


# Thailand's Economy Updates

## 56<sup>th</sup> EGEEC Meeting

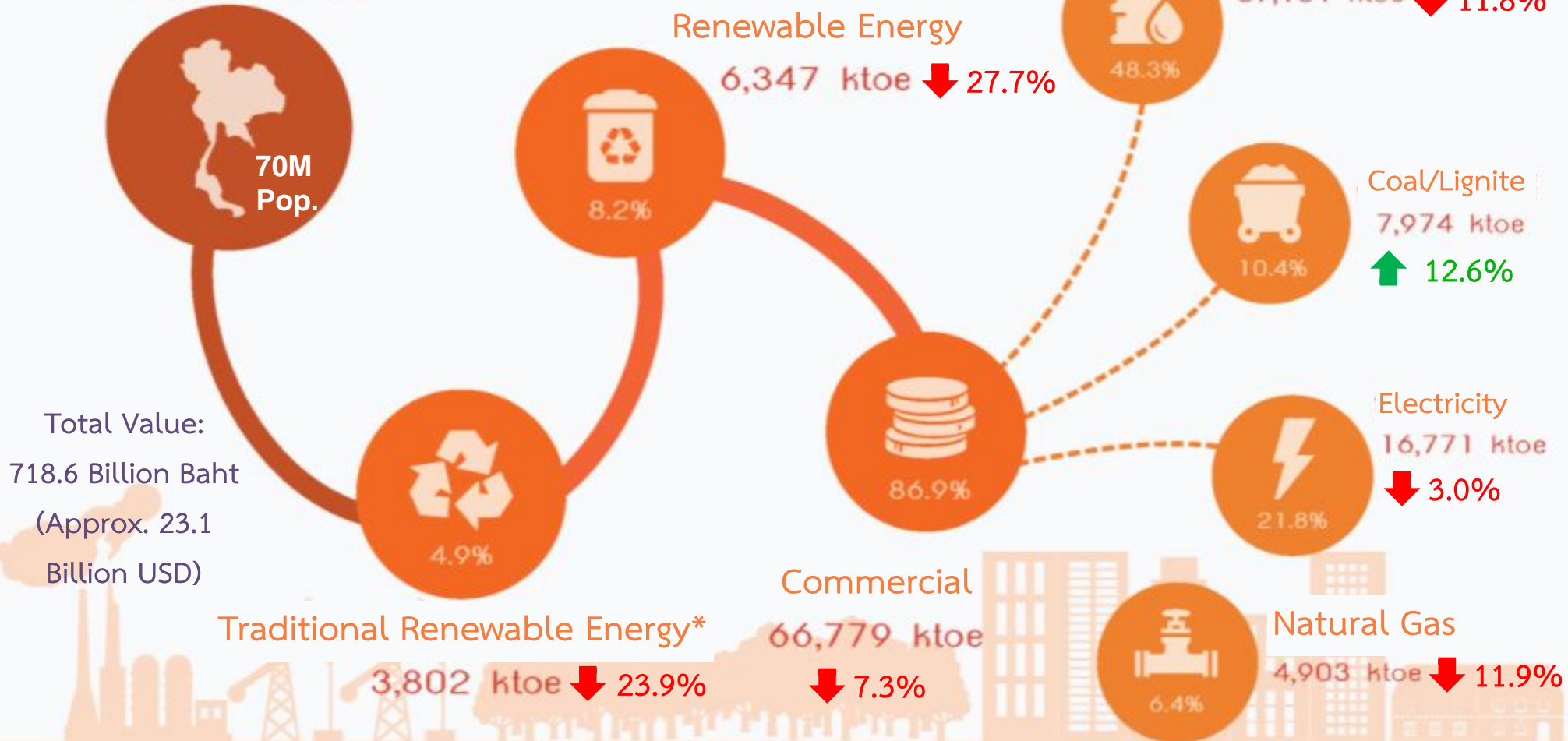


**Energy Regulation and Conservation Division  
Department of Alternative Energy Development and Efficiency  
