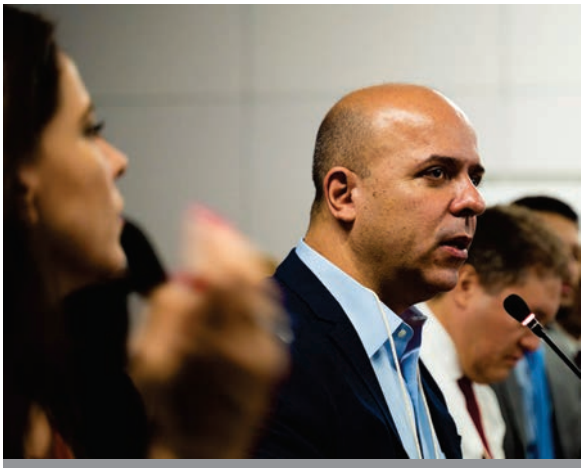
ABIQUIM, ICCA AND GLOBAL COMPACT BRAZIL PROMOTE SEMINAR ON CLIMATE CHANGE AND THE ROLE OF CHEMICAL INDUSTRY IN PREPARING FOR ADAPTATION

LATIN AMERICA & CARIBBEAN CLIMATE WEEK

HOW IS THE CHEMICAL INDUSTRY PREPARING FOR CLIMATE CHANGE?

ADAPTATION: ECONOMIC OPPORTUNITIES FOR A LOW-CARBON ECONOMY IN BRAZIL



Special Secretary for Productivity, Employment and Competitiveness at the Ministry of Economy, Carlos Alexandre Da Costa

Abiquim, The Brazilian Network of the UN Global Compact and the International Council of Chemical Associations (ICCA) held the seminar "How is the chemical industry preparing for climate change?", The seminar was na official event of the Latin American and Caribbean Climate Week, which took place in Salvador from 19th to 23rd of August, 2019.

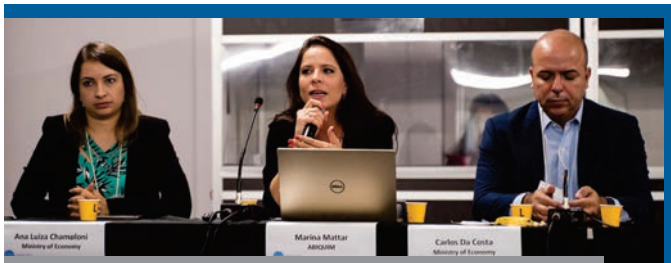
The seminar, held on the first day of the Latin American and Caribbean Climate Week, was attended by the federal government's Special Secretary for Productivity, Employment and Competitiveness at the Ministry of Economy, Carlos Alexandre Da Costa, the Head of the Task Force of the ICCA Energy and Climate Chain Leadership Group Mr. Jorge Sotto, the Head of the World Bank's Carbon Pricing Leadership Coalition (CPLC) Secretariat Mrs. Angela Churie Kallhauge, The General Environment and Climate Change Coordinator from the Department of Public Policy at the Ministry of Economy Dr. Ana Luiza Champloni, The Coordinator of the Global Compact Brazil Energy and Climate Thematic Group Mr. Luiz Carlos Xavier, Waycarbon Climate Risk and Adaptation Manager Dr. Melina Amoni, EMBRAPII Coordinator from the city of Salvador Mr. Daniel da Silva Motta, The CEO of Carbonor Mr. Paulo Cavalcanti Jr and the Director of Institutional Relations, Sustainability and Communication from Abiquim Mrs. Marina Mattar.

THE EVENT WAS DIVIDED INTO THREE PANELS: **THE LOW CARBON ECONOMY, CARBON PRICING AND CLIMATE ADAPTATION.**

In the first panel of the seminar, Secretary **Carlos Alexandre Da Costa** spoke about business opportunities and competitiveness in a low-carbon economy. In his presentation, he argued that actions for a low-carbon economy in Brazil should recognize the characteristics of the country's clean energy matrix to promote greater competitiveness for domestic companies. He also stressed that the federal government's policy on natural gas strengthens the agenda for reducing carbon emissions and carbon footprint.

