



POWER SERAYA

SUSTAINABILITY REPORT 2010





Welcome Note

The journey continues as we forge ahead to produce a sustainability report that provides greater transparency and disclosure for the second consecutive year. This is significant given the recent company changes with a divestment exercise that led to an ownership change in March 2009.

To align with the operational philosophy and modus operandi of the parent company for synergistic opportunities, a restructuring exercise was carried out in PowerSeraya following the divestment. This is disclosed in the report with reference to the strong industrial union relationship between the union and management to ensure the restructuring exercise was a smooth and successful one.

Besides doubling the number of GRI indicators in this report, we have also made conscious efforts to add greater depth to the topic of climate change by relating it to our company strategy, local policies and initiatives as well as drawing references to the global context.

In addition, we have added greater depth and breadth to the topic of human rights by drawing its application from the Singapore context so readers will have a greater appreciation of local human issues and its relevance to the company.

The reporting period covers a significant period in time when the world was going through a financial turmoil in 2008/2009. Even in 2010, this issue remains a real and imminent challenge to both developed and developing countries. No company was spared during the financial crisis and that included PowerSeraya.

In this report, we highlighted how our company's risk management practices helped limit its exposure to the varied changes in fuel oil prices and tight credit crunch faced during the height of the global financial crisis.

On Product Responsibility, we have expanded our reporting to elaborate on the innovative products developed for customers which also helped to limit their exposure to the volatility of fluctuating oil prices. As we operate in a highly regulated electricity market, we have also elaborated on our role as an active and pro-active participant of the Electricity Market for the smooth and efficient function of the market mechanism so that competitive electricity prices for the benefit of end-consumers can be realised.

We continue to report on our internal and external initiatives on the environmental and social fronts. In particular, we are pleased to highlight our major investment in the community through the establishment of the Energy Learning Hub at the premises of our adopted school, Greenridge Secondary School. We have also increased the report's coverage of our business operations' environmental performance by highlighting new items such as indirect energy consumption and corresponding carbon dioxide emissions, water intensity as well as input materials used and recycled.

We hope that this year's report will give readers a balanced and extensive view of the company's strategy and initiatives related to sustainability.

Reporting Standards

The sustainability report is based on the Sustainability Reporting Guidelines of the GRI (Global Reporting Initiative), the de facto global standard for reporting. It has undergone an independent third party assurance process and a GRI Application Level check. This is a G3: B+ report, covering 57 performance indicators and encompassing all the six indicator categories (Economic, Environmental, Society, Labour, Human Rights & Product Responsibility).

Report Application Level		C	C+	B	B+	A	A+
STANDARD DISCLOSURES	G3 Profile Disclosures	Report on: 1.1 2.1 - 2.10 3.1 - 3.8, 3.10 - 3.12 4.1 - 4.4, 4.14 - 4.15	REPORT EXTERNALLY ASSURED	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 - 4.13, 4.16 - 4.17	REPORT EXTERNALLY ASSURED	Same as requirement for Level B	REPORT EXTERNALLY ASSURED
	G3 Management Approach Disclosures	Not Required		Management Approach Disclosures for each indicator Category		Management Approach Disclosures for each Indicator Category	
	G3 Performance Indicators & Sector Supplement Performance Indicators	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.		Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human Rights, Labor, Society Product Responsibility		Report on each core G3 and Sector Supplement* Indicator with due regard to the Materiality Principle by either: a) reporting on the Indicator or b) explaining the reason for its omission.	

* Sector supplement in final version

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CEO Message

Striking a Balance





CEO'S MESSAGE

The global financial crisis, the competition for fuel oil and natural gas as well as the global agenda on climate change. You would probably have heard of these global challenges facing most energy businesses. Closer to home, the lack of natural fuel oil sources present energy security considerations for a tiny country like Singapore. As a Singapore-based company, PowerSeraya faces a similar challenge and recognises the need to pursue a fuel diversification path to ensure that our business continues its sustainable growth path in the medium- to long-term. All these on the back of increased competition from new players entering the energy scene.

Yet, flip to the other side and you'll see opportunities abound too for PowerSeraya to grow sustainably into the future. The global agenda on climate change is gathering pace, which means this presents opportunities for us to explore cleaner and alternative sources of energy.

Operating in a knowledge-based economy can only seek to heighten our awareness of the need to nurture existing and attract new human capital, as well as build our social capital (or networks and relationships as some may call it) to drive the company's growth.

These factors point to the increasing need for PowerSeraya to balance the economic, social and environmental aspects of the business – so we can continue to deliver profits for our shareholders and at the same time, ensure due consideration is given to the environment and society.

In the same vein, the heart of our business success lies with our people. It stems no doubt from the fact that we take pride in nurturing our staff. Our management enjoys an excellent relationship with the union and works closely with them to enhance worker productivity while ensuring a healthy work-life balance in the organisation. This supports the values of tripartism (a unique collaborative relationship between companies, the unions and the government for the country's economic well-being) that has worked well for PowerSeraya.

CEO'S MESSAGE

The recent restructuring exercise was conducted successfully to align with the operational philosophy practices of our new parent company YTL Power International Berhad. This move benefited staff with new job experiences, expanded training opportunities and enhanced core technical competencies. The vital role the union has played in the restructuring exercise has enabled PowerSeraya to make a smooth transition during the restructuring exercise with minimal impact to our business operations and customers.

The remodification of our existing combined cycle plants to co-generate steam in addition to electricity, has created not only an additional revenue stream, but also allowed us to gain higher operational efficiency. This move to modify our existing plant assets also marks a key progressive step in realising our vision of becoming an integrated energy company.

Additionally, our new 800MW Combined Cycle Plant will be operational in 2010, which will enable us to achieve even greater levels of thermal efficiency, reduce the use of carbon intensive fuels and potentially reduce carbon dioxide emissions by a further 10% from existing levels. This corresponds with the resource efficiency goals highlighted in the Sustainability Development Blueprint of Singapore.

Our engagements with our stakeholders continue on the environmental and social fronts. Recent community investments include the establishment of an Energy Learning Hub at our adopted school Greenridge Secondary School to educate youths on the inter-relationship between energy and climate change. Every year, we sponsor significant environmental events like Clean and Green Singapore, as well as support environmental NGOs and social charities through fund-raising events like the CEO Semakau Run.

CEO'S MESSAGE

We collaborate and organise joint environmental initiatives like the 1 Degree Up Challenge and International Coastal Cleanup with external parties to raise environmental awareness to the wider community. Our customers are encouraged to go green by signing up for our e-billing features. They are also empowered with the knowledge to better manage their energy consumption through orientation programmes that teach them how to better understand their energy bills.

Internally, we seek to galvanise our staff into eco-action and 'walk the talk' on energy conservation. Besides getting our staff involved in green activities, we endeavour to nurture them with a heart for the needy and have made incremental steps to enhance our social contributions either through volunteering efforts or donations in kind. For example, our staff volunteers have participated in social outreach initiatives involving disadvantaged children from Child@Street 11. Every month, about 60% of our employees also make voluntary contributions to the Community Chest via the SHARE programme.

Beyond that, we continue to nurture and invest in talented youths through our scholarship programme with the Nanyang Technological University of Singapore. Internships are also offered to selected students each year so they can gain practical work experience with the company.

In essence, PowerSeraya's sustainability journey will require a constant balancing act of economic, environmental and social imperatives. The company recognises it has a part to play in climate change action and remains committed to this environmental stewardship role while fulfilling its obligation to its shareholders to bring economic returns. As the company works towards greater sustainability for the future, it is my hope that our employees will similarly adopt sustainable practices in their own lives and be life-changers to the people around them.



John Ng Peng Wah
Chief Executive Officer
PowerSeraya Ltd

Scope of Sustainability Report



Pushing the Envelope

Working Towards Greater Transparency and Disclosure



SCOPE OF THE SUSTAINABILITY REPORT

“A company’s performance is governed not only by its economic achievements, but also its environmental and social activities to give a balanced view.”

This is PowerSeraya’s second sustainability report. In terms of report profile, we have increased its content to include an additional financial year’s worth of data and analysis. In doing so, our company fulfills its commitment to the yearly reporting cycle.

The company underwent a restructuring exercise in March 2009 which arose from the divestment of the company from Temasek Holdings Private Limited to its current parent company, YTL Power International Berhad. This has added both depth and breadth to the scope of the sustainability report that included more human issues to reflect the company’s continued focus on building people capabilities as well as nurturing human relations within the company. This is evident in the inclusion of more indicators in the Labour category.

Compared to the previous sustainability report, the reporting period of this report has been increased by one year to cover a three-year period from FY06/07 (April 06 to March 07) to FY 08/09 (April 08 to March 09) unless otherwise indicated. That said, we have also included report content beyond the above-mentioned three-year period. For example, we have included report content to include the restructuring exercise of our largest business group (e.g. the Utilities Group) which was implemented in the June to September 2009 period.



REPORT COMPILATION, BOUNDARY & APPLICATION

The Sustainability Reporting Team (SRT), which was formed for the purpose of compiling last year's inaugural report, continues to be relevant for this report. New SRT members were added to the team (from seven to ten) to enrich the report with new information as well as to inject fresh perspectives to the content. Similar to the previous year, the Environmental Department of the Corporate Services Group leads the reporting team.

This year a more decentralised approach to the reporting process was adopted. Separate discussions (via emails and more informal meetings) were held with the SRT members to gather information and inputs on sustainability areas that were specific to their area of work. This approach was done mainly with existing SRT members who had gone through last year's rigour of determining the report materiality as they were familiar with their areas of contribution to the report content. For new SRT members, a greater length of time was taken to introduce the reporting process and discussions were held to determine the significant content for inclusion in the report.

In general, all SRT members went through the following stages of the reporting process:

- a) Determining report content (i.e. materiality)
- b) Collation of Global Reporting Initiative (GRI) performance indicators, management approach and information on standard disclosures
- c) Report drafting
- d) Vetting of report draft
- e) Assurance process by a third-party and GRI check

REPORT COMPILATION, BOUNDARY & APPLICATION

Report Form and Format

Similar to the previous year, this year’s report has been developed in two versions (online and PDF). New features were added to this year’s online report to enhance readability and search experience. The enhancements include the placement of the Page Tools (e.g. resize text, download chapter, download full report) at a convenient location so that it is accessible to readers at all times. It also seeks to make it easier for readers to give their feedback at any point in the online report. We made a conscious effort to include more visual representations of our sustainability by adding more graphs and charts.

The online report is available 24/7 on our corporate website. Readers can select sections and make hardcopies of them, or download a PDF version of the entire report.

Report Boundary and Application Level

As with the previous report, the report boundary covered entities PowerSeraya Ltd, Seraya Energy Pte Ltd and PetroSeraya Pte Ltd (the latter two are wholly-owned subsidiaries of the former – see diagram 2.1). Seraya Energy (SE) is the retail arm of PowerSeraya and one of the main players in the contestable electricity market. It is material that SE be included in the reporting boundary. PetroSeraya, being the oil trading and bunkering arm of PowerSeraya’s business, forms an important, growing revenue stream in the company’s overall integrated energy growth strategy. PetroSeraya is thus material to the report content.



