

Revolutionizing Sustainable Housing: Innovative Water Heater Empowers Developers to Decarbonize and Achieve ESG Goals

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Apparent Inc. →

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NOVATO, Calif. , Dec. 14, 2023 /PRNewswire/ -- Apparent Inc., a trailblazer in clean energy solutions, is poised to reshape the water heating landscape with its revolutionary technology—the **ExElement Heating System (EXEL)**. Apparent's system implements both patented technologies, as well as new, patent pending technology. This innovative system is designed to accelerate the transition from traditional natural gas and electric resistance water heaters to advanced, clean energy, grid-responsive technologies, aligning seamlessly with national, local, and utility strategies for rapid decarbonization.

Apparent is launching affordable and innovative water heating solutions to housing developers. Engineered with high efficiency and sustainability in mind, this solution is designed to meet the clean energy requirements of states like CA Title 24 and Hawaii building standards.

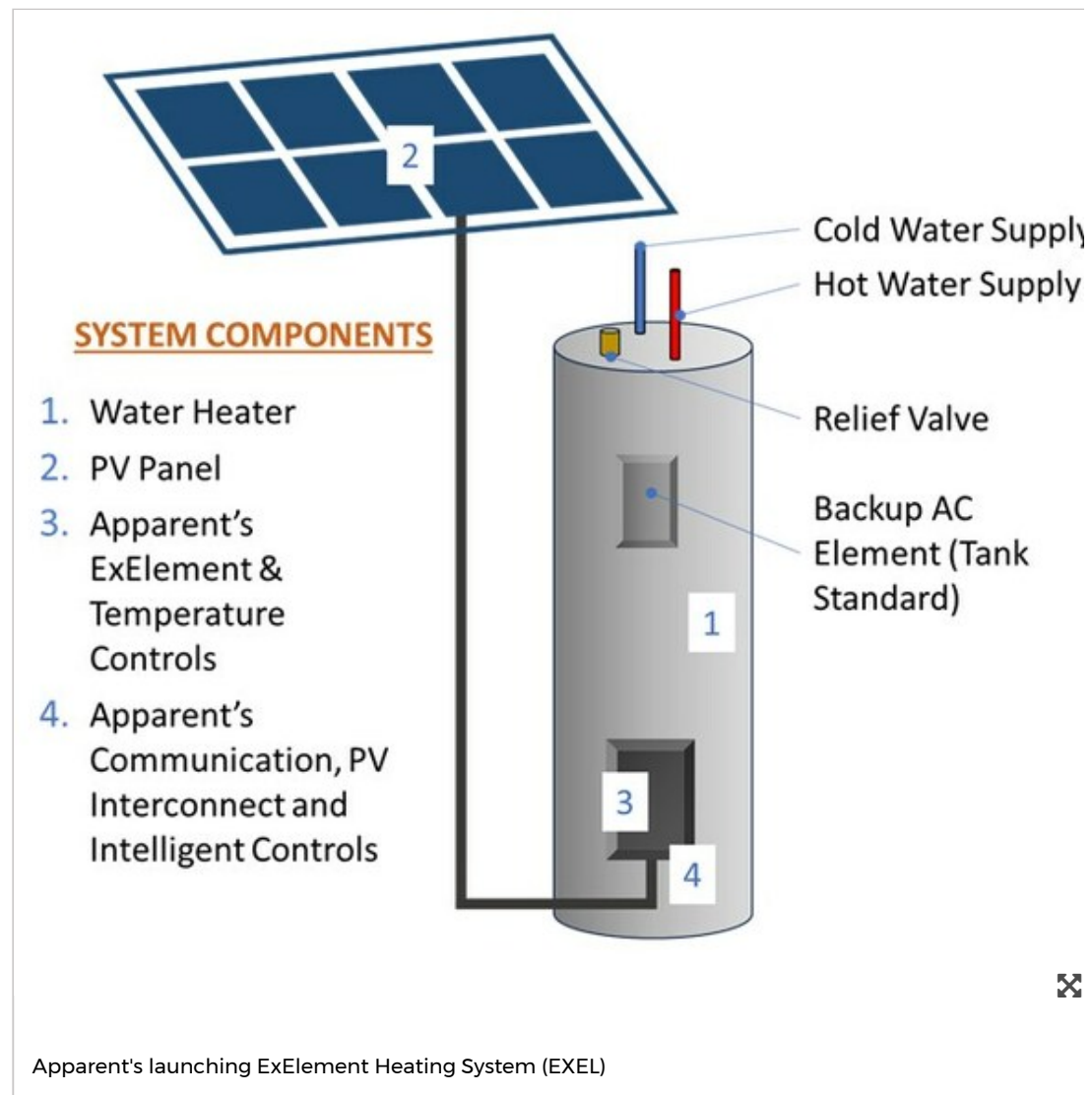
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The innovative design is a low-power, DC system requiring only four PV solar panels, thus offering developers both a code and environmentally compliant solution to achieve sustainability offerings and savings while aligned with the increasing shift away from natural gas by local and state municipalities. With Apparent, sites can achieve 100% renewable and grid-independent heating with a nominal \$5,000 investment.