Thailand**

# Thailand's Energy Situation 2020

## Final Energy Consumption (Total)

76,928 ktoe ↓ 10.3%



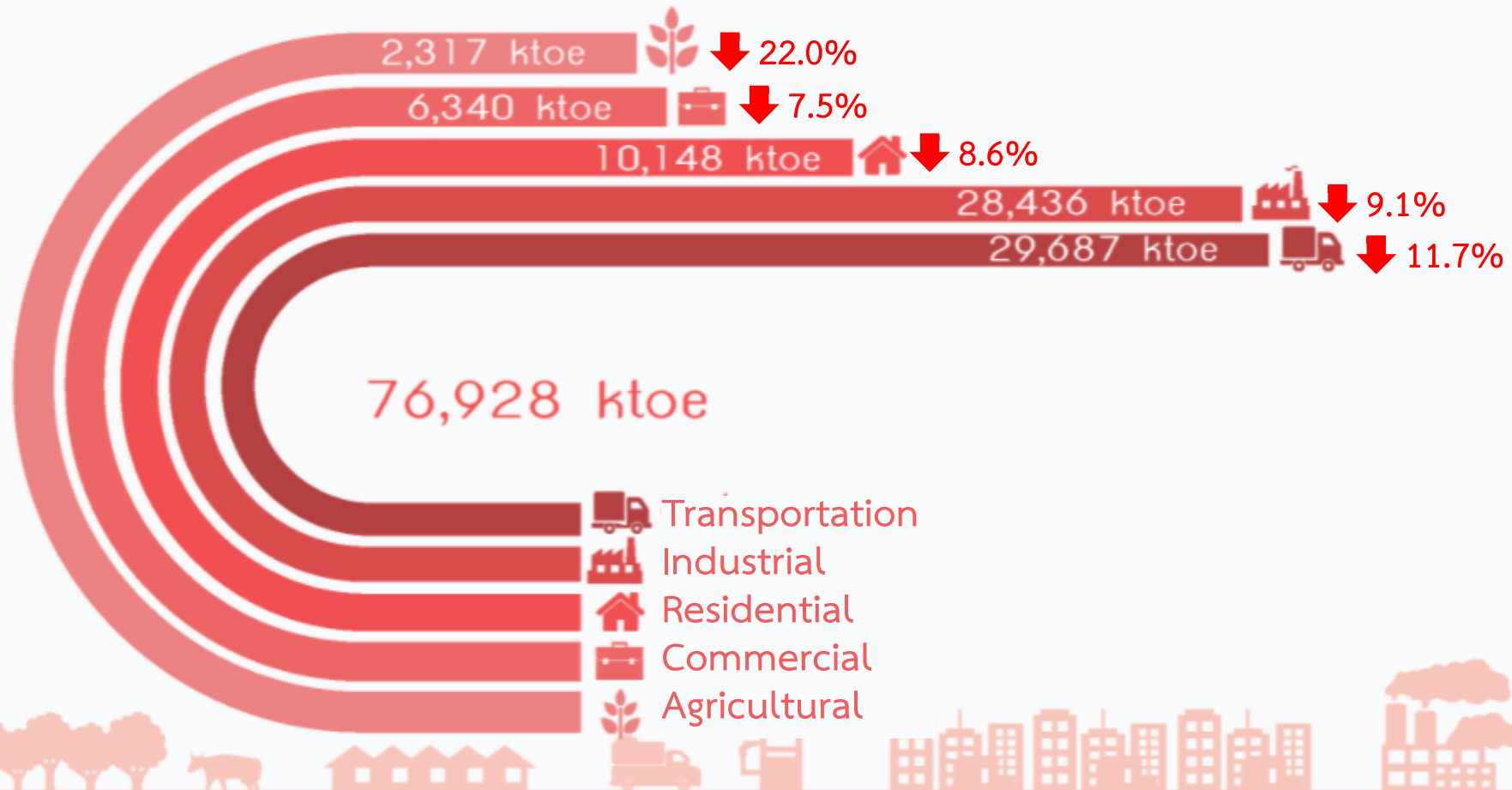
Total Value:  
718.6 Billion Baht  
(Approx. 23.1  
Billion USD)

