

European Energy Saving Award Energy Saving Plan

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European Energy Saving Award Energy Saving Plan

- What ENERGY SAVING PLAN is
- How to promote it... → EESA at National and International levels
- Results and indicators
- Feedback: Barriers and Boosters



What ENERGY SAVING PLAN is



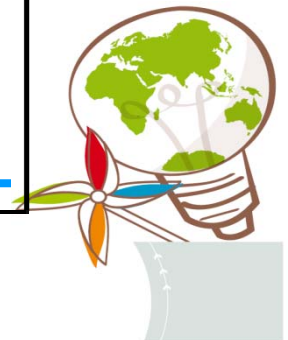
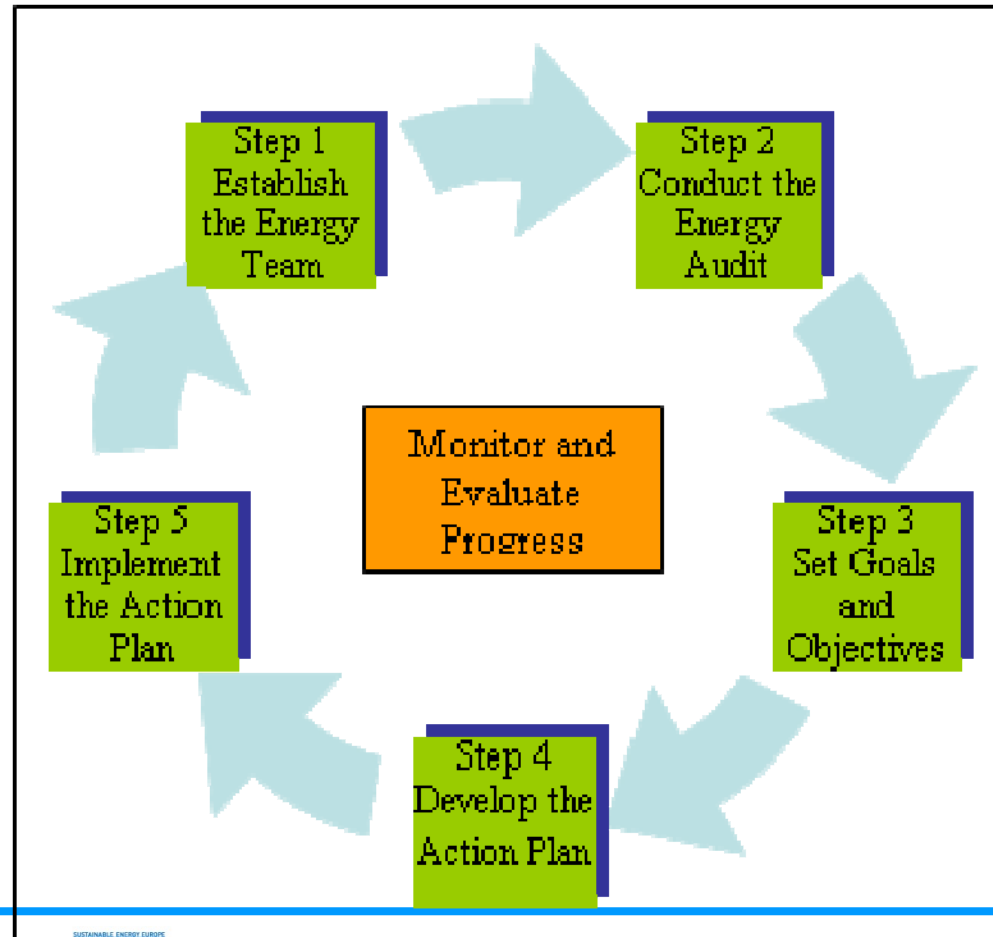
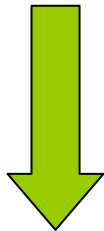
What ENERGY SAVING PLAN is

Energy Saving Plan

HB for Teachers

Consists of a programme to help schools develop a systematic approach to energy management.

