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## EXHIBIT HALL HOURS

|           |                    |
|-----------|--------------------|
| TUESDAY   | 11:00 AM – 5:00 PM |
| WEDNESDAY | 11:00 AM – 5:00 PM |
| THURSDAY  | 11:00 AM – 3:00 PM |

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## ACCESS CONFERENCE HANDOUTS

Scan QR Code located on classroom flyer  
and in the Mobile App

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## CONFERENCE EVALUATIONS

YOUR FEEDBACK IS IMPORTANT



Please take time to  
provide feedback for  
this session in the  
Mobile App.

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**NRCA**

## GET IN THE GAME

Visit **NRCA booth 2345** for game-changing ideas for your business. Save up to \$1,000 with our exclusive IRE new member discount—and win big!

**JOIN US!**



[nrca.net/member-benefits](http://nrca.net/member-benefits)

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**NRCA**  
FOR  
**SUICIDE PREVENTION**

NEED TO TALK?  
CALL OR TEXT  
**988**

**CRISIS TEXT LINE**  
**Text HOME to 741741**  
Free | 24/7 | Confidential

**Be tough enough to ask for help.**

**FACT:** It is estimated 1 in 5 adults live with a mental illness. Less than half are seeking help.

**FACT:** The construction industry has the second-highest suicide rate of all major industries in the U.S.

**Every suicide is preventable,** so please join NRCA to raise awareness around mental health and suicide prevention.

**Start the conversation.** Recognize the warning signs. Don't be afraid to reach out for help. We can all be part of the solution.

Scan for essential mental health resources.



[nrca.net/mentalhealth](http://nrca.net/mentalhealth)


**NRCA**

**CONSTRUCTION INDUSTRY ALLIANCE**  
**SUICIDE PREVENTION**

**STAND UP**  
FOR SUICIDE PREVENTION

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**ROOFING DAY IN D.C.**

## HELP CHANGE THE GAME

Attend Roofing Day in D.C. to activate advocacy!  
April 14-15

**REGISTER NOW!**



[nrca.net/roofingday](https://nrca.net/roofingday)

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# SAVE THE DATE

## International Roofing Expo

### February 16-18, 2027

Las Vegas Convention Center  
West Hall



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## SPEAKERS

**John Geary**  
CEO  
JRG Solutions LLC

40+ years as a manufacturer, contractor and distributor

Former CMO of Nations Roof, the 5th largest US roofing contractor

Former VP of Marketing at Firestone Building Products (now Amrize)

**Jason Wilen, AIA, NCARB, CDT, RRO**  
Principal  
Klein & Hoffman

30+ years as a forensic architect, roof system designer, and roof consultant

Former Technical Director at the NRCA

Board Certified Architect – 10 States

**Ellen Thorp, M.A., CAE**  
Executive Director  
EPDM Roofing Association

15+ years of work for associations in the AEC and roofing industries

Former Executive Director at National Women in Roofing

Led over 25 successful advocacy campaigns that reinforce contractors and consultants as THE roofing experts.

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## LEARNING OBJECTIVES

- **Identify the key structural, membrane, and drainage factors** that determine whether a commercial roof can successfully support a photovoltaic (PV) system over its full service life.
- **Explain how rooftop solar can generate revenue for building owners** through energy savings, net metering, lease agreements, power purchase agreements (PPAs), and renewable energy credit (REC) sales.
- **Evaluate the impact of code exemptions and federal/state incentives**—including the Inflation Reduction Act (IRA), C-PACE financing, and IECC overburden clauses—on solar and roof system selection.
- **Apply practical strategies to position roofing system upgrades** as part of a long-term solar-readiness plan that increases project value and helps contractors differentiate their services

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## SESSION OVERVIEW

- The Business Opportunity
- Technical Background
- Real Project Lessons
- Sales Strategies
- Contractor Takeaways

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Photo credit: Solar Guide

## THE BUSINESS OPPORTUNITY

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THE BUSINESS OPPORTUNITY

## GOVERNMENT FINANCIAL ASSISTANCE

### Various Types of Funding

- Credits
- Subsidies
- Incentives

### Different vehicles for the funding

- Solar panels/photovoltaics
- Energy Efficiency
- Building Performance Standards
- Programs like NetZero, Carbon-neutral, and related

### Incentives and Subsidies are offered by:

- Federal
- State
- Local
- Utilities

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## OWNERS AND PROPERTY MANAGERS