Diagram 2.1: Corporate structure of PowerSeraya showing all the report entities

REPORT COMPILATION, BOUNDARY & APPLICATION

Report Application Level

This report covers 57 Global Reporting Initiative (GRI) performance indicators, a more than two-fold increase in the number of indicators reported compared to the previous year's report. It covers all core G3 and several significant Electric Utility Sector Supplement indicators across all six categories (Economic, Environmental, Labour, Society, Human Rights and Product Responsibility).

PowerSeraya appointed an independent third party, Ere-S Pte Ltd, to provide assurance on this report. This is a GRI Level B+ report.



DEFINING THE REPORT CONTENT

“We have dedicated a section to explaining our role in climate change stemming from the carbon intensive nature of our business and the importance of climate change.”

The Sustainability Reporting Team (SRT) took into account the following factors in determining the report content:

Materiality

In the previous year’s report, we had dedicated a section to explaining our role in climate change stemming from the carbon-intensive nature of our business. While this year’s report is no different, we have placed a greater emphasis on the local context by referring to the Singapore’s Sustainability Blueprint and the National Climate Change Strategy paper. Additionally, we have expounded in greater detail on how our company has taken into consideration carbon risks in our corporate strategy as well as our given thought to achieving long-term sustainability in Singapore’s context.

We continue to give an account of what we have reported in the previous report as they are relevant and material. Below summarises what is featured in this report:

Economic data - Key financial data are extracted from our FY08/09 Annual Report and presented in this report to give readers an overall picture of our company performance and its relation to sustainability.

Environmental data - A substantial part of the company’s environmental performance is driven by the management processes under ISO 14001. Power generation operations involve a complex chain of chemical processes which impact the environment and all compliance-related environmental aspects are covered in the ISO 14001. In this report, we detail the reporting structure and processes of the ISO 14001 which plays an instrumental part in ensuring that environmental performance is constantly measured, monitored and reported on a regular basis.

As in the previous year’s report, we continue to disclose environmental aspects that may pose health risks to the public or are related to climate change. Examples include reporting the company’s sulphur dioxide emissions and carbon dioxide emissions, as well as other greenhouse gas emissions.

DEFINING THE REPORT CONTENT

On the social aspects of our business, we have included the important role that the company has taken in the career development of its staff through its emphasis on training. We have highlighted the important role that the union UPAGE occupies in terms of promoting employee welfare as well as its collaborative relationship with management in delivering the company's goals. This is especially pertinent in light of the restructuring exercise which the company went through following an ownership change of the company. How the union and management worked together to ensure positive outcomes from the restructuring exercise are further elaborated in this report. In addition, the report highlights the challenges faced from the restructuring exercise and how they were addressed with due attention given to human issues. On the external front, our company has also taken a more proactive stance in getting greater staff involvement to help the community. Details of our community outreach activities are featured in detail in the Social Performance section of this report.

Expanding on what was reported under Human Rights performance indicator category, we felt it was important to give our stakeholders (especially those in foreign countries) a deeper understanding of how human rights issues such as child labour, indigenous rights and forced labour are being viewed and addressed in Singapore as this ultimately translates to the practices being adopted in the company. Thus, in addition to the matters concerning our employee's right, we have included in this report the subject of collective bargaining – giving an update on the developments leading to the renewal of the current collective bargaining agreement which is expiring in 2010.

DEFINING THE REPORT CONTENT

Our company has always focused strongly on corporate risk management alongside our corporate governance philosophy. In this report, we provided updates on how the new ownership change in our company has impacted on the risk management structure and systems. We also included a feature of how our enterprise risk management regime has helped to minimise the risk exposures of oil price fluctuations and credit risk arising from the outset of the global financial crisis in late 2008. We also continue to feature fraud risk management and gave more details on the training aspect of this subject matter.

In this year's report, we expanded on the Product Responsibility section to include the vital role our company plays in ensuring a fair and level playing field in the electricity market which ultimately affects end-consumers in terms of utility costs. In addition, we featured how our company has helped customers to mitigate the risk of volatility of electricity price (which fluctuates in tandem with fuel oil prices) through innovative product packages tailored to the different risk profiles of our customers. This product innovation has helped us gain and retain customers.

Stakeholder Inclusiveness

This sustainability report is meant for all our stakeholders, which includes parties with whom the company has interaction or over whom it has an influence. As such, our employees, customers, major shareholders, board of directors, potential investors and suppliers, as well as the community in which we operate, are all stakeholders. In this report, we have included our engagement activities and processes with these stakeholders, which are covered in 'Corporate Governance'. Where possible, we have also included the voices of our customers and suppliers through the disclosure of survey findings covering the feedback and inputs of these stakeholders.

DEFINING THE REPORT CONTENT

Sustainability Context

The company sees itself playing a role in climate change action, and this report aims to link the sustainable development approach we have taken in balancing economic and environmental imperatives to deliver long-term outcomes. In this report, we have made conscious efforts to explain in more detail how our company operates and how aspects of sustainability are incorporated and viewed in our company. This is to give our stakeholders a deeper understanding of the sustainability philosophy of the company. How our company views carbon risk in relation to the issue of energy security in Singapore's context are also given further elaboration in this report. On the social aspect, our organisation views human capital as an important asset of the company and believes in nurturing its employees as well as the community through social contributions, which centre on supporting talented youths. We also maintain good union-management relations which is key to the harmonious industrial relations the company enjoys and in so doing, grow our social capital.

Completeness

The report has taken into account materiality, sustainability ability context and its stakeholders. All entities of PowerSeraya, including its subsidiaries, have been included. Close reference were made to the Global Reporting Initiative G3 Sustainability Reporting Guidelines and the recently released final version of Electric Utility Sector Supplement in efforts to improve on the reporting quality as we progressively work our way to achieving GRI Application Level A+ in the years ahead.

Quality

We strive to provide a balanced view of our company performance by including performance indicators that cover all GRI indicator categories. Both positive and negative results are presented and for easy trend analysis, charts and graphs are used where appropriate. We feel that a company's performance is governed not only by its economic achievements, but also its environmental and social performance, which give readers a balanced view.

DEFINING THE REPORT CONTENT

Comparability

We have included three years-worth of content in the report (and in some areas five year's data) so that there can be some basis of comparison of the company's economic, environmental and social performance. Where appropriate, we have compared our performance against industry or equivalent standards/benchmarks.

Accuracy

All content is backed by supporting documentary evidence provided by members of the Sustainability Report Team (SRT) which comprises employees representing every major business unit in PowerSeraya. Where possible, we included methodologies and assumptions explaining how the performance was calculated. The appointment of an independent party to conduct third party assurance on the report content further lends credibility to the accuracy of the key data being presented in this report via the an audit process based on a recognised, international standard.

Timeliness

We aligned the environmental and social performance indicators with the economic indicators. The latter are in the company's Annual Report on a financial year basis, as the financial year ended in March and the report was released in August.

DEFINING THE REPORT CONTENT

Clarity

The report is meant for all stakeholders so we have tried to write it in a clear, concise manner to cater to most readers. We have made an effort to avoid information that is too technical, so that the report would be accessible to readers without a technical background. In some areas, we have provided readers with some background knowledge to assist them in understanding the relevance and context of the report content. For example, in relating the product responsibility role that our company does in ensuring a level playing field in the electricity market, we found it pertinent to explain how the electricity market in Singapore functions and how our compliance to the electricity market rules is relevant.

We value your feedback

We welcome all feedback and queries relating to this report. Please get in touch with our Environmental and Corporate Services Manager by corresponding via this email address: csr@pseraya.com.sg



Organisational Profile



Dependable Energy

To be the Leading Integrated Energy Company Based in Singapore



ORGANISATIONAL PROFILE

“PowerSeraya Ltd’s strategic vision is to become an integrated energy company, to diversify into other commodities such as steam, cooling water, gas and oil trading.”

NAME

PowerSeraya Ltd

WHOLLY OWNED SUBSIDIARIES

Seraya Energy Pte Ltd
Seraya Energy an Investments Pte Ltd
PetroSeraya Pte Ltd

PRIMARY SERVICES

Electricity generation
Electricity retailing
Oil trading and bunkering
(since April 2007)

HEADQUARTERS

1 HarbourFront Place #17-01
HarbourFront Tower One
Singapore 098633

POWERPLANT STATIONS

Pulau Seraya Power Station
3 Seraya Avenue
Singapore 628209

Jurong Power Station
16 Jurong Pier Road
Singapore 619175

COUNTRY OF OPERATION

Singapore

OWNERSHIP

PowerSeraya Ltd is now a wholly-owned subsidiary of YTL Power. International Berhad since 6 March 2009. (see diagram 3.1)

ORGANISATIONAL PROFILE

CHANGES IN ORGANISATIONAL STRUCTURE DURING REPORTING PERIOD

The company underwent ownership changes during the reporting period which resulted in an organisational restructuring exercise in 2009. The Utilities Group underwent a major restructuring exercise in Q3 2009 to align its modus operandi with that of its parent company

MARKET SERVED

Singapore

EMPLOYEES (FULL TIME)

414 (for year ending March 2009). This is a 2.7% increase in the number of full-time employees in FY 08/09 compared to the previous FY.

REVENUE

S\$3.58 billion (for year ending March 2009)

NET PROFIT AFTER TAX

S\$172 million (for year ending March 2009)

EARNINGS PER SHARE

S\$0.19 (for year ending March 2009)

RETURN ON ASSETS

7.8% (for year ending March 2009)

LICENSED GENERATION CAPACITY

3,100 MW



Diagram 3.1 :PowerSeraya is a wholly-owned subsidiary of YTL Power International Berhad



STRATEGIC PROFILE

“PowerSeraya recognises the need to achieve a balance between economic returns, its environmental footprint and its contributions to society for long-term sustainable growth.”

The PowerSeraya Group, a wholly-owned subsidiary of YTL Power International Berhad, is in the business of producing, wholesaling, trading and retailing of energy, with a primary focus on electricity. With a licensed generating capacity of 3100MW, PowerSeraya is one of Singapore’s largest electricity generators, supplying about 30% of the country’s energy needs. Through its retail arm, Seraya Energy, it has been providing a wide range of innovative products and services to meet the diverse needs of its customers. As part of our vision to become an integrated energy company, the company entered into the fuel-trading and oil-bunkering business through our wholly-owned subsidiary PetroSeraya Pte Ltd in 2007, further complementing PowerSeraya’s power-generating business and Seraya Energy’s electricity retail business.

In our drive to become a leading integrated energy player, the company’s strategy is to diversify into other commodities such as steam, cooling water, gas and oil trading as a means to broaden our revenue streams. This requires the integration of new infrastructure with existing power generating assets to achieve this strategy. The recent modifications to our existing natural-gas fired combined cycle power plants (Blocks 10/20) has enabled the company to produce steam (through the application of waste heat recovery principles) for our customers with sustainability in mind.

The PowerSeraya Group remains committed to maximising value to its shareholders and customers while maintaining high standards of operational excellence and delivery without compromising its commitment to the environment and the community.

STRATEGIC PROFILE

Our Sustainability Philosophy

Unlike many countries, Singapore is a tiny country with limited natural resources. It has no fossil fuel deposits and the potential for large-scale renewable energy adoption is constrained by its land scarcity as well as its geographical location. As such, the country is heavily dependent on oil and natural gas imports to power its economy.

