

STRATEGIA GENERALE

1) Obiettivo generale di riduzione delle emissioni di CO2

Barrare la casella corrispondente:

- ☒ Riduzione assoluta
- ☐ Riduzione "pro capite"

20,00

(%) entro il

2020



[Istruzioni](#)

2) Visione a lungo termine del vostro Comune

Indicare le aree d'intervento prioritarie nonché le tendenze e le sfide principali

The local authority believes that the main chances to reduce the CO2 emissions in the next 9 years are linked to three main areas: 1) energy refurbishing of buildings, especially for the residential buildings from 1946 to 1976, 2) district heating and renewable energy, 3) a decrease of private mobility in the municipality area. In the last years the emissions linked to the industrial production (non ETS) have decreased following the trend for a reclassification of industries outside the municipality area. New regulation for building energy, which is based on the European directives 2002/91 and 2010/31, allows the construction of high quality buildings, while for the refurbishing the municipality is considering a series of incentives and support. The district heating will increase from zero to 10.1 Mm3 heated volumes from 2005 to 2020, having reached 3.4 Mm3 already in 2010. Together with the increase of building quality, this trend will decrease the CO2eq of more than 18% from the baseline of 2005. The change of regulation for photovoltaic has recently strongly decreased the rate of PV plant installations and this new situation has been taken into account: it will be in fact very difficult to reach the target of 1kW/inhabitant which was initially considered. The target value will be now only about 0.2kW/inhabitant. About the mobility the present fundings will not allow a strong increase of the number of public transport vehicles. The mobility actions are mainly focused on the modal split and on the optimization of the actual system, with an increase of usage of public transport and bikes. Another very important strategy is linked to the construction of the tramvia system in order to bring more passengers from wheel to rail. One criticality of the present SEAP has been the poor answer of stakeholders, with only few of them (A2A, ALER and ATB) really contributing in the proposal. In the future it will be necessary to stimulate a more enlarged participation of all the possible stakeholders and the citizens themselves.

3) Aspetti organizzativi e finanziari

Strutture organizzative e di coordinamento create/assegnate

Personale assegnato alla preparazione e alla realizzazione del Piano

Coinvolgimento di soggetti interessati e cittadini

Bilancio complessivo stimato

Fonti di finanziamento per gli investimenti previste nel Piano d'Azione

Misure di monitoraggio e verifica previste

A working group for coordination and monitoring of the project "Sustainable Bergamo", consisting of Agenda 21, the Municipal Energy Plan and the Covenant. University of Bergamo contributed to the technical support.
Working Group: *Management and Monitoring Project: Dario Tade, Giovanni Valietti; *Technical Committee of Coordination and Planning: Diego Finazzi, Alessandro Salvi, Serena Trussardi, Marina Zambianchi; *Coordination and Cartographic Information System: Andrea Maffei; *Administrative Coordination: Tiziano Cipriani.
An extensive stakeholder engagement activities has been activated. Special forums and thematic meetings have been organised.
The total economic value of all actions provided for Municipality, stakeholders such as A2A, ALER and ATB, ESCO and private citizens may reach 1.5 billion euro within 2020. We consider that the amount related to building renovations and micro-cogeneration concerns approximately 2/3 of the SEAP's actions total value. This value is considered as a reference for this plan to reduce emissions of CO2 eq in the territory of the municipality of Bergamo. It is thought that about a fifth of its economic value can be financed through the help of the BEI in the manner deemed most appropriate and cost effective. The SEAP budget estimated from the actions, without the actions on building refurbishing, is 515.5M€.
Sources of financing SEAP's actions are basically four: i) internal municipality's resources, ii) BEI financing, iii) ESCO project financing or assistance, iv) stakeholders funding. Excluding the budget for building refurbishing, the plan provides for a costs breakdown which is absorbed by private people for an amount of 21% (except construction's sector, who amounts to about 1 billion Euros) and an amount of 79% from the public field, of whom a share of 17 % can be traced back to municipality of Bergamo.
Next steps are monitoring, verifying and evaluation of the CO2 emissions reduction targets achievement. Regular monitoring of the indicators most relevant to each sector associated with the appropriate revisions to the SEAP and, if necessary, to remedial action operations are key to achieving a continuous improvement plan and to adapt to changing conditions. An implementation report will be presented by the city of Bergamo on a biennial basis from the date of submission of the SEAP. There is a substantial review of this SEAP in 2014 with a redefinition of the activities of CO2 emissions through use of a bottom - up on time. The monitoring will also include an assessment of the state of implementation of operations through inspections and audits of technical and economic progress. This same document is understood to be open to the streamlining of data and external audits, so it can become an instrument of public control of the data and the results of the SEAP.