Source: Thailand's Energy Situation (Jan – Dec 2020), DEDE

\* Fuel wood, charcoal, paddy husk, agricultural waste

# Thailand's Energy Situation 2019

## Final Energy Consumption (by sector)



Source: Thailand's Energy Situation (Jan – Dec 2019), DEDE

\* Industrial sector includes manufacturing, mining, and construction



# Thailand Integrated Energy Blueprint



Integration



Harmonized Time Frame



Better Balanced Focus

## Security Economy Ecology

**PDP**

POWER DEVELOPMENT PLAN

แผนพัฒนากำลังผลิตไฟฟ้าของประเทศไทย\*

**EEP**

ENERGY EFFICIENCY PLAN

แผนอนุรักษ์พลังงาน\*

**AEDP**

ALTERNATIVE ENERGY DEVELOPMENT PLAN

แผนพัฒนาพลังงานทดแทนและพลังงานทางเลือก

**GAS**

GAS PLAN

แผนบริหารจัดการก๊าซธรรมชาติ

**OIL**

OIL PLAN

แผนบริหารจัดการน้ำมันเชื้อเพลิง



กระทรวงพลังงาน  
MINISTRY OF ENERGY



# TIEB

THAILAND INTEGRATED ENERGY BLUEPRINT

# Energy Efficiency Plan 2018

Long-term Energy Efficiency Implementation 2018 - 2037

