

# SSA 2023 FALL CONFERENCE & TRADE SHOW



## Evaluating Your Solar Portfolio

Maximizing Solar ROI for Self Storage



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# About ESA



## Who We Are

- Clean energy consulting, development, and engineering firm headquartered in Orlando, FL
- Offices in Washington D.C. and California, providing services nationally

## What We do

- Evaluate real estate portfolios to identify the best solar options for each location
- Develop and engineer projects to get approvals with governments and utilities
- Manage implementation and construction



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# Value Add Services



## Core Focus Areas

### *Clean Energy Finance*

- + Structured portfolios
- + Partnership structures
- + Incentive processing
- + Project financing

### *Engineering*

- + Feasibility analysis
- + Design sets
- + Interconnection analysis
- + Construction management

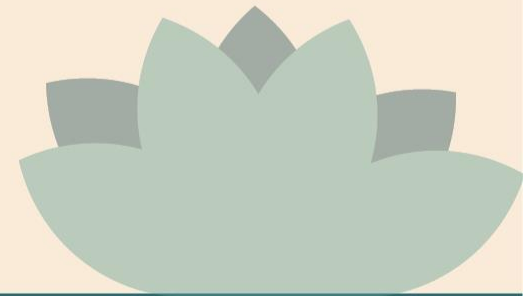


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## SECTION 1

Self Storage and Solar



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# Market Feedback



**Why** are they doing it?

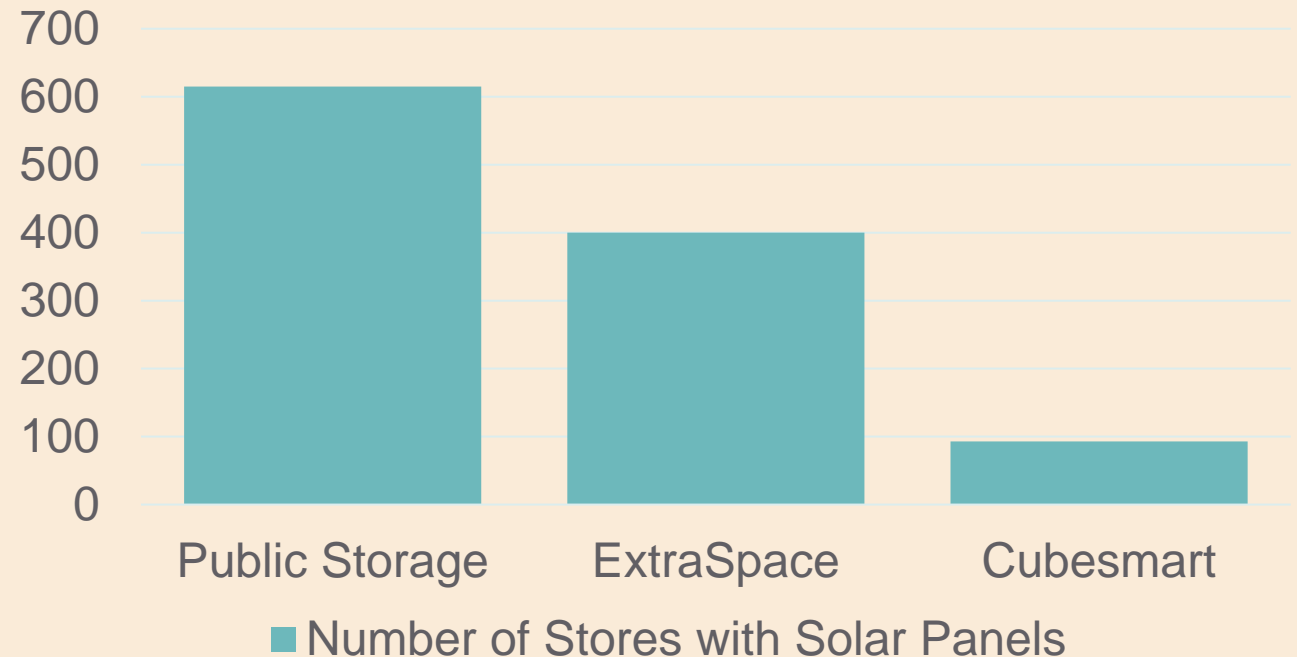
**How** are they doing it?

