

NGO Sustainability, Inc.



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The Race to Zero Carbon

March 6th, 2019 at the United Nations Headquarters

NGO SUSTAINABILITY PRESIDENT, ROMA STIBRAVY:

Roma welcomed attendees and gave a special thanks to speakers Chuck Kutscher and Romany Webb and co-hosts: Ambassador Rohan Perera, Deputy Permanent Representative of Sri Lanka to the UN and Ambassador Koki Muli Grignon, Deputy Permanent Representative of Kenya to the UN.

H.E. AMB. ROHAN PERERA, PERMANENT REPRESENTATIVE OF SRI LANKA TO THE UNITED NATIONS

Ambassador Perera congratulated NGO Sustainability and President Roma Stibravy for organizing this timely and important event. The topic is of extreme relevance and constitutes the main focus of several forthcoming UN high level meetings, particularly the ECOSOC High Level Political Forum on Sustainable Development in July, the SDG Summit to be held at the UN in September and COP25 of the UNFCCC to be held in Chile in November.

- Sri Lanka is 4th in the Global Climate Risk Index for 2018 due to the increasing impacts of climate change such as floods, droughts and cyclones, The annual losses due to climate induced disasters in Sri Lanka were estimated at 1,623 million USD in 2017.
- The country is looking to reduce its carbon footprint particularly in the tea industry as Sri Lanka, like Kenya, is one of the largest global producers of tea.
 - Promoting organic cultivation & moving towards the zero use of chemicals and pesticides.
 - Prevent soil erosion in tea plantations, conserve the utilization of water, promote afforestation and encourage tea factories to adopt eco-friendly processes.

- Sri Lanka is increasingly adopting renewable energy sources and has built several wind farms, solar power stations, wind power stations and biomass power stations across the country. Hydro power has been the most successful on the island, with a number of large scale and mini hydro projects.

Ambassador Perera closed by reminding all that combating climate change is a collective global effort. Sri Lanka will continue to support all international initiatives to reduce our carbon footprint on this planet and build a sustainable world for the future generations.

H.E. AMB. KOKI MULI GRIGNON, DEPUTY PERMANENT REPRESENTATIVE, KENYA MISSION TO THE UNITED NATIONS

Ambassador Grignon thanked Ambassador Perera for co-hosting and Roma for organizing this crucial discussion taking place during the fourth year of the United Nations Sustainable Development Goals (SDGs). It is a welcome event coming a few weeks before the High-Level Event organized by the President of the General Assembly on the “protection of global climate for present and future generations” taking place on 28th March 2019 and later, the Climate Action Summit on September 23rd 2019 hosted by the UN Secretary General.

- In 2015, Kenya pledged to cut its carbon emissions by 30% below business-as-usual levels by 2030 in spite of the fact that Kenya is a very small carbon emitter in global ranking.
- The Government of Kenya has made heavy investments in renewable sources of energy especially geothermal and wind power to provide reliable, low cost, base load power with a small carbon footprint. Currently, over 65% of power generated in Kenya is from renewable sources.
- Kenya has made major progress in conserving our oceans and achieving Marine Protected Areas (MPA) and increasing afforestation to 10% from 7% by 2020.
- Climate change is integrated into the curriculum for primary and secondary levels of education to equip the younger generation with knowledge to combat the negative effects of climate change.
- We have also enacted the Climate Change Act, 2016 and created institutions to deal with climate related issues.

The Ambassador closed by emphasizing the importance of the decisions adopted at the sixteenth Conference of Parties (COP16) working together towards sustainable development. “We can only accomplish this together – individually we are a drop but together we are an ocean!”

NGO SUSTAINABILITY PRESIDENT, ROMA STIBRAVY: Opening Remarks - Better Messaging

Roma pointed out that we need better messaging to gain attention on the consequences of climate change on our planet and on human life.

