Forbes THAILAND

Sebastian-Justus Schmidt the man who fell in love with hydrogen

Sineeporn Marukpitak/ BUSINESS EDITOR
04 APR 2025 | 09:30 AM

A German software executive who chose to settle his family in Chiang Mai Province 10 years before building Phi Suea House, an energy-efficient residence that uses solar power to generate electricity alongside hydrogen gas storage, successfully producing its own electricity 24 hours a day, the first of its kind in the world. It has become a model that draws interested visitors from time to time.

In mid-January, Sebastian-Justus Schmidt, owner and builder of Phi Suea House, hosted the Hydrogen Summit 2025 to mark the 10th anniversary of the Phi Suea House project. The summit was a forum that brought together leaders and stakeholders in the hydrogen industry from around the world to share experiences, exchange ideas, and present approaches to promoting the hydrogen economy in both Thailand and internationally. More than 150 people attended, and the panel topics included "Thailand's Hydrogen Knowledge Hub" and "S/E Asia and the Road to Hydrogen," among others.

The venue was an open-air area covered by tents, where the fans, the sound system, and every electrical appliance ran on electricity from hydrogen energy produced on site. The tents were packed with attendees from many countries, and many of their backpacks had personal cups or water bottles tucked into the sides. The food and drink containers used for breaks and lunch included no disposable plastic or paper plates. Everything at the event was designed to align with an eco-friendly approach.

Software Businessman

Before becoming the owner of Phi Suea House, Sebastian-Justus Schmidt succeeded in developing and co-creating many innovative technologies, including audio and video compression technology, mobile applications, and, today, green hydrogen energy. After holding executive positions at several publicly listed companies in Germany, he founded SPB Software in 2001, which became one of the most successful companies in its field and was the first to get involved in mobile software.

In 2011, he sold SPB Software to Yandex, which is listed in the United States. In 2013, he served as Executive Vice President and GM Mobile at Yandex, the largest internet company in Europe.

His work required him to regularly travel to meet clients in cities and countries such as Seoul, Shenzhen, Hong Kong, Singapore, and Thailand. In 2004, he decided to settle in Chiang Mai Province. A question Thai journalists often ask him is why Thailand. His first answer is "food," before he later elaborates that it was because there is a German international school for his children to attend, and there are direct flights to various cities, making it convenient to travel to meet clients.

As for why he built a hydrogen-powered house here, he explained that building one like this in Germany would have required permits from various agencies, taking at least 3 years because nothing like it had existed before. There is no room for new entrepreneurial initiatives, and he would have run out of patience before it was done. Thai government agencies, on the other hand, simply replied that there were no regulations on the matter yet, but that it was not prohibited. So the Phi Suea House project came to life in Thailand, built to the same standards as in Europe. Jan-Justus Schmidt, his eldest son, serves as the lead project manager, responsible for the technical design and operation of the residence, which is powered by the world's first off-grid solar-hydrogen microgrid.

"When I started building the house 10 years ago, friends would ask me why I was investing in this house because it was very expensive. Other people might buy a Ferrari, but I bought an energy system, to showcase that a high-level green sustainable way of life is possible. Today, more than 150 people came to the event because an energy system is not a Ferrari... I went to international conferences where speakers talked about hydrogen, and people said it doesn't work, but I'm using it. Something must be wrong. This is why education is important. I've been using it for 2 years, and I fell in love with hydrogen because I live with it, see it, breathe it, and touch it every day..."

Turning the Tables to Become a Technology Owner

Two years after the house was built, a technology manufacturer in Italy went bankrupt. Sebastian acquired the company for 100,000 euros, along with 1 million euros in debt, and renamed it Enapter AG. He oversaw research and development and provided direction on software development, and stepped down as CEO in December 2023, remaining as an advisor and major shareholder.

Enapter AG is a manufacturer of hydrogen generators using Anion Exchange Membrane (AEM) technology, which was developed from the water electrolysis process. The company's electrolyzers are used in many industries, such as energy, automotive, industrial, heating, and telecommunications. It has customers worldwide, mostly in Europe and the Americas, with others in Japan, Australia, and Southeast Asian countries. From 2017 to 2024, it sold 8,000 units at an average price of 400,000 baht per unit.

In 2023, revenue was 31.6 million euros, growth of 114% over 2022, and in 2024 revenue was approximately 30 million euros, with more than 340 customers from over 50 countries around the world. Broken down by industry, 2024 sales were 30% power generation, 40% automotive, and 30% heavy industry.

Images: Phi Suea House

สินีพร มฤคพิทักษ์. (2025, April 4). *Sebastian-Justus Schmidt* ชายผู้หลงรักไฮโดรเจน [Sebastian-Justus Schmidt: The man who fell in love with hydrogen]. Forbes Thailand. https://www.forbesthailand.com/people/forbes-life-people/sebastian-justus-schmidt-a-man-who-loves-hydrogren