



Danfoss: Innovation in energy efficiency

ENGINEERING
TOMORROW



Julie Kjestrup, Head of EU Public Affairs, 20 May 2019

Business segments



DANFOSS POWER SOLUTIONS

#2 Market position



- **6,815 employees**
- **22 factories** in 11 countries
- **13.9bn DKK sales / 1.9bn EUR**



DANFOSS COOLING

#1 Market position



- **6,396 employees**
- **13 factories** in 10 countries
- **11.9bn DKK sales / 1.6bn EUR**



DANFOSS DRIVES

#2 Market position



- **4,652 employees**
- **11 factories** in 7 countries
- **10.3bn DKK sales / 1.4bn EUR**



DANFOSS HEATING

#1 Market position



- **5,339 employees**
- **26 factories** in 12 countries
- **7.3bn DKK sales / 1.0bn EUR**

Urban efficiency

- **Putting energy efficiency first** – 40% of emissions reductions needed by 2050 have to come from energy efficiency (to keep the rise in planet temperature at 2 degree Celsius)
- Energy efficiency is the most **cost-effective way** to decarbonize our economy, while helping to decouple GDP growth from energy use
- Energy-efficient technologies that are **ready for implementation** exist and are good business cases
- Cities are key to unlocking energy efficiency
- **Urban efficiency:** Connecting buildings, energy systems, industry, water, food infrastructure



SAINSBURY'S SUPERMARKET



- The store was built in 1988. The sales area covers 2430sqm.
- CO₂-Refrigeration system installed in August 2010.
- Heat recovery unit, which takes heat out of refrigeration system to heat tap water and building, installed in 2014.

Results

- 1 Million kWh gas heating saved in the first year
- >100 Tons CO₂ emissions avoided
- 90% reduction in gas usage
- 900£ savings / week in the winter
- 2,3 year payback time



SOMA, TURKEY



- **8 000 houses** switched from charcoal boilers to district heating – potential for 40 000 houses
- District heating network uses the **excess heat** from the municipal power plant

Results

- **66% cost and energy savings** for citizens; with gas imports getting more expensive, district heating becomes even cheaper in comparison
- Reduced **air pollution** (by replacing individual charcoal boilers with district heating)
- Reliable and secure heating system delivering continuous comfort
- Reduced **energy consumption** and emissions

DANFOSS AND URBANIZATION

ENERGYLAB NORDHAVN



- Over the next 50 years, Nordhavn will develop into a **new district** with 40,000 residents and 40,000 jobs
- The ambition is to become an **example of a future sustainable city**, supporting Copenhagen's 2025 **carbon-neutrality** goal
- The *EnergyLab* demonstrates ways to **integrate** renewable power, heat, transport and energy-efficient buildings into an **intelligent, flexible** energy system

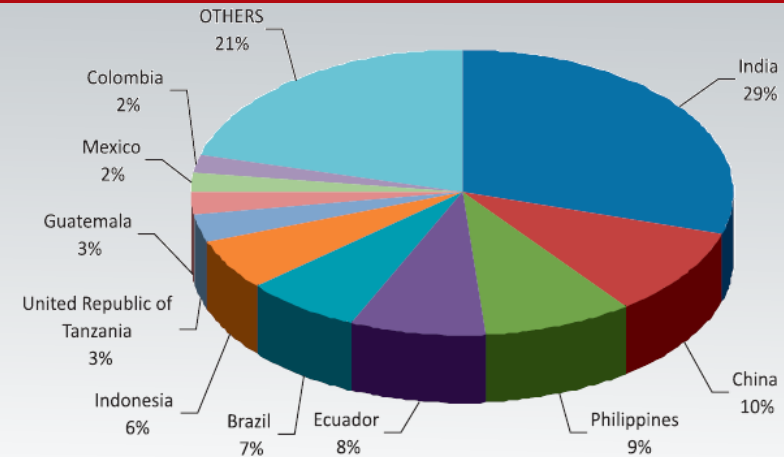
DANFOSS AND FOOD SUPPLY

BANANA FESTIVAL



- CII Cold Chain Task Force and CII Tamil Nadu identified Banana as a focus crop for Tamil Nadu
- State Government decision to **educate farmers** through Banana festivals
- Three Banana Festivals conducted at Chennai, Coimbatore and Trichy

India ranks First with 29% share of World's Banana Production





DANFOSS AND FOOD SUPPLY

BANANA FESTIVAL

Results

- Farmers are more **aware** of understanding post harvest losses
- Banana ripening through ripening chambers has distinctly **increased**
- Number of Cold storages for Banana have **increased** in specific clusters
- State Government has further included our suggestions in the **Vision 2023** document



ENGINEERING
TOMORROW