Energy Plan guideline for successful performance and implementation is composed of a few simple steps



How to participate in the award

Energy
Saving Plan

HB for Teachers

Step 1:

Designate the Energy Board (Energy Management Team).

Main tasks :

to take responsibility for the whole process,

to disseminate the information as necessary across the school,

to put in operation useful tools and the actions,

to organize the activities,

to hold internal meetings periodically to improve and monitor the programme



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Main tasks :

Step 2:

Conduct an Energy Audit (Energy Review) of the facility

- assess how much energy your facility uses and discover where potential for energy conservation mainly lies

- detect energy consumption weaknesses and consequently set up energy saving measures and implementation

*Simplified - do it yourself
energy audit*



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Step 2:
Conduct an Energy Audit of the facility

3 Phases :

1st Phase :

Gather Basic consumption data

Same Table of Section 3 a) of Application Form

	Year 1	Year 2
Number of people		
Area of the school - Footage (m ²)		
Energy Service	Consumption	
Electricity Consumption	Year 1	Year 2
	kWh	
Fuel Consumption for Heating*	Year 1	Year 2
Natural gas (m ³ - kWh)		
Propane/Butane (m ³ - kWh - kg)		
Gasoil (litre - kg)		
Wood or other biomass	kg	
Coal	kg	



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Step 2:

Conduct an Energy Audit of the facility

2nd Phase :

Obtain Detailed energy
consumption

Could be skip and go directly to
the next (a simpler and quicker
process).

HB on Buildings

*first, second & third
exercises*

3rd Phase :

Conduct Energy
review (detecting
weakness)

“to detect the energy losses and discover
where energy can be conserved, by
making an energy review of devices,
equipment, building involvement (windows
and doors), and so on”.

*HB on
Buildings*

5th exercise

“Energy Audit Data Sheet”



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General goals:

Specific Objectives:

Step 3:

Establish goals & objectives for the Action Plan.

- To reduce energy consumption in the school facility by at least ___% at the end of the set period
 - in comparison with the previous year's bills
 - establish a baseline at the 20XX school year
 - calculate the baseline by averaging the consumption of the last years.

- Replace at least ___% of incandescent light bulbs
- Reduce time lights are switched on by ___% in the whole school.



How to participate in the award

Energy Saving Plan

HB for Teachers

Step 4:

Draw up a set of measures to enable the goals to be achieved (Action Plan).

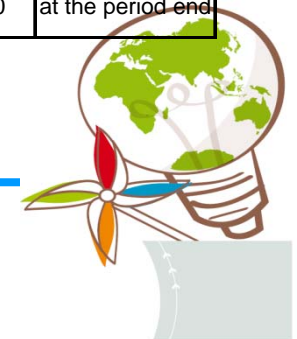
Built On the basis of the results of energy audits and inspections of the facility and systems

Energy Saving Action Plan Template

Target	Actions	Type of Actions (Behav. - Tech.)	Indicators	Resources			Timeline	Results
				Human (type & n°)	Material (type & n°)	Expenditure EUR		
Conserve 20% Electricity usage in lighting	1 a) Assign 2 pupils to monitor the lights are switch off when not needed b) Put up posters or stickers for turning off lights in each classroom	B	Number of lights turned off when the classrooms are empty	Students per class per week (number 2)	Posters or/and stickers (1 per class)	70 (estimation)	20 Nov.'09 - 20 Dic. '09	Record results weekly
	11 Install lighting and appliance control systems (timers, occupancy and motion sensors, etc)	T	Number of control system installed	Headmaster - Subcontracting to electrician	Approx.: 10 timers + 5 motion sensors	500 (estimation)	15 Oct. '09 - 15 Jan. '10	Record results at the period end



Alternatively



How to participate in the award

Energy Saving Plan

HB for Teachers

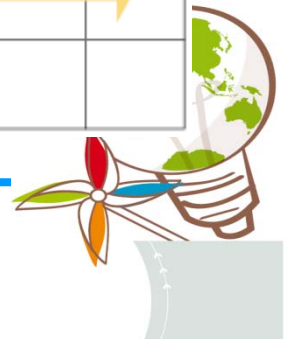
Step 4:

Draw up a set of measures to enable the goals to be achieved (Action Plan).

