

ENERGY  
EVALUATION  
ASIA PACIFIC

## SUMMARY NOTES

### EEAP WEBINAR 20

#### Measuring What Matters: Non-Energy Benefits of Weatherization and Efficiency Programs

On August 5, 2025, the Energy Evaluation Asia Pacific (EEAP) hosted its 20th webinar, focusing on the topic of 'Measuring What Matters: Non-Energy Benefits of Weatherization and Efficiency Programs'.

The session featured two distinguished speakers from Three3, Inc:

- **Dr. Bruce Tonn** (he/him), Co-founder and President, Three3, Inc.
- **Michaela Marincic** (they/them), Senior Research & Data Analyst, Three3, Inc.

Edward Vine opened the session by introducing the mission of Energy Evaluation Asia Pacific (EEAP) to promote objective evaluation of energy efficiency and renewable energy programs across the region. He emphasized the growing importance of assessing non-energy benefits (NEBs) such as health, comfort, and financial well-being - critical dimensions in understanding the full impact of energy interventions.

Dr. Bruce Tonn presented findings from multiple U.S.-based studies on the non-energy impacts of low-income weatherization programs. He demonstrated how physical improvements to homes lead to measurable gains in health, household finances, and life satisfaction, and advocated for integrating weatherization with public health and climate resilience strategies.

Michaela Marincic followed with a detailed explanation of how to monetize these non-energy impacts, showing how assigning dollar values to health and well-being outcomes strengthens the case for investment in energy efficiency. They illustrated innovative modeling approaches and emphasized the importance of cross-sector collaboration in advancing evaluation practices.

The webinar offered a compelling exploration of how weatherization and energy efficiency programs can deliver wide-ranging societal benefits. It provided valuable insights for policymakers, evaluators, and practitioners seeking to design more equitable, cost-effective, and impactful energy programs.

This document summarizes the key discussion points from the webinar.

## Webinar Agenda

Time (PDT)	Sessions/Speakers
9:00-9:05 AM	<b>Welcome Remarks &amp; Context Setting</b>  <i><b>Edward Vine</b>, Affiliate, Lawrence Berkeley National Laboratory (LBNL) and Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)</i>
9:05-9:40 AM	<b>Presenters</b>  <b>1. Dr. Bruce Tonn</b> , Co-founder and President of Three3, Inc. <b>Discussion Topic: “Non-energy Impacts of Weatherization”</b>  <b>2. Michaela Marincic</b> , Senior Research & Data Analyst, Three3, Inc. <b>Discussion Topic: “Approaches to monetizing non-energy impacts for energy efficiency programs</b>
9:40-9:55 AM	<b>Moderated Audience Q&amp;A</b>  Moderated by <i><b>Edward Vine</b>, Affiliate, Lawrence Berkeley National Laboratory (LBNL) and Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)</i>
10:00 AM	<b>Concluding Comments &amp; Vote of thanks</b>  <i><b>Edward Vine</b>, Affiliate, Lawrence Berkeley National Laboratory (LBNL) and Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)</i>

## Introduction and Context Setting

Edward Vine, Affiliate, Lawrence Berkeley National Laboratory (LBNL) and Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)

