



# RAC NAMA Thailand

## Combining energy efficiency and climate action

**Ms. Sirimas Visessri, Electricity Generating Authority of Thailand (EGAT)**

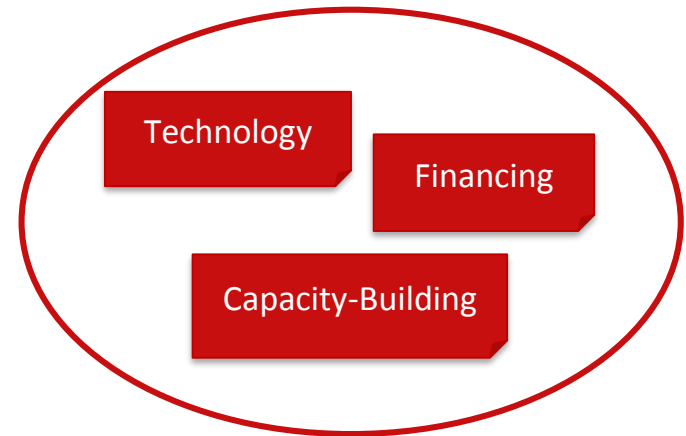
**Ms. Denise Andres, GIZ Proklima**



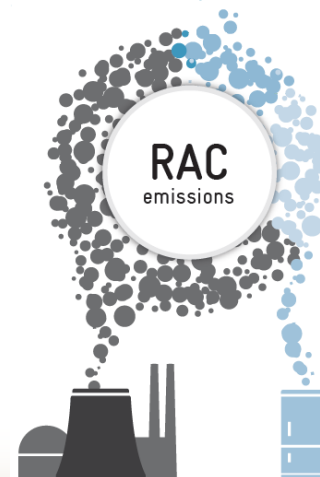


## NAMAs or Nationally Appropriate Action Mitigations as a vehicle for climate-friendly and energy-efficient technologies

- **government driven** and **voluntary** actions that refer to **specific mitigation measures**
- **transform** a (sub-)sector towards a **sustainable, irreversible and low-carbon pathway**
- **reduce country's greenhouse gas (GHG) emissions**
- contribute to the **sustainable development** objectives of the country



**Indirect emissions:**  
Emissions from  
**energy consumption**  
of appliances

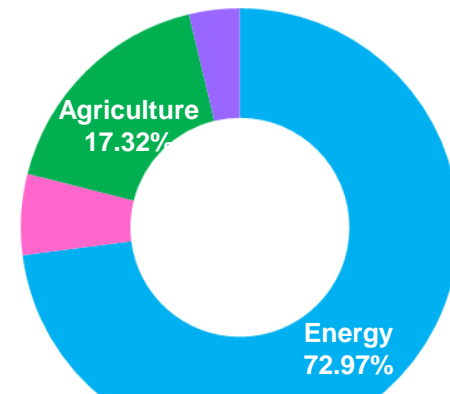


**Direct Emissions**  
Emissions from  
**refrigerant use** released  
during manufacture,  
operation, and disposal



## Thailand

- Thailand is an important industrial hub in the global refrigeration and air-conditioning (RAC) sector.
- It houses about 7% of the global production capacity for unitary ACs and is also responsible for about 2% of global demand
- Estimations indicate that about ~20 % of Thailand's emissions come from the Refrigeration and Air-Conditioning (RAC) Sector
- In its Nationally Determined Contributions (NDCs), Thailand aims to reduce 20-25% of its emissions until 2030



Energy sector covered about 73% GHG emission in 2014 in Thailand

Source: ONEP



Project Duration: 2016-2021

[www.racnama.org](http://www.racnama.org)

### Thailand RAC NAMA

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

**NAMA** Facility

On behalf of:

Federal Ministry  
for the Environment, Nature Conservation,  
Building and Nuclear Safety

