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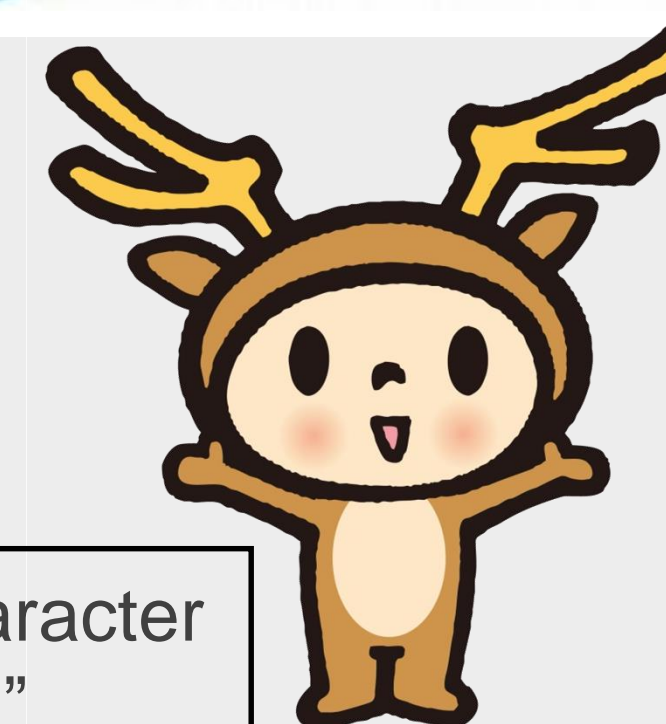
Adopting Natural refrigerant
refrigeration system
NARA COOP

February 13th, 2018

■ The organization overview

- ◆ Nara Consumer's CO-Operative Society
- ◆ HQ / 1-2-2, Koinokubo, Nara-shi, Nara prefecture
- ◆ Representative / Board chairman : Motoko Nakano
- ◆ TEL / 81-742-34-8731
- ◆ Founded / September 1974
- ◆ Number of shops / 1 HQ, 4 Branch (Delivery center), 11 Shop, 1 Office (Yoshino), 1 Distribution center
- ◆ Employees (including part-time worker) / 1,594
- ◆ The membership / 269,972 (46% of the householders in Nara prefecture at March, 2017)
- ◆ Sales (2016) / 38,650,210 (Thousand JPY)

Corporate character
"Narappi"



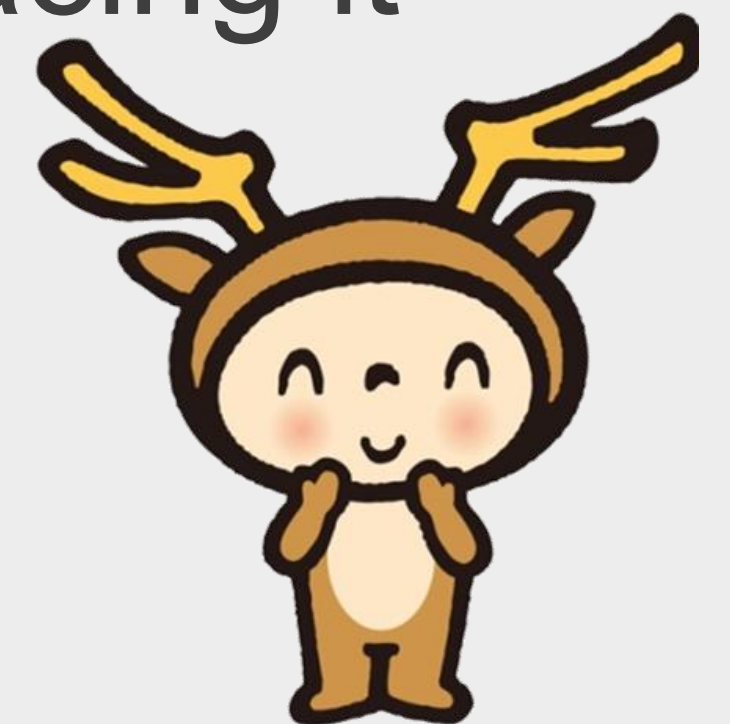
■ The organization philosophy

- ◆ Based on co-operative mutual-aid and democratic organization management, we will improve member's life economically & culturally.

■Environmental philosophy

As an organization of consists of many citizens, we have a responsibility to hand over Earth & Nara's rich nature to next generation and create better environment by co-operative power.

Therefore we value that the environmental protection activity is connected to the CO-OP' s organization philosophy and placing it our basic principle.



