**Sam Rashkin**
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**Summary:**  A lifetime bringing innovation and performance to housing. How lucky can a person be?

**Experience:**

***Founder, Retooling the U.S. Housing Industry***March 2021 – Present
Building on experience successfully transforming our nation’s housing industry to high-performance homes, support a diverse array of housing industry organizations effort to get housing innovation across the market diffusion chasm between early adopters and mainstream users.

***Housing 2.0:*** Curated decades of experience into an extensively researched and vetted framework for consistently delivering high-performance homes with industry-leading user experience (UX). Results include:

* Authored two books filling a critical gap in guidance for integrating high-performance and UX optimization.
* Trained thousands of high-performance housing professionals and architectural students via workshops, webinars, and conference presentations on the critical skills needed to integrate and optimize UX.
* Empirically achieved 30 to 70 cost reductions on UX optimized zero energy ready home projects with a wide array of high-performance builder clients.

**Innovation to Market:**

* Developed a true-cost comparison tool for innovative product clients (e.g., SIPs, aerosol air sealing, and weather resistant barrier integrated sheathing) that internalizes the impressive cost savings and added value normally hidden into the bidding and sales process.
* Prepared a roadmap plan with the Structural Insulated Panel Association (SIPA) board of directors to optimize investments for targeted industry growth.
* Initiated a roadmap plan for the manufactured housing industry that will lay out a strategic set of research investments to achieve critical industry performance and growth goals.
* Serve as a senior advisor to diverse industry clients seeking to grow market penetration for their innovative products and services.

***Chief Architect, Building Technologies Office at U.S. DOE:***
June 2011 – March 2021 (9 years, 9 months)
Applied the same principles of maximizing efficiency and minimizing waste with U.S. DOE Building Technologies Office to deliver maximum impact at lower cost. Results include:

***Zero Energy Ready Home (ZERH):*** Led development of national voluntary high-performance home program at one-fifth the cost of the EPA ENERGY STAR Certified Home program and similar exponential growth. Results included:

* Strategic investment to work with the U.S. Treasury resulted in 45L builder rebate providing a 10-year lock on $5,000 incentive for each single-family certified ZERH.
* At 1% of the cost of the ENERGY STAR Certified Home program tracking system, leveraged the existing RESNET HERS Registry to track ZERH program results with no burden to HERS raters, real-time vs. quarterly updating, and more data informing analytics.
* For 1% of the cost of the ENERGY STAR Awards program, negotiated ZERH Housing Innovation Awards (HIA) program as part of EEBA with 100X greater exposure to the high-performance home community.
* At no cost, integrated submission requirements in HIA applications that provide content and testimonials to showcase over 500 cost-effective ZERHs Tour of Zero.
* At a fraction of the ENERGY STAR Certified Home marketing budget, leveraged hundreds of manufacturers and industry organizations to launch a national ‘Tour of Zero’ campaign.
* At 1% of the cost of the ENERGY STAR Certified Home partner meeting, took advantage of existing events (EEBA and RESNET conferences) to implement customer discovery meetings with attending builders and HERS raters.

***Building America Solution Center:*** Transformed proven DOE research innovation resources from fixed content to continuously improved database driven web tool. Results include:

* 80% lower cost to produce content
* 70% faster delivery of content from completion to end users
* 80% faster to find content with simplified interface
* 90+% of content up to date compared to a small percentage with fixed content
* Completely customizable bundling of content vs. no customization with fixed content
* Completely accessible content leveraging mobile applications
* ~15 million page views to date compared to 1,000s of downloads of old builder guides

***Race to Zero Student Design Competition (RTZ):*** Repurposed resources for ineffective builder awards program replaced at a fraction of the cost with the ZERH HIA with a new student design competition. Results compared to the Solar Decathlon include:

* RTZ only required one-fifth the DOE staff and resources.
* DOE is now able to reach ~2000% more universities and students while providing a stronger foundation for integrating building science into curriculum for building professionals all across U.S. and Canada.
* RTZ required a tiny fraction of the time and cost for students to participate while ensuring they received critical building science skills, experiences presenting to industry leaders, and access to career connections.
* Race to Zero is now integrated with the Solar Decathlon (Design and Build Challenge) and dominates in terms of reach and impact.

***Guidelines for Building Science Education:*** Established a national framework for establishing critical building science skills and competencies in 30 workforce classifications at a fraction of the cost and burden of the Better Buildings Workforce Guidelines.

***Building America:*** Provided strategic direction transforming this national program for research and development of high-performance home innovations to more effectively target critical gaps required for zero energy homes and deep energy retrofits.

