

Free Hot Water

Bringing Solar Hot Water into the American Mainstream

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San Jose, Calif.-based Free Hot Water began in 2007 when Gal Moyal, the company's cofounder and chief mechanical engineer, saw oil prices rising and realized that there was something he could do about it. At the time, Free Hot Water was known as Gemtech Sales Corporation, founded in 1998 as a semiconductor engineering and design endeavor. But Moyal completely reoriented the company to solar thermal solutions after taking a world trip researching the state of current solar thermal products and seeing how he could make improvements to traditional designs.

Returning from his research trip, Moyal partnered with friend and Internet entrepreneur Paul Burrowes, Free Hot Water's cofounder and COO, who also saw a need for more affordable solar thermal solutions, especially in the commercial sector. Though operating together for only a short time, the two have grown Free Hot Water to become one of the country's leading manufacturers and distributors of solar hot water systems and one of the largest players in the Californian multiresidential market.

Free Hot Water designs and distributes Solar Rating and Certification Corporation (SRCC)-certified solar thermal collectors and exclusive mounting and racking systems to assure consistently high-quality installations. The team prides itself on bringing a multidisciplinary engineering background to the design of easily integrated solutions that are both environmentally responsible and a solid financial decision.

Operating from its headquarters in San Jose, Free Hot Water distributes a wide variety of commercial and residential solar water heating systems to clients around the country and even internationally. The company's products include closed-loop systems that indirectly heat water through a heat exchanger, and are suitable for colder climates throughout North America, as well as open-loop and drainback systems that heat water directly, which are designed for warmer weather climates. The company also carries affordable solar pool heating systems designed specifically for reducing the cost of heating pools through solar thermal energy.



To help make solar thermal more accessible and easy to install, Free Hot Water has also designed commercial and residential prepackaged solar thermal kits that reduce installation time and labor costs. Installers can also find a variety of solar systems, storage tanks, heat exchangers, circulator pumps, controller, pump stations, insulated flex piping, roof penetration systems, solar charging stations, tools, sealants, adhesives and cleaners on Free Hot Water's extensive online catalog.

Free Hot Water maintains an internal sales team and a

network of distributors and over 300 installers who can order products for professional installations using Free Hot Water's SRCC-certified residential solar kits, the company's top-tier components, as well as custom-engineered systems for commercial applications

Free Hot Water offers engineered systems to hook up to existing hot water heaters and storage tanks, as well as pre-engineered commercial systems (from 12 to 60 collectors) for easy and expedient installation. The company maintains a team of trained engineers to design a custom solution for applications in apartments, restaurants, hotels, universities, or in other hot water-intensive sectors. For certain projects Free Hot Water's customer service also extends to submitting all documents necessary for permits and to get all applicable financial solar incentives.

Finding a Niche

The management at Free Hot Water sees the shift toward a low-carbon energy sector steadily gathering momentum, and a transformation of the entire market occurring. Growing concerns over energy supplies, fossil fuel price volatility and

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climate change are accelerating this transformation, and Free Hot Water is poised to provide high-quality solar hot water systems, components, materials and tools from the United States and Europe, along with custom mounting parts, fasteners and racking systems to easily adapt the components to U.S. building codes and make the systems simple to install.

"If the rest of the world is any indication, the U.S. needs to start using more solar," asserts Burrowes. According to the Global Solar Thermal Energy Council, the People's Republic of China accounts for over 80 percent of the global solar thermal market, and demand has grown on average of 21-percent annually in the past seven years.

In contrast, solar thermal systems are still largely a niche item in the United States, but Free Hot Water has made the proliferation of affordable, reliable solar thermal systems its mission since its inception, starting with its name. Though at first glance the company's name might seem hyperbolic, the reality is that solar energy is free, and any homeowner or property owner with enough solar exposure and roof space can invest in a system to put that energy to good use.

In turn, Free Hot Water prides itself on being a total resource for customers in the solar thermal market and offers a variety of solar thermal design tools for solar installers to access easily from the company's website. "Our solar calculators account for about 20 percent of our web traffic, even from competitors," expands Burrowes. Free Hot Water offers a selection of calculators to sort through the haze of solar thermal jargon and provides consumers with a clearer sense of how large a system will suit the consumer's application and how much the consumer can expect to pay upfront.

Today and Tomorrow

In addition, Free Hot Water keeps tabs on all the state and federal incentives available to consumers, and offers easy links to interstate resources like the Database of State Incentives for Renewables & Efficiency. There are plenty of additional incentives and rebates that are passed all over the United States,



The Free Hot Water team standing on a panel

and Free Hot Water maintains an up-to-date portfolio of opportunities. The company continues to develop proactively, and it fosters the best team possible for identifying financing for retrofits and new construction.

"Incentives for solar thermal systems really only took off in late 2010 for California, so we're still a very immature market from that standpoint, but that also means there's a lot of room left to grow," reflects Burrowes.

In fact, in 2011 Free Hot Water performed what is the largest multi-residential solar thermal installation partially funded by the new California Solar Initiative Thermal program. Precisely 186 commercial-grade solar thermal collectors were mounted on five roofs across the 320-unit Tradewinds apartment complex in South San Jose, Calif. The installation is expected to produce over 5 million BTUs daily and prevent 250,000 tons of carbon dioxide emissions annually. The state program provided over \$150,000 in rebates, and the new system is expected to cut the complex's water heating bill by 60 percent.

With every new installation Free Hot Water helps to create more jobs in the renewable and clean energy sector, and reduce the impact on the environment. As the national demand for solar thermal systems increases in response to rising energy prices, Free Hot Water is poised to help residential and commercial property owners find the right system to suit the property and support the proliferation of high-quality, clean and cost-effective energy. •