**Where** are they doing it?

*“We aren’t looking at solar, because we don’t have an ESG program like the bigger guys.”*

-Self Storage Operator, TX

**Solar and Self Storage by the Numbers**



# Financial Outlook



## Inflation Reduction Act Summary

- Extended investment tax credits for **10 years**
- Increased base tax credits
- Added new bonus tax credits
- Tax **credit transfers** between unrelated entities
- Created option for **non-profit** 501c3 and others to receive tax credit as a direct payment
- Increase carryback for tax credits to **3 years**

	Pre-IRA	Today
Base Investment Tax Credit	26%	30%
Additional Tax Credit (Adders)	0%	30%
MACRS Depreciation (2023)	80%	80%
MACRS Depreciation (2024)	60%	60%

# Three Solar Structures



## You Own It

## They Own It

	Direct Ownership	Third Party Ownership	Community Solar
Invest upfront capital	✓	X	X
Receive tax incentives	✓	X	X
Receive electric bill savings	✓	✓	X
Receive environmental benefits	✓	✓	X
Receive rent for your roof space	X	X	✓

# Evaluation Challenges



**13.7** months

Average time to evaluate and execute on a solar action plan. (Does not include implementation time).

**Companies fail at evaluating solar for *three* main reasons.**

- Missing Key Players
- Incorrect Information
- Wrong Evaluation Process



# Common Mistakes



## Problem



## Diagnosis



## Result

Did not include facilities personnel



**Missing Key Players**



The roof needs to be replaced before solar

Choosing one site at random to evaluate



**Wrong Evaluation Process**



Solar “didn’t make sense” and failed to look at other sites

No investigation of the utility policy



**Incorrect Information**



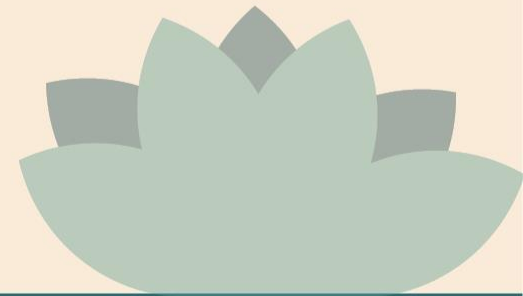
IRR dropped from 12% to 4%

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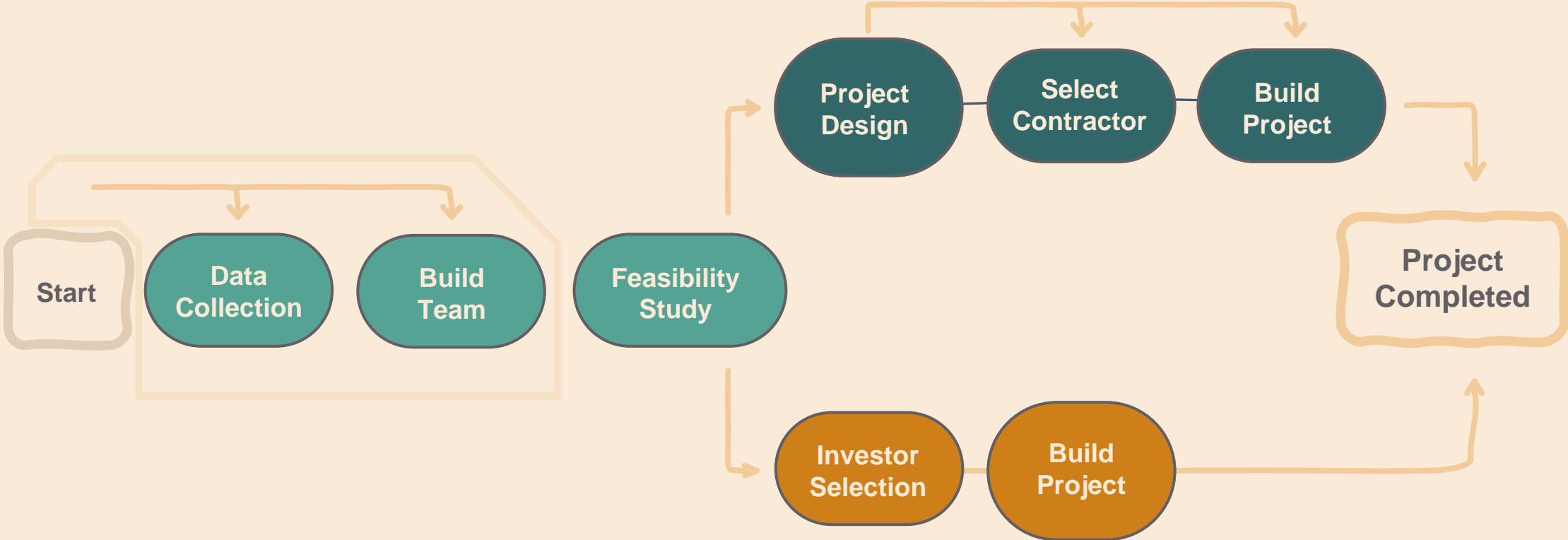
## SECTION 2