An easier method of drawing up an Energy Action Plan:

“to build up a set of measures/actions and binding them on a timeline”

Task	Q3 - 2009			Q4 - 2009			Q1 - 2010		
	July	August	September	October	November	December	January	February	March
Put up posters in passages asking people to turn off lights'	→								
Supply laboratory with power strips with on/off switches				→					
Implement a 10% Renewable Electricity self produced			→						
Perform a check of all equipment for heat and cooling				→					
'Put up posters asking people not to leave windows and doors to the outside open unnecessarily'		→							
Install weather stripping on all doors and windows					→				
Obtain and make available energy education materials for all teachers for incorporation into their subject matter					→				
Develop checklists for the school community on daily energy conservation actions		→							



Energy Saving Plan

HB for Teachers

key factors:

Step 5: Implement the Action Plan

- Involving and emphasizing whole school community participation
- development of communication strategies for encouraging broad involvement (see the chapter on the Communication Plan).

Examples of implementation activities:

- Adopt an energy awareness periodic training programme for all school employees
- Make available energy education materials for teachers for incorporation into their subject
- Adopt a set of energy standards guidelines for use in the daily life of the school facility
- Launch a periodic award for energy efficiency, green standards, environmentally-friendly behaviour, etc.




Energy Saving Plan
HB for Teachers

LAST Step 6:
Monitor and evaluate progress

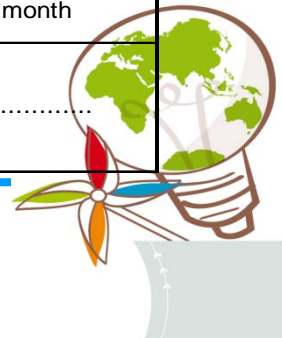
The monitoring system has to be based on the objectives, indicators, and timeline set out in the Action Plan and should use some easy tools,

Examples:

- Results observation (a diary)
- Progress reports 
- Meetings
- Evaluation
- Use of information

Progress Report Template

Periodicity: Quarterly (suggested)			
Date:			
Realization	Results	Financial Data	Evaluation
		Expenditure (EUR)	Comments
a) Pupils have been assigned b) Posters and stickers have been put up in all classrooms	Approximately 70% of lights are off	100	The missing 30% is caused by a restricted group of students not sufficiently involved
This task has been recently subcontracted		500	Starting date expected by
	10 doors out of 15 and 40 windows out of 75 have been sealed	350	End of action expected in 1 month
.....



How to promote it... → EESA



How to promote it... → EESA



LEARN BY DOING



Award

Awards Categories

1. Schools
2. Students
3. Multimedia

National Level:

Awarded (3) three best for
each category
= 9 awarded

European Level:

First of each category per country will
compete

Participants = Three (3) / country = 36

EU Awarded = 9 (3 per category)

European Awarding ceremony (here, TODAY):

The winners of each category = 9 delegations invited



How to promote it... → EESA

What we
asked

Application Form (depends on category)

- Section one: Information about the school
- Section two: Activities and Measures
- Section three: Consumption and Achievements.
- Section four: Future Plan
- Section five: Declaration (compulsory)

