**Current Promotional Material**

**Realtor Green Day Program, June 14, 8:30 to 4:00**

Earn CEUs while expanding your knowledge about energy efficiency and renewable energy and your network of local folks who are experts in what is happening right here in Maine. You’ll enjoy a fresh, heathy breakfast and lunch served sustainably at the Oceanview Dining Hall overlooking Willard Beach at SMCC campus in South Portland, all for the low price of $50.  Save the Date, registrations will be available soon. There are two, 3 CEU classes being offered.

**Morning: Financing the Clean Energy Revolution: What Real Estate Professionals Need to Know, 3 CEUs, 9:00 – 12:00**

Are you curious about the many ways to finance energy efficient upgrades and renewable energy in residential property, like rebates, tax credits and loans?  Changes are happening as the result of the bipartisan legislation passed in Congress making funding available for just these things.  Wouldn’t you like to be the source of that information to your customers and clients, and get 3 CEUs?  Attend **Financing the Clean Energy Revolution,** the morning class, featuring four experts.

Dan Burgess, Director, Governor’s Energy Office, Taking Initiatives with State and Federal Funding

Tamika Donahue, Vice President, Academy Mortgage, What the Mortgage Industry has to Offer Now

Interactive Activity

James Neal, Senior Program Manager, Efficiency Maine Green Bank on New Financing Available

Andy Meyer, Efficiency Maine Trust, Rebates Available for Efficiency and Electrification.

**Promotional Material**

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**Afternoon: Making the Transition from Fires to Wires, 3 CEUs, 1:00 – 4:00**

You have heard about the health and climate impact of burning fossil fuels, but are you curious how to heat (and cool) your home, heat your domestic hot water, and ventilate with super-efficient electric appliances?  You have heard about Passive House, LEED and Energy Star Net Zero Ready standards, but did you know the Pretty Good House standard was created right here in Maine?  Attend **Making the Transition from Fires to Wires**, the afternoon class, featuring five experts and another 3 CEUs.

Phil Coupe, Co-founder, Revision Energy, The Transition is Attainable!

Dan Kolbert, Principal, Kolbert Builders, Co-Author, Pretty Good House, Building Envelope Basics Review and Economics

Michael Maines, Principal, Maines Design and Co-Author, Pretty Good House, Designing for Zero Indoor Combustion and Mechanical Systems

Matthew Tilas, Mitsubishi Electric on Heat Pump Options for Maine That Work All Winter

Chris Jones, ReVision Energy, Balancing Solar Load for the Electric Home

**Instructor Bios and Timed Outline**

**Realtor Green Day June 14, 2023 Morning Class 9 – 12**

**Financing the Clean Energy Transition, 3 CEUs**

**9:00 Introduction and Welcome,** **Julia Bassett Schwerin, Maine Green Broker, Advisors Living Real Estate and Co-chair of the Sustainability Advisory Group of the Greater Portland Board of Realtors (10 min)**

Bio - Julia is a Green Broker with Advisor’s Living Real Estate and has practiced residential real estate in Cumberland and York counties primarily since 2005. Julia is Co-chair of the Sustainability Advisory Group in the Greater Portland Board of Realtors, and a Director on the boards of the Greater Portland Board of Realtors and the Maine Association of Realtors. She holds designations in Green brokerage, Smart Homes, Global Luxury, Resort, Second Home, Waterfront and Investment Property, Buyer Representative, and Commercial Real Estate Brokerage.

She earned a B.A., completed MBA classwork, and has extensive prior work experience in market research in such technologies as solar PV, wind, geothermal, personal computers, audio-video, electronic gaming, the Internet and optical discs.

Topic: It is Time to Think Through What We are Doing to our Property Values

Increasingly we are seeing the evidence of global warming’s devastating effects on our ecosystems, agriculture, aquaculture, coastal property values, coastal tourism values, and property values everywhere in Maine. Everywhere there is suffering from extra-normal drought, famine, wildfires, floods, storm surge, ocean acidification and warming, and extra-normal destructive storms. At the same time, we are seeing evidence of subterfuge by the fossil fuel industry: buying politicians, sponsoring disinformation from their “think tanks” to the media, and trying like the tobacco companies to buy time before the majority of voters recognize they are being lied to and reject the argument that everything is fine. It’s not fine. And we need to think through what we are doing continuing to emit greenhouse gases into an atmosphere that 99% of scientists say cannot handle any more without ecosystem collapse.

