



Solar Power for End Users Series:
*Webinar Two -
Negotiating Solar Agreements,
Leases and Related Agreements*

Marc D. Machlin, Mark A. Solomon | May 13, 2010



We will be starting momentarily...



Listen to the audio portion of today's webinar by dialing:

North America Toll-Free: +1.866.322.1348

International Toll: +1.706.679.5933

Audio Conference ID #: 73227929

Technical Support Numbers



If you experience technical difficulties, hit *0 on your telephone keypad and an operator will assist you.

Or you can dial:

For Web Support:

North America:

+1.877.812.4520 or

International

+1.706.645.8758

For Audio Support:

North America:

+1.800.374.2440 or

International:

+1.706.645.6500

Click this icon to view the slide in full screen mode.

Solar Power for End Users Series: *Webinar Two - Negotiating Solar Agreements, Leases and Related Agreements*



Marc D. Machlin, Mark A. Solomon | May 13, 2010

Pepper Hamilton LLP
Attorneys at Law

Solar Power for End Users Series: *Webinar Two - Negotiating Solar Agreements, Leases and Related Agreements*

**Click the printer icon
to download/print
the slides.**

Marc D. Machlin, Mark A. Solomon | May 13, 2010

Pepper Hamilton LLP
Attorneys at Law



Feel free to submit text questions
throughout the webinar

Solar Power for End Users Series:
*Webinar Two -
Negotiating Solar Agreements,
Leases and Related Agreements*

Marc D. Machlin, Mark A. Solomon | May 13, 2010

Pepper Hamilton LLP
Attorneys at Law

Our Locations



BERWYN

400 Berwyn Park
899 Cassatt Road
Berwyn, PA 19312-1183
610.640.7800
FAX 610.640.7835

BOSTON

15th Floor, Oliver Street Tower
125 High Street
Boston, MA 02110-2736
617.204.5100
FAX 617.204.5150

DETROIT

Suite 3600
100 Renaissance Center
Detroit, MI 48243-1157
313.259.7110
FAX 313.259.7926

HARRISBURG

Suite 200
100 Market Street
P.O. Box 1181
Harrisburg, PA 17108-1181
717.255.1155
FAX 717.238.0575

NEW YORK

The New York Times Building
37th Floor, 620 Eighth Ave
New York, NY 10018-1405
212.808.2700
FAX 212.286.9806

ORANGE COUNTY

Suite 1200
4 Park Plaza
Irvine, CA 92614-5955
949.567.3500
FAX 949.863.0151

PHILADELPHIA

3000 Two Logan Square
Eighteenth and Arch Streets
Philadelphia, PA 19103-2799
215.981.4000
FAX 215.981.4750

PITTSBURGH

50th Floor
500 Grant Street
Pittsburgh, PA 15219-2502
412.454.5000
FAX 412.281.0717

PRINCETON

Suite 400
301 Carnegie Center
Princeton, NJ 08543-5276
609.452.0808
FAX 609.452.1147

WASHINGTON

Hamilton Square
600 Fourteenth Street, N.W.
Washington, DC 20005-2004
202.220.1200
FAX 202.220.1665

WILMINGTON

Hercules Plaza, Suite 5100
1313 Market Street
P.O. Box 1709
Wilmington, DE 19899-1709
302.777.6500
FAX 302.421.8390