Being the second largest power generating company in Singapore by licensed capacity, we supply close to 30% of the country's needs and play an important role in addressing the energy security concerns of Singapore over the long-term. Coupled with these challenges, the growing agenda of climate change does place increasing pressure on companies like PowerSeraya to do their part for the environment. It is on this backdrop of economic and environmental challenges that PowerSeraya recognises the need to achieve a balance between economic returns, its environmental footprint and its contributions to the society for long-term sustainable growth. Indeed, this same philosophy is similarly shared by S Iswaran, Senior Minister of State for the Ministry of Trade and Industry, Singapore, where he stated during the release of the Economic Strategies Committee recommendation that "Singapore needs to find a balance between economic competitiveness and environmental sustainability and, at the same time, ensure that its energy supply is secure."

Details about our sustainable philosophy in relation to the integrated energy strategy, is expressed in our Annual Report 2008/2009 (CEO's Message).



OPERATIONAL STRUCTURE

A review of PowerSeraya's operation was conducted. To align the organisation to the operational philosophy of the parent company. A major restructuring exercise was conducted at the Utilities Group which resulted in an operating structure change that is now functional-based (from the previous asset-based structure), with an added focus on in-house operational maintenance. The regulation function which was previously residing in Seraya Energy – one of PowerSeraya's subsidiaries – has been transferred to the Legal and Regulatory Affairs department which currently sits within the Corporate Services Group.

CEO's Office

The CEO leads a senior management team of seven to create shareholder value and to realise the company's vision to be the leading integrated energy company based in Singapore.

Retail – Seraya Energy Pte Ltd

The retail and marketing arm of the PowerSeraya Group handles key accounts servicing, marketing, billing operations and the contact centre. It currently participates in the contestable sector of the electricity market comprising mainly of companies in the commercial and industrial sectors.

OPERATIONAL STRUCTURE

Utilities

This group is responsible for the safe, reliable and efficient generation of power to supply close to 30% of Singapore's energy requirements. The Utilities Group is divided largely into the two main divisions of Operations and Maintenance. Within the Operations Division are the Gas Plant, Steam Plant and Multi-Utilities Services departments. The Maintenance Division is made up of departments based on the different areas of engineering expertise of Electrical, Mechanical and Technical Services as well as Facilities & Security. Other departments within the Utilities Group include Health, Safety & the Environment, Capital Projects, Performance & Planning and Admin & Purchasing.

Corporate Finance

Finance, Risk Management and Internal Audit fall under this group. Apart from overseeing timely financial and management reporting, integrity of internal controls and treasury functions, this group charts our corporate risk management framework.

Trading and Fuel Management – PetroSeraya Pte Ltd

This group oversees the operations of the four departments: Business Development and Planning, Physical Oil Trading, System Operations and Terminal Operations. The Trading and Fuel Management Group focuses on operations related to fuel management and blending, terminal operations, sourcing and procurement of fuels and physical trading and bunkering.

Corporate Services

Covering a diverse range of support services that extends to Human Resource, Procurement and Contracts, Corporate Communications, Legal & Regulatory Affairs and Environmental Sustainability, this group is tasked with building a vibrant workforce and an innovative and commercial culture. It is also responsible for developing the company into a socially responsible organisation with a focus on environmental sustainability and aims to make PowerSeraya the employer of choice.

OPERATIONAL STRUCTURE

Energy Markets

This group handles electricity market operations, proprietary trading and a new portfolio relating to gas market operations. The three departments under this group are the Electricity Market, the Gas Market and the Derivatives Market. With the seamless integration of the three departments, this group seeks to transform the energy market in Singapore.

Process and Innovation

The P&I Group is a dedicated team comprising IT Infrastructure, Enterprise Solutions and Business Solutions. It seeks to develop and manage the IT assets and systems of the company and align it to key business processes and objectives. It also seeks to creatively use IT to automate business processes and deliver innovative solutions.



Diagram 3.2. Operational structure of the company



CORPORATE ACHIEVEMENTS

2009

- Best Sustainability Report (at ACCA Singapore Awards for Sustainability Reporting 2008)
- Best First Time Report (at ACCA Singapore Awards for Sustainability Reporting 2008)
- Community Chest SHARE Award (Silver)
- ISO 14001 Certification
- OHSAS 18001 Certification
- Singapore 1000 Company (by DP Information Group for PowerSeraya and Seraya Energy)
- CIO Asia's 2009 100 Index

2008

- ISO 14001 Certification
- OHSAS 18001 Certification
- Community Chest SHARE Award (Bronze)
- Global Water Awards (our desalination plant was named 'Desalination Plant of the Year')
- CIO Honouree 2008
- Home Team National Service Award
- Meritorious Home Team Partner Award
- Meritorious Defence Partner Award (by MINDEF Singapore)
- Singapore Global Trader Award
- ISO/IEC17025:2005 Laboratory Accreditation from SAC-SINGLAS

2007

- ISO 14001 Certification
- OHSAS 18001 Certification
- Community Chest SHARE Award (Bronze)
- FG50 (Fastest Growing 50) by DP Information Network (22nd place)
- Singapore 1000 by DP Information Network Pte Ltd

CORPORATE ACHIEVEMENTS

2006

- ISO 14001 Certification
- Singapore 1000 Company (by DP information Group for PowerSeraya and Seraya Energy)
- 4FG50 (Fatest Growing 50) by DP information Network (3rd place)
- Singapore Health Awards (Gold)
- Excellent Service Award, SPRING Singapore (1 Gold, 5 Silver)
- 6th Singapore Call Centre Awards and 3rd Regional Call Centre Awards 2006
 - Best Contact Centre Manager, Singapore – Silver
 - Best Team Leader, Singapore – Bronze
 - Best Team Leader, Regional – Bronze

4

Economic Performance



Reliable Strength

Steady Economic Performance for Sustainable Growth



ECONOMIC PERFORMANCE

“The Company’s vision is to be a Leading Integrated Energy Company – increasing existing revenue streams while developing new ones for the long-term sustainable growth of the company”

Though the company increased its FY 08/09 revenue compared to the previous year, the company encountered significant challenges to operating costs which resulted in lower earnings. The onset of the global financial crisis since Q4 2008 resulted in higher fuel costs and the provision for fuel inventory at lower costs, which increased the company’s overall costs. The good performance by PetroSeraya, the oil trading arm of PowerSeraya, doubled their earnings from the previous year and contributed significantly to overall earnings of the company. Concurrently, the prudent risk management of the company helped to limit the company’s exposure to oil price volatility as well as credit risks that arose from the global financial crisis. These factors helped to stretch the earnings of the company during these challenging times.

As the company continues on its path to be a leading integrated energy company, it aims to increase existing revenue streams and develop new ones for the long-term sustainable growth of the company. The continued economic success of the company is vital not only for the survival of the company. It translates to job creation for employees that can in turn deliver positive impact to people’s livelihoods and society. It also enables us to continue investing in sustainable development initiatives that would deliver environmental and social benefits for the community now and into the future.



REVENUE STREAMS

The main revenue streams of the company come from the electricity generation services offered by PowerSeraya Ltd, energy sales in the contestable market through Seraya Energy (our electricity retail arm), vesting contracts with the Market Support Services License (MSSL) and oil trading and bunkering services offered by PetroSeraya (our oil trading arm). Steam is an additional utility service which the company has just started to offer its customers and should generate stable earnings in the near future.

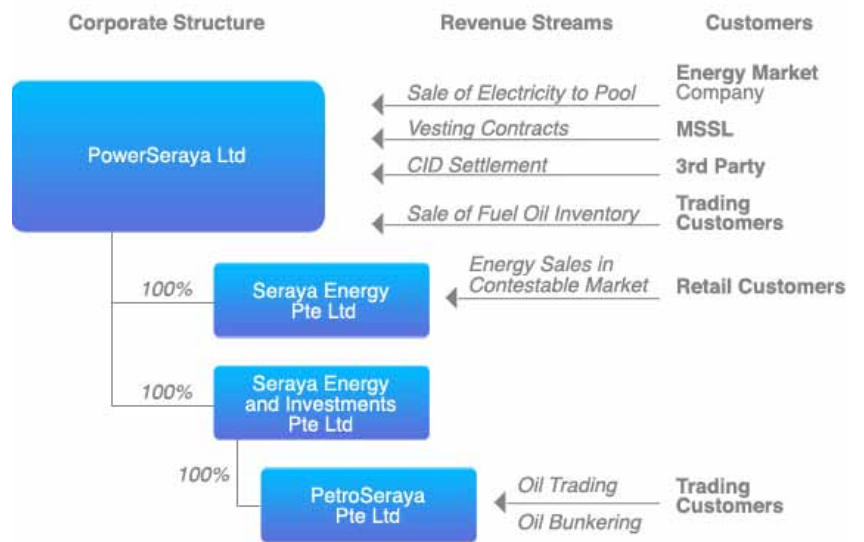


Diagram 4.1: Relationship between revenue streams and corporate structure



FINANCIAL PERFORMANCE

The information provided below is a direct extract from the Annual Report 2008/2009:

Operating revenue/earnings

The Group's operating revenue grew by S\$784 million, a 28.1% increase over FY07/08 to S\$3.6 billion contributed mainly by higher electricity prices, increased revenue from the sale of oil and a full-year operation of PetroSeraya.

The average vesting contract hedge price, which was pegged to three-month fuel oil forward, increased from \$143/MWh in FY07/08 to \$190/MWh in FY08/09. This was due primarily to a fuel oil price increase over the period. Spot electricity prices during the year also rose in tandem with the vesting contract hedge price.

Generation Units Sold was 9,541 GWh or 6.3% lower than FY07/08 due to increased competition.

Overall system demand fell by 0.7% from FY07/08. Despite a contraction in system demand, retail market share grew by 2.2%. Total units sold through the retail arm for the year was 7,004 GWh.

Profitability

The Group's net profit after tax of S\$171.9m was mainly the result of higher fuel cost, an unfavourable economic environment which resulted in lower generation volume from the power plant and lower electricity demand, as well as the provision for fuel inventory at a lower cost.

FINANCIAL PERFORMANCE

Earnings per share & Return on Equity

The Group's Return on Equity (ROE) for the year was 14.3% and Earnings Per Share (EPS) amounted to 19 cents for the year.

Basic EPS decreased by 24% to 19 cents in FY08/09 as compared to 25 cents in FY07/08. The decrease is in line with the lower profits after tax for the Group.

Return on Equity was 14.3% in FY08/09. This represented a decrease of 25% over last FY's 19.1%. This was due to lower profits as a result of the provision made to fuel inventory.

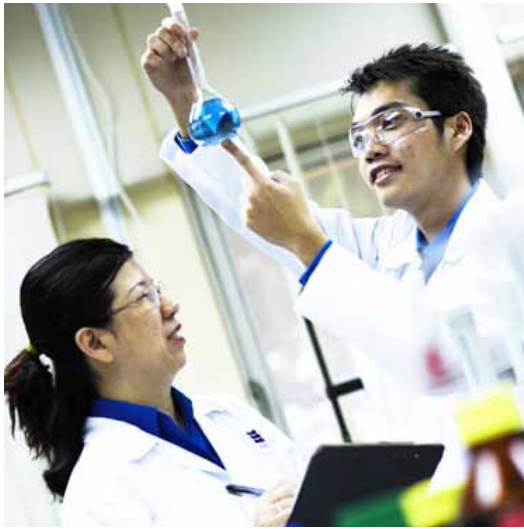
Details of the financial performance of the company are covered comprehensively in the hardcopy version Annual Report 2008/2009.