We are REALTORS® with a fiduciary responsibility to protect the value of property for our clients, yet our legislative representatives usually oppose environmental initiatives as being anti-business. The Sustainability Advisory Group (SAG) of the Greater Portland Board of Realtors (GPBR) thinks it is our fiduciary responsibility to be competent to advise our clients about the threats to their property that climate change represents, and how to mitigate those threats with energy efficiency and renewable energy while lowering fuel expenses and raising building value. This idea was established by the 2019 NAR President Vince Malta and brought to us by 2020 Greater Portland Board of Realtors President Leanne Barschdorf Nichols to form the first Sustainability Advisory Group. Our group has grown to 16 members and is still growing.

The Sustainability Advisory Group will have put on 26 hours of sustainability CEUs by the end of Realtor Green Day 2023. This is an extraordinary record of which we are very proud. Many community groups consider the SAG and GPBR their primary outreach group for their sustainability initiatives in Maine.

Our planet is connected from the town programs and rebates, the county programs, the state programs and rebates, the national programs, rebates and tax incentives, and the international greenhouse gas reduction goals agreed to by an unprecedented 196 nations at the Paris Climate Accord in 2015. We are truly all united and working on the same set of goals for greenhouse gas reduction from Paris, Maine to Paris, France.

**9:10 Dan Burgess, Director, Governor’s Energy Office, KEYNOTE: GEO Initiatives Overview and Financing Opportunities (25 min)**

Bio - Dan Burgess was appointed as the Director of the Maine Governor’s Energy Office by Governor Janet Mills in March of 2019. Prior to his return to his home state of Maine, Burgess spent eight years working in leadership roles at the Massachusetts Department of Energy Resources and the Executive Office of Energy and Environmental Affairs. Burgess has a business degree from the University of Maine and a Masters in Public Administration from Northeastern University. As Director, Burgess serves on the Board of the Efficiency Maine Trust, and serves on the Board of the National Association of State Energy Officials.

**Topic: Governor’s Energy Office Initiatives Overview and Financing Opportunities (25 Minutes)**

The Governor’s Energy Office has a robust suite of initiatives it is undertaking with multiple types of clean and renewable energy: Energy Efficiency, Clean Energy Partnership, and Renewable Energy, as well as participation in the Maine Climate Council Four Year Plan, Maine Won’t Wait.

* Update on the Maine Won’t Wait Dashboard.
* Progress towards the Governor’s Goals of 100,000 new heat pumps by 2025, 17,500 existing homes weatherized by 2025, communities participating in the Community Resilience Partnership.
* Funding from the Bipartisan Infrastructure Law.
* Funding from ARPA.
* Funding from the Maine Jobs and Recovery Plan including 30,000 clean energy jobs by 2030.
* Funding from the Federal Inflation Reduction Act.
* Where we go from here.
* Q and A (5 min)

**9:40 Tamika Donahue, Branch Manager, Academy Mortgage Corporation**

**Bio –** Tamika has over 23 years of experience in mortgage banking and am knowledgeable in all aspects of residential mortgage lending. With a strong belief in the power of consistent communication with their clients to make the homebuying process seamless and efficient, Tamika is committed to providing exceptional service to our clients and partners and to helping deliver the dream of sustainable homeownership. Tamika is a member of the Maine Mortgage Bankers Association, the Women’s Council of Realtors, Greater Portland Board of Realtors, and the Maine Association of Mortgage Professionals.

**What the Mortgage Industry Has Now to Offer for Green Financing**

Traditional mortgage products such as Conventional cash-out refi, FHA 203K and Home Equity Line Of Credit (HELOC) can be used for financing green upgrades in residential buildings. Traditional mortgage products do not allow for higher debt to income ratios taking into account lower operating expenses for fuel due to energy efficiency upgrades but can be used for energy upgrades if market conditions and underwriting allow.

VA Energy Efficient Mortgage, FHA Energy Efficient Mortgage, Fannie Mae HomeStyle Mortgage and Freddie Mac Green Choice Mortgage are all designed to allow for energy efficiency upgrades and renewable energy with higher debt to income due to lower utility bills, but are difficult to underwrite in Maine due to low to no demand from consumers and lender unfamiliarity.

Academy mortgage offers Green Energy mortgage products with similar advantages to the energy efficiency mortgages from Fannie and Freddie, with up to $6,500 allowed add-on for weatherization projects, more for distressed properties, without a report from an energy auditor recommending those specific improvements, and with an energy audit up to 15% of the as0completed property value. Since Academy finances its loans, it offers inhouse underwriting to support the borrower.

**10:10 Interactive Activity from the NAR Green Home course (20 minutes)**

**10:30 Break**

**10:40 James Neal, Senior Program Manager, Efficiency Maine Green Bank, New Financing from the Maine Green Bank (25 min)**

James Neal is the Senior Program Manager of Finance Initiatives for Efficiency Maine. James oversees the management and development of new finance programs for the Efficiency Maine Green Bank designed to drive private market capital into market gaps for energy efficiency technology. James Neal has a decade long background in renewable energy & finance and has facilitated over $300MM in project financing primarily focused on disadvantaged communities.

