

Figure 9: Suggested communication strategy




What should the hotel say to guests about its environmental policy?

State the environmental objectives that the hotel has set for its facilities and the hotel should provide information on the actions it is taking to reduce its environmental impact. It is important to explain that reduction of the energy consumption of the hotel is part of the hotel's environmental strategy. The hotel may say, for instance:

- "Substantial amounts of energy are used by hotel facilities worldwide, most being derived from fossil fuels, thus generating huge amounts of greenhouse gas. By improving the energy efficiency of our hotel and by avoiding waste of energy, our hotel is taking important steps toward reducing its green house gas emissions and contributing to the preservation of the earth's natural resources."
- If the energy savings obtained are re-invested in new environmental measures or are used to improve the quality of service delivered to the guests (e.g. improve food quality), it is recommended that the hotel let their guests know!

Which simple actions can the hotel advice its guests to take in order to reduce energy consumption?

The table below provides examples of the advice the hotel can provide to their guests.

8 simple actions to reduce the energy consumption of a hotel while maintaining its level of comfort!	
	<p><i>Help us save electricity:</i></p> <ul style="list-style-type: none"> By avoiding waste of electricity, you will contribute to the preservation of our natural resources and landscapes. That is why we invite you to turn off electrical appliances when not in use. In particular: <ol style="list-style-type: none"> Please stop the air-conditioning when you leave the room. Please switch off lights when leaving the room. Please avoid sleep mode for televisions (turn them off instead).
	<p><i>Help us reduce energy use for space heating and cooling:</i></p> <ul style="list-style-type: none"> Did you know that almost half of the energy consumed in hotels is used for space heating and cooling, and that a significant portion of this is usually wasted? <ol style="list-style-type: none"> Please close windows when the heating system or air-conditioning system is switched on. Please keep the room temperature reasonable in winter (around 20-22°C) and in summer (around 25-26°C).
	<p><i>Help us save water:</i></p> <ul style="list-style-type: none"> Water is a precious resource for humanity. By using water sparingly, you will contribute to its preservation and you will also reduce the substantial amount of energy used to heat the water! <ol style="list-style-type: none"> If possible, please take a shower instead of a bath. Please inform the cleaning staff if you are willing to keep your towels more than one day. Please inform hotel staff in case of water leaks.
<p><i>Thank you for supporting our environmental objectives. Please let the hotel manager know if you have any suggestions to reduce energy consumption and improve the environmental friendliness of our hotel!</i></p>	

Which information medium to use (oral communication, leaflets, brochures, video...)?

- The main point is to maintain active communication (written, oral or visual).
- If the hotel wants to inform their guests about its environmental policy and about the actions they can take to reduce the energy consumption, it is recommended that they provide them with a written document (e.g. a brief notice, leaflet or brochure). The hotel may want to hand out this document at the reception desk or leave it in the guestrooms.
- In addition, to ensure maximum impact of the hotel communication, it is important that the staff at the reception desk inform arriving guests that the hotel has an environmental policy.
- Finally, the hotel may also consider mentioning its energy policy on its Internet website.

About its implementation:

- Easiness: Easy (*)
- Best moment: can be done at any time.
- Relevant initial situation: the hotel does not have any strategy in its environmental policy for providing environmental information to its guests, nor does it inform his guests about the simple actions they can take to help save energy.

Cost:

- Time to be spent on the preparation of the information documents and money to be spent on editing (it may cost around 1,000 Euros for production of 150 brochures of 15 pages, and much less if you make your own editing and printing).

Indicative return on investment time:

< 1 year

ANNEX VII. FINANCING SOURCES FOR EE AND RE PROJECT FINANCING:

7.01 EQUITY⁵³

Equity can take the form of direct investment of one's own resources and capital, or as third party capital inputs, e.g. in the form of risk capital by venture capital funds or simply wealthy families.

Using the hotelier resources as equity is the simplest method of EE and RE project financing and makes sense if the hotel has sufficient cash reserves and a strong balance sheet. With this form of equity, all cost savings realized from the upgrade are immediately available to the hotel, and the hotel is able to realize the tax benefit of the equipment's depreciation. However, the hotel incurs an opportunity cost in that it no longer has that capital available for other investments. This financing method is good for relatively inexpensive and simple efficiency measures that are likely to pay for themselves in about a year. The contractual arrangement is typically structured as a fixed cost contract or possibly a per-unit cost guarantee.

Debt providers expect all projects to be at least partly financed through equity. Lenders demand that borrowers take a direct equity stake themselves (to ensure their commitment to the success of the project). In practice, lenders normally look for a minimum of around 20% of the project cost to come in the form of the borrower's own equity.⁵⁴ RET with higher risks are expected to have a correspondingly higher equity ratio.

However, most project developers have a limited amount of own funds to make this essential contribution to the financial package. This creates the need for the participation of additional equity investors.

7.02 LOAN⁵⁵

A loan may be obtained to finance the project. In financing an EE or RE project, a bank may ask for a personal guarantee from the hotel owner. The lender's goal is for the client to make minimum payments dependably, so lenders may require up to a 40% down payment on loans for energy projects. Lenders consider EE and RE projects to be high risk, which results in less leverage, higher interest rates, and a shorter debt term.

