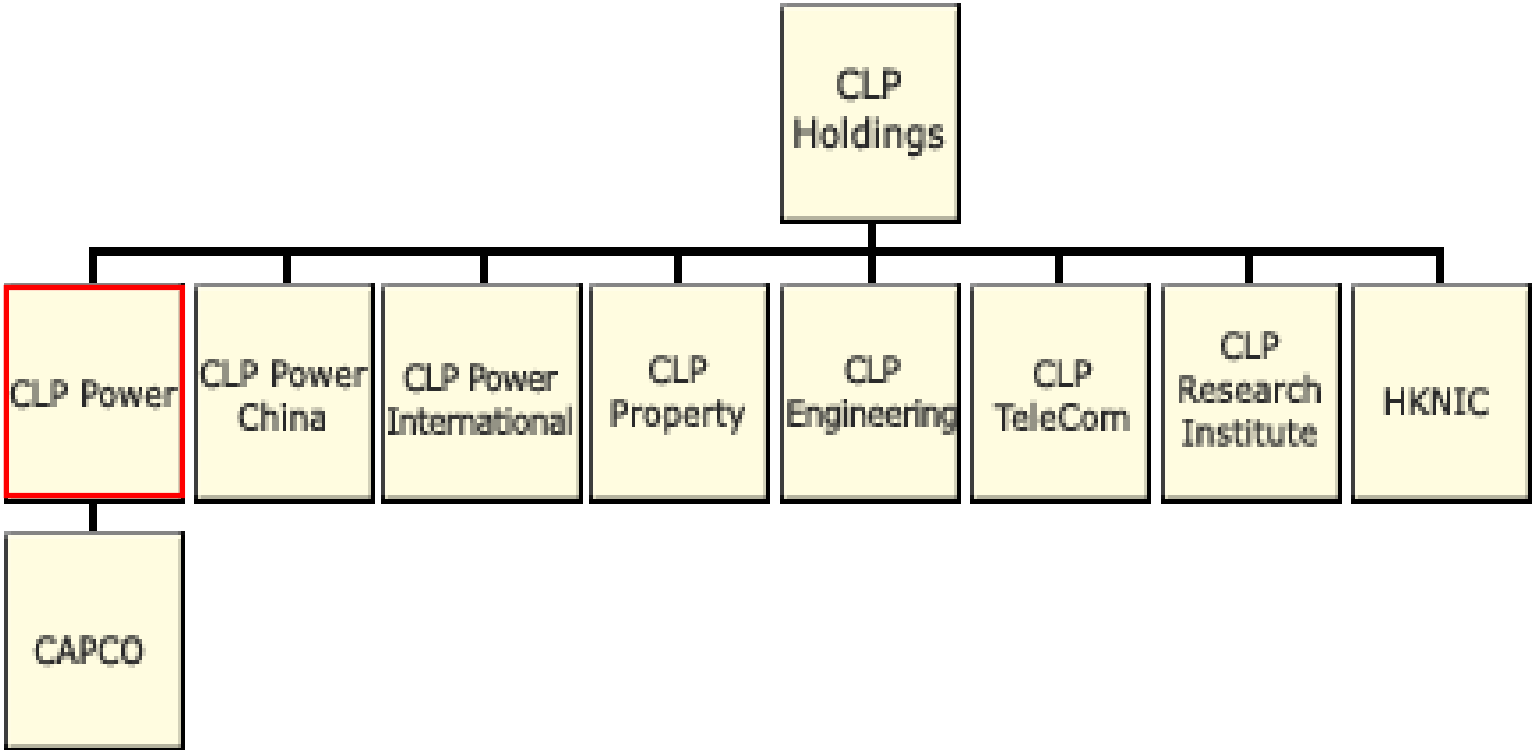


CLPP Integrated SHEQ Management

**Visit of Hong Kong Society for Quality
15th March 2003**



CLP Holdings - Group Structure



Business Overview



- Integrated electricity generation, transmission and distribution business
- Supply to over 2 million customers
- Covering 80% of total area of Hong Kong