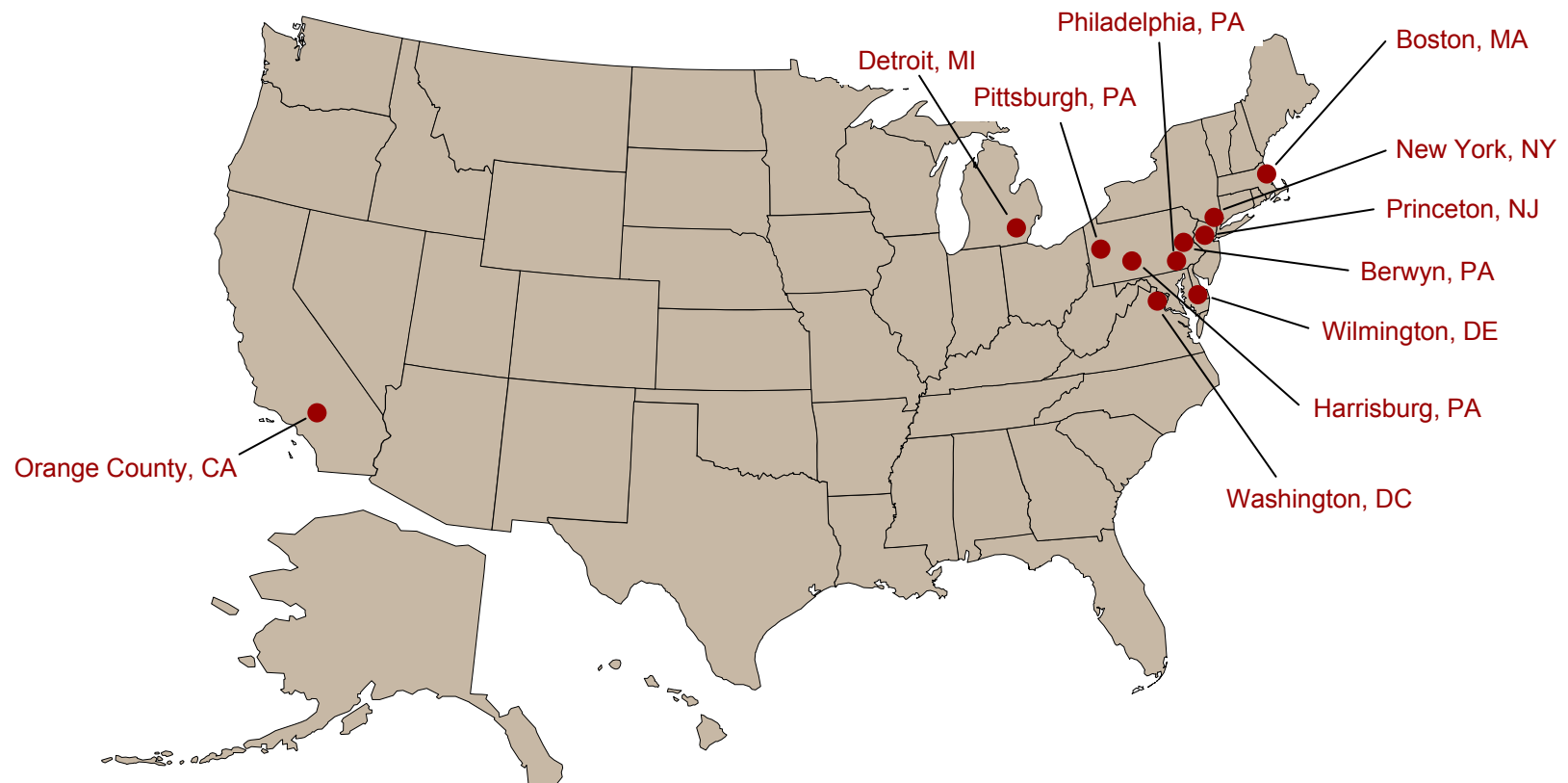
www.pepperlaw.com

Pepper Hamilton LLP
Attorneys at Law

Pepper Locations



Pepper has expanded from its Philadelphia origins to 11 locations.



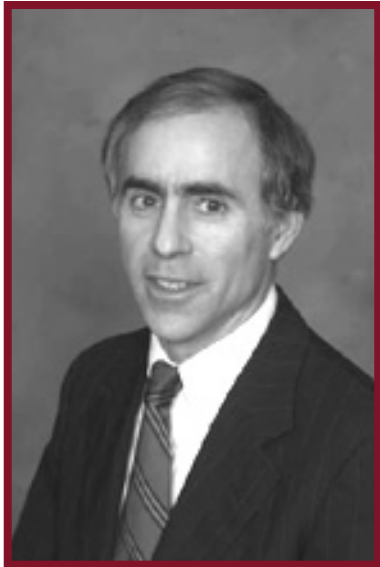
Speaker: Marc D. Machlin



202.220.1439
machlinm@pepperlaw.com

- Partner in the Washington office of Pepper Hamilton LLP
- Head of the Regulatory Section within the firm's Commercial Litigation Practice Group
- Practice covers a broad range of areas, including environmental and energy; infrastructure projects and renewable energy projects; transportation and NHTSA; public utility regulation and railroad regulation
- Member of the firm's Sustainability, CleanTech and Climate Change Team.

Speaker: Mark A. Solomon



609.951.4131
solomonma@pepperlaw.com

- Partner in the Princeton office of Pepper Hamilton LLP
- Concentrates his practice in real estate development, land use and zoning, commercial real estate, redevelopment, environmental law, and real estate-related litigation, including condemnation and tax appeals
- Member of the firm's Sustainability, CleanTech and Climate Change Team.