⁵³ public finance mechanisms to catalyze sustainable energy sector growth. SEFI UNEP. www.energy-base.org/.../media/.../SEFI_Public_Finance_Report.pdf

⁵⁴ Financing Renewable Energy, Instruments, Strategies, Practices Approaches. December 2005 KFW.

⁵⁵ public finance mechanisms to catalyze sustainable energy sector growth. SEFI UNEP. www.energy-base.org/.../media/.../SEFI_Public_Finance_Report.pdf

7.03 PERFORMANCE CONTRACTING AND ESCOs⁵⁶

This option is attractive to the customer because it requires no up-front cost, since the project is paid for out of the energy savings from the efficiency project itself. An Energy Service Company (ESCO) provides the financing and assumes the performance risks associated with the project. Until the project has been fully paid for, the ESCO owns the upgraded equipment. That means that the equipment asset and debt do not appear on the customer's balance sheet.

Performance contracting relies on the financial strength of the building owner, and the cost savings potential of the project. Performance contracting is an operating budget issue more than a capital budget issue despite the upgraded equipment provided through the project. Capital budgeting may typically require board approval, and may be decided upon only periodically. On the other hand, the utility payments are already in the operating budget, so any savings through the implementation of efficiency measures may free funds for discretionary spending.

Under a performance contract, after the energy efficiency upgrade, the funds that were used to pay the energy bill cover the new energy bill and the payment to the ESCO, and generate positive cash flow for the customer. Under a "shared savings" performance contract, the customer and the ESCO divide the cost savings according to the contract documents. A "paid from savings" performance contract sets the customers share of the savings at a fixed level, while the ESCO payments fluctuate according to actual savings.

Historically, when pursuing an EE or RE project, large public and private clients would hire an engineering company to design the installation. The client would then issue requests for proposals (RFPs) to contractors. The engineering company assists the client in selecting the best or lowest cost contractor. This historical procurement process created problems for the client when trying to procure energy services, leading to the emergence of the ESCO. EE and RE project clients are not procuring an equipment installation, but are instead looking for actual results in the form of energy savings in addition to improved system performance. Under the old procurement process, the design engineer could not be held responsible for the installation by a different contractor, nor could the installation contractor be held responsible for the design. Existing conditions, for example, may be substantially different from those established in the design, profoundly impacting energy savings. Under the ESCO model, the ESCO assumes the role of a design/builder, taking responsibility for the whole process.

ESCOs meet client needs to reduce costs, improve energy efficiency, manage risks, consolidate services, and enhance competitive advantage. To meet these needs ESCOs offer integrated energy services including analysis, energy and equipment, installation, monitoring, and guarantees. Contracting arrangements with an ESCO usually offer flexible terms, financing, risk management, quality assurance, verifiable performance, and follow-on service. Specific energy efficiency options vary from project to project in scale, ownership, location, technology, load factor, run-time, control type, services, and financing provided.

⁵⁶ Best Practices Guide: Economic and Financial Evaluation of Energy Efficiency Projects and Programs Prepared for: Energy and Environment Training Program Office of Energy, Environment and Technology Global Bureau, Center for the Environment United States Agency for International Development.

Fundamentally, an ESCO makes money in a fashion similar to a general contractor. ESCOs typically mark up the cost of materials to cover overhead and profit. ESCOs will attempt to make a small margin on financing the project consistent with the credit and performance risk involved. However, an ESCO may or may not make money from financing, particularly if it is offered through a third party. Additional costs are associated with monitoring the project that typically are not embedded in the interest rate cost or the installed cost. These are usually included as a separate line item or a fee for a savings guarantee.

7.04 SAVINGS GUARANTEE

A savings guarantee can be entered into with the ESCO separate from an installation agreement. This is recommended if the contractual arrangement is not a performance contract. Performance contracts already include an implicit savings guarantee.

A savings guarantee reduces the customer's risk by guaranteeing that energy cost savings will meet or exceed an established minimum value. The guarantee acts like an insurance policy where the customer pays a premium that compensates the guarantor for the performance risk and monitoring costs.

7.05 OPERATING LEASE

Under an operating lease, the lessor owns the equipment and claims any tax benefits associated with the depreciation of the equipment. At the end of the contract term the customer can purchase the equipment at fair market value (or at a predetermined amount), renegotiate the lease, or have the equipment removed. An operating lease is also known as an "off balance sheet" lease.

Firms often choose to lease long-term assets rather than buy them for a variety of reasons - the tax benefits are greater to the lessor than the lessees, leases offer more flexibility in terms of adjusting to changes in technology and capacity needs. Lease payments create the same kind of obligation that interest payments on debt create, and have to be viewed in a similar way.

In an operating lease, the lessor (or owner) transfers only the right to use the property to the lessee. At the end of the lease period, the lessee returns the property to the lessor. Since the lessee does not assume the risk of ownership, the lease expense is treated as an operating expense in the income statement and the lease does not affect the balance sheet.

