ENERGY EDUCATION GOVERNANCE SCHOOLS

Energy
State of the art

WP2 Results of the Questionnaire,
September 2010

- WP2
- Energy State of the Art
- ROCN workpackage leader

Energy State of the Art

Results are based on data collection of
- 10 countries
- 39 schools

Valid percentages only
Tendencies

Topics
- Accommodation
- Governance
- Education
- Training Needs
- Best Practice

Accommodation

Year of Construction	%
1-10 years ago	13
10-20 years ago	13
over 20 years ago	74
Total	100

Accommodation

Square meters used	%
less than 5000	43
5000-15000	38
15000 or more	19
Total	100

Accommodation

Number of people at school (%)	2008	2007	2006	2005
Students				
- less than 500	34	32	34	37
- 500-1000	45	38	34	33
- 1000-1500	16	24	25	23
-1500 or more	5	6	7	7
Total				
- less than 500	29	29	31	30
- 500-1000	37	38	35	36
- 1000-1500	26	27	28	27
-1500 or more	8	6	6	7

Accommodation

Energy used (%)	2008	2007	2006	2005
Electricity				
- less than 30000	18	13	14	8
- 30000-60000	21	27	14	17
- 60000-120000	18	13	25	29
- more than 120000	43	47	47	46
Gas				
- less than 30000	38	26	13	15
- 30000-60000	14	32	25	23
- 60000-120000	33	32	37	31
- more than 120000	15	10	25	31

Accommodation

Other energy sources used (%)	2008	2007	2006	2005
Number of sources				
none	61	60	54	54
one source	33	34	40	38
two sources	3	3	3	4
three sources	3	3	3	4

Governance

Owner of accommodation	%
the Government	18
a local authority	77
a private institute	5
Total	100

Governance

Influence on energy use	%
Yes	79
If yes, management	
through the headmaster	36
through the school board	13
by public experts	3
by private experts	3
otherwise	45

Governance

Habits practised (%)	
- double glazing	76
- use of specific lamps	71
- appliances with low consumption	42
- use of circulating water	21
- sun protection	21
- power switches	21
others	37

Governance

Other habits

- Using sensors turning off electricity (i.e. the lights) after a certain time
- Turning off the lights and heating during the weekend and holidays
- Using the temperature of the groundwater for heating
- Energy consumption depending on weather conditions
- No specific equipment but smart / intelligent behaviour such as:
  - switches are labelled and easy to find to turn off
  - heating is regulated when windows are open

Governance

Incentives used (%)	
- internal communication	89
- consumption display	37
- other	20

Governance

Other incentives

A diagram of energy consumption is hanging in the floor (target group seems to be the teachers); class rooms are equipped with thermometers, so the students can monitor daily the temperature of the room.

Governance

Plans, politics and support (%)	
- work with action plans to reduce the use of energy	41
- existence of relevant national energy policies	26
- having support in using sustainable energy	46

Governance

Support given by

- the landimmobilien-cooperation
- the ministry of Education
- the province
- the city council i.e. the department of environment and the department for maintenance of buildings

Education

Educational level	%
primary school	5
secondary school	34
vocational education	61
Total	100

Education

The 'use of energy' is a subject matter of the curriculum for most of the schools i.e. 87%

Education

Kinds of energy in curriculum (%)	
- electric energy	92
- thermal energy	84
- potential energy	74
- chemical energy	74
- kinetic energy	68
- nuclear energy	53
- surface energy	32
- geothermal energy	58
- others	24

Education

Free to implement (%)	
- as organisation	27
- as management	35
- as teacher(s)	78

Education

Students involved in energy issues (%)	
- workshops	38
- club	9
- thematic day	62
- specific projects	79
- otherwise	32

Education

Audit	%
Yes	74
Yes, kind of audit:	
consumption data	48
installations used	59
Both	41

Education

Audit	%
Yes	74
Yes involved are:	
students	24
school staff	66
external organisation(s)	72

Training Needs

Teachers trained	%
Yes	55

Training Needs

Competence (1-5)	1	2	3	4	5
- on sustainable development	6	22	**42**	19	11
- education on sustainable development	6	**33**	28	25	8
- problems of energy and environment	3	**30**	**30**	25	11
- energy efficiency and saving	3	33	**36**	8	19
- renewable energy sources	3	28	**38**	17	14
- institutional framework	19	**50**	25	6	0
- european standards	37	**39**	20	4	0

Training Needs

Teachers training needs (%)	Yes
- on sustainable development	94
- education on sustainable development	94
- problems of energy and environment	94
- energy efficiency and saving	94
- renewable energy sources	91
- institutional framework	94
- european standards	84

Training Needs

Other staff training needs (%)	Yes
- on sustainable development	74
- education on sustainable development	71
- problems of energy and environment	75
- energy efficiency and saving	79
- renewable energy sources	82
- institutional framework	66
- european standards	64

Training Needs

Teachers training needs on problems of energy and environment (%)	Yes
- on green house gases	52
- on climate change	77
- on CO-2 balance	61
- on energy scenario	90

Training Needs

Other school staff training needs on problems of energy and environment (%)	Yes
- on green house gases	52
- on climate change	77
- on CO-2 balance	61
- on energy scenario	90

Training Needs

Teachers training needs on renewable energy sources (%)	Yes
- on solar thermal	70
- on photovoltaic	70
- on hydroelectric and marine energy	39
- on energy from biomass	57
- on geothermal	48
- on other alternative sources	36

Training Needs

Other school staff training needs on renewable energy sources (%)	Yes
- on solar thermal	62
- on photovoltaic	66
- on hydroelectric and marine energy	25
- on energy from biomass	41
- on geothermal	47
- on other alternative sources	31

Best Practice

Cooperate in programmes	%
Yes	68
If yes at level:	
local and regional	68
national	16
european	8
other level	8

Best Practice

Use of alternative sources	%
Yes	36
If yes:	-Solar energy -Biomass and wood

Best Practice

Topics (%)	Yes
- attention focussed on technical aspects	40
- educational programmes focussed on attitudes	53
- sustainable development part of everyday school life	31

Best Practice

Experience (%)	Yes
- with energy audit	70
- with thermograph analysis	15
- with CO-2 balance	22
- with equipment in renewable energy	44
- otherwise	4

The End