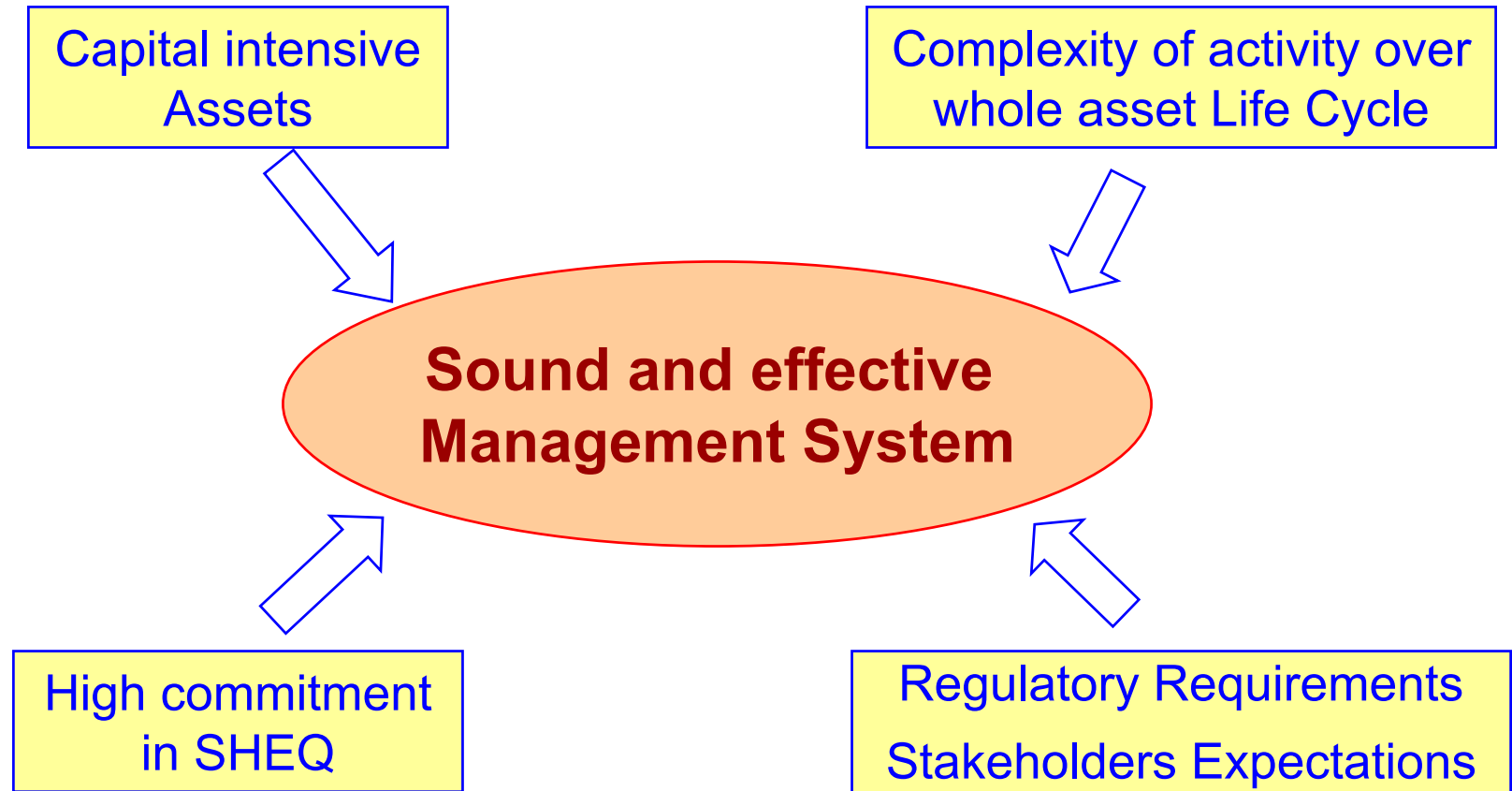


Power Supply System

- **Mix of Generation sources**
 - NG Combined Cycle units at Black Point Power Station
 - Coal, NG and Oil fired units at Castle Peak Power Station
 - Gas Turbines at Penny's Bay Power Station
 - Nuclear units at Guangdong Daya Bay Nuclear Power Station
 - Pumped storage hydro units at Guanzhou Pumped Storage Power Station
- **Transmission & Distribution Network**
 - Operating at 400KV, 132KV, 66KV, 33KV, 11KV



Requirement of Sustainable & Integrated Management System



Integrated Management Framework



Core Systems

- Design
- Engineering

Example:
In GBG 19 Management Systems
developed under OIMS Framework

Supporting Systems

- Risk Management
- Occupational Safety & Health
- Operational Safety (PTW)
- Environmental Management
- Contractor Management
- Emergency Response
- Incident Investigation & Analysis
- Document Management
- Personnel Placement
- Training & Authorization
- Regulatory Compliance
- Management of Change

