

Country: **Switzerland**

Total number of plants: 3
 with co-firing: 0
 fossil fuels for co-firing:

Locations (+database No.):

Crissier (151), Lausanne (152), Niedergösgen (153).

Year of construction	No.	
before 1995	0	0 %
1995 - 2000	0	0 %
after 2000	0	0 %
unknown	3	100 %

Type of power generation	No.		Fuels	No.*	
Steam turbine:	1	33 %	Woodchips (forest residues):	0	0 %
Steam engine:	0	0 %	Woodchips (saw industry):	1	50 %
Organic rankine cycle:	2	67 %	Paper sludge:	1	50 %
Stirling engine:	0	0 %	Waste wood:	0	0 %
Hot air engine:	0	0 %	Bark:	0	0 %
Gas engine:	0	0 %	Peat:	0	0 %
Gas turbine:	0	0 %	Straw:	0	0 %
Other (or n.a.):	0	0 %	Other (or n.a.):	0	0 %

Character of plants	No.		Electric power	No.	
Testing plants:	0	0 %	<1MW:	2	67 %
Pilote plants:	0	0 %	1MW - <5MW:	0	0 %
Demonstration plants:	1	33 %	5MW - 20MW:	0	0 %
Commercial plants:	2	67 %	>20MW:	0	0 %
unknown:	0	0 %	unknown:	1	33 %

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

Name: CHP Crissier

Database No. 151

Basic Info	
Country:	Switzerland
Location:	Crissier
Character of plant:	Commercial plant
Owner:	CRICAD SA
Contact Person:	Mr. K-R. Scheidegger
Telephone:	+21/ 636/ 0902
Fax:	n.a.
email:	n.a.
webpage:	n.a.
Year of construction:	n.a.

Technology		Fuel	
Type of power generation:	Organic rankine cycle	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:	n.a. % wet
Co-firing:	N		
Fuel conversion:	Combustion		
Annual production electricity:	n.a. GWh/a	Type of fuel 1:	n.a.
Annual production heat:	n.a. GWh/a	Share of fuel 1:	n.a. %
Electric efficiency:	n.a. %	Input of fuel 1:	n.a. t/a
Thermal efficiency:	n.a. %		
Total efficiency:	- %	Type of fuel 2:	-
Ratio electricity/ heat:	-	Share of fuel 2:	- %
Fuel power:	n.a. MW _{fuel}	Input of fuel 2:	- t/a
<i>Boiler (if steam technology)</i>			
Steam mass flow:	- t/h	Type of fuel 3:	-
Steam temperature:	- °C	Share of fuel 3:	- %
Steam pressure:	- bar	Input of fuel3:	- t/a

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

Source:

TU-Graz: "Analyse und Systematisierung existierender und vorgesehener KWK-Anlagen", 2001

n.a.... not available

Name: CHP Lausanne

Database No. 152

Basic Info	
Country:	Switzerland
Location:	Lausanne
Character of plant:	Demonstration plant
Owner:	Office des Constructions Federales
Contact Person:	Mr. K-R. Scheidegger
Telephone:	+21/ 636/ 0902
Fax:	n.a.
email:	n.a.
webpage:	n.a.
Year of construction:	n.a.

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

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

Source:

TU-Graz: "Analyse und Systematisierung existierender und vorgesehener KWK-Anlagen", 2001

n.a.... not available

Name: CHP RENI AG

Database No. 153

Basic Info	
Country:	Switzerland
Location:	Niedergösgen
Character of plant:	Commercial plant
Owner:	RENI AG
Contact Person:	Mr. Clemens Adam
Telephone:	+41/ 62/ 8583066
Fax:	n.a.
email:	n.a.
webpage:	n.a.
Year of construction:	n.a.

Technology		Fuel	
Type of power generation:	Steam turbine	Total fuel input:	n.a. t/a
Electric power:	n.a. MW _{el}	Tot. lower heating value:	n.a. kWh/kg
Thermal power:	12 MW _{th}	Moisture content:	41 % wet
Co-firing:	N		
Fuel conversion:	Combustion	Type of fuel 1:	Paper sludge
Annual production electricity:	n.a. GWh/a	Share of fuel 1:	100 %
Annual production heat:	n.a. 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:	n.a. 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:	n.a. mg/Nm ³
Spec.investment costs (elec):	n.a. Mio€/MW _{el}	NO _x :	n.a. mg/Nm ³
Fuel costs:	n.a. €/t	Particles:	n.a. mg/Nm ³
Subsidies:	n.a. Mio €	C _x H _y :	n.a. mg/Nm ³
Number of employes:	n.a.	SO ₂ :	n.a. mg/Nm ³

Source:

TU-Graz: "Analyse und Systematisierung existierender und vorgesehener KWK-Anlagen", 2001

n.a.... not available