The heart of Apparent's solution lies within its AI and machine learning software platform, the **proprietary Intelligent Grid Operating System (igOS™)**, transforming the water heater into a bi-directional demand management tool. This enables consumers to optimize energy consumption, benefit from dynamic pricing models, and contribute to a more sustainable future. The Apparent low voltage water heater system makes it easy and safe for installations. Other features include app-based controls for easy operations, inverter-less design with fewer components, off-grid functionality, and extended performance sunrise to sunset.

For utilities and commercial developers, the EXEL water heaters can be leveraged as part of a scalable, grid-connected fleet when paired with Apparent's igOS™. The igOS™ already actively manages energy-saving microgrids, plug-and-play battery storage systems, vehicle charging stations, and virtual power plants supplying utilities. The EXEL water



heating system is poised to play a key role in grid-responsive DERs and enable commercial developers and utilities to attain ESG commitments using lower cost, energy efficient water heating.

For consumers, EXEL offers a game-changing solution, with the ability to eliminate 20-30% of energy bills associated with hot water heating. In addition, EXEL will be eligible to meet various state and federal rebate programs allowing for an average system payback period of 10-12 months. Once installed, the system represents a complete paradigm shift in harnessing the sun's energy to provide cost-free, water heating and achieve a carbon neutral, clean energy home. Installers benefit from the EXEL easy drop-in conversions for standard water heater installations, making it a versatile choice that conforms to conventional rooftop solar PV setups.

The EXEL stands out by offering an alternative to standard water heaters and heat pump water heaters (HPWH). Efficient performance and energy savings are achieved through its ExElement—an innovative, low-impedance, low-voltage, DC heating element energized by solar PV. Unlike traditional solar water heaters relying on inverters and sunny days, the EXEL employs an advanced electron excitation technology for its water heating element (ExElement), ensuring efficient operation from sunrise to sunset, even in low light conditions (200-300 W/m²).

Considering the global water heater market's projected growth to surpass \$49 billion by 2030, the EXEL presents a new pathway for climate-friendly advancements. With millions of water heaters being replaced or installed annually in the U.S., the EXEL's adoption is projected to accelerate equitable access to clean, renewable technology with enhanced grid resiliency.

Apparent Inc. invites building developers to embrace this innovative water heating solution, offering a paradigm shift in affordable, equitable and efficient clean tech. By incorporating Apparent's technology, developers not only differentiate their offerings but empower their sites to meet ESG targets, contributing to a greener and more sustainable future. Join in launching a new wave of grid-responsive water heating solutions.

About Apparent

Apparent Inc., an energy management company, offers proprietary, patented enterprise software and connected hardware solutions for microgrid applications. Headquartered in Novato, California, the company's bi-directional platform uses machine learning to reduce energy cost and use by matching demand for energy with available generation at the best rates all in sub seconds.

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