



**SGS RELIABLE ENERGY AND CARBON ONE-STOP  
SOLUTIONS TO SHARP YOUR COMPETITIVE EDGE**

**SGS**

## YOU MAY FACE THE FOLLOWING CHALLENGES DURING BUSINESS OPERATION:

- “The 12<sup>th</sup> Five-year” energy-saving emission reduction targets
- Energy efficiency and supply-chain management to reduce costs
- Reduction of environmental hazards to shoulder social responsibility
- Catering to consumers’ preferences for environmentally friendly low-carbon product
- Enhance the green and brand competitiveness to capture the market opportunities
- Objective third-party verification, the fairness of energy efficiency and low carbon projects
- Understand energy efficiency and low-carbon industries trend.

## SGS IS YOUR RELIABLE TESTING AND CERTIFICATION EXPERT

In the fields of energy efficiency and low carbon management, SGS is the advocator in response to the global climate change and is also the leader in providing testing and certification solutions. SGS keeps walking in industry forefront in the research and service of energy efficiency and low carbon area, and has achieved many milestones for successful attempts to internal energy saving and emissions reduction, such as

- the first domestic food industry carbon label
- the first carbon neutral project
- the first carbon assets management ability construction project
- the first public institutions energy saving planning project
- the first energy efficiency power plant pilot project

and has successfully introduced international energy management training courses, which provides copied valuable experience from the third party for Government and the enterprises to save energy in the future.



# COMMON CONCERN-SGS ENERGY SAVING SOLUTION

“Global warming, human survival environment has been damaged, strengthen energy management, improving energy efficiency a looming”

## ENERGY MANAGEMENT SYSTEM >>

Establishment of a comprehensive, dynamic, timely, up to dated energy management system to benefits to enterprises on operation efficiency improvement

- GB /T23331-2009 (Chinese standards)
- ISO 50001 (International standards)



**P**lan >

- Energy assessment
- Benchmark establishment
- Energy performance parameters determination
- Goal, target and management plan establishment
- Energy policy publications



**D**o >

- Management plan implementation
- System operation
- Effective communication



**C**heck >

- Process monitoring and measurement
- Main parameters of monitoring and measurement
- Energy performance analysis
- Internal audit and management review



**A**ct >

- Continuous improvement

## ENERGY AUDIT >>

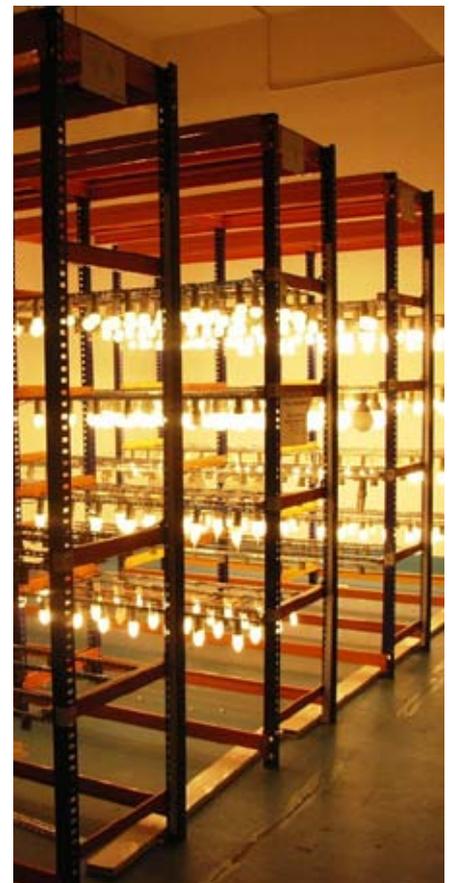
Investigate the energy status quo, discover energy saving potentials and find out energy efficiency opportunities, to meet government and the parties' requests

- Energy and energy management, energy flow and energy measurement and a statistical overview
- Calculate Energy consumption index, analyze equipment operating efficiency, analyze energy consumption indicators for output and the energy cost indicators

