

METRO

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SUSTAINABILITY + CLIMATE RESPONSIBILITY IN GLOBAL VALUE CHAINS

Brussels, February 01, 2018
Olaf Schulze

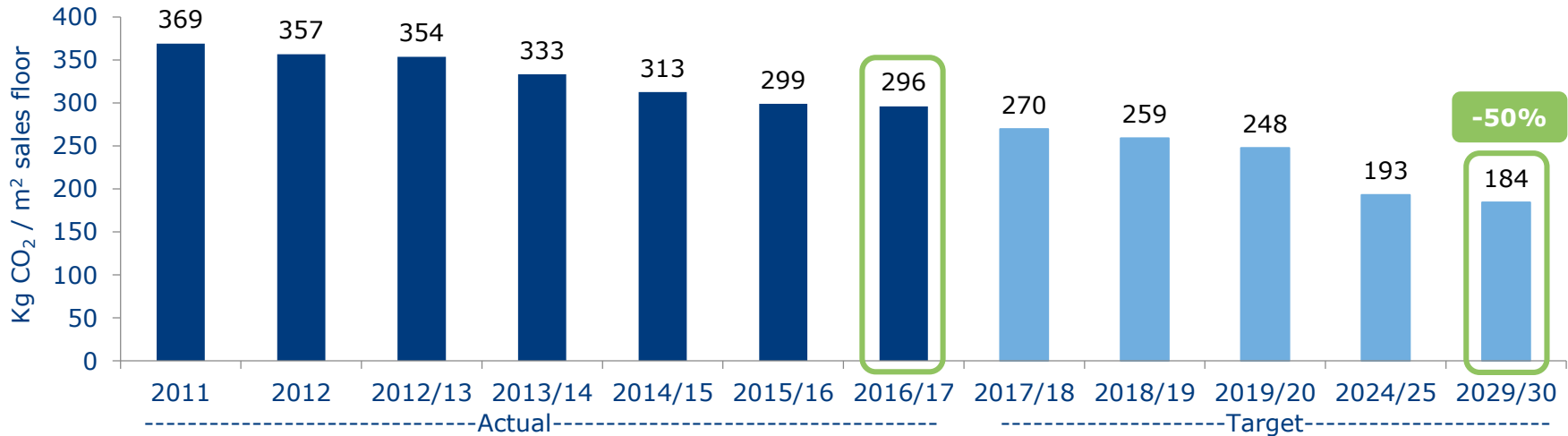
CLIMATE PROTECTION TARGET 2030.

Climate protection target 2020 already achieved in 2015:
→ Reduction of core CO₂ emissions by 20% vs. 2011.



New climate protection target for 2030:
→ Reduction of core CO₂ emissions by 50% vs. 2011

METRO Performance on Climate Protection Target



CO2 REDUCTION STRATEGY 2030.

To achieve our Climate-Protection-Target
METRO focuses on:

- (1) Energy-Efficiency Investments (ESP) & Behavior (EAP)
- (2) F-Gas Exit Program – FEP
- (3) Renewable Energy Production-
Project Smaragd & Rubin
- (4) GREENSTORE + ZEUS INITIATIVE (ZERO Emission Unit Store)



ENERGY EFFICIENCY.

EAP Program:

Awareness about energy & resource efficiency – MOOC METRO
OPEN ONLINE COURSE

ESP Program:

Invest in efficient building technology; ROI <5y/ internal CO2
price 25 €/to



A/C + HEATING:

- BMS + advanced EMS
- Temperature + CO2-Sensors
- Smart ventilation (CN)

COOLING:

- Closed cooling furniture (CN)
- Eco fans

DOORS + INSULATION

- Fast running doors (PK)

ILLUMINATION:

- LED + Moving-Sensors (CN + IN)
- Daylighting + sensors (CN + PK)



F-GAS EXIT PROGRAM.

Schedule METRO China

2014: start with 1st subcritical system (SC) in Weifang in NSO + Remodeling

2017: 1st transcritical system (TC) in MCC China,

- NSO Beijing
- further rollout 2018 ff. (Beijing/Chongqing)

Low + minus cooling with pure CO2 instead H(C)FC

Status: 1 TC // 42 SC

2020: elimination of (last) HCFC in MCC China

METRO CASH & CARRY

757 stores, HQ in Germany, part of Metro Group

GOOD:

- CO₂ transcritical technology has been rolled out to 51 stores, including one in Romania, five in Italy and one in Spain
- CO₂ cascade systems have been rolled out to 66 stores, including 28 in China, one in Ukraine, 18 in Russia and three in Turkey
- Actively communicating the benefits of using natural refrigerants in media and through production of reports and briefings
- Half of all fridges have doors fitted

BAD:

- Still uses HCFCs in 137 of 757 stores worldwide

EIA GREEN COOLING LEADER



PROJECT SMARAGD – ONSITE PHOTOVOLTAIC.

Target 2030:

- 50.000 kWp installed capacity; energy production for own use
- top roof + parking canopy + facade

Status 2017:

- METRO: 10.800 kWp on 25 stores
- thereof MCC CN 5.200 kWp on 10 stores
- thereof MCC IN 3.400 kWp on 8 stores

Outlook 2018

- MCC CN > 5.000 kWp on 12 stores
- MCC IN + MCC PK > 1.000 kWp (250 kWp Lahore 02/2018)
- Others >10.000 kWp (DE)



GREENSTORE/ ZERO EMISSION STORE

2016 METRO "Green store" Dongguan

- Remodelling of an existing store
- Full LED + daylight usage with light bands
- Closed cooling furnitures
- CO2 Cascade + heat recovery
- Smart A/C + EMS
- PV top roof + parking canopy + facade (800 KWp)
- Road lamps LED + PV + wind + battery (300 W)
- E-Car-Charger (AC+DC) + rain water usage + waste management system
- appx. 50% energy savings (150 KWh/m²),
- 60% CO2 savings
- MCC CN Jinan 2017 + Putuo/Chongjing 2018



2017 METRO "ZEUS store" MCCAT – St. Pölten

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