To reduce energy intensity (EI) by **30%** within 2037 (Base year 2010)

Energy consumption reduction target: 49,064 ktoe via 3 main strategies

## Compulsory

- Energy Management Standards
- Energy Codes (Industrial, Buildings, Residential)
- Energy Efficiency Resource Standard (EERS)



## Promote

- Equipment Standards and Labeling
- Financial Supports
  - Grants and Subsidy / Soft loan
  - Tax incentive / Credit Guarantee
- Innovations (IOT, Smart Building, Big Data)
- Energy Efficiency in Agricultural Sector (Smart Farming, Switch to Machinery)
- Energy Efficiency in Transportation Sector (Mode shifting, Smart transport)

## Complementary

- Human Resources Development (HRD)
  - Energy Manager / Auditor
  - Technologies
- Public Relation/Awareness
- Research and Development



## 5 Economic Sectors

Industry

Building

Household

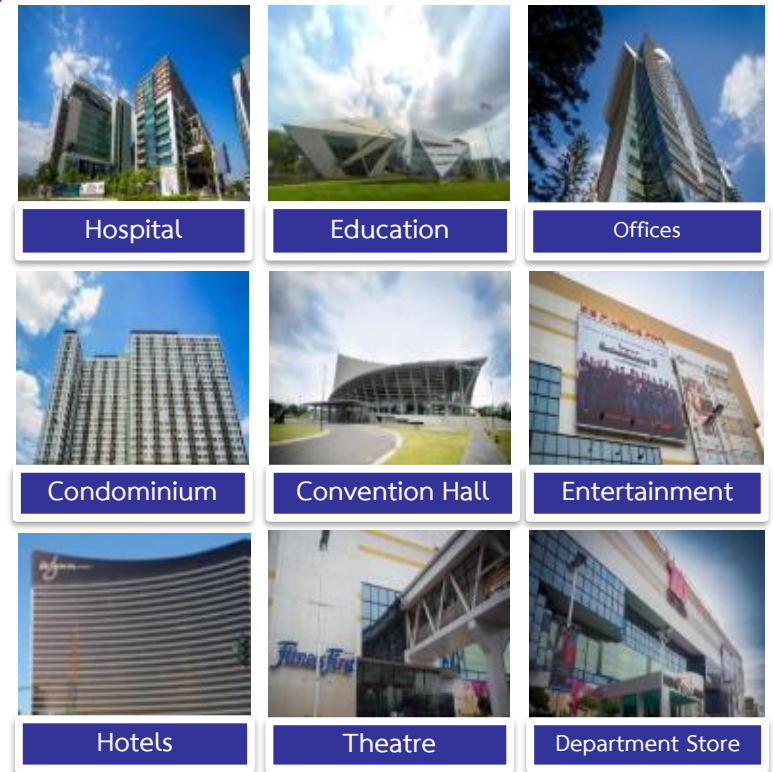
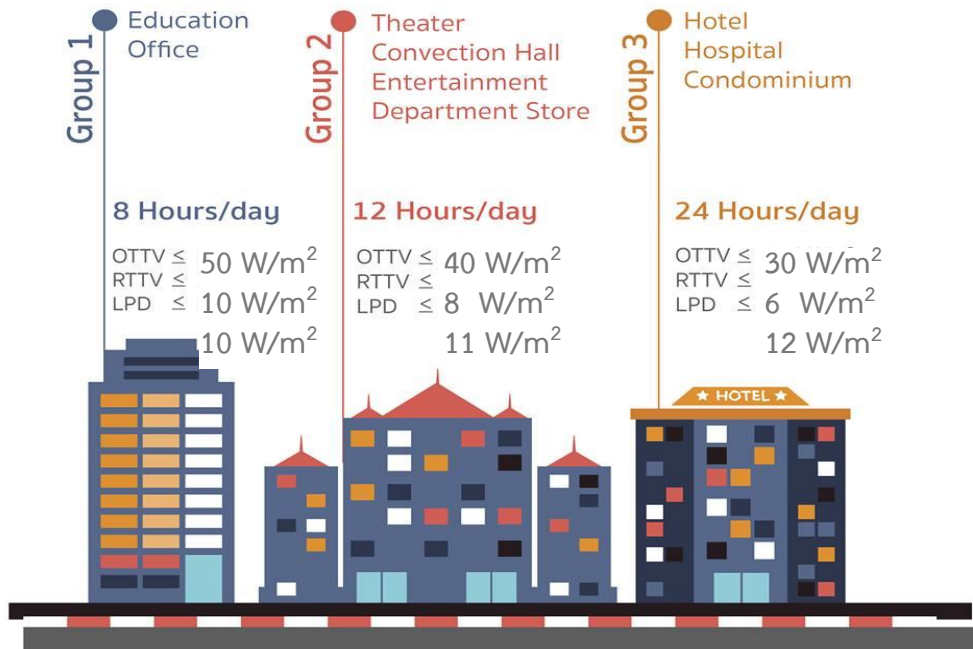
Agriculture

