SUMMARY NOTES

EEAP WEBINAR 10
Measuring Progress on Energy Wellbeing in New Zealand

On May 7, 2024, the Energy Evaluation Asia Pacific (EEAP) hosted its 10th webinar focusing on the crucial topic of 'Measuring Progress on Energy Wellbeing in New Zealand'. This insightful webinar featured two notable speakers: Dr. Phoebe Taptiklis, Research Fellow, Motu Economic Public Policy Research, New Zealand, and Dr. Caroline Fyfe, Post-doctoral Researcher, Karolinska Institute, Stockholm, Sweden. The webinar served to provide a guided tour of two important evaluations which measured the impact of New Zealand's recent energy hardship policies.

Phoebe Taptiklis presented findings from an evaluation of the Mario and Public Housing Renewable Energy fund, which allocated a substantial allocation of $28 million to tackle energy affordability issues and enhance the quality of housing in New Zealand. Caroline Fyfe provided an overview of a study conducted on the Warm Kiwi Homes program in New Zealand run by the Energy Efficiency Conservation Authority (EECA), which aimed to improve energy efficiency and provide heating solutions for low-income households.

The discussions underscored the critical role of renewable energy and energy efficiency initiatives in promoting inclusive and sustainable outcomes for communities facing energy-related challenges. The session also served to emphasize the importance of comprehensive evaluation methodologies, blending quantitative and qualitative analysis, to assess program impacts accurately. This document summarizes the key discussion points from the webinar.

Webinar Agenda

Time (IST)	Sessions/Speakers
12:30-12:40 pm	**Welcome Remarks & Context Setting** ***Nina Campbell**, Energy Lead, Consumers International* *Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)*

12:40-1:10 pm	**Presenters** 1. ***Dr. Phoebe Taptiklis,*** Research Fellow, Motu Economic Public Policy Research, New Zealand, ***'Evaluating the Maori and Public Housing Renewable Energy Fund: Interim findings from the first winter'*** 2. ***Dr. Caroline Fyfe,*** Post-doctoral Researcher, Karolinska Institute, Stockholm, Sweden, ***'Quantifying the impacts of energy efficient heating: The Warmer Kiwis Programme'***
1:10-1:30 pm	**Moderated Audience Q&A** Moderated by ***Nina Campbell****, Energy Wellbeing Consultant and Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)*
1:30 pm	**Concluding Comments & Vote of thanks** ***Nina Campbell****, Energy Lead, Consumers International* *Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)*

Introduction and Context Setting

Nina Campbell, Energy Lead, Consumers International
Steering Committee Member, Energy Evaluation Asia Pacific (EEAP)

Nina Campbell, a member of the Steering Committee for EEAP, cordially greeted the participants and speakers, introduced EEAP and provided a context of the webinar.

Introduction to Energy Evaluation Asia Pacific (EEAP)

Nina introduced EEAP to the participants. Established as a non-profit organization in 2018, 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.

The organization 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 interested in evaluation 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. Nina emphasized that monitoring and evaluation are central to EEAP's work, ensuring that robust methods and data support policymaking and practice in the energy sector.

Context of Energy Wellbeing in New Zealand

Nina provided a context of energy landscape in New Zealand. She described New Zealand to the participants as an island country in the Southwest Pacific Ocean, comprised of two main islands with a land area of approximately 260,000 square kilometers and a population of around 5 million people. She highlighted the spaciousness of the country, influencing housing and living conditions. New Zealand primarily utilizes wood for building construction, with many houses in varying states of repair due to factors like low-income occupancy and cultural norms. Most residents live in individual dwellings, with only 15% residing in multi-family or joined dwellings. Building insulation is relatively rare but is being retrofitted rapidly across the country, although it hasn't historically been required by building codes. Consequently, New Zealand houses tend to be fairly cold, with typically single-glazed windows. In terms of energy sources, homes primarily rely on electricity, with electricity and wood most commonly used for heating and cooking. Natural gas is also used, but only about 20% of homes are connected to the gas grid.

