Italian transposition of Energy Efficiency Directive (2012/27/EU)

Provisions from Art. 8 of Lgs. Decree 102/14:

Energy audits: results and next steps.

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Summary

1. Enterprises obliged to energy audit
2. Results
3. Sanctions
4. ENEA's role
5. Conclusions

Energy audits and EMS

According to Art. 8 of Lgs. D. 102/14, the hereinafter mentioned companies from the Industry sector must undergo energy audits on their production sites, by 5 Dec. 2015, and at least every four years:

- Large enterprises (comma 1);
- Energy intensive Enterprises (comma 3)

EVERY YEAR IS A YEAR OF OBLIGATION.

Energy Intensive Enterprise

An organisation qualifies as Energy Intensive Enterprise if it is registered on the list of «Cassa Conguaglio» (Governamental Agency related to electricity).

These companies have tax relief on the energy's cost on the electric bill.

Year 2013: 2.929 enterprises

Sanctions

Obliged Enterprises that will not carry out energy audit within the predefined deadline, shall be subject to administrative monetary penalties.

The penalty does not free enterprises from carrying out audit that must be submitted to ENEA within six months after the imposition of the sanction.

Art.8 : ENEA's role

Lgs. Decree 102/2014 entrusts ENEA with the following tasks:

- Art. 5. ENEA designs and manages a database of enterprises obliged to undergo energy diagnosis.
- Art 6. ENEA shall carry out controls to ensure compliance with the requirements of the diagnosis article, through an annual selection of a statistically significant percentage of the population of enterprises subject to the obligation ……, at least 3%.
- ENEA shall carry out controls over 100% of the diagnoses carried out by internal auditors. The control activities will also include in "situ" inspections.

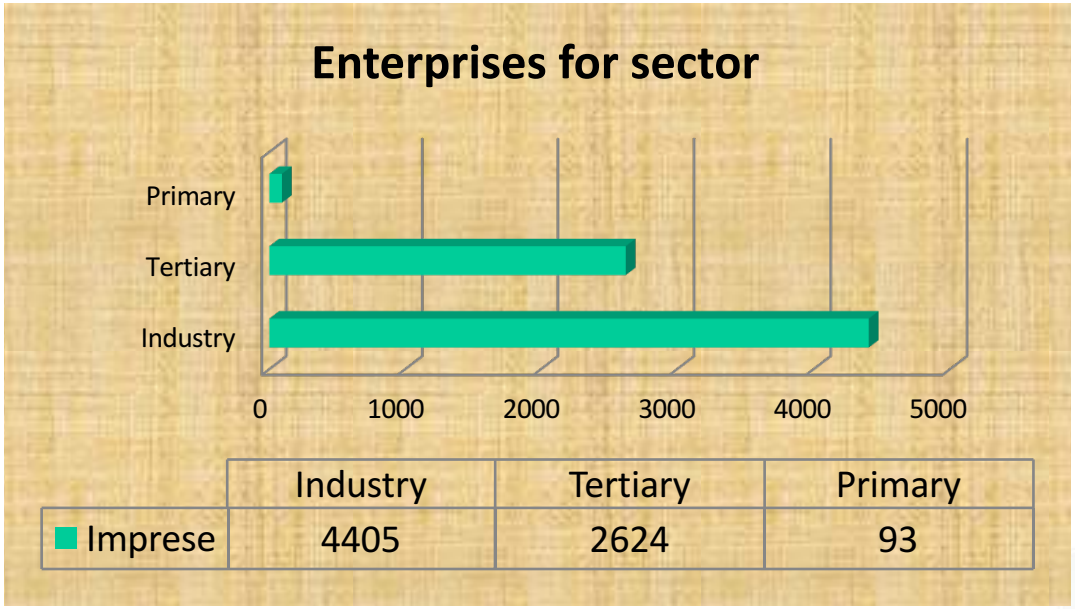
Results

At 22 December 2015 approximately 14,000 energetic audits reached.

Enterprises that complied the obligation by sending the diagnosis: 7484

Results

Large Enterprises	4680	63%
Energy intensive Enterprises	2804	37%
Total enterprises	7484	



Results at 22/12/2015

Sector (Nr Enterprises)	%
Motor Production	5,48
Chemical	4,23
Metal Products	7,17
Plastic and rubber	8,69
Textile	3,52
Food Industry	7,41
Retail	3,69
Other	59,81

Sector (nr Sites)	%
Plastic and rubber	6,21
Metals Products	4,98
Textile	2,51
Food industry	5,98
Retail	8,25
Other	72,07

Results at 22/12/2015

Energy Audit from Enterprises with Energy Management System ISO 50001

Total Enterprises : 400

Sector	%
Metallurgy	5,5
Clothing	7
Chemical	7
Food Industry	7
Engine Production	6,5
Gas/El. En./ Heat Supply	5,5
Automotive	6

Results at 22/12/2015

Energy Intensive Industries recorded in the List of «Cassa Conguagli»: 2,929

Energy Intensive Industries who sent the diagnosis: 2,804.

