
MENORCA 2030
ROADMAP TO
DECARBONISATION

Menorca 2030, basic principles

Principles

Supply security
Social participation
Economic viability
Environmental sustainability
Landscape integration

Fields of action

Electric system
Households
Services sector
Land transport

Menorca 2030 objectives

ELECTRIC DEMAND	LAND TRANSPORT	THERMAL USES	PRIMARY SECTOR
85 % covering with renewables	50 % reduction fossil fuel consumption	30 % reduction fossil fuel consumption in services sector, households and industrial	10 % reduction diesel consumption

RENEWABLES DEPLOYMENT	PROMOTION OF SELF CONSUMPTION IN URBAN ENVIRONMENTS	STORAGE	ENERGY SAVING
PV Wind Others		400 MWh	Households Companies Public sector

SUPPORT SYSTEMS
THERMAL PLANT (Reserve) DOUBLE UNDERWATER CABLE

TRANSITION AGENDA PROPOSALS

- Renewable generation
- Storage and support
- Land mobility
- Efficiency and demand response
- Smart grids
- Smartmarkets
- Menorca energy community

RENEWABLE GENERATION

2030 SCENARIO

PV PLANTS

261 MWp

402 GWh/year

WIND

16,5 MWp

41 GWh/year

RENEWABLES NEXT TO URBAN ENVIRONMENT

30 MWp

42 GWh/año

OTHER TECHNOLOGIES (BIOGAS, WAVE ENERGY, ...)

