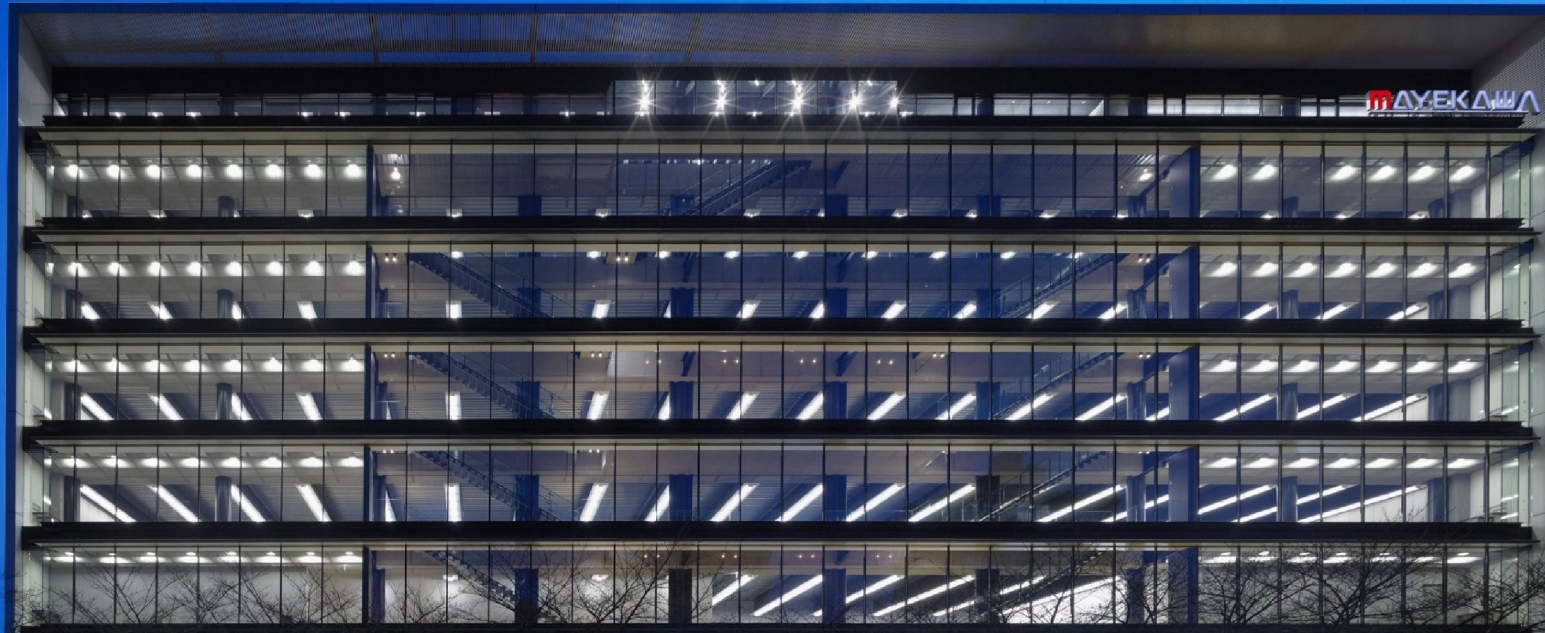


# Case Study : Project 2 Development Process

Project of Introducing High Efficiency Refrigerator to  
Food Industry Cold Storage & Frozen Food Processing Plant

PT Mayekawa Indonesia

REZA ARYADITYA



# Company Profile



**Tokyo Head Office**

## **MAYEKAWA MFG.CO.,LTD.**

Established in: 1924  
Capital: 1 billion yen  
Sales: 1.1 billion U.S.D (group)  
President: Tadashi Mayekawa  
Employees: 2,300 in Japan  
1,700 overseas  
Offices: 60 in Japan, 94 overseas  
Plants: 3 in Japan, 6 overseas