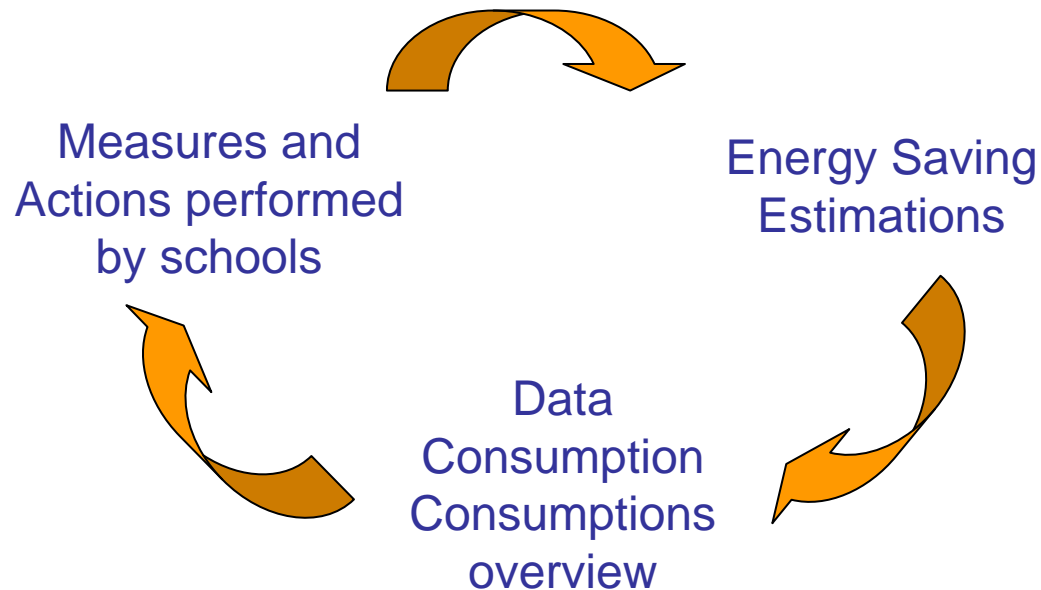
20th May 2010



What we
appreciated

Most of the Evaluation lies in the

Coherence among:

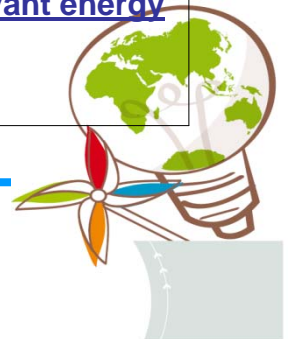


How to promote it... → EESA

Who decided

Applications will be examined and evaluated by Evaluation Committees

	NATIONAL	EUROPEAN
Appointed by	National Partner	Proj. Coordinator
Composition	<p>Members of the National jury: (5)</p> <p>One representative of each:</p> <ul style="list-style-type: none"> • the national partner • an educational authority • an energy authority or an energy agency • an environmental association • one or two well known people from politics, sports or showbiz. 	<p>Members of the European jury: (19)</p> <p>One representative of:</p> <ul style="list-style-type: none"> • each partner • EACI • a teacher/school association • an environmental association • two celebrities from politics, sports or showbiz. <p><u>The European jury awards the participants that have obtained the most relevant energy savings.</u></p>



How we
decided

All Applications have been assessed according to a set of Evaluation Criteria (with different relevance/weight for each category)



Score Grid

divided into sections (7) and subsections (....)

➤ **Guidance Principle:**

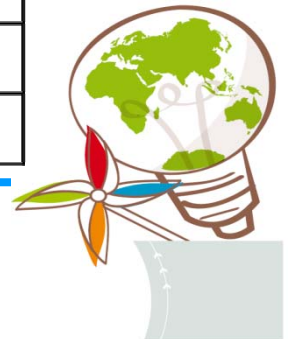
“coherence between measures and energy saving results
estimated/claimed by participants”



How we decided

SCHOOLS & STUDENTS

Section/Subsection Criteria	Schools	Single & Group of students
1. Relevance of the action	Gateway	Gateway
1.1 How relevant is the proposal to the objectives and one or more of the priorities of the Call for Award?		
1.2 Are savings and renewable energy facts a key part of the practice and culture of the school/household?		
2. Demonstrability of energy savings*	40	30
2.1 Are energy savings proved?		
2.2. Reliability of proving documents		
2.3. Do documents refer more possible to the period time of the award?		
2.4. Are savings generated by the measures illustrated by the applicants?		
3. Integration of energy theme into the school life/operations	15	Not applicable
3.1 Has been an Energy Plan planned and implemented?		
3.2 Has energy efficiency related topics included into the school curricula?		
3.3 Has been settled a continuous monitoring of energy consumption and efficiency?		



