

Country: **Slovenia**

Total number of plants: 5
 with co-firing: 1
 fossil fuels for co-firing:

Locations (+database No.):

Ajdovscina (107), Celje (108), Kamnik (109), Sevenica (110), Straza (111).

Year of construction	No.	
before 1995	5	100 %
1995 - 2000	0	0 %
after 2000	0	0 %
unknown	0	0 %

Type of power generation	No.		Fuels	No.*	
Steam turbine:	4	80 %	Woodchips (forest residues):	0	0 %
Steam engine:	1	20 %	Woodchips (saw industry):	5	56 %
Organic rankine cycle:	0	0 %	Paper sludge:	0	0 %
Stirling engine:	0	0 %	Waste wood:	0	0 %
Hot air engine:	0	0 %	Bark:	2	22 %
Gas engine:	0	0 %	Peat:	0	0 %
Gas turbine:	0	0 %	Straw:	0	0 %
Other (or n.a.):	0	0 %	Other (or n.a.):	2	22 %

Character of plants	No.		Electric power	No.	
Testing plants:	0	0 %	<1MW:	1	20 %
Pilote plants:	0	0 %	1MW - <5MW:	4	80 %
Demonstration plants:	0	0 %	5MW - 20MW:	0	0 %
Commercial plants:	5	100 %	>20MW:	0	0 %
unknown:	0	0 %	unknown:	0	0 %

*) double counting possible because some CHP plants might use more than one fuel

Name: Lipa

Database No. 107

Basic Info	
Country:	Slovenia
Location:	Ajdovscina
Character of plant:	Commercial plant
Owner:	Lipa
Contact Person:	n.a.
Telephone:	n.a.
Fax:	n.a.
email:	n.a.
webpage:	n.a.
Year of construction:	1983

Technology		Fuel	
Type of power generation:	Steam engine	Total fuel input:	n.a. t/a
Electric power:	1 MW _{el}	Tot. lower heating value:	n.a. kWh/kg
Thermal power:	18 MW _{th}	Moisture content:	20 % wet
Co-firing:	N		
Fuel conversion:	Combustion	Type of fuel 1:	Woodchips (saw industry)
Annual production electricity:	0,02 GWh/a	Share of fuel 1:	100 %
Annual production heat:	46,4 GWh/a	Input of fuel 1:	n.a. t/a
Electric efficiency:	n.a. %		
Thermal efficiency:	n.a. %	Type of fuel 2:	-
Total efficiency:	- %	Share of fuel 2:	- %
Ratio electricity/ heat:	-	Input of fuel 2:	- t/a
Fuel power:	15 MW _{fuel}		
<i>Boiler (if steam technology)</i>		Type of fuel 3:	-
Steam mass flow:	n.a. t/h	Share of fuel 3:	- %
Steam temperature:	n.a. °C	Input of fuel3:	- t/a
Steam pressure:	n.a. bar		

Costs		Emissions	
Investment costs:	n.a. Mio €	CO:	1.100 mg/Nm ³
Spec.investment costs (elec):	n.a. Mio€/MW _{el}	NO _x :	650 mg/Nm ³
Fuel costs:	n.a. €/t	Particles:	n.a. mg/Nm ³
Subsidies:	0 Mio €	C _x H _y :	n.a. mg/Nm ³
Number of employees:	6	SO ₂ :	n.a. mg/Nm ³

Source:

project partner

n.a.... not available

Name: Merkscha Furnirnica

Database No. 108

Basic Info	
Country:	Slovenia
Location:	Celje
Character of plant:	Commercial plant
Owner:	Merkscha Furnirnica
Contact Person:	n.a.
Telephone:	n.a.
Fax:	+386/ 34/ 285166
email:	n.a.
webpage:	n.a.
Year of construction:	1977

Technology		Fuel	
Type of power generation:	Steam turbine	Total fuel input:	n.a. t/a
Electric power:	1 MW _{el}	Tot. lower heating value:	n.a. kWh/kg
Thermal power:	n.a. MW _{th}	Moisture content:	20 % wet
Co-firing:	N		
Fuel conversion:	Combustion	Type of fuel 1:	Woodchips (saw industry)
Annual production electricity:	1,2 GWh/a	Share of fuel 1:	60 %
Annual production heat:	20 GWh/a	Input of fuel 1:	n.a. t/a
Electric efficiency:	n.a. %		
Thermal efficiency:	n.a. %	Type of fuel 2:	Bark
Total efficiency:	- %	Share of fuel 2:	40 %
Ratio electricity/ heat:	-	Input of fuel 2:	n.a. t/a
Fuel power:	12 MW _{fuel}		
<i>Boiler (if steam technology)</i>		Type of fuel 3:	-
Steam mass flow:	n.a. t/h	Share of fuel 3:	- %
Steam temperature:	n.a. °C	Input of fuel3:	- t/a
Steam pressure:	n.a. bar		

Costs		Emissions	
Investment costs:	n.a. Mio €	CO:	504 mg/Nm ³
Spec.investment costs (elec):	n.a. Mio€/MW _{el}	NO _x :	120 mg/Nm ³
Fuel costs:	n.a. €/t	Particles:	124 mg/Nm ³
Subsidies:	0 Mio €	C _x H _y :	n.a. mg/Nm ³
Number of employees:	6	SO ₂ :	0 mg/Nm ³

Source:

project partner

n.a.... not available

Name: Stol

Database No. 109

Basic Info	
Country:	Slovenia
Location:	Kamnik
Character of plant:	Commercial plant
Owner:	Tisa d.o.o.
Contact Person:	n.a.
Telephone:	+386/ 18/ 315584
Fax:	+386/ 18/ 314908
email:	n.a.
webpage:	n.a.
Year of construction:	1968

