



HELIO SAGE
WISDOM IN SUN

IARW North Atlantic Chapter Meeting:
An Overview of Solar Energy Opportunities
in the North Atlantic Region



CONTENTS



- Why Solar? Why Now?
- Your Solar Options
- Solar Policy Overview
- Installation Video

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INTRODUCTION

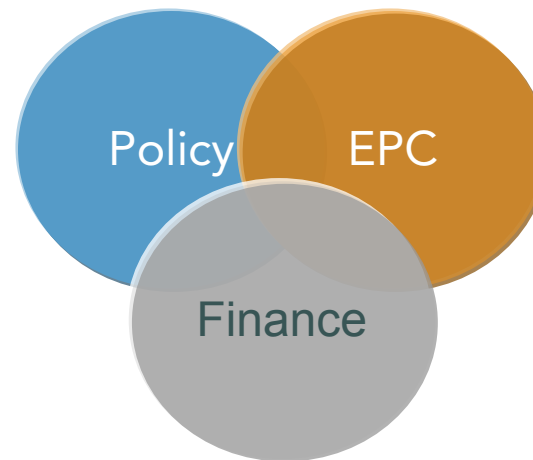


About HelioSage

- A solar energy project developer
- Commercial, municipal, and education clients
- Generating power in 3 states
- Contracts across 8 states

Our History

- Founded by the principals of Greenlight Energy, Inc.,
- Greenlight: a large scale wind energy project developer
- 6,000 MW development pipeline; projects in 15 states
- \$500MM in financed projects (i.e. built)
- Greenlight sold to BP Alternative Energy in 2006



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WHY SOLAR? WHY NOW?



Solar reduces operating costs.

Solar provides a hedge against volatile and rising utility costs.

Solar is incentivized at the federal, state, and local level.

Solar is clean, renewable power.

Solar provides marketing opportunities.

GOOGLE



JOHNSON & JOHNSON



STAPLES



WAL-MART



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OPTIONS FOR "GOING SOLAR"

Host a System

- Third party ownership
- No capital outlay
- Discounted power price

Types of Hosting:

- Power Purchase Agreement
- Roof or Land Lease Agreement

Buy a System

- Capital outlay
- Free power on day 1
- Federal & State incentives
- Rapid investment recapture



PROJECT CONSIDERATIONS

Host a System

- No capital outlay
- Long term contract
- Energy hedge
- Energy savings
- Find the right partner

Buy a System

- Available capital?
- Available tax appetite?
- Non-core business; ownership risk
- Find the right partner



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POTENTIAL PITFALLS, SOLUTIONS

Pitfalls:

- Market full of new entrants and start-ups
- Fragmented market, differences in every state
- Multiple vendors with various motivations
- Fluid incentive markets; boom & bust

Solutions:

- Understand risks/rewards of owning and hosting a solar project
- Choose the qualified partner who you trust

**"2 out of 3
projects never
get built"**



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VARIOUS INCENTIVE MECHANISMS

- **Tax Incentives**

- Federal Investment Tax Credit (ITC), 30% of project cost
- Federal Modified Accelerated Cost Recovery System (MACRS)
- State Sales & Property Tax Credits, Exemptions

- **Feed-in Tariff (FiT)**

- Direct, fixed long-term contract for power generated by the system

- **Solar Renewable Energy Certificates (SRECs)**

- Tradable, non-tangible commodity designed to assign monetary value to the environmental benefit of 1 MWh of electricity generated by solar
- Risk of market over-supply (e.g. PA, NJ)

- **Direct Rebates or Grants**

- Can be capacity-based (CBI) ... \$/kW
- Or performance-based (PBI) ... \$/kWh
- Programs are often fleeting; quick to run out of funding



