ACEEE Presentation: Co-Selling EE and Solar

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Opportunities for Co-Sales of EE & Solar

Vary Dramatically by Region and Organization

CHICAGO INFRASTRUCTURE TRUST

EFFORTLESS ENERGY

BlueStar energy solutions

Organization: Chicago Infrastructure Trust

Location(s): Illinois

CHICAGO INFRASTRUCTURE TRUST

CIT is a project development 501c3

Mission: *To assist the people of the City of Chicago, the City government, its Sister Agencies and private industry in providing alternative,* ***innovative financing and project delivery options*** *for transformative infrastructure projects*

Energy

Transportation

Development

Telecommunications

Energy Program

CHICAGO INFRASTRUCTURE TRUST

Product Offerings

- Energy Efficient Buildings
- Energy Efficient Streetlights
- Solar
- Combined Heat and Power
- Energy Storage
- Electric Vehicles
- CNG Vehicles

Clients

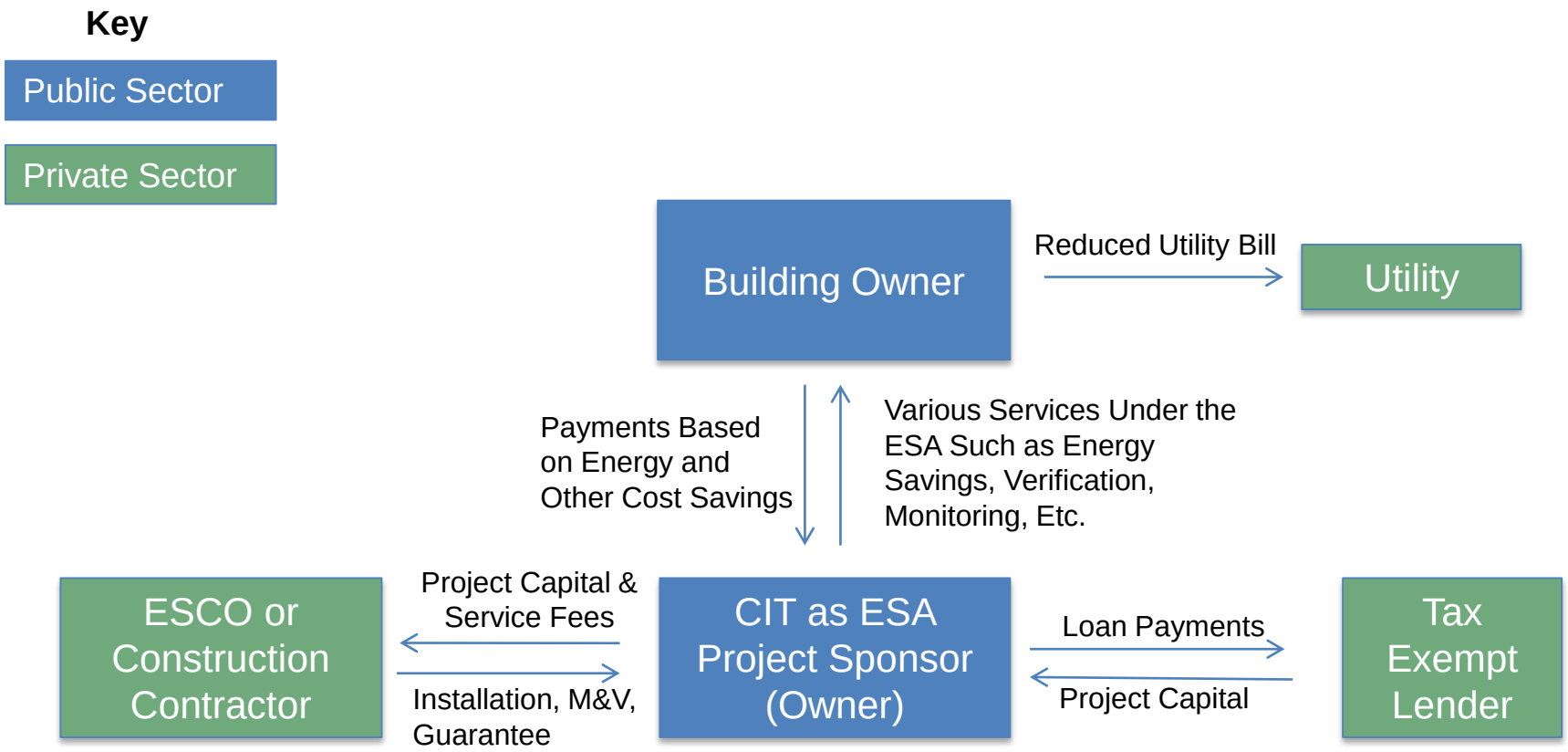
- City of Chicago
- Chicago Public Schools
- Chicago Park District
- Chicago Department of Water Management
- Chicago Transit Authority
- Chicago Housing Authority
- Museums
- Zoos
- Universities
- Hospitals
- Suburban, Chicago-area municipalities and sister agencies
- Other not-for-profits and public-serving entities