Modulo SEAP (Piano d'Azione per l'Energia Sostenibile)

INVENTARIO DI BASE DELLE EMISSIONI

1) Anno di inventario

Numero di abitanti nell'anno di inventario

2005

I Firmatari del Patto che calcolano le emissioni di CO2 pro capite devono indicare qui il numero di abitanti nell'anno di inventario.

2) Fattori di emissione

Barrare la casella corrispondente:

☐ Fattori di emissione standard in linea con i principi IPCC

☐ Fattori LCA (valutazione del ciclo di vita)

Barrare la casella corrispondente:

Unità di misura delle emissioni

☐ Emissioni di CO2

☒ Emissioni equivalenti di CO2

3) Risultati principali dell'inventario di base delle emissioni

Legenda Colori e Simboli:

Campi Obbligatori
Celle Non Modificabili



Fattori di Emissione



Istruzioni

A. Consumo energetico finale

Si segnala che per la separazione dei decimali si usa il punto [.]. Non è consentito l'uso di separatori per le migliaia.

Categoria	CONSUMO ENERGETICO FINALE [MWh]															
	Elettricità	Calore/Freddo	Combustibili Fossili								Energie Rinnovabili					TOTALE
			Gas Naturale	Gas Liquido	Olio da Riscaldamento	Diesel	Benzina	Lignite	Carbone	Altri Combustibili Fossili	Oli Vegetali	Bio-Carburanti	Altre Biomasse	Energia Solare Termica	Energia Geotermica	
EDIFICI, ATTREZZATURE/IMPIANTI E INDUSTRIE																
Edifici, attrezzature/impianti comunali	25.030,540	0,000	35.299,480	1.925,430	0,000	1.925,430	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	64.180,880	
Edifici, attrezzature/impianti terziari (Non comunali)	328.696,025	0,000	463.545,676	25.284,310	0,000	25.284,310	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	842.810,320	
Edifici residenziali	123.803,527	0,000	796.786,799	29.628,194	0,000	107.931,280	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	1.058.149,800	
Illuminazione pubblica comunale	5.456,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	5.456,000	
Industrie (Escluse le industrie contemplate nel Sistema Europeo di Scambio delle quote di emissione – ETS)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
Totale Parziale Edifici, Attrezzature/Impianti e Industrie	482.986,091	0,000	1.295.631,955	56.837,934	0,000	135.141,019	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	1.970.597,000	
TRASPORTI																
Parco auto comunale	0,000	0,000	0,000	165,000	0,000	178,000	708,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	1.051,000	
Trasporti pubblici	280,530	0,000	1.365,000	0,000	0,000	9.904,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	11.549,530	
Trasporti privati e commerciali	0,000	0,000	0,000	2.153,840	0,000	185.537,840	119.999,590	0,000	0,000	0,000	0,000	0,000	0,000	0,000	307.691,270	
Totale Parziale Trasporti	280,530	0,000	1.365,000	2.318,840	0,000	195.619,840	120.707,590	0,000	0,000	0,000	0,000	0,000	0,000	0,000	320.291,800	
TOTALE	483.266,621	0,000	1.296.996,955	59.156,774	0,000	330.760,859	120.707,590	0,000	0,000	0,000	0,000	0,000	0,000	0,000	2.290.888,800	

(Eventuali) Acquisti di elettricità verde certificata da parte del comune [MWh]:	0,000
Fattore di emissione di CO2 per gli acquisti di elettricità verde certificata (Approccio LCA):	0,000

B. Emissioni di CO2 o equivalenti di CO2

Si segnala che per la separazione dei decimali si usa il punto [.]. Non è consentito l'uso di separatori per le migliaia.