FINANCIAL ASSISTANCE FROM GOVERNMENT AND COMMUNITY INVESTMENTS

We did not receive any financial assistance from the Government in FY08/09.

Our community investments (comprising environmental and social investments) in FY08/09 increased 83% to S\$312,837. This significant increase is due to our sponsorship of the Energy Learning Hub at the premises of our adopted school, Greenridge Secondary School; our inaugural sponsorship to the Clean Green Singapore event as well as social contributions through the Nithiah Nandan Book Prize and the PowerSeraya Scholarship Programme launched in 2008. Further details of our community investments can be found in Section 8: 'The Environment and the Community'



PROPORTION OF LOCAL SPENDING AND CONTRIBUTIONS TO THE LOCAL ECONOMY

PowerSeraya and its subsidiaries have operations that are based locally in Singapore. None of these companies have overseas operations. A high proportion of the goods and services that are purchased by PowerSeraya and its subsidiaries are made from local suppliers based in Singapore even though the organisation does not have a policy or common practice for using local-based suppliers. Our procurement practices are based on 'best buy' principles (i.e. procuring 'value for money' product and services). Supplier selection is based on price, lead time, service levels, payment terms and quality (i.e. meets specifications and complies with legislation including environmental regulations). Prior to supplier selection, suppliers are required to declare whether they are certified with recognised environmental systems/standards such as the ISO 14001 before they are granted 'Approved Vendor' status.

Based on goods receipts for the three-year period FY06/07 to FY08/09, an estimated 93% of the purchases are from local suppliers. These figures suggest the significant amount of spending that is being made by the company to support local businesses in the supply chain and contributions to the local economy.

Based on Order Value

Year	% Local	% Overseas
FY 06/07	95.2%	4.8%
FY 07/08	64.7%	35.3%
FY 08/09	62.3%	37.7%
Total	66.1%	33.9%

Based on Goods Receipt

Year	% Local	% Overseas
FY 06/07	89.8%	10.2%
FY 07/08	94.1%	5.9%
FY 08/09	95.4%	4.6%
Total	93.1%	6.9%



DEVELOPMENT & IMPACT OF INFRASTRUCTURE INVESTMENTS FOR PUBLIC BENEFIT

PowerSeraya, as an integrated energy company, sees itself playing an important role in educating the community on energy conservation. This is evident from our significant investment in establishing the Energy Learning Hub at the premises of our adopted school, Greenridge Secondary School.

Over the period FY07/08 to FY08/09, PowerSeraya donated a sum of S\$170,000 to construct the Energy Learning Hub (ELH). The idea of the ELH was first mooted by Greenridge Secondary School who was keen to enhance environmental education for its students. A series of discussions between the school and PowerSeraya eventually led to a proposal of the learning hub that would serve as a resource centre for not only the students of the school but also the Cluster West 6 schools in the neighbouring areas. PowerSeraya approached the 11 schools in the West 6 cluster, covering 11,000 students and 770 teaching staff, to make a presentation on the ELH. The ELH also received support from the Superintendent of Cluster West 6 as well as principals from the eleven schools.

Approval from the Board of PowerSeraya was subsequently obtained to construct the ELH which led to several rounds of discussions with the school on the design, infrastructure and content aspects of the ELH. The initial plan was for the ELH to showcase content covering various environmental themes. After much deliberation, it was agreed that the ELH would be energy-centric, featuring the linkage between energy and climate change, with a mini rainforest to depict the carbon sink concept. The ELH whose initial name was Environmental Learning Hub was then renamed to Energy Learning Hub to suit the theme. The hub also featured PowerSeraya's role in climate change action as well as messages from the National Environment Agency which were aligned with the energy conservation theme. Further details of the ELH can be found in Section 8: The Environment and The Community.



MAKING CONTRIBUTIONS TOWARDS EMPLOYEES' SOCIAL SECURITY

Companies with operations in Singapore are required by law to make monthly contributions into the *employees' Central Provident Fund (CPF), the national social security savings plan that provides working Singaporeans (including those holding Permanent Resident status in Singapore) with a sense of security and confidence in their old age. The CPF aims to provide a retirement income to meet one's basic needs such as a roof over one's head upon retirement and savings for future medical expenses. This is unlike other jurisdictions where the employee's retirement funds are met by the organisation's pension funds.

Every month, PowerSeraya makes contributions to its employee's CPF. The CPF contribution rates, which are percentages of their current wages, vary according to age starting from 5% to 14.5% as stipulated by the CPF Board. In FY08/09, the company's contributions to its employees' CPF, which covers 98.3% of the workforce, totalled S\$4.7million.

*Employee is any person (excluding foreigners with no Permanent Resident status in Singapore) who is employed in Singapore and any Singaporean seaman who is employed by an employer under a contract of service or other agreement entered into in Singapore.



Corporate Governance & Stakeholder Engagement





CORPORATE GOVERNANCE AND STAKEHOLDER ENGAGEMENT

“The robust corporate governance system ensures that the company’s business practices are carried out in a responsible and ethical manner. It serves to protect the interests of our shareholders as well as other stakeholders that have interactions with our company.”

The changes in the ownership of the company (with new owners YTL Power international Berhad) have not altered the strong emphasis placed on corporate governance in the company. PowerSeraya is committed to maintaining high standards of corporate governance, professionalism and accountability to safeguard and create long-term value and returns to its stakeholders through the application of sound policies, practices and internal controls.

The following chapters, covering our corporate governance structures, have been updated following the divestment of PowerSeraya from Temasek Holdings to become a wholly-owned subsidiary of YTL Power International Berhad from 6 March 2009.



GOVERNANCE Q&A

What is the governance structure of PowerSeraya, such as the committees for specific tasks such as setting strategy or providing organisational oversight?

The highest governance body in PowerSeraya Ltd is the Board of Directors (BOD) which provides organisational oversight on areas such as business strategy, risk management, employee compensation and company policies. The BOD has two committees to assist in the execution of its responsibilities:

- Audit Committee – responsible for the financial reporting, internal controls and compliance issue (operations and finance)
- Human Resources and Remuneration Committee – responsible for human resources policies and compensation matters.

The composition of the BOD as well as details of each BOD member can be found under the 'Board of Directors' Chapter of the Annual Report 2008/2009.

Is the chairman of the BOD also an executive officer in PowerSeraya and, if so, what is his function within the management?

No, the chairman of the BOD is not an executive officer of the company.

How many people in the BOD are independent and/or non-executive members?

As of 31 March 2009, the BOD consists of three members, two of whom are non-executive members. The only executive member of the BOD is the Managing Director of PowerSeraya. A non-executive director is generally considered a director who has no involvement in the day-to-day running of the company and is not employed by the company. As such, a non-executive director will usually devote part of his time to the affairs of the company as an independent adviser on matters of policy and strategy.

GOVERNANCE Q&A

What mechanisms do you have for the shareholder and employees to provide recommendations or direction to the BOD?

PowerSeraya was a wholly-owned subsidiary of Temasek Holdings Ltd during most of the reporting period. PowerSeraya was divested from Temasek Holdings and became a wholly-owned subsidiary of YTL Power International Berhad on 6 March 2009. There are no minority shareholders, and PowerSeraya's sole shareholder appoints the directors on the BOD.

Employees have the right to raise concerns anonymously through a whistle-blowing policy which is covered under the company's Code of Ethics.

UPAGE (Union of Power and Gas Employees) represents our employees who are union members and they make up more than half of the company's staff. UPAGE and the management of the company meet on a regular basis to discuss topics relating to the welfare of the union members as well as on areas of collaboration where the union and the management can work together to achieve company goals, among other issues.

Is there any link between compensation for BOD members, senior managers, and executives and PowerSeraya's performance, including social and environmental performance?

The members of the Board of Directors are not paid director's fees on an annual basis for the roles and responsibilities they carry out. Papers covering financial, environmental and social subjects are tabled regularly at the BOD level. For dedicated attention, two committees (Audit Committee and the Human Resources and Remuneration Committee) are set up to scrutinise issues in greater detail, such as business planning and strategies; corporate governance and risk management; and human resource matters including industrial relations. The BOD appoints directors to head and be members of the two committees.

GOVERNANCE Q&A

All of our employees are covered in an established and structured performance management system where bonus and salary remuneration are tied to group and individual performance targets aligned to our overall performance goals. This include social and environmental performance. On the latter, it encompasses the environmental performance of the power plant operations as well as environmental initiatives organised or supported by the organisation for employees and the community. The establishment of the Environmental Department in late FY06/07 shows our emphasis on corporate social responsibility with a focus on the environment. The bonus and increment of employees from the Environmental Department and the group heads concerned are tied to the performance of the corporate social responsibility goals which include targets for environmental and social items. Our social performance includes the various community programmes covered under the corporate social responsibility goals. These goals form part of the corporate performance targets which are tracked by the BOD on a quarterly basis.

What processes are in place for the BOD to ensure conflicts of interest are avoided?

If there is any conflict of interest, the individual BOD member who is in a position of conflict of interest will not vote on the matter. Our annual report includes annual financial statements which require directors to declare whether they have any interest in the shares or debentures of the company or its related corporations in accordance with the Singapore Financial Reporting Standards.

Our tender process for the procurement of products or services include procedures that require members of the Board of Directors to declare whether they have an interest in the suppliers or service providers bidding for the tenders.

GOVERNANCE Q&A

Is there a process for determining the qualifications and expertise of the BOD members guiding PowerSeraya's strategy on economic, environmental and social topics?

PowerSeraya prescribes to the standards set by the Accounting Standards Council, which took over the task from the Council on Corporate Disclosure and Governance with the enactment of the Accounting Standards Act on 1 November 2007.

In sourcing and considering the candidates for appointment as directors to the Board, his qualifications and experience will be scrutinised by our Shareholder in relation to the prevailing composition of the Board expertise and the desired profile.

GOVERNANCE Q&A

What internally developed statements of mission or values, codes of conduct, and principles do you have that are relevant to economic, environmental, and social performance, and what is the status of their implementation?

Our vision is to be the leading integrated energy company based in Singapore.

Our mission statement is: “At PowerSeraya, our relentless pursuit is to maximise value for our shareholders, customers, employees and the community.”

Our guiding business principles include:

- Optimal development and utilisation of resources
- Sound environmental practices
- Product/service differentiation
- Creative and vibrant workforce

Our core values are “Venture, Innovation, Best Practices, Respect, Accountability, Nurture and Teamwork” (VIBRANT for short)

Our Code of Conduct covers areas such as health and safety and fraud, which are relevant to environmental and social performance. Our Code of Ethics covers areas such as safe workplace and environment and whistle-blowing.

Each employee is given a copy of the Employee Handbook which covers the above statements of mission, vision and values. The corporate website and the intranet also communicate these corporate messages. We also have posters about them throughout the workplace.