ANNEX VIII. INCENTIVES FOR EE/RE APPLICATIONS

8.01 FEED IN TARIFF⁵⁷

The tariff levels vary depending on the country, technology, size and location of the systems. The information below provides an overview of different EU feed-in tariffs. Please note that

⁵⁷ <http://www.sourcerenewable.com/en/pages/grants-funding.aspx>

some of the details of the feed-in tariffs (e.g. regarding eligibility, bonuses, degression, etc.) are more detailed than they appear hear. The information is merely intended to give an overview and does not reflect all details of the statutory requirements.

In Germany⁵⁸

First introduced in 2000, the Erneuerbare-Energien-Gesetz (EEG) law is reviewed on a regular basis and the 2010 version is currently in force. Its predecessor was the 1991 "Stromeinspeisegesetz". Since 2009, there are additional tariffs for electricity immediately consumed rather than supplied to the grid with increasing returns if more than 30% of overall production is consumed on site. This is to motivate demand-side management and help develop solutions to the intermittency of solar power.

The German Bundestag (Parliament), on 8 July 2010, finally decided to reduce the feed-in tariffs for solar installations that begin operating for the first time after 30 June 2010 and after 30 September 2010. The cut starting 1 July 2010 shall apply retroactively.

Table 8. German feed in tariffs for some RE technologies⁵⁹:

Note that the amounts are in cents €/kWh

Hydropower	
<i>Facilities of up to 5 MW – new</i>	
Up to 500 kW	12.67
Up to 2 MW	8.65
Up to 5 MW	7.65
Biomass	
Up to 150 kW	11.55
Up to 500 kW	9.09
<i>Bonus for the use of renewable raw materials (Nawaro Bonus)</i>	
<i>Share of capacity up to 150 kW</i>	
Biomass excluding biogas	+ 5.94
Biogas	+ 6.93
Combined heat and power (CHP) bonus (only for the share of feed-in deemed to be CHP electricity)	
Up to 20 MW	+ 2.97
Solar radiation	
<i>Roof-mounted facilities</i>	
Up to 30 kW	39.14
Up to 100 kW	37.23
Up to 1 MW	35.23
Over 1 MW	29.37
<i>Electricity produced is used within building/facility</i>	
Up to 30 kW	22.76

⁵⁸ http://www.germanenergyblog.de/?page_id=965

⁵⁹ www.allianceforrenewableenergy.org/.../hawaii_feedin_tariff_case_studies.doc

Spain⁶⁰

The current Spanish feed-in legislation is Royal Decree 1578/2008 (Real Decreto 1578/2008) for photovoltaic installations and Royal Decree 661/2007 for other renewable technologies that supply electricity to the public grid. Originally under the 661/2007, photovoltaic feed-in tariffs have been recently (Sept 2008) developed under a separate specific legal framework due to the rapid growth experienced by this technology since release of the original scheme.

The current photovoltaic decree 1578/2008 categorizes installations into two main groups with differentiated tariffs:

1. Building-integrated installations: tariff of 34c€/kWh for systems up to 20 kW of nominal power, and of 31c€/kWh for systems above 20 kW with a limit of nominal power of 2MW.
2. Non-integrated installations: 32c€/kWh for systems up to 10MW of nominal power.

For other technologies, decree 661/2007 sets the following tariffs:

Table 9. Feed in Tariffs in Spain

Energy Source	Feed-in Tariff
Cogeneration systems	Maximum FiT of 13.29c€/kWh during lifetime of system.
Solar thermoelectric	26.94 c€/kWh for the first 25 years
Wind systems	Up to 7.32 c€/kWh for the first 20 years
Geothermal, wave, tidal and sea-thermal	6.89 c€/kWh for the first 20 years
Hydroelectric	7.8 c€/kWh for the first 25 years
Biomass and biogas	Up to 13.06 c€/kWh for the first 15 years
Waste combustion	Up to 12.57 c€/kWh for the first 15 years

Czech Republic

The Czech Republic introduced a feed-in tariff in 2005 by act of law no. 180/2005 for a wide range of renewable sources.⁶¹ The tariff is guaranteed for 15 to 30 years (depending on technology). Supported technologies are small hydropower (up to 10 MW), biomass, biogas, wind and photovoltaics. As of 2010 the tariff goes from 12.15 CZK/kWh to 12.25 CZK/kWh for small photovoltaic.⁶²

⁶⁰ <http://lists.gaiahost.coop/pipermail/sage/20110108/008329.html>

⁶¹ <http://www.renewableenergyworld.com/rea/news/article/2005/05/czech-republic-passes-feed-in-tariff-law-30844>

⁶² http://www.eru.cz/user_data/files/cenova%20rozhodnuti/CR%20elektro/OZ/ER%20CR%205_2009_slunce.pdf

8.02 ECO-LABELS AND CERTIFICATION SCHEMES FOR HOTELS

Since 1993, the European Network for Sustainable Tourism Development (ECOTRANS) with its 20 partners in 12 European countries has been doing systematic research and monitoring of efforts to set sustainable standards within Europe's tourism industry. Its database, ECO-TIP,⁶³ contains more than 100 eco-labels and awards and over 300 examples of "good practices" by tourism businesses. The diversity of tourism in Europe, however, presents enormous challenges for certification initiatives. Analysis of the criteria of the leading certificates in Europe shows that many recommend or request businesses to regularly monitor energy, water and waste consumption per overnight stay. This requirement is part of the VISIT (Voluntary Initiative for Sustainability in Tourism) initiative, which has been designed to demonstrate how tourism eco-labels in Europe can collaborate and move the tourism market towards sustainability.