Sales Insights

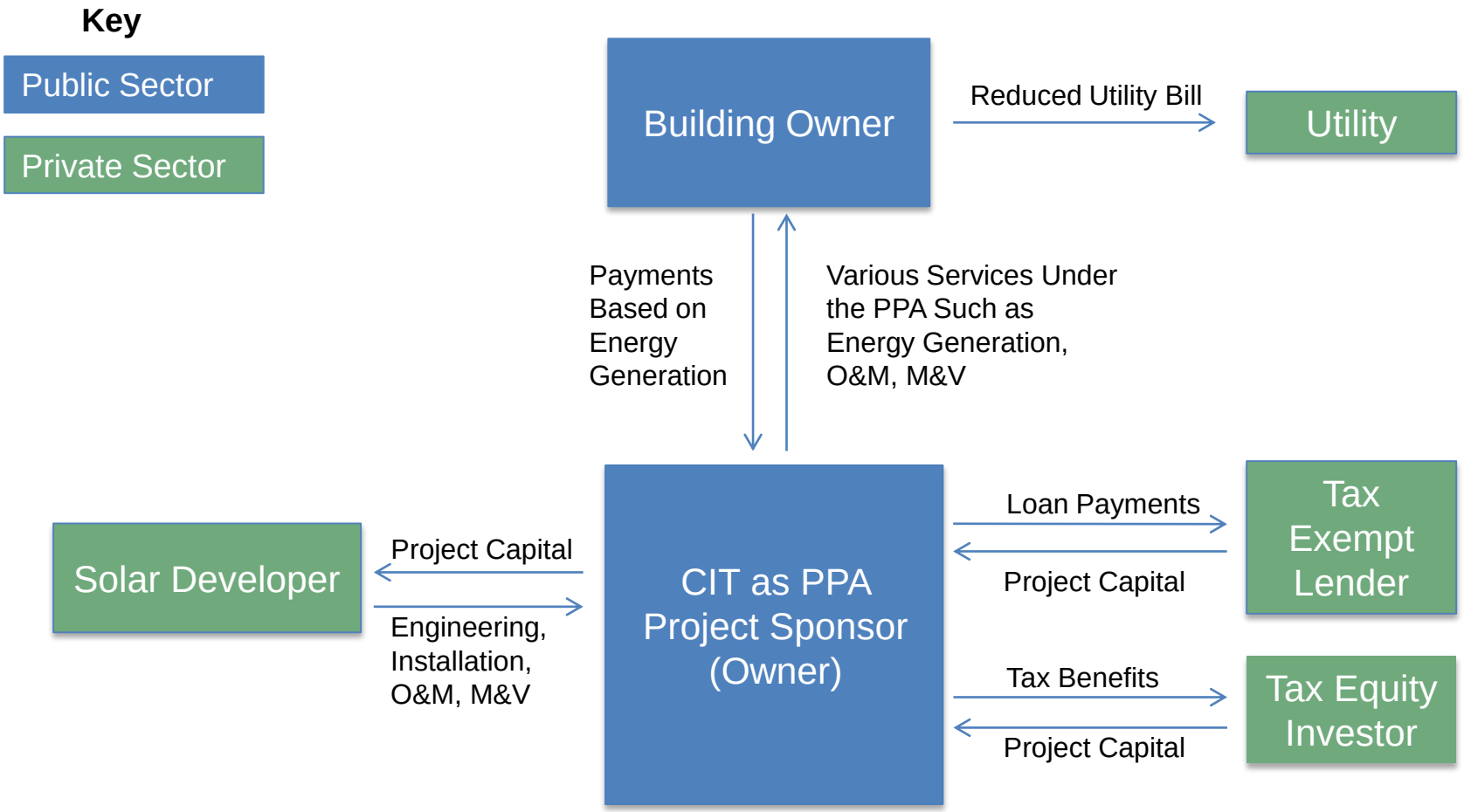
- **Multiple products can be pitched to new clients, creating synergies in sales time and costs**
  - Public-serving clients have no expertise in energy, appreciate the Trust for its ability to tailor the right set of solutions for their facilities, know the right market timing for products, finance off-credit and off-balance sheet, and run a competitive procurement process for them