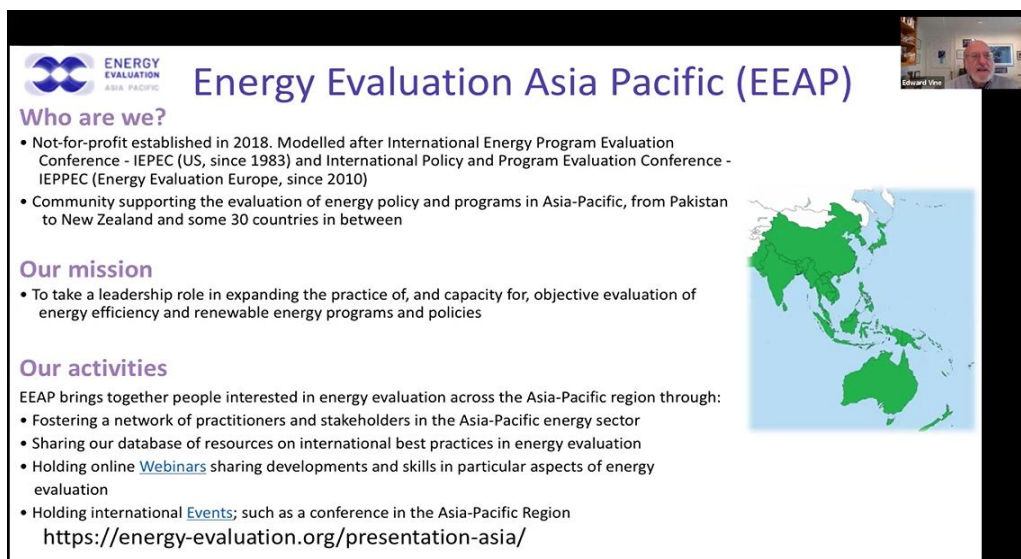
Ed greeted the participants and speakers, introduced EEAP and provided a context for the webinar.

### **Introduction to Energy Evaluation Asia Pacific (EEAP)**

Ed introduced EEAP to the participants. Established as a non-profit organization in 2018, and modelled after IEPEC (US, since 1983) and IEPPEC (Europe, since 2010), EEAP is focused on expanding the practice of objective evaluation in the Asia Pacific region. EEAP's mission is to lead in expanding evaluation practices, building capacity, and understanding the impact of energy efficiency and renewable energy programs and policies, aiming to provide a strong evidence basis for continuous improvement in these areas.



EEAP fosters exchange and interaction among evaluators, NGOs, government agencies, and academics to promote the value of energy evaluation and capacity building. EEAP offers a database of resources on best practices, holds webinars on various topics, and organizes international events and conferences, particularly in relation to the Sustainable Development Goals (SDGs). EEAP brings stakeholders together to support data-driven decision-making in the energy sector. One of its main objectives is capacity building, especially in the rapidly growing Asia Pacific region.



**Energy Evaluation Asia Pacific (EEAP)**

**Who are we?**

- Not-for-profit established in 2018. Modelled after International Energy Program Evaluation Conference - IEPEC (US, since 1983) and International Policy and Program Evaluation Conference - IEPPEC (Energy Evaluation Europe, since 2010)
- Community supporting the evaluation of energy policy and programs in Asia-Pacific, from Pakistan to New Zealand and some 30 countries in between

**Our mission**

- To take a leadership role in expanding the practice of, and capacity for, objective evaluation of energy efficiency and renewable energy programs and policies

**Our activities**

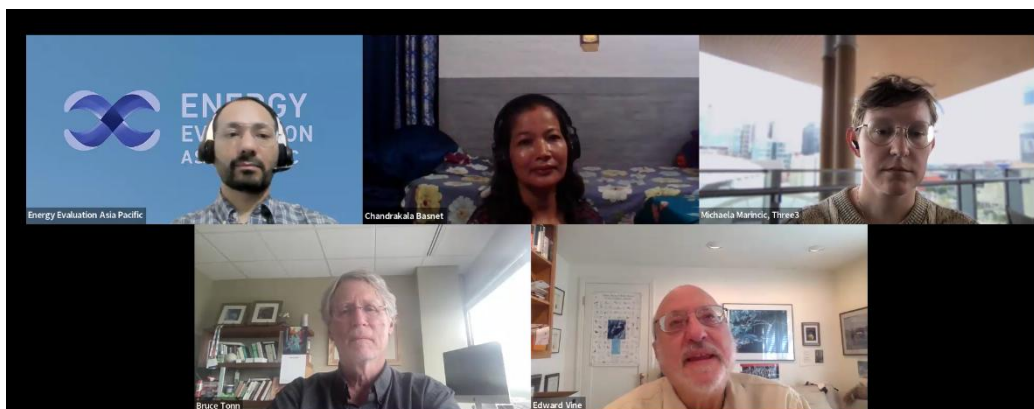
EEAP brings together people interested in energy evaluation across the Asia-Pacific region through:

- Fostering a network of practitioners and stakeholders in the Asia-Pacific energy sector
- Sharing our database of resources on international best practices in energy evaluation
- Holding online [Webinars](#) sharing developments and skills in particular aspects of energy evaluation
- Holding international [Events](#); such as a conference in the Asia-Pacific Region

<https://energy-evaluation.org/presentation-asia/>

Additionally, he referenced a recent report by the International Energy Agency on the multiple benefits of energy efficiency, encouraging attendees to explore it for global insights.

