

### Solicitation Themes of Technologies for Demonstration Projects

Industry	Air Pollutants Emission Reduction Technologies	Effluent Control and Reduction Technologies	Energy Efficiency / Carbon Reduction Technologies	Solid Waste Reduction Technologies
(1) Generic application (non-sector specific)	<ul style="list-style-type: none"> <li>i) Emission reduction technologies for generator set</li> <li>ii) VOC reduction and treatment technologies such as carbon adsorption, catalyzed thermal destruction, biofiltration, etc</li> <li>iii) Use of alternative clean fuel</li> <li>iv) Alternative design of furnaces and boilers</li> <li>v) Use of renewable energy</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Optimization of wastewater treatment facilities to reduce treatment costs</li> <li>iii) Upgrade of wastewater treatment facilities to achieve further reduction in effluent pollutant discharge</li> <li>iv) Waste heat recovery from industrial effluent</li> <li>v) Material recovery from industrial effluent</li> <li>vi) Treated effluent reuse</li> </ul>	<ul style="list-style-type: none"> <li>i) Generator set power quality and operation efficiency improvement</li> <li>ii) Chiller operation efficiency improvement</li> <li>iii) Cooling tower operation efficiency improvement</li> <li>iv) Heat recovery for heating, ventilation and air-conditioning systems</li> <li>v) High efficiency heat pump applications</li> <li>vi) Waste heat for air-conditioning application</li> <li>vii) Compressed air system operation efficiency improvement</li> <li>viii) High efficiency lighting systems</li> <li>ix) Power factor correction</li> <li>x) Energy efficient material handling system</li> <li>xi) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Raw material / product / process enhancement to reduce solid waste generation</li> <li>ii) Raw material utilization rate optimization to reduce scrap material generation</li> <li>iii) Recycling and reuse of industrial solid waste</li> <li>iv) Hazardous waste reduction and treatment</li> <li>v) Recovery of useful materials from waste</li> </ul>
(2) Chemical products	<ul style="list-style-type: none"> <li>i) Cost-effective solvent recovery system</li> <li>ii) No/Low-VOC substitute chemicals</li> <li>iii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste chemical reduction in production</li> <li>iii) Material recovery technologies</li> <li>iv) Advanced technologies to remove refractory organics from wastewater</li> <li>v) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Material handling system operation efficiency improvement</li> <li>ii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of plastic waste in production</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Recovery of useful materials from sludge / solid waste</li> <li>iv) Packaging enhancement to reduce solid waste</li> </ul>

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(3) Food and beverage	<ul style="list-style-type: none"> <li>i) Low cost flue gas desulphurisation system for boilers</li> <li>ii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste minimization in production</li> <li>iii) Caustic recovery in production clean-in-place</li> <li>iv) Anaerobic technologies for wastewater COD reduction</li> <li>v) Advanced technologies to treat high-strength organic waste</li> <li>vi) Advanced technologies to reduce effluent COD, nitrogen or phosphorus discharge</li> <li>vii) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Heating system operation efficiency improvement</li> <li>ii) Waste energy recovery technologies</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Food waste collection and recycling and reuse</li> <li>ii) Packaging enhancement to reduce solid waste</li> </ul>
(4) Furniture	<ul style="list-style-type: none"> <li>i) No/Low cost VOC control technologies for paint spraying process</li> <li>ii) Water based or high solid paint application and process improvement</li> <li>iii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste chemical reduction in production</li> <li>iii) Material recovery technologies</li> <li>iv) Advanced technologies to remove refractory organics from wastewater</li> <li>v) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Waste energy recovery technologies</li> <li>ii) Compressed air system operation efficiency improvement</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Recovery of useful metals from solid waste</li> <li>iv) Packaging enhancement to reduce solid waste</li> </ul>
(5) Metal and metal products	<ul style="list-style-type: none"> <li>i) No/Low cost VOC control technologies for paint spraying process</li> <li>ii) Water based or high solid paint application and process improvement</li> <li>iii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Heavy metals removal and recovery</li> <li>iii) Etchant recovery and reuse</li> <li>iv) Waste chemical reduction in production</li> <li>v) Advanced technologies to reduce effluent COD, nitrogen or phosphorus discharge</li> <li>vi) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Furnaces operation efficiency improvement</li> <li>ii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Recovery of useful metals from sludge / solid waste</li> <li>iv) Packaging enhancement to reduce solid waste</li> </ul>

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(6) Non-metallic mineral products	<ul style="list-style-type: none"> <li>i) Low cost flue gas desulphurization system for furnaces and kilns</li> <li>ii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste minimization in production</li> <li>iii) Reduction of effluent COD discharge</li> <li>iv) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Furnaces and kilns operation efficiency improvement</li> <li>ii) Material drying and handling systems operation efficiency improvement</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Packaging enhancement to reduce solid waste</li> </ul>
(7) Paper and paper products	<ul style="list-style-type: none"> <li>i) Low cost flue gas desulphurization system for boilers</li> <li>ii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Material recovery technologies</li> <li>iii) Treatment, recovery and reuse of spent caustic</li> <li>iv) Advanced technologies to reduce effluent COD, nitrogen or phosphorus discharge</li> <li>v) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Heating system operation efficiency improvement</li> <li>ii) Material drying and handling operation efficiency improvement</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Packaging enhancement to reduce solid waste</li> </ul>
(8) Printing and publishing	<ul style="list-style-type: none"> <li>i) No/Low VOC printing cleansing processes and materials</li> <li>ii) No/Low VOC post-printing processes and materials</li> <li>iii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste chemical reduction in production</li> <li>iii) Solvent recovery technologies</li> <li>iv) Advanced technologies to remove refractory organics from wastewater</li> <li>v) Advanced technologies to treat high-strength wastes</li> <li>vi) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Printing process operation efficiency improvement</li> <li>ii) Waste heat recovery from web-printing machine</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Packaging enhancement to reduce solid waste</li> </ul>

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(9) Textiles	<ul style="list-style-type: none"> <li>i) Low cost flue gas desulphurization system for boilers</li> <li>ii) No/Low VOC substitute chemicals</li> <li>iii) Alternative production processes</li> </ul>	<ul style="list-style-type: none"> <li>i) Process water reduction technologies</li> <li>ii) Waste chemical reduction in production</li> <li>iii) Treatment, recovery and reuse of desizing waste, spent mercerizing caustic and dyestuff</li> <li>iv) Advanced technologies to reduce effluent COD, nitrogen or phosphorus discharge</li> <li>v) Advanced technologies to remove refractory organics from wastewater</li> <li>vi) Advanced technologies to treat high-strength wastes</li> <li>vii) Recycling of industrial effluent</li> </ul>	<ul style="list-style-type: none"> <li>i) Boiler system operation efficiency improvement</li> <li>ii) Waste heat recovery from process stream</li> <li>iii) Operational efficiency improvement of production machines</li> </ul>	<ul style="list-style-type: none"> <li>i) Recycling and reuse of industrial solid waste</li> <li>ii) Onsite regeneration of VOC adsorption materials</li> <li>iii) Packaging enhancement to reduce solid waste</li> <li>iv) Computer-aided fabric cutting to reduce fabric scrap</li> </ul>