•Decommissioning /
Demolition

•Construction
•Commissioning

•Operations
•Maintenance



Objective

- Operations Integrity:
- SHE Excellence
- Regulatory Compliance
- Quality

OIMS Management System Characteristics

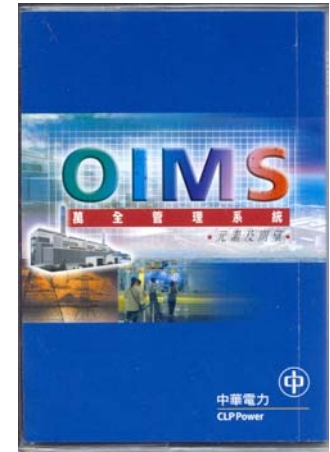
1. Scope & Objectives
2. Procedures
3. Responsibilities and Accountabilities
4. Verification and Measurement
5. Feedback Mechanism

System Quality Considerations

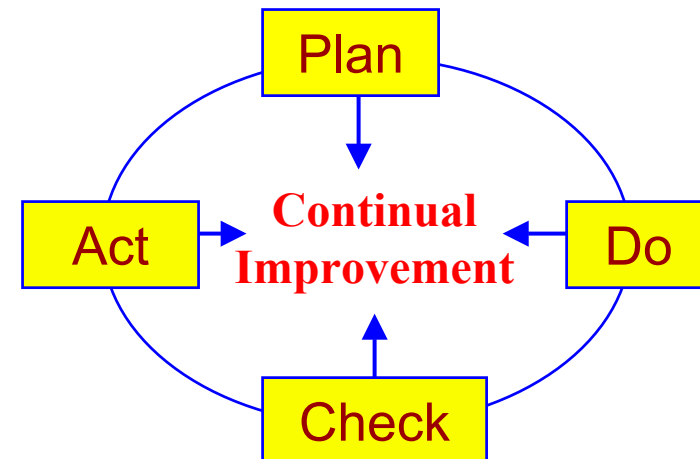
- Documentation
- Implementation (communication resources deployment, responsibilities etc)
- Verification of Status and Effectiveness
- Achievement of Objectives and Results
- Improvement

System Assessment

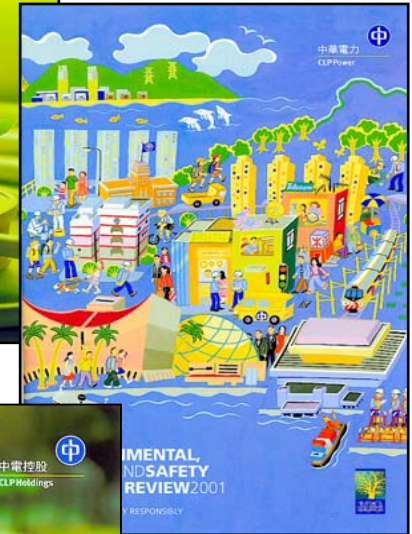
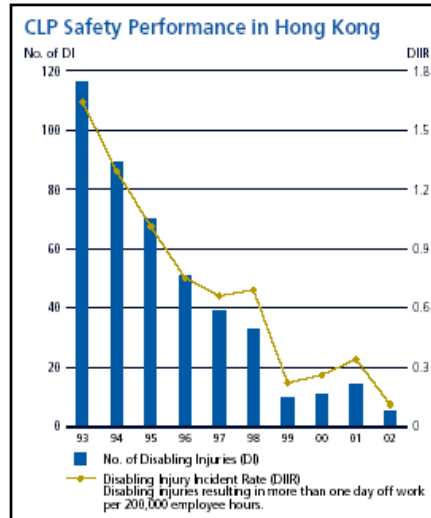
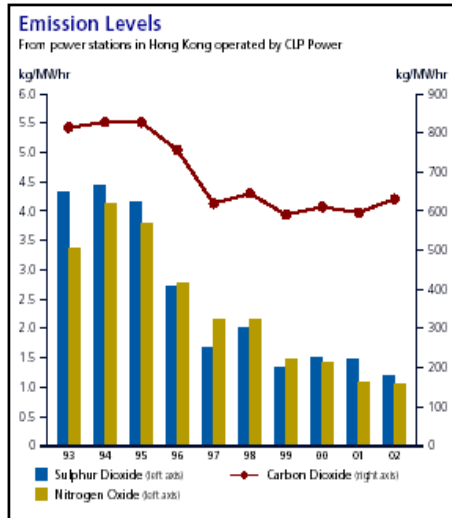
- Annual
- Internal / External