How we decided

SCHOOLS & STUDENTS

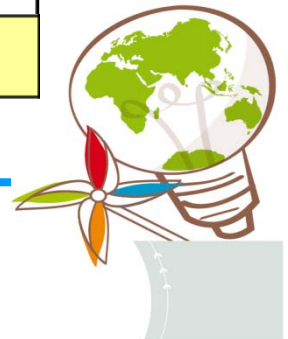
4 Originality of the action	5	25
4.1 Does the action show an innovative approach to reach energy saving?		
5 Dissemination and participation	10	20
5.1 Does the action contain dissemination practices?		
5.2 Is the partners' level of involvement and participation in the action satisfactory?		Not applicable
5.3 Have been other people (family or friends) actively involved?	Not applicable	
6 Replicability	5	5
6.1 Has the action the potentiality to be replicable by others?		
7 Consistency and Size of the actions	25	20
7.1. Size of effort (time and/or money)		
7.2. Is there a sort of rational integration among different measures, such as behavioural, technical, curricula measures?		
7.3 How comprehensive the Energy Saving Plan is (if there is)?		Not applicable
7.4. Future Plans		
7.5. Activities already done		
Maximum Total Score	100	100



How we decided

VIDEOS

Section/Subsection Criteria	VIDEO / MULTIMEDIA
1. Relevance of the action (Threshold)	40
1.1 Video or digital contents related to the principles of EE and of RES systems?	
1.2 Do they promote energy efficient behaviours?	
2. Originality and artistic quality	30
term of the energy savings solutions proposed	
2.2. Originality and artistic quality of the way in which the message is presented	
3. Impact	30
3.1 Effectiveness of the message	
Maximum Total Score	100



So...

*Summarizing
links between*

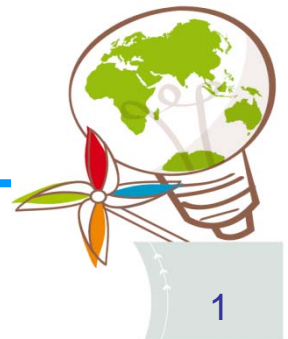
Energy Saving Plan

EESA Application Form

- | | |
|----------------------------------|--|
| 1. Energy Board | Section 1: Information about the school |
| 2. Energy Audit | Section 2: Activities and Measures |
| 3. Establish goals objectives | Section 3: Consumption and Achievements. |
| 4. Set of measures (Action Plan) | Section 4: Future Plan |
| 5. Implement | Section 5: Declaration |
| 6. Monitor and evaluate progress | |



Results and indicators





Results and indicators

BY COUNTRIES		
SCORE	RANKING	
257,89	1	Italy
255,13	2	Spain
254,63	3	Rumania
230,31	4	Czech Rep.
229,83	5	Ireland
228,27	6	Slovenia
227,41	7	Latvia
226,27	8	Austria
204,69	9	Bulgaria
187,28	10	Greece
179,23	11	France
116,63	12	The Netherl.



SCHOOLS			STUDENTS			VIDEOS		
SCORE	RANKING		SCORE	RANKING		SCORE	RANKING	
95,38	1	Rumania	85,59	1	Rumania	89,86	1	Ireland
91,72	2	Spain	84,00	2	Italy	84,55	2	Spain
90,84	3	Italy	78,86	3	Spain	84,34	3	Slovenia
90,47	4	Latvia	78,19	4	Czech Rep.	83,05	4	Italy
83,78	5	Slovenia	68,39	5	Ireland	82,19	5	Austria
82,00	6	Bulgaria	66,86	6	Austria	78,81	6	Czech Rep.
77,58	7	France	64,52	7	Latvia	73,66	7	Rumania
77,22	8	Austria	60,16	8	Bulgaria	72,42	8	Latvia
73,78	9	Greece	60,14	9	Slovenia	62,53	9	Bulgaria
73,31	10	Czech Rep.	58,35	10	Greece	60,28	10	Netherl.
71,58	11	Ireland	56,34	11	The	55,14	11	Greece
0,00	NOT PRESENTED	The Netherl.	54,80	12	France	46,86	12	France



