WEEK OF THE ROLE OF ENERGY EFFICIENCY IN THE POST-COVID ECONOMIC RECOVERY

EVENT REPORT

October 4th - 7th, 2021

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Federal Ministry for the Environment, Nature Conservation and Nuclear Safety of the Federal Republic of Germany

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EXECUTIVE SUMMARY

Team Europe is born in 2020 with a new focus in joint work among European Institutions, Member States and enforcing agencies, alongside with financial development institutions to contribute with the global response to the COVID-19 pandemic, looking, not only for immediate solutions, but also for a medium- and long-term recovery plan, framed within the obtainment of Sustainable Development Goals (SDGs). This has the goal of generating a transformational, collective change with an innovative focus that has impact and coherence.

In Mexico, Team Europe has undertaken the "Transición Verde MX" initiative so as to encourage exchanges and collaborations amongst different regions, sectors and key stakeholders which allow for the advancement towards a better development with lower carbon emmissions, and successfully implementing the Paris Agreements and the 2030 Agenda. Through this initiative, a closer cooperation with Mexican authorities is being actively sought at a local, state, and federal level, alongside with the private sector, civil society, academics, and the general populace so as to identify climate policy options and good environmental practices, so as to promote cooperation and investment while improving public awareness of environmental issues.

Within the "Strategic Partnerships for the Implementation of the Paris Agreement" (SPIPA, for short) framework, financed by the European Union and Germany, and being implemented by GIZ, the German Cooperation Agency, Team Europe, through the "Transición Verde MX" initiative, has coordinated the organization of the "Week for the Role of Energetic Efficiency in the Post-COVID Economic Recovery", which took place on October 4 through 7, 2021.

With these events, Team Europe is hoping to exchange ideas, experiences, and projects, while respecting the decision autonomy and sovereignty of each country, but also acknowledging that we all have common interests in preserving our planet and which can only be achieved within an environment of cooperation and dialog. In order to hold these events, there was logistical support from the Mexican organization "Política y Legislación Ambiental" (POLEA).

Throughout 4 days, over 40 Mexican and European experts in government, private sector, and specialized institutes issues, met to talk about their experiences and best practices for an efficient use of energy in key economic sectors such as industry, transport and construction. They also talked about relevant issues such as the contribution of local policies and actions so as to encourage federal interventions in this regard, alongside with the importance of taking into account gender aspects while defining public policies to ease access of women to technical employment in the energy sector.

Within the framework of this event, the importance of energetic efficiency was highlighted in two senses:

1. As a tool to achieve the reduction of energy costs which make the productive sector more competitive, both in national and international markets. This is even more important within the context of post-COVID economic recovery.
2. As a decisive factor in fulfilling national goals and international commitments in the fight against climate change, since, together with the encouragement and promotion of renewable energies, this is another of the cornerstones of the much-needed energetic transition.

On behalf of Mexico, representatives of the Federal Congress, the Natural Resources and Environmental Secretary (SEMARNAT), and the National Institute of Ecology and Climate Change (INECC), alongside with state authorities from Campeche, Mexico CIty, Quintana Roo, Tabasco and Yucatán, the Business Coordinator Council (CCE), representatives of financial institutions such as BANOBRAS and several civil associations also participated. Meanwhile, the EU had the participation of European Commission and European Investment Bank representatives, together with experts from Denmark, Spain, Finland, France, Italy, the Netherlands, and Romania. Besides, the United States and the International Energy Agency participated too.

Within their interventions, several specialists highlighted the fact that improving the efficiency of energy usage has multiple benefits, not only in the economic and job creating sector, but also in terms of positive impacts in environmental and public health issues.

The discussions for the week concluded that energetic efficiency is a matter of mutual interest, particularly regarding experiences and lessons learned to overcome technological and economical barriers, alongside with the strengthening of innovation and implementing digitalization to advance in creating adequate energetic efficiency solutions, taking into account specific conditions for each country and region.

Recently, Team Europe defined the prioritary areas of cooperation with Mexico until the year 2027, and energetic efficiency is one of them, together with the creation of a circular economy, sustainable mobility, and nature-based solutions for climate change. Therefore, this themed week is the first step to continue dialog in these matters and identifying concrete areas that allow for the implementation of an ambitious effort of cooperation with all relevant stakeholders in Mexico supporting the country to advance in its goals of mitigating and adapting to the effects of climate change.

CONTEXT

In Glasgow, Scotland, from October 31st through November 12th, the 26th session of the Conference of Parties to the United Nations Framework Convention against Climate Change, also known as COP26, took place.

All the countries which signed the Paris Agreement shall present to the world all the concrete measures being taken to advance in the implementation of the Agreement and helping limit global warming to 1.5°C by the end of this century. This implies both long term strategies towards the end of the century, and short and medium term strategies during this decade to face the climate emergency.

Energy efficiency is an opportunity to consume less energy and advance through the necessary energetic transition and achieving climate goals; this is one of the most viable policy alternatives, which enjoys a high consensus. Nevertheless, it is important that consumers and companies have sufficient information regarding the economic, social, and environmental benefits that may be generated through the

implementation of measures for energy efficiency, and that government authorities are aware of the scope that such a robust energy efficiency policy may have.

In the European Union, the improvement of energy efficiency is a key subject for the 'green recovery' strategy in the post-COVID world context, and in order to achieve the goal of climate neutrality by 2030, which is within the framework of the European Green Deal.

This Deal provides a working route with concrete actions to take steps toward a clean, circular, competitive economy, while biodiversity is restored, and pollution is reduced. All of this within the idea of an inclusive economy based on the 'no one left behind' principle. Within this scope, the European Commission included energetic efficiency in a package of legislative proposals, recently introduced, called "*Fit for 55*" which strives for the EU to reach a reduction in net greenhouse gas emissions in at least 55% towards 2030, by comparison with the 1990 levels.

On the other hand, in Mexico, derived from international commitments in matters of climate change and reduction of greenhouse gas emissions (GHG), the Energetic Transition Law has established in its third transitory article, that the Secretary of Energy (SENER) fixed a goal of minimum clean energy generation at a 25% for 2018, 30% for 2021 and 35% for 2024.

In this sense, the Government is contemplating goals, strategies and actions that allow for an increase in efficiency and sustainability of energy and transport industries, alongside with emissions due to the extraction of oil and natural gas, sectors that are considered to be among the largest emitters of GHG.

This has been incorporated within the Sectorized Energy Program 2020-2024 within the priority goal #4: "Elevating the level of efficiency and sustainability in production and usage of energies within the country." Likewise, the National Determinate Contribution (NDC) of Mexico considers energy efficiency as a multidisciplinary and inter-sector focus to contribute reducing GHG.

It is in this context that, with a series of events, an integral exchange of experiences between European and Mexican experts was encouraged so as to identify challenges, opportunities and particular coordination sectors which help advance in the implementation of energy efficiency policies within a post-COVID recovery context, and therefore, contributing with the implementation of the international commitments acquired in virtue of the Paris Agreement and Agenda 2030.

INTRODUCTION

The series of events in the "Week for the Role of Energetic Efficiency in the post-COVID Economic Recovery" took place within the framework of the Transición Verde MX initiative on October 4 to 7, through the Zoom virtual platform, bringing together 43 panelists which exchanged experiences with an audience of over 229 people.

Each day, they had a specific theme as pointed out in the following chart:

Chart 1. Themes for the "Week for the Role of Energetic Efficiency in the Post-COVID Economic Recovery.

Date	Theme
October 4th, 2021	Energetic efficiency in the industrial sector.
October 5th, 2021	Public policies in energetic efficiency
October 6th, 2021	Improvement in energy efficiency in the transport sector.
October 7th, 2021	More energy-efficient constructions.

Source: Self-made.

