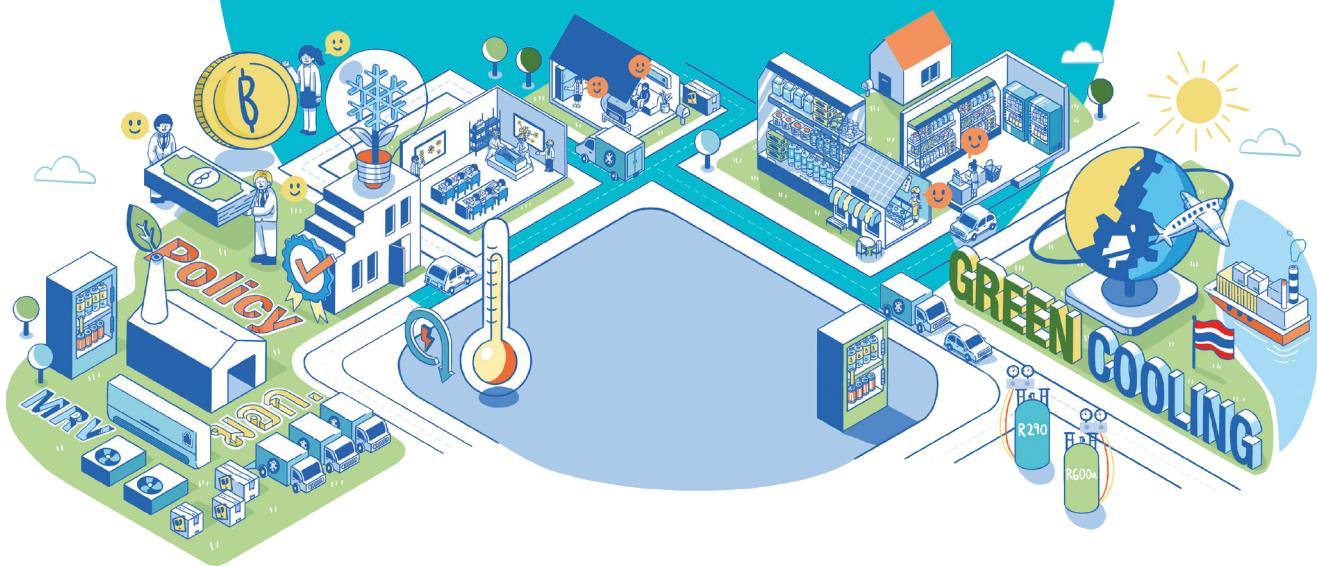


GREENER THAILAND

Success Stories from RAC NAMA Project Implementation



Thailand Refrigeration and Air Conditioning Nationally Appropriate Mitigation Action Project
(RAC NAMA)

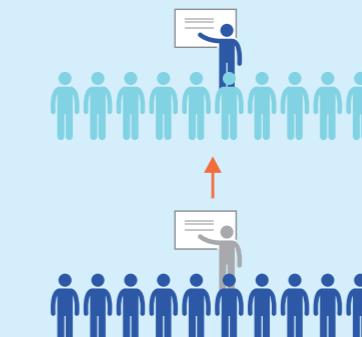
Success Stories from RAC NAMA Project Implementation



Thailand now has **10 producers** of refrigerators, chillers and air conditioners as front runners of green cooling technologies, who are activating the market and moving the industry towards wider use of natural refrigerants.

Thailand now has **more than 150,000 green cooling units** in the domestic and export markets. Particularly in the commercial refrigeration sector, the number of green cooling units is projected to increase to more than 90% of market share in the next 3 years.

Thailand now has **a knowledge product on production line conversion** from the industry's first movers in switching to green cooling. The report conserves producers' experience and will be shared to other industry players to follow suit with the greener technological trend.



Thailand now has **8 Training Centers** established across the country, led by King Mongkut's University of Technology North Bangkok (KMUTNB) as the champion of "R - Training: Safe Use and Handling of Flammable Refrigerants in air conditioners", in cooperation with Department of Skill Development and Office of the Vocational Education Commission.

Thailand now has **222 master trainers and head technicians** trained with the knowledge and skills on the safe use and handling of flammable refrigerants, also known as "**R-Training**". The number of service technicians are projected to expand to 2,000 – 3,000 by 2022.

Within 2021, Thailand will have R Training course embedded in national skill standards and curricula of Department of Skill Development, ensuring long-term competence of the service workforce.



Thailand now has **the experience and expertise on product safety**, being the first-hand experience by producers or academic knowledge at KMUTNB. If the product follows the standard, it is safe to use while installation and servicing needs to be done by trained technicians.

Thailand now has **testing facilities for air-conditioning for natural refrigerant technology**

at the Electrical and Electronics Institute in accordance with the new TIS 1529-2561 standard on safety of air-conditioning using flammable refrigerants, in preparation for market introduction.

Thailand now has **MRV system**

to track mitigation potential from the green cooling products.

Overall project GHG mitigation results are 350,000 tCO₂eq

incl. all production that goes into the export markets. **35,000 tCO₂eq** of local sales have been captured through the MRV tool and can be formally reported by Thailand.



Thailand now has **an experience in managing a climate finance project with the Electricity Generating Authority of Thailand (EGAT)** at the forefront of climate finance in Thailand.

In quarter 4 of 2021, a Cooling Innovation Fund (CIF), a spin-off from the returns of the RAC NAMA Fund, is expected to start. The CIF will focus on the adoption of technically more challenging applications, for example residential air-conditioning and large commercial cooling equipment, and involve public and private capital. **EGAT will be the owner and fund manager of the CIF.**



Cooling in Southeast Asia is as important as heating in Northern Europe. It provides not only human comfort, but also ensures healthy work environments and food security. From any perspective, it is a remarkable social and economic achievement that an increasing number of people have access to affordable cooling technologies.

But where there is light, there are shadows too. Today, more than half of Thailand's electricity is produced just to respond to the energy demands of air-conditioners and refrigerators. Despite all the energy efficiency gains Thailand has made in the past, electricity consumption in the country is on the rise, mostly due to the soaring demand for all kinds of cooling. This not only puts Thailand's energy security at risk, but also contributes largely to climate change in a country where electricity production from fossil fuels is still the norm. On top of that, there are large emissions of synthetic refrigerants, chemicals that circulate within the refrigeration system and that are greenhouse gases much more harmful than carbon dioxide.

The scale of this problem, which stretches beyond Thailand across all Southeast Asia and many other tropical countries, is so huge that analysts from the International Energy Agency have named it the Cooling Crisis.

Amidst the Cooling Crisis, Thailand offers a special opportunity as the largest users of cooling technologies and one of the largest production hubs. One out of ten air-conditioners and refrigerators sold globally is "Made in Thailand", either by local brands or by international companies. And while it is important that these air-conditioners and refrigerators remain affordable, it is even more important that cooling is as clean and energy efficient as current technologies allow, and that the boundaries of green cooling technologies are constantly pushed.

Over the past five years, the RAC NAMA project has worked towards making green cooling technologies a reality in Thailand, building upon an alliance of ministries, agencies, universities and the private sector. Today, we see a growing demand for green cooling technologies thanks to the work of many organisations and people involved in RAC NAMA.

About RAC NAMA



Commissioned by:	NAMA Facility (a joint initiative of the Federal Republic of Germany and the United Kingdom)
Country:	Thailand
Main partners:	The Office of Natural Resources and Environmental Policy and Planning (ONEP) The Department of Alternative Energy Development and Efficiency (DEDE) The Electricity Generating Authority of Thailand (EGAT)
Duration:	April 2016 – July 2021
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For more details