Categoria	EMISSIONI CO2 [t] oppure EMISSIONI EQUIVALENTI CO2 [t]															
	Elettricità	Calore/Freddo	Combustibili Fossili								Energie Rinnovabili					TOTALE
			Gas Naturale	Gas Liquido	Olio da Riscaldamento	Diesel	Benzina	Lignite	Carbone	Altri Combustibili Fossili	Oli Vegetali	Bio-Carburanti	Altre Biomasse	Energia Solare Termica	Energia Geotermica	
EDIFICI, ATTREZZATURE/IMPIANTI E INDUSTRIE																
Edifici, attrezzature/impianti comunali	9.511,605	0,000	7.059,896	435,147	0,000	510,239	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	17.516,887
Edifici, attrezzature/impianti terziari (Non comunali)	124.904,489	0,000	92.709,135	5.714,254	0,000	6.700,342	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	230.028,221
Edifici residenziali	47.045,340	0,000	159.357,360	6.695,972	0,000	28.601,789	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	241.700,461
Illuminazione pubblica comunale	2.073,280	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	2.073,280
Industrie (Escluse le industrie contemplate nel Sistema Europeo di Scambio delle quote di emissione – ETS)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Totale Parziale Edifici, Attrezzature/Impianti e Industrie	183.534,715	-	259.126,391	12.845,373	-	35.812,370	-	-	-	-	-	-	-	-	-	491.318,849
TRASPORTI																
Parco auto comunale	0,000	0,000	0,000	37,290	0,000	47,170	185,496	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	269,956
Trasporti pubblici	106,601	0,000	273,000	0,000	0,000	2.624,560	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	3.004,161
Trasporti privati e commerciali	0,000	0,000	0,000	486,768	0,000	49.167,528	31.439,893	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	81.094,188
Totale Parziale Trasporti	106,601	0,000	273,000	524,058	0,000	51.839,258	31.625,389	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	84.368,305
ALTRO																
Smaltimento dei rifiuti																
Gestione delle acque reflue																
Indicate qui le altre emissioni del vostro Comune																
Totale Parziale Altro	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
TOTALE	183.641,316	0,000	259.399,391	13.369,431	0,000	87.651,628	31.625,389	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	575.687,154

Corrispondenti fattori di emissione di CO2 in [t/MWh]	0,380	0,176	0,200	0,226	0,271	0,265	0,262	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Fattore di emissione di CO2 per l'elettricità non prodotta localmente [t/MWh]	0,561														

C. Produzione locale di elettricità e corrispondenti emissioni di CO2

Si segnala che per la separazione dei decimali si usa il punto [.]. Non è consentito l'uso di separatori per le migliaia.

Elettricità Prodotta Localmente (Esclusi gli impianti ETS e tutti gli impianti/le unità > 20 MW)	Elettricità Prodotta Localmente [MWh]	VETTORE ENERGETICO UTILIZZATO [MWh]											Emissioni di CO2 o Equivalenti di CO2 [t]	Fattori di Emissione di CO2 corrispondenti per la Produzione di Elettricità [t/MWh]
		Combustibili Fossili					Vapore	Rifiuti	Olio Vegetale	Altre Biomasse	Altre Fonti Rinnovabili	Altro		
		Gas Naturale	Gas Liquido	Olio da Riscaldamento	Lignite	Carbone								
Energia eolica	0,000												0,000	0,000
Energia idroelettrica	336,000												0,000	0,000
Fotovoltaico	0,000												0,000	0,000
Cogenerazione di energia elettrica e termica	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	
produzione di energia elettrica da rifiuti	50.200,000	0,000	0,000	0,000	0,000	0,000	0,000	50.200,000	0,000	0,000	0,000	0,000	20.230,600	0,403
TOTALE	50.536,000	0,000	0,000	0,000	0,000	0,000	0,000	50.200,000	0,000	0,000	0,000	0,000	20.230,600	

D. Produzione locale di calore/freddo (teleriscaldamento/teleraffrescamento, cogenerazione di energia elettrica e termica...) e corrispondenti emissioni di CO2

Si segnala che per la separazione dei decimali si usa il punto [.]. Non è consentito l'uso di separatori per le migliaia.