95% Of Energy Intensive Industries fulfills the legal requirement.

Sanctions

After the control activities carried out by the Ministry of Economic Development about 700 penalties on defaulting enterprises were imposed (125 or around 20% on Energy Intensive Industries).

Next Steps

- Specific guidelines for energy audits (in collaboration with stakeholders, ESCo, category associations);

- Analysis productive sectors based on the summary sheets: definition of energy indicators and benchmarks. The Study is based mainly on data from excel file attachments (voluntary) to the diagnosis and also from direct contacts with stakeholders.

Next Steps

- Sectors already analyzed: plastic and iron metallurgy;
- Work in progress: supermarkets, private healthcare, paper, ceramic and metallurgy.

Next Steps

ENERGETIC STRUCTURE									
LA	CORPORATE DATA	NAME	ADDRESS	VAT NR	SECTOR [ATECO CODE]	YEAR	PRODUCTION [value]	PRODUCTION [u.m.]	
		Azienda modello	Via degli Orti, 173 - 00100 Roma	45789999338	2654	2014	30.000	t	
	CONSUMPTION	CODE	VECTOR	u.m.	value	Conversion factor in tep	PCI o EER	TOE	Vtot [toe]
		1	Electric Energy	kWhe	5.800.000	0,187 x 10^-3		1.085	3.147
		2	Natural Gas	Sm3	2.500.000	8.250 x 10 ^-7	8.250	2.063	
		3	Heat	kWht		860 x 10^-7		0	
		4	Cold	kWhf		(1/ EER) x 0,187 x 10^-3	3	0	
		5	Biomass	t		PCI (kcal/kg) x 10^-4	4.000	0	
		6	Burning Oil	kg		PCI (kcal/kg) x 10^-7	9.800	0	
		7	LPG	T		PCI (kcal/kg) x 10^-4	11.000	0	
		8	Gasoline	t		PCI (kcal/kg) x 10^-4	10.200	0	
		9	Petroleum Coke	t		PCI (kcal/kg) x 10^-4	8.300	0	
		10	Compressed Air	Nm3		0,11 x 0,187 x 10^-3		0	
		11	Other						
		12							
		13							

Next Steps

		ELECTRIC ENERGY	CONSUMPTION	TOE ING.	Ipg					
			kWh	Toe	measure[continous, spot or calculation]	kWh / t	Monitored Consumption	Other	% coverage	
LB	j=1	ELECTRIC ENERGY	5.800.000	1.085	Continuo	193,33	4.900.000	900.000	84%	

			CONSUMPTION	TOE ING.	Ipg		D.s.		Ips		
LC	1.1	MAIN ACTIVITIES	3.400.000	636	continous	113,33	value	u.m.	Measure[continous, spot or calculation]	Value	u.m. [kWh/D.s.]
LD	1.1.1	Press	2.000.000	374	continous	66,67	600	Pieces	Continous	3.333,33	kWh / pieces
	1.1.2	Cut	1.200.000	224	continous	40,00	550	Pieces	Continous	2.181,82	kWh / pieces
	1.1.3	Packing	200.000	37	continous	6,67	500	pieces	continous	400,00	kWh / pieces
	1.1.4										
	1.1.5										
	...										
	1.1.n										
LC	1.2	AUXILIARY SERVICES	1.000.000	187	Continous	33,33	value	u.m.	Measure[continous, spot o calculation]	value	u.m. [kWh/D.s.]
LD	1.2.1	Compressors Room	600.000	112	Continous	20,00	5.000.000	Nmc	Continous	0,12	kWh / Nmc
	1.2.2	Central refrigerator	300.000	56	spot	10,00	100.000	kWhf	Continous	3,00	kWh / kWhf
	1.2.3	Pumps Room	100.000	19	spot	3,33	100.000	mc	continous	1,00	kWh / mc
	1.2.4										
	1.2.5										
	...										
	1.2.n										
LC	1.3	GENERAL SERVICES	500.000	94	spot	16,67	value	u.m.	measure [continous, spot o calculation]	value	u.m. [kWh/D.s.]
LD	1.3.1	Lighting	100.000	19	Calculation	3,33	300	lux	spot	333,33	kWh / lux
	1.3.2	Cooling	350.000	65	Spot	11,67	4.000	GGxggxh	Calculation	87,50	kWh / GGxggxh
	1.3.3	Canteen	50.000	9	Calculation	1,67	35.000	meals	calculation	1,43	kWh / meals
	1.3.4										
	1.3.5										
	...										
	1.3.n										

Further information on Energy Diagnosis is available from:

- www.agenziaefficienzaenergetica.it/per-le-imprese/diagnosi-energetiche
- Email: diagnosienergetica@enea.it

Thanks for the attention