SNCF’s climate and energy policy

Conserving Now, Preserving Future
Created in 1937 and owned by the French government, SNCF is a railway company operating in increasingly competitive markets.

Per day for SNCF: 15,000 trains - 5 million passengers (rail) - 250,000 tons of goods carried (rail)

SNCF group is made up of 5 business units:
- SNCF Réseau (network)
- SNCF Voyageurs (passengers)
- Keolis (urban transportation)
- SNCF Logistics
- SNCF Immobilier (real estate)
SOME KEY INDICATORS

30,000 km of railway tracks maintained and monitored 24/7 among which:

- 15,000 km electrified
- Over 2,000 km at high-speed

Daily traffic (2015):

- 800 high-speed trains
- 325 standard long-distance trains
- 11,900 urban, suburban and regional trains
- 1,060 freight trains
CO2/passenger in France

- Rail transport: 0.4% of GHG gas emissions (CO2 equ) of transport in France (*National low-carbon strategy 2015*)
- French electricity mix has a low carbon content due to an important share of nuclear energy
- About 70% of our traction is electric

- **CO2 equ/passenger for 1km long distance travel:**
  - Walking and cycling (non electric): 0g
  - Train: 8.4g
  - Coach: 42.8g
  - Car sharing - 3 people - 71g
The UN low-carbon strategy for transport

**AVOID**: avoiding inefficient or unnecessary travel or transport, where appropriate, e.g. by improved and integrated urban planning, compact city form, transport demand management, less complex and extended supply chains, and e-communication options (mobile phone use, teleworking)

**SHIFT**: shifting travel/transport to improve trip efficiency through most efficient or environmentally friendly mode or combination of modes, capable of meeting the travel/transport needs, and or/ shifting to off-peak travel

**IMPROVE**: improving the environmental performance of transport through technological, operational, regulatory or pricing and/or infrastructure improvements to make transport vehicles and equipment and the provision of transport more energy-efficient and less carbon-intensive.
AVOIDING UNNECESSARY TRANSPORT

• Marginal adaptation of working time schedule in Rennes to ease public transport congestion (Keolis)

• Development of co-working offices in stations (Gare de Lyon)

• Rail stations designed as intermodality hubs and expertise in urban planning around stations and beyond

• SNCF’s subsidiary, AREP, designed Casa Port in Casablanca, Morocco and is also contracted to design the future Ecocity of Caidian in Wuhan, China
SHIFTING PASSENGERS

From **station to station** to **door-to-door** through:

**DIGITAL TOOLS:** SNCF door-to-door smartphone application

**TRAIN + BICYCLE:** installation of secure bike parking at stations when asked for by local authorities (picture: bike parking at la Rochelle station)

**TRAIN + CARSHARING:** SNCF subsidiary IDVroom acting as a web platform between drivers and passengers

**TRAIN + PUBLIC TRANSPORT,** **TRAIN + CABS,** etc.

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SHIFTING FREIGHT

Intermodal strategy:

- Rail motorways (semi-trailers put on ad-hoc designed wagons) CO2 emissions savings significant compared to road transport + air quality benefits

- ECOTRANSIT WORLD tool to inform clients about the impact of their choices: (CO2 and air quality, national or international, all modes of transport, intermodal transport)

- Urban logistics:, cosmetics shops in Shanghai supplied with electric vehicles + IT system to optimise delivery flows: 66 tons of CO2 saved, no pollutants emitted

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SNCF CLIMATE/ENERGY PROFILE

- 17 TW/h energy consumption for SNCF group (all modes of transport)
- 9 TW/h of electricity per year for SNCF (rail) that is to say 3% of French electricity consumption
- SNCF CO2 reduction objectives:
  - 25% in 2025 (baseline 2015)
IMPROVING OUR CLIMATE PERFORMANCE

• 2012: Energy unit in charge of energy purchase and energy efficiency

• Climate/energy actions: deployment of counters, ecodriving (software indicating recommended driving speeds to drivers), ecoparking, etc.

• Decision to develop partnerships to allow use our premises for renewable energy production (including solar energy)

• Research activities ongoing on energy storage, braking energy recovery, stations as smart energy hubs, hybrid (battery + diesel) and hydrogen rolling stock

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But also ADAPTING to climate change

- Principle: base our adaptation actions on climate science

- Support of a PhD thesis on Climate change adaptation together with I4CE, ADEME and Versailles Saint-Quentin University

- Case study on one French region (Languedoc Roussillon) for this PhD thesis

- Experiment: the first-ever workshop on climate change adaptation in France involving rail experts but also climate scientists: preliminary results are promising...

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SNCF Réseau (Network) green bonds

**Green bonds**: bonds issued to finance projects with a certified environmental benefit (second independent opinion for investors, possible certification according to the Climate Bond Initiative, annual reporting)

SNCF Réseau (Network) has issued green bonds dedicated to:

- Maintenance upgrade and energy efficiency of the network
- New lines or new line extensions
- Further actions to enhance biodiversity or the protection of natural resources

March 2017: **1 billion euros** green bond issuance (17 years maturity)