GOVERNANCE Q&A

How does the BOD oversee PowerSeraya's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct and principles?

The BOD meets at least quarterly to be updated on the progress of the company's performance which includes economic, environmental as well as social aspects. They also provide advice and direction on issues facing PowerSeraya and how to move the company forward. From time to time, the BOD appoints external consultants and auditors to augment expertise and provide advice on specific company matters. The BOD is supported by two main committees: the Audit Committee looks into the risk management aspects of the organisation with the Risk Management Committee which provides quarterly reports to the Audit Committee; and the Human Resources and Remuneration Committee looks into HR policies as well as the Code of Conduct.

How do you evaluate the BOD's performance, particularly with respect to economic, environmental and social performance?

There are no formal processes to evaluate the performance of the BOD. However, there is the practice of re-electing and rotating BOD members for a second consecutive term which is an indirect means to evaluate members who wish to be considered for a new term.



RISK MANAGEMENT

Risk Management for Organisational Value Optimisation

At PowerSeraya, we view risk management as a necessary and important function that serves to protect the enterprise value of the company. Taking a precautionary approach through the various risk management practices within the company helps to mitigate the multiple risks that the company encounters in its daily operations. Due to the interdependent nature of the business operations of PowerSeraya and its subsidiaries, prudent risk management aims to minimise the risk impacts that affects the business ecosystem of the PowerSeraya Group. This way, it seeks to also optimise the value chain across the various business entities.

We have a corporate risk management framework that covers the different types of enterprise risk. Under this framework, enterprise risks are identified by the respective business units and significant risks are documented in the Corporate Risk Register and monitored. The business risks are expected to identify mitigation measures to address the enterprise risks and implement them accordingly in efforts to reduce the risk exposure. We employ risk monitoring and reporting systems to enable early detection and escalation of risks to the various levels for review to take appropriate actions. Diagram 5.1 shows the risk-management cycle practiced in the company.

RISK MANAGEMENT

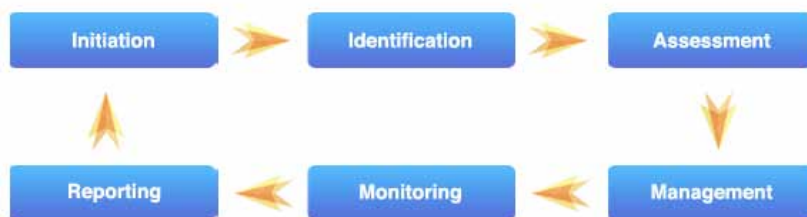


Diagram 5.1: Risk-management cycle

PowerSeraya has put in place a structure to manage the risks of the entire company. The committees and their respective roles in risk management are shown in Diagram 5.2. We have the Risk Management Committee (RMC) which is responsible for the development and implementation of processes that identify, measure, monitor and control risks within the company. The RMC is headed by a Chief Risk Officer (CRO) appointed by the Board.

Positive Outcomes to Risk Management Committee with New Ownership Changes

There were no changes to the existing risk management structure of the company even when new owners YTL Power International Berhad came on board in 6 March 2009. However, there were several changes to the key appointment holders which led to two changes in the composition of the risk management committee in 2009. The new members of RMC come from diverse backgrounds and their experiences has injected valuable perspectives to how risk can be better managed to enhance the value of the organisation. For example, the appointment of our new CFO cum CRO, has contributed his experience in dealing with financial issues related to banking like credit granting which would have an impact on enterprise risk if mismanaged.

RISK MANAGEMENT

Reporting to the RMC are the various risk owners who are responsible for managing and monitoring risks of their business units. The Enterprise Risk Management (ERM) Department collates all reports from the risk owners on a quarterly basis. The ERM Department primarily manages the overall market risk of the company and works with the different risk owners to manage other types of enterprise risks that include (but are not limited to) the following:

- Market Risk
- Credit Risk
- Liquidity Risk
- Regulatory and Legal Risk
- Project Risk
- Health and Safety Risk
- Operational Risk
- Integrity Risk
- Human Capital Risk
- Business Continuity Risk



Diagram 5.2 : Organisational structure for Risk management

RISK MANAGEMENT

How Risk Management has protected our enterprise value during the onset of the global financial crisis in 2008

Due to the interdependency between oil prices and our business operations, strong oil fluctuations can have an adverse impact on the profitability of the company. During the global financial crisis which started in the last quarter of 2008, the world experienced a huge dip in oil prices. The company managed to mitigate its loss due to the sharp drop in oil prices from the robust risk management systems in place. The exposure to the company from the oil price fluctuations were limited by capping the open positions of our oil traders. The Enterprise Risk Management (ERM) team provides daily reports on the day's open positions to the management who will then make informed decisions to manage the company's risk exposure. A system of alerts enables the management to be notified of any trading positions that has exceeded a certain allowable threshold and this triggers precautionary measures to be taken to limit losses.

Besides strong oil fluctuations, another challenge encountered during the financial crisis is the credibility of counterparties. One month before the collapse of Lehman Brothers, the ERM proposed to the management to freeze its credit limits with Lehman when bad news about the company continued to emerge in the market. No additional trade was done after the management's approval. During the financial crisis, more counterparties' credit limits were freezed after ERM's review. Besides a few reputable counterparties which ERM deemed as still being financially strong and sound to trade with, PowerSeraya turned to the Exchange (SGX and NYMX) to complete its hedging requirement which has virtually no credit risk.

RISK MANAGEMENT

5.2.i Crisis

As a responsible company, we are committed to safeguarding the well-being of our employees, contractors, customers, the public and the environment. PowerSeraya adopts a three-level response framework for handling emergencies.

Level 1 – The Site Incident Response Team responds and controls minor incidents.

Level 2 – The Emergency Management Team handles more serious operational incidents with wider potential implications.

Level 3 – The Crisis Management Team, which is responsible for the protection of the company’s value and image, deals with strategic issues and high-level shareholder communications during an escalated incident.

Ten major operational incidents and response plans have been identified in the organisation (below). The response/contingency plans are reviewed regularly to ensure they are updated against changes in business operations and regulations.

Major Incidents	Response/Contingency Plans
Generation Failure	Major System Failure
Transmission Switching Failure	Major System Failure
Fire and Explosion - Plant	On-Site Emergency Response Plan
Safety Hazards	On-Site Emergency Response Plan
Environment Incidents (Oil Spill)	Oil Spill Plan
Fire - HarbourFront Office	Fire Emergency Plan for HarbourFront Towers
System/IT/Communications issues	IT Disaster Recovery Plan
Infringement of Port Security	Port Facilities Security Plan
Contagious Disease	Business Continuity Plan (Pandemic Flu)
Fuel Supply Disruption	Natural Gas Disruption - SOP

Table 5.3: Ten major operational incidents and response/contingency plans

RISK MANAGEMENT

5.2.ii Managing Fraud Risk

The management of PowerSeraya recognises the significance and impact of fraud risks if these are not well managed. The company has a Fraud Risk Management (FRM) framework which it views as important in protecting the interests of shareholders, employees as well as other stakeholders who have dealings with the company. The overall responsibility of implementing and overseeing the FRM framework lies with the Fraud Control Officer (FCO), supported by the Fraud Risk Assessment Committee. Diagram 5.4 shows the organisational structure for FRM.

In 2007, the Fraud Risk Management (FRM) Policy was formalised and approved by senior management and the Audit Committee. It aims to draw together the preventive, detective and resolution, and reporting initiatives adopted by PowerSeraya in one document and to:

- Promote awareness of potential high fraud risk areas
- Develop appropriate strategies and controls to minimise the risks of fraud and consequent losses.

At PowerSeraya, all business units are periodically analysed for fraud risks (including corruption which is a subset of fraud). Since the formulation of the FRM Policy in 2007, there have been no confirmed incidents of fraud arising from allegations received and investigated. Fraud risk assessments are conducted on business processes (e.g. procurement, treasury) which cut across multiple departments and functions in the organisation.

RISK MANAGEMENT

Complementing the FRM Policy are the Code of Ethics and the Code of Conduct. The former serves to guide employees in making sound and ethical decisions. The latter aims to uphold the integrity and image of the company through the employee's diligence and due care in the discharge of his/ her duties.

Fraud risk awareness workshops are also conducted periodically to help employees identify potential red flags. From FY 2006/2007 to FY 2008/2009, a total of three fraud awareness workshops were conducted involving close to 148 employees. The workshops covered topics like the fraud risk policy, potential activities leading to fraud and the role that employees have on fraud detection. Employees are also encouraged to report known or suspected incidences of malpractice in accordance to with the Employee Handbook.

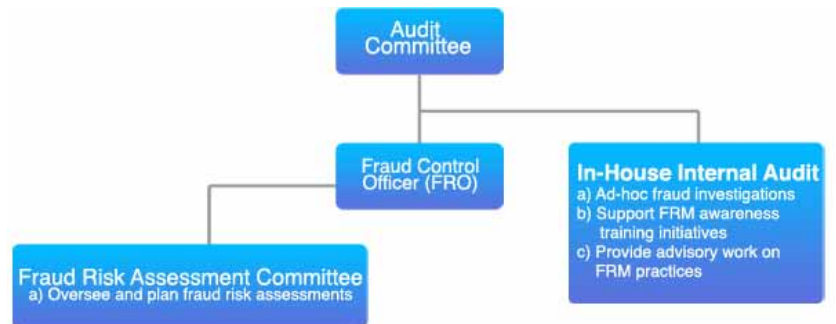


Diagram 5.4: Organisation structure for fraud risk management



STAKEHOLDER

“One of the CSR Strategic Thrusts is to grow with the community. PowerSeraya sees itself as being part of the climate change solution and regularly engages the community through environmental events and initiatives.”

Our interactions with our stakeholders, be it our business partners, customers, suppliers or the community enable us to increase our financial capital, nurture our human capital and at the same time provide us with the opportunities to enhance our social and environmental capital. Our stakeholders thus include groups that directly or indirectly contribute to the sustainable growth of the company through a balance of our economic, environmental or social performance.

To identify the stakeholders with whom we should engage, PowerSeraya takes its direction from our Corporate Social Responsibility (CSR) Strategic Thrusts which was developed in consideration of our integrated energy strategy, as well as challenges and opportunities facing the company. These cover five areas which involved the following stakeholders as shown in the table below.

CSR Strategic Thrusts	Stakeholders
a) Investing in Green Capabilities	Shareholders, Customers, Business & Technology Partners
b) Incorporate Greenhouse Gas in Management Practice	Shareholders, Customers
c) Build Strategic Relationships	Customers, NGOs, Government Agencies
d) Grow with the Community	Schools, Wider Community
e) Nurture Human Capital	UPAGE*, Employees (Current & Future), Youths

* UPAGE stands for Union of Power and Gas Employees

In addition to the CSR Strategy driving our engagement with stakeholders, our economic performance is driven by our vision and mission statement which will involve the engagement of stakeholders such as business partners and service providers for the various economic-related activities/initiatives.

Our engagement with the government agencies for environmental performance relates to compliance towards environmental laws and regulations. For raising environmental awareness and social work among employees and the community, we work closely with the government agencies, NGOs and schools for our CSR initiatives.