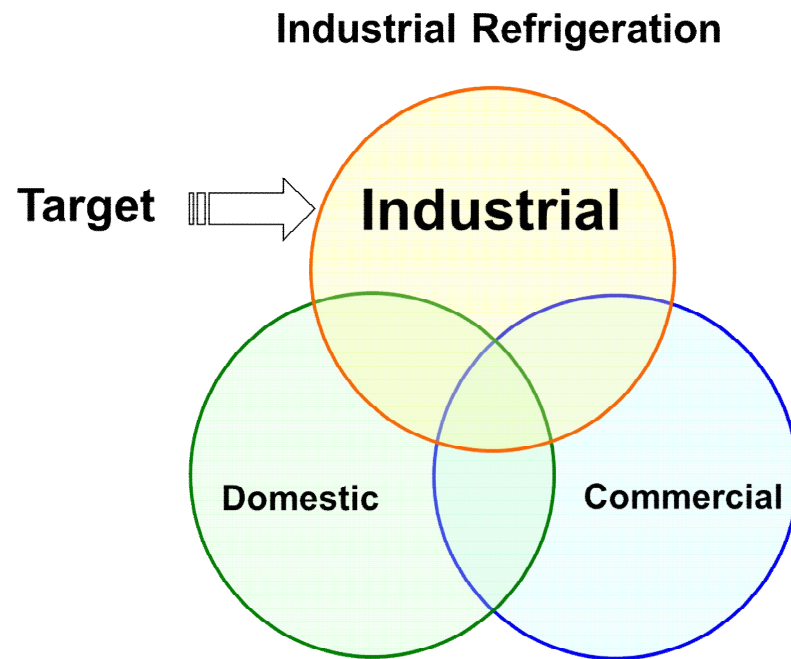
## **PT MAYEKAWA INDONESIA**

Established in: 1985  
Headquarter: Jl. MT Haryono, Jakarta  
Branch: Surabaya, Medan

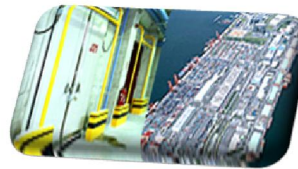
Contents: Manufacture and sales of various kinds of gas compressors mainly [for industrial refrigeration, plant engineering and service engineering](#) related to agriculture, meat and seafood processing industries, food distribution and energy fields.

# Scope of Activity

We are involved in various industries, systems and products by contributing to facilitate eco-friendly and energy-saving production.



