HON. KENRED DORSETT, M.P.,

MINISTER OF THE ENVIRONMENT AND HOUSING

KEYNOTE ADDRESS

2015 Sub-Regional Meeting of Ozone Officers of the English Speaking Caribbean and Haiti

SUPERCLUBS BREEZES
NASSAU, BAHAMAS

25TH MARCH, 2015

SALUTATIONS

- Mr. Gilbert Bankobeza – Chief Legal Affairs and Compliance Officer, Ozone Secretariat of the Vienna Convention and the Montreal Protocol, UNEP;

- Mr. Marco Pinzon - Regional Network Coordinator for the Caribbean, UNEP-ROLAC (Regional Office of Latin America and the Caribbean);

- Mr. David Cates – Acting Permanent Secretary, Ministry of the Environment and Housing (MTE & H);

- Mrs. Cora Colebrooke – Undersecretary, MTE & H;

- Dr. Gerry Eijekemans – PWR - PAHO

- Ms. Melony McKenzie, Director of DEHS;

- Other Senior Government Officials and Heads of Departments

- Representatives from -
    - United Nations Industrial Development Organization (UNIDO); and
    - United States Environmental Protection Agency;
    - Ocean Thermal Energy Corporation (OTE); and
    - Smart Refrigerant;

- National Ozone Officers of the Caribbean Ozone Officer Network;

- Ladies and Gentlemen

GOOD MORNING

CHECK AGAINST DELIVERY

It gives me great pleasure to be a part of this Sub-regional Network Meeting of Ozone Officers for the English Speaking Caribbean and Haiti. Cornelius Benjamin Fox once said, "To the Philosopher, the Physician, the Meteorologist, and the Chemist, there is perhaps no subject more attractive than that of Ozone." We may have to ask Mr. Cornelius Benjamin Fox to revisit this opinion, because all National Ozone Officers around the globe not only find the subject of Ozone attractive, but work every day to ensure its integrity is kept intact.

Ladies and Gentleman, whilst the Ozone Officers are most familiar with this information, I would be remiss if I did not inform the media; those who may not know and the public, who may read my remarks or see video footage of this event, that the high energy radiation from the sun creates an unstable molecule known as Ozone. This tri-atomic form of oxygen forms at 15 to 55km above the earth's surface to form the ozone layer. The ozone layer is most significant to life on earth as it acts like the sunscreen of the earth by absorbing ultra-violet-B (UV-B) rays from the sun before reaching the earth's surface. The layer is also responsible for the way temperature is distributed in the atmosphere; so the ozone layer is pivotal to regulating the earth's climate.

The Ozone layer is often threatened by man-made chemicals containing chlorine and bromine that destroy its integrity. Chemicals such as –

1. CFCs once found in refrigerators, and air-conditioning systems;

2. HCFCs found in central air-conditioners;
3. Halons found in fire extinguishers;
4. Methyl Bromide used as an agricultural pesticide; and
5. Carbon Tetrachloride and methyl chloroform, used mainly as solvents from cleaning metals.

Once these chemicals are dispersed into the atmosphere, they break down the ozone molecule and leave a hole in the ozone layer known as the ozone hole. The development of this ozone hole is like having a house without a roof. So more exposure to UV-B rays means detrimental health effects such as -

1. Melanoma skin cancers;
2. Cataracts to the eyes; and
3. Suppressed immune systems.

The depletion of the ozone layer also leads to -

4. Stunted growth in plants;
5. Reduced quantities of plankton because less plankton means reduced fish productivity and less food for us to eat;
6. Ozone depletion also contributes to degradation in paints and plastics.

With the passage of time, we are most grateful that the Vienna Convention for the Protection of the Ozone Layer came into force in 1985 which provided the framework for the protection of the ozone layer. However, it would not be a success without the support from the Montreal Protocol on Substances that Deplete the Ozone Layer. Having commenced its work in 1987, the Montreal Protocol agreement has done the 'heavy lifting' to phase out the production and consumption of ozone depleting substances around the globe.