- Why is a rain forecast not considered "good news?" How about more reporting on the water supply situation in our reservoirs and the state of our aquifers as daily news?
- Daily financial reporting should start off with the latest statistics on the supply of renewables, pending and new investments, stock prices on renewable companies, air quality in their immediate surroundings, and how much renewables are contributing to our energy supply instead of solely focusing on oil and gas production and prices.
- We have to move from people seeing climate change as a distant threat to something that is already happening, affecting every aspect of their lives. How can we each serve as better messengers?

The first speaker, Chuck Kutscher, is a fellow and senior research associate of the Renewable and Sustainable Energy Institute at the University of Colorado, Boulder. He is also fellow at the American Solar Energy Society, served as the Chair in 2000 and 2001 and has chaired two national solar energy conferences. Chuck served as the Director of Buildings and Thermal Sciences at the National Renewable Energy Laboratory (NREL) and as an adjunct professor at the University of Colorado, Boulder and the Colorado School of Mines. He is the lead author of the third edition of the college textbook: Principles of Sustainable Energy Systems.

CHUCK KUTSCHER

Dr. Kutscher opened by discussing the connection between climate change and the increase of weather disasters around the world and their costs.

- Claiming that there is a “new normal” suggests that we have reached a new steady situation. “New abnormal” is more appropriate as our atmosphere and climate are always changing as we add more and more carbon dioxide to the air as the temperature keeps going up.
- In the U.S., extreme weather events have cost on average about 50 billion dollars a year. The record was in 2017, the cost mounted to 306 billion dollars for extreme weather events. There isn’t full data for 2018 yet but estimates for the cost of the California wildfires alone will amount to to 400 billion dollars.
- **It is not too costly to address climate change. Doing nothing is the costliest thing we can do.**

Chuck introduced four steps to addressing climate change:

1. **Maximize efficiency:** Emphasis on buildings as they are responsible for 40% of the carbon emissions by the United States. Chuck showed how the National Renewable Energy Lab, the largest net zero office building in the nation, reached its energy goals can be met using advanced heating, daylight, and renewables.
 - a. NREL has developed and made freely available BEOP (building Energy Optimization) which you can download, model your house, and make different variations of energy efficiency measures for wall insulation, roof insulation, better windows, etc.
2. **Electrifying everything:** natural gas heating in buildings should be replaced with electric pumps. Transportation needs to be electrified. Electric cars have endless advantages including no maintenance costs
3. **Produce energy with wind and solar:** This functions hand in hand with electrifying everything. The costs have gone down dramatically; the utility expense that wind and solar provide are 2-4 cent per kilowatt hour (with 4 hours of battery charge) compared to New York City's unit cost of electricity at 21 cents.
 - a. If you look at investments in wind and solar, China is number one in terms of investments, number 2 is Europe, and US comes in third with less than half the annual investment in renewables as China. The U.S. needs to incentivise investments in wind and solar.
4. **Energy Storage:** Effective storage systems include large plants, home batteries, and the prospect of using electric batteries from your car.

Chuck ended on a positive note mentioning the hope that in 2019, the Green New Deal and young people like Greta Thunberg and Alexandria Villasenor bringing attention to the need for climate action. He showed how fast the US could mobilize if climate change was taken seriously.

- He noted that 2019 will be the first year where climate change is a major topic of debate. Presidential candidates are going to have no choice but to respond to climate change. The kids won't let them off the hook. This will be real change.
- We need to mobilize as we did in WW2. People are saying The Green New Deal is impossible transition in 10 years. Chuck gave an example of how the U.S. responded to an emergency once. In WWII, 1944, the Ford Motor Company Plant was converted from

automobiles to producing B24 Bombers. This plant produced a complete B24 Bomber every 63 minutes, 24 hours day, 7 hours a week. That's what we can do if we address this as an emergency.