Presentation by Speakers

'Evaluating the Maori and Public Housing Renewable Energy Fund: Interim findings from the first winter'

Dr. Phoebe Taptiklis, Research Fellow, Motu Economic Public Policy Research, New Zealand

Phoebe Taptiklis presented findings from an evaluation of the Maori and Public Housing Renewable Energy Fund. The Maori and Public Housing Renewable Energy fund, with a substantial allocation of $28 million, was established in New Zealand with a dual objective: to tackle energy affordability issues and enhance the quality of housing. This initiative targeted both state-owned housing and indigenous housing, offering support with innovative renewable energy solutions.

Diverse renewable energy projects were encouraged under the fund. While solar power was most common, the methodologies varied, encompassing rooftop solar installations with and without battery storage, grid-connected systems, and larger solar arrays serving entire communities. Other technologies were also supported, such as geothermal heat.

The evaluation of the fund's impact employed a comprehensive methodology blending quantitative and qualitative analysis. Quantitatively, it utilized before-and-after data collection through household surveys, covering key metrics such as energy usage, affordability, health, and well-being. Qualitative insights were gathered through in-depth case studies, enabling a nuanced understanding of the unique dynamics at play within different households.

Preliminary findings from the evaluation reveal promising outcomes, particularly in terms of grid-sourced electricity consumption reduction. Following the installation of solar panels, there was a notable decrease in electricity usage from the grid, particularly during evening peak hours. This reduction remained consistent across various regions of New Zealand, even after controlling for factors such as outdoor temperature fluctuations. It is expected that overall electricity use did not reduce, but reductions observed were explained by electricity sourced from the solar panels and batteries replacing grid-based power supply.

Future research directions aim to enrich these findings by incorporating additional data sources, such as inverter data and energy audits. By delving deeper into household-level behavior changes, researchers seek to validate the impact of solar power on energy consumption patterns, affordability and well-being metrics.

The study underscores the critical role of renewable energy initiatives in addressing both energy poverty and housing quality issues. By reducing electricity demand and alleviating peak loads, solar energy not only enhances individual household well-being but also contributes to broader energy management strategies.

‘Quantifying the impacts of energy efficient heating: The Warmer Kiwis Programme’

Dr. Caroline Fyfe, Post-doctoral Researcher, Karolinska Institute, Stockholm, Sweden,

Caroline Fyfe provided an overview of a study conducted on the Warmer Kiwi Homes program in New Zealand run by the Energy Efficiency Conservation Authority (EECA), which aims to improve energy efficiency and provide heating solutions for low-income households. Caroline's study, conducted in partnership with various New Zealand universities and EECA, sought to evaluate the effectiveness of this program.

Initially planning a natural experiment, Caroline's team faced challenges due to the COVID-19 pandemic, particularly the Delta variant and supply chain issues. Instead, they conducted a cohort study, comparing households that received heat pumps with those that did not due to supply chain delays. They followed up for a second year, allowing for a more comprehensive analysis.

The study, spanning 164 households across New Zealand, utilized indoor air quality monitors, electricity usage data, and surveys to collect extensive data. Results indicated significant improvements in life satisfaction, and perceived warmth, particularly during the COVID-19 pandemic. Internal temperatures increased significantly after heater installation, especially during colder external temperatures and electricity usage decreased by about 16%. A cost-benefit analysis revealed substantial societal and fiscal benefits, particularly in health-related savings.

Caroline's presentation highlighted the positive impact of the Warmer Kiwi Homes program on well-being, energy efficiency, and cost savings for low-income households in New Zealand.

UPCOMING EVENTS

- **Webinar on: Energy Evaluation Stories: Transforming the way we measure clean energy transitions.**

- Date: Wednesday, June 5, 2024 - 13:00 PM IST (Indian Standard Time)
- **Details:** https://www.globalevaluationinitiative.org/event/energy-evaluation-stories-transforming-way-we-measure-clean-energy-transitions

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