Over the last 22 years, the Government of The Bahamas has affirmed and maintained its commitment to the implementation of the Montreal Protocol

Convention. As you would recall, The Bahamas became a party to the Montreal Protocol on 4th May, 1993. It completed a Refrigerant Management Plan which resulted in hundreds of air-conditioning and refrigeration technicians being trained and certified throughout the archipelago through the Bahamas Technical and Vocational Institute, (BTVI) and the Refrigeration Service Engineers Society (RSES). With the intensive schedule of the National Ozone Unit, The Bahamas was able to meet "the freeze" on the consumption of CFC's in 1999, and to maintain the consistent phase out of its use in all mainstream activities. Since much technical capacity was successfully built up in the air-conditioning and refrigeration sectors for the CFCs, ongoing training activities continue to be implemented so that all technicians are eventually certified in the safe use and handling of all refrigerants that deplete the ozone layer.

Ahead of its Caribbean counterparts, in 2002, The Bahamas with the assistance of the World Bank, embarked on a Terminal Phaseout Management Plan designed to accelerate the phase out all CFC's by the year 2008. This date was two years ahead of the 2010 international schedule of the Montreal Protocol. Further, in an effort to adapt to the changes on the international front, The Bahamas also accepted all related amendments to ensure full compliance with the Protocol.

As a matter of fact, a key component to the success of this environmental treaty in The Bahamas is its Active Public Awareness Campaigns. Over the years, The Bahamas has had a number of intensive public awareness activities to sensitize both the industry and the public at large. To this end, various methodologies have been utilized through newspaper articles, public service announcements, information workshops, exhibits, videos, infomercials, Ozone Week, Ozone Month and International Ozone Day and most recently a poster competition for Junior High School students.

In February 2006, The Bahamas enacted the Montreal Protocol Act. Soon thereafter, the Import/Export Licensing System was established as regulations to this Act to manage the movement of these ozone depleting substances and to foster deepened collaboration with the Bahamas Department of Customs. In

hindsight, we are grateful as a country that we did not rush to form legislation that dealt with CFCs alone, but carefully crafted the Montreal Protocol Act and the Import/Export Licensing System Regulations that covers the gamut of ozone depleting substances. The Licensing System requires all importers to be registered and licensed through the National Ozone Unit (NOU). Without the proper approvals from the NOU, The Bahamas Custom Department will not allow these substances to be released to the importer.

With the help of legislation, on 1st January, 2010, The Bahamas was able to meet its obligation of 100% reduction in Halons and Carbon Tetrachloride. By 1st January, 2015, The Bahamas was able to also meet its 100% reduction of Methyl Bromide. Now, the focus of the Montreal Protocol is to target or HCFCs. The goal for The Bahamas is to gradually phase out the use of the popular refrigerant R22 which is used in central air-conditioning systems by the year 2040. With the Montreal Protocol Act, The Bahamas is in a position to achieve its phaseout targets. So no matter the phaseout date or the ODS in focus, legislation and regulations are in place to assist The Bahamas to achieve its goals.

It is of interest that The Bahamas is a large importer of American goods. Therefore, most, if not all, technology imported into the Bahamas uses ozone friendly technology. The most popular refrigerants utilized are the R-134a and the R-410 and R-404a. These gases are hydro/fluoro/carbons (HFCs) and have a high global warming potential. There constant use contravenes the principals of the Kyoto Protocol under the Convention on Climate Change. As the international community comes to terms with whether it will make amendments to the Montreal Protocol to address hydrofluorocarbons, otherwise known as HFCs, The Bahamas will continue to import the latest technology.

It has been proven that 50% of a building's energy consumption is attributed to air conditioning and/or refrigeration. Therefore, it is imperative that Small Island Developing States such as The Bahamas develop innovative strategies to maximize energy efficiency. The Government of The Bahamas recently released a National Energy Policy to improve the energy sector for some 20 years. One of the goals of the country is to be “a world leader in the development and implementation of

sustainable energy opportunities and continuously pursues a diverse range of well-researched and regulated, environmental sensitive and sustainable energy programmes, built upon our geographical, climatic and traditional economic strengths."