Transport

# Building Energy Code

Requiring 9 types of new or retrofitted buildings (total area (all floors combined)  $\geq 2,000 \text{ m}^2$ ) must comply with building energy code

1. Building Envelope
2. Lighting System
3. Air-conditioning System
4. Water-heating System
5. Renewable Energy
6. Total Consumption



1. BEC Enforcement
2. New buildings promotion
3. ZEB Promotion

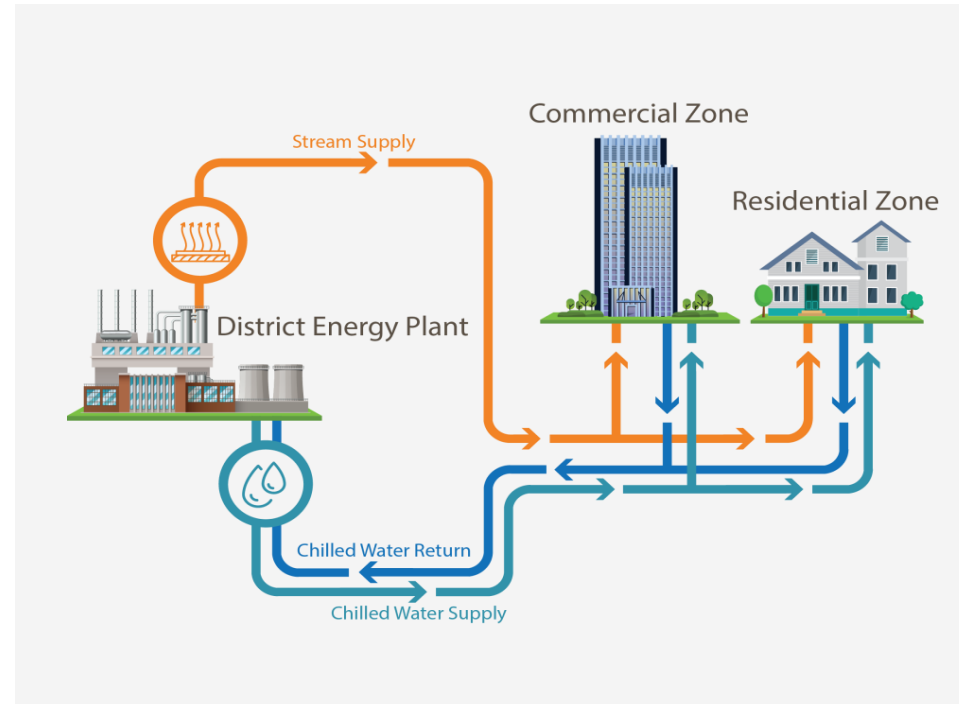
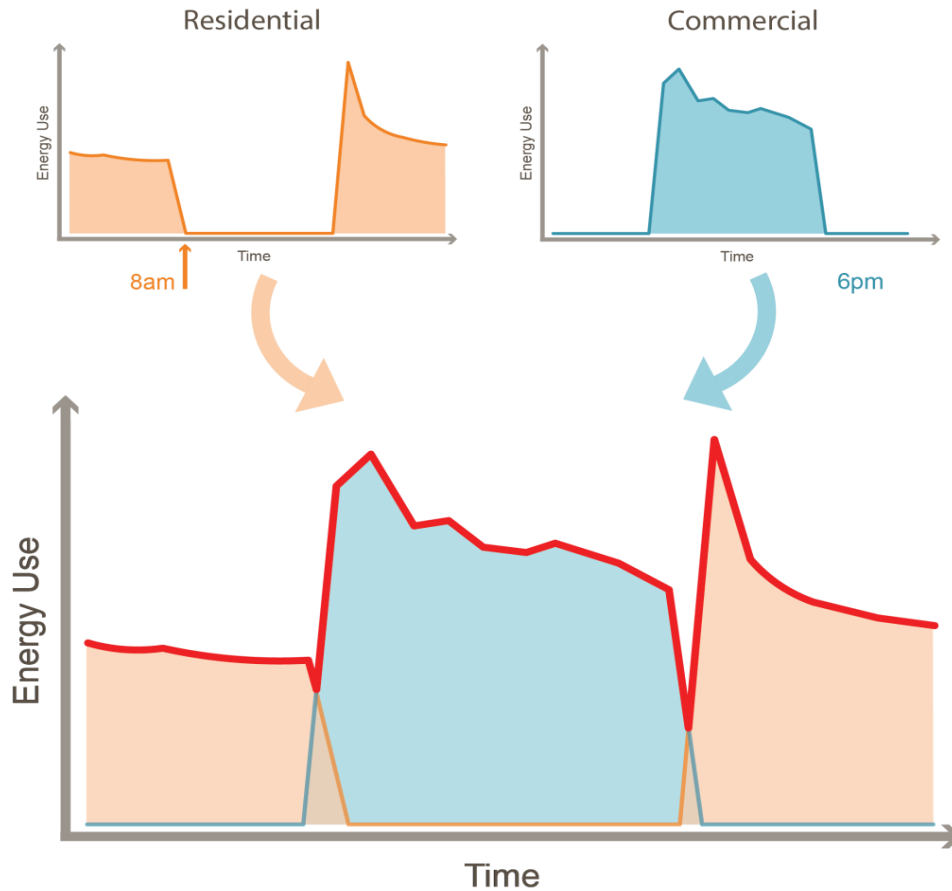
- BEC Enforcement
- Develop auditor system
- Research, development to strengthening BEC and promoting EE building construction
- Promote and publicize construction of ZEB

# Introduction

## District Cooling in Thailand

- District Cooling can be defined as **the distribution of cooling from one or more sources to multiple buildings**.
- District cooling systems **produce chilled water at a central plant** and then **pipe that energy out** to buildings in the district for air conditioning use.
- Individual buildings **don't need their own chillers or air conditioners** anymore. A district cooling system does that work for them.
- District Cooling has also proven to be a major contributor to **Greenhouse Gas reduction** in many cases.
- District Cooling has been specified as one of significant components in **Thailand SMART City Criteria under Smart Energy category**.
- **District cooling in Thailand is now under development in most of large business districts and mixed-use complex.**