Calore/Freddo Prodotti Localmente	Calore/Freddo Prodotti Localmente [MWh]	VETTORE ENERGETICO UTILIZZATO [MWh]										Emissioni di CO2 o Equivalenti di CO2 [t]	Fattori di Emissione di CO2 corrispondenti per la Produzione di Calore/Freddo [t/MWh]
		Combustibili Fossili					Rifiuti	Olio Vegetale	Altre Biomasse	Altre Fonti Rinnovabili	Altro		
		Gas Naturale	Gas Liquido	Olio da Riscaldamento	Lignite	Carbone							
Cogenerazione di energia elettrica e termica	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Impianto(i) di teleriscaldamento	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Altro (Specificare)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
TOTALE	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	

PIANO D'AZIONE PER L'ENERGIA SOSTENIBILE

1) Titolo del vostro Piano d'Azione per l'Energia Sostenibile

Data di approvazione formale
Ente che ha approvato il Piano

Piano d'Azione per l'Energia Sostenibile - Comune di Bergamo
06/06/2011
Consiglio Comunale - Comune di Bergamo

2) Elementi principali del Piano d'Azione per l'Energia Sostenibile del vostro Comune

Legenda Colori e Simboli:

Campi Obbligatori
Celle Non Modificabili

 Aggiungi Azione
 Cancella Azione



[Istruzioni](#)

Modulo SEAP Online - E' necessario salvare i dati forniti al termine della compilazione di ciascun settore per evitare che

SETTORI [Campi d'Azione]	AZIONI/MISURE PRINCIPALI PER CAMPO D'AZIONE	SERVIZIO, PERSONA O SOCIETA' RESPONSABILE [In caso di coinvolgimento di terzi]	ATTUAZIONE [Data di Inizio e Fine]	COSTI STIMATI PER AZIONE/MISURA [€]	RISPARMIO ENERGETICO PREVISTO PER MISURA [MWh/a]	PRODUZIONE DI ENERGIA RINNOVABILE PREVISTA PER MISURA [MWh/a]	RIDUZIONE DI CO2 PREVISTA PER MISURA [t/a]	OBIETTIVO DI RISPARMIO ENERGETICO O PER SETTORE NEL 2020 [MWh]	OBIETTIVO DI PRODUZIONE LOCALE DI ENERGIA RINNOVABILE PER SETTORE NEL 2020 [MWh]	OBIETTIVO DI RIDUZIONE DI CO2 PER SETTORE NEL 2020 [t]
EDIFICI, ATTREZZATURE/IMPIANTI E INDUSTRIE										96.394,00
Edifici, Attrezzature/Impianti Comunali	Action 1: EDI-PUB-S/L01 REHABILITATION MEASURES OF NON-RESIDENTIAL MUNICIPAL ASSETS (POP). Restructuring and upgrading the energy efficiency context of a group of buildings selected by the City that have already been programmed.	Comune	Short Term/Long Term	50.110.000,00			937,00			
	Action 2: EDI-PUB-S02 ENERGY PLANT REQUALIFICATION OF NON-RESIDENTIAL MUNICIPAL ASSETS. Replacing the existing thermal power stations with high-efficiency thermal power plants. Wherever possible by proximity to the district heating network, the connection is provided to the network. Installation of thermostatic valves. Regeneration of plants No. 132 buildings by 2014.	A2A	Short Term	2.935.510,00			17.528,00			
	Action 3: EDI-PUB-L03 ENERGY CONSTRUCTION REQUALIFICATION OF NON-RESIDENTIAL MUNICIPAL ASSETS. Redevelopment wrap N ° 32 buildings by 2020.	Comune	Long Term	13.015.139,00			1.143,00			
	Action 4: EDI-PUB-L04 ENERGY PLANT REQUALIFICATION OF NON-RESIDENTIAL MUNICIPAL ASSETS. Redevelopment plants N ° 65 buildings by 2020.	Comune	Long Term	183.981,00			387,00			

