# Solar Finance and Investment

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- *SEIA is the nation's largest solar trade group. Our work supports:*
  - *Federal policy support (ITC & related issues)*
  - *State policy support (net metering, interconnection)*
  - *Consumer protection (new code and enforcement process)*
  - *Market organization*
- SEIA's finance activities designed to:
  - *Open investment capital*
  - *Expand solar economy to underserved sectors*
  - *Facilitate financial innovation*

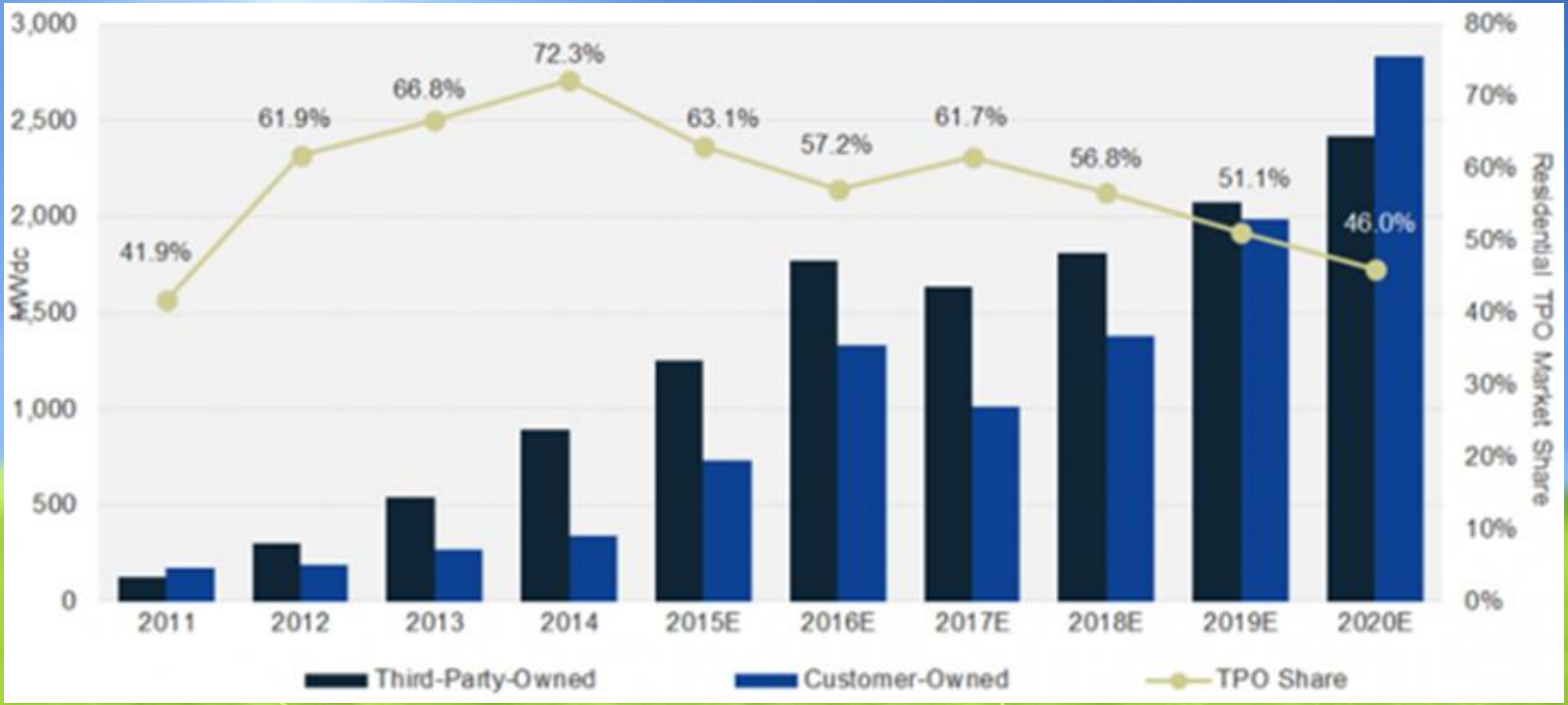
# Consumer Finance vs. Investment

- Sometimes the same, but usually not
- Consumer Finance – why?
  - Long-lived assets / need for long contract
  - Need to monetize tax credits
  - Maintenance and repair requirements
- Consumer Finance Options
  - Power Purchase Agreements (PPAs)
  - Leases
  - Loans
  - PACE (Property Assessed Clean Energy)
  - Community / Shared

# Consumer Finance vs. Investment, cont'd

- Investment – 3 basic elements to "capital stack"
  - Tax Equity
  - Sponsor Equity
  - Debt
- Tax Equity is most complex:
  - Requires active ownership
  - Comprehension of solar tech., state regs, structures
  - Complexities lead to limited supply
- 3 basic structures:
  - Partnership flip
  - Sale Leaseback
  - Inverted Lease

# Third-Party Ownership




2015 analysis indicates 72% in 2014

Forecasts decline to less than half of market by 2020

(But analysis was pre-ITC extension)

# Tax Equity – in More Detail

- Monetizes:
  - *30% ITC*
  - *Accelerated Depreciation*
  - *Some of the cash flow*
  - *Combined, equals about 45 – 50% of project value*
- Generally available only in larger quantities:
  - *E.g., $20 million or about 10-20 MW of projects*
  - *May be aggregated through a financing platform (e.g., Spruce Finance, Sunrun, etc.) but developers lose certain control and impact on cost-effectiveness*
- And only from the largest banks:
  - *Smaller banks and corporate entities don't have necessary expertise to assess risk*
  - *GAAP accounting issues can limit value of TE investment*

# Complexities in Consumer Finance

- Solar energy provides range of benefits:
  - *Savings against utility bills*
  - *100% emission free, minimal water usage*
  - *Valuable hedge against future fuel prices*

- *But*, solar benefits are **not** widely distributed. Generally limited to*:*
  - *High FICO customers who own their home*
  - *Commercial entities with highly rated credit*
    - *BBB- or higher*
  - *Municipal entities with high credit and bonding authority*

# Impact on Commercial Real Estate

- Most commercial real estate not owner-occupied
- Triple-net lease very common, where tenant pays:
  - Taxes
  - Energy
  - Insurance
  - Building improvements
- Most tenants are small, unrated entities (difficult to finance a long-life asset such as solar)
- PACE represents valuable instrument – solves owner-tenant split-incentive complexity and allows for long-term (20 yr) finance

# PACE – Some Insights

- PACE lien stays with the property - so the payments transfer automatically to the new owner.
- Underwriting is based on the property, not the borrower's credit
- Frees up cash because yearly savings from the project exceed yearly payments
- Can finance 100% of the project costs.
- PACE providers can use more relaxed underwriting standards because they are not federally insured financial institutions

# Contact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