Technology		Fuel	
Type of power generation:	Steam turbine	Total fuel input:	n.a. t/a
Electric power:	1 MW _{el}	Tot. lower heating value:	2,33 kWh/kg
Thermal power:	n.a. MW _{th}	Moisture content:	30 % wet
Co-firing:	N		
Fuel conversion:	Combustion	Type of fuel 1:	Woodchips (saw industry)
Annual production electricity:	2,7 GWh/a	Share of fuel 1:	100 %
Annual production heat:	12,9 GWh/a	Input of fuel 1:	n.a. t/a
Electric efficiency:	n.a. %		
Thermal efficiency:	n.a. %	Type of fuel 2:	-
Total efficiency:	- %	Share of fuel 2:	- %
Ratio electricity/ heat:	-	Input of fuel 2:	- t/a
Fuel power:	6 MW _{fuel}		
<i>Boiler (if steam technology)</i>		Type of fuel 3:	-
Steam mass flow:	n.a. t/h	Share of fuel 3:	- %
Steam temperature:	n.a. °C	Input of fuel3:	- t/a
Steam pressure:	n.a. bar		

Costs		Emissions	
Investment costs:	n.a. Mio €	CO:	171 mg/Nm ³
Spec.investment costs (elec):	n.a. Mio€/MW _{el}	NO _x :	402 mg/Nm ³
Fuel costs:	22,7 €/t	Particles:	n.a. mg/Nm ³
Subsidies:	0 Mio €	C _x H _y :	n.a. mg/Nm ³
Number of employees:	17	SO ₂ :	0 mg/Nm ³

Source:

project partner

n.a.... not available

Name: TANIN

Database No. 110

Basic Info	
Country:	Slovenia
Location:	Sevenica
Character of plant:	Commercial plant
Owner:	Tanin Sevenica
Contact Person:	n.a.
Telephone:	+386/ 78/ 141224
Fax:	n.a.
email:	n.a.
webpage:	n.a.
Year of construction:	1987

Technology		Fuel	
Type of power generation:	Steam turbine	Total fuel input:	3.333 t/a
Electric power:	1 MW _{el}	Tot. lower heating value:	2,44 kWh/kg
Thermal power:	n.a. MW _{th}	Moisture content:	50 % wet
Co-firing:	Y		
Fuel conversion:	Combustion	Type of fuel 1:	Woodchips (saw industry)
Annual production electricity:	4,1 GWh/a	Share of fuel 1:	93 %
Annual production heat:	91,2 GWh/a	Input of fuel 1:	3.100 t/a
Electric efficiency:	n.a. %		
Thermal efficiency:	80 %	Type of fuel 2:	Bark
Total efficiency:	- %	Share of fuel 2:	1 %
Ratio electricity/ heat:	-	Input of fuel 2:	33 t/a
Fuel power:	16,9 MW _{fuel}		
<i>Boiler (if steam technology)</i>		Type of fuel 3:	Oil
Steam mass flow:	n.a. t/h	Share of fuel 3:	6 %
Steam temperature:	n.a. °C	Input of fuel3:	200 t/a
Steam pressure:	n.a. bar		

Costs		Emissions	
Investment costs:	1,5 Mio €	CO:	38 mg/Nm ³
Spec.investment costs (elec):	1,13636 Mio€/MW _{el}	NO _x :	248 mg/Nm ³
Fuel costs:	n.a. €/t	Particles:	115 mg/Nm ³
Subsidies:	0 Mio €	C _x H _y :	1 mg/Nm ³
Number of employees:	7	SO ₂ :	10 mg/Nm ³

Source:

project partner

n.a.... not available

Name: NOVOLES

Database No. 111

Basic Info	
Country:	Slovenia
Location:	Straza
Character of plant:	Commercial plant
Owner:	Novoles
Contact Person:	n.a.
Telephone:	+386/ 73/ 084500
Fax:	+386/ 73/ 083878
email:	n.a.
webpage:	n.a.
Year of construction:	1970

Technology		Fuel	
Type of power generation:	Steam turbine	Total fuel input:	n.a. t/a
Electric power:	2 MW _{el}	Tot. lower heating value:	n.a. kWh/kg
Thermal power:	n.a. MW _{th}	Moisture content:	30 % wet
Co-firing:	N		
Fuel conversion:	Combustion	Type of fuel 1:	Woodchips (saw industry)
Annual production electricity:	7,4 GWh/a	Share of fuel 1:	91 %
Annual production heat:	66,4 GWh/a	Input of fuel 1:	n.a. t/a
Electric efficiency:	n.a. %	Type of fuel 2:	Sawdust
Thermal efficiency:	n.a. %	Share of fuel 2:	9 %
Total efficiency:	- %	Input of fuel 2:	n.a. t/a
Ratio electricity/ heat:	-	Type of fuel 3:	-
Fuel power:	13,8 MW _{fuel}	Share of fuel 3:	- %
<i>Boiler (if steam technology)</i>		Input of fuel3:	- t/a
Steam mass flow:	n.a. t/h		
Steam temperature:	n.a. °C		
Steam pressure:	n.a. bar		

Costs		Emissions	
Investment costs:	1,5 Mio €	CO:	669 mg/Nm ³
Spec.investment costs (elec):	0,76923 Mio€/MW _{el}	NO _x :	276 mg/Nm ³
Fuel costs:	n.a. €/t	Particles:	n.a. mg/Nm ³
Subsidies:	0 Mio €	C _x H _y :	n.a. mg/Nm ³
Number of employees:	12	SO ₂ :	0 mg/Nm ³

Source:

project partner

n.a.... not available