

**Annex - III**

**Energy efficient clean and green technologies for steel rerolling mills (SRRMs)**

<b>No.</b>	<b>Category</b>	<b>EE Technology</b>	<b>Investment estimate</b>	<b>Saving potential</b>
<b>1</b>	<b>Low end EE tech equipment</b>	Shell in shell type recuperator for pulverized coal firing system	INR 3 – 15 lakhs	Savings in specific fuel consumption by 5 - 15%
		Modified pulverized coal firing system		
		Energy efficient pulverizer		
		Installation of automation & control system (Proportional Integrated Derivative [PID] based for reheating furnace air-fuel ratio control system)		
		High efficient U-tube cross flow type metallic recuperator (for furnace oil / gas fired reheating furnaces)		
		Variable Voltage Variable Frequency (VVVF) drive		Savings in specific power consumption by 2 -10%
		Universal spindles & couplings		
		Antifriction roller bearings		
		Installation of Y-roller table in 3-Hi mill stands of rolling mills		
		Installation of tilting table for 3-Hi mill stand		
Energy efficient drives for rolling mills				
<b>2</b>	<b>Low end EE technology package</b>	Replacement of existing furnace with new energy efficient furnace	INR 1 – 2 crores	Savings in specific fuel consumption by 20 - 35%
		Conversion of fossil fuel to CBM based reheating furnace		
		Conversion of fossil fuel to biomass based producer gas re-heating furnace		
		Revamping / modernization of pulverized coal fired re-heating furnace		
		Revamping existing furnace with energy efficient top fired re-heating furnace		Savings in specific power consumption by 10 - 15%
		Revamping of rolling mill		
		Revamping furnace with new insulation & refractory lining		
<b>3</b>	<b>Low end EE technology</b>	Revamping of mini scrap based rolling mill	INR upto 15 lakhs	Savings in specific energy consumption by 5 – 15%
<b>4</b>	<b>High end technology</b>	Direct rolling	INR 1.5- 3 crores	Savings in specific fuel consumption by 80 -100%