The structure of these events consisted in a welcome segment with the participation of high-level political representatives from Europe and Mexico, followed by expert panels with their corresponding discussion panels and, at the end of the day, each moderator brought forth some brief conclusions to highlight the main aspects talked about throughout the workday. For further details, please check **Annex I. Agenda.**

The goals for this series of events were as follows:

1. Promoting a space for the dialog and exchange of experiences and best practices between the EU and Mexico for the efficient use of energy in key sectors in the economy such as industry, transport, and construction.
2. Opening a space to learn about the projects being implemented in the European Union as an example for Mexico.
3. Highlighting the contribution of local policies and actions to advance in the national energy efficiency agenda and in fulfilling the international goals for sustainable development and the fight against climate change.
4. Considering the importance of gender issues in the definition of public policies to ease access for women to technical jobs and increasing their participation in the energetic sector.

In the following website: https://www.transicionverde.mx videos may be found for each of the days in which the forum took place, alongside with the graphic memory and presentations.

DEVELOPMENT OF THE EVENT

DAY 1: IMPROVING ENERGETIC EFFICIENCY IN THE INDUSTRIAL SECTOR: CHALLENGES AND OPPORTUNITIES IN POST-COVID TIMES

October 4th, 2021

Moderator: Dr. (C) Íñigo Martínez

Welcome speech

The welcoming speech was given by His Excellency Mr. Gautier Mignot, Ambassador of the European Union and Master Roger González Lau, President of the Commission of Energy from the Busines Coordinator Council (CCE).

The Ambassador commented that energy efficiency plays a double role. In first place, it achieves cost reduction making the sector much more competitive, which is even more important now in the post-COVID recovery context-, and in second place, it's a decisive factor in complying with the previous commitments to fight climate change. He higlighted that energy efficiency is key to advance towards a green, sustainable, and inclusive economy so as to achieve climate neutrality by 2050. He also highlighted that long term strategies are as necessary as short or medium term strategies that contribute to strengthening energetic competitiveness and the creation of opportunities in benefit of the different sectors of society.

The Ambassador closed his intervention mentioning that this event seeks to provide an open exchange to participate in a constructive discussion to identify good ideas and best practices to support the economic recovery of Mexico and the EU, through the implementation of policies and projects in favor of energy efficiency in different areas.

On the other hand, Master Roger González highlighted the efforts undertaken by the European Union through the development of energy savings and efficiency strategies. He mentioned that energy efficiency is key in the period of recovery in which several countries are now, particularly Mexico. Due to this, it's fundamental to learn from the experiences of other countries to continue implementing good practices in the energy sector. Likewise, he highlighted the Energetic Efficiency Route Paper, developed by the National Commission for the Efficient Use of Energy (CONUEE in Spanish), in October 2018, and acknowledged that several Mexican companies have already implemented important measures to mitigate climate impact and to make the energetic sector more efficient. However, it's necessary to keep updating goals and integrating sustainable practices in this sector.

Session 1. The role of energy efficiency in the economic recovery of industries.

a) **Mr. Pedro Ballesteros-Torres: General Direction of Energy at the European Commission.**
Subject: "The European Context".

Mr. Ballesteros has mentioned that the EU has committed to constructing a global coalition in favor of carbon neutrality by the year 2050, and that energy efficiency is a key element to achieve it. For the EU, efficiency goes beyond energy, since it integrates concepts such as circular economy in which it strives to make the use of materials and resources that have an impact in the environment, more efficient.
He also highlighted that there are divergences between the EU and Mexico in energy policies, but energy efficiency is still a key element in which both stakeholders share common interests. Finally, he mentioned that the global context asks us to emphasize the importance of creating alliances for the common good. And despite finding ourselves in a globalized world, it is important to think of strategies ata global level.

b) **Master Raúl Ortega: President of the Mexican Association of Energy Efficiency Companies (AMENEER in Spanish).**
Subject: "Examples of post-COVID recovery in the hospitality sector in Mexico."

Master Ortega shared the experience he has with a project implemented by AMENEER, through financing by GIZ, which had the goals of identifying how energy efficiency may help the post-COVID recovery process in the hospitality sector in Mexico.
This exercise took place in 100 different hotels, half of them in beach resorts and the other half in cities. It has been identified that hotels in beaches have greater barriers to energy efficiency due to their inherent infrastructure.
Among the results it is to be highlighted that the implementation of energy efficiency measures may result in significant savings regarding energy consumption with the hotel industry, but it also encourages a sped-up recovery that will contribute to compensate the impacts COVID had on the sector. Ortega emphasized that measures to reduce energy consumption in the hotel industry may be repeatable in other industries in the service sector, such as restaurants and schools, which is a boon to the post-pandemic recovery. He also pointed out that the geographic context of Mexico provides an advantage to produce renewable energy, and this factor has a complementary role while reducing the production cost of clean energies such as sun and wind power. He finished his speech mentioning that knowledge of institutions is key in the success of implementing energy efficiency measures; this is how education and raising awareness on the importance of energy efficiency may constitute a central aspect in easing these processes, or otherwise becoming a hindrance to them.

c) **Mr. Hugo Salamanca: International Energy Agency.**
Subject: "Global trends and industry potential for energy efficiency in economic recovery".

Mr. Salamanca centered himself in the role being played by the industrial sector in developing countries, explaining that the implementation of energy efficiency measures is necessary to mitigate the impact of this sector towards the environment, so as to achieve a sustainable post-COVID recovery.
Likewise, he highlighted that, using existing technology it's possible to reduce GHG emmissions by 30%, which would generate savings for industrial processes and would help increasing this sector's competitiveness.
He also noted that, as an effect of the pandemic, the speed for implementing energy efficiency measures has been lowered. This is why it's fundamental to create economic incentives to this end, where there are co-benefits such as job creation, saving money and reducing GHG emmissions. He also suggested to contemplate policy packages which ease the implementation of energy efficiency measures, which must include adequate regulation, information, and resources for these improvements. He lastly highlighted that the infrastructure of the industrial sector is characterized for its longevity, a situation that may seem to be a barrier in certain cases of implementation of energy efficiency measures.

d) Discussion and conclusions.

- It was emphasized that the EU has taken measures to counteract socioeconomic repercussions of the pandemic both at the national and supranational levels.
- We must transcend from a traditional economy to one that prioritizes climate change as a main challenge to be tackled; to do so, we must support innovation so that digitalization leaves no one behind.
- Mexico has a huge energy efficiency potential. However, there are important barriers in regulatory matters, in access to financing and in environmental education. Political actions must be aligned to climate goals.
- Only 2% of all post-COVID recovery public policy plans talk about energy efficiency.

Session 2. Implementing measures for energy efficiency in the industrial sector - better practices by the European Union.

a) Mr. Fabian Bühler: Danish Energy Agency.
Subject: "Danish Energy Agency: Electrifying Industry".

Mr. Bühler shared the energy context of Denmark and the changes that have taken place with time in their own energy network. These changes derived in reducing GHG emmissions related directly with an increase in participation of renewable energies and implementing energy efficiency measures in the industrial sector.
He mentioned that energy efficiency measures shall contribute to achieving carbon neutrality by 2050, and to electrify homes and industries. These measures will also help reduce energy usage and operative costs in companies.
He described the electrification of the dairy industry, so that pasteurization and cooling processes are undertaken with different energy sources as an example of energy efficiency in the food

industry sector. He also emphasized that, in order to make these processes easier, it's necessary to count with the appropriate support in policy design and through increasing investment in projects that encourage the discovery of new technologies and allow for innovation. Finally, he identified some barriers to energy efficiency, such as a lack of public policy, of funding for research and of application of measures in the private sector.

b) Mrs. Esther Macho: Sub-director for Energy Efficiency in the Ministry for Ecological Transition and Demographic Challenges for Spain.
Subject: "Spain: Certificates Of Energy Savings".

