

SF₆ Regulations in Asia

Japan

In January of 2019 Japan submitted its Fourth Biennial Report under the United Nations Framework Convention on Climate Change, including an estimate of GHG emissions broken down by sector. SF₆ emissions in CY 2017 (the latest year on record in the report) were 2.1 MtCO₂e which represented an 83.4% decrease from CY 1990. The report mainly credits enhancements in gas recovery and management systems within the electric utilities sector for this reduction.¹

Japan has no laws that restrict the use of SF₆ in the power sector, or that require emissions tracking and reporting. Instead, Japan's power equipment manufacturers and electric utilities formed a voluntary action plan in the late 1990's to: 1) reduce emissions throughout the SF₆ life cycle; 2) establish and promote recycling; 3) improve SF₆ inventory tracking; and 4) develop alternative insulation technologies.²

South Korea

South Korea's Third Biennial Report under the United Nations Framework Convention on Climate Change reports an increase of 6000 ktCO₂e between 1990 and 2016 in SF₆ emissions reported³. This dramatic increase was likely due to the rapid growth of various technology manufacturing subsectors within the country over that time period, requiring build-out of greater electrical infrastructure. Among these was the growth of the semi-conductor industry, which also uses SF₆ in its processes. It is important to note that from 2010 (the highest recorded level of emissions) to 2016, emissions were reduced by 40%.

South Korea implemented a GHG Emissions Trading Scheme in 2015, which includes SF₆. Drawing from an emissions baseline of 2011-2013 levels, Phase 1 (2015-2017) entailed 100% free allocations for most sectors; Phase 2 (2018 – 2020) entailed 97% of total allowance supply; and Phase 3 (2021-2025) will entail less than 90% free allowances⁴.

China

China's Second Biennial Update Report on Climate Change has little information on SF₆ emissions, and the information listed is only pertinent to the Industrial Sector.⁵ However, since the 2018 report was issued, China is now considering new regulations or standards to reduce SF₆ usage and emissions.

¹ Japan's Fourth Biennial Report under the United Nations Framework Convention on Climate Change. December 2019, pg 12.

² SF₆ Emission Reduction from Gas Insulated Electrical Equipment in Japan; Mr. Hiroshi Yasutake, The Federation of Electric Power Companies, Mr. Masanari Meguro, The Japan Electrical Manufacturers' Association. 2001, pg. 2.

³ The Third Biennial Update Report of the Republic of Korea under the United Nations Framework Convention on Climate Change. November 2019.

⁴ Korea Emissions Trading Scheme, International Carbon Action Partnership

⁵ The People's Republic of China Second Biennial Update Report on Climate Change. December 2018.