	Action 5: EDI-PUB-S05 LIGHT AUDIT OF 32 SCHOOL BUILDINGS AND BUILDING FOR LOCAL OFFICES. Collection of data for casing and plant consumption.	Comune	Short Term	6.600,00			0,00
	Action 6: EDI-PUB-S06 LIGHT AUDIT 174 MUNICIPAL PUBLIC BUILDINGS tertiary sector. Collection of data for casing and plant consumption.	Comune	Short Term	69.600,00			0,00
	Action 7: EDI-PUB-S07 ENERGY DATABASE CREATION AND IMPLEMENTATION OF MAPS.	Comune	Short Term	7.000,00			0,00
	Action 8: MON-PUB-S13 MONITORING MUNICIPAL ENERGY BUILDINGS RETRAIN.	Comune	Short Term	10.000,00			0,00
	Action 9: PUB-S14 ENERGY MANAGER.	Comune	Short Term	0,00			0,00
Edifici, Attrezzature/Impianti Terziari (Non Comunali)	Action 1: EDI-PR-L01 ENERGY RATIONALIZATION MEASURES IN TERTIARY SECTOR OF SHOPPING CENTER. Upgrading the energy efficiency of construction of large structures and systems with sales area of over 2.501m2.	ESCO, Privati	Long Term	0,00			2.830,00
	Action 2: EDI-PR-L02 ENERGY RATIONALIZATION MEASURES IN TERTIARY SECTOR OF THE AVERAGE STRUCTURE OF SALE AND NEIGHBORHOOD. Upgrading the energy efficiency of construction and plant sales structures with lower surface of 2.500m2.	ESCO, Privati	Long Term	0,00			16.202,00
	Action 3: EDI-PR-L03 ENERGY RATIONALIZATION MEASURES IN TERTIARY SECTOR OF THE HOTEL. Upgrading the energy efficiency of plant construction and hotels.	ESCO, Privati	Long Term	0,00			2.675,00
Edifici Residenziali	Action 1: EDI-PUB-L08 ENERGY CONSTRUCTION REGENERATION OF ALER PUBLIC RESIDENTIAL. Insulation of the building of a group of buildings ALER (42 blocks of buildings, housing about 2400) selected by the client.	ALER	Long Term	25.578.000,00			2.550,00
	Action 2: EDI-PUB-S09 ENERGY SYSTEMS REGENERATION OF ALER PUBLIC RESIDENTIAL. Replacing the boiler room of a group of buildings ALER (41 blocks of buildings, with 2,000 housing) selected by the client.	ALER	Short Term	981.200,00			265,00
	Action 3: RES-S01 BUILDING REGULATION OF BERGAMO MUNICIPALITY. Contains information of classes and rewarding specific and detailed intervention procedures and requirements for new construction, renovations on a surface of 25% or more dispersant to a volume greater than 20% of the existing minor interventions on building existing.	Comune	Short Term	0,00			0,00

	Action 4: RES-S/L02 ASSOCIATIONS AND GROUPS OF COMPANIES PROMOTING FOR BUILDING RENOVATION. To promote the utmost care retraining existing building, for both the residential and the tertiary sector, involving all actors in the chain necessary interventions.	ESCO, Privati	Short Term/Long Term	0,00			50.774,00			
Illuminazione Pubblica Comunale	Action 1: ILL-PUB-S/L10 EFFICIENT PUBLIC STREET LIGHTING. Progressive replacement of all lighting with high pressure sodium lamps powered.	Comune	Short Term/Long Term	678.153,00			243,00			
	Action 2: ILL-PUB-S11 THROUGH TRAFFIC SYSTEMS OPERATIONS ON THE REPLACEMENT OF TRADITIONAL WITH LED LAMPS. Progressive replacement of 4,964 incandescent traffic light bulbs with LED lamps.	ATB	Short Term	890.000,00			607,00			
	Action 3: ILL-PUB-L12 EFFICIENT PUBLIC STREET LIGHTING - LED PILOT PROJECT. For the Grumello quarter will be installed to replace existing ones, 367 types of LED lamps, taken as a pilot project.	Comune	Long Term	330.300,00			253,00			
Industrie (Escluse le industrie contemplate nel Sistema Europeo di Scambio delle quote di emissione – ETS) e Piccole e Medie Imprese (PMI)										
Altro [Specificare]										
TRASPORTI										32.410,62
Parco Auto Comunale	Action 1: MOB - S/L01 RENEWAL OF MUNICIPAL FLEET. The action is to replace the municipal fleet, beginning with the most polluting vehicles.	Comune	Long Term	1.468.900,00			202,89			
	Action 2: MOB - L02 RATIONALIZATION OF MUNICIPAL FLEET. Over the next year plan to rationalize the use of the municipal fleet by preparing a study on the origin-destination movements of the fleet, with the aim of reducing the mileage for the same service and encourage shared use.	Comune	Long Term	5.000,00			38,33			
	Action 3: MOB - S/L13 MOBILITY MANAGEMENT. The Mobility Manager is responsible for organizing local origin-destination movements of staff and administration at the same time to study and propose travel logistics that go to maximize benefits and reduce overall emissions.	Comune	Long Term	342.000,00			1.083,33			
	Action 1: MOB - S/L03 RENEWAL ATB FLEET. In the coming years is expected to convert the consortium ATB fleet to 60% means Euro 5 or later, a 30% to 15% methane and hybrids and increase the frequency of urban services by increasing the size of the fleet of 12 long 15 / 2 m.	ATB	Long Term	4.180.000,00			66,07			
	Action 2: MOB - S/L04 STRENGTHENING OF LOCAL PUBLIC TRANSPORTATION SERVICE.	Comune	Long Term	Da Pianificare			500,00			