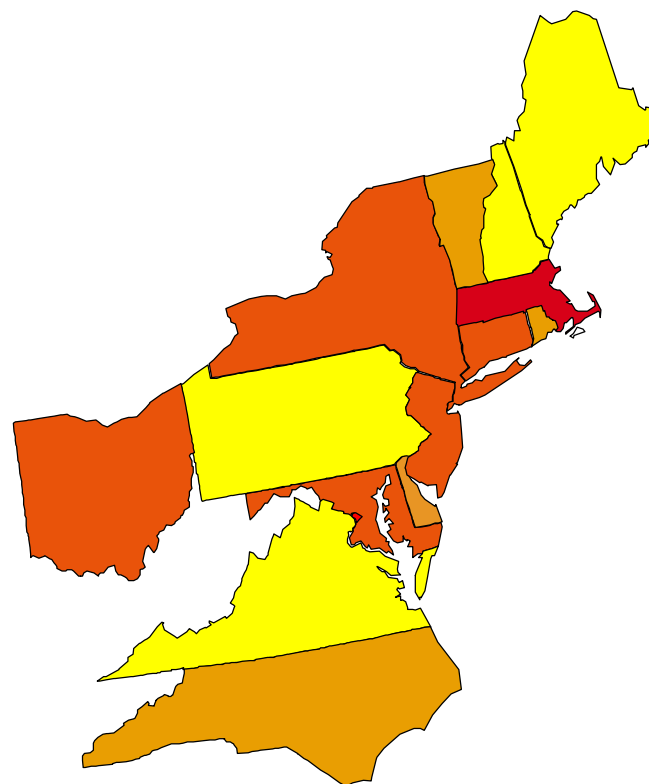
SOLAR POLICY: "HEAT MAP" NORTH ATLANTIC REGION

U.S.

- MA: A
- DC: A
- NJ: A-
- CT: A-
- OH: A-
- MD: A-
- NY: B+
- DE: B
- VT: B
- RI: B-
- PA: C+
- ME: C+
- NH: C
- VA: C-

Canada

- ON: A
- QC: C



SOLAR POLICY: MARKET UPDATES

NORTH ATLANTIC REGION

US

- New Jersey
 - Robust SREC program now facing rapid oversupply, market concerns
- Connecticut
 - Massive energy bill passed in June
 - Creation of new “ZREC” market and other solar incentives
- Massachusetts
 - Very successful SREC program, though some growing concerns with interconnection, net metering, and eventual SREC oversupply.
- Delaware
 - Modest SREC market soon to be bolstered by higher targets in Jan 2012
- DC
 - Modest SREC market soon to be bolstered by higher targets in Jan 2012





SOLAR POLICY: MARKET UPDATES

NORTH ATLANTIC REGION

US

- New York
 - With other policy issues now aside, NY likely to pass massive solar legislation in Q1 2012
- Pennsylvania
 - Large SREC oversupply & modest RPS targets have put market on temporary hold
- Ohio
 - New SREC market looking strong for in-state projects
- Maryland
 - Solid SREC program with continued focus on policy improvements

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SOLAR POLICY: MARKET UPDATES

NORTH ATLANTIC REGION

Canada

- Ontario
 - North America's first robust Feed-in Tariff (FiT) has led to expansive solar development in the province
 - Tariff levels have stepped down, but still strong
 - Some complaints about administrative/interconnection issues
 - Uncertainty regarding upcoming election's impact on the future of the FiT



CASE STUDIES; REAL BENEFITS



Host



Case 1

- Scope: 1.15 MW roof mount array
- Location: Boston, MA
- Client Type: Medical Technology

Benefits

- \$83,000 in Year 1 savings
- Potential savings over contract: \$3M+
- Fixed power price for 20 years
- PR Value

Buy



Case 2

- Scope: 737 kW roof mount array
- Location: Maryland
- Client Type: Warehousing & Logistics

Benefits

- Investment recapture: 5-6 years
- 30% Federal cash grant
- Tax shields from accelerated depreciation
- Sale of SRECs
- PR Value