**An overview of the Efficiency Maine Green Bank and the existing finance products.**

The Green Bank offers technical assistance and financing, and favorable loan rates terms and credit access for clean energy projects.

It leverages capital in the private sector by providing loan loss reserves and guarantees.

It complements the standard discount-based incentive offerings of the Efficiency Maine Trust.

An initial infusion of capital may come from the Inflation Reduction Acts’ Greenhouse Gas Reduction Fund.

Initial finance products include:

* C-PACE Commercial Property Assessed Clean Energy, financing secured by a property tax assessment and associated lien on the property.
* PACE Residential Property Assessed Clean Energy loans up to $7,500.
* Manufactured Home Heat Pump leases to allow the substitution of efficient heat pumps in place of forced hot air furnaces in the same footprint.
* Municipal Leases to align municipal projects with local municipal lease providers.
* Loans for smalls businesses and income-eligible applicants.

Q and A (5 minutes)

**11:10 Andy Meyer, Senior Program Manager, Efficiency Maine, Tools for the Clean Energy Transition**

Andy Meyer is a Residential Program Manager at Efficiency Maine. He has over thirty years of sales and marketing experience and manages Efficiency Maine’s residential heat pump water heater, heat pump, and insulation programs.

**Efficiency Maine Tools to Leverage the Clean Energy Transition. (25 minutes)**

Energy Efficiency Resources That Realtors Can Share with Homebuyers

Incentives

* Mail-In rebates
* Instant discounts
* Tax credits

Financing

* Standard Recipients
* Low-income recipients

Technical information

* Online tools
* handouts

Efficiency Maine’s contractor locator

Q and A (5 min)

**11:40 Round Table Discussion (20 minutes)**

**12:00 Break for Lunch (60 minutes)**

**Realtor Green Day Afternoon class, June 14, 2023 1 – 4**

**Making the Transition from Fires to Wires, 3 CEUs**

**1:00 Philip Coupe, Co-Founder, Revision Energy, Transitioning to Clean Energy in the Built Environment**

Phil Coupe is a co-founder of Maine-based ReVision Energy, a 100% employee-owned solar company and certified B Corp. He focuses on leadership development, business strategy, communications and the national security implications of America's over-reliance on fossil fuels. Prior to the launch of ReVision, he worked as a journalist in Washington, DC and then helped start up a business that twice made the Inc. 500 List of Fastest-Growing Companies in the U.S.  To match growth with purpose, Phil immersed himself in the early days of the movement toward corporate social responsibility and socially responsible business practices, leading the startup company to earn multiple awards for its community involvement work on homelessness, at-risk youth and the environment. He currently serves on the board of directors of the Conservation Law Foundation and the Environmental & Energy Technology Council of Maine, and is a long-time mentor in the Big Brothers, Big Sisters Program. He lives in southern Maine with his family and a surfing Chihuahua named Kodak.

**Do We Have The Tools To Abandon Fossil Fuels in Northern New England?** (25 minutes)

Every year Mainers export $4 billion from the local economy to import finite, polluting fossil fuels from away. It no longer has to be this way. Despite the fact that Maine is one of the northernmost states in the U.S., the so-called "Dirigo State" happens to be at the exact same latitude as Monaco on the famously sunny French Riviera. Maine's abundant annual solar resource, combined with its relatively cool temperatures (solar electric panels are more efficient at lower temps) means that Mainers can derive a strong economic and environmental return on a solar investment. It's also true that battery storage technology has progressed significantly over the past decade, making it possible to store solar energy for night time and for bad weather days. Plus, air source heat pumps that are effective in below zero weather make it possible to heat and cool our buildings without combusting gas, oil or coal. And last but not least, electric vehicle technology has reached the point where we can trade in internal combustion engine vehicles for EV's that are quieter, faster and zero emissions. In his presentation, ReVision Energy co-founder Phil Coupe will let us know what he has learned during the company's first 20 years in business, and try to answer the question about whether society has what is needed for a clean energy transition.

Q and A (5 minutes)

**1:30 Dan Kolbert, Kolbert Builders, Pretty Good House, Lessons from the Pretty Good House**

Dan Kolbert has been a building contractor in Portland for 20 years and a carpenter for 35 years. He has led the Building Science discussion Group at Performance building Supply monthly for the past 10 years before covid. A tireless advocate and patient teacher of practical but sustainable building science to young and old builders alike, Dan knows how all the pieces fit together in designs of every variation. Dan is a co-author of the recently published bible of energy efficient construction and renovation The Pretty Good House, published by Taunton Press, with Michael Maines, Emily Mottram, and Chris Briley.