OVERVIEW OF SOLAR POWER WEBINAR SERIES



Webinar One:
May 6, 2010

Solar Power For End Users:
Getting Started

Webinar Two:
May 13, 2010

Negotiating Solar Agreements,
Leases, And Related Agreements

Webinar Three:
May 20, 2010

Tax Credits And Other Government
Incentives For Solar Power

To register for these webinar, contact Kristen Clark at clarkk@pepperlaw.com

OVERVIEW OF TODAY'S PRESENTATION



- Two Approaches Used For Most Solar Power Projects
- Option 1:
 - Third party designs, builds, and maintains solar energy system
 - Third party leases land or roof-top space from end user
 - End user purchases output under long-term power purchase agreement (PPA)
- Option 2:
 - Third party designs, builds, and usually maintains solar energy system
 - End user becomes the owner of the system upon completion

OVERVIEW OF TODAY'S PRESENTATION



- Risks And Benefits Of PPA Approach (Option 1)
- Risks And Benefits Of Direct Ownership (Option 2)
- Key Provisions In The PPA Agreement, Lease, Parent Guaranty
- Key Provisions in the EPC Agreement and O&M Agreement
- Other Types Of Transactions, Including Pure Lease Or Hosting Agreements

RISKS AND BENEFITS OF OPTION 1 – THE PPA MODEL



- Principal Benefits Of PPA Model
 - No direct commitment of capital by end user
 - Pay only for solar power actually delivered, metered
 - Achieves cost savings, lower energy costs
 - Green image from being a solar host
 - Ownership risks (including risks from equipment failures, hail damage, obsolescence) largely assigned to third party
 - Allows non-profit entities, governmental organizations to obtain economic benefits of investment tax credit, SREC revenue; these benefits largely passed through by the solar provider

RISKS AND BENEFITS OF OPTION 1 – THE PPA MODEL



- Principal Risks, Disadvantages Of PPA Model
 - Economic benefits of project must be shared with third party provider and its lender(s)
 - Cost savings may be based upon projections relating to future energy prices, delivered utility prices
 - Project may be fully paid off in 5 to 10 years but provider retains benefits of ownership
 - Loss of control stemming from having a third party operating a system on the roof-top, or on adjacent land or parking lots
 - Default by end user may trigger requirement to purchase system
 - Third party provider may have differing priorities in obtaining interconnection, resolving land use issues, and avoiding damage to facilities

RISKS AND BENEFITS OF OPTION 1 – THE PPA MODEL



- Principal Risks, Disadvantages Of PPA Model
 - Many PPA terms, lease terms may be dictated by provider's lender(s)
 - Requires monitoring of insurance policies, coverage held by provider
 - Provider may or may not be willing to commit to specific output levels
 - Complications may arise if end user moves or ends operations

RISKS AND BENEFITS OF OPTION 2 – THE OWNERSHIP MODEL



- Principal Benefits Of Ownership Model
 - Higher rate of return for end user
 - Greater control over system once operational
 - More input into selection of technology, components vendors
 - Project costs paid in large part by investment tax credit, S-REC revenue, and other grants and subsidies
 - Owner decides whether to sell S-RECs in spot market or enter into long-term sales agreements, or use a combination of approaches
 - More control over level, frequency of maintenance activities

RISKS AND BENEFITS OF OPTION 2 – THE OWNERSHIP MODEL



- Principal Risks, Disadvantages Of Ownership Model
 - Must commit, raise necessary capital
 - Risks of system failure, system damage fall entirely on end user
 - Still probably need to pay for design, installation, procurement, O&M services; may or may not have internal engineering capacity to evaluate, oversee these services effectively
 - If relying on spot market S-REC sale, must bear risks associated with price fluctuations
 - If selling S-RECs on a long-term basis, must confirm credit-worthiness of buyer

RISKS AND BENEFITS OF OPTION 2 – THE OWNERSHIP MODEL



- Principal Risks, Disadvantages Of Ownership Model
 - If system fails, component manufacturers and installation firm may each seek to deny responsibility
 - Long-term durability of certain modules, inverters may not be established; lifespan may not be known with precision
 - Not all entities able to utilize investment tax credit or U.S. Treasury grants in lieu of this credit

NEGOTIATING THE AGREEMENTS KEY PROVISIONS UNDER THE PPA MODEL



- Duration of PPA, Lease
- Purchase Option(s) And Termination Values
- Liability, Indemnification, And Insurance
- Use Of A Project Company, Combined With A Parent Guaranty For Specified Obligations
- Commitments From The Provider On Design Standards, Operating Standards, Avoiding Disruption Of The Host's Ongoing Operations
- Parent Guaranty