Trasporti Pubblici	Action 3: MOB - S09 NEW LIFTS TO HIGH TOWN FROM BAIONI STREET. Strengthen links with high city activating a new line of connection type lift.	Comune	Short Term	5.700.000,00			1.000,00
	Action 4: MOB - L14 UPGRADING IRON LIGHT TRANSPORT TO VALLE BREMBANA. Inserting a tramway serving Valle Brembana to steal share to road user charges and transfer them to the rail.	Enti Pubblici	Long Term	142.540.432,00			5.910,00
	Action 5: MOB - L15 UPGRADING IRON LIGHT TO AIRPORT. Activate a public transport service direct from the rail station of Bergamo to Orio al Serio airport via the exhibition center of Bergamo.	Enti Pubblici	Long Term	140.000.000,00			
	Action 6: MOB - S/L18 OFFERING UNIFY AND SIMPLIFY FARES PAYMENT TICKETS. Unify the ticket on the various means and provide an integrated pricing be extended suburban area.	ATB	Long Term	3.000.000,00			
	Action 7: MOB - S/L20 LIGHT TAXI EXPERIMENT. Promoting the integration of the offer of a taxi light, assisted pedal and power supply with zero emissions, is intended to cover short distances in a strictly urban.	Comune	Long Term	Da Pianificare			
	Action 8: MOB - S23 PROMOTING THE USE OF PUBLIC TRANSPORT. Offer, in conjunction with some of the important annual events in town, the price of a single ticket a day pass.	Comune	Short Term	270.000,00			
	Action 9: MOB - S/L25 STRENGTHENING PUBLIC TRANSPORTATION SERVICE TO AND FROM HIGH CITY. Strengthen links with the city by implementing the high frequencies of existing ones as and when the closure of the upper city to private cars.	ATB	Long Term	Da Pianificare			500,00
Trasporti Privati e Commerciali	Action 1: MOB - S16 INFO MOBILITY (INFORMATION TECHNOLOGY SERVICES). Through the introduction of ITS systems enable the information boards at strategic points in the city, to help the driver to locate the nearest available parking lot or the path to freer trade.	Comune	Short Term	Da Pianificare			7.090,00
	Action 2: MOB - L17 PROMOTION OF USE ELECTRIC VEHICLES. Enter the column distribution of green electricity for recharging electric cars at strategic points in the cities and larger commercial areas. Provide parking dedicated solely to electric cars and in some key areas to ensure the car only to electric cars, announcing it with green paint.	Comune	Long Term	Da Pianificare			
	Action 3: MOB - L19 INTRODUCE VIDEO SURVEILLANCE SYSTEMS FOR CONTROL OF MOBILITY ROAD IN THE CITY. Introduce cameras and surveillance systems to promote compliance with containment measures introduced by the reduction of CO2 SEAP. The action is accompanied by the regulations contained in the LTZ and Zone 30.	Comune	Long Term	60.000,00			

