- Accelerate Deployment

- Rooftop Solar Challenge
  - Standardized permitting & interconnection
  - For Photovoltaic (pv) electric systems

Goal: Make solar energy cost-competitive without subsidy by 2020
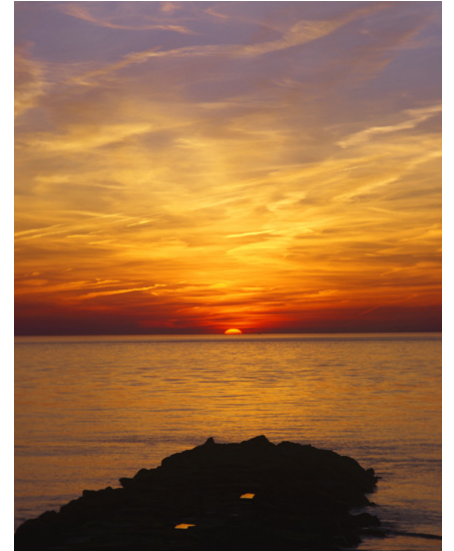
WA: Evergreen State Solar Partnership

- 4 jurisdictions to streamline, standardize permitting

- 4 participating utilities to streamline interconnection

- Offer standards statewide

- Currently: 2,000+ systems (PSE has over 1,000)

Goal: Double WA installations in 3 years

Market Movers

- Neighborhood-based purchasing campaigns
  - 50% of Seattle installs in 2011
- Financing & Incentives
  - Federal Tax Credit
  - State Production Incentive
  - Community Solar Opportunities
- UTC Distributed Gen. Study
  - Expand net metering

Capacity in WA rose 50% in 2011, to 12 MW Installed

2/22/2012

Falling Costs

Installed costs fell another 17% in 2011