Climate change activities in NSG group

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NSG (Nippon Sheet Glass co.) Group

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NSG Business structure

Architectural

- Glass for photovoltaics
- Vacuum glazing
- Digital Signage
- Fire protection glass

CO₂ emissions 62 percent

Automotive

- Solar control technology
- HUD and camera systems
- Lightweight glazing
- Aftermarket Glass Replacement

CO₂ emissions 33 percent

Technical Glass

- Battery technology
- Engine timing belts
- Anti-corrosion coatings
- Lens for LED print

CO₂ emissions 5 percent

Social and Environmental Benefits

VA products and services

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Number of employees ... 27,000
Principal operations ... 29 countries
Principal sales ... over 100 countries

CO₂ emission -- 4 million tonnes/yr
Our products contribute to energy generation and conservation

Energy generation / conservation

Solar control glasses

Glass for Thin Film Photovoltaic

Vacuum glazing glass
(for window / refrigerators)

Solar control

Battery Separator

Our products are necessary for Decarbonising society
Roadmap to reduce CO₂ emissions from our processes

**Time scale**

**Short term**
(Existing technology)

**Medium term**
(R&D required)

**Long term**
( Innovative change)

**Action Plans**

- **Conventional measures**
  (Fuel switch/ inverters/ submeters / renewables / oxy fuel/ heat recovery/ training)
  <Target> Reduce specific CO₂ emission at least 1%/year

- **Combustion methods**
  (Furnace design and alternative fuels)
- **Raw material**
  (Increase quality of end of life cullet)

- **CCS / CCU**
- **Electrical melting**
Float Glass Electric Melter

Operation
- Float glass electric melting operated in the past
  Electricity more efficient than gas firing by a factor of 2:1

Technical Barriers
- Scale up Issues
  - Number of electrodes
  - Electrode life/advancement
- Refining
  - Development is required to refine large volumes of glass using only electric heating.

Economic challenges
- Cost of electricity high and currently still linked to oil/gas price
Since 2009.
A network of Japanese companies that aim to create a net zero society, seizing on the idea that low-carbon development is a prerequisite for economic activity.
To Become Companies Necessary for the Net Zero Society

Policy Engagement

Net Zero Business Incubation

Corporate Commitments

Japan-CLP

Japan Climate Leaders’ Partnership

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