



On-Site Solar, Storage and the IRA: Opportunities and Challenges

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Commercial Solar
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David Zelasko – Kokosing Solar

- »» Commercial Solar Consultant
- »» 10 Years in the Solar Industry
- »» Solar Design
- »» Financial Modeling



ABOUT KOKOSING

- Family Owned, founded in 1951
- 70+ Years in Construction, 20+ Years in Solar
- HQ in Central Ohio
- Working Throughout the Midwest and Mid-Atlantic U.S.
- Renewables, Industrial Manufacturing, Heavy Civil, Water/Wastewater, Transportation, Marine
- Premier Projects: LG Honda Jeffersonville, Ascend Elements, USACE Soo Lock, Brent Spence Bridge

ENR
Engineering News-Record

TOP 400
CONTRACTORS

60th



WHY GO SOLAR

Lower Electric Bill
Hedge Against Rising
Costs
Showcase
Sustainability Efforts
Engage Employees



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Benefits of Battery Energy Storage

- » The Battery Value Stack
- » Bill Savings – Energy, Capacity, Transmission
- » Revenue – Ancillary services to the grid
- » Resiliency – back up your operations in a grid outage

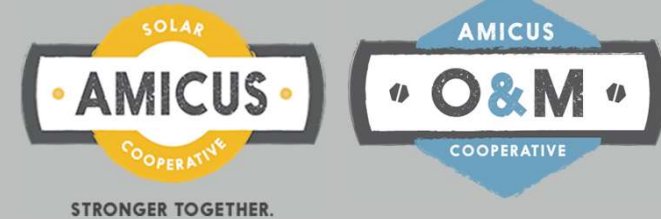


THE PATH TO SUCCESS:
SELECTING THE RIGHT PARTNER



PARTNER CONSIDERATIONS

- Specialized Contractor vs. General Trades
- Contracting Strategy (Turnkey EPC vs. other)
- Industry Credentials
- Solar Engineering Expertise
- Past Work Experience
- Reputation & Longevity
- Execution Strategy (self-perform vs. subcontract)
- Compliance with IRA Requirements
- Operations & Maintenance



STRONGER TOGETHER.



PV Installation Professional



SOLAR ETHICS PLEDGE
GREEN ENERGY OHIO - SOLAR UNITED NEIGHBORS



OPERATE WITH
LEADERSHIP

An aerial photograph of a solar farm. The solar panels are arranged in long, parallel rows. A large, semi-transparent circular graphic is centered over the image, containing the main text and logo. Several yellow maintenance vehicles are scattered throughout the solar farm area.

THE PATH TO SUCCESS: UNDERSTANDING INFLATION REDUCTION ACT

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2022 Inflation Reduction Act



- Project Under 1MW AC
- 30% for 2023 – 2033 – Long term planning and certainty

Adders for Projects that meet Labor Requirements

- 10% Bonus for Domestic Content
- 10% Bonus for Siting in Energy Community
- **Additional 30% (10% & 20%) for Low income communities and low income residential housing
 - This program is capped and has a competitive application process

- >1MW AC (Beginning after 60 days treasury guidance)
- 6% Base ITC
- 2% Bonus for Domestic Content
- 2% for Siting in Energy Community

Adders for Projects that meet Labor Requirements

- 24% Base ITC
- 8% Bonus for Domestic Content
- 8% Bonus for Siting in Energy Community
- **Additional 30% (10% & 20%) for Low income communities and low income residential housing

What this means for tax exempt entities

- Direct Pay Incentive
 - 990-T
- PPAs more than just Section 48 ITC
- Local Gov't - Caution regarding use of tax exempt bond financing
- New programs targeting LMI populations





**THE PATH TO SUCCESS:
UNDERSTANDING
PROJECT TIMELINE**

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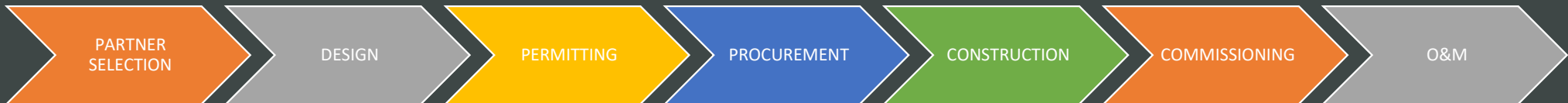
PROJECT TIMELINE

Typical Critical Path

- System Design
- Permitting & Interconnection Approval
- Long Lead Equipment and Materials
- AC Electrical Construction
- Startup & Commissioning, Utility PTO

Other Factors

- Internal Gating
- Financing





THE PATH TO SUCCESS:
OPTIMIZED SYSTEM DESIGN

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DESIGN CONSIDERATIONS

»»» What are the conditions of satisfaction?

»»» Best ROI

»»» Maximum Energy Production

»»» Maximum Demand Reduction

Optimization!

»»» Energy Load Profile

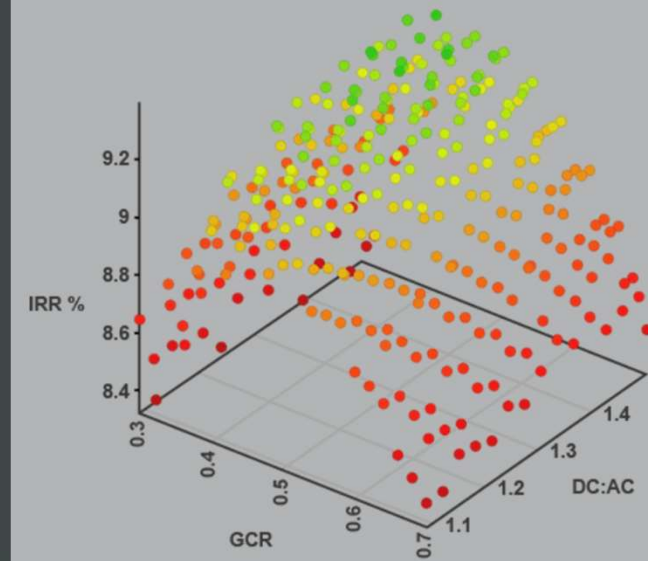
»»» Roof Condition, Structural Adequacy, Warranty Preservation

»»» Available Ground Space

»»» Interconnection Location & Means

»»» Equipment Selection / Supplier Due Diligence

»»» Supply Chain Constraints





**THE PATH TO SUCCESS:
WORKING WITH THE UTILITY**

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UTILITY COORDINATION

- Regulated Utilities vs. Municipal Utilities vs. Rural Cooperatives
- Evolving Standards
- Increasing Length of Approval Queues
- System Size Limitations
- Net Metering / Export Thresholds
- Multiple Meters



**THE PATH TO SUCCESS:
NOW THAT IT'S UP
AND RUNNING...**

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ONGOING OPERATIONS

- Preventative Maintenance & Equipment Warranty Preservation
 - Levels of O&M Service
 - O&M Provider vs. In-House Team
 - Corrective Maintenance - Common Failure Modes
 - DAS / System Monitoring
- 

THANK YOU!



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David Zelasko has over 10 years in the solar industry. He started in solar in 2014 as an installer for residential and small commercial projects in Ohio and West Virginia. David joined Kokosing Solar in 2015 as a Solar Consultant, and since his start has helped over 250 homeowners, non-profits, and businesses go solar. David specializes in optimizing solar designs based on customer goals and educates customers on Solar's impact on their electricity bills.