of the Federal Republic of Germany



Department for  
Business, Energy  
& Industrial Strategy



Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

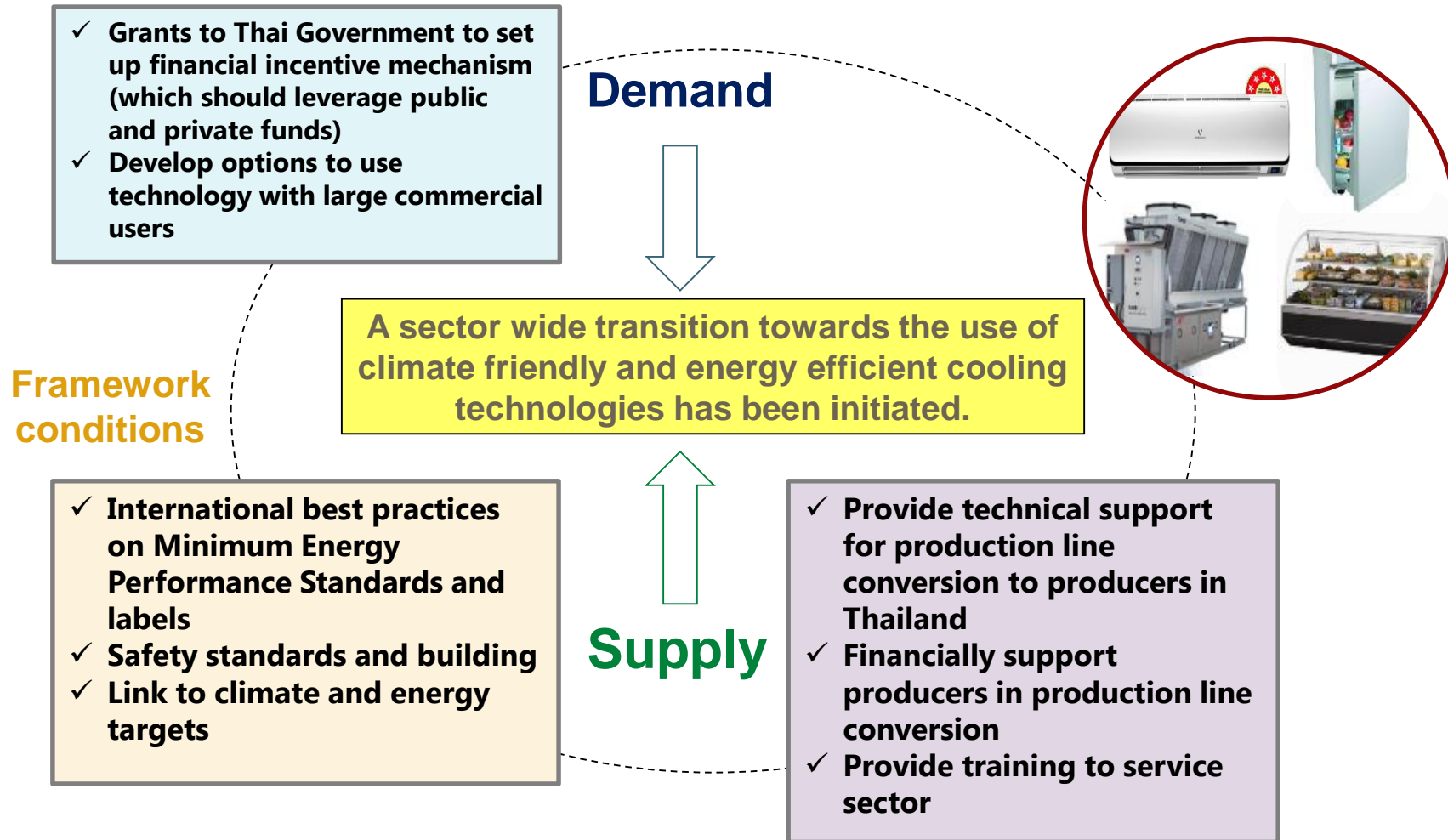


Department of Alternative  
Energy Development and Efficiency  
MINISTRY OF ENERGY





## Overall Goal and Demand & Supply Approaches



On behalf of Thailand, EGAT plays an important role as the Project Fund Manager (PFM) of the RAC NAMA Fund, particularly to promote energy-efficient and climate-friendly technologies which is in alignment with EGAT's vision of "Innovate Power Solutions for a Better Life".

Whilst promising a core mandate of generating electricity to meet country's growing demand and development, EGAT is highly determined to promote sustainability in terms of GHG mitigation and energy efficiency with well-known campaign of Label No. 5 over 20 years.

## Mitigate

4 MtCO<sub>2</sub>e of GHG emissions by 2020  
10 MtCO<sub>2</sub>e of GHG emissions by 2030



## **Objective**



Market introduction of green cooling technologies



Financial instruments



RAC NAMA  
Fund

**Greener and  
energy efficient cooling  
technologies with  
natural refrigerant**



Domestic  
refrigerator

R-134a → R-600a



Commercial  
refrigerator

R-22  
R-134a → R-290  
R-404a R-600a  
R-744



Split-type AC

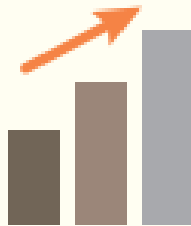
R-22  
R-32 → R-290  
R-407c  
R-410a



Chiller

R-22 → R-290  
R-134a





Economic Impact

- Boost awareness and consumer demand
- Promote investment and green economy
- Increase competitiveness



Ecological Impact

- Reduce GHG emission
- Restore cleaner environment
- Enhance the quality of life





NAMA facility

Project duration:  
April 2016-March 2021

**giz**

Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

Grant Agreement  
Dec 2017



**EGAT**


Power for Thai Happiness  
National Fund Recipient


RAC NAMA Fund (€8.3 Million)  
EGAT : Project Fund Manager  
(PFM)

duration: April 2018-March 2021

 **Revolving Fund**  
(5.3 M€ or ~200 MB)

 **A**  
Consumer Finance

 **B1**  
Credit Line for  
Producers

 **B2**  
Credit Line for SMEs

 **Sub-Grant Scheme**  
(Max. 3 M€ or ~110 MB)

**C1**  
Sub-Grant for Producers 

**C2**  
Sub-Grant for Training and  
Testing Facilities 

20 February 2018  
EGAT signed MOU with 4 Banks at  
EGAT Head quarter



Credit fee for high energy  
efficiency refrigerators with  
natural refrigerants  
March-August 2018



# Thank you!!

**For inquiries, please contact:**

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