VISIT

In 2001/2002, a partnership with 10 regional, national and international eco-labelling schemes was established within the VISIT initiative.⁶⁴ VISIT stands for "Voluntary Initiative for Sustainability in Tourism." Together with Ecotrans as independent co-coordinator, these labels based their work on the internationally recognized ISO 14024 standard for "Type I Eco-labels".

The VISIT eco-labels (for hotels) have intensively collaborated with each other and it was found that there is considerable overlap of criteria. Nine out of eleven VISIT eco-labels already require the same or similar criteria for 23 different environmental issues.⁶⁵ This has allowed the VISIT eco-labels and the EU Flower to agree on joint targets for the next revision of their criteria, with the aim to have a set of 20 mandatory criteria implemented at more than 1000 certified hotels and camping sites in Europe.

Some of the core criteria for the VISIT eco-labels are:

1. Political implementation of sustainability concepts
2. Environmental Indicators
 - a. Tourism transport (access to destination and return travel, local mobility)
 - b. Carrying capacity - land use, bio-diversity, tourism activities
 - c. Use of energy
 - d. Use of water
 - e. Solid waste management
3. Social and cultural performance indicators
4. Economic performance indicators

For more information about the VISIT eco-labels criteria, go to: www.visit21.net/

⁶³ <http://www.ecotrans.org/visit/brochure/fr/060.htm>

⁶⁴ www.visit21.net/

⁶⁵ These also form part of the EU Flower.

European Eco-label

If the hotelier is planning to set up an environmental policy and action plan for the hotel, it may be worth starting by assessing whether the hotel meets the standards of the EU Eco-label, and what actions the hotel would need to take to qualify for the EU Eco-label.

The EU Eco-label is an official certification from the European Union that has gained European-wide recognition and can be effectively integrated into the hotel marketing strategy. Even if the hotel is not planning to obtain the EU Eco-label, reading about it may give the hotel ideas of the actions the hotel can take to improve the environmental performance of its hotel, especially regarding energy use and efficiency.

General purpose of the EU Eco-label

- The EU eco-label for tourist accommodation has been created to identify and highlight tourism companies that respect the environment. The EU-flower logo signals high environmental performance to customers.
- Because a growing number of guests now demand environmentally friendly accommodation, the EU Eco-label can be a strong marketing asset for any hotel.

What are the requirements to qualify for the EU Eco-label?

- The criteria of the EU Eco-label relate to the following environmental domains:
 - o Energy consumption
 - o Water consumption
 - o Waste production
 - o Use of chemical products
 - o Environmental management
- Some criteria are mandatory while others are optional. However, the hotel must satisfy a sufficient number of the optional criteria in order to qualify. For more information about the EU Eco-label criteria, go to www.ecolabel-tourism.eu.
- As a first step, the hotelier can evaluate how close its hotel is to qualifying for the EU Eco-label by considering all mandatory criteria and assessing whether the hotel meets or exceeds them. This will give the hotelier an initial idea of the efforts the hotel may need to make in order to qualify for the EU Eco-label. The next step would be to review the optional criteria in the same manner.
 - o Regarding energy-related criteria, the table below shows which criteria (mandatory and optional) deal with EE and RE in the hotel.
 - o The hotelier can find more detailed information about the requirements for each criterion from the www.traintoecolabel.org website. (Please note that this website is based on the old criteria for the EU-Eco-label that were valid until October 31st, 2009. It had not yet been updated as of August 2010).

EE and RE components of the EU Eco-label (Commission Decision of 9 July 2009)

The table below lists all the criteria that deal directly or indirectly with energy. The table specifies whether the criteria are mandatory or optional, and whether they deal with the type of energy used, efficiency of equipment, equipment regulation, building characteristics, or management measures.