STAKEHOLDER

5.3.i Stakeholder Engagement

PowerSeraya believes in continuous engagement with its many stakeholders to keep abreast of the latest developments and to communicate our views to all parties with whom we interact. It is the process of interaction that ideas flow, opportunities are found and where innovation can take place in our relationships with our stakeholders. Our stakeholder engagement allows us to gain input and feedback on our business, clarify perceptions of our company and foster constructive relationships for the benefit of our business as well as the community. We engage our stakeholders in various ways ranging from formal meetings, dialogue sessions, customer events and initiatives with the community. These are just some of the more specific ways in which PowerSeraya engages its main stakeholders.

Communities

PowerSeraya sees itself as part of the climate change solution and regularly engages the community through environmental events organised, supported or participated in by the company. Our engagement with the community also extends to meaningful causes that benefit society.

Throughout the years, we have involved the community in both environmental as well as social initiatives. For example, our joint initiative with our landlord on the '1 Degree Up Challenge' is an annual event aimed at getting office tenants to conserve energy by raising their office temperature by 1°C on World Environment Day. In 2009 we had staff volunteers who spent time with the intellectually disabled during our bi-annual Family Day event. Our support for community work also comes in the form of donations to NGOs that seek to enhance the lives of the socially marginalised or to care for the environment. Details of our community engagements can be found in Chapter 8: 'The Environment and the Community'.

STAKEHOLDER

Government Agencies and Non-Governmental Organisations (NGOs)

Our main engagement with NGOs and government bodies is our contact with the National Environment Agency (NEA), the National Electricity Market, Jurong Town Council (JTC), the Energy Market Company and the Energy Market Authority. In 2009, we have been working closely with NEA and the South West Community Development Council to develop the Responsible Energy Advocates Programme (REAP), which is due to be launched in FY10/11. We also engage societies and NGOs such as the Singapore Environment Council, the Singapore Compact Waterways Watch Society and the Singapore Polytechnic Environmental Club to collaborate on CSR activities that benefit the environment and the society.

Customers

We run energy efficiency and education events to carry out our product responsibility beyond the provision of safe and reliable electricity. At these events, customers gain an insight into electricity generation and learn about energy conservation solutions. Through these events, we also gain customer feedback, learn about their concerns and as a result, innovate our products to tailor to our customer's varied needs. For further details, kindly refer to Chapter 10: 'Product Responsibility'.

In June 2008, a customer survey was conducted to understand the correlation between the high customer satisfaction rate (from the findings of the customer satisfaction survey done in 2007) and customer loyalty. Details of the customer survey can be found in Chapter 10: 'Product Responsibility'

STAKEHOLDER

Shareholders, Management and Staff

The Board of Directors holds quarterly meetings with the senior management team to update themselves on the progress of the company performance, discuss and develop the business strategy, develop medium- to long-term plans and provide advice on problems and challenges.

Our staff management dialogues are a means for the management to update the staff every quarter on the company's performance, understand the concerns of staff and elicit feedback. When PowerSeraya was in the midst of a divestment exercise in 2008 and early 2009, the staff management dialogue sessions were also used as a platform by the union to manage the anxieties of our staff (the change of owners eventually took place in March 2009).

The Business Group Retreat is an annual event held by each group to discuss plans and goals for the coming financial year. The outcomes of the retreats are used as inputs for the Management Retreat where corporate-wide business plans and goals are discussed by the senior management team. The outcomes of these discussions are then shared with the business groups so that amendments to plans are updated. The plans and goals for the coming financial year are later shared with all employees during Staff Management Dialogue sessions and through a meeting with UPAGE.

Finally, to tie these activities with our sustainability as a business and for the environment, the Sustainability Reporting Team (SRT) met several times over the report preparation period (Oct 2008 to Feb 2009). For details of the process undergone by the SRT, please refer to Chapter 2: 'Scope of Sustainability Report'.

Suppliers

PowerSeraya participates in the annual V94.3A/84.3A Asia Pacific User Group Meeting where users of the Siemens V94.A/83.A machinery share their experiences and knowledge on the operations and maintenance of this machine used in power plants.

STAKEHOLDER

As an initial step towards sustainable procurement practices, a pilot initiative was done to urge our suppliers to make voluntary submissions of the sustainability procurement checklist in the last quarter of 2009. The sustainability checklist aims to find out more about their sustainable practices and the sustainability of the products supplied. To find out more about this pilot initiative, please refer to Chapter 7: Environmental Performance.

Employees and their trade unions

A close and productive working relationship exists between the management of the company and UPAGE with both parties committed to working together in a strategic alliance to meet challenges, resolve issues and seize opportunities with a view to enhancing business competitiveness and the well-being of employees. PowerSeraya takes a highly consultative approach, engaging UPAGE to share information, discuss business strategies and plans, taking into consideration each other's constraints, concerns and interests and seeking win-win solutions. The close union-management ties is especially relevant to the company in light of Singapore's drive to increase the country's productivity by 2% to 3 % over the next decade as disclosed during the release of the Singapore Budget in February 2010.

All employees of PowerSeraya and its subsidiaries have the freedom to join the UPAGE (Union of Power and Gas Employees). There is also freedom for collective bargaining by the UPAGE on matters concerning employees. In FY2008/2009, about 52% of the workforce is covered by the collective agreement and about 73% of PowerSeraya's workforce are UPAGE members.

STAKEHOLDER

On average, UPAGE and the management meet four times a year. Two of these meetings discuss bonus payout and salary increment for employees. In addition, the Management will share with UPAGE at the start of the financial year the business plans and goals so that both parties are aligned. On an informal basis, these two parties also hold meetings to discuss and resolve any issues that may arise. One of the important issues that is expected to be discussed in 2009/2010 is the re-employment of older workers. There were altogether eight Union-Management meetings in FY2006/2007 to FY2008/2009 period.

The Collective Agreement (CA), which came into effect on 1 July 2007, reiterated both the company and the union's commitment to protect the interests of the employees. With the current CA due for expiry in 2010, the Human Resource Department along with the senior management, are already making plans to review the CA for the new term. Some of the expected issues pertinent to the CA that would be discussed with UPAGE include the i) Re-employment of older workers, ii) Staff Productivity and iii) Pay-For-Performance Bonus Structure. As with previous years, a series of meetings with UPAGE will be held with management to discuss and negotiate on matters that affect our employees and reach an agreement on the final terms and conditions of the new CA. The Board's approval will then be sought on the new CA.

Under the current CA, there is no mention of a minimum notice period regarding significant operational changes. However, there is a mutual understanding on how significant matters (affecting employees) are handled under the guidance of Singapore's unique tripartite industrial relations. This indicates that the Singapore Government, the employees and unions work together to address the challenges of maintaining a productive workforce in today's competitive, globalised world for the mutual benefit of employers, workers and society. Singapore's industrial relations system is governed by the values of tripartism and this has worked well for the country for many decades.

STAKEHOLDER

The Restructuring Exercise of the Utilities Group - A Fine Example of the Excellent Working Relationship between Union and Management

One fine example of how significant operating changes are being handled in PowerSeraya (guided by the tripartism values) is the recent restructuring of one of the company's business groups, namely the Utilities Group. Following the new ownership change in PowerSeraya since March 2009, the restructuring of the Utilities Group was necessary to align with the operating structures and philosophies of parent company YTL Power International Berhad. This is done to take advantage of the synergistic and collaborative opportunities from having all power generating companies operate under the same modus operandi. The restructuring also meant that there was greater emphasis on developing core competencies and this led to less reliance on external parties for the maintenance of plant equipment.

The Utilities restructuring was rolled out in three major phases over four months (June to September 2009). The first phase 'Preparing for Change' essentially involved the planning work to prepare the affected staff for the transition to the new organisation structure from the existing asset-based modus operandi to one that is functional-based. Firstly, the management staff of the Utilities Group had several rounds of meetings to develop the new organisation structure to support the new modus operandi and the manpower requirements to run the power plant smoothly. The union was also consulted occasionally to seek their opinion and inputs on the new organisation structure. This was followed by the re-designation of staff which involved a considerable amount of work to assess each and every staff member's skills and competency to match them to their new job scopes. Conscious efforts were made to ensure that there was sufficient on-the-job training (OJT) for staff in new and expanded roles to cope. This was done by assigning inexperienced staff to the more experienced ones so that knowledge and skills could be learnt and transferred in a time-effective manner through hands-on training under the close supervision of mentors. Formal classroom training were also identified for staff to equip them with the necessary knowledge so they can perform effectively in their new roles.

STAKEHOLDER

After the first phase, the second phase was 'Managing The Change'. This involved the execution of the restructuring plan and managing the change process to ensure smooth transition on the ground. Throughout the transition, the union in close collaboration with the management team of the Utilities Group played a major role in assisting staff to shift to the new roles and facilitated close door discussions with staff who exhibited signs of anxiety or discomfort in their new roles as well as through dialogue sessions with all affected staff to communicate and re-assure them on the new changes.

The last phase of the restructuring, which is 'Reinforcing the Change', aimed to bridge any unforeseen gaps in the restructuring process and ensure that staff had settled down comfortably in their new roles. Staff feedback was gathered in the form of surveys to assess whether the restructuring plans had achieved the intended objectives. It also served to flag out any staff issues that needed to be addressed.

As a whole, the restructuring exercise was a huge success due to the prudent planning and execution work performed by the Utilities Group who worked closely with the union to communicate and assure staff on the new changes. Besides the Utilities Groups, other business groups also played critical supporting roles to ensure that the restructuring process went smoothly. Accounting changes, new job descriptions and the re-allocation of inventories had to be effected in line with the new organisation structure of the Utilities Group. The restructuring exercise not only resulted in cost savings from a greater emphasis placed on developing in-house capabilities over outsourcing, it also provided immense opportunities for staff to maximise their true potential and thus developed their confidence. It also broadened the skill sets of several staff in their new found roles. In addition, the close union and management relations played a crucial role in preparing staff for the restructuring exercise – human issues were handled in an effective and sensitive manner during the execution phase to ensure that the aims of the restructuring exercise were met.

STAKEHOLDER

5.3.ii External Commitments

What externally developed economic, environmental, and social charters, principles or other initiatives does PowerSeraya subscribe to or endorse?

PowerSeraya is a member of the Singapore Compact, which is a participant of the UN Global Compact.

What associations (such as industry associations) and/or national/international advocacy organisations is PowerSeraya involved in, is on the governing bodies of committees of, funds or views membership as strategic?

PowerSeraya's external commitments include the following:

- Singapore Compact (Member)
- Sustainable Energy Association of Singapore (Member)
- National Environment Agency – Corporate and Schools Partnership (CASP) Programme
- Singapore Work Skills Qualification (WSQ) – our CEO is Steering Committee member of the WSQ
- Gas Industry Structure Implementation Steering Committee (GISISC) – our CEO represented the company in the GISISC till June 2009

To date, the company is not actively involved in any public policy development and lobbying activities related to sustainability. The company also does not have a representative that holds a public policy position on sustainability issues/matters. Notwithstanding this, the company does assign representatives to sit in working committees led by government-linked agencies such as the WSQ for skills upgrading and the GISISC to shape the country's gas industry.