### Increasingly expect roofs to:

- Be an asset to the property
- Enhance living space
- Cut operating costs
- Generate power
- Deliver long-term ROI through PV system integration

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## RETURN ON INVESTMENT

### ROI depends on:

- Cost of the PV assembly and installation
- Cost of the racking system and installation
- Efficiency of the PV system
- Must include structural/roofing upgrades
- Durability and longevity of the PV system
- The service life of the roof = expected longevity of the PV assembly

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## YOUR OPPORTUNITY

### New profit centers:

- Solar-ready retrofits
- Installations
  - Racking systems
  - Whole PV system integrations
- Combined roof-and-PV maintenance services
  - Roof maintenance
  - Cleaning
  - Regularly scheduled service calls to maximize their solar investment

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Photo credit: Professional Roofing

## TECHNICAL BACKGROUND

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### TECHNICAL BACKGROUND

## SOLAR READY=ROOF READY

- Structural integrity
- Minimum required Fire Classification
- Minimum required Wind Uplift Pressure Resistance
- Insulation
  - Proper R-value
  - Cover boards
- Appropriate Wind Speed Limit
- Service Life
  - PV System
  - Roof System



Photo credit: Dreamstime.com

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## TECHNICAL BACKGROUND

**HOLISTIC ROOF SYSTEM DESIGN**

Sustainability is about resilience, decarbonization, energy efficiency, recyclability, and longevity combined, not just one of those factors

- Thermal bridging and condensation
- Reflective roofs can increase PV panel temperatures by  $\approx 9^{\circ}\text{F}$
- EPDM membranes
  - Highly reflective (white)
  - Non-reflective (black)
  - IECC and ASHRAE 90.1 (§ C402.3 and 90.1)
    - Exemptions
    - Reflectivity minimum requirements when:
      - $\geq 75\%$  is covered by PV or other overburden
      - Over non-cooled spaces

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## TECHNICAL BACKGROUND

**SPECIFICATION RECOMMENDATIONS****Service-life alignment**

- Specify roof systems with equal or longer expected service life than PV arrays
- Install PV immediately after construction to avoid costly R&R later.

**Membrane choices & thickness**

- Favor adhered membranes [why? because they last longer]
- Increase thickness baseline to minimum 60 mil
  - Boost puncture and impact resistance
  - Reduce flutter under wind.

**Cover board & insulation**

- Add high-compressive-strength rigid insulation
- Add continuous cover board to distribute PV loads
- Resist tool drops and traffic.
  - Help “bury” plates/fasteners
  - Minimize abrasion or point-loading under ballasted racks.

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## TECHNICAL BACKGROUND

**CONSIDERATIONS****Flexible/self-adhered PV**

- Use high-temperature-resistant membranes or sacrificial layers
- Confirm long-term adhesive heat-aging and uplift performance

**Access, layout, and testing:**

- Keep PV off expansion joints
- Preserve seam/drain visibility
- Specify pre- and post-install integrity testing (ELD), or permanent leak monitoring over critical areas.

**PV system selection impacts membranes**

- Ballasted, attached, and integrated systems each pose unique challenges for
  - membrane protection
  - drainage
  - fire performance
  - coordination with roof manufacturers is essential to preserve warranties.

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Photo credit: AES Limited

**REAL PROJECT LESSONS**

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## REAL PROJECT LESSONS

**DISTRIBUTION CENTER  
WHITINSVILLE, MA****Turnkey Project**

- Add 1.5" polyiso insulation
- Install mechanically fastened reinforced EPDM
- Ballasted racking system, tilted 5 degrees.
- 8307, 225-watt polychrystalline modules

**Coordination**

- Tecta roofing and solar crews
- Master Electrician
- Medium Voltage Electrician
- Concrete subcontractor
- Internet and Communications Vendors
- Inverter manufacturer
- Commissioning Technicians



Photo credit: Professional Roofing

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## REAL PROJECT LESSONS

**WASHINGTON, D.C. HISTORIC RETROFIT – KIMPTON  
HOTEL MONACO**

- 590-panel, non-penetrating PV on historic roof
- Upgraded EPDM/metal supported 20-year PPA
- Structural + fire classification coordination
- Preventive maintenance extended roof life
- Coordination to ensure solar integration invisible from street view

Combined solar + roof warranty program saved > \$650,000 and provided annual inspections, proving that solar can succeed even on historic assets.



Photo credit: Kimpton Hotels

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## REAL PROJECT LESSONS

**MAUNA KEA OBSERVATORY (HAWAII)**

Two stories here: longevity and solar panel installation

**Longevity**

- 30 year old ballasted roof
- Stone ballast was locally sourced volcanic cinder
- Met wind-load needs
- Inspectors indicated the EPDM membrane "appeared brand new"

**Solar panel installation**

- 137 kW PV at 14,000 ft
- Custom non-penetrating racking system
- Stone ballast removed and replaced
- Reinforced cover board protected substrates
- PV output supplies 10-15% facility power



Photo credit: Roofing Magazine

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## REAL PROJECT LESSONS

**LESSONS LEARNED****Rooftop Coordination Lessons**

- Conduct joint inspections with PV installers to identify anchor points and load paths
- Ensure wiring and conduit routing avoid penetration conflicts
- Require post-install infrared scans or electronic leak detection to confirm watertightness

Fire and Access Compliance: Maintain code-required "clear lanes" for fire access between PV panel blocks per IFC § 1204

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# SALES STRATEGIES

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## SALES STRATEGIES

### BE PREPARED

- Solar Ready Roof as investment-grade improvement linking energy, resilience, and ROI
- Highlight IECC exemptions and system longevity to support dark membrane selection for solar
- Offer documentation packages (drawings, warranty letters, testing data) to facilitate tax-credit and insurance qualification
- Present a monthly or quarterly maintenance plan
  - Inspect, repair and document condition of the roof
  - Clean PV system to maximize performance
  - Submit annual budget



Photo credit: Quality Roofing Services

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## SALES STRATEGIES

**PREVENTIVE MAINTENANCE AFTER INSTALLATION****Most effective way to extend the life of your roof!**

- Regular inspections
- Before catastrophic

**Warranty requirements**

- May include preventive maintenance
- May require documentation
  - Overburden

**Good preventive maintenance agreements:**

- Drawing, description, and materials
- Work history, invoices and warranties
- Regularly inspections with report and photos
  - Good, Better, Best
- Minor repairs
- Caulking, trash removal, clear drain heads
  - Quotation for more substantial repairs
- Annual budgets for the following year
  - Include expected repairs
  - Expectation for long term performance



Photo credit: jefflikescleaningwindows.com

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**CONTRACTOR TAKEAWAYS**

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## CONTRACTOR TAKEAWAYS

**KNOWLEDGE AND EXPERIENCE ARE YOUR ADVANTAGE**

- A bad roof ruins good solar: membrane quality, attachment design, and coordination determine PV performance
- Solar adoption enables contractors to upsell
  - Longevity
  - Energy savings
  - Resilience
  - Key differentiators in today's market
- Position yourself as an energy partner, not just a roof installer
  - Master IECC, ASHRAE, NRCA, and fire-access provisions
- EPDM's 38 year expected service life aligns with solar panel cycles, ensuring long-term asset value

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## CONTRACTOR TAKEAWAYS

**KNOWLEDGE AND EXPERIENCE ARE YOUR ADVANTAGE**Emphasize *roof system as platform*:

- Protection
- Power generation
- Durability
- Financial performance in one assembly

Circular-economy advantage

Ultimate sustainability



Photo credit: EPDM Roofing Association

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## CONTRACTOR TAKEAWAYS

**FIVE BIG RISKS TO MANAGE**

1. Moisture/waterproofing at penetrations
2. Thermal/structural/wind loading and insulation compression
3. Fire (arcing, under-panel flame spread, access limits)
4. Traffic damage caused by others
5. Drainage paths remaining functional with PV overburden in place



Photo credit: EPDM Roofing Association

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## CONTRACTOR TAKEAWAYS

**BUILD TO LAST**

1. Strategic planning for future needs
2. Resilient assemblies (cover board, appropriate insulation, robust membrane) extend service life and reduce total cost of ownership.
3. Maintenance services extend the service life of the roof and the energy performance of the PV system



Photo credit: Solar Power World

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THE BUSINESS OPPORTUNITY

## RESOURCES

ERA Website, Research & Resources, Solar  
Bulletins

- Technical
- Advisory
- Education Bulletin Briefs

Research Recap



Photo credit: Solar Power World

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## THANK YOU

**John Geary**

*CEO, JRG Solutions LLC*

**Jason Wilen, AIA, NCARB, CDT, RRO;**

*Principal, Klein & Hoffman*

**Ellen Thorp, M.A., CAE**

*Executive Director, EPDM Roofing Association*



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