	Criteria #	Mandatory / Optional	Specific aspect addressed by the criteria
<i>Type of energy used</i>			
	1	M	▪ Use of electricity from renewable sources (at least 50%)
	2	M	▪ No use of coal and heavy oils
	30	O	▪ Generation of electricity through renewable energy sources (at least 20% of annual consumption)
	31	O	▪ Energy from renewable energy sources
	34	O	▪ District Heating
	35	O	▪ Combined heat and power
	36	O	▪ Use of heat pump
	48	O	▪ Swimming pool heating with renewable energy sources
<i>Equipments efficiency / Equipments regulation</i>			
	3	M	▪ Efficiency and heat generation
	4	M	▪ Air conditioning (class A)
	7	M	▪ Switching off heating or air conditioning
	8	M	▪ Switching off lights
	9	M	▪ Energy efficient light bulbs
	10	M	▪ Outside heating appliances
	32	O	▪ Boiler energy efficiency
	33	O	▪ Boiler NO _x emissions
	37	O	▪ Heat recovery
	38	O	▪ Thermoregulation
	40	O	▪ Air conditioning (15% more efficient than class A)
	41	O	▪ Automatic switch-off air conditioning and heating systems
	43	O	▪ Energy efficient refrigerators, ovens, dishwashers, washing machines, dryers/tumblers and office equipment
	45	O	▪ Refrigerator positioning
	46	O	▪ Automatic switching off lights in guest rooms
	47	O	▪ Sauna timer control
	49	O	▪ Automatic switching off outside lights
<i>Building characteristics</i>			
	5	M	▪ Energy efficiency of buildings
	6	M	▪ Window insulation
	39	O	▪ Energy performance audits for buildings
	42	O	▪ Bioclimatic architecture
<i>Management measures that have an impact on energy use</i>			
	23	M	▪ Maintenance and servicing of boilers and air-conditioning systems
	24	M	▪ Policy setting and environmental program
	25	M	▪ Staff training
	26	M	▪ Information to guests
	27	M	▪ Energy and water consumption data
	29	M	▪ Information appearing on the eco-label
	89	O	▪ Energy and water meters

How to apply for the EU Eco-label?

- If the hotelier thinks that its hotel qualifies for the EU Eco-label, it is highly recommended to apply for it. The first step is to get in contact with the respective “competent body”, which is the national organisation responsible for managing the application process for the EU Eco-label in their country. It will give the hotel information on the application procedure.
- The hotel will then has to provide a detailed dossier showing how technical criteria have been met. The “competent body” is responsible for the verification of compliance prior to awarding the Eco-label and may seek to verify submitted data.
- If the hotel application is in conformity with the requirements and the application fee is paid, the hotel will be awarded with the Eco-label.

Other certification schemes

Tourism certification has been hurt by a lack of credibility and market confusion, given that there is not yet an internationally accepted framework against which to measure certification programmes. Europe has far more ‘green’ certification schemes than any other region of the world and accounts for 78% of world tourist arrivals. The table below compares different certification schemes, of which 4 are specific to the hotel sector and one is for buildings in general; 4 are focused in Europe and one is international.

Table 10. Summary Table of Selected Certification Schemes⁶⁶

	Green Hospitality Award	EC3 Green Globe	Nordic Swan	EU Flower	LEED-EB (Operations & Maintenance)
Region	Ireland Only	Worldwide	Scandinavia <i>Finland, Sweden, Norway, Iceland, Denmark</i>	Europe15 <i>+ Norway, Iceland, Liechtenstein</i>	International, mostly US
Hotels Specific	Yes	Yes	Yes	Yes	X
Operational Data Only		Yes	Yes	Yes	Yes
Mandatory Energy Management System	Yes	Yes	Yes	Yes	Yes
Back Up Documentation Required	Yes	Yes	Yes	Yes	Yes
Independent On-Site Audit	X	Yes	X	Yes	Yes
Award Levels	Bronze Silver Gold	Bronze Silver Gold	One Level	One Level	Certified Silver Gold

⁶⁶ An Analysis Of The Performance of Certification Schemes In The Hotel Sector In Terms Of CO2 Emissions Reduction, Aoife Anne-Marie Houlihan Wiberg. October 2009. Page 110

	Platinum				Platinum
Does Increased Award Level Indicate Increased Environmental Performance?	YES	X	One Level	One Level	YES
Categories	1) Environ. Management System 2) Water Management 3) Waste Management 4) Energy Management	1) Sustainability Policy 2) Energy Consumption 3) Water Consumption/Saving 4) Waste sent landfill/Recycling 5) Community 6) Paper Products 7) Cleaning Products 8) Pesticide Products	1) Energy Consumption 2) Water Consumption 3) Waste Consumption 4) Waste Management	1) Energy 2) Water 3) Chemicals 4) Management 5) Waste 6) Other	1) Sustainable Sites 2) Water Efficiency 3) Energy & Atmosphere 4) Materials & Resources 5) Indoor Air Quality 6) Innovations in Operations
Energy Mandatory Category	YES	X	YES	YES	YES
Rigorous Energy Accounting ²	***	****	***	*	****
Are key CO2 emissions reduction criteria included in mandatory section?	X	N/A	X	YES	YES
Are key CO2 emissions reduction criteria weighted the same as criteria that have no direct impact?	YES	N/A	YES	YES	YES
Number of Categories required for certification	4	2	2	6	6
Obligatory Requirements & Optional Points Score in each category?	YES	N/A	YES	YES	YES
Use of Benchmarks?	YES	YES	YES	X	External Rating System
Benchmarks Published in Public Domain	YES	X	YES	N/A	X
Is certification Awarded on the basis of passing Benchmarks Only?	X	X	X	X	X
CO2 Benchmark	X	X	X	N/A	X
Reporting CO2 emissions	X	Optional	Optional	X	Mandatory
Mandatory Energy Benchmark	X	X	YES	N/A	YES
Key Energy Performance Indicator	KWh / m ²	MJ / guest night	KWh/m ² or kWh/guest night	No calculation	EPA Rating 1-100 (kBtu/ft ²)
Energy Benchmark					
Energy Benchmark vary with Geographical Location	N/A	YES	YES	N/A	YES
One day guest equivalent (staying at hotel for at least 4 hours)	Calculates per square metre	0.3 guest nights	0.5 guest night	No calculation	Calculates per square foot
1 Conference Guest equivalent (Guests staying 1 day & part day)	Calculates per square metre	X	1.5 guest night	No calculation	Calculates per square foot