Food Robotics



Logistics



Food



Breweries Oil,  
Gas & Chemical



Environment



# Sustainable Refrigeration Systems

**Zero Ozone Depletion Potential**

**Energy saving**

**Low Global Warming Potential**

**Low Carbon**

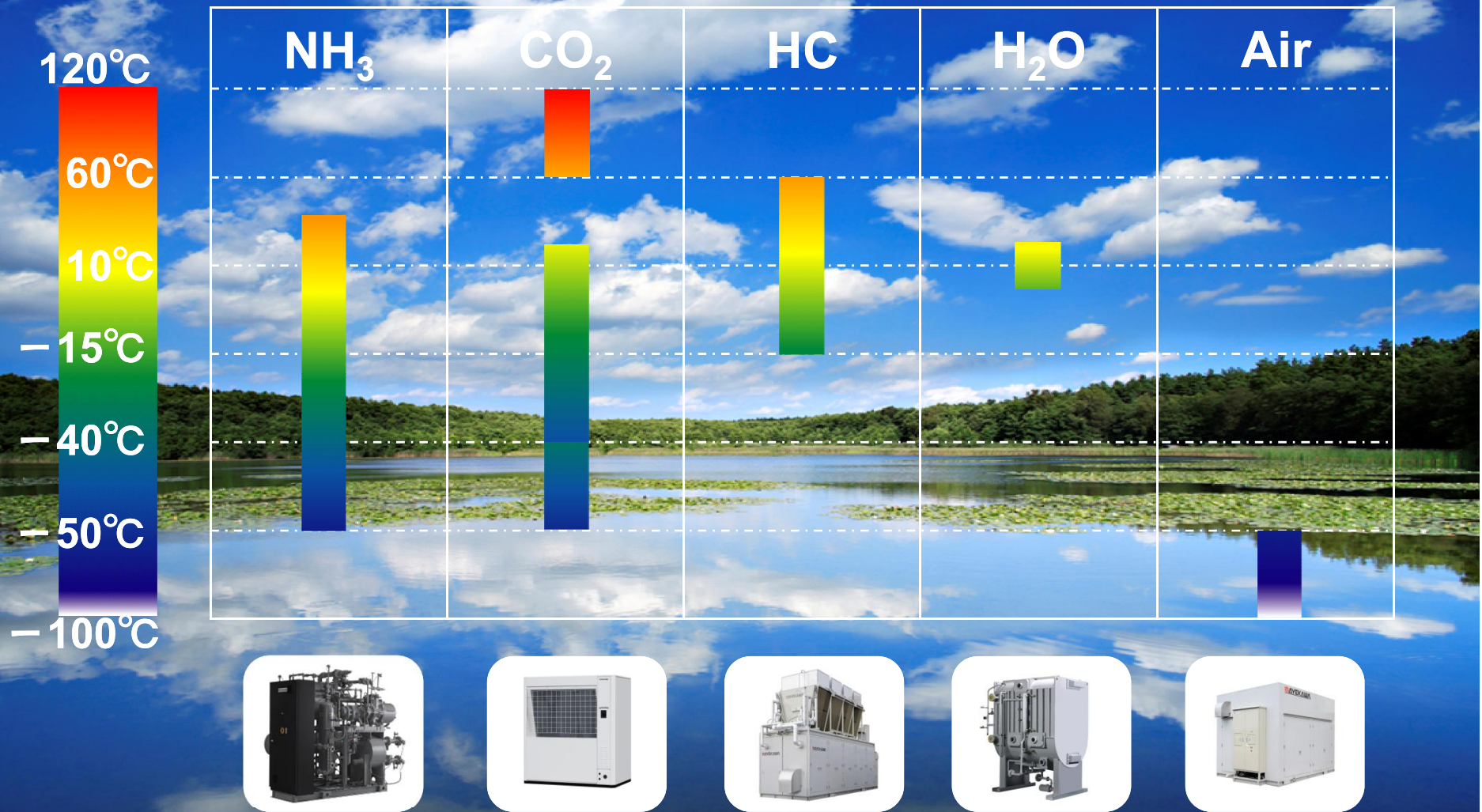


**Natural Refrigerants**



# NATURAL FIVE

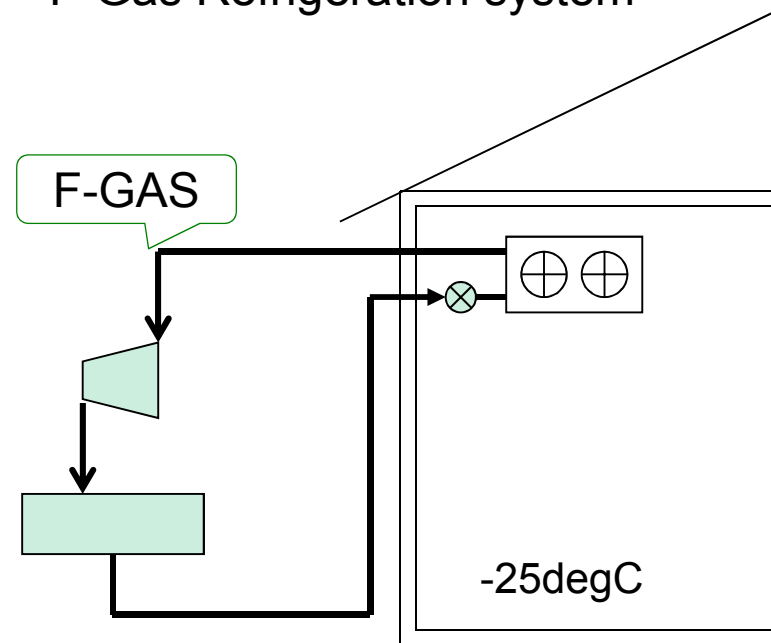
## Refrigerants and Product Solutions



# Indirect Systems with NH<sub>3</sub>/CO<sub>2</sub>

## Conventional Type

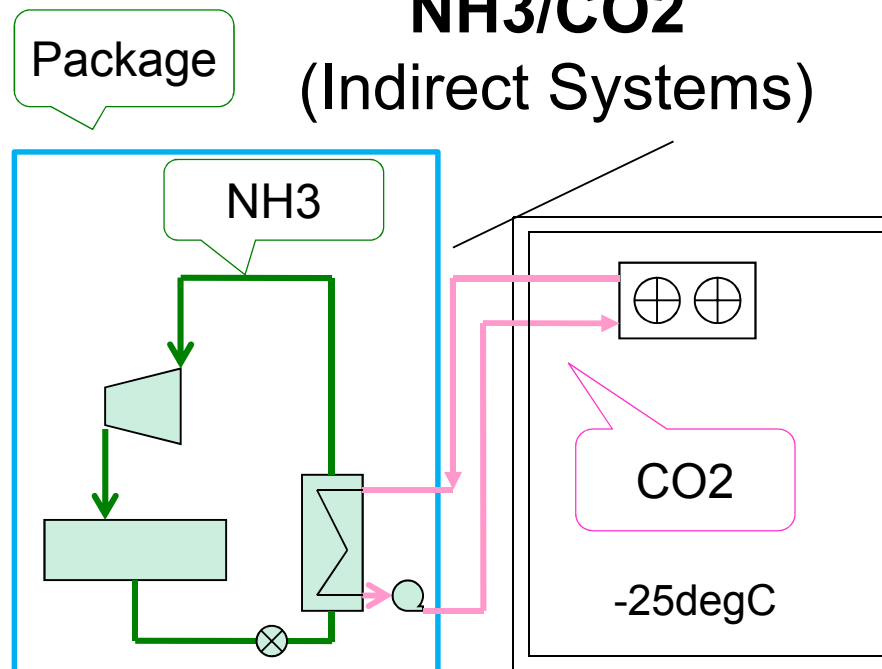
F-Gas Refrigeration system



### Direct method

- Potential leak in storage room
- Requires large amount of F-Gas
- Simple system

## Safest Approach of NH<sub>3</sub> Refrigeration Systems with NH<sub>3</sub>/CO<sub>2</sub> (Indirect Systems)



### Indirect method

- Least potential of leakage in storage room
- Uses very small amount of ammonia at 25kg
- A bit more complicated system



**NewTon**

**Shaping Refrigeration Systems for Tomorrow**



**MAYEKAWA**  
**MYCOM**

# JCM Project in Indonesia using NewTon

## Energy Efficient Refrigeration Technology To Support Cold Chain Industry

### PT Adib Global Food Supplies



#### Bekasi Cold Storage

- The 1<sup>st</sup> JCM project by MOEJ in FY 2013
- Completed in 2014
- 1 unit NewTon R-6000, capacity 187 kW
- Cold storage dimension:  
14,000W×23,000 L×11,000H
- Expected CO<sub>2</sub> reduction: 96 t CO<sub>2</sub>/year