Evaluating Your Portfolio



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# A Model for Success



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# Building a Team



**Owner/Operator**

External Team

Internal Team



**Solar Developer**



**CPA**



**CFO/Controller**



**Solar Contractor**



**Outside Counsel**



**Facilities Team**



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# Building a Team



Common Questions	DEVELOPER	CONTRACTOR
How do we know if solar will pencil financially?	✓	x
Which of our facilities are best to look at for solar?	✓	x
What tax credits does the project qualify for?	✓	x
How can we finance the system?	✓	x
Will the utility allow us to install a solar system?	✓	x
What will it cost to install the system?	x	✓
What permits do I need for solar?	x	✓
How long will construction take?	x	✓



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# Solar Scorecard



## Solar Financial Model Metrics

	Utility Model	Capital Model	Performance Model
Inputs	<ul style="list-style-type: none"> <li>+ Electric Rate Structure (before and after solar)</li> <li>+ Avoided Cost (Solar Impact)</li> <li>+ Average Escalation</li> </ul>	<ul style="list-style-type: none"> <li>+ Capital Structure</li> <li>+ Tax credits, incentives, depreciation</li> <li>+ Interest expense</li> </ul>	<ul style="list-style-type: none"> <li>+ Annual energy generated</li> <li>+ Expected degradation</li> <li>+ Operating costs</li> </ul>
Outputs	Electric Bill Savings	Cashflow	Investment Indicators
	<ul style="list-style-type: none"> <li>+ NOI Increase (Electric Savings)</li> </ul>	<ul style="list-style-type: none"> <li>+ Project cashflow</li> </ul>	<ul style="list-style-type: none"> <li>+ IRR, Payback, NPV</li> </ul>

# The Golden Rule



## The Golden Rule

No two locations are *the same*.

## Scan Your Portfolio for Opportunity

### *Top Three Factors to Consider*

1. Highest electric utility unit cost (\$/kWh)
2. Highest tax credit eligibility
3. Newest roofs

	California	Ohio	Florida
System Size	105 kW	105 kW	105 kW
Total CAPEX	\$336,000	\$301,000	\$305,000
Year 1 Savings	\$34,327	\$11,562	\$14,933
IRR	19.14%	8.73%	12.10%

