



## H2-view.com interview

# Exclusive: EGAT and Thailand as a lighthouse-nation for green micro-grids

By [Rob Cockerill](#) on Aug 16, 2019

Earlier this week, the news emerged that the Electricity Generating Authority of Thailand had signed a cooperation agreement with electrolyser manufacturer Enapter to advance the production of hydrogen in Thailand.

The two companies are taking action to deploy green hydrogen gas as a carbon-free energy carrier in the country.

For Thailand, it builds upon the Phi Suea House project, a multi-housing compound that uses hydrogen as energy storage and since early 2015 has been proving to the world that sunshine and rainwater are enough to power several buildings in a fully autonomous mini- grid set-up.

Mini-Grids are autonomous power systems that operate independently of the central electrical grid infrastructure. EGAT and Enapter will establish a Green Mini-Grid Sandbox Project at EGAT and, following its successful establishment, they aim to deploy this technology in across Thailand and potentially beyond.

For Enapter, a Thai-German-Italian start-up that manufactures highly efficient, modular hydrogen generators using a patented Anion Exchange Membrane (AEM) electrolysis, the deal is another step forward in its own clean energies journey. Its core technology has a 10-year proven track record and the company credits it as being flexible, scalable, fast to deploy.

Sebastian-Justus Schmidt, Chairman of Enapter, has spoken of his belief that green hydrogen has the potential to replace fossil fuels completely. Here in an exclusive interview with H2 View just days after its EGAT announcement was made, Schmidt talks more about the project and its origins, the technology at the heart of Enapter, how and where his own zest for hydrogen began, and much more besides.

<https://www.h2-view.com/story/exclusive-enapter-egat-and-thailand-as-a-lighthouse-nation-for-green-micro-grids/>



# Enapter



**Thanks for giving H2 View your time. Could you tell us a little about your latest development, just announced, with EGAT in Thailand?**

EGAT and Enapter have been discussing hydrogen in Thailand since the Phi Suea House project in Chiang Mai was inaugurated. The modular hydrogen production capabilities caught EGAT eyes, as you can develop any kind of project with it. This is Enapter's speciality.

EGAT is planning to build an Energy Excellence Center (EGAT-EEC) that serves as education and co-creation for a sustainable energy future. Designed as a hub for energy professionals, utilities and others, EGAT wants to develop and showcase innovative energy system set-ups that can be replicated throughout Thailand and beyond. The energy demand of the showcase will be mostly covered by energy from solar, wind and biogas.

Thailand's availability of renewable resources is an ideal environment to integrate hydrogen for energy security and independence. EGAT is a great partner for Enapter to go forward in developing the hydrogen infrastructure and their approach to public education and 'giving back' is not only a principle of Thai culture, it is also a part of our company ethics.

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**Enapter**



## What does Enapter do and how does this fit into the vision of a hydrogen economy?

Enapter manufactures a compact, standardised and scalable electrolyser. At the core of our hydrogen generator is patented Anion Exchange Membrane (AEM) technology. It requires no noble metals for high performance, and it has a simple balance of plant. We can mass produce it, which allows us to slash the cost of green hydrogen.

Renewables are cheaper than fossil fuels today. The only thing that matters now is to have an energy carrier available that can bring solar and wind to industry, transport, heating and cooling sectors.

In parallel to our unique hardware, we developed the Energy Management System (EMS). It allows quick and simple integration of our electrolysers in any energy system. No matter where in the world you are, you can remote monitor or control your system. Enapter brings plug-and-play products to the market to propel the hydrogen momentum. We believe our electrolyser is the portal to the hydrogen economy.

## It sounds like you have a very interesting role at Enapter, could you tell us a little about it and your zest for hydrogen?