	Action 4: MOB - S/L21 DIFFERENTIAL CHARGING CAR PARKS. Introduce a system of charging for public parking addressed to strengthen the existing differentiation between center and periphery using a very attractive pricing for the latter, in order to promote intermodality with public transport.	Comune	Long Term	Da Pianificare					
	Action 5: MOB - L22 COMMERCIAL TRAFFIC. Restrict access of commercial vehicles in urban areas only vehicles that meet emission limits by gradually introducing elements of regulation and control of distribution of goods.	Comune	Long Term	Da Pianificare					
	Action 6: MOB - S24 COMPUTERIZATION SERVICES PUBLIC. Through the action of computerization of public services will be available to download documents from home and fill practices, without having access to the municipal offices. The action plan to enable the municipality some satellite offices in different districts, within walking distance from the inhabitants, or at least by reducing miles driven.	Comune	Short Term	50.000,00					
Soft Mobility	Action 1: MOB - S05 ENHANCING SERVICE WALKING BUS. Arrange an escort service to walk children to school and back along a path that includes stops in its development which "load " and "download" the children who gravitate nell'intorno.	Comune	Short Term	90.000,00			255,00		
	Action 2: MOB - S06 ENHANCING CYCLE NETWORK. Strengthen the links by providing a network of cycle paths which go to serve and to relate the different parts of the city. Will also be important to ensure that the connections to serve continuously cycling go all the services envisaged in the plan of services, with particular attention to schools.	Comune	Short Term	2.450.000,00			8.965,00		
	Action 3: MOB - S07 ENHANCED PEDESTRIAN CONNECTIONS. In the process of reorganization of the urban areas act, when necessary, to ensure continuous pedestrian connections as much as possible, safe, direct and rich in attractors elements. In the forecasts of PUT (Urban Plane of Traffic) is called to set in the neighborhood of all the attractions of public buildings (radius of 150 m) and within the zone 30 to achieve a completion of existing new sidewalks.	Comune	Short Term	800.000,00			5.300,00		
	Action 4: MOB - S/L12 ENHANCING BIKE-SHARING. Enhance the service by increasing cycling, bike-sharing deals, increasing the distribution of positions and, if possible, limiting the cost to just buy the subscription card.	ATB	Long Term	1.357.500,00			1.500,00		
PRODUZIONE LOCALE DI ELETTRICITÀ									14.239,00
Energia Idroelettrica									
Energia Eolica									

Fotovoltaico	Action 1: IND - L02 PHOTOVOLTAIC. It is estimated an increase of PV through the actions being taken and evaluated the positive impact on reducing CO2 emissions.	ESCO, Privati	Long Term	75.000.000,00			14.239,00			
	Action 2: IND-S04 SOLAR BUYING GROUP (GAS).	Privati	Short Term	0,00			0,00			
	Action 3: IND-L05 PHOTOVOLTAIC AGREEMENT WITH PRIVATE FOR INSTALLATION ON ROOF OF NOT MUNICIPAL PUBLIC BUILDINGS.	ESCO, Privati	Long Term	0,00			0,00			
	Action 4: IND-L07 SIMULATION OF BUILDINGS COVERED ON SOLAR INJECTIONS.	Comune	Long Term	5.000,00			0,00			
Cogenerazione di Energia Elettrica e Termica										
<i>Altro [Specificare]</i>										
TELERISCALDAMENTO/TELERAFFRESCAMENTO, IMPIANTI CHP										65.123,00
Cogenerazione di Energia Elettrica e Termica	Action 1: IND-L06 INCENTIVE SYSTEM INSTALLATION AND MICRO-MICRO-COGENERATION TRIGENERATION TO INDIVIDUALS.	ESCO, Privati	Long Term	Da Pianificare			0,00			
Impianto di Teleriscaldamento	Action 1: IND-S01 LOCAL DISTRICT HEATING. This action provides the power needed to adapt by increasing the share of heat produced by cogeneration.	A2A	Short Term	30.000.000,00			61.757,00			
	Action 2: IND-L03 LOCAL DISTRICT COOLING.	A2A	Long Term	4.000.000,00			3.366,00			
<i>Altro [Specificare]</i>										

