

ELENCO KPI (post issue) GREEN BOND ISSUED 2017-MATURITY 2027 (ISIN: XS1704789590)

Business Unit	n	Project Description	Eligible Green Category	Eligible Category (DNV)	KPI	UM	CONSUNTIVO 2017	CONSUNTIVO 2018	2019	2020	2021	2022
BU Ambiente	1	Termovalorizzatore per produzione calore per tlr – Comune di Parma	Energy Efficiency	Cogeneration Facilities	PES Primary Energy Saving Indicator per operating year [%]	%	17	13	17			
					Renewable energy share in percent on total	%	50	49	49			
					Thermal energy recovered from waste to Parma DH network in MWh per operating year	GWh	196	196	151			
	2	Termovalorizzatore per produzione calore per tlr – Comune di Piacenza	Energy Efficiency	Cogeneration Facilities	PES Primary Energy Saving Indicator per operating year [%]	%			25	25	25	25
					Renewable energy share in percent on total	%			35	15	15	15
					Thermal energy recovered from waste to Piacenza DH network in MWh per operating year	GWh	23	30	55	55	55	55
	3	Raccolta differenziata Torino + Emilia	Waste Management Efficiency and Recycling	Waste Collection and Sorting Upgrades	Total sorted waste collection (t)	t	711.911	788.313				
					Total of non sorted waste disposed (t)	t	464.837	445.411				
					Number of bins for sorted waste	N	615.681	839.269				
					Volumes of bins for sorted waste (m ³)	mc	163.037	224.759				
Door to door collection system (n)					N	1.391.087	1.473.268					
Sorted waste collection hubs (n)					N	113	113					
Volumes of waste collected in the collection hubs (t)					t	193.308	211.396					
BU Energia	4	Accumulatori teleriscaldamento del Bit (TO)	Energy Efficiency	Energy Distribution and Management	Primary energy saving per operating year [MWh]	MWh	9.201	10.723	12.181	14.372	12.395	11.488
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	1.809	1.752	2.395	2.826	2.437	2.259
	5	Accumulatori teleriscaldamento del Martinetto (TO)	Energy Efficiency	Energy Distribution and Management	Primary energy saving per operating year [MWh]	MWh	18.403	21.446	24.363	28.744	24.790	22.977
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	3.618	3.504	4.790	5.651	4.874	4.517
	6	Accumulatori teleriscaldamento di Mirafiori Nord (TO)	Energy Efficiency	Energy Distribution and Management	Primary energy saving per operating year [MWh]	MWh			5.846	14.372	12.395	11.488
					Electrical energy produced from renewable non-fossil sources per operating year [MWh]	MWh			46	46	46	46
					Thermal energy produced from renewable non-fossil sources per operating year [MWh]	MWh			350	350	350	350
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t			1.149	2.826	2.437	2.259
	7	Sottostazione scambio termico e pompaggio Lucento	Energy Efficiency	Energy Distribution and Management	Electrical energy produced from renewable non-fossil sources per operating year [MWh]	MWh			18	18	18	18
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t			9	9	9	9
	8	Scambio termico e pompaggio TRM Grugliasco e interconnessione con Grugliasco e Beinasco	Energy Efficiency	Energy Distribution and Management	Avoided CO ₂ emissions from fossil sources per operating year [t]	t			31.280	31.280	31.280	31.280
					Distributed thermal energy per operating year [MWh]	MWh			145.000	145.000	145.000	145.000
	9	Rete di teleriscaldamento di Piacenza, collegamento e stazione di pompaggio Tecnoborgo (PC)	Renewable Energy	Energy Network Development	Avoided CO ₂ emissions from fossil sources per operating year [t]	t	5.617	1.874	4.643	4.883	5.002	5.122
					Distributed thermal energy per operating year [MWh]	MWh	47.019	43.619	63.701	66.988	68.632	70.276
	10	Rete di teleriscaldamento di Parma (PR)	Renewable Energy	Energy Network Development	Primary energy saving per operating year [MWh]	MWh	143.372	141.785	145.812	147.032	148.252	148.252
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	29.165	28.934	30.164	30.418	30.673	30.673