Mrs. Macho highlighted that the framework of energy and climate policies in Spain is determined by the COP21 commitments and the Integrated National Plan for Energy and Climate of Spain (PNIEC in Spanish), within which energy efficiency measures are intended to be reinforced. She mentioned that the Directives for Energy Efficiency in article 7 define the goals for accumulated final energy savings foreseen for Spain in the 2021-2030 timeframe, which for industry is specified at 28%.
She also pointed out that the industrial sector, given its environmental impact and its contribution to GHG emmissions, must work as a pioneer in implementing energy efficiency measures so as to have a multiplying effect in other sectors.
She highlighted that there is an intent to integrate Energy Savings Certificates (CAES, in Spanish) into the National System of Obligations of Energy Efficiency for sectors such as transport, industry, agriculture, services and homes, seeking to:

- Easing the compliance requirements with final energy savings obligations for the entities under obligation so that these energy savings are obtained at the least possible cost.
- Improving the efficiency of the National System for Obligations in Matters of Energy Efficiency to make compliance with the national goal of energy saving, easier.
- Registering savings that, even when they have happened until now, haven't possibly been tracked.
- Monetizing energetic savings obtained by the final consumers.
- Generating non-energetic benefits such as job growth, productivity improvement and entrepreneurial competitiveness derived from energy efficiency investments.
- Encouraging employment, both in construction related sectors and in energy services companies.
- Alleviating energy poverty in concordance with the National Strategy against Energy Poverty, 2019-2024.

c) Mr. Jorge Cernadas: Manager for Development of New Businesses in the Energy, Sustainability, and Innovation Group (ENEL).
Subject: "Energy efficiency: Key tool in energy transition".

Mr. Cernadas defined energy efficiency as key in the process of energy transition and to face the challenges existing in Latin America regarding quality of life, environmental harm, urbanization, and industry.
He highlighted the fact that the energy industry is undergoing an important transformation spearheaded by urbanization, decarbonization, electrification, digitalization, and the surge of new necessities. He also mentioned that the great challenges of the region are urbanization, with 80% of the people living in urban areas and experiencing a growth in new settlements; transport (since the region contains 5 of the 50 most congested cities in the world); quality of life and the environment.
He also mentioned that the ENEL strategy contemplates four key cornerstones: platforming, digitalization, integrating solutions and creating ecosystems for the improvement of energy efficiency. In this regard, ENEL has sought with time to increase generation throughout Latin America while optimizing energy consumption based on industrial needs, spearheading the development of energy storage in the region, and implementing system flexibility solutions, and also encouraging the integration of electric buses into cities' transport networks.

d) **Mr. Răzvan Nicolescu: Member of the Government Committee of the European Institute of Innovation and Technology.**
Subject: "Energy efficiency in the industrial sector".

Mr. Nicolescu shared the Romanian experience in their energetic transition process, and the role that the efficiency factor has had in said transformation.
He mentioned that the European Institute for Innovation and Technology is the largest innovation ecosystem in Europe, with representatives from the scientific, academic, and entrepreneurial communities, providing support to initiatives and tools for energy efficiency in the industrial sector.
He also highlighted that between Romania and Mexico there are common barriers since both nations have a long story and tradition with fossil energies industries. In Romania, currently, 24% of the energy being consumed is obtained through clean sources, which is a great achievement for the country that had the first oil refinery in the world.
The case of Romania also shows that in the last 10 years, GDP saw an increase of 50%, while emissions were reduced in 35%. This lets us understand that we must undo this mental correlation between GDP increase and GHG emmissions increases, too.
Afterwards, he pointed out some key aspects to be considered for success in the implementation of energy efficiency measures: a package of policies that function as enablers in this process, contributing to a regulation of market prices; the involvement of the public sector and the support of the national and international financial sectors. Finally, he also pointed out that there must be a *bottom-up* focus, led by industrialists, to encourage energy efficiency measures, when there is a lack of political will to implement these exercises.

e) **Discussion and conclusions.**

- The industrial sector has great potential to increase energy efficiency. Also, green energy prices are an important variable to consider in the transition. Nevertheless, public support is necessary so that stakeholders visibilize the fact that clean energies give better returns and lower costs in the long term.
- Emphasis was given into that industry is the second largest energy consumer in Spain, therefore it's indispensable to reinforce measures so that through a multiplying effect, transition in other sectors is accelerated too.
- The initial infrastructure cost is a barrier for many, so it's necessary to demonstrate that ROI rates are high.
- Emphasis was also given into the fact that energy transition is the way to achieve energy efficiency, which is a task that all world governments have to reach climate and sustainable development goals.
- This discussion ended with a declarating that energy efficiency usually isn't an attractive subject for politicians to talk about, reason for which spaces like this are needed to publicize the benefits and importance it has.

Session 3: **Challenges and opportunities for the implementation of a working paper for industry in Mexico, including gender parity aspects.**

a) **Mr. Daniel Bouille: Director of the Environmental and Development Department at Fundación Bariloche.**
Subject: "Design of a working paper for efficiency in Mexican industry and developing the instruments to ease its adoption".

Mr. Bouille highlighted that policy instruments oriented towards promoting energy efficiency in industries have been strengthened through a scheme based in incentives and requirements. In this regard, it is indispensable to link energy efficiency strategies with the existing history of legislation and policies to contribute to the successful implementation of new measures.
He mentioned that command and control instruments such as voluntary agreements, ought to be complemented with a defined audit program, designed, and conducted by government authorities. Thus, they would be of voluntary participation but obligatory compliance under conditions of fiscal, regulatory, market or funding incentives.
He suggested to review and eventually redesign financing programs to make the best use out of the opportunities offered by the domestic capitals market, the role that development banks can play, and international funds destined to environmental goals. At the same time, he emphasized the importance of expanding development programs and those to strengthen capabilities and sensitization both in the public and private sectors, to have the greatest impact on energy efficiency.
Finally, he mentioned that within the energy sector there is a high participation of women, but the greatest barrier identified is that women mostly work in administrative posts and not in technical

or decision-making positions. Besides, many stakeholders don't contemplate gender issues as a social duty but rather just as public relations stunt.

b) Discussion and conclusions.

This discussion was mainly centered in the available instruments to overcome the barriers to have energy efficiency. It was mentioned that:

- To overcome energy efficiency barriers, it's necessary to consider the wide range of available instruments.
- This isn't necessarily related with creating new instruments but rather reformulating existing ones and/or make use of more than one when convenient or possible.
- Potential new instruments must converge to complement existing ones.
- There is wide international experience that provides sufficient history to show Mexico how to adapt these instruments.
- The development of capabilities both at the public and private level, is another necessary condition to reduce said barriers.

DAY 2: FROM LOCAL TO NATIONAL LEVELS, IN THE DEFINITION OF PUBLIC POLICIES FOR ENERGY EFFICIENCY

October 5th, 2021.

Moderator: Dr. (C) Íñigo Martínez

Welcome speech

The welcome speech was pronounced by Her Excellency, Päivi Pohjanheimo, Ambassador of Finland in Mexico, and Dr. María Amparo Martínez Arroyo, General Director of INECC.
The Ambassador commented that energy efficiency is one of the four priority attention areas for international, national, and municipal level cooperation. She highlighted that in Finland, 40% of energy comes from renewable sources, especially hydroelectric and through biofuels. Besides, forests are managed with a focus in sustainability and circular economy.
She also shared some innovative and sustainable strategies that have taken place in Finland, which has allowed them to use different sources of energy to diversify their energy network and reducing GHG emmissions.
Her closing statement declared that Research and Innovation are essential to move towards sustainability and that climate education is key to train young people to achieve said transition to a green economy.
On the other hand, Dr. Amparo highlighted that the COVID-19 pandemic has reminded us of the importance of fighting against climate change, since it's a shared threat. Therefore, since energy

generation is one of the sectors with the greatest environmental impact, it must be in the central focus of any solution against it.
She commented that economic recovery after the pandemic must be constructed through sustainable bases and with a solid component of adaptation to generate new capacities in society while facing adverse events. She also highlighted that energy efficiency is a fundamental piece to satisfy energy demands and reaching worldwide climate goals, while also generating co-benefits in human health and ecosystems.
She finally highlighted that in order to undertake successful energy efficiency measures we need political will and cooperation among sectors going beyond the necessary economic resources to implement them.