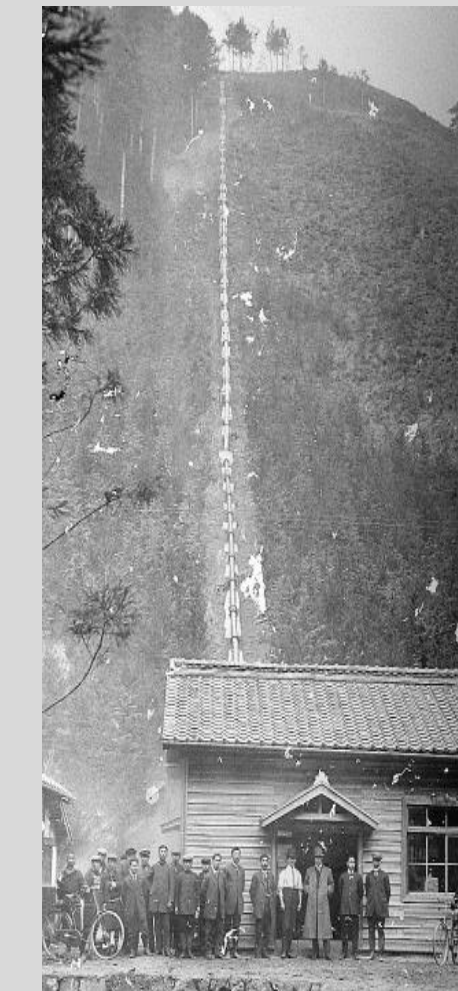
■ Environmental effort

- ◆ Solar cell system installation
- ◆ Supporting child food support restaurants
- ◆ Garbage recycle activity
- ◆ Collecting corrugated carton, styrene foam, waste paper,
PET bottle, milk carton, can & food tray for recycling
- ◆ Spreading environmental friendly products
- ◆ Collecting waste fry oil
- ◆ Supporting small hydro-electric generation in Tukubane power plant in Higashi-yoshino village

< Tukubane power plant >



Present plant



About
100 years ago

■ Trigger to install Natural refrigerant refrigeration system

To achieve both business expansion and environmental contribution (EX: reducing green house gas exhaust), installation of energy saving Natural refrigerant refrigeration system is expected for energy saving & reduction of high Global Warming Potential Freon exhaust.



■ Shop introduction

① CO-OP Nango

Address / 578-81, Otani, Takada-shi, Yamato
TEL / 81-745-25-1120
Open / November 25th, 2016
Sales area / About 1850m²
Business hours / 9 : 00 ~ 21 : 00



■ Natural refrigeration system installation situation and its effect

CO-OP Nango

Address / 578-81, Otani, Takada-shi, Yamato
 TEL/81-745-25-1120
 Open/November 25th, 2016
 Sales area/About 1850m²
 Business hours/9 : 00 ~ 21 : 00



Condensing unit
 10HP×1unit
 15HP×1unit
 20HP×9unit

Showcase
 61 unit
 +(7 cooling coils)

Energy saving ratio
36.7%
 ※1

CO₂ Exhaust reduction
385.8
 Tonnage/year※2



↑Explanation & PR panel of environmental activity in the shop



※1 (Comparing measured data with HFC refrigerant system)
 ※2 (Comparing calculation with HFC refrigeration system)

Shop Introduction

② CO-OP Shichijo

Address / 2-1100, Shichijo-nishimachi, Nara-shi
TEL / 81-742-45-7882
Open / November 17th, 2017
Sales area / About 1,736^m²
Business hours / 9 : 0 0 ~ 2 1 : 0 0



■ Natural refrigeration system installation situation and its effect

CO-OP Shichijo

Address / 2-1100, Shichijp-nishimachi, Nara-shi
 TEL/81-742-45-7882
 Open/November 17th, 2017
 Sales area/About 1,736㎡
 Business hours/9 : 0 0 ~ 2 1 : 0 0



Condensing unit
 15HP×3unit
 20HP×8unit

Showcase
 61 unit
 +(8 cooling coils)

CO₂ Exhaust reduction
381.0
 Tonnage/year※1

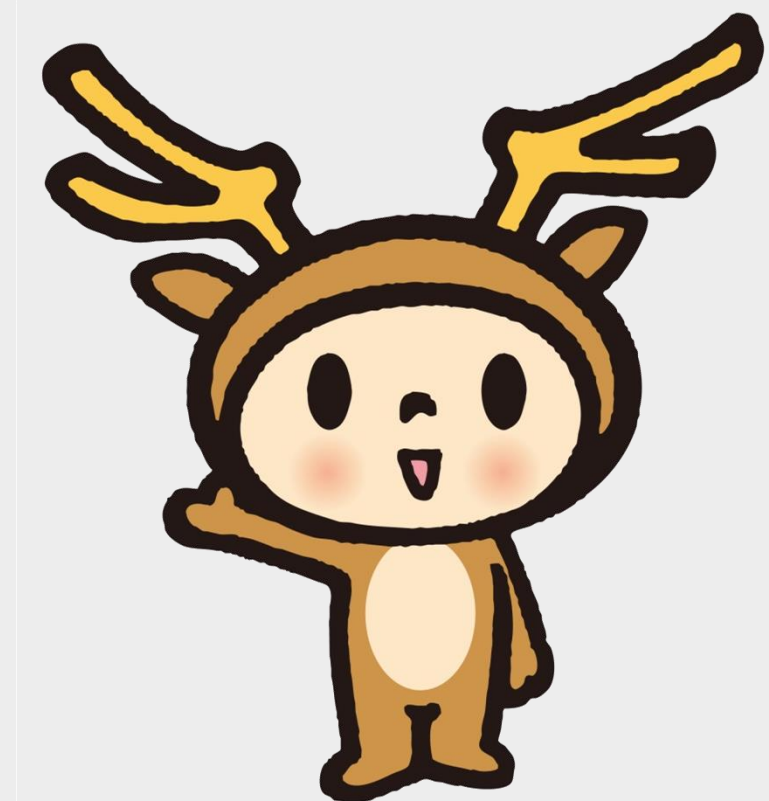


※1 (Comparing calculation with HFC refrigeration system)

■ Valuation of Natural refrigerant refrigeration system

To achieve both business expansion and contributing environment, especially green house gas exhaust reduction is an important and difficult problem for us.

We value this Natural refrigerant refrigeration system installation is a big step to solve this problem.





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Thank you very much!