

Nomination: 18995

Energize Tomorrow: CO2 Wi-Fi Heat Pump's Sustainable Breakthrough (U06)

Page: General Information
Name of Organization / Company Reclaim Energy
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Web Site Address https://reclaimenergy.com.au/ (https://reclaimenergy.com.au/)
Page: Entry Information
Entry Title Energize Tomorrow: CO2 Wi-Fi Heat Pump's Sustainable Breakthrough (U06)
Category U01 - U11 - Award for Innovation in Sustainability > U06. Saving Energy
Submission Format An Essay of up to 625 Words

Essay

We are thrilled to showcase Reclaim Energy's ground-breaking achievements in the esteemed Saving Energy category (U06). Our submission revolves around the transformative impact of the CO2 Wi-Fi Heat Pump Hot Water System, a pioneering solution that has been reshaping the energy efficiency landscape.

Key Milestones:

1. May 2023: Successfully launched the CO2 Wi-Fi Heat Pump Hot Water System, establishing a new benchmark for energy-efficient solutions.
2. February 2024: Forged an unprecedented partnership with Panasonic, a testament to the exceptional quality and innovation inherent in our product. Notably, Reclaim is the first company and Australia is the first country outside Japan that Panasonic has chosen to collaborate with, showcasing the trust in our business.

Sustainability at the Core:

Since our establishment in 2018, Reclaim Energy has been a trailblazer in sustainable solutions, garnering recognition as a Banksia Award finalist and receiving various industry honours.

Reducing Energy Consumption:

Our CO2 Wi-Fi Heat Pump operates within the range of 0.5-1.5 kW a day, achieving a remarkable 87.5-95.8% reduction in energy draw compared to the average 12 kW daily consumption of standard systems. Moreover, when paired with renewables, the energy draw is often reduced to zero, making it a truly sustainable choice.

Environmentally Friendly Refrigerant:

While industry counterparts use R134A with a GWP of 1430, our system stands out by utilizing R744 (CO2) with a GWP of 1, thereby significantly minimizing environmental impact.

Reliability and Quality:

The CO2 Wi-Fi Heat Pump boasts an impressive 0.34% warranty case rate, underscoring its reliability. Offering the longest warranty in the market reflects our confidence in the quality and durability of our product.

Smart Integration for Sustainable Practices:

Through the integration of Wi-Fi capabilities and collaboration with Solar Analytics, our system empowers users to optimize their hot water systems based on excess PV energy. This not only fosters accountability but also promotes responsible energy consumption, aligning with global sustainability goals.

Advocacy for Legislative Changes:

Actively engaging with lawmakers, we are fervently advocating for the ban of dangerous refrigerants. Our CEO and CTO, both esteemed experts in the industry, are driving impactful shifts, contributing to the transformation of the hot water heat pump market.

Global Recognition and Collaborative Engagement:

Collaborations with esteemed partners, including Panasonic, Solar Analytics (UNSW), ViPac Labs, and Dontek Technology, emphasize our commitment to environmental and consumer well-being. The recognition as a Banksia Award finalist further solidifies our dedication to industry excellence.

Contextualizing the Impact:

Understanding the broader context of energy consumption and environmental impact is crucial. Water heating constitutes the second-largest segment of household energy use, ranging from 15% to 30%, making it a prime target for innovative solutions.

Market Dynamics:

Residential buildings contribute to around 24% of overall electricity use and over 10% of total carbon emissions in Australia. With price increases of 20.8% to 23.9% for residential customers without controlled load and 19.6% to 24.9% with controlled load from July 1, 2023, the urgency for energy-efficient solutions becomes even more apparent.

Impactful Replacement Trends:

Annually, 700,000 hot water units are replaced in Australia, with 450,000 being electric immersion elements drawing a daily energy of 12 kW. Our Wi-Fi unit, with a maximum daily draw of 1.5 kW, offers a significant reduction. If all 450,000 were Reclaim units, the reduction in energy consumption over their lifespan would be monumental.

For this category please provide

An essay of up to 625 words describing the nominated innovative achievements since July 1 2021, **OR** a video of up to five (5) minutes in length illustrating the same.

Optional (but highly recommended), a collection of supporting files and web addresses that you may upload to our server to support your entry and provide more background information to the judges.

Credits

Dr Chris Taylor - CEO Solar Thermal Australia

Natalie Bailey - National Customer Experience Manager - Submission Writer

Saeed Tehrani - Engineer and Chief Technology Officer

Essay continued -

In fact, this equates to a staggering reduction of 17,246,025,000 KWs of energy consumption over the lifespan of these units compared to standard systems. This is based on our maximum energy draw so actual figures could be significantly more. When paired with our WiFi unit this equates to a reduction of 18,888,750,000 KWs of energy. When paired with the WiFi unit and Solar PV our app utilises only excess PV at peak times rather than transporting excess energy back to the grid so equates to a reduction in consumption of 19,710,000,000 KWs of energy.

Contributing to National Targets:

The National Energy Performance Strategy's legislated emissions reduction targets of 43% by 2030 and net-zero by 2050 are ambitious. Our product significantly contributes to these targets, aligning with Australia's commitment to sustainability.

Environmental Impact:

Using a refrigerant with a GWP of 1, our product stands in stark contrast to competitors using R134A with a GWP of 1430. The reduction in CO2 emissions, when multiplied by the 450,000 units replaced annually, exemplifies our commitment to environmental responsibility. This results in a remarkable reduction of 4,725,000 tonnes of CO2 emissions annually in Australia alone.

Global Environmental Impact and Government Goals:

Our product's impact extends beyond Australia. By helping governments achieve emissions targets, we continue to make a substantial difference in every country we trade. As our presence grows, we are compelling competitors to adopt better practices and reconsider their refrigerant choices.

Reclaim Energy's CO2 Wi-Fi Heat Pump Hot Water System is not just a technological advancement; it is a transformative force that actively addresses global challenges. With unmatched accountability, emission reduction capabilities, and societal impact, our product is a beacon of responsible innovation in the hot water system market.

As we look to the future, our commitment to continuous improvement and collaboration remains unwavering, echoing possibilities for every underdog with a dream of making a significant impact on an entrenched industry.

Do You Have Supporting Files You Would Like to Upload?

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Audio (Mp3), Documents (PDFs, Word, PowerPoints), Images (PNG, JPG, TIF), and Video (Mp4)

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