The ICCA representative Mr. **Jorge Soto** presented how the global chemical industry is providing strategies and solutions for both mitigation and climate adaptation actions.

EMPRAII Coordinator from the city of Salvador, Mr. **Daniel da Silva Motta**, also participated in the first panel. He explained how Embrapii works with new, low carbon technologies.

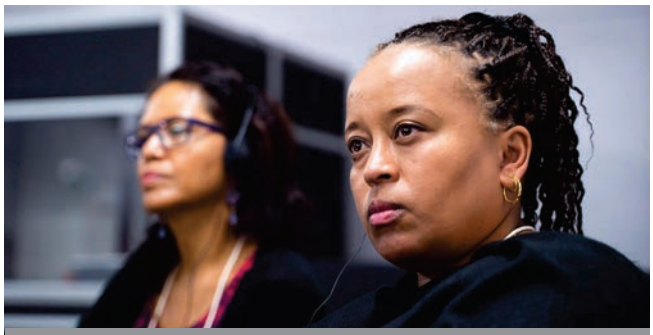


The General Coordinator of Environment and Climate Change of the Secretariat of Economic Policy Dr. Ana Luiza Champloni; Director of Abiquim, Mrs. Marina Mattar, and Special Secretary from the Ministry of Economy Mr. Carlos Alexandre Da Costa.

Abiquim's Director of Institutional Relations, Comunications, and Sustainability, Mrs. Marina Mattar, who is also a member of the World Bank's Carbon Pricing Leadership Coalition (CPLC) Steering Committee, presented the position of the Brazilian chemical sector on carbon pricing, which was launched in 2017 by Abiquim, increasing advocating actions for the implementation of a carbon market In Brazil. Mrs. Mattar stressed the need for a national carbon pricing policy that recognizes the efforts that were already made voluntarily by the various industries, including the chemical industry, to reduce their CO2 emissions. She also highlights that a carbon pricing market needs to be adopted by all sectors.

The second panel was attended by World Bank Carbon Pricing Leadership Coalition (CPLC) Secretariat Chief Mrs. Angela Churie Kallhauge, who presented the evolution of carbon pricing policies in different countries. Mrs. Kallhauge explained that the number of initiatives around the world went from 51 in 2018 to 57 in 2019, the result of a mobilization of society and governments that understand the need to implement carbon pricing policies. According to her, only 20% of the carbon generated is priced, and this volume needs to be increased.

Also, on the carbon pricing panel, the General Coordinator of Environment and Climate Change of the Economic Policy Secretariat of the Ministry of Economy, Dra. Ana Luiza Champloni, presented the status of the PMR Project Brazil (Partnership for Market Readiness), which aims to provide technical support for the preparation of recommendations on carbon pricing instruments and public policy adjustments. Such recommendations can complement and make measures for carbon pricing more cost-effective to the country, helping to achieve the reduction commitments of greenhouse gas emission that Brazil has made internationally under the Paris Agreement.



The World Bank Carbon Pricing Leardership Coalition (CPLC) Secretariat Chief, Mrs. Angela Churie Kallhauge.

The third panel on climate adaptation featured the participation of the coordinator of the Energy and Climate Thematic Group of the Global Compact Network Brazil, Mr. Luiz Carlos Xavier, who made the presentation "The Global Compact: introduction on actions to increase resilience in Brazil, a new adaptation project." WayCarbon´s consultant Dr. Melina Amoni also participated in this panel and spoke about initiatives, risks, and project management in climate adaptation throughout Brazil.

The last panel also featured the presentation of a business case of the chemical sector that demonstrates efforts to a low-carbon economy. The presentation was made by Carbonor´s CEO, Paulo Cavalcanti Jr. Carbonor uses Co2 from another industry as raw material for the production of baking soda. The company has invested in new technologies, increasing production in a responsible way.

Dr. Melina Amoni, Waycarbon Climate Risk and Adaptation and Mr. Luiz Carlos Xavier, Coordinator of the Global Compact Brazil Energy and Climate Thematic Group

Carbonor's CEO Mr. Paulo Cavalcanti Junior.

To conclude the seminar, **Mr. Adriano Santhiago, Director of the Department of Environmental Economics and International Agreements of the Ministry of the Environment**, highlighted the role of the chemical industry as a provider of solutions to the National Climate Change Adaptation Plan.