NEGOTIATING THE AGREEMENTS

KEY PROVISIONS UNDER THE PPA MODEL



- Ability Of Provider To Sell, Transfer, Assign System To Its Lender(s)
- Security Interest Of Provider's Lender(s); Primacy Of Host's Existing Lenders
- Solar Easements; Preservation Of Sunlight
- Insurance Coverage For Provider, Host
 - Liability insurance
 - Property damage and casualty
 - Automobile
 - Workmen's compensation
 - Umbrella
- Property Access For The Provider

NEGOTIATING THE AGREEMENTS KEY PROVISIONS UNDER THE PPA MODEL



- Deadline For Starting, Completing Construction
- Conditions Precedent For Provider
 - Interconnection
 - Financing
 - Zoning, land use approvals
- Output Levels; Degradation Or Decreases In Production Over Time
- Maintenance, Repairs, Replacement Parts, Monitoring

PPA MODEL SITE LEASE AGREEMENT



- Lease Provisions Follow PPA, Facilitate PPA
- Term: Tracks PPA Or System Lifespan
- Leased Premises; Leased Area
 - Rooftop/Condition; when last repaired, replaced?
 - Weight of system; ability to support
 - Special circumstances with environmentally impaired properties
 - Vacant land; any grading required; wetlands or wetlands buffers

NEGOTIATING THE AGREEMENTS - KEY PROVISIONS UNDER THE OWNERSHIP MODEL



- Price For Installed System And Pricing Adjustments
 - Ability of provider to submit change orders
 - Ability of owner to accept, reject change orders
 - Progress payments over a suitable time frame
- Deadline For Initiating On-Site Work And For Completion
- Responsibility For Interconnection, Ensuring That Net Metering Is Available
 - Interface with utility
 - Interconnection delays, costs for upgrades
- Liability, Indemnification, And Insurance
- Responsibility For Ensuring That AECs, SRECs Are Provided

NEGOTIATING THE AGREEMENTS - KEY PROVISIONS UNDER THE OWNERSHIP MODEL



- Responsibility For Land Use Approvals
- Owner Review, Approval Of Designs
- Owner Review, Approval Of Permit Applications
- Preservation Of Manufacturer Warranties
- Warranties From The Provider
 - Duration
 - Scope
 - Need for continued O&M

NEGOTIATING THE AGREEMENTS - KEY PROVISIONS UNDER THE OWNERSHIP MODEL



- Obligations Relating To O&M Services
- Obligations Relating To Spare Parts
- Output Levels; Degradation Over Time

OTHER TYPES OF TRANSACTIONS FOR END USERS



- Hosting Of Solar System Without Purchasing The Output
 - Traditional leasing issues
 - Land use issues
- Rental Payments
 - Fixed amount based upon area with annual escalation
 - Price per unit of capacity (MW) or price per unit of power generated (kWH; AC), with annual escalation (e.g., \$0.045 per watt, increased by 2.5 percent annually)
- Term, Expected Lifespan Of System
- Surrender, Removal And Restoration

SOLAR HOSTING LEASE WITHOUT PURCHASING POWER



- Other Typical Leasing Issues Must Be Addressed
 - Environmental
 - Real Estate Taxes
 - Lenders and Mortgagees
 - Rent Commencement
 - Construction Schedule
 - Operations Date
 - Maintenance and Performance
 - Indemnification
 - Insurance
 - Permits and Approvals
 - Assignment
 - Condemnation
 - Casualty
 - Default
 - Temporary Construction Lay-Down
 - Interconnection
 - Access

OTHER TYPES OF TRANSACTIONS



- Purchases Of S-RECs Or Green Power On The Open Market
- Use Of Brownfields For Solar Projects
- Lessening Dependence On The Grid In Other Ways
 - Cogeneration
 - Back-up fossil fuel generation
 - Geothermal systems
 - Microgrids

Questions and Answers



Thank You!



202.220.1439
machlinm@pepperlaw.com



609.951.4131
solomonma@pepperlaw.com

OVERVIEW OF SOLAR POWER WEBINAR SERIES



Webinar One:
May 6, 2010

Solar Power For End Users:
Getting Started

Webinar Two:
May 13, 2010

Negotiating Solar Agreements,
Leases, And Related Agreements

Webinar Three:
May 20, 2010

Tax Credits And Other Government
Incentives For Solar Power

To register for these webinar, contact Kristen Clark at clarkk@pepperlaw.com



**For more information, visit
www.pepperlaw.com.**