Session 1. The role of energy efficiency in climate action, from the local to the national levels.

a) **Mr. Efraín Villanueva Arcos: Secretary of Ecology and Environment for the State of Quintana Roo (SEMA, in Spanish).**
Subject: "Mexican Context".

Secretary Villanueva underlined the fact that Quintana Roo was severely affected by the pandemic, mostly in the tourist sector, since this generates 70% of the state's GDP. By April 2020, out of 100% from the expected hotel occupancy in the Easter vacations, only 3% was achieved, which reduced employment and the income for the State and Municipalities.
She pointed out that the State Government of Quintana Roo has built an intersectional climate agenda, through public policies that involve the public, private and civil society sectors.
Afterwards, she shared the design of the route to decarbonization for the State, and she highlighted that she is working to update the Action Law for Climate Change in Quintana Roo, so as to harmonize it in light of the international commitments the country has in this matter.
Finally, she mentioned that Quintana Roo deems it necessary to update its inventory of GHG emmissions, alongside with the identification of mechanisms to implement and finance different actions toward decarbonization, encouraging a greater participation of women and young people, and establishing a monitoring system to report and verify the impacts of the implementation of said actions.

b) **Mr. Michael McNeal: Lawrence Berkeley Lab (United States).**
Subject: "U.S. Context, Buildings as an opportunity to Mitigate Climate Change in Mexico".

Mr. McNeal highlighted that energy efficiency must be prioritized to strengthen climate action. Decision makers need to promote energy efficiency at a higher level, for example, including it in their NDCs, in their energy transition plans and doing a follow up of implementation in all government levels.
He also explained that in order to increase investments in energy efficiency it's necessary to identify low-cost measures, in terms of tons of CO2, and taking into account all political and

financial barriers. In this sense, technical assistance provides tools and formation needed to increase the capacity of energy efficiency ecosystems.
He pointed out that buildings contribute greatly to generating GHG. In this sense, air conditioning systems in Mexico are a great opportunity for the country to make energy use more efficient. He also mentioned that the way to decarbonize buildings in Mexico City could contribute with reducing up to 87% all GHG emmissions by 2050 and promoting investment in developing technologies to encourage innovation.

c) **Mrs. Ghislaine Kieffer: International Energy Agency.**
Subject: "Perspectives of the International Energy Agency".

Mrs. Kieffer emphasized that the route toward carbon neutrality by 2050 would require a dramatic transformation in the energy sector and a deep change in the scale and time in which energy projects are implemented.
In this sense, within the possible solutions for cities to reach carbon neutrality, there is digitalization, which makes services accessible, clean, resilient, and energy efficient, besides spurring economic growth and job creation.
She highlighted that energy transition doesn't only deal with economic and technological aspects but also important aspects in the social sphere, which must be treated with the same relevance to create capacities and citizen participation to transform the energy sector.

d) Discussion and conclusions.

- Public policy must be oriented to the potential opportunity areas taking into account that work periods in each administration limit the time of action.
- In the case of Quintana Roo, construction rulebooks are being updated to treat energy efficiency matters in public buildings.
- The construction code must have the final goal clearly defined. It's necessary to find a balance between local and national focuses and having the role of governance present.

Session 2. Examples of actions and policies to improve energy efficiency at a subnational level with a potential of replication.

a) **Mr. Fabrice Juquois: French Development Agency.**
Subject: "Best practices to handle necessary data to define energy efficiency policies, from the local to the national level."

Mr. Juquois shared the work undertaken by CONUEE regarding monitoring energy efficiency measures. He pointed out that indicators help have a greater comprehension of the benefits of energy efficiency and its trends, while at the same time, they allow to monitor policies and objectives with a long-term impact. Therefore, it's crucial to have a sample of data to evaluate and monitor energy efficiency policies.

He highlighted that energy efficiency doesn't generate cash flow, but it does generate savings. This is why sometimes its profitability is invisibilized.
Finally, he said that energy efficiency must be conceived as a component within all infrastructure projects, and not as an isolated project.

b) **Mrs. Laura Sudries: EnerData, France.**
Subject: "Best practices for data management to define energy efficiency policies: Experiences in Mexico and Latin America."

Mrs. Sudries highlighted the importance of having good quality data to define energy efficiency policies. In this regard, she shared a couple of cases of success:

- The BIEE Project (Base for the Indicators of Energy Efficiency), developed by the Latin American Economic Commission (CEPAL) with the goal of monitoring energy efficiency trends in Latin American countries.
- The project implemented with CONUEE to compile date in the home sector - including the State level - and through it, evaluating the potential for energy savings.

She highlighted that it's fundamental for data to be the most detailed possible. That is, they must be explanatory indicators that point to a better comprehension of energy efficiency trends and which, through similar methodologies may allow to compare experiences shared by different countries and learn from their results.

c) **Mr. Jani Uitti: Turku Energy, Finland.**
Subject: "Urban heating through wastewater - the Turku example".

Mr. Uitti highlighted that in Finland, by 2019, the sectors with the greatest level of energy consumption were industry with 45%, heating with 25% and transport with 17%. 95% of energy consumption from heating comes from urban areas.
He also highlighted that wastewater may be used as a source of heating, constituting a viable alternative to decarbonize this sector. As an example, he highlighted the case of Turku, a city in Finland that implemented in 2009 a wastewater treatment plant that supplies up to 92% of heating used in buildings in the district.

d) **Engineer Juan Carlos Vega: Energy Subsecretary, Secretary of Economic Development and Labor, Government of Yucatán.**
Subject: "Yucatán: Technical Norms in Energy Efficiency (NTEE, in Spanish)".

Engineer Vega shared the case of the implementation of the Technical Norms in Energy Efficiency in Yucatán, which have the goal of establishing efficiency and comfort criteria through the operation, purchase, rent and/or loan of public buildings (new and existent). It is currently being applied in 61 institutions and 1049 buildings throughout Yucatán, focusing on the reduction of energy consumption reaching maximum efficiency in buildings.

It was also highlighted that within the steps to follow for the Yucatán Government, there is: the follow-up of information and automation of indicators, the creation of reports in buildings and institutions, the energy efficiency brigades and participation with CONUEE to link the state's experience with federal programs.

e) **M.C.E. Patricia León López: Secretary of Sustainable Energy Development of the State of Campeche (SEDESU, in Spanish).**
Subject: "Public Policies for Energy Efficiency in the State of Campeche".

Secretary León highlighted that energy efficiency is part of public policies in the State of Campeche, under a sustainability focus. One of the normative instruments the state has to this end are the so-named "Guidelines for Energy Efficiency for Buildings in the Public Administration of the State of Campeche".
This document contributes to promoting and implementing, in dependencies and entities, actions focused on the efficient use of energy and encouraging a culture of energy saving. Among the associated co-benefits, there are: the improvement of public spending efficiency, encouraging public participation in policies to strengthen sustainable development in Campeche, and gradually advancing in the consolidation of development policies with a vision for energy efficiency that contributes to complying with climate goals that Mexico has at an international level.

f) **M.D.E. Alejandro Moo Cervera: Legal Matters Director at SEDESU.**
Subject: "Public Policy: Guidelines for Energy Efficiency in Constructions for the Public State Administration in Campeche".

