CP 10

CONCEPT PAPER

for KIER International Cooperation project

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Title	Demonstration of small and medium scale industrial boiler for heat and power production in Vietnam			
Description	● Barrier(s) to tackle ● Rapidly industrializing country as well as with one of the largest scale agricultural business sectors in South East Asia ● Government top priority with handling municipal waste and biomass waste and their energy conversion. ● Racks of research capability and field experiences in WtE technology. ● Difficulty to approach the market and get construction consent from the Vietnam government. ● KIER has MoU with Industrial university of Ho Chi Minh City, and Hanoi University of Science and Technology THE REPUBLIC OF VIETNAM ● Strategy to solve ● Co-operation and development of best WtE technology for the Vietnam market with capable Vietnamese partners. R&D to solve rising combustion problems while burining waste/biomass fuels. ● Vietnam counter party solves market research problem and winning construction consent from the government ● Application of KIER CFBC technology to handle Vietnamese WtE problems ● Direct advance to the market through design and demonstration of a commercial scale (~10MWe) CFBC WtE facility.			
Outcomes*	● Demonstraion of a 10MWe CFBC for solid waste/biomass. Efficiency > 99% (current 97~98%), Cost down (10,000US$/kW to 5,000US$/kW), CO2 emission abatement (or to 100,000 t_{CO2}/year for biomass combustion) ● Publications and/or Patents SCI/SCIE 2 papers in Combustion Enhancement, and boiler performance Patents for WtE technology, Combustion Additives (○)			