Adipic acid is primarily used in the manufacture of spandex, which can also include non-renewable products, plastics, pharmaceuticals, and fuels, as well as in a wide range of applications.

Adipic acid is primarily used in the manufacture of nylon 6,6. N2O is produced as a byproduct. For every molecule of adipic acid produced, a molecule of N2O is produced as a byproduct. Adipic acid has a global warming potential almost a million times greater than CO2 (12). N2O has a global warming potential almost a million times greater than CO2 (12).

HOW THE CHINA ADIPIC ACID PRODUCTION PROTOCOL SUPPORTS GHG REDUCTIONS

The China Adipic Acid Production Protocol issues credits for N2O emission reductions associated with adipic acid production. The protocol includes key eligibility constraints to ensure additionality:

- Minimum 90% abatement efficiency to ensure rigorous GHG accounting. By only crediting for N2O abatement above 90%, the economic incentives remain attractive but will not create the same skewed incentives as other options.
- Only N2O abatement in excess of program compliance requirements are eligible for crediting.
- A regional ETS program in Chongqing regulates total CO2e and since N2O abatement is one way of meeting the requirements, only N2O abatement in excess of program compliance requirements are eligible for crediting.

The emissions and production of a new, non-selective, catalytic destruction technology is required to ensure additionality. This protocol utilizes a mandatory destruction technology that mandates requiring the installation of technology that destroys N2O by catalytic destruction of N2O. If programs expand to include N2O at a later date, the Reserve will review their impact on project eligibility.

N2O has a global warming potential almost a million times greater than CO2 (12). N2O has a global warming potential almost a million times greater than CO2 (12). The China Adipic Acid Production Protocol issues carbon credits for N2O emission reductions associated with the production of adipic acid in China. The protocol supports GHG reductions by including carpets, tire cord, safety air bags, apparel, upholstery, and polyamide, which has wide usage in everyday products. N2O is produced as a byproduct. For every molecule of adipic acid produced, a molecule of N2O is produced as a byproduct. Adipic acid has a global warming potential almost a million times greater than CO2 (12). N2O has a global warming potential almost a million times greater than CO2 (12).

The protocol includes key eligibility constraints to ensure additionality.

- Projects are not currently required to demonstrate verifiable, real reductions in adipic acid production. Two facilities in China increased production increases for the purpose of demonstrating N2O emissions compared to historical levels.
- The installation and production of a new, non-selective, catalytic destruction technology is required to ensure additionality.
- Ventilation is required throughout the production process and the recovery of N2O is required to produce other products.
- Another central technology that eliminates the need to emit N2O as a production waste product is required to produce other products.
- Carbon credits for N2O abatement above 90%, ensure rigorous GHG accounting. By only crediting for N2O abatement above 90%, the economic incentives remain attractive but will not create the same skewed incentives as other options.

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