# THE BENEFITS OF District Cooling System

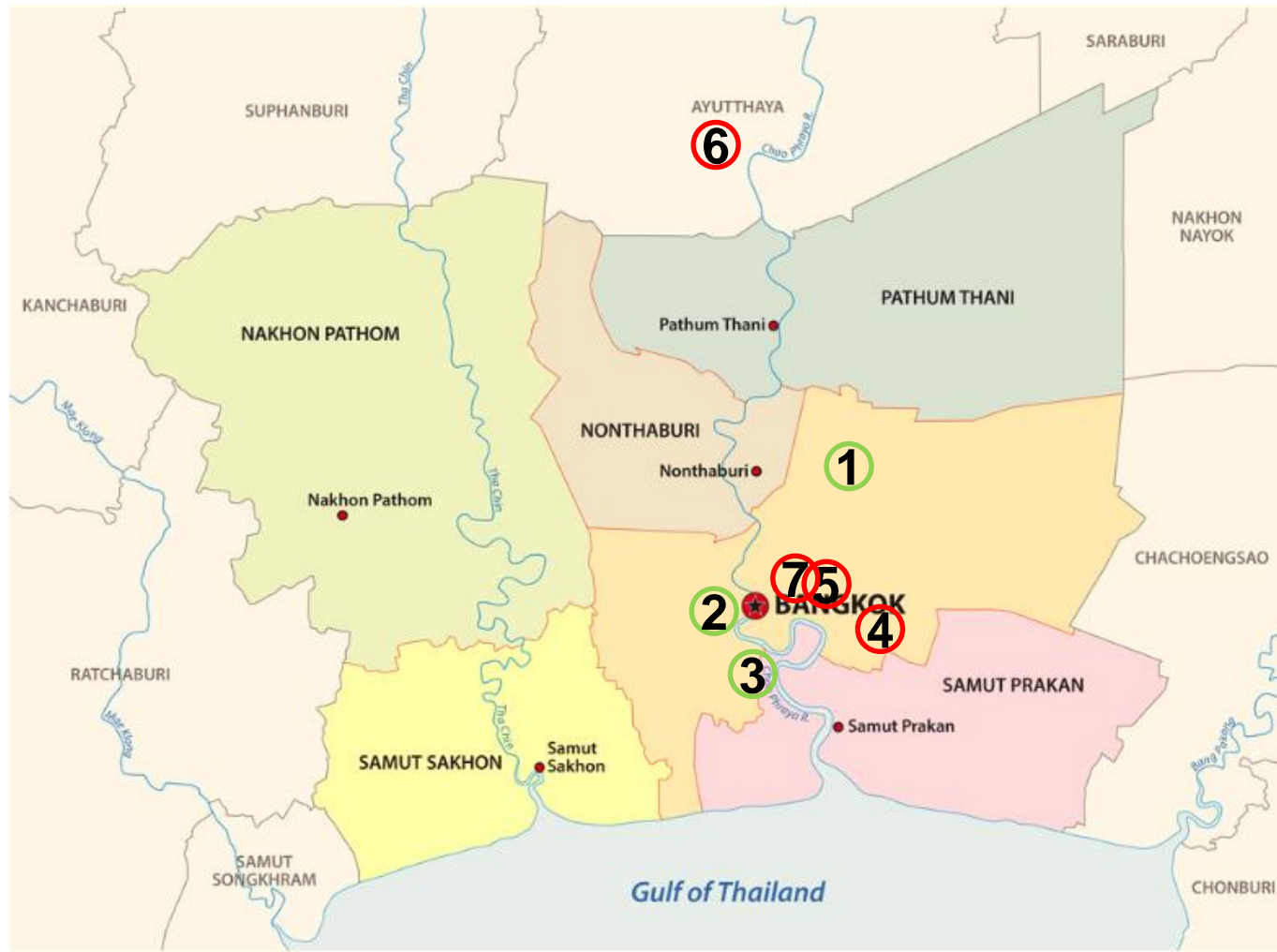


Concept of District Cooling, Peak Power Demand



# HIGHLIGHTED

## DISTRICT COOLING PROJECTS IN THAILAND



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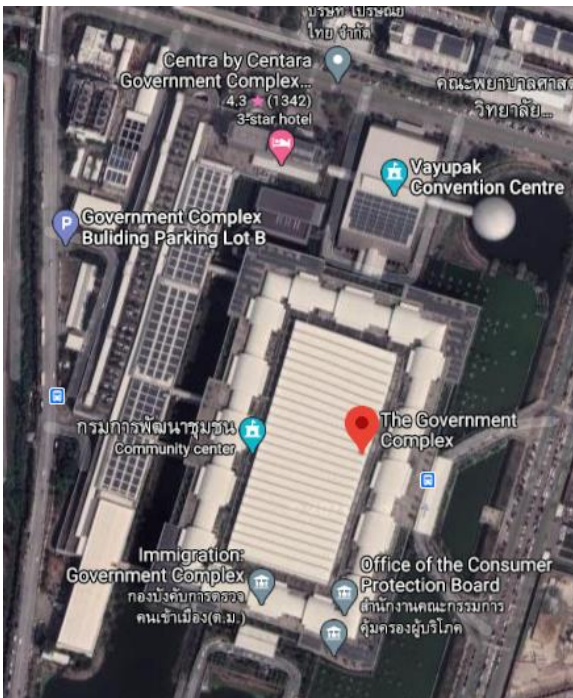
**Status** : Completed, in operation