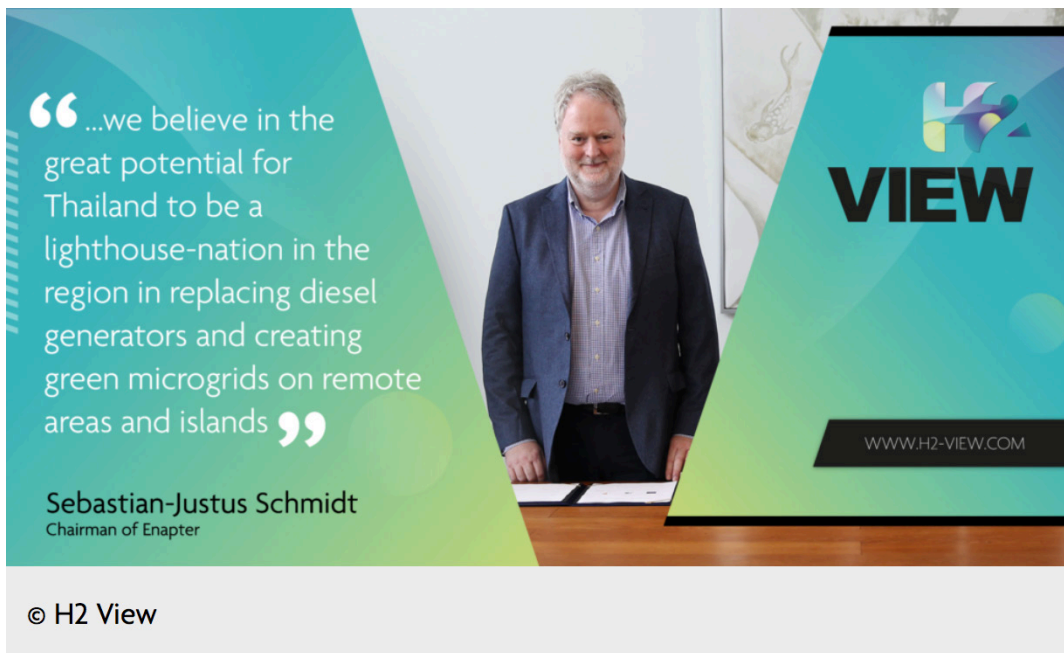
When I was planning the building of my private house in Thailand, I was selecting only materials which had a secured path for recycling. When it came to lithium batteries, I thought there might be better ideas on the market. We also have rainy season in Northern Thailand which makes more seasonal storage needed. In 2014 I saw a small Italian company at an exhibition in Singapore – and I bought prototypes of electrolysers for my Phi Suea House in Northern Thailand. Since then I put all my energy into the topic of hydrogen and the software to run effective energy systems. I am a software guy, so it is no wonder that I took this route.

When the Italian electrolyser company failed commercial-wise, several times, I had the company offered from the insolvency lawyer. First, I was bit hesitant, but my son Jan and some good friends convinced me to step in. We took over the company (ACTA spa) in November 2017. At this time, the company had 11 employees. Today, 20 months later, we have grown substantially all engineering teams and rented and renovated a new factory area for our serial fabrication requirements. Today we have 74 employees and we are still growing!

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**Enapter**



**With your offices in Berlin, Italy and Thailand, you must have a great insight into the hydrogen energy movement in each of these countries. What changes have you seen within these local ecosystems and which country do you think is the most advanced?**

Yes, it is fascinating to see the narrative of hydrogen evolve in Europe and Asia, including Russia (St. Petersburg) where our fourth location is.


Of these locations, Germany is the most active in building the hydrogen infrastructure across all sectors – mobility, power, industry and heat. At a local scale, we notice interests spurring from Italy in research or maritime applications. In Russia, seasonal storage with hydrogen is also becoming a hot topic. In Thailand, there is abundant sun and many islands; we believe in the great potential for Thailand to be a lighthouse-nation in the region in replacing diesel generators and creating green microgrids on remote areas and islands.

However, we have recently completed some installations in Japan and we see more coming. These installations are triggered by different sources: Government subsidiaries and some large companies like Toyota with their 'Toyota Challenge 2050' which has already impacted on suppliers.

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**Enapter**



Finally, if you could leave our readers with just one message about the hydrogen economy, what would it be?

Green hydrogen has the potential to replace fossil fuels entirely. Solar and wind are winning but, so far, they are only electricity. Hydrogen, however, is an energy carrier with unmatched versatility. If made from renewables, it becomes a power fuel that decarbonises mobility, industry and heat sectors. It is the missing link to a global energy transition.

Enapter makes building blocks for the future of energy. We are ready, now it is time for you to join the 'HydroGeneration'.

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**Enapter**