"It is very important to have the private sector and the industrial sector, especially the chemical industry sector, involved in the country's effort to make its contribution to the NDCs and the Paris Agreement. For the adaptation plan, we consider risk areas: housing and infrastructure, particularly health, sanitation, and transportation. What does the chemical industry have to do with these issues? The chemical industry acts on both greenhouse gas mitigation and adaptation. When we talk about risky areas in housing and infrastructure (health, sanitation and transportation) we are talking about three important parts of our NDC: water security, food security, and sustaining biodiversity. The chemical industry in terms of water safety is important in the treatment of water, sewage, and waste. For food security, we would not have had the significant increase we had in the productivity of Brazilian agriculture without the chemical industry, this would not be possible. In biodiversity, we are talking about bioeconomics; without the chemical industry it would not be possible either, especially regarding mitigation and adaptation to climate change. In transportation, the use of biofuels. Here in Brazil we have to discuss the use of water vehicles and biofuels, along with electricity, given our emissions profile and our very clean electrical matrix with over 80% renewable energy. So, in adaptation, the partnerships that we started in the past with the private sector and with the industry, especially the chemical industry is fundamental, and it is still very strong today."

Dra. Ana Luiza Champloni

Ana Luiza Champloni holds a PhD in Economics from the Universidade Catótica de Brasilia. A public servant of the Federal Finance and Control Auditor's career, she serves as the General Coordinator of Environment and Climate Change at the Secretariat of Economic Policy of the Ministry of Economy.

1) What is the PMR Brazil Project?
The PMR Brazil Project, which began in 2014, aims to discuss the advisability and timeliness of including greenhouse gas pricing in the package of instruments aimed at implementing the National Policy on Climate Change (PNMC) and to assist Brazil's commitments in meeting the Paris Agreement's goals. The study focused its analysis on the following sectors: energy (electricity and fuel generation), industry and agriculture, and included a specific study on the possibility of including forest-based offsets in the pricing system.
The analysis was divided into 3 main components. Component 1 mapped out existing sector policies and recommendations for existing policy measures and adequacy to propose some policy package scenarios. Subsequently, Component 2 is performing the economic modeling of the different packages, complemented by a Regulatory Impact Analysis that will capture aspects regarding the political feasibility and implementation costs of the proposals. Finally, we have Component 3, for raising awareness and engagement work with key stakeholders, as well as providing technical support to the project.

2) What are the main results of the project so far?
The project is now entering its decisive phase. By the end of the year, we will have the preliminary results of economic modeling and begin the consultation phase for Regulatory Impact Analysis. This is a step prior to the policy recommendation to be made by the Project (White paper) and does not represent a political decision to implement the scenarios proposed, in the proposed parameters, by the Federal Government.

3) What is the Ministry of Economy's position on carbon pricing?
Our current orientation is to propose measures that don't increase the tax burden or create new taxes.

4) When will the final results of the Project come out?
The projected closure of the PMR Brazil Project is March 2020.

ABIQUIM´S POSITION ON CARBON PRICING

ABIQUIM
ASSOCIAÇÃO BRASILEIRA DA INDÚSTRIA QUÍMICA

- Recognize historic actions and efforts;
- Between 2006 and 2015, the sector prouds itself of having reduced 29% of CO2 emissions and 19% of electricity consumption;
- Formulate a strategy and a chronogram for carbon pricing in Brazil until the end of 2018, starting to implement it in the beginning of 2020;
- Companies need to be able to adapt to a transition for a low carbon economy in a gradual and interactive process in order to plan investments. Currently, over 1200 companies in the world have implemented an internal price (2016) for carbon or plan to do so in the next two years2. Besides, there are around 38 carbon pricing initiatives being implemented in the world (among them, the European Union, Japan, France, New Zealand, South Korea, etc.)3 ;
- Implementation of a carbon pricing market suited to Brazilian jurisdiction and reality that includes all sectors as an effective instrument for reaching Greenhouse Gases (GHG) mitigation targets and promoting economic development;
- In case the government chooses to implement a pricing mechanism that includes taxation, there should be “tax neutrality”4. The neutral carbon and taxes that already exist can be implemented in potential incentives or compensations to the sectors that have higher costs for mitigation and, therefore, greater risk of losing competitivity;
- Integrate Brazilian policies to the policies of other countries and regions with the same carbon pricing mechanisms in place, aiming to harmonize rules and parameters, besides giving international visibility to Brazilian initiatives and promoting the implementation of a carbon pricing global mechanism;
- Incentives to investments in low carbon products and processes. Allocation of resources for the development and implementation of technologies in the field of climate change adaptability.5;
- Harmonization between Brazilian climate policies and energy policies, to secure the industry's access to competitive energy;
- Guarantee a high level of governance by the government, planning how the structure of this leadership will be conducted.