Mr. Moo highlighted that the Executive Power in the State of Campeche, through SEDESU, undertook a project considered to be *deep engagement*, to contribute to the state and national energy efficiency goals. This project took place in the framework for the Climate Action Program for Cities supported by the Accelerator of Efficiency in Constructions (PACC-BEA Program, in Spanish) together with Sustentabilidad Para México, A. C. (SUME), and in collaboration with the WorldGBC council.
Campeche has developed a normative public policy called: "Guidelines for Energy Efficiency", which must be observed in Public Administration Buildings in the State, together with the implementation of the pilot project called "Energy Management System for the Government Palace in the State of Campeche".
In general, the state government has sought to promote and put into practice, in dependencies and entities, actions focused on energy efficient consumption, benefitting the most vulnerable sectors through a reduction of costs in its energy consumption.

g) **Master Oscar Vázquez: Director of Climate Change Issues at the Secretary of Environment Issues (SEDEMA, in Spanish).**
Subject: "Mexico City: Strategies in Energy Efficiency Matters in Buildings."

Master Vázquez centered his presentation in the Program of Transition to Sustainable Public Buildings, with the objective of implementing energy efficiency actions that allow them to save and have a gradual and progressive reduction of electric and thermal energy consumption in public buildings in Mexico City, while reducing GHG emmissions derived from these activities, through the use of renewable energy sources.

The Program achieved the following benefits: access to competitive funding sources for long-term sustainability; publicizing and diversification among several funding sources, anchored to exchange networks promoted by international cooperation; promoting innovative financing schemes between public and private sectors; strengthening of public administration capabilities through workshops and exchanges of experiences in different working groups, and contributing to achieving environmental commitments both nationally and internationally.

h) BA Libertad Blanco: Director of Innovation and Transition.
Subject: "Learning Network in Energy Management Systems in Municipalities in Tabasco".

BA Blanco explained that Tabasco seeks to implement actions and policies for energy efficiency that contribute with the saving of energy consumption and reducing GHG emmissions.
In the State, the Learning Networks model has been implemented in Management Systems for several municipalities. Among these results, we highlight that: energy efficiency policies in the State have been strengthened through technical assistance; energy diagnoses have been obtained for each municipality with their baseline; and from these diagnoses, goals and specific implementation objectives have been generated, allowing for each municipality to have an energy policy in accordance with their necessities, and having clarity regarding their contribution to reducing CO2 emmissions.

i) Discussion and conclusions.

- It was highlighted that energy efficiency indicators are key for several purposes: they allow to monitor objectives and policies, they give clarity in a market vision, they are useful to measure long-term impacts, they help publicizing results and explaining trends and are, in general, a fundamental tool to take informed decisions.
- In this sense, it is necessary to have explanatory indicators that allow for a greater understanding of trends in energy efficiency matters.
- The greatest challenge in obtaining data usually is information per subsectors.

Session 3: Gender focus in energy efficiency policies.

a) Engineer Elsa Bernal: General Joint Coordinator for the Women Network for Renewable Energy and Energy Efficiency (REDMEREE in Spanish).
Subject: "Perspectives for workforce integration in energy efficiency".

Engineer Bernal shared that REDMERRE works to encourage the energetic sector's development promoting sustainable and humane development where men and women can reach their full potential and develop in conditions of substantive equality. She seeks for women to be empowered to become agents of change.
She also explained that in Mexico, at a higher level in engineering directly related with the energy sector, participation of women represents only 21.4% of the student community and 38% of women in this sector considers not having the same opportunities as men do.
Women's participation in the workforce is oriented to administrative work and not for technical or decision-making work. 45% of women consider that their professional experiences in the energy sector have made them face difficulties or obstacles just because they are women.
Likewise, only 8% of women are the maximum authority of the institution. 35.4% of women point out that their technical abilities have been put in question due to their gender, while 30% consider that there is a salary gap in terms of compensation for the same work in comparison with their male peers. She added that 59% of women in this sector has also faced some sort of undue stares or suggestive gestures at work, while 21% have suffered undesired physical contact.
Finally, she said that public policy has an important role to play, since new mechanisms must be developed in order to keep entrepreneurship in the sector, generating jobs and transiting to substantive equality.

b) Master Daniela Méndez: Manager of AMENEER.
Subject: "Importance of visibilization of gender gaps in the energy sector".

Master Méndez highlighted the historical relationship between women and energy, which has enlarged the gap in their participation in the energy sector.
She said that there is a misconception that it's not recommended for women to study technological careers, which increases the lack of egalitarian access to new opportunities. She also strengthened what was proposed by Elsa Bernal, in that for the energy sector, women usually are in charge of administrative positions, or low-profile jobs.
Likewise, she underlined those women make 77% of housework without remuneration, which means that their workday is double.
Finally, she mentioned that the energy sector provides great opportunities for women, which ought to be encouraged through 1) the promotion of STEM careers (*Science, Technology, Engineering and Mathematics*) for young women, 2) the eradication of gender salary gaps, and 3) the inclusion of gender focus in projects and initiatives in the energy sector.

c) Discussion and conclusions.

- One third of professionals in the energy sector considers there has been an improvement with gender inclusivity in their organization. Nevertheless, the double workday socially assigned to working women, limits their professional development and makes economic independence harder.

- The health crisis due to COVID-19 deepened salary inequality, and out of all lost jobs, most were lost by women that took over caretaking work at home.
- The improvements in gender matters in the energy sector is related with the fact that international organizations have set it within their agenda as a priority action. This has also the boon of other organizations in different lands, which seek to reduce inequalities.
- Finally, she highlighted that international instrument help give the institutional framework in the design of public policies so that women are in key positions for decision making.

DAY 3: DEVELOPING A WORKING PAPER WITH A ROUTE TO IMPROVING ENERGY EFFICIENCY IN THE TRANSPORT SECTOR: EU AND LATIN AMERICAN PERSPECTIVES

October 6th, 2021

Moderator: Dr. Andrés Ávila

Welcome speech

The welcome speech was pronounced by Her Excellency, Anne Le Guellec, Joint Ambassador of the Kingdom of the Netherlands in Mexico, and Dr. Marco Heredia Fragoso, General Director of Climate Change Policies at the Secretary of Environment and Natural Resources (SEMARNAT, in Spanish).

Joint Ambassador Anne Le Guellec highlighted that it's indispensable to consider how to manage energy in a more efficient way, since energy efficiency plays an important role in investment and decision processes. She highlighted that the transport sector in Mexico is one of the key areas to reduce GHG emmissions in the country. Besides, she acknowledged that spaces like the Week for the Role of Energy Efficiency, work as a platform to encourage discussion among the main involved sectors, to implement measures of energy efficiency in public and private spheres.

On the other hand, Dr. Marco Heredia, mentioned that it's necessary to detect opportunity areas to identify routes for cooperation in the implementation of energy efficiency measures in transport, since it's a key factor to reach carbon neutrality by 2050. He highlighted that sustainable development with transport is a key element for Mexico to fulfill its climate commitments, and that we are at a socio-environmental moment that will be considered pivotal, because discussions on distribution, generation and use of energy are especially relevant. In this sense, it is fundamental to develop technologies that allow us to make sustainable transportation and promoting resiliency in this sector and its users.

Session 1. Key elements for a working paper that is comprehensive and effective regarding energy efficiency in transport and electrical mobility.

a) **Mr. Saki Gerassis Davit: General Direction of Mobility and Transport of the European Commission.**

Subject: "European Commission: European Strategy for a sustainable and smart mobility".