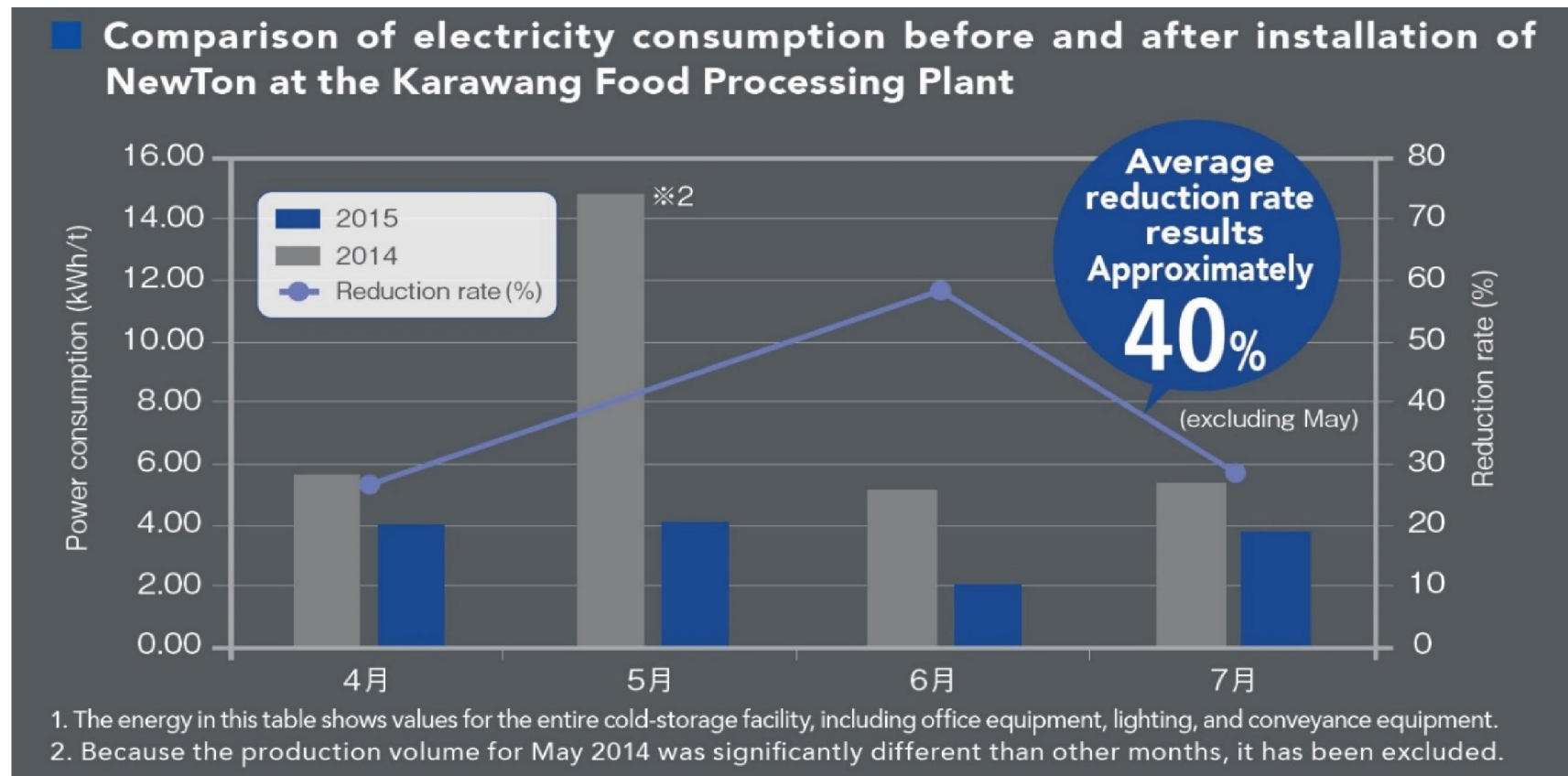


#### Karawang Food Processing Plant

- Completed in 2014
- 1 unit NewTon F-300, capacity 66 kW
- Mayekawa also installed Intelligent Quick Freezer (IQF)
- Expected CO<sub>2</sub> reduction: 26 t CO<sub>2</sub>/year