4 MWp

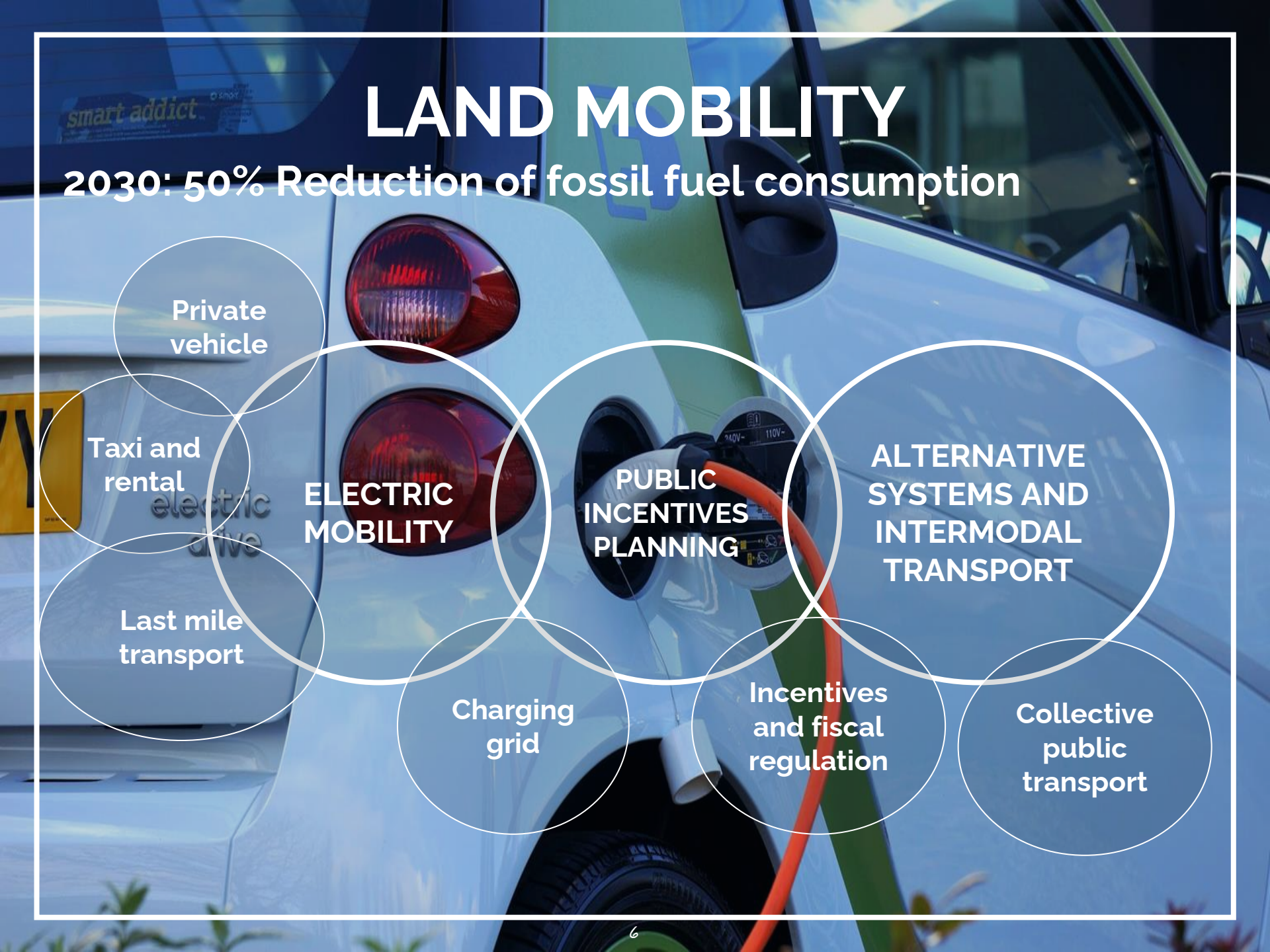
7 GWh/year

STORAGE

400 MWh

LAND MOBILITY

2030: 50% Reduction of fossil fuel consumption



EFFICIENCY AND DEMAND RESPONSE

HOUSEHOLDS

17% final energy consumption, 75% electricity

SERVICES SECTOR

18% final energy consumption, 74,5 % electricity

INDUSTRY

3,5% final energy consumption, 44% electricity

PRIMARY SECTOR

2,9% final energy consumption, 83% diesel

EFFICIENCY AND DEMAND RESPONSE

HOUSEHOLDS

PV SELF CONSUMPTION

ENERGY REHABILITATION

EuroPACE EXPERIENCE

FORMATION AND INFORMATION SERVICE

ELECTRIC VEHICLE INTEGRATION AND SMART MONITORING

HEAT PUMP AND BIOMASS Thermal uses

FACILITIES EFFICIENCY AND APPLIANCES

EFFICIENCY AND DEMAND RESPONSE

SERVICES SECTOR

TOURISM

PUBLIC SERVICES AND ADMINISTRATION

PUBLIC LIGHTING

WATER CYCLE MANAGEMENT

2030 OBJECTIVES

Services work under efficiency, integral energy management and self generation from renewables.