- **Project development is still opportunity-based**
  - Primary criteria for projects moving forward is cost-effectiveness
  - Most clients have huge cost-effective EE opportunities
  - Clients are wary about solar from many cost-ineffective false starts
  - Solar currently **NOT COST-EFFECTIVE** in Illinois, so must pair with batteries and win the Illinois Power Authority's 2015 or 2016 SREC Markets (or hold breath for IL Legislature RPS Fix Bill)
  - Urgency of solar opportunities takes priority over EE, so can drive client relationship development at the outset
  - Growing number of clients have already exhausted EE opportunity (or have done low-hanging fruit, which ruins cross-subsidization for our large, financed projects)
  - Many clients don't have the thermal load to support CHP

Efficiency Services Agreement (ESA)



Power Purchase Agreement (PPA)



Product Insights

- **Each product generally uses different contractors, with a few exceptions:**
  - Solar & CHP (Tax Equity for PPAs)
  - Solar & Batteries (Tax Equity from batteries subsidizes solar)
  - Efficiency & CHP (Heavy mechanicals)
- **EE financing structures learning from solar**
  - ESA is essentially a PPA for negawatts
  - Contingent payment structure where variable energy savings payments flow to Trust make it off-credit and off-balance sheet
  - >50% of project needs to be non-stipulated savings
- **Each product financed separately**
  - Solar and CHP require tax equity financing to monetize ITC, whereas ESAs use debt + guarantees
  - Capital costs are paramount
    - EE – debt compared to bond rates
    - Solar – need to win SREC markets
  - Solar's new low-cost Yield Co financing structures make it harder for Trust partners to take advantage of Trust's tax-exempt debt issuance ability

