

Non-CO₂ Greenhouse Gases: High-GWP Gases

Source/Sectors: Substitution of ODS/End-uses of Consumer Products and Specialty Products

Technology: Not-in-kind (NIK) products (C.1.2.2.3)

Description of the Technology:

The successful Not-in-Kind (NIK) substitutes include solid applicators, finger-trigger pumps, powder formulations, sticks, rollers, brushes, nebulizers, and bag-in-can/piston-can systems. These options are often better and more cost-effective than HFC-propelled aerosols. It has replaced HFCs especially in areas where HFC property is not specifically needed for a certain end-use (USEPA, 2006b).

Effectiveness: Good

Implementability: Good

Reliability: No safety/health risks recognized (IEA, 2003).

Maturity: It has already applied to most products that could switch to NIK, therefore further market penetration might not be expected (IEA, 2003).

Environmental Benefits: HFCs emission reduction

Cost Effectiveness: Very cost effective

Technology	Lifetime (yrs)	MP (%)	RE (%)	TA (%)	Capital cost	Annual cost	Benefits
Not-in-kind (NIK) products ¹	10	10	100	100	\$0.34	-\$5.26	\$0.00

Note: MP: market penetration; RE: reduction efficiency; TA: technical applicability; costs are in year 2000 US\$/MT_{CO₂-Eq.}
1: USEPA (2001), IEA (2003), & USEPA (2004)

Industry Acceptance Level: The technology has already well-adopted in the aerosol market, ever since the CFCs were banned (USEPA, 2001).

Limitations: Since it has already been used in most of the available market, no further market penetration is expected.

Sources of Information:

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