Ed outlined the structure of the webinar, introducing the speakers Bruce Tonn and Michaela Marincic from Three3, a nonprofit research organization. He stressed that the topic, measuring what matters, was timely and relevant, especially for low-income and climate-vulnerable communities. His remarks set the stage for a deeper exploration of how weatherization and energy efficiency programs can deliver wide-ranging societal benefits.



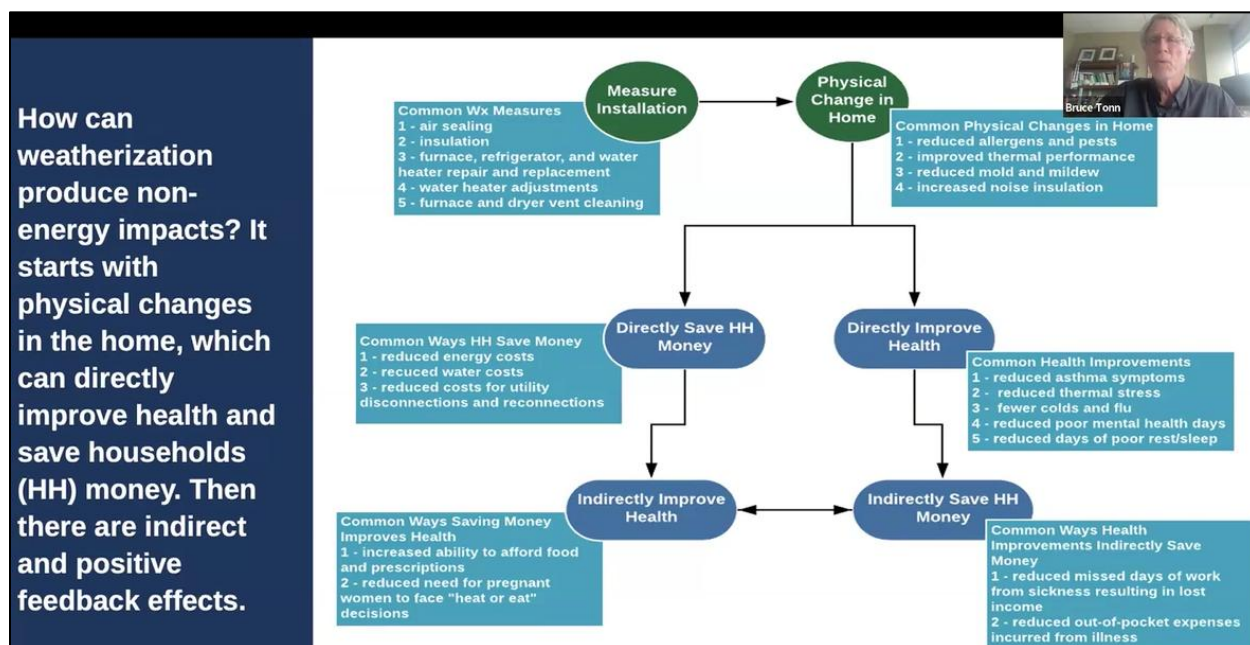
## Presentation by Speakers

### 1. “Non-energy Impacts of Weatherization”

Dr. Bruce Tonn, Co-founder and President of Three3, Inc.



Bruce Tonn presented a comprehensive overview of the non-energy impacts (NEIs) of weatherization programs, particularly those targeting low-income households in the United States. As president of Three3, Tonn shared findings from multiple studies conducted in collaboration with utilities, foundations, and public agencies. He explained that weatherization involves installing energy efficiency measures, such as insulation, air sealing, and HVAC upgrades, that lead to physical changes in the home environment. These changes, in turn, result in improved thermal comfort, reduced exposure to allergens, and enhanced indoor air quality. Bruce emphasized that these physical improvements have measurable effects on health, including fewer asthma symptoms, reduced arthritis pain, and lower rates of hospitalization due to thermal stress.