Mr. Gerassis shared the strategies adopted by the EU in matters of sustainable mobility. Europe expects to reduce 90% of its transport-related emissions by 2050, through a *green deal* that strives to develop zero-emmission zones.
He highlighted that we are currently at an important geopolitical moment in history, in which the transport sector plays a fundamental role in the reduction of GHG emmissions in Europe and the world.
Likewise, he mentioned that some sorts of transport are harder to decarbonize. Nevertheless, it is sought that technologies offer greater guarantees to generate the systemic change that the transport sector needs to comply with international agreements in matters of climate change, and to encourage enterprises and users to have accessible technologies for everyone.
Finally, he added that, through the transition to a sustainable mobility, an improvement to the way in which users interact with transport is being sought, and at the same time, making multimodal options available to them to treat their needs in an efficient manner, promoting the development of great cities to be done in harmony with the environment.

b) **Dr. Marco Heredia Fragoso: General Director of Climate Change Policies at SEMARNAT.**
Subject: "Federal Policies and vision towards the future, on the working paper for energy efficiency in transport and electrical mobility in Mexico".

Dr. Heredi mentioned that SEMARNAT made a working paper with a route to achieving sustainable transport, that is efficient and low emissions, with a transversal and intersectional focus.
It is important to develop solutions that open the door to sustainable measures that allow us to revert the historical trend of transport in the country, since this sector is among those which contribute the most to environmental decay.
In Mexico, 43% of energy consumption comes from transport. In 2020, there were approximately 50 million vehicles in the Valley of Mexico, which represents a grave problem, since 58% of those vehicles require fossil fuels. In general, automobiles emit 25% of GHG emissions.
Our country is the 4th largest world exporter of automobiles and the 7th largest producer of them in the world. These data are alarming, especially considering our position in consumers and producers of GHG emissions.
Finally, he mentioned that electrical mobility is growing at an important pace and increasing its share in the market with each passing year; thus, financing is fundamental to develop and implement the working paper-defined route to sustainability.

c) **Mr. Mark van Kerkhof: APPM Management Consultants, Kingdom of the Netherlands.**
Subject: "The road to electrical mobility infrastructure".

Mr. van Kerkhof highlighted the use of hybrid and electrical vehicles. Currently, 4% of vehicles in the Netherlands are electric.

Regarding goals, he said that by 2025 it is being sought for transport emissions to be reduced by 50%, and by 2035, that they be 100% zero-emissions. Also, 48 thousand charging stations are to be installed for these cars.
He also mentioned that the road for an electrical mobility infrastructure in the Netherlands contemplates sustainable mobility that encompasses not only automobiles, but also alternative transport modes such as bicycles.
Likewise, he explained that, if we are to talk about sustainable mobility, we must not only consider vehicles but also the uses being given to them. This is why it's important to count with adequate infrastructure to make an effective transition towards a sustainable and electrified development in the long term, with strategic locations in accordance with the demand of users and energy, and a deep analysis based in social needs.

d) Mrs. Carla Robledo: Ministry of Economic Affairs of the Kingdom of the Netherlands.
Subject: "The Netherlands' Hydrogen Strategy".

Mrs. Robledo shared the National Hydrogen Strategy being undertaken by the Netherlands, and their role in decarbonizing the transport sector in said country. He emphasized the potential to decarbonize the industry with hydrogen through natural gas and with CO2 capture. Likewise, combining production with *offshore* hydrogen and electricity, benefits the economic factor, making this technology more accessible. He mentioned that in the case of the Netherlands, hydrogen production at a large scale could derive into it to be used in other productive sectors beyond transport.
Also, he highlighted that in the case of natural gas, using the existing infrastructure is cheaper than starting construction from scratch, which may help encourage this production.
In this sense, energy transition requires new forms of infrastructure such as the intelligent and efficient use of existing infrastructure, such as the use of different complementary technologies to satisfy the energy demand that exists in a sustainable way.

e) Mr. Raúl Carral: Manager of Business Development in Wärtsilä, Finland.
Subject: "Energy efficiency in maritime transport".

Mr. Carral highlighted that some key factors toward the transformation of the transport sector concern the harmonization of the environmental sector, reducing GHG emissions, to achieve an optimized energy production and usage method, and creating intersections with business and technology methods.
This is why the transformation of the sector requires a change of paradigm in generation technologies towards more flexible, efficient, and sustainable mechanisms.
Developing technologies that contribute with solving the existing challenges, related with the intermittent nature that some renewable energy sources have, is also fundamental.

f) **Discussion and conclusions.**

g)

- Cooperation and mutual learning were emphasized, since this also allows to strengthen global strategies for energy efficiency, especially in the transport sector.
- Financing in research and infrastructure is key for the sector's energy efficiency.
- We can go one step further, since currently there are other alternatives to usual fuels, for a better environment and better economy. Hydrogen, for example, doesn't generate carbon emissions and may be produced directly from water.
- In Mexico, transport emissions have been quantified through the last years, which allows us to follow and monitor the sector's energy efficiency. This implies the implementation of strategic actions and putting in action an integral public policy. This allows us to walk in an orderly fashion with key sectors, looking for this transition.

Session 2. Funding sustainable transport.

a) **Mrs. Caroline Lemoine: European Investment Bank.**

Mrs. Lemoine shared some of the measures that the European Union has supported to encourage more sustainable mobility, through projects financed in the region and in Latin America related with means of transport that are low in carbon emissions, in countries like Colombia, Ecuador, Nicaragua and Mexico.
She highlighted that the transition towards sustainable mobility must be related not only with private cars, but also with making sustainable public transport play an important role in that transformation.
It is necessary to encourage the creation of new capabilities in cities to mitigate the effects of climate change through support in the implementation of projects that promote an accessible, low-carbon, sustainable transport, alongside with overcoming technical and funding barriers.

b) **Master Gustavo Jiménez: LAB México.**

Master Jiménez indicated that some criteria in the evaluation of projects incorporate key aspects in the economic and financial and environmental sphere, alongside with the social and institutional spheres.
Besides, he identified the necessity to diversify means of transport in large and small cities, to offer multimodal options to users.
Within the main barriers in the financing of sustainable urban mobility we can find transport fees, the precarious formulation and implementation of projects and the lack of experience in the mobility sector for financial middlemen.
As a response to these barriers, a working paper with a road to counteract these barriers was proposed. It covers the harmonization of projects with existing public policies, encouraging technical assistance and use of available financial instruments.

c) **Master Abraham Vargas: National Bank for Public Works and Services (BANOBRAS, in Spanish).**

Master Vargas shared the current urban context of Mexico and problems within the transport sector in the country. One of which is the lack of adequately prepared projects.
In order to work these issues, it's necessary to have a multidimensional, integral focus on transport. In this sense, the role being played by the bank is to provide accompanyment in the development and design of projects with financial and technical viability in different states and municipalities in the country.
Likewise, he highlighted that BANOBRAS developed the Program for Federal Support to Mass Transit (PROTRAM) which provided technical and financial support to States and Municipalities for urban and suburban mass transit with coinvestment and participation of the private sector in cities over 500 thousand people in size.

d) Discussion and conclusions.

- Cities are being greatly affected by climate change effects, but they are also part of the solution due to the innovation potential, and sustainable options for multimodal transit that can be found in them.
- It is fundamental to reduce access barriers to funding for sustainable transport, this is an opportunity to strengthen mobility inside and outside of cities.

Session 3: Gender focus for the improvement of energy efficiency in the automobile sector.

a) Mrs. Nazareth Black: CEO for Zacua.
Subject: "The Mexican experience".

Mrs. Black explained that the participation of women in the automobile sector has been a historic challenge due to many reasons. The main one being that usually it's directed by men, although it has been demonstrated that women's contributions have made car designs and productions better.
She mentioned that, as a woman, it has been hard for her to take part of this industry, since her knowledge is often called into question.
She emphasized that Zacua is the first 100% Mexican electrical vehicle assembly company, and they are focusing in potentializing the participation of women in the automobile industry, which is a sector historically dominated by men.
She finalized her presentation mentioning that, in spite of the advances regarding the incursion and acceptance of women in this sector, there is still a long way to go. It's still very necessary to generate spaces for women to have access to all posts, including those for decision-making. This shall have positive incidence in the future of the sector in Mexico, and in the way to equity.

b) Discussion and conclusions.