For over 15 years, the European community has been utilizing hydrocarbon technology in air-conditioning and refrigeration. Many have shun this technology because hydrocarbons are flammable and this raises serious safety concerns. With good practices and safety protocols, the Europeans have had minimal incidences. Studies reveal that the benefits have outweighed the possible negative effects as the hydrocarbon technology is found to be more energy efficient, it has a lower global warming potential (GWP) and the technology cools better than conventional refrigerants. Some countries in the regions such as Jamaica, St. Lucia, Grenada, and Belize have utilized hydrocarbon technology and have yielded energy savings of 20 – 40%. In view of these positive results, the National Ozone Unit of the Department of Environmental Health Services has embarked on a pilot project to assess the viability of using this alternative gas. The project will involve the main building of the Department of Environmental Health Services headquarters and its Solid Waste Management Building. The project seeks to –

- determine the peak performance of the present refrigerant with a calculated energy usage;
- retrofit the present equipment to contain the hydrocarbon technology;
- install a hydrocarbon monitor;
- determine the energy savings accrued over a specified period of time ;
- generate a report for presentation of the Ministry of the Environment and Housing; and
- seek the Government' s wishes as to whether it would like to implement such technology in other Government Buildings.

Another ozone friendly alternative The Bahamas has been pursuing is Ocean Thermal Energy. No doubt you have already seen Baha Mar on your way to this

resort. Baha Mar is earmarked to be "a collection of the most extraordinary names and experiences in hospitality: SLSLUX at Bahamar, Grand Hyatt at Baha Mar, Rosewood at Baha Mar and the Baha Mar Casino & Hotel, featuring the largest casino in the Caribbean." With the construction of this complex comes more square footage to cool. Therefore, Baha Mar sought out another alternative to reduce its electrical cost and refrigerant usage. Consequently, The Baha Mar Sea Water District Cooling (SDC) Project was drafted. Subject to the compliance with all regulatory requirements of the various agencies, the Government of The Bahamas has agreed to the installation of an undersea pipeline that would run along the route extending from Prospect Ridge up to Goodman's Bay parking lot and enter the water toward Long Cay (give audience idea of where that is in relation to Breezes). The technology associated with this pipeline is designed for 9,800 tons of ocean water to meet 100% of the air-conditioning load of Bahamar. It is expected to displace Baha Mar's chiller load of 7 Megawatts and 59,000 barrels of oil/year.

The Bahamas recognizes economic development played a significant role in the development of the ozone hole. With the construction of bigger buildings that have to be air-conditioned creates a greater the potential for refrigerant to be released into the atmosphere. The Bahamas is committed to a foster a green economy, so our relationship with the Montreal Protocol will continue to deepen as it has already assisted The Bahamas to –

1. convert to non-ozone depleting substances technologies;
2. change practises in development so that greater consideration is given to the types of refrigerants utilized in central air-conditioning systems and chillers that occupy our homes, major hotels, banks, malls, shopping centres and other large buildings.
3. alter the national consumption; and
4. helped to green our economy by providing jobs in the refrigeration and air-conditioning sector where the technicians are well trained, certified and well-versed in the use of ozone friendly refrigerants and equipment.

Through this plethora of strategies and mechanisms, The Bahamas is poised to achieve all of its reduction targets agreed under the Montreal Protocol.

It is my hope that whilst you seek to protect the ozone layer and discuss ways that your countries can be more compliant, I invite you to explore the Cable Beach area, have a dip in our pristine waters, visit the fish fry at Arawak Cay and enjoy our delicious Bahamian food.

At this point it gives me great pleasure to declare the sessions of the Caribbean Ozone Officers Network Meeting “open.” I wish you every success in your deliberations.