# Qualifying Your Sites



## ✓ Financial

Determine preliminary IRR for each site

## ✓ Technical

Maximum system size for expected energy use

## ✓ Regulatory

Explore options for third party agreements

## ✓ Energy Cost

Cost of electricity per kWh by each location

## ✓ Emissions

Estimate environmental impact of solar generation

## ✓ Utility Policy

Determine impacts of utility policy on projects

## ✓ Incentives

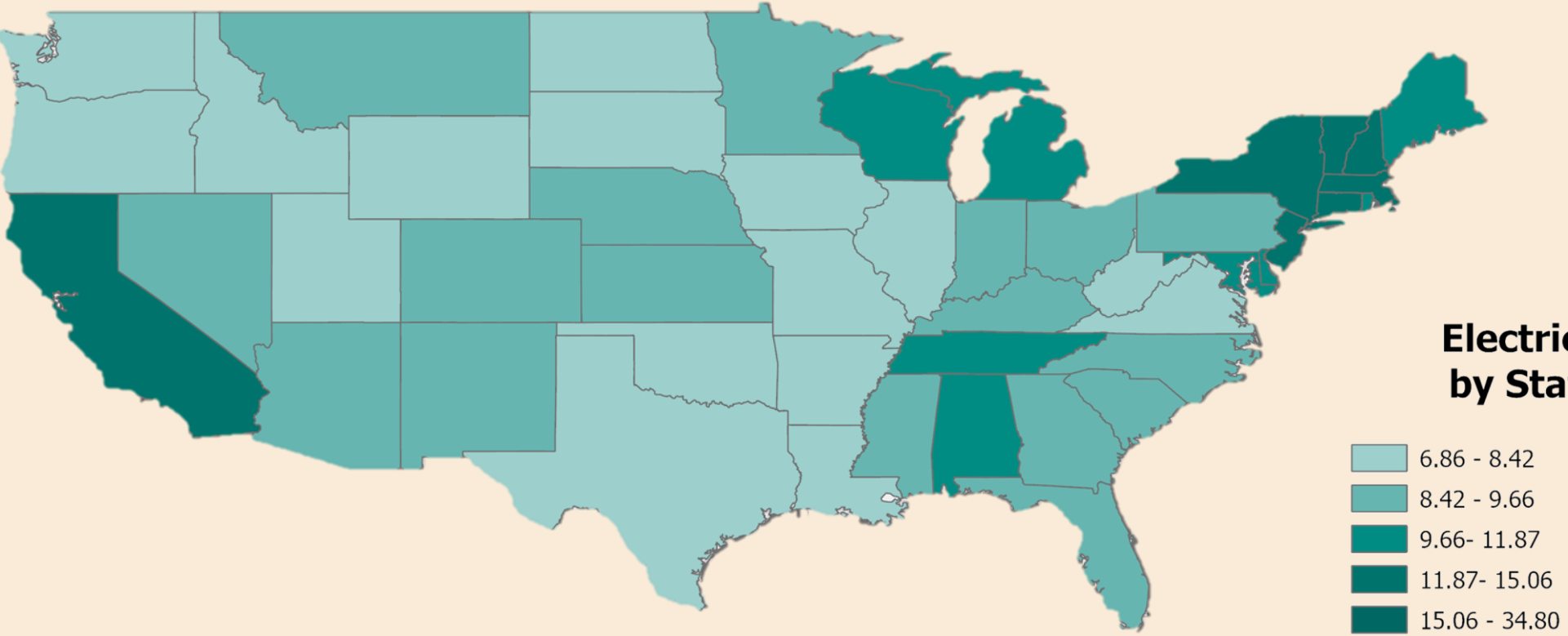
Determine Eligibility for tax credits and local incentives

## ✓ Facilities

Age of the roof, building, and on site infrastructure



# Targeting Potential



**Electricity Prices by State ¢/kWh**

- 6.86 - 8.42
- 8.42 - 9.66
- 9.66 - 11.87
- 11.87 - 15.06
- 15.06 - 34.80



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# SECTION 3

## Solar Modeling Examples



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# Case Study #1



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# SECTION 4

## Frequently Asked Questions



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# Questions?



What do I need to get started on a solar feasibility analysis?

Are there certain states that we should *not* look at?

How long does a power purchase agreement last?

Will solar work with my operating agreement structure?

Does *all* of the energy get sold to the grid?

How do I know what tax credits I am eligible for?



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## Get in Touch With Our Team



**Anne Shirley Lewis**

*Account Executive*

813-453-9423

aslewis@esa-solar.com



**Jeff Dixon**

*Account Executive*

386-341-9371

jdixon@esa-solar.com



**Rachel Roberts**

*Account Development Representative*

512-630-7677

rroberts@esa-solar.com



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