1 Restaurant guest equivalent (Hotel Occupancy >60% Restaurant Turnover >45% total)	Calculates per square metre	X	0.25 guest night	No calculation	Calculates per square foot
Accounting of resident staff in guest night calculation	Calculates per square metre		X	No calculation	Calculates per square foot
Additional optional points scored for % renewable resources	Platinum	X	YES	YES	YES
Additional optional points scored for insulation of existing building	YES	X	X	YES	X
Additional optional points scored for use of energy efficient light bulbs	YES	X	YES	YES	X
Boiler Efficiency >90%	Gold & Platinum	X	X	YES	X
Energy Consumption Sub-Metering	Gold & Platinum	X	YES	YES	
Extra Optional Points (ENERGY RELATED) for Hotels with Laundry, leisure centre, conference	Gold & Platinum	X	YES	YES	X
Are extra points explicitly awarded for passive or bioclimatic architectural design principles?	X	X	X	YES	X
Additional Features	X	2007: Separate Spa Performance Benchmarks (MJ per treatment hour)	Consumption for banqueting, catering and spa facilities may be deducted from total.	X	X

ANNEX IX. SHORT ENERGY AUDIT FORM⁶⁷

This form can be useful for hotelier to start identifying energy savings potential, and raise awareness on the considerations of implementing EE and RE measures.

FORM:

Hotel name:	
Address:	
Date:	

Main characteristics

This short audit form is used to identify the hotel characteristics and electrical, heating, cooling and domestic hot water systems installed.

Known future changes in installations and/or energy use etc can be noted separately.

Such factors as the size of heating, cooling and electrical loads, the temperatures at which heat and cooling are required, site for locating the CHCP etc can be examined and determined on the basis of this form. The identification of which load to use, and an accurate determination of this load and its variation, are the most important steps in the design of CHCP installation.

Occupation

Occupation rate, %

Size

Number of rooms: _____ Average room size, m2: _____

Total covered area, m2: _____

Public general service and service area, m2: _____

⁶⁷ CHOSE : Energy Savings by Combined Heat Cooling and Power Plants (CHCP) in the Hotel Sector, ÅF-Energikonsult AB, Energi och Miljö Box 8133, Fleminggatan 7 S-104 20 Stockholm, SWEDEN. 2001

A. Special service

Climate cooling: Total size of climatized areas: _____

Swimming pool: Area, m2: _____ Period of use: _____

Restaurant: Places: _____ Use for non guests: _____

Average meals/month: _____

Laundry: Yes ☐ No ☐

Energy sources, primary energy bought (used) per year, MWh

Energy	Energy per year, MWh
Electricity	
District heating	
Light oil	
Natural gas	
Other:	

B. Use of water, per year

Use of water, total m3: _____

Use of, domestic hot water, m3 _____

Climate according to geographical location, just for internal use

Heating degree-days: _____

Outside average _____

C. Energy Data

C1. Electricity

The following information can usually be found on your electricity bills.

Installed Electrical Power, kW: _____

Electrical Demand (Max demand), kW: _____

Electricity consumption

Month	Demand KW	Consumption KWh
Jan.		
Feb		
Mar		
Apr.		
May		
Jun.		
Jul.		
Aug.		
Sep.		
Oct		
Nov.		
Dec.		
Total		

Installed systems within the hotel, electrical power by end-use/equipment

(HVAC; Swimming pool heater; Domestic Hot Water, Climate cooling, refrigerator etc)

Unit no	Heating-, cooling-, water and electrical system	Power, kWe	Installed year	Used for:	Meters installed Yes/No

C2. Thermal energy consumption for the year

Installed thermal power (total), kW

Installed power by end-use/equipment, kW:

(HVAC; Swimming pool heater; Domestic Hot Water, etc)

1st Thermal energy source

Energy source: _____ Unit: _____

Produced energy used for: _____

Month consumption, MWh:

Jan.	Feb.	Mar.	Apr.	May.	Jun.
Jul.	Aug.	Sep.	Oct.	Nov.	Dec.

Total consumption, MWh: _____

2nd Thermal energy source

Energy source: _____ Unit: _____

Produced energy used for: _____

Month consumption, MWh:

Jan.	Feb.	Mar.	Apr.	May.	Jun.
Jul.	Aug.	Sep.	Oct.	Nov.	Dec.

Total consumption, MWh: _____

3rd Thermal energy source

Energy source: _____ Unit: _____

Produced energy used for: _____

Month consumption, MWh:

Jan.	Feb.	Mar.	Apr.	May.	Jun.
Jul.	Aug.	Sep.	Oct.	Nov.	Dec.