Climate Change and Us

Our Commitment

Being part of the Green Solution





THE UNDENIABLE ASSOCIATION WITH CARBON

“PowerSeraya has embarked on a path in response to climate change by enhancing the efficiencies of our power plant operations and shifting to cleaner fuels such as natural gas.”

Data from the National Environment Agency points to the fact that the power sector is a dominant contributor of carbon dioxide emissions in Singapore, contributing close to 50% of the total carbon dioxide emissions from primary energy consumption sources. PowerSeraya’s internal projections also show that the power sector will continue to be the major contributor of carbon dioxide emissions in the next two decades given the resource constraints and the lack of renewable energy options in Singapore at the moment. With Singapore’s pledge to cut its carbon emissions by 16% below business-as-usual levels by 2020 (contingent to an international binding, post-Kyoto climate change treaty) at the recently concluded Copenhagen summit (COP15) on climate change, this underscores the important and continued role that PowerSeraya has to play in climate change mitigation for the long-term as it would impact the present as well as future generations.



	Electricity Generation	Industry	Transport	Buildings	Consumers/ Households	Others
Primary Consumption (combust fuel)	19,315 (48%)	13,465 (33%)	7,056 (17%)	325 (1%)	216 (1%)	-
Secondary Consumption (use electricity)		8,328 (21%)	930 (2%)	5,910 (15%)	3,415 (8%)	732 (2%)
Overall		21,793 (54%)	7,986 (19%)	6,235 (16%)	3,631 (9%)	732 (2%)

Above data is from the National Environment Agency as provided in Singapore’s National Climate Change Strategy paper.

THE UNDENIABLE ASSOCIATION WITH CARBON

The Singapore Climate Change Strategy paper published in 2007 concluded that the use of less carbon-intensive fuels (e.g. natural gas and renewables) and energy efficiency improvements would be key to mitigating GHG emissions. This echoes our company's shift to greater use of natural gas as well as the efficiency improvements that have been made at our power generating units. For the 2000 to 2009 period, we improved our overall plant efficiency by almost 10%. In addition, the share of energy units generated from natural gas leap-frogged to about 45% in FY2003/2004 with the inception of the company's very first natural-gas fired combined cycle power plant. Since then, we have managed to increase this share by a further 4% over seven years. This has resulted in significant improvements in our carbon dioxide emission figures – an estimated 32% reduction in CO₂ tonnes and an estimated 20% reduction in carbon intensity over the 2000 to 2009 period (see Diagram 3.1 for details).

It has also resulted in the delivery of social goods such as good air quality for the surrounding community. This would not have been possible without the deliberate attempt to develop our business sustainably with due regard given to profits, the planet as well as social good. We firmly believe that our increased use of natural gas and our investment in more energy efficient equipment will continue to allow our company to remain profitable over the long-term. At the same time, it allows us to care for the planet and deliver society's needs which include ensuring the healthy employment of our workforce, delivering reliable electricity to our customers as well as contributing to the energy security of the nation.

The on-going development and execution of our company's integrated energy strategy has also allowed us to grow with sustainability in mind. The recent actualisation of this strategy is the recent modification works to our existing natural-gas fired combined cycle power plants (blocks 10 & 20) to produce steam and electricity at the same time. It also aligns with one of the Sustainability Blueprint of Singapore's goals to achieve resource efficiency.

THE UNDENIABLE ASSOCIATION WITH CARBON

From the original intent of producing electricity as the sole product from the combined cycle power plants, we were able to harness the waste heat from the electricity generation process to produce steam using water from our desalination plant. By combining the prudent use of resources and the deployment of existing technologies, we were able to innovatively integrate our existing assets and, in so doing, increase the efficiency of blocks 10/20 from an estimated 50% to about 80%, develop our capability to supply steam to our customers and create an additional revenue stream for the company. Moreover, the production of steam through the integration of existing assets is a more cost effective and less carbon intensive solution compared to a standalone investment solely to produce steam. A win-win achievement for the planet, people as well as profits.

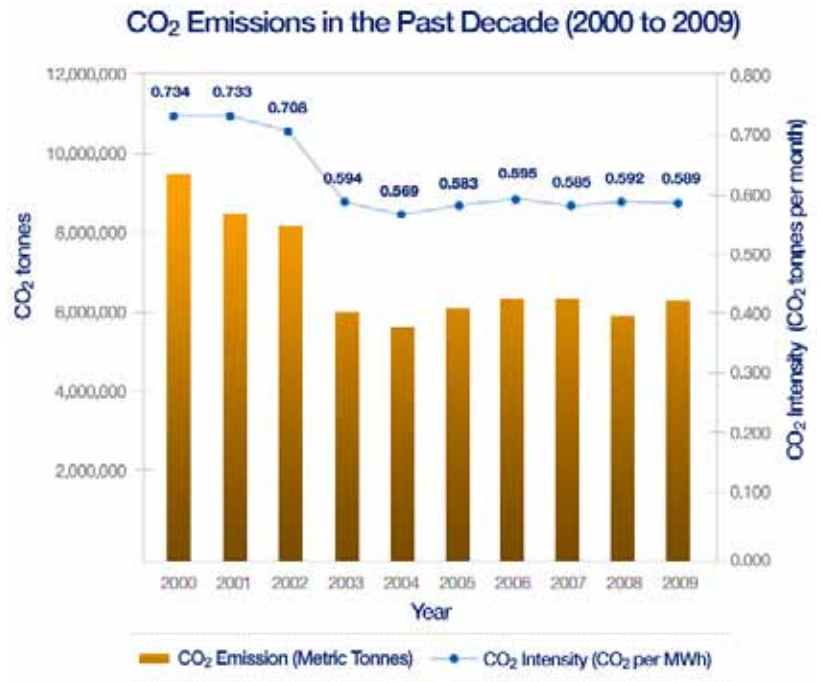


Diagram 6.1: CO₂ emissions over the 2000 to 2009 period



INDIRECT SOURCES OF CARBON DIOXIDE EMISSIONS

Occasionally PowerSeraya is unable to fulfill our customer's demand for electricity and would need to purchase electricity from the EMC (Electricity Market Company). The extra electricity demand purchased from external sources contributes to our indirect sources of carbon dioxide emissions (i.e. Scope 2 emissions as per GHG Protocol). For the period FY2006/2007 to FY2008/2009, the proportion of electricity purchased from external sources versus the electricity generated from our plants was in the 9.0% to 11.9% range. The corresponding carbon dioxide emissions over the same period is 1,686,073 tonnes. (Based on the 2008 Electricity Grid Emission Factor (Simple Operating Margin) of 0.5016 kg CO₂/Kwh from the National Environment Agency, Singapore).

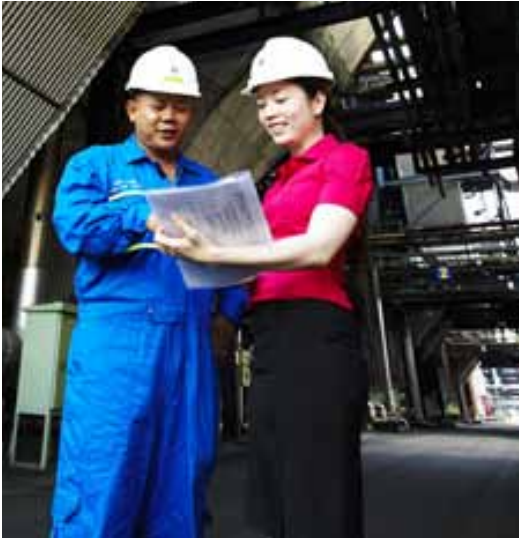
Our corporate HQ is an office lease premise covering one and half floors of HarbourFront Tower One. It consumes an average of 438,982 Kwh of electricity per year in the period 2007 to 2009. The corresponding carbon dioxide emissions resulting from the electricity consumption works out to an average of 220 tons per year. Further details on this can be found in Chapter 7 : Environmental Performance.

To date, we do not track indirect carbon dioxide emissions arising from other corporate activities (i.e. Scope 3 emissions as per GHG Protocol) such as company travel and are thus unable to report any information on them.



CARBON DIOXIDE REDUCTIONS AT SOURCE, PRODUCTION AND END-USE

At PowerSeraya, we take a holistic approach towards carbon. Besides reducing carbon dioxide emissions at source by switching to less carbon intensive fuels, coupled with our continuous drive to achieve the highest possible efficiencies for all power generating units, we also consciously work with customers and staff to reduce end-user energy consumption. This is done by raising awareness on energy conservation and providing call-for-action initiatives to educate people on using less energy in efforts to reduce GHG emissions. For details please refer to Chapter 8 : The Environment and the Community.



TAKING CARBON RISKS INTO CONSIDERATION

In developing its CSR Strategy in 2008, the company highlighted carbon risk as one of the challenges facing the organisation in the future. The growing global agenda on climate change places pressure on all national governments to act responsibly in slowing down the rate of global warming and thus avert the disastrous effects that climate change can have for future generations.

The carbon risks that governments face may eventually filter down to businesses either in the form of carbon tax, cap and trade mechanisms or incentives for low carbon businesses practices, cleaner energy technology adoption – all to mitigate the effects of climate change. No matter what form these carbon risks may present itself in the future, it will have a certain degree of impact to PowerSeraya. It is with this recognition of future carbon risks that PowerSeraya is constantly exploring the adoption of cleaner energy technologies and practices, measuring its carbon footprint and keeping updated on the latest global and local developments in climate change.

With the renewable energy constraints that Singapore currently faces, the country is projected to be dependent on fossil fuels for sustainable growth in the future. The country's power generation sector has shifted from heavy fuel oils to greater use of natural gas over the years, as is the case with PowerSeraya. Looking ahead, natural gas will increasingly be the main fuel used in PowerSeraya's generation operations in years to come. Our projected dependence on natural gas in future years does, however, present economic challenges in the long-term.

In the World Energy Outlook 2009 by IEA, it is forecasted that demand for natural gas worldwide is set to continue its long-term upwards trend with the power sector being the biggest driver of gas demand in all regions. However, the cost of developing new sources of natural gas is set to rise over the long-term even as the world consumes available natural gas resources over time.

TAKING CARBON RISKS INTO CONSIDERATION

Moreover, the recent financial crisis has cast a shadow over energy investments to fulfill growing energy needs in the next few years. The fragile financial markets in the USA and Europe, the badly embattled banks in these countries and stricter regulation of the banking system may well limit or constrain the lending capacities of these banks especially for some years to come. This runs the risk of companies choosing cheaper, more carbon intensive energy investments because of the limited financing options for more expensive but cleaner energy investments. The carbon risks of such a scenario is high and does not augment well for power generators like PowerSeraya that aims to grow its business in manner that is both economically and environmentally sustainable.

Looking on the bright side, the technology advances in renewable energy does also provide some hope to the carbon risks faced by Singapore and power generators like PowerSeraya. This is echoed by the IEA in the recent World Energy Outlook 2009 publication which indicated that the continued exploration in the renewables space coupled with technological advances and the process of commercialisation will make it a possible and sustainable solution in the medium- to long-term.