PIANIFICAZIONE TERRITORIALE										2.500,00
<i>Pianificazione Strategica Urbana</i>										
<i>Pianificazione Trasporti/Mobilità</i>	Action 1: MOB - S10 CONSOLIDATION "ZTL" (areas with limited traffic). Consolidate and extend the ZTL inserting electronic gates to control access and simultaneously promote, in line with what has already been prefigured in PGT, shifts in how street within these areas and accessibility to the ZTL with adequate public transport service.	Comune	Short Term	845.000,00			1.000,00			
	Action 2: MOB - S/L11 EXTENSION "ZONE 30 ". Extend and rationalize the existing zone 30 and enter the speed controls to ensure compliance.	Comune	Long Term	Da Pianificare			1.500,00			
<i>Standard di Ristrutturazione e Nuovo Sviluppo</i>										
<i>Altro [Specificare]</i>										
APPALTI PUBBLICI DI PRODOTTI E SERVIZI										0.00
<i>Requisiti/Standard di Efficienza Energetica</i>										
<i>Requisiti/Standard di Energia Rinnovabile</i>										
<i>Altro [Specificare]</i>										
COINVOLGIMENTO DEI CITTADINI E DEI SOGGETTI INTERESSATI										50.00
<i>Servizi di Consulenza</i>										
<i>Sovvenzioni e Sostegno Finanziario</i>										
<i>Sensibilizzazione e Messa in Rete Locale</i>	Action 1: INF - S01 ENERGY OFFICE . Explain the actions taken by the public in the field of environmental protection. It works on two different levels: a first information and dissemination for citizens and a second more specialized for professionals working in the energy sector.	Comune	Short Term	12.000,00			0,00			
	Action 2: INF - S02 COORDINATION OF EDUCATION AND AWARENESS OF STUDENTS. The education activities will be divided according to type of school: Elementary for kindergarten and recreational activities will be prepared on thematic energy / environmental and efficiency while the secondary school of first and second grade will be added to the theme of energy / environment to 'internal education.	Comune	Short Term	5.000,00			0,00			
	Action 3: INF - S03 SECTION COVENANT OF MAYORS ON THE WEB. Turning on the corporate website of a specific section of the Covenant where you can find, view and download all the documents and the collection of the actions of the plan.	Comune	Short Term	12.000,00			0,00			
	Action 4: INF - S04 CONSUMPTION DISPLAY OF MUNICIPAL BUILDINGS. Installing the display indicating power consumption in buildings.	Comune	Short Term	8.000,00			0,00			
	Action 5: INF - S05 SPREAD CULTURE EUROPEAN LABEL.	Comune	Short Term	5.000,00			0,00			
	Action 6: INF - S06 COMMERCIAL LICENSE PLATE RECOGNITION. Delivery of a plaque to all those exercises which certify that they have managed to reduce by at least 50% of CO2 emissions compared to 2005.	Comune	Short Term	5.000,00			0,00			

	Action 7: MOB - S08 EDUCATION CAMPAIGN GUIDE. Organize with ACI few days of driving the most virtuous aimed at saving fuel consumption and consequently reduce emissions.	Comune	Short Term	57.600,00			50,00			
Formazione ed Istruzione	Action 1: INF - S07 TRAINING COURSE FOR ENERGY CERTIFICATION. Activation of the training course for energy certification recognized by the Regione Lombardia in the curriculum of the Faculty of Engineering, Bergamo University of study. This course is also open to outsiders, will allow the energy performance certificate.	Privati, ESCO	Short Term	165.000,00			0,00			
	Action 2: INF - S08 TRAINING FOR THE STAFF OF THE MUNICIPALITY OF BERGAMO.	Comune	Short Term	19.200,00			0,00			
Altro [Specificare]										
ALTRO(I) SETTORE(I) [Specificare]										0,00
Nuove Aree Verdi	Action 1: ECO - S01 NEW GREEN AREAS. Increase the wealth of communal green areas to improve the quality of life.	Comune	Short Term	8.280.000,00			Non Contabilizzabile			
TOTALE										

3) Indirizzo Internet

Link diretto all'eventuale sito internet del vostro SEAP

<http://territorio.comune.bergamo.it/servizio-ecologia-e->

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