C4NET

MEDIA RELEASE

Electrification Insights Unveiled: ESP Project First Completed Output

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Amidst the evolving energy landscape, C4NET's Enhanced Systems Planning Project (ESP) marks a significant step in delivering clarity through data. C4NET are pleased to announce the release of the ESP project's first component, providing crucial insights into the impacts of electrification on heating and cooling demand.

The ESP project, led by C4NET, is a major research initiative focused on informing sub-transmission level electricity planning beyond 2030. focusing on the complexities introduced by renewable energy integration, heating and cooling electrification, and distributed energy resources (DERs), as Australia moves to a whole of system approach to planning.

The component "*Technical modelling of electrification of heating (and cooling) profiles*", undertaken by the University of Melbourne, includes a comprehensive literature review, the development of a modelling framework, and the generation of high-resolution electrified heating and cooling demand profiles. Using a physics-based bottom-up methodology, the model integrates factors such as building type, household size, energy efficiency, and local weather conditions to accurately predict energy demand at various levels of aggregation.

Key findings from the component highlight critical insights into operational performance, peak demand dynamics, and the technological impacts of electrification on heating and cooling systems. These insights lay the groundwork for future research aimed at refining energy consumption models and optimising sustainable energy integration.

Throughout development of the component, C4NET has facilitated ongoing collaboration with ESP Project partners and industry stakeholders, refining model parameters, assumptions, and methodologies. This unique industry collaboration between Distribution Network Service Providers (DNSPs), researchers, government, and industry stakeholders is a key feature of the ESP Project and ensures a holistic approach to future system planning.

The release of the ESP Project's first component is a significant milestone for C4NET and its partners, as they pioneer this collaborative, data-enabled whole-of-system approach to energy planning. By harmonising diverse modelling frameworks and incorporating extensive stakeholder input, the ESP

Project not only ensures robust predictions but will also lead the charge in addressing critical gaps in long-term whole-of-system national energy planning.

Quotes Attributable to James Seymour, CEO of C4NET:

As we release the first component of our Enhanced Systems Planning Project, we are unveiling foundational insights that can inform future energy system planning.

The release of the ESP project's first component signifies a significant achievement for C4NET and its partners, setting a precedent for informed decision-making in energy system planning.

Webinar Invitation

To hear more about the ESP Project's first component "*Technical modelling of electrification of heating (and cooling) profiles"* join us at our webinar **on Friday, 28 June**. To register, please go here.

For additional information on C4NET and the ESP project please visit c4net.com.au

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