He also discussed the financial and psychological benefits of weatherization, noting that households report greater ability to pay utility bills, fewer trade-offs between food and medicine, and improved life satisfaction. Bruce introduced a theory of change model that links physical home improvements to health, financial stability, and overall well-being. He advocated for integrating weatherization with healthy homes and climate resilience measures and called for greater involvement from healthcare organizations in funding and supporting these programs.

### Main Takeaways:

- Weatherization programs produce significant health, financial, and quality-of-life improvements, especially for low-income households, by addressing physical deficiencies in the home.
- Cross-sector collaboration, particularly with public health and climate resilience initiatives, can amplify the benefits of weatherization and make programs more impactful.

## 2. “Approaches to monetizing non-energy impacts for energy efficiency programs”

Michaela Marincic, Senior Research & Data Analyst, Three3, Inc.



Michaela Marincic (using they/them pronouns) focused their presentation on the monetization of non-energy impacts (NEIs), explaining why assigning dollar values to health and well-being benefits is crucial for policy and program evaluation. They emphasized that traditional cost-benefit analyses often undervalue weatherization programs because they only consider energy savings, which may be modest compared to the investment. By quantifying NEIs, such as reduced medical costs, improved productivity, and avoided utility disconnections, evaluators can present a more complete picture of program value. Michaela outlined methodologies used by Three<sup>3</sup>, including surveys, direct measurements, and secondary literature, and stressed the importance of transparency and rigor in assigning monetary values.



Michaela provided examples from both residential and non-residential contexts, including improved lighting in workplaces, reduced airborne infections in schools, and enhanced resilience through battery storage and solar panels. They also highlighted innovative modeling approaches, such as using the Wells-Riley equation to estimate infection risk reduction from improved ventilation. Michaela concluded by encouraging evaluators to consider local context such as air pollution, fuel types, and grid reliability, when assessing NEIs, and emphasized the potential for linking these evaluations to broader goals like climate adaptation and sustainable development.

### Main Takeaways:

- Monetizing NEIs enables more accurate and compelling cost-benefit analyses, which can justify greater investment in energy efficiency and weatherization programs.
- Innovative modeling and cross-sector expertise, such as epidemiological tools and healthcare data, are essential for advancing NEI evaluation and informing policy decisions.



## Presenters' Bio



### **Michaela Marincic**

Senior Research & Data Analyst, Three3, Inc.

Michaela Marincic has over seven years of experience working with utilities and public agencies to evaluate energy programs, particularly those for low-income residents. Marincic is a co-author on the forthcoming U.S. Department of Energy report on estimated energy burdens for participants in the national Weatherization Assistance Program; this report marks an update to the previous energy burden estimates produced by Three3 (Rose & Hawkins 2020). Marincic has contributed to research on health benefits resulting from low-income residential weatherization throughout the Southeastern, Midwestern, and Northeastern United States in studies funded by the JPB Foundation, Massachusetts Utility Program Administrators, and the Tennessee Valley Authority. Their research has included statistical modeling and qualitative surveys and interviews with weatherization recipients about their health and well-being. Marincic holds an M.S. in Public Policy, Management, and Data Analytics from Carnegie Mellon University and specializes in using data analytics, machine learning, mapping and geographic information systems (GIS) for social good.



### **Dr. Bruce Tonn**

Co-founder and President of Three3, Inc.

Dr. Bruce Tonn is co-founder and President of Three<sup>3</sup>, Inc., which is a non-profit research organization located in Knoxville, Tennessee. Three<sup>3</sup>'s mission is *to foster equitable, sustainable futures*. Dr. Tonn has 40-years of experience in the energy program evaluation field. Dr. Tonn and colleagues have made major strides in estimating the non-energy impacts (e.g., health) of low-income weatherization and other energy efficiency programs. Dr. Tonn earned degrees from Stanford, Harvard, and Northwestern Universities.

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