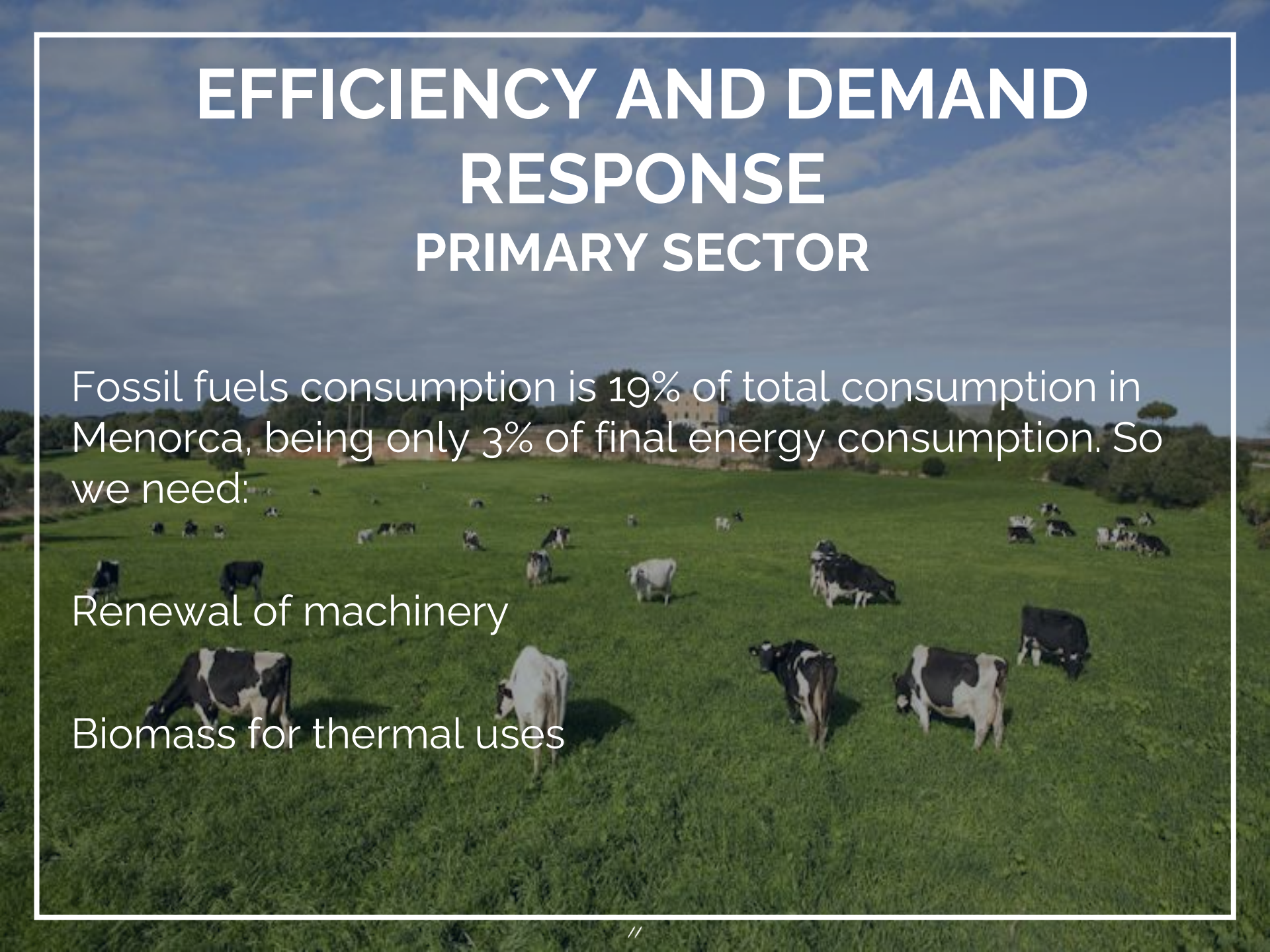
Those measures create local economy and can be highly replicated

EFFICIENCY AND DEMAND RESPONSE
INDUSTRY

Renewable generation in roofs and parking surfaces
Promotion of selfconscumption (shared or individual)
Promotion of PPA
Storage
Biomass
Consumption monitoring
Financing strategies for energy improvements
Insolation improvements
Demonstration projects

EFFICIENCY AND DEMAND RESPONSE

PRIMARY SECTOR



Fossil fuels consumption is 19% of total consumption in Menorca, being only 3% of final energy consumption. So we need:

Renewal of machinery

Biomass for thermal uses

SMART GRIDS

Adaptation of actual grids to smart grids is fundamental. So, generation and storage are interconnected by grids wich can preview generation, demand and energy flows automatically.