Indeed, some of the recommendations of the recent Economic Strategies Committee (ESC) is for Singapore to explore coal and nuclear as future energy sources given the energy security issues that confront our small nation. PowerSeraya, as one of major power generating companies that currently supplies close to 30% of the country's energy needs, will also find itself in a similar situation of evaluating options to meet the country's future energy needs. The challenge is finding the appropriate balance to grow the company while taking care of the environment in a sustainable manner in the years ahead.



INVESTMENTS IN SUSTAINABLE DEVELOPMENT

PowerSeraya has invested in a new 800MW combined-cycle power plant (CCPP) which will deliver potential carbon dioxide emission reductions of about 10% from current levels when it is fully operational in 2010.

We are in the process of getting this project CDM (Clean Development Mechanism) registered with the UNFCCC as of March 2009. A stakeholders' consultative session was conducted to gather feedback from the general public regarding this project. The topics raised and answered during this session can be found on our corporate website¹.

¹. http://www.powerseraya.com.sg/index.php?option=com_content&task=view&id=53&Itemid=13

Further details of this project can be found on the UNFCCC website*.

*<https://cdm.unfccc.int/Projects/Validation/DB/SGP0QX-F9O1ZSA7UYRDJB0LSIJ88JB3/view.html>



Environmental Performance



Environmental Consciousness

Holistic Approach to Managing Resources



ENVIRONMENTAL PERFORMANCE

“PowerSeraya takes a holistic approach towards environmental sustainability beyond its power-plant operations, to include our employees in the workplace and our customers, as well as the community.”

At PowerSeraya, we take an integrated approach towards environmental sustainability. Besides environmental performance at our plant which is largely governed by our QHSE policy, our company also tries to walk the talk by monitoring our office resource consumption and organising regular internal initiatives to educate staff on environmental issues.

In addition, we enter into collaborative relationships with external stakeholders to raise environmental awareness to the community. Our internal initiatives with staff and our external activities involving the community on environment is driven by our Environmental Policy under our CSR Vision. It covers more non-compliance aspects of the environment such as educating the community to be responsible agents for the environment as well as adopting voluntary business practices that promote sustainability.



CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.i ISO 14001 & EMS –The Backbone of Environmental Performance at the Plant

In the daily operations of a power plant, a considerable amount of fuel and chemicals are being consumed and several hazardous chemicals are produced as waste in the process of producing electricity and utilities such as steam to our customers. To minimise damage to the environment and the ill effects that these substances bring to our health, we need to keep our environmental performance at a high level.

Driving the environmental performance of our plant is the ISO 14001 environmental management system which is a process that has been established at our plant since 2005. The environmental impacts for each and every environmental aspect is identified and assessed before it is entered into the Significant Environmental Aspect Register. Action plans encompassing procedures, mitigation measures and target objectives are then drawn up for every significant environmental aspect for control purposes and for subsequent implementation. The environmental aspects and their associated actions plans are then communicated to all relevant staff.

For monitoring purposes, environmental indicators are tracked against objectives and reported on a monthly and quarterly basis at the department/group and senior management levels respectively. On an annual basis, a management review of the environmental objectives and EMS procedures is conducted as part of the continuous improvement cycle.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Every year since obtaining the ISO 14001 in 2005, our company has been successful in maintaining its certification status. In the latest surveillance audit exercise done in 2H 2009, no major non-conformance items were found in our ISO 14001 systems when an audit was conducted by the independent auditor, SGS. Some of the positive remarks made by SGS during the recent re-certification exercise were:

- Records are updated, readily available and retrievable during the entire audit.
- Staff commitment in maintaining the Quality and Environmental management system is observed.
- Comprehensive Utilities Group Environmental Programme Initiatives (E.g Reduction of CO₂ & SO₂ emission, water and electricity consumption) were observed.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.ii Identification Process for Environmental Aspects

How we arrived at our list of Significant Environmental Aspects

The risk level of each environmental aspect is ascertained based on criteria such as the legal requirement, severity of environmental impacts and the likelihood of occurrence (taking into account the frequency of aspects occurring and existing control measures) and is mapped into a severity-likelihood matrix to determine whether a particular aspect is entered into the Significant Environmental Aspect Register. We then develop action plans to control or mitigate each significant environmental impact based on the risk level of the corresponding environmental aspect, taking into consideration other factors such as the feasibility of control/mitigation measures as well as operational, financial and technological constraints.

Key Environmental Aspects	Activities	Key Environmental Impacts
Fuel consumption	Combustion of fuel oil in steam boilers	<ul style="list-style-type: none"> Non-renewable resource depletion CO₂, SO₂, CO, NO_x, PM emission Ash and boiler slag generation and disposal
	Combustion of natural gas in combustion chamber	<ul style="list-style-type: none"> Non-renewable resource depletion CO₂, CO, NO_x emission
	Terminal operations for fuel management and transfer	<ul style="list-style-type: none"> Potential for oil spillage causing sea pollution
Water consumption	Use of water for steam generation in steam plant and combined cycle plant	<ul style="list-style-type: none"> Scarce resource depletion Wastewater generation and discharge
Material consumption	Use of limestone for FGD plant Use of ammonia for EP	<ul style="list-style-type: none"> Scarce resource depletion Waste / by-products generation (e.g. gypsum, waste chemicals, etc.)
Electricity consumption	Use of in-house electricity for operation equipment for power generation (e.g. EP, FGD, Water Treatment Plants, etc)	<ul style="list-style-type: none"> Indirect use non-renewable resource depletion Indirect CO₂, SO₂, CO, NO_x, PM emission Indirect ash and boiler slag generation and disposal

Table 7.1.ii : Environmental Aspects And Corresponding Environmental impacts

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

GRI Environmental Indicators

We found that it was material that our list of GRI environmental indicators cover the main environmental aspects from the Significant Environmental Aspect Register to cover all the elements of air, land and water.

SO₂, CO₂ and HCFC (i.e. hydrochlorofluorocarbons) are significant air emissions arising from our business operations and are thus featured in this report. The latter two, in particular, were chosen due to their association with climate change.

With regard to water pollutants, we reported the major compliance-related pollutants such as biological oxygen demand and chemical oxygen demand which are bound by law, as well as oil-spill incidence. We have also included water consumption arising from our business operations in the context of how our water desalination plant aligns with Singapore's focus on water self-sufficiency.

For land pollutants, we included hazardous wastes as there is a fair proportion of the former which is treated and shipped internationally under the Basel Convention. We also included non-hazardous wastes and highlighted how our waste recycling rate contributes positively to the country's drive to increase the waste recycling rate in efforts to extend the lifespan of our landfills.

This year we included indicators on biodiversity explaining the context in which biodiversity law is being applied in Singapore and how it is relevant to our operations.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.iii Organisational Responsibility

The QHSE Steering Committee and QHSE Working Committee are responsible for developing, implementing and improving the ISO 14001 EMS (Environmental Management System) along with other management systems (i.e. quality, health & safety). These committees were established under the QHSE Policy which is endorsed by the CEO of the company.

The main tasks of these two committees are to establish and review the QHSE policy and the environmental objectives. In addition, these committees ensure the availability of resources to administer the EMS and conduct management reviews on a regular basis as part of the continuous improvement cycle. In general, each department/section head holds operational responsibility for the environmental management system for their respective areas and works closely with the QHSE Working Committee to address all environmental aspects arising from the business operations.

The organisation charts for the QHSE Steering Committee and QHSE Working Committee are provided below to illustrate the leadership and commitment to environmental performance.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS



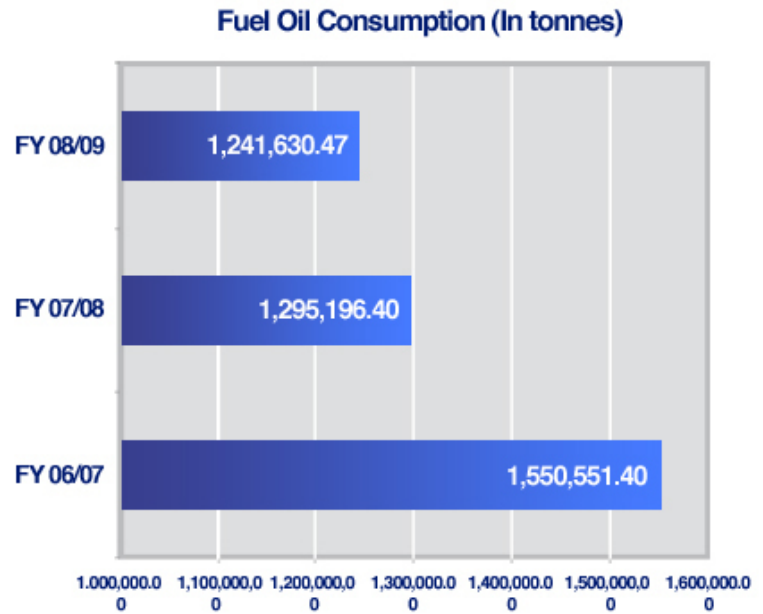
Diagram 7.1.iii(a) QHSE Steering committee



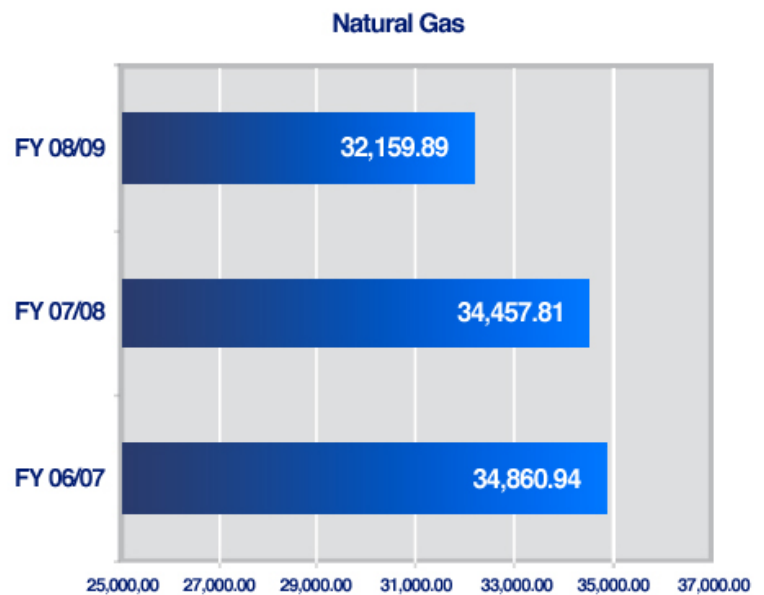
Diagram 7.1.iii(b) QHSE Working committee

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.iv Fuel Consumption



Graph 7.1.iv(a): Fuel Oil Consumption (FY06/07 to FY08/09)



Graph 7.1.iv(b): Natural Gas Consumption (FY06/07 to FY08/09)

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Natural gas consumption declined by 6.7% in FY2008/2009 over the previous year. The decay of natural gas pressure in FY2008/2009 resulted in our natural-gas fired plants being utilised less than planned. In 2009, there were more than 150 incidents of low natural gas pressure which disrupted the smooth operations of our natural-gas fired plants.

Fuel oil consumption dropped by 4.1% in FY2008/2009 compared to the previous FY. This drop would have been greater if not for the decay in the natural gas pressure which necessitated the changeover from natural gas to diesel oil to fulfill regulatory requirements.