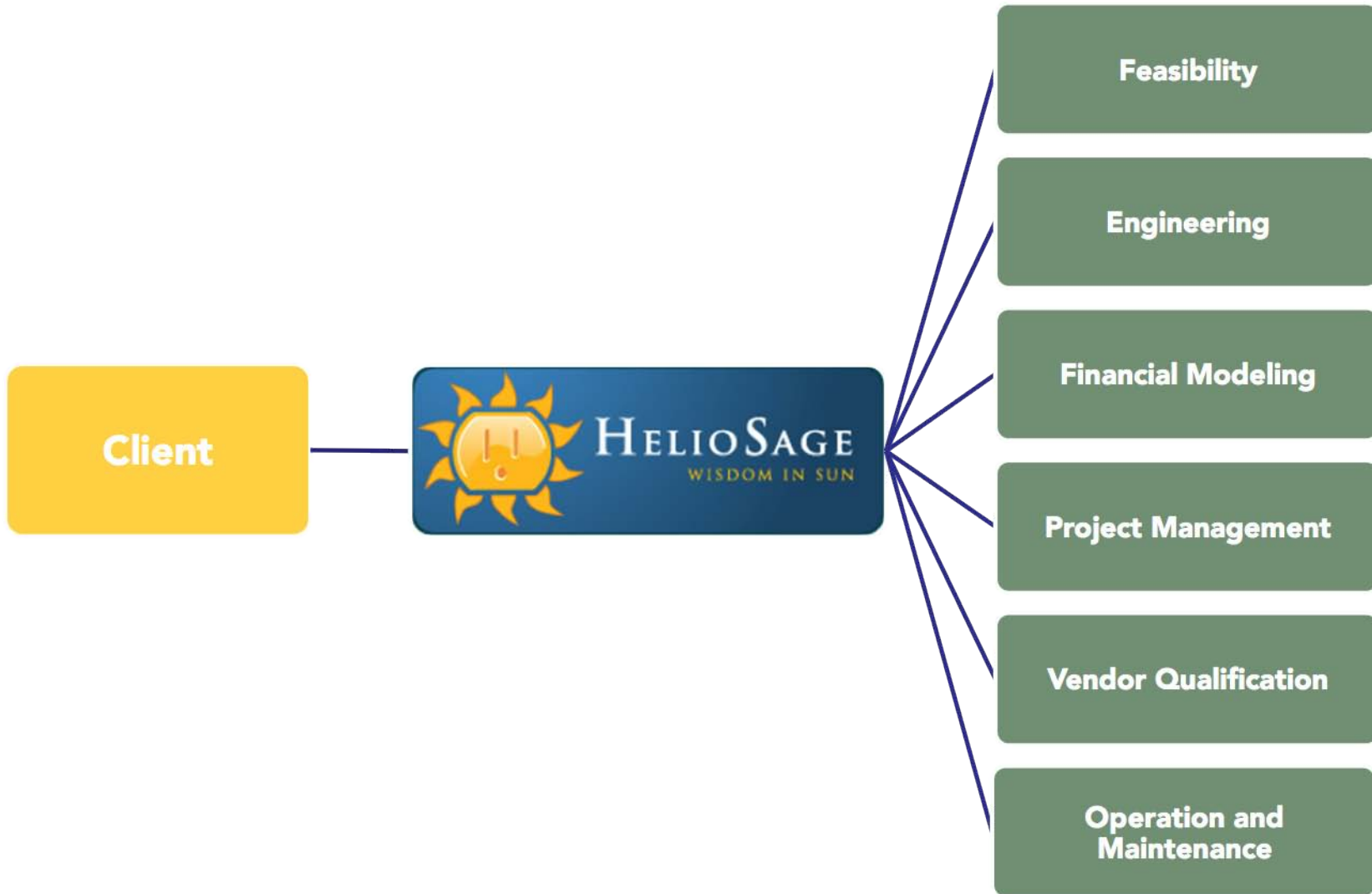
CONSTRUCTION VIDEO



HelioSage, LLC | 117 4th Street SE, Suite B | Charlottesville, VA 22902



OUR ROLE



HelioSage, LLC | 117 4th Street SE, Suite B | Charlottesville, VA 22902





HELIO SAGE
WISDOM IN SUN

Contact:

Andrew Foukal

afoukal@heliosage.com

434-825-2787

HelioSage, LLC | 117 4th St SE, Suite B | Charlottesville, VA 22902

434-293-7589 | info@heliosage.com | www.heliosage.com