**Project** : Government Complex –  
Chaengwattana, Bangkok

**Function:** Multi Office Buildings,  
Convention Center **1**

**Area** : GFA 975,200 sqm

**Cooling Capacity** : 12,000 RT



**Status** : Completed, in operation

**Project** : Siriraj to Medical Excellence  
in South East Asia (SIME)

**Function:** Multi Buildings Hospital  
Campus

**Area** : GFA 238,000 sqm **2**

**Cooling Capacity** : 6,000 RT





# HIGHLIGHTED

## DISTRICT COOLING PROJECTS IN THAILAND



**Status** : Completed, in operation

**Project** : Kasikornbank – Head Office

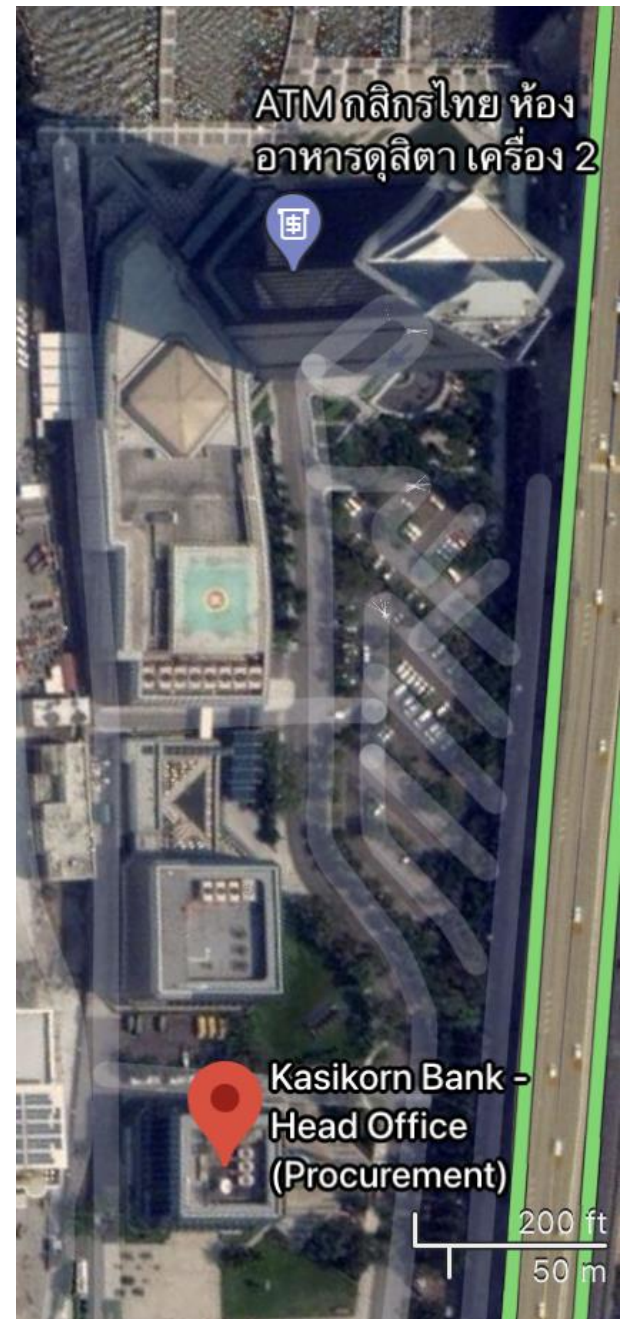
Ratburana Office

**Function:** Office Building

**Area** : GFA 163,000 sqm

**Cooling Capacity** : 4,000 RT

3





**Thank you  
for your attention**