ROMANY WEBB

Romany Webb, is Associate Research Scholar and Senior Fellow at the Sabin Center for Climate Change Law at Columbia Law School. Her research focuses on the intersection of energy and climate, exploring the use of legal and policy tools to minimize the climate impact of energy developments. Her recent scholarship has addressed topics such as the regulation of the energy sector's greenhouse gas emissions under US federal and state Law, federal and state law approaches to supporting clean energy development, and legal and policy issues relating to carbon capture.

Her presentation explored some of the key legal issues that will need to be addressed, with a particular focus on issues affecting electricity and fuel decarbonization.

- Article II of the Paris Agreement states that temperatures should be maintained under a 2 degree level rise, ideally limiting warming under 1.5 degrees. The IPCC report disclosed that warming has already increased by 1 degree and even if pledges of emissions reduction by countries in the Paris Agreement are met, we are likely to see a 3-4 degree increase by the end of the century.
- In order to keep temperatures below 1.5-2 degrees, the U.S. and other countries need to engage in a process of deep decarbonization. This will require systemic changes to the energy economy, with countries having to transition away from carbon-based energy sources towards cleaner alternatives. Furthermore, we need to be taking methane and other harmful greenhouse gases out of the atmosphere in addition to limiting them.
- Fuel switching through electrification will be very difficult in certain sectors such as aviation and shipping and some industrial processes. However, natural gas can be replaced with more eco-friendly alternatives such as biomass.

Legal Challenges to Deep Decarbonization:

- Many of the technologies needed for this transition are already available, but implementing them at the speed and scale required will be difficult, in part because existing laws often do not support and actually hinders their use. The Sabin Center for Climate Change produced a book to address these challenges: [Legal Pathways to Deep Decarbonization in the U.S.](#)

- Access to large plots of land is necessary for wind and solar installments. Unfortunately, the federal government owns much of the desert area in western states and the federal approval process for developments can be a very difficult, lengthy, and costly process.
- The environmental review is very important because these developments can have negative impacts on the environment but can prolong and in some cases, ultimately terminate the project.

Example of Nantucket Sound Wind Project:

- In 2001, construction of the Nantucket Sound Wind Project began as first offshore wind development with an area over 50 square miles. Reviews were required by multiple agencies, coastal states, the federal government.
- 10 years later, developers finally obtained necessary federal permits only to have them challenged in court by local landowners who were upset with visual obstruction
- The court proceedings delayed the project and consequently caused two utility companies that were financing the project to pull out, causing the developers to end the project after spending 16 years and 17 million dollars.

Romany concluded by specifying that most of the legal issue are relatively easy to address especially as momentum is growing to address climate change.

QUESTIONS & COMMENTS:

H.E. AMB. RODRIGO CARAZO, PERMANENT REPRESENTATIVE, COSTA RICA MISSION TO THE UNITED NATIONS

Ambassador Carazo thanks Roma for her hard work in organizing important events such as the very timely Race to Zero Carbon and also thanks Ambassadors Perera and Grignon.

- After Costa Rica has launched its 32 year deep decarbonization strategy, it is a country that not only wants to survive in the future but also make a place for future generations to thrive.

GELVIN STEVENSON, NGO BOARD MEMBER

Too little too late; how do we get there in time?

- Romany admits we are in a tough situation by approaching this issue 30-40 years too late, we need to be using technology that remediate the effects of climate change in addition to the things that Chuck mentioned.
- Chuck pointed out the necessity of a social movement. The fossil fuel industry is the one of the most popular and profitable movements in history, trying to convince people that climate change is not a problem. Social movements happen from the bottom up and 2019 may be the year we finally turn the coin and begin drawing carbon dioxide from the air on top of implementing more renewable energy practices. He finished by reiterating: **“the most expensive thing to do is NOT address this.”**

AUDIENCE:

If the US taxed gasoline as high as Europe does, how much would that reduce consumption?

- Chuck asserts that gasoline taxes are the wrong way to go because they are very regressive where the price people pay for gasoline is a large part of their income. Measures to get people to cut their emissions are more egalitarian.

ROMA STIBRAVY:

It is more expensive to do nothing than to do something.