11 Elements
60 Expectations



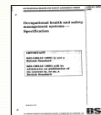
SHE Performance & Reporting



GBG Integrated Audit 2002 successfully completed on 16 Oct

Achievements

- ✓ 19 GBG Management Systems assessed and all rated at level 3+ to 4 (4 being highest)
- ✓ F&IU SMS Audit for GBG completed with full compliance
- ✓ NOSA Grading Audit by new integrated protocol (CMB 253)
 - 5-Star (Platinum) for CPPS
 - 5-Star (Platinum) for BPPS
 - 5-Star (Platinum) for PBPS
 - 5-Star (Platinum) for GMD
 - 5-Star (Platinum) for Generation Business Group
- ✓ ISO14001 Certification retained for all Stations and GBG
 - BPPS
 - CPPS
 - PBPS
 - GBG
- ✓ OHSAS 18001 Certification for GBG



Congratulations !



Social and Environmental Report 2002

ENVIRONMENTAL,
HEALTH AND SAFETY
REVIEW 2001

CLPP SHEQ Achievements/Awards

(Examples)



Safety & Health	Environment	Quality
<ul style="list-style-type: none"> •OHSAS 18001 Certificates 	<ul style="list-style-type: none"> •ISO 14001 Certificates 	<ul style="list-style-type: none"> •ISO 9001:2000 Certificates
<ul style="list-style-type: none"> •HK Occupational Safety and Health Council Awards 	<ul style="list-style-type: none"> •HK Awards for Industry – Environment Performance 	<ul style="list-style-type: none"> •HK Award for Customer Service
<ul style="list-style-type: none"> •NOSA 5-Star Rating for all BGs and NOSCAR Awards for CLPP 	<ul style="list-style-type: none"> •Best Environmental Report - Hong Kong Eco-business Awards 2000 •HK Eco-Business and Green Office Awards, WasteWi\$e Scheme Gold Logo 	<ul style="list-style-type: none"> •Customer Services Excellence Award



Experience Sharing in Process Improvement – Integrated Audit



Background

- Numerous auditing requirement to satisfy business objectives, regulatory compliance, system assessment for continuous improvement, etc.

System Assessment	Conformance and Verification
•OIMS Assessment	•F&IU (SMS) Regulation Compliance Audit
•NOSA Audit	•OHSAS 18001 Certification Audit
	•ISO14001 Certification Audit
	•ISO 9001:2000 Certification Audit

- Pressing need for process streamlining and resources optimization

Benefit

- Numerous auditing requirements integrated in a single process
- Minimize interruption to normal business operation with manpower saving in both the audit team and the audited units.

Experience Sharing – Integrated Audit



Challenges

- Variety of audit protocol, requirements and focus
- Truly integrated audit vs ‘combined or simultaneous audits’
- Audit team formation and member skill mix
- Effective sharing of audit findings among audit members
- Independence of external auditors / certification bodies
- Balanced emphasis on system effectiveness review and compliance verification
- Design of detailed audit schedule for accomplishment of all objectives
- Logistics support (interviews, site verifications, documents review, etc.)

Experience Sharing – Integrated Audit



Planning

- Partnering
 - Feasibility study and trial run with external auditing partners
- Protocol Synergy Analysis
 - Detailed analysis of all auditing protocols and requirements to identify the common and specific areas.
 - Matrix mapping produced for identification of process synergy in audit team formation and detailed audit schedule.
- Audit Team Formation
 - Multi-disciplinary team with a mix of SHE expertise and other line/functional expertise (in Project Management, O&M Management, etc.)
 - Members from NOSA, ISO Certification agency, RSA, Managers from ExxonMobil and CLPP
- Familiarization and Alignment
 - Auditing parties in full perspective of audit process design, rationale with buy-in
 - Sharing and alignment between auditing parties and auditors



Experience Sharing – Integrated Audit

Implementation

- Audit Team Leader to oversee and manage the overall audit process for the workout of synergy, sharing and no-duplication principle
- Audit Team Daily Meeting to share audit findings and discuss planned work progress
- Joint evaluation with full team participation to ensure consistency and avoid misalignment in system assessment findings and recommendations

Experience Sharing – Integrated Audit



Post Audit Review

- Detailed post audit review to identify improvement opportunities
- Continuous Improvement
 - Optimum audit duration balancing on protocol requirements, workload on audit team/audited units and quality deliverables
 - Fully achieving the objective of sharing and learning of world best practices
 - Alignment of different time-frame requirements for various ISO/OHSAS surveillance / re-certification audits
 - Further integration opportunities in System documentation design

Quality Initiatives / Promotion in CLPP



Generation Innovation Team (GIT) Competition



GIT Webpage



QCC Convention



Customer Services Symposium



Quality Training



Thank You