## EQUIPMENTS PERFORMANCE TESTING >>

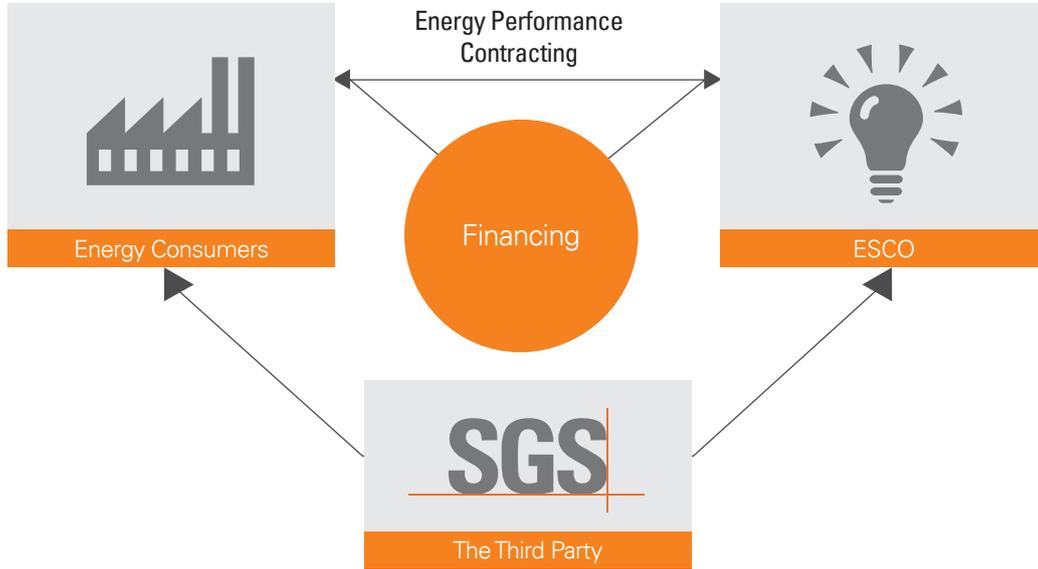
Troubleshoot potential adverse factors in equipment operation, to find the optimal operating point

- Equipment /facility running status and efficiency
- Major energy-using systems running status and efficiency
- Whether equipment, facilities and operation of the system meets the related Standards and the economic operational requirements
- Test and find out the hidden problem to guarantee good operation
- Energy-saving diagnosis to identify energy-saving space
- Decision-making reference index for the Project
- Baseline reference for energy-saving technological transformation project



## ENERGY SAVINGS MEASUREMENT AND VERIFICATION >>

Effectively ensure the interests of energy-saving and financing institutions, energy consumers and energy saving transformation company.



## BUILDING COMMISSIONING >>

Cut down the cost for investors, discover energy saving potential operator and eliminate security risk for operators.

- Energy saving optimized debugging: Central air conditioning systems, Water supply and drainage system, Lighting system, Power distribution system, Motor system, BAS Building automation system, EMS energy detection system
- Electrical safety testing: Infrared imaging tests and ground tests
- Training: Operation commissioning training, instrument and meter training

## OTHER ENERGY EFFICIENCY SERVICES >>

- Electric balance/ water balance: Plan for the use of water and electric power and take rectification measures, set up a scientific management system
- Energy saving emission reduction development planning: Customize medium and long term planning for the development of the energy saving emission reduction
- Customized projects: Establish the project in accordance with the fixed energy efficiency goal in order to meet the multi-requirement



**COMMON CONCERN-SGS LOW CARBON SOLUTION OF ORGANIZATION AND PRODUCT**  
**"The low carbon economy will be the commanding height in future economy. Face to low carbon economic transition, the response speed and ability of corporation will impact itself development and survival"**

**ISO 14064 CARBON VERIFICATION >>**

Optimizing the management fulfill the social responsibility obtaining the benefit between the economic, management and environmental.

Reference to ISO 14064-3:2006 standards



**ECODESIGN OF PRODUCTS & PACKAGING >>**

Understanding the environmental performance in life cycle of product

Identifying the negative environmental impacts

Providing green claim

- Cover the life cycle of product, include: extraction, production and transportation of raw materials, packaging materials, manufacture, distribution, energy using, disposal/recycling
- Preliminary assessment on the environmental performance of the product/packaging
- Evaluation of the time and resources needed for improvement of product environmental performance
- Life cycle assessment is conducted for identification and determination of detailed action items
- Reviews the implementation & effectiveness of action items



## PRODUCT ECODSIGN >>

Product carbon footprint:

Meeting the public expectations and consumer demand, assisting the supplier chain management, continuous improving

