



Government Finance Solutions

A DIVISION OF DAWOOD



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ENGINEERS ▶ PLANNERS ▶ SURVEYORS

The  
Economics of  
Solar Energy  
Projects



# Agenda

- The Energy Portfolio of Pennsylvania
- Green Energy Policy
- Financial Viability of Green Energy
- Solar Energy Project Finances
- Green Energy as a an Economic Development Tool
- Near-term environment for projects in PA
- Project Process from Concept to Operation



# The Energy Portfolio of Pennsylvania

- Coal
- Oil
- Natural Gas
- Nuclear
- Renewables



Pennsylvania is the #1 Electricity Exporter in the US – 85.5 Million Megawatt Hours

# Green Energy Policy

- US goal of 25GW of solar by 2025 a 200% increase
- The Commonwealth has committed to 50% solar energy usage for its own energy needs
- New incentives for development in the form of tax credits
- Electric Vehicle conversion
- Grid Modernization
- Battery Storage



# Financial Viability of Green Energy



- 10 years ago a solar panel produced 10 times more and produced 75% less power
- New legislation provides a 30% tax credit +
- Rising cost of electricity (gas) makes solar more competitive
- Distributed Generation provides a price hedge
- Permitting and grid review cause project delays

# Solar Energy Project Finances

- Development costs
- Private capital available and thirsty for projects
- Power Purchase Agreements create financeable revenue streams of 20-30 years
- Public and nonprofit entities cannot benefit from the tax credits
- Favorable electricity costs for development

**30%**  
RENEWABLE ENERGY  
**TAX CREDIT**  
AVAILABLE NOW



# Green Energy as an Economic Development Tool

- Cheap energy is a strong attribute
- Carving out solar development in redevelopable areas
- Additional Tax credits in Brownfields and LMI Census Tract areas
- Use existing infrastructure



# Near-term environment for projects

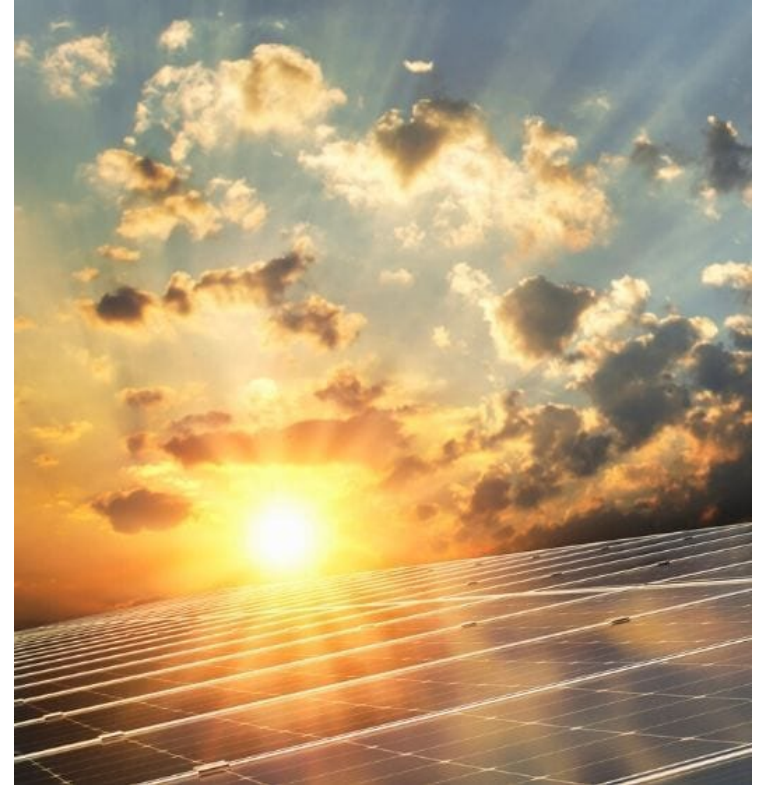
- Many developers seeking to paper projects
- PJM Queue effectively closed for Utility Scale Projects
- Supply chain constraints for all projects
- Many Distributive generation projects underway
- Community Solar Legislation coming
- Strong public involvement pushback fueled by misinformation and poor project planning





# Project Process from Concept to Operation

- Developer Reviews Site Viability
- Utility Grid Capacity Approval
- Municipal Approval
- Site Preparation
- Construction and Interconnection
- Operation for 30+ years
- Regular Maintenance and Monitoring



# Action Steps

- Review City and Authority Assets
- Review Electricity Rates
- Talk with developers
- Determine Investment vs. Monetization
- Create a Renewable Energy Strategy
- Prepare for More Development





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Questions?

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