

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
STARRED QUESTION NO. 265*
TO BE ANSWERED ON 21.03.2017

Kigali Agreement

265. SHRI BAIJAYANT JAY PANDA:
SHRI R. DHRUVA NARAYANA:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the salient features of the Kigali Agreement which amended the Montreal Protocol and substantially limited the emission of hydrofluorocarbons (HFCs) that contribute to global warming;
- (b) the commitments pledged by India in the Kigali Agreement and the action plan to fulfil its commitments;
- (c) whether the Government has banned the release of HFC-23, a family of potent greenhouse gases and if so, the alternatives for the same;
- (d) the budgetary allocation for aiding the purpose of attaining these goals; and
- (e) the measures taken by the Government to bolster R&D and technological initiatives to come up with alternatives to HFCs and cleaner sources of energy?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ANIL MADHAV DAVE)

(a) to (e): A statement is laid on the table of the House.

Statement in reply to Parts (a) to (e) of the Lok Sabha Starred Question No. 265 for reply on 21.3.2017 regarding Kigali Agreement raised by Shri Baijayant Jay Panda And Shri R. Dhruva Narayana.

(a) & (b): The 28th Meeting of Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, held in Kigali, Rwanda from 10th to 15th October, 2016 adopted an amendment to the Protocol for phasing down the Hydrofluorocarbons (HFCs), a greenhouse gas, within a specific time frame in the interest of protecting environment from adverse effects of its global warming potential.

Under the Kigali Amendment, the developed countries have undertaken, to phase down HFCs by 2036 with reference to baseline years of 2011-2012-2013. It has been agreed that the developing countries will have a differentiated time schedule for such phase down. There are two sets of baselines agreed for the purpose of phase-down by developing countries; while China and a few other countries will have 2020-2021-2022 as their baseline, India along with some of the developing countries will have 2024-2025-2026 as the baseline years, with a commitment to freeze the production and consumption in 2028. The freeze year can be deferred to 2030 subject to technology review. In addition to production and consumption of HFCs in the baseline year, 65 % of Hydrochlorofluorocarbons (HCFC) baseline has also been added to provide for adequate carbon space for the development of the country. India has undertaken to complete its phase down in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047. This agreement facilitates adequate carbon space for growth on domestic industry while minimizing the cost to the economy and consumers during the transition period.

The Montreal Protocol had no arrangement till date to incentivise improvement in energy efficiency in case of use of new refrigerant and technology. Under the Kigali Amendment, it has been agreed that the Multilateral Fund (MLF) for the implementation of the Montreal Protocol will fund maintenance and/or increase in the energy efficiency with new technology. Funding for R&D and servicing sector in developing countries has also been included in the agreed solutions on finance. In addition, the costs of patents and designs and incremental cost of royalties have been included as agreed cost

elements for support by MLF. The agreed baseline years, freeze year and reduction schedule under the Kigali Amendment of the Montreal Protocol for phase-down of HFCs is given at Annexure.

(c): The government has directed manufacturers of Hydrochlorofluorocarbon (HCFC)-22 not to emit/ vent Hydrofluorocarbon (HFC) – 23 in the atmosphere and to incinerate HFC – 23 using an efficient and proven technology. However, HFC – 23 may be used as feedstock for production.

(d): Funds for achieving compliance targets under the Montreal Protocol by the developing countries (Article 5 parties) are provided by the Multilateral Fund under the Montreal Protocol. The funding, inter alia, covers incremental costs for technology conversions in industry, technical assistance, training and capacity building, information dissemination and awareness generation, and management and coordination. No separate budgetary allocation has been made by the Government for meeting compliance targets set by Protocol. However, the Government has a fiscal incentive scheme which provides custom and exise duty exemption for phase out of Ozone Depleting Substances (ODSs) using non-ODS technology.

(e): A collaborative R&D programme for development of low global warming potential (GWP) alternatives to Hydrofluorocarbons (HFCs) has been announced by the Ministry of Environment, Forest and Climate Change with the objective of development of indigenous cost effective alternate technologies to HFCs using low GWP non Ozone Depleting Substances. This *inter alia* includes development of next generation sustainable refrigerants.

Annexure

The agreed baseline years, freeze year and reduction schedule as Kigali Amendment of the Montreal Protocol for phase-down of HFCs

	A5 Group 1 (Developing)	A5 Group 2 (Developing)	A2 (Developed)
Baseline	2020-2022	2024-2026	2011-2013
Formula	Average HFC consumption	Average HFC consumption	Average HFC consumption
HCFC	65% baseline	65% baseline	15% baseline*
Freeze	2024	2028	-
1st step	2029 – 10%	2032 – 10%	2019 – 10%
2nd step	2035 – 30%	2037 – 20%	2024 – 40%
3rd step	2040 – 50%	2042 – 30%	2029 – 70%
4th step			2034 – 80%
Plateau	2045 – 80%	2047 – 85%	2036 – 85%

* For Belarus, Russian Federation, Kazakhstan, Tajikistan, Uzbekistan 25% HCFC component of baseline and different initial two steps (1) 5% reduction in 2020 and (2) 35% reduction in 2025

Notes:

1. Group 1: Article 5 parties not part of Group 2
2. Group 2: GCC, India, Iran, Iraq, Pakistan
3. Technology review in 2022 and every 5 years
4. Technology review 4-5 years before 2028 to consider the compliance deferral of 2 years from the freeze of 2028 of Article 5 Group 2 to address growth in relevant sectors above certain threshold.