

KPI LIST GREEN BOND TAP ISSUED 2021 - MATURITY 2031

Business Unit	n.	Project Description	Eligible Green Category	Eligible Category (DNV)	KPI	UM	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022				
WASTE	1	Waste to energy plant for heat production in Parma	Energy efficiency	Cogeneration facilities	PES Primary Energy Saving Indicator per operating year	%				11	17	17	13	26	28	13	13				
					Renewable energy share in percent on total	%							27	49	50	49	49	49	49	49	
					Thermal energy recovered from waste to Parma DH network in MWh per operating year	GWh							103	130	196	196	194	189	132	132	
	2	Waste to energy plant for heat production in Piacenza	Energy efficiency	Cogeneration facilities	PES Primary Energy Saving Indicator per operating year	%											25	25			
					Renewable energy share in percent on total	%													15	15	
					Thermal energy recovered from waste to Piacenza DH network in MWh per operating year	GWh								23	30	27	31	55	55		
	3	Development of separate waste collection services	Waste management efficiency and recycling	Waste collection and sorting upgrades	Total sorted waste collection	t	635.724	644.444	675.610	721.788	737.163	711.911	788.313	813.804	825.674	809.000	828.000				
					Total of non sorted waste disposed	t	550.903	528.100	503.896	484.128	488.426	464.837	445.411	415.905	371.735	354.000	335.400				
					Number of bins for sorted waste	N	661.961	648.491	648.709	663.268	699.065	615.681	839.269	886.715	856.108	910.775	918.896				
					Volumes of bins for sorted waste	mc	105.278	111.322	120.371	145.345	155.114	163.037	224.759	236.033	214.253	245.807	248.395				
					Door to door collection system	N	687.215	833.069	998.080	1.061.847	1.139.228	1.391.087	1.473.268	1.590.536	1.656.415	1.859.322	1.925.170				
					Sorted waste collection hubs	N	112	112	112	117	117	113	113	117	117	117	117				
					Volumes of waste collected in the collection hubs	t	161.937	174.639	186.210	208.544	205.719	193.308	211.396	228.358	219.801	228.625	230.224				
	4	PAI Parma: plastics, paper and cardboard selection plant	Waste management efficiency and recycling	Waste collection and sorting upgrades	Plastics treated	t												35.000			
					Paper and cardboard treated	t													100.000		
					Ratio of unsorted plastics (% of plastics treated)	%														< 15%	
					Ratio of unsorted paper (% of paper treated)	%															< 5 %
					Ratio of unsorted cardboard (% of cardboard treated)	%															< 2 %
	5	Biowaste recovery to produce compost and biomethane - Ferrania (SV)	Waste management efficiency and recycling	Waste collection and sorting upgrades	Production of compost (% on organic fraction in input)	%										11%	15%	15%			
					Production of biomethane	Msm3												4	4		
Avoided CO ₂ emissions from fossil sources per operating year					t													7.888	7.888		
Primary energy saving per operating year					Tep													6.270	6.270		
6	Biowaste recovery to produce compost and biomethane - Santhià (TO)	Waste management efficiency and recycling	Waste collection and sorting upgrades	Production of compost (% on organic fraction in input)	%										13%	15%	15%				
				Production of biomethane	Msm3													3	3		
				Avoided CO ₂ emissions from fossil sources per operating year	t													5.127	5.127		
				Primary energy saving per operating year	Tep													2.173	2.173		
ENERGY	7	Accumulators district heating in San Salvario (TO)	Energy efficiency	Energy distribution and management	Primary energy saving per operating year	MWh											12.395	11.488			
					Electrical energy produced from renewable non-fossil sources per operating year	MWh														18,30	18,30
					Avoided CO ₂ emissions from fossil sources per operating year	t														2.437	2.259
					Avoided CO ₂ emissions from fossil sources per operating year by photovoltaic plant	t														9,37	9,37
	8	Heat exchange and pumping substation in Lucento	Energy efficiency	Energy distribution and management	Electrical energy produced from renewable non-fossil sources per operating year	MWh												18	18		
					Avoided CO ₂ emissions from fossil sources per operating year	t														9	9
	9	District heating networks development in Torino	Renewable energy	Energy network development	Primary energy saving per operating year	MWh	2.794.000	2.889.000	2.270.000	2.733.000	2.997.000	3.400.000	2.998.000	2.546.000	1.900.427	3.479.000					
					Avoided CO ₂ emissions from fossil sources per operating year	t	1.007.686	1.092.546	795.595	933.086	1.026.775	1.046.376	876.667	873.083	670.711	1.191.843					
					Distributed thermal energy per operating year	MWh	2.192.000	2.312.000	1.990.000	2.109.000	2.205.000	2.307.366	2.168.838	2.132.541	2.242.779	2.559.000					
	10	Cogeneration plant Moncalieri – GT2 RPW	Energy efficiency	Cogeneration facilities	Electrical energy produced per operating year	MWhe	1.669.146	2.028.560	1.585.195	1.292.799	1.515.332	1.882.310	1.807.728	1.792.325	1.400.952	1.474.560	1.474.560				
Thermal energy produced per operating year					MWht	659.604	751.435	817.637	477.307	612.983	680.375	538.323	543.157	517.001	432.117	432.117					
Primary energy saving per operating year					MWh	84.092	97.341	84.700	58.099	871.249	1.026.936	905.088	730.886	540.591	820.670	840.349					
Avoided CO ₂ emissions from fossil sources per operating year					t	310.931	400.332	349.098	265.512	303.862	321.873	269.818	263.595	177.513	257.175	265.655					
11	Smart solutions	Energy efficiency	Energy distribution and management	Avoided CO ₂ emissions from fossil sources per operating year	t								1.119	3.096	2.545	2.516	2.516				
				Primary energy saving per operating year	tep										648	1.282	1.067	1.033	1.033		
NETWORKS	12	Investment in drainage and purification (La Spezia-Liguria)	Waste Water treatment	Wastewater treatment plant upgrades	Treated population equivalent (potential)	N							220.000	228.378	230.306	247.000	257.000				
					Smart meters installed	n	2.928	5.104	10.862	39.422	97.034	258.569	469.480	603.171	654.804	738.500	748.800				
	13	Gas distribution Smart Metering (Emilia and Liguria)	Energy efficiency	Energy distribution and management	Percentage of smart meters on the total	%	0,4%	1%	1%	5%	13%	33%	61%	78%	84	95%	97%				
14	Replacement of gas distribution networks	Energy efficiency	Energy distribution and management	Average network leaks (underground network measured with planned inspection)	n	886	776	715	665	620	590	552	514	289	≤ 530						
MARKET	15	E-mobility initiatives in the Iren offices	Transport	Electric vehicle	Avoided CO ₂ emissions from fossil sources per operating year	t							52	789	1.091	871	1.063				