Sustainability in the Chemical and Petrochemical Industry

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ABIQUIM – Brazilian Association of Chemical Industry
WHO WE ARE

- Founded in 1964
- Non-profit organization

191 member companies

- Small, medium and large sized chemical industries
- Carriers and specialized service providers
- Mercosur Council of Chemical Industry (CIQUIM)
- International Council of Chemical Associations (ICCA)
OUR GOAL

WE WORK ACTIVELY PROMOTING THE INCREASE OF COMPETITIVENESS AND SUSTAINABLE DEVELOPMENT OF THE CHEMICAL INDUSTRY WITH PRODUCTION IN BRAZIL.
THE BRAZILIAN CHEMICAL INDUSTRY

2 MILLION JOBS

6th WORLD LARGEST Chemical Industry

10% OF BRAZILIAN INDUSTRIAL GDP

4th MAIOR Setor Industrial DO PIB

112.4 US$ BILLION Net Sales
BRAZIL MAY BECOME THE 5TH LARGEST WORLD OIL PRODUCER.

GAS PRODUCTION WILL NEARLY TRIPLE BY 2030.

THE HIGHEST BIODIVERSITY IN THE WORLD.

CHEMICALS PRODUCTION FROM RENEWABLE RAW MATERIALS

LARGE MINERAL RESERVES, SUCH AS QUARTZ AND RARE EARTH ELEMENTS.
We consume 50% more than what the planet can produce, absorb and regenerate

16% of the world's population consumes 78% of resources

2/3 of the population does not reach income to be part of the consumer market

1 billion people without access to safe drinking water

Source: WWF - Relatório Planeta Vivo 2010
SUSTAINABLE DEVELOPMENT: Shared Responsibility

Government and Intergovernment Organizations

Private Organizations

Civil Society
PARIS AGREEMENT – THE BRAZILIAN NDC

**2025:** REDUCE GREENHOUSE GAS (GHG) EMISSIONS BY 37%*

**2030:** REDUCE GHG EMISSIONS BY 43%*

*year base 2005

**INDUSTRY SECTOR**

Promote clean energy and technologies, extend energy efficiency measures and low-carbon infrastructure.

**ENERGY SECTOR**

Achieve 45% of renewables in the energy mix (2014: 42%); achieve 10% efficiency gains in electricity sector by 2030; increase to 18% the bioenergy share in energy matrix by 2030 (ethanol and biodiesel).

**TRANSPORTATION SECTOR**

Promote efficiency measures and improve infrastructure for transport and public transportation in urban areas.

**CHANGE OF IN LAND USE AND FORESTS**

Achieve zero illegal deforestation in the Brazilian Amazonia by 2030; restore and reforest 12 million hectares by 2030; strengthen the implementation of the Forest Code.
A WORLD PLAYER AS A LOW CARBON ECONOMY

GHG EMISSIONS: BRAZIL X GLOBAL
1990-2013 – Mt CO2e

- 4.6% of total global emissions in 1990 and
- 2.34% in 2012

1990-2013: reduced 15% of its emissions, while global emissions raised 35%

2005-2012: reduced 52%
In the same period, its GDP raised 32%


1 Source: Sistema de Estimativa de Emissões de Gases de Efeito Estufa – Observatorio Clima, pg. 27; World Resources Institute, 2012.

2 Source: INCD do Brasil (2015)

3 Source: Sistema de Estimativa de Emissões de Gases de Efeito Estufa – Observatorio Clima, pg. 7
GHG EMISSIONS EVOLUTION IN BRAZIL

1990-2013 - Mt CO2e

- Land use change
- Waste
- Industrial processes
- Agriculture
- Energy

Energy emissions in 2013: 29%1

Industry processes emissions in 2013: 6%1

2004-2014: 82% of reduction in deforestation rates2

Energy emissions: 1.09% of global GHG emissions in 20123

Source (graphic): Sistema de Estimativa de Emissões de Gases de Efeito Estufa – Observatorio Clima, pg. 7 (www.apremavi.org.br).
1 Source: ibidem, pg. 8.
2 Source: Brazilian Ministry of Science, Technology, Innovation and Communications.
INDUSTRIAL SECTOR CO2 EMISSIONS (BY SECTOR)

Pig iron and steel
Non-ferrous and other metals
Ceramics
Iron alloys
Cement
Mining and pelleting
Paper and cellulose
Other industries
Chemical
Food and beverages
Textile

Chemical Industry emissions is 8% of the total industrial sector\(^1\)

Source (graphic): Sistema de Estimativa de Emissões de Gases de Efeito Estufa – Observatório Clima, pg. 16 (www.apremavi.org.br).
One of the sectors that invest most in safety and innovations that contribute to sustainability

Reduced by 43% the generation of waste during processes

19% decrease of electricity consumption per ton

36% reduction in the volume of water captured in its processes

29% reduction in CO2 emissions

*From 2006 to 2015

Source: ABIQUIM – Responsible Care Performance Index. 2016.
CHEMICAL PRODUCTS ARE ESSENTIAL TO OTHER SECTORS SINCE THEY CAN PROVIDE VARIOUS SUSTAINABLE SOLUTIONS.
WE ARE PART OF THE SOLUTION

AND MANY OTHERS...
ACTIVELY PARTICIPATING

COMMITTEE ON SUSTAINABLE DEVELOPMENT

"REDE CLIMA" (CLIMATE NETWORK)

AND MANY OTHERS...

Brazil has the conditions to become one of the **WORLD LEADERS OF LOW CARBON ECONOMY**;

Investment in **INNOVATION**, new forms of **COOPERATION** and **NEW BUSINESS MODELS** are essential for the development of this new economic order;

Large **INVESTMENTS AND INCENTIVES** are needed to make these comparative advantages a competitive advantage;

The Chemical Industry is an **ESSENTIAL PART OF THE SOLUTION** in the development of alternatives for reducing GHG emissions and adapting to climate change in all other industrial sectors;

The **HISTORICAL ACTIONS AND EFFORTS OF THE CHEMICAL INDUSTRY TO REDUCE EMISSIONS** and other factors that contribute to sustainable development must be recognized.
THANK YOU!

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