					Distributed thermal energy per operating year [MWh]	MWh	194.389	190.364	200.964	202.660	204.355	204.355
	11	Sviluppo reti teleriscaldamento Torino (TO)	Renewable Energy	Energy Network Development	Primary energy saving per operating year [GWh]	GWh	3.400	2.998	3.330	3.416	3.479	
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	1.046.376	876.667	1.140.770	1.170.222	1.191.843	
					Distributed thermal energy per operating year [GWh]	GWh	2.307	2.169	2.450	2.513	2.559	
	12	Sviluppo reti teleriscaldamento Emilia (RE)	Renewable Energy	Energy Network Development	Primary energy saving per operating year [MWh]	MWh	120.327	114.281	96.191	96.758	98.175	98.175
Avoided CO ₂ emissions from fossil sources per operating year [t]					t	47.097	31.056	34.889	35.095	35.609	35.609	
Distributed thermal energy per operating year [MWh]					MWh	407.335	413.484	411.144	413.567	419.625	419.625	
13	Mini Hydro La Loggia	Renewable Energy	Mini Hydro Power	Electrical energy produced from renewable non-fossil sources per operating year [MWh]	MWh	3.343	2.638	3.536	3.536	3.536	3.536	
				Avoided CO ₂ emissions from fossil sources per operating year [t]	t	1.644	1.262	1.810	1.810	1.810	1.810	
14	Mini Hydro Pianchette - Noasca	Renewable Energy	Mini Hydro Power	Electrical energy produced from renewable non-fossil sources per operating year [MWh]	MWh			2.020	2.020	2.020		
				Avoided CO ₂ emissions from fossil sources per operating year [t]	t			1.034	1.034	1.034		
15	Mini Hydro Giffoni riattivazione impianto Vassi	Renewable Energy	Mini Hydro Power	Electrical energy produced from renewable non-fossil sources per operating year [MWh]	MWh			1.837	1.837	1.837		
				Avoided CO ₂ emissions from fossil sources per operating year [t]	t			940	940	940		
Iren Rinnovabili	16	Impianti Fotovoltaici Enia Solaris presso Brindisi	Renewable Energy	Solar PV Energy Generation	Net produced electricity from renewable non-fossil sources per operating year (kWh)	kWh	7.370.000	6.667.000				
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	3.624	3.188				
BU Reti	17	Miglioramento impianti Genova	Waste Water Treatment	Wastewater Treatment Plant Upgrades	Treated population equivalent (potential) (n)	N	231.000	231.000	236.000	326.000	423.000	423.000
					Analytic parameters (Abb % BOD, Abb % COD, Abb % SST, Abb % Ntot, Abb % Ptot)	%						
	18	Miglioramento impianti Reggio Emilia	Waste Water Treatment	Wastewater Treatment Plant Upgrades	Volumes of water destined to irrigation re-usage / Volumes of total treated water	%	30%	30%	28%	28%	28%	28%
					Treated population equivalent (potential) (n)	N	24.250	24.250	38.850	38.850	38.850	38.850
	19	Miglioramento impianti Piacenza	Waste Water Treatment	Wastewater Treatment Plant Upgrades	Treated population equivalent (potential) (n)	N	23.500	23.500	23.500	23.500	23.500	23.500
					Analytic parameters (Abb % BOD, Abb % COD, Abb % SST, Abb % Ntot, Abb % Ptot)	%						
	20	Miglioramento impianti Parma	Waste Water Treatment	Wastewater Treatment Plant Upgrades	Treated population equivalent (potential) (n)	N	11.900	11.900	14.000	14.000	14.000	14.000
					Analytic parameters (Abb % BOD, Abb % COD, Abb % SST, Abb % Ntot, Abb % Ptot)	%						
	21	CELSIUS - Impianto di turboespansione cogenerativa	Energy Efficiency	Cogeneration Facilities	Net produced electricity from renewable non-fossil sources per operating year (kWh)	kWh	45.000	75.000	5.100.000	5.100.000	5.100.000	5.100.000
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	12	22	1.200	1.200	1.200	1.200
	22	Investimenti idroelettrici	Renewable Energy	Mini Hydro Power	Net produced electricity from renewable non-fossil sources per operating year (kWh)	kWh	24.898.000	32.163.539				
					Avoided CO ₂ emissions from fossil sources per operating year [t]	t	12.245	15.381				