# Implementation Result

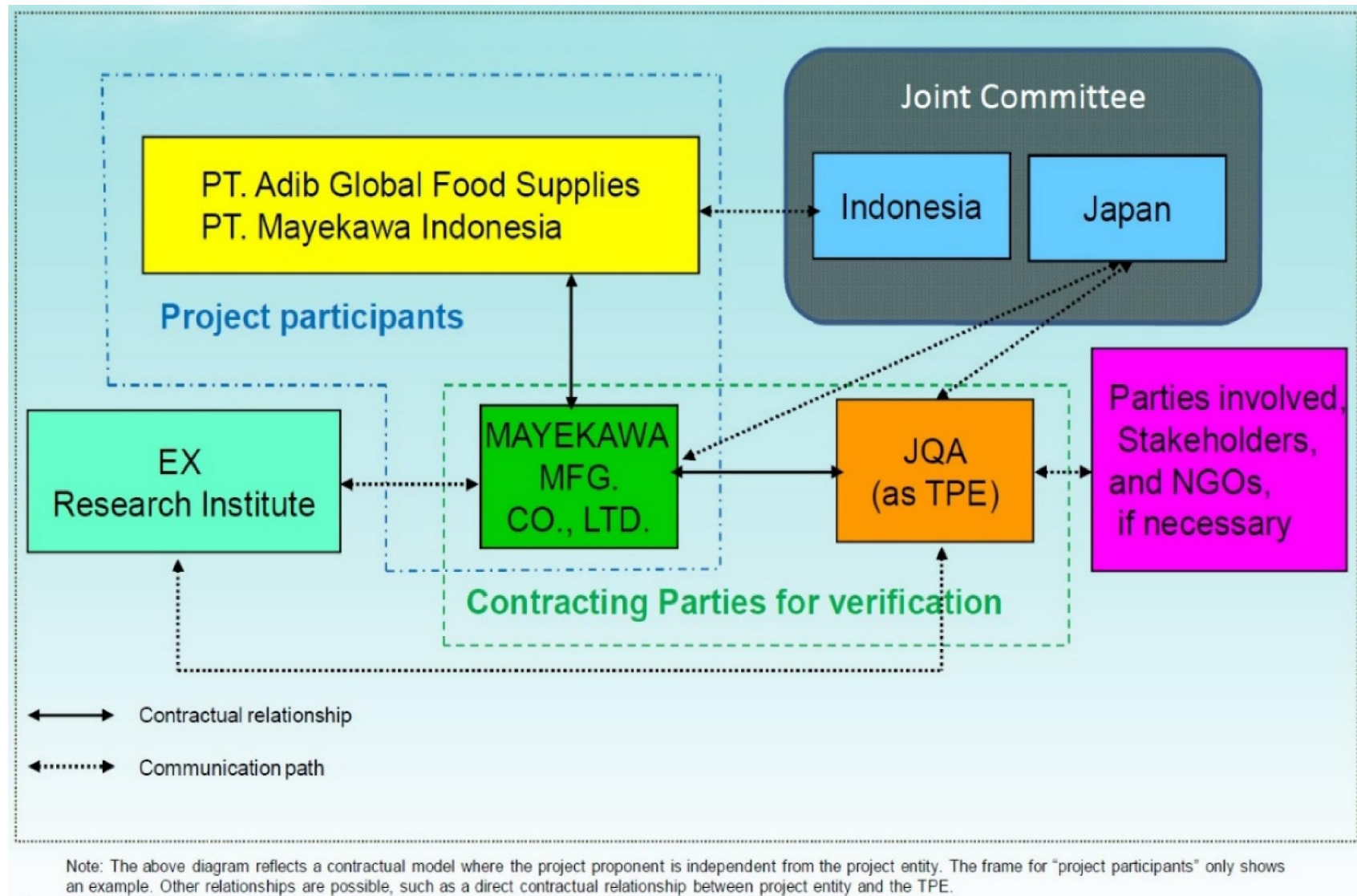


**Results after adopting NewTon:**

**Power consumption per pallet has been reduced approximately 25 to 30%**

**MOEJ introduces NewTon as Japanese Good Practices**

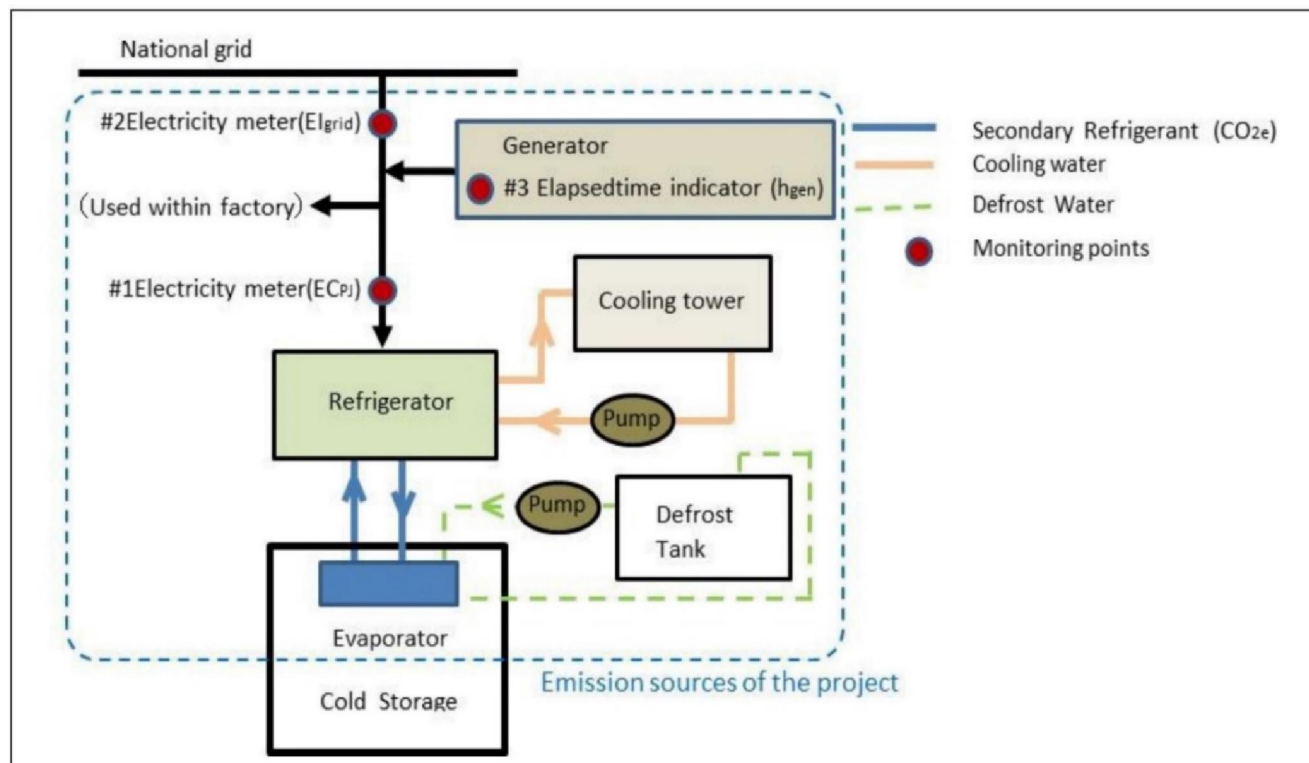
# JCM MRV (Monitoring, Reporting, Verification)





# JCM MRV – Monitoring, Reporting

## Monitored Items:



## Reported Items:

#	Item	Monitoring Point	Unit	Freq.
1	Refrigerator consumed electricity	Electricity Meter Equipped with Refrigerator	kWh	Daily
2	Monthly grid electricity imported	Electricity Invoice from Electricity Provider	kWh	Monthly
3	Elapsed time of onsite power generator	Elapsed Time Indicator	Hours	Daily

# **JCM MRV – Verification**

**Verification process consists of :**

**Document Review  
Before On-Site Assessment**

**On-Site Assessment**

**Resolution of  
outstanding issues (if any)**

**Thank you for your attention**