Braulio Pikman is ERM Technical Director (since 2002). He developes specialized technical services for public and private companies. Braulio worked at the National Petroleum Agency (2000-2002) coordinating the development of specifications for the quality of petroleum products, specially natural gas.


Braulio Pikman

Gas consumers receive the product, among other liquids, with an average of 6% of ethane (the ANP limits this value to a maximum of 12%). Gas producers led by Petrobras are now requesting that ANP stops adjusting the percentages. In practice, the producers could deliver any kind of gas to the market without the appropriate treatment.

1. How does ERM analyze the proposal under discussion at ANP?
The proposal under discussion at ANP for quality attributes of natural gas represents the interests of only a majority of one party (producers). In order for us to have full development of the gas market in Brazil, it is necessary to establish standards that meet the interests of the whole society, including distributors and, mainly, end consumers of the gas. The risks associated with the existing equipment need to be better assessed to avoid performance loss and the need for new investments to meet the new specification.

2. What are the results of the studies conducted by ERM and how does this proposal align with international parameters?
The study prepared by ERM Brasil observes how the theme is being treated internationally. Recent cases in the United States and ongoing cases in Europe show that changes in gas quality with the introduction of more heavy hydrocarbons face strong opposition from the entire downstream value chain. Impacts on performance, equipment life, atmospheric pollution, and greenhouse gas emissions are all negative and for this reason, in-depth analysis of regulatory impact needs to be conducted by regulators. This is the decision model that we recommend to be applied in Brazil, in view of the numerous evidences of problems arising from this change.

3. What are the main risks if gas quality specifications are loosened?
The first risk is security. Operation with higher carbon hydrocarbon mixtures requires adjustments to the amount of air to be burned. Without adjustments, that may even require changes to already installed equipment. The risk of incomplete burning with increased emission of poisonous gases such as carbon monoxide and atmospheric pollutants is relevant.

The second risk is loss of efficiency, which affects the entire fleet of equipment to varying degrees. The substantial variation in gas composition compared to the one delivered to the market over the past 17 years leads to loss of equipment efficiency with consequent increase in operating cost (more maintenance) and reduced equipment life.

The third risk is environmental, as the suggested changes will certainly lead to increased emissions of regulated pollutants and greenhouse gases. While these variations may seem incremental, they have a very large impact, given the large volume of gas traded in the country (which is expected to continue to grow rapidly). To give you an idea, a 4% increase in greenhouse gas emissions by changing composition (a highly likely scenario in the producers' proposal) eliminates all the climate benefit produced by a program such as Renovabio. We also have the health risk for the population, as a risk derived from safety and environmental risks. These risks envolve accidents and higher emissions of polluting gases.

4. What do you think about US President Donald Trump's proposal to revise the limits of methane present in US gas? Do you think this measure could increase greenhouse gas emissions in that country?

The methane issue in the United States has no direct relation to the specification of gas, considering the uses of gas. These are gas losses throughout the production process. Either way, it represents loss of product to the atmosphere in a form that has maximum impact, from a climate change perspective. Therefore, it seems to me a double mistake because it increases emissions and generates product loss (methane is the main component of natural gas).

Would you like to make other considerations?
From the point of view of the discussion process, the main conflict-moderating agent in the value chain should be the sector regulator (in this case the ANP). The main guideline to be followed by the Agency is to seek the solution that has the lowest cost to society as a whole (including competitiveness, safety, health and environment). Regulatory impact analysis is the cornerstone of establishing which alternatives will create the best results for the country as a whole.

EXPEDIENTE
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