- It is necessary that policies, legislatures, financing, and technology all contribute to the role of women becoming more prominent, and that their participation is taken into account in a more equitative manner.

- Nevertheless, there is still a vision of women needing to bear the burden to show they can do it, and that they know what they are doing, especially in a sector that is so dominated by men. Those aspects are already assumed from men.
- The basis to change this is simple, and it starts by opening spaces for decision-making and leadership positions. Assuming the commitment and taking responsibility to create a better society for all. Starting by making the most equitable teambuilding processes possible. Therefore, participation of women is indispensable to promote empowering them in the automobile industry, and thus breaking more paradigms regarding our way of transporting ourselves.

DAY 4: TOWARDS MORE ENERGY-EFFICIENT BUILDINGS: ECONOMIC, SOCIAL, AND ENVIRONMENTAL ASPECTS.

October 7th, 2021

Moderator: Sofía Muñoz

Welcome speech

The welcoming speech was given by His Excellency Jean-Pierre Azvazadourian, Ambassador or France in Mexico, and Senator Indira Kempis, Secretary of the Commission of Urban Development, Territorial Ordainment and Housing.
The Ambassador commented that energy efficiency is identified as a priority axis for Team Europe, and that energy renovation for buildings is key in the fight against climate change. Having efficient constructions generates a positive direct impact in household energy budgets. Likewise, he shared some experiences regarding different programs of bio-climate design in other countries, with French cooperation. He ended by mentioning that this kind of spaces are very important to exchange experiences on buildings for the future which seek to ensure social justice and sustainable development in cities.
Later, Senator Indira Kempis explained that projections point to the fact that little by little, more buildings will crop up since one of the goals of urbanization is making cities more compact. In order to transform quality of life for inhabitants through energy efficiency, it is necessary to encourage the implementation of economic incentives to mitigate inequalities with access to housing. This extends to gender affairs, since inequality prevails regarding ownership by women. He ended his intervention highlighting the urgency of complying with climate goals, and the requirement of immediate, efficient actions that encourage energy efficiency, together with greater sustainability and resiliency for new housing.

Session 1. Resilient, low-carbon, high-efficiency buildings.

a) **Mr. Régis Meyer: Minister of Ecological Transition in France.**
Subject: "Global Alliance for Buildings and Construction in Mexico" (GABC_Mx).

Mr. Meyer shared his experience from the Franco-German Cooperation perspective for building efficiency, and he mentioned that one of the objectives by GABC_Mx is reinforcing the cooperation between countries to generate therefore a positive effect in the value chain for the construction sector. The promotion of the defense and importance of decarbonization is also being sought for buildings and in favor of energy efficiency. Supporting, then, initiatives to produce energy efficiency programs for the construction industry.
The construction sector has an important responsibility in the fight against climate change due to its global contribution to GHG emissions. This is why it's fundamental that, through planning and constructing buildings, new measures to adapt and mitigate climate change effects are implemented.
He highlighted that it's essential to act immediately. It can't be left for later, it must be made very clear that in order to break the barriers and tend to the needs of the population, public policies by all countries are necessary.

b) Mr. Carlos Alejandro Carrazco: General director of the Alliance for Energy Efficiency (ALENER, in Spanish).
Subject: "General overview of sustainable housing and its construction in Mexico".

Mr. Carrazco has stated that ALENER has promoted different instruments and actions that had been laying the basis to have what we know today as general frameworks of sustainable construction and energy efficiency in our country.
He highlighted that with the COVID-19 pandemic, it was made evident that space composition and their capability of adapting is crucial for inhabitants to feel safe to respond to unexpected crises such as this one.
In Mexico, diagnoses have been generated at a national level which have relation with the way in which energy is used. Household appliances, or those which work with electricity and gas. Besides the way in which this usage has happened, in order to also understand what the opportunities for energy efficiency and sustainability are, alongside with habitability itself.
The country has very diverse climates, reason for which there exist different challenges that are present in designing homes and constructing them and operating the construction process too. Thus, public policy must be at the level of these requirements.
It is necessary to continue working in strengthening political will and provide accompanyment to stakeholders in the value chain to encourage their participation. He also commented that the efficient design of buildings -from their start- can generate savings at the same time that they reduce GHG emissions.

c) Discussion and conclusions.

- It has been mentioned that in order for this matter to keep advancing, it is necessary to have an always open channel of dialog between public and private institutions so that they can mutually help each other.
- In Mexico, the way in which these strategies are communicated must be very careeful and starting from a sensitization point and an integral policy of accompanying to all

stakeholders, so that they may all find shared benefits when recurring to energy efficiency policies.

- It's necessary to publish massive sensitization campaigns directed to the general populace regarding the use of energy and resources in the most efficient way.

Session 2. Energy efficiency in social housing.

FUNDING:

a) **Mrs. Paola Méndez: European Bank of Investments (BEI in Spanish).**
Subject: "Funding social housing".

Mrs. Méndez shared her experience from the European Bank of Investments in funding or financing sustainable homes. This Bank is an EU financial organization existing since 1958, located in Luxembourg, with approximately 3500 specialists in different areas. There are specialists in financing, engineers, economists, etc., All of them work together in making different projects come true, both within and outside Europe.

She explained that the Bank has managed to allocate up to 1 trillion Euro in action investments to fight climate change; they look to align their activities with the Paris Agreement and want to increase the participation of pro-climate financing annually, going from last year's 30% to 50% by 2025.

The energy efficiency factor is key in planning and constructing social interest housing, to assure comfort at the least possible operating cost. An energy efficient house allows for a strengthening in its capacity and that of its inhabitants to adapt to extreme events such as those caused by climate change.

She continued explaining that global performance certifications are necessary to explain the behavior of housing; and that this should generate public information on this regard so that anyone can have access to it and make decisions based on them.

Mrs. Méndez emphasized that it's necessary to continue constant training for those implementing energy efficiency measures: A well-designed house is half the way. It has to be correctly implemented so that the expected results in terms of energy efficiency are obtained.

TECHNOLOGY AND STRENGTHENING OF CAPABILITIES:

b) **Mrs. Ileana Cerón Palma: President of FabCity Yucatán.**
Subject: "Yucatán: Social appropriation of technology for data acquisition. EcoCasa and Nama Facility housing monitoring."

Mrs. Cerón commented that the "EcoCasa" program is a project for home monitoring with the goal of analyzing true performance by said homes, energy efficiency measures and mitigation potential.