Total consumption, MWh: _____

Principal schemes and manuals to be enclosed for the individual systems:

Schemes of installation, regulation equipment and a flow scheme. A copy of the manual if possible.

ANNEX X. CHECKLIST FOR ENERGY SAVING MEASURES IN HOTELS⁶⁸

This form can be used by the trainer to raise awareness on the hoteliers on the energy savings potential.

Energy Management

Is there a good management of the energy consumption?
(operating hours, split areas etc)

Yes ☐ Partly ☐ No ☐

Heating/Hot Water

Is the in-door temperature controlled?

Yes ☐ Partly ☐ No ☐

Is the insulation in good condition?

Yes ☐ Partly ☐ No ☐

Is the domestic water temperature controlled?

Yes ☐ Partly ☐ No ☐

Lightning

Is the use of electric lightning optimised?
(use of daylight, motion detectors, room-key automatic switch etc)

Yes ☐ Partly ☐ No ☐

Ventilation

Is the ventilation system optimised?

Yes ☐ Partly ☐ No ☐

Air Conditioning

Is the AC system optimised and co-ordinated with the heating?

Yes ☐ Partly ☐ No ☐

Are other energy consumers in the hotel optimised?

Catering

Yes ☐ Partly ☐ No ☐

Laundry

Yes ☐ Partly ☐ No ☐

Pool

Yes ☐ Partly ☐ No ☐

Staff knowledge and Behaviour

Is there defined responsibilities and instruction for energy efficient behaviour?

Yes ☐ Partly ☐ No ☐

Is the staff educated in energy savings and aware about relevant instructions?

Yes ☐ Partly ☐ No ☐

Comments:

⁶⁸ CHOSE : Energy Savings by Combined Heat Cooling and Power Plants (CHCP) in the Hotel Sector, ÅF-Energikonsult AB, Energi och Miljö Box 8133, Fleminggatan 7 S-104 20 Stockholm, SWEDEN. 2001

ANNEX XI. CREATING AN ENERGY SERVICE AGREEMENT

In order to work with an ESCO it is needed an Energy Service Agreement (ESA). Several ingredients are critical to these kinds of agreements. The primary elements that should be included or considered for inclusion in an ESA are listed and briefly explained below. In general, the contract will be defined by the financing arrangement that has been chosen by the Hotel owner; however there are numerous contractual terms that should be included in any ESA⁶⁹. The next elements are just some suggestions that the hotelier can include in this kind of agreements, and the trainer can use it to provide guidance.

Financing Terms

1. Basic Financing Terms to Include
 - a. Contract amount
 - b. Term of the contract
 - c. Indicate who is responsible for any sales tax
 - d. Contact information for invoicing purposes
 - e. Late payment treatment
 - f. How to resolve invoicing disputes
 - g. Indicate how often the client needs to provide updated financial information and what is required
2. Payments if a Cash Contract
 - a. Mobilisation fee (down payment), if applicable
 - b. Progress payments based on percentage of completion
 - c. If retainage is called for, include the percentage to be retained from each invoice and what triggers the release of that money
 - d. 100% of the contract sum must be paid within 30 days of the Certificate of Acceptance (COA)
3. Payment terms if a Performance Contract
 - a. First payment is usually due within 30 days of the COA
 - b. Payments are based on estimated savings until actual savings are verified under the first energy savings report
 - c. Savings numbers should be reconciled periodically and any discrepancies should be invoiced or split accordingly
 - d. Indicate the frequency and number of payments
 - e. Establish the threshold level of savings
4. Payment Terms if a Lease
 - a. If it's a 3rd party lease, then there are usually several related contract documents:
 - Lease documents from the financier
 - Installation contract with the ESCO
 - Savings guarantee (if applicable)
 - b. Early buyout amounts, termination fees, and contract continuation clauses should be included for each contract

⁶⁹ Economic and Financial Evaluation of Energy Efficiency Projects and Programs Prepared for: Energy and Environment Training Program Office of Energy, Environment and Technology Global Bureau, Center for the Environment United States Agency for International Development

- c. Identify financed amount
 - d. Attach an amortisation schedule
 - e. Residual value of the equipment
 - f. Indicate senior vs. subordinated debt
 - g. Indicate whether secured or unsecured debt and what the security is
 - h. Upon execution of the COA the financier begins invoicing the client, and the ESCO gets paid by the financier
- 5. If Utility Rebate is Involved
 - a. Utility timelines affect the project's eligibility and schedule
 - b. Address how the rebate amount affects the contract sum
 - c. Address what happens if the actual rebate amount differs from what has been estimated
- 6. Contingency
 - a. Is a portion of the budget in contingency?
 - b. What happens if the contingency is not used?