- Carbon footprint Mark:  
Covers the GHG quantification processes at each stage from design, packaging, manufacturing process & transportation etc. Information about the calculation result, data collection time etc.
- Carbon reduction Mark:  
Can be labeled on a product which demonstrates a company's effort in carbon reduction and its commitment in continuous improvement.
- Carbon neutral Mark:  
Display the total GHG emissions of the product assessed are offset



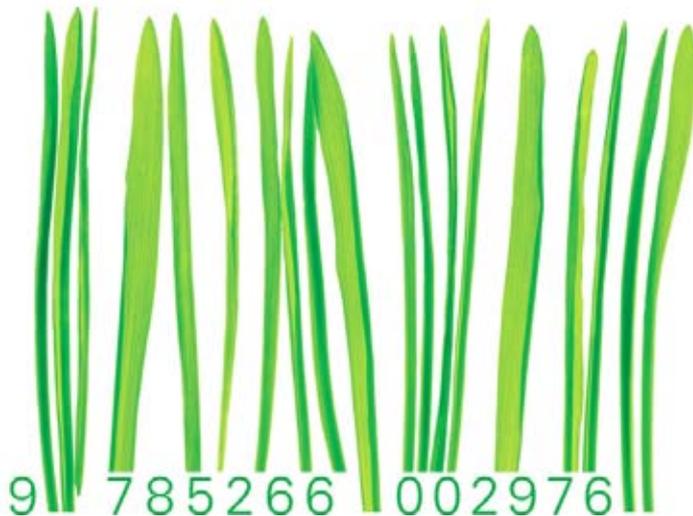
## RECYCLING PROCESS REVIEW >>

Demonstrate products eco performance

Enhance the transparency of the recycling process

Identifying the improvement opportunities

- On site review and make sure the recycling process reliable
- Testing the product to display the performance



# COMMON CONCERN-TRAINING SERVICE

**“You can refuse to learn, but your competitors will not. To enhance management consciousness and technology, change from passive to active”**

TRAINING SERVICE	VALUE	OUTLINE
CERTIFIED ENERGY MANAGER TRAINING(CEM®)	To learn the leading edge energy concept and science; To cultivate senior energy management staff; To improve energy efficiency and lower the cost; A CEM certificate issued by AEE will be awarded upon passing the examination and fulfill the eligibility requirement.	Electric Systems; Economic and Life Cycle Cost Analysis; M&V; Energy Performance Contracting; CHP Systems; Building automation and control systems.
CERTIFIED MEASUREMENT & VERIFICATION TRAINING(CMVP®)	To obtain the latest M&V methodology and technique; To satisfy the corporate demands on the professionals in energy saving fields; A CMVP certificate issued by EVO will be awarded upon passing the examination and fulfill the eligibility requirement.	Energy Efficiency Management Training.
Four basic methodology options of IPMVP methods, options A, B, C and detailed case studies; Evaluation of energy saving on frequency converter system	To realize the latest technology and enhance energy management skill; To enhance management consciousness and technology; To develop professional energy management team and reveal energy saving opportunities; To avoid potential risk and reduce energy costs.	Energy audit and instrumentation; Energy performance contracting; Energy efficiency technology of thermal, electrical and HVAC systems, building systems commissioning technology, automation control system, facilities operation and maintenance; International energy saving testing & verification rules.
ENERGY MANAGEMENT SYSTEM(EnS) INTERNAL AUDITOR TRAINING	To master the EnMS rules and audit methods; To increase productivity with the use of energy management knowledge and practices.	Explanation of EnMS standards Implementation of internal EnMS audit.
ISO14064 GREENHOUSE GAS VERIFIER TRAINING	To familiarize the development trend of industry; To understand the workflow of PCF calculation; To enhance PCF management.	Introduction of the standard ISO14064 verification scope, principles and content.
PRODUCT CARBON FOOTPRINT MANAGEMENT TRAINING	To understand the workflow of PCF calculation; To establish GHG emission management system per product basis; To meet the GHG reporting requirements from governments and customers.	Sustainability solutions in low carbon economy, carbon neutral and carbon trade; Product Carbon Footprint assessment and calculation
SUSTAINABLE PACKAGING TRAINING	To introduce the key concepts of sustainability; To provide the latest sustainable packaging information and technical advice.	Sustainability and Balancing tradeoffs; Tools for measuring and reporting sustainability; Sourcing and recovering materials; Communicating sustainability communications; Understanding environmental and human health impacts.

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**WHEN YOU NEED TO BE SURE**