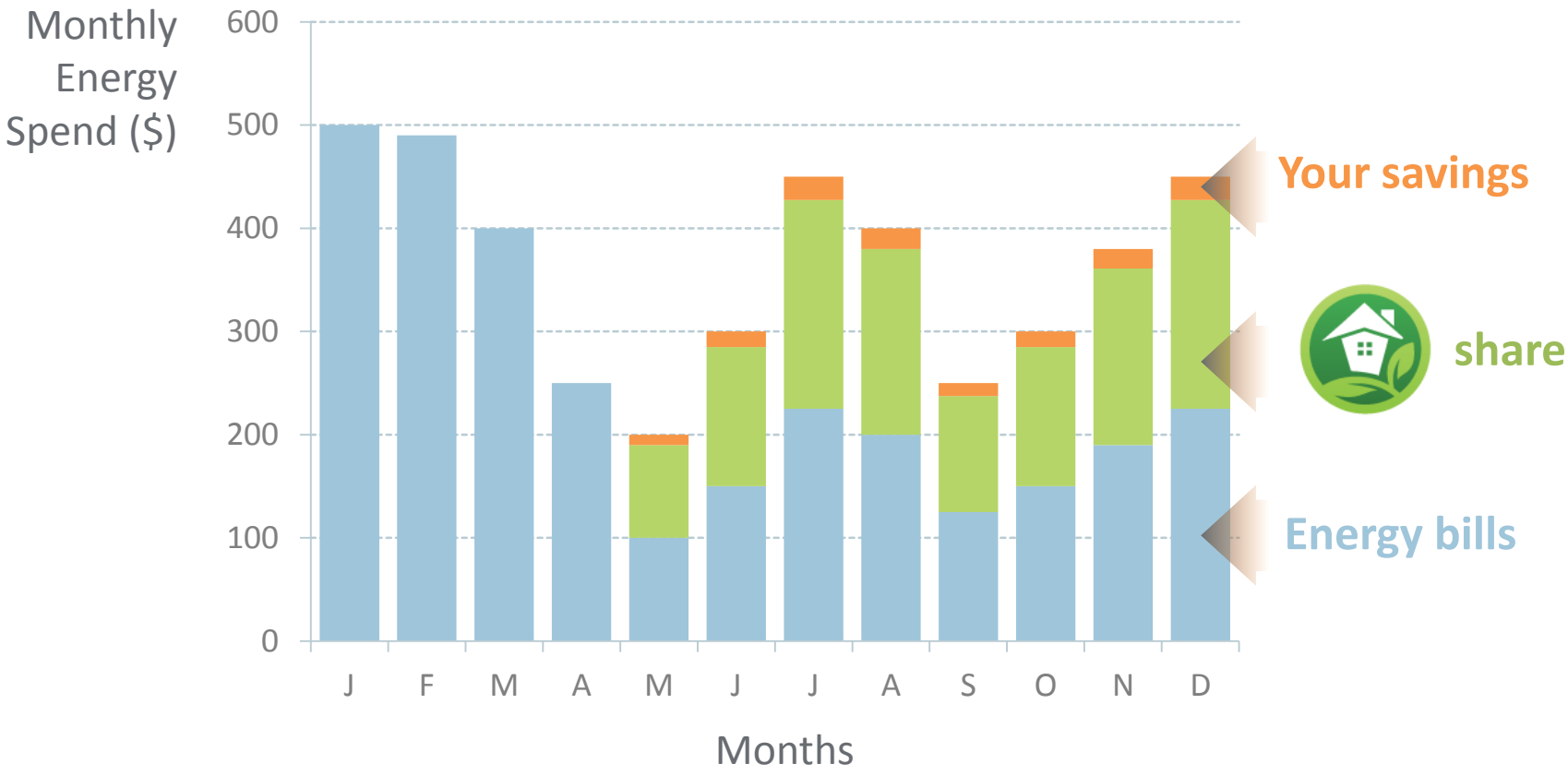
Organization: Effortless Energy

Location(s): Midwest, Hawaii

EFFORTLESS ENERGY

Home **E**fficiency **S**ervices **A**greement **(HESA):**

We pay for upgrades and share in the savings



EFFORTLESS ENERGY

HESA features

- Service contract, not a loan. Like a PPA for negawatts.
- Does not alter homeowner's ability to borrow
- Energy savings fluctuates with weather, occupancy, and behavior
- Up to 15 year agreement term
- Can be transferred to next homeowner if home is sold
- Can be paid off at any time
- Energy Star rating is capitalized into value of home (up to 14% increase)

EFFORTLESS ENERGY

Insights

- **EE can learn from home solar securitization**
  - + HESA is like a PPA for negawatts
  - + Well-accepted “watt meter” in generation can be recreated in EE using real-time data from smart devices and smart meters
  - + Commercial wind and solar finance have accepted models for modeling variance in wind and solar resource; we can use those same approaches for modeling weather, occupancy, and behavior risks
  - – Home solar securitization only on very stable cash flows (i.e., leases), so closely watching how home PPAs will evolve
  - – Need more, better, standardized data on actual performance of EE measures for HESA market to grow
  - – Need more smart meters, easy Green Button data, and better smart home APIs

Smart Home Efficiency Upgrades

Midwest

Hawaii

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Insights

- **Solar isn't cost-effective in all regions, and cost-effective packages of EE measures vary by region**

- **Primary contractor partners vary by region**
  - In Midwest, HVAC contractors are main sales agents
  - In Hawaii, solar PV companies or anyone with plumbers on staff are main sales agents since solar thermal is the biggest ticket efficiency measure there

- **$500 Solar PV referrals can subsidize EE sales costs**
  - EE has lower total cost-effective packages than solar (by 5-10x) in markets where solar can beat the grid power price, so CAC for EE is high relative to the LTV of the customer unless you add cross-sales benefits of DR, solar referrals, etc.

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Insights

- **Energy Efficiency is more than just a bolt-on solution**
  - + “Smart home” devices are driving major interest in home EE
  - + Home comfort very attractive in Midwest, not Hawaii
  - + Proven home value increases with EE (specifically Energy Star, per Kahn UCLA study)
  - – EE is more invasive than solar
  - – EE doesn’t offer same bragging rights as a shiny object on your roof

Organization: Blue Star Energy (now AEP)

Location(s): HI, PA, NJ, CA, CO

BlueStar™ energy solutions

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