***National Director, ENERGY STAR for Homes at U.S. EPA***November 1994 - June 2011 (16 years, 8 months)
Led the nation's most successful voluntary label program for energy efficient homes from inception through major market transformation goals. Key results over include:

* Established critical sequence and timing for progressively increased rigor that effectively crossed over from early adopter to mainstream builders.
* Established exponential growth which now has over 2.5 million certified homes.
* Over my tenure, EPA realized over $4 billion of benefits including homeowner energy savings and local government tax revenue for an investment of $40 million.
* 70% of ENERGY STAR Certified Homes in the first decade received no or minimal incentives demonstrating effectiveness of marketing solutions and distribution network strategy.

***Program Manager, California Energy Commission***June 1981 – November 1994 (13 years, 6 months)
Developed and managed innovative programs for promoting energy efficiency and renewable energy. Sample results include:

* Developed cost-neutral zero energy home concept in 1984 study.
* Led design and preparation of Energy Technology Status Report (ETSR) in 1984 including thousands of pages of analysis comparing cost, technical challenges, and research priorities for hundreds of supply and demand-side technologies.
* In 1984, as part of ETSR, created first levelized cost analysis comparing hundreds of supply and demand-side technologies showing energy efficiency was the lowest cost energy option decades in advance of same findings in the famous 2009 McKinsey study.
* Led small business loan program for applying energy efficiency and renewable energy technologies with such a strong portfolio, private sector offers were received to take it over.

***Sam Rashkin, Architect***
October 1978 - June 2011 (32 years, 9 months)
Designed over 100 energy efficient new, retrofit, and multi-family housing projects.

***National Awards:***

* 2019 - Energy and Environmental Building Alliance (EEBA) Legend Award
* 2012 - Hanley Award for Vision and Leadership in Sustainable Housing
* 2002 - Professional Builder Achievement Award

***Publications and Presentations:***

* Author of two books on preparing for the future of the housing industry:
***“Housing 2.0: A Disruption Survival Guide”***Green Builder Media, 2021 ***“Retooling the U.S. Housing Industry: How It Got Here, Why It’s Broken, and How to Fix It”***Cengage Learning, 2012
* 100’s of industry conference presentations, a sampling include:
	+ NAHB IBS 2024, February 27, 2024:
	*“Getting to Zero Faster, Better and Cheaper”*
	+ EEBA Annual Summit 2023, October 11, 2023:
	*“Five High-Performance Innovations that are Faster, Better and Cheaper”*
	+ EEBA Annual Summit 2022, September 20, 2022:
	*“Near Zero Building Envelopes Fast & Better Value Than Traditional Methods”*
	+ Westford Building Science Symposium, August 2019:

*“Building America Solution Center: Actionable Building Science Guidance”*

* + RESNET Annual Conference 2019:
	*“How to Up-Serve High-Performance Builders with the Building America Solution Center”*
	+ EEBA Annual Summit 2017, October 17, 2017:
	*“Zero Energy Ready Home: The Road Ahead”*
	+ EEBA Annual Summit 2016, September 17, 2016:
	*“The Times They are a Changing: Keeping Current with Building Science”
	“Who Knew Zero was so Simple: The Easy Lift from ENERGY STAR and Low HERS Scores”*
	+ Better Buildings, Better Business Annual Conference, March 10, 2020:
	*“New Business Opportunity: Existing Home Service Center”*
	+ IBS 2020 Master Class, January 18, 2020:
	*“Better Homes for Lower Cost”*
	+ Better Builds, Better Business Annual Conference, March 2019:
	*“Disruption is Coming to the Housing Industry”*
	+ DOE Better Buildings Summit, 2017
	*“Deep Energy Retrofits: Do No Harm”*
* Dozens of technical and policy papers, a sampling include:
	+ DOE Zero Energy Ready Home Reports: 2013 thru 2019
	*“Zero Energy Ready Home Leading Builder Round-Table Reports”
	“Zero Energy Ready Home Leading HERS Rater Round-Table Reports”*
	+ DOE White Paper, April 2016:
	*“Market Transformation to Zero Energy Ready New Homes and Deep Energy Retrofits”*
	+ DOE White Paper, April 2013:
	*“Building America Building Science Education Roadmap”*
	+ DOE White Paper, November 2012:
	*“Building America Affordable High-Performance Home Competition”*
	+ EPA White Paper, 2005:
	*“1995-2005: A Decade of Change in Home Building with ENERGY STAR”*
* Dozens of peer-reviewed research conference papers, a sampling include:
	+ ACEEE Summer Study 2018:
	“*What We Learned on the Way to 2 Million ENERGY STAR Certified Homes
	that is Positioning Zero Energy Ready Homes for Exponential Growth”*
	+ ACEEE Summer Study 2014:
	*“Setting the Pace for the Race to Zero Energy Ready Homes”*
	+ ACEEE Summer Study 2012:
	*“How Did a Small Voluntary Program Transform the $.3 Trillion U.S. Housing Industry?”*
	+ ACEEE Summer Study 2008:
	*“Tackling Efficiency Paradoxes: Responses to ‘Energy Efficient’ 10,000 sq. ft. Houses”*
	+ ACEEE Summer Study 2008:
	*“The Road to Carbon Neutral” ENERGY STAR for Homes and Beyond”*
	+ ACEEE Summer Study 2002:
	*ENERGY STAR Labeled Homes Evolving with State Energy Codes: Ensuring Success in a Changing Context”*
	+ ACEEE Summer Study 2002:
	*“Surprise! Energy Efficiency Sells Without Rebates: Results of Mainstream Builders Selling ENERGY STAR Labeled Homes*
* Dozens of industry conference keynote addresses, a sampling include:
	+ National Institute of Building Science BEST6, March 19, 2024
	*“The Greatest Existential Threat to the Planet: Spoiler Alert, It’s NOT Climate”*
	+ SelectSIPs Expo and Annual Meeting, January 2024:
	*“Translating the Hidden Value of SIPs”*
	+ RaterFest Annual Conference 2023, September 23, 2023:
	*“Certification as a Service”*
	+ Extreme Panel Annual Conference, November 15, 2022:
	*“High-Performance Enclosures: Faster, Better, and Cheaper”*
	+ Modular Home Builder Association Annual Conference, October 16, 2022:
	*“The Future of Housing … with Certainty”*
	+ Built Green Conference, September 16, 2021:
	*“The Future of Housing … with Certainty”*
	+ Better Buildings, Better Business Annual Conference, March 10, 2020:
	*“Why Housing is Long Overdue for Disruption”*
	+ Maine Indoor Air Quality & Energy Annual Conference, November 2019:
	*“Housing Disruption: Why Now”*
	+ Penn State Engineering Hankin Lecture, November 8, 2016:
	*“The Path to a Sustainable Future Begins with Power Words”*
	+ 10th Annual North American Passive House Conference, September 12,2015
	*“Power Words”*
* Dozens of industry publication articles, a sampling includes:
	+ Green Builder Media:
	August 2023: *“Disruption Comes to Housing: Part 2 – What”*
	June 2023: *“Disruption Comes to Housing: Part 1 – Why”*
	November 2022: *“The Risks of Building Net Zero Energy Homes”*
	October 2022: *“Workforce Crisis: High Impact, Low-Cost First Step*April 2022: *“The Missing Air Barrier”*December 2021: *“Why Indoor Air Quality is the New Must-Have Feature”*
	November 2021: *“Saving the Planet Tip: Don’t Grip too Tight”*
	+ Builder Online:
	May – September 2016: *“It’s Time to Change Platforms – Parts 1 thru 5”*
	August 2015: *“Performance Anxiety: What if a Car Came with a 2,000 Mile Warranty?”*
	July 2015: *“When Value Trumps Price”*
	+ Professional Builder, March 1, 2014
	*“Leading Builders Pave the Way for the Future of Housing”*
* Dozens of television appearances and podcasts

***Volunteer Experience***

***National Advisory Board for KB Homes***June 2009 – Present
Expert board member advising the 5th largest home builder in the nation on sustainable practices

***ESG Working Group for Green Builder Media***November 2022 – November 2023
Expert collaboration led by Green Builder Media developing ESG Guiding Principles

***Ex-Officio Board Member/Expert Advisor at Net-Zero Buildings Coalition***
July 2014 – November 2019 (1 year 4 months)
Advised start-up non-profit dedicated to zero energy ready buildings

***Steering Committee Member for USGBC LEED for Homes***Expert member advising development of national green home building program

***Steering Committee Member for NAHB Green Home***Expert member advising development of housing industry sponsored green building program

***Development Team for EPA Indoor Air Package***Expert advisor for development of nation’s first comprehensive indoor air quality specification for new homes

***Education***

***New York University Masters of Urban Planning studies:*** 1975 - 197752 out of 64 total credits, 3.7 GPA

***Syracuse University Bachelor of Architecture (BArch)***: 1971 - 1974
Bachelor of Architecture
Activities: Advanced Structures Program Team authoring book on High-Rise Structures