They can give us:

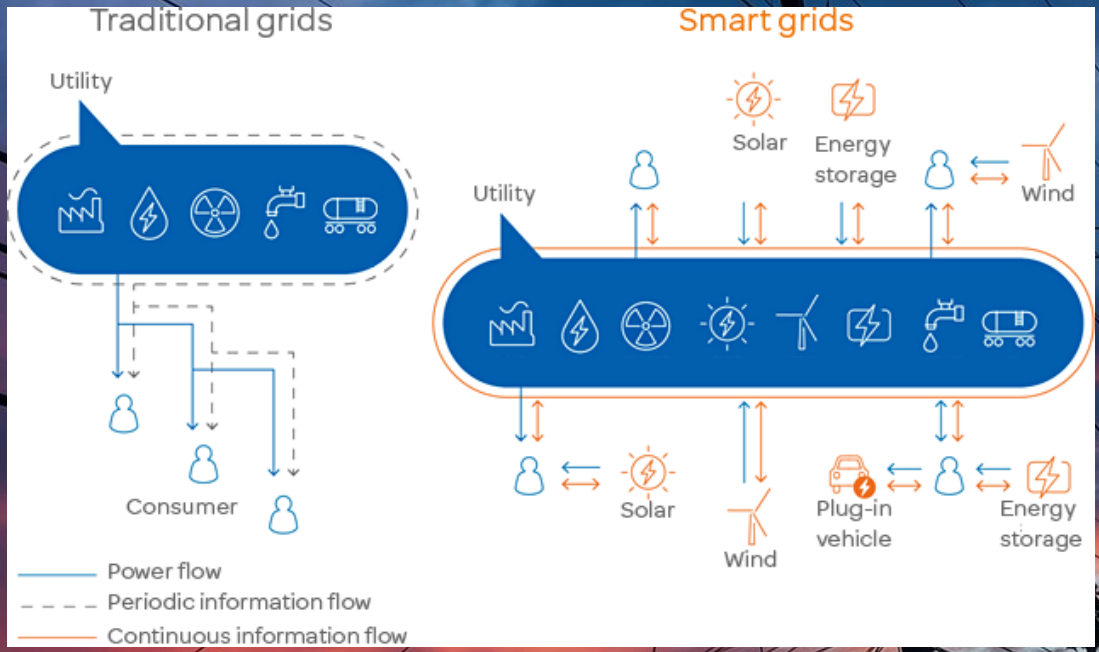
Fiability

Interactivity

Predictability

Interconnectivity

Security



SMARTMARKETS

They must allow:

To buy and sell energy in a beneficial way for all parts almost immediately

To buy and sell energy from grid operators (TSO, DSO) to any electric sector agent

Reservation of power at short and medium term

MENORCA ENERGY COMMUNITY

- Citizen participation to involve them in energy transition
- Excellence center in renewable design and implementation
- Bringing the energy transition to higher education
- Promote the creation of companies and associations related to energy services and decarbonisation process
- Citizen assessment
- Personnel forming in all productive sectors
- Demonstrations with citizen participation

TOP10: STRATEGIC MEASURES MENORCA 2030

1 Renewable energy generation in Milà
2 PV plants
3 Storage with batteries
4 Self Consumption in buildings
5 PV in public parkings
6 EuroPACE program (energy efficiency in buldings)
7 Electric mobility and charging grid
8 Smart Grids
9 Local energy markets
10 Menorca 2030 office

ROADMAP

STAGE 1
2020

- 1st underwater cable working (35MW)
- 15% renewable energies cover
- Start of developing PV in public parking surfaces
- Start of self consumption in households and companies
- Charging grid

STAGE 2
2025

- Double underwater cable working (100MW)
- 35% renewable energies cover
- 200 MWh batteries storage
- PV in big roofs
- Thermal plant working with natural gas
- Global charging grid
- 15% reduction of fossil fuel in land transport and thermal uses

STAGE 3
2030

- Doble enlace operativo (100MW)
- 85% renewable energies cover
- 400 MWh batteries storage
- PV self consumption 100% deployed
- Thermal plant (only support)
- Global charging grid
- 50% reduction of fossil fuel in land transport and thermal uses

1990 **340.951 t CO_2**

2013 **544.818 t CO_2**

2030 **157.110 t CO_2 (-71%)**