All data obtained through monitoring is incorporated in real time in an information acquisition platform. The main contribution or expected result from this project is having a quantitative

evaluation of the measures implemented, so as to provide the Federal Mortgage Society hard technical data that allows them to make informed decisions on the programs being implemented. Something that is very valuable is documenting this methodology, both the technical and social parts, alongside with good practices and areas of opportunity to improve. All this enriches any latter research and monitoring program.
Ileana Cerón's closing statement emphasized that the inclusion of the social aspect is as relevant as the technical part, since this allows for the increase of sensitization for beneficiaries of these projects, and thus advancing towards technological empowerment.

c) **Mrs. Claudia Acuña: Director of the National Self-production Coordination (CNAP in Spanish). Subject: "The 'Decide and Construct' Platform".**

Mrs. Acuña emphasized that the National Self-Production Strategy provides counseling in the process of strengthening capabilities for families that choose to produce their own housing, in subjects such as solutions, materials, labor and resources.
The 'Decide and Construct Platform' which is actually a digital platform, has as its main goal, making information close to millions of families that build their own housing in Mexico, so that they may do it in the most efficient way possible.
Since most homes in the country are built like this, it is necessary that the component of energy efficiency has a priority role in the processes for self-construction of housing.
It is fundamental to include the efficient use of materials, spaces, and services within the concept of residences. It is also necessary that families have an adequate access to resources and information so that the planning process is efficient, technical capabilities are strengthened, decisions are taken in an informed manner, and social costs are reduced.
Energy efficiency not only has a positive impact in the comfort of families and their impact to the environment, but it also contributes to increase productivity and has a positive effect on health.

d) **Discussion and conclusions.**

- It was explained that in Mexico, self production impacts families and their economies. There is also lots of information on the rest of Latin America, but there is not a very specific understanding of how to integrate energy efficiency in these self-production processes.
- It is complicated for families to adopt eco-technologies, and it's even more complicated if we don't understand their socioeconomic realities. The challenge is understanding the reality people face, to generate the best tools.
- Emphasis was made in the necessity of having public policies that, starting from the local points, gear us towards energy efficiency, seeking to have a positive impact at the global level.
- There are many more problems to attend before implementing energy efficiency here. There must be a methodology to solve conflicts and train people. The first step is beginning a one-on-one relationship with people. There must be a human-centered approach in which the needs of inhabitants are talked about to undertake energetically efficient projects.

Session 3: Gender focus in improvement of energy efficiency in buildings.

GENDER, HOUSING AND SOCIAL FOCUS EQUITY:

a) **Mrs. Lacmi Rodríguez Amaya: National Executive Director for Habitat for Humanity Mexico (HPHM in Spanish).**
Subject: "HPHM: Pilot project for self-production of social housing".
Mrs. Rodríguez shared that the pilot program to incorporate energy efficiency measures for self-production processes in housing has the main goal of developing a model that can systematize useful information for decision making, responding to several questions among which there are: How to enter a territory, how to work with people, how to generate trust, how to achieve the goal of having family's appropriate energy efficiency measures, among others.
Likewise, this has the focus of improving life quality for families, achieving at the same time a reduction in household energy consumption. This has a bottom-to-top focus to generate a greater understanding of real needs for families and making the inclusion process for energy efficiency in the construction of their homes a successful one.
This project contributes to gender issues because through these processes, it is sought that there is a greater participation of women directing the self-production processes, which encourages the further contribution of women as agents of positive change.
Generally, between 50 and 70% of people leading onsite solutions are women; they are the factor that would contribute most for any implementation to be undertaken in any territory to be successful. The project is striving to generate knowledge for women so that eventually this can continue replicating in the sector.
Among the benefits achieved in these communities which have participated in the project, we can find reduction in the use of firewood, up to 40 to 50% less than it used to be reduction of illnesses associated to this, such as lung cancer, and the reduction of the impact in income for homes which relied in purchasing this energy for everyday consumption.

b) **Discussion and conclusions.**

- Energy poverty affects differently both men and women. Women spend more time in their homes, and they live more intensely any lack in energy. Therefore, they are also those who will benefit the most from the implementation of energy efficiency measures.
- Mexico is a wide territory with extremely complex and different realities. Then, on several occasions, the kind of solutions being proposed from the capital are incapable of responding to all the existing realities in the country.
- This is why this kind of projects originating within the interior of the territory seek for public policy to retake the multiple realities and respond to the necessities of families so that they may have access to credit incentives or subsidies.
- What is being sought is that the knowledge generated doesn't remain in a pilot project but rather that it becomes an experience that can be shared and appropriated by decision makers.

CLOSING WORDS FOR THE WEEK FOR THE ROLE OF ENERGY EFFICIENCY IN THE POST-COVID RECOVERY

The closing speech was given by His Excellency Jean Pierre Bou, Joint Mission Chief in the EU Delegation. In this regard, he commented that there was a fruitful exchange of ideas between Mexican and European experts regarding best practices to help make energy use more efficient in key economy sectors, particularly in the industry of transports and buildings.

He also said that very important matters were discussed such as the contribution of local policies and actions to encourage federal interventions in this regard, alongside with the importance of taking into account gender issues in the definition of public policies to ease access of women to technical jobs in the energy sector. It was clear that energy efficiency is an indispensable tool in the post-COVID economic recovery process, and in climate action both at the local and federal levels.

Improving the efficiency of energy use has multiple benefits, not only in the economic sense, but also in terms of environmental impact and on population health. He also emphasized that we have lots to learn from one another. This is why it's particularly important to continue holding this kind of exchanges centering them in cooperation in concrete matters and establishing pertinent links with other aspects of strategic cooperation between Mexico and the EU.

Afterwards, he said that Team Europe has identified energy transition as one of the four priority cooperation areas with Mexico in the short and medium term. Within this context, energy efficiency is a clear common interest theme, particularly regarding learned lessons and experiences in overcoming technological and economic barriers, while also strengthening innovation and implementing digitalization to advance in adequate energy efficiency solutions, taking into account the specific conditions of each country and region.

He concluded by saying that the EU, its members, and the European Investment Bank are ready to continue these discussions with state and federal authorities in Mexico, but also with the private sector and civil authorities in Mexico to ground and materialize long-lasting, win-win cooperation ideas.

GENERAL CONCLUSIONS

The **Week for the Role of Energy Efficiency in the Post-COVID Economic Recovery** generated a space of dialog and exchange among Mexican and European experts to advance in the design and implementation of measures and policies of energy efficiency that contribute to complying with climate change and sustainable development goals, as well as with the economic recovery that countries will have to seek after this pandemic.

Participants all agreed that energy efficiency is a mutual interest matter, in which experience and learned lessons may converge, with knowledge from Mexico and the EU, particularly in regards to overcoming technological and economic barriers, alongside with the strengthening of innovation and the implementation of digitalization, taking into account specific conditions of each country and region.

Likewise, there was consensus among panelists regarding the co-benefits generated by the implementation of measures and policies for energy efficiency, which go from the economic aspect to the social and environmental focus. In the same way, in several occasions the need of keeping the dialog channels open and the sharing of experiences, was highlighted, because this will help identify specific strategic cooperation areas between Mexico and the EU.

On the other hand, there was an emphasis on the need for cooperation to extend, not only among countries, but also among the public and private sectors, as well as academia, civil society and population in general, with the goal of an exchange of ideas to exist, which will allow to identify and attend the needs of each sector, providing solutions that would contribute to improve quality of life for people in the world, and having a healthier environment.

The only way in which we may undertake a noticeable change in the way we live and face the climate emergency, will be acknowledging the common challenges and goals, and face them through public awareness, generating a transformative effect in policies.

In this sense, the role of government institutions is essential to create those public policies which would complement those already existing, and they may be better adapted to the current context through synergy with the private sector and other key sectors, so as to gradually transit towards sustainable development models that allow us to have more resilient societies. In the same manner, it is essential to consider the contribution of local policies and actions to strengthen federal interventions in matters of energy efficiency, which give us the cases of success in Mexico for Campeche, Mexico City, Quintana Roo, Tabasco, and Yucatán.

On the other hand, it is indispensable to take into account the relevant role that gender issues have in the formulation and application of these public policies, since currently, the access and participation women have in the energy sector is still characterized not only by a lack of equity, but also by the inequality of positions being occupied by women, being mostly hired for administrative posts, instead of having access to technical, decision-making jobs. Even when it's more frequent now to see women involved in this sector, there is still much to be done for this to be a comfortable and safe area for all parties, that allows for their growth and development of their abilities regardless of gender.

In sum, energy efficiency is a viable and affordable solution to advance in fulfilling our climate goals, simultaneously generating a series of socioeconomic co-benefits that are of a vital importance in the context of the post-COVID recovery process. This is why we expect that the dialog and exchange started through this series of events will have continuity and that they will materialize in cooperation opportunities to encourage the conception of new projects that contribute to increasing energy efficiency both in Mexico and the EU.