Construction Terms

- 1. Scope of Work
 - a. Detailed description of measures and any associated work (repairs, painting, disposal of old equipment, etc.)
 - b. Equipment quantities
 - c. Client approval procedures throughout the process
 - d. Commissioning procedures
 - e. Training
- 2. Installation and procurement schedule
- 3. Handling of change orders
- 4. Description of the operations and maintenance plan that will be provided with the COA
- 5. Standards of service
- 6. Whether subcontracting is permitted and what discretion the client has in disallowing subcontractors or individual employees
- 7. All applicable provisions in the ESA should be required to be included in any subcontracts
- 8. Details regarding access to the facility
- 9. Certificate of Acceptance
 - a. Used for sign-off by the client at completion of the project installation indicating that everything is in working order
 - b. Date of project acceptance triggers the monitoring and verification to begin, thereby beginning the payments to the ESCO under a performance contract

Savings Performance

1. Monitoring and verification methodology
2. Formula for calculating savings
3. Baseline calculations and adjustments
4. Client needs to sign off on baseline usage
5. Client must provide ESCO with energy use data in a timely manner throughout the term of the contract
6. Client must notify the ESCO of material changes to the equipment or operations
7. ESCO should be allowed a certain period of time to remedy any technical problems
8. Address who will bear the risk of change in energy prices
9. Reporting conventions and frequency
10. Responsibilities for operations and maintenance of M&V equipment

Warranties

1. ESCO may provide a warranty on labour and materials for a set period of time
2. ESCO should obtain warranties for the same period of time from the subcontractors and equipment manufacturers
3. Equipment warranties should be transferred to the customer upon transferring title to the equipment

Other Terms

1. The customer should verify that it owns the premises and intends to use the premises in a manner similar to its current operation for the term of the agreement
2. If the customer is the owner, but there is a different tenant, then the ESCo may want to obtain a certificate of tenant authorisation
3. If the customer is a tenant, then a landlord- or mortgage-waiver should be obtained
4. How the project is being financed will dictate who might take a security interest in the equipment
5. Ownership of the equipment will transfer to the customer upon full payment, and will vary by contractual arrangement

Legal Requirements and Notification

1. Compliance with relevant laws and standard practices, including any applicable permits, licenses, or regulatory approvals to perform the work
2. Identify what jurisdiction of law the contract will be interpreted under
3. Detail how to notify the other party of changes in the contract and who they should be addressed to

Representations

1. Each party must have the appropriate authority to sign and execute the contract
2. In some cases a Corporate Resolution or Certificate of Partners may be called for

3. Attest to having no suits or proceedings pending that will adversely affect the party's ability to perform its obligations
4. Verify that government approvals are not required to execute this agreement, or that such approvals have already been obtained

ESCO Insurance

1. Require comprehensive commercial general liability
2. Worker's compensation limits are usually stipulated by the laws of the location where the work is being performed
3. Automobile insurance covering all owned and hired vehicles
4. Certificates of insurance must be sent to the customer by the ESCO's insurance agent
5. Notice of any changes to the policy or cancellation of the policy must be sent to the customer within an amount of time detailed in the contract
6. The customer should be named as an Additionally Insured on the ESCO's policy for the term of the contract

Customer's Insurance

1. Coverage on the equipment must be carried by the customer and should name the equipment owner as loss payee (usually the ESCO until title to the equipment transfers to the customer). In this case, the customer must provide a certificate of insurance naming the ESCO as loss payee.
2. Customer should name ESCO as an Additional Insured

Bonds

1. In some cases the customer may require that the ESCO obtain a Performance Bond
2. Performance bonds must be obtained prior to commencement of installation
3. A bond covers the installation period only and will terminate upon execution of the COA
4. The bond should be in the amount of the contract
5. Usually obtained through an insurance company
6. Include the cost of the bond in the contract

Events of Default

1. Non-payment
2. False or misleading representations
3. Failure to meet terms and conditions of contract
4. Failure of the customer to perform required maintenance on the equipment

Remedies Upon Default

1. Available legal remedies
2. Termination of the contract through proper legal process and collection of any associated termination value, or removal of the equipment

3. Right to cure⁷⁰
4. Indicate how long the party has to cure the event of default if possible
5. Address who is responsible for payments associated with the cure

Assignment

1. The ESCO may want to assign the agreement or grant a security interest in the equipment to another party
2. Provisions should be included in the contract as to how the assignment would take place
3. Customer must be notified of the assignment
4. The ESCO's obligations under the contract do not typically transfer to the assignee

Hazardous Materials

1. Hazardous materials, such as asbestos or leaking PCB ballasts may be encountered in the course of performing the work
2. Work shall stop until the customer disposes of those materials
3. ESCO will notify customer in writing of the hazardous materials

Lamp & Ballast Disposal

1. Usually taken care of by the ESCO through its subcontractors
2. Some lamps and ballasts contain hazardous materials and their disposal may be regulated
3. For liability reasons, the ESCO should never take ownership of the hazardous materials
4. It is recommended that the customer contract with a qualified disposal company that may be suggested by the ESCO. The whole disposal process should be well documented by all parties.

Severability

1. In the event that any provision of the agreement is declared unlawful, all other provisions will remain in force
2. There may be provisions in a DSM contract that need to be included in the ESA
3. Force Majeure clauses - the force majeure clause in a contract excuses a party from not performing its contractual obligations due to unforeseen events beyond its control.

⁷⁰ The right to cure is a written clause in a contract or lease that permits one party to rectify a default that most likely will terminate the agreement or cause financial loss or loss of other rights

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