Results and indicators

<i>Partner</i>	<i>Schools</i>	<i>Students</i>	<i>Multimedia</i>
Italy	11	2	10
Greece	7	6	3
Spain	8	10	3
Ireland	4	3	7
Czech Rep.	4	3	6
Netherlands	0	2	6
Latvia	17	53	32
France	3	3	3
Romania	8	22	13
Slovenia	7	17	98
Austria	1	2	3
Bulgaria	8	3	3
	78	126	187



Feedback: Barriers and Boosters

BARRIERS

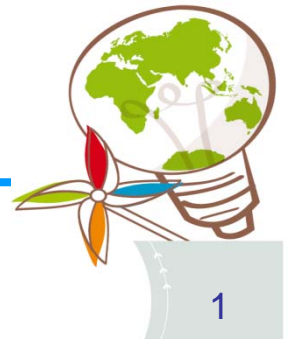
- Some schools & students didn't reach to the end
 - SCHOOLS: 131 started, 78 finished
 - STUDENTS: 155 started, 123 finished
- Bureaucrazy (time consuming procedures & multi-level permissions)
- Problem to fit regular teaching calendar and IUSES demands & schedule
- Lack of time to really demonstrate energy savings
- Cultural lack of initiative of students with no supervision
- Not very encouraging prizes
- Lack of financial support by IUSES for energy efficiency improvements at schools; SCHOOLS don't have budget for this
- "Crisis" lowered SCHOOLS' budgets even more
- Extra-work for teachers with no returns



Feedback: Barriers and Boosters

BOOSTERS

- Video Projects were increased by the end of the project:
 - VIDEOS: 148 by the middle of the project, 187 finished
- Great output in terms of audit examples and videos for future energy efficiency teaching initiatives at schools
- Energy Efficiency educating materials tested and ready at IUSES website
<http://www.iuses.eu/downloads.php>



Feedback: Barriers and Boosters

BOOSTERS

- More than 147.000 teachers and students are now aware of energy problems and saving strategies

- More than 1,1 Million kWh saved = 110.000 bottles of oil



~ 5 x 5 x 5 m tank of oil

- 3500 tons CO² saved = CO² fixed by 1,4 Million trees in one year



~ 2000 Hectars of forest



BOOSTERS

- Sinei
- Toda
- an ei



Currículo Europeo



PROYECTO e-TWINNING



Alumnos participantes:



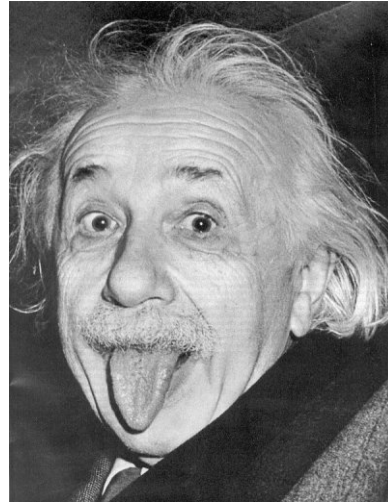
Scuola Media Statale
Diego Vitrioli
Reggio Calabria
ITALIA

PROJET SAVING ENERGY IN SCHOOLS

La idea principal del proyecto es realizar una **auditoria energética** y poder comparar entre diferentes colegios europeos **SMS Diego Vitrioli, Reggio Calabria, ITALIA** información referente a los medios de transporte que utilizan los alumnos para ir al colegio, la iluminación de las aulas y pasillos, los residuos que se generan en clase y en el patio y los equipos informáticos, con la finalidad de fomentar medidas de ahorro de energía y contribuir al medio ambiente.

Totalidad del Colegio		
Equipación	AULAS	Horas de utilización a la semana
PC's Sobremesa (solo torre)	20	8
Pantallas	3	4
Pantallas Planas	9	10
Impresoras inyección de tinta	10	30
Impresora Láser	5	5
Impresora Láser	3	4
Proyector	3	5
TV	2	4
Equipo musical	4	10
---	59	80





"Life is like riding a bicycle -
in order to keep your balance you must keep moving"
Albert Einstein.