**Lessons from the Pretty Good House (25 minutes)**

Introduction to the Pretty Good House and Getting Rid of the Carbon Brothers

Building Envelope Basics Review

* IECC 2015 and stretch code requirements charts
* Insulation, R-Values
* Wall assemblies
* Roofs
* Foundations
* Thermal bridging
* Outsulation
* Air sealing
* Blower door testing
* Case Study: Pretty Good Renovation

Economics

* First vs. operational cost
* Long term thinking
* Tedd Benson approach
* Case study: Maquoit Bay

Q and A (5 minutes)

**2:00 Michael Maines, Designing for Zero Indoor Combustion and Mechanical Systems (25 min)**

Michael is a co-author of the recently published bible of energy efficient construction and renovation The Pretty Good House, published by Taunton Press, with Dan Kolbert, Emily Mottram, and Chris Briley. Michael designs homes and renovations that meet Pretty Good House building standards: simple, low carbon, resilient, healthy air quality, solar energy, local sourcing of materials, and not too big. He is also a co-host of the BS and Beer show with architect Emily Mottram.

Design Considerations

* Site planning
* Long term thinking
* Form follows function
* Panelization and modular construction
* Case Study: Jamaica Plain Legacy

Mechanical Systems

Overview of non-combustion mechanical systems in a weatherized building

* Why this makes sense
* Lack of make-up air
* Relative efficiency, e.g. operational expense
* Indoor air quality

Requirement for mechanical Ventilation

* HRV, ERV, continuous bath vents balanced load to ACH

Energy modeling software to calculate household demand

Humidity control equipment

Heat Pump Water Heaters and Hybrid Heat Pump Water Heaters

Transition to zero-combustion, energy efficient mechanical systems pairs will with Solar PV

Case Study: Meadow View House

Q and A (5 minutes)

**2:30 Break (10 minutes)**

**2:40 Matthew Tilas, Residential Area Manager ME/NH, Mitsubishi Electric Trane HVAC**

Matthew has a strong technical background in HVAC systems. His industry knowledge and real world experiences are part of all his professional activities.

Residential Air Source Heat Pumps (25 minutes)

Air Source Heat Pumps are part of strategic electrification in new construction and after weatherization in existing buildings. Other types of residential heat pumps are ground source heat pumps (aka geothermal) and heat pump water heaters.

Mini-Splits have an inside wall or floor mounted, or ceiling cassette connected to an exterior compressor with two small diameter copper pipes that carry a special refrigerant.

Ducted systems are also available.

Indoor Air Quality

* Enhanced with zero fossil fuel combustion or toxic gas emitted into the indoor space.
* Advanced filtration for pollutants, allergens, bacteria and smoke.

Economics

* Up to 40% more energy efficient than conventional heating and AC systems.
* Eligible for Efficiency Maine Rebates when installed by one of their approved contractors.

Functionality:

* Air Source Heat Pumps work well in a cold climate such as Maine when a unit is rated for it.
* Zones and room controls.
* Can replace conventional Heating and cooling systems when sized appropriately by a contractor or designer.
* Maintenance and life expectancy.

Q and A (5 minutes)

**3:10 Chris Jones, Clean Energy Consultant, ReVision Energy (25 min)**

*Chris joined ReVision Energy in the Spring of 2017, with a background in the non-profit sector and the goal of mission-driven employment. He considers it a privilege to travel throughout Maine discussing renewable energy with Mainers who are intent on reducing their carbon footprint and saving money on their energy costs.*

**Solar Photovoltaic Renewable Energy** (25 minutes)

* Why should homeowners go solar?
* How does solar work for homeowners in Maine?
* Combining solar with an electrified home and lifestyle
* Economic and environmental benefits of a "Net Zero" home
* What is a microgrid and why to you want one

Q and A (5 minutes)

**3:40 Round table discussion (20 minutes)**

Learning Objectives

Financing the Clean Energy Transition

Licensees will learn how customers and clients can find financial aid to complete weatherization projects to make their buildings less expensive to operate, to substitute expensive fossil fuel appliances with clean, efficient electric ones, and to use rooftop or community solar to make their buildings use net zero energy. Financial aid is available in three forms: rebates or grants, tax deductions, and loans. Low-income households can receive greater aid. To be a fiduciary requires licensees to be knowledgeable about funding available to the public in Maine for building energy efficiency and renewable energy to reduce energy expenses and increase building value.

Making the Transition from Fires to Wires

Licensees will learn how the transition from fossil fuels to efficient and renewable energy systems before global warming reaches level that scientists say will cause economic chaos is not only possible but has real and lasting benefits to our economies from households to entire regions. To be a fiduciary requires licensees to be knowledgeable about efficient and renewable energy systems, how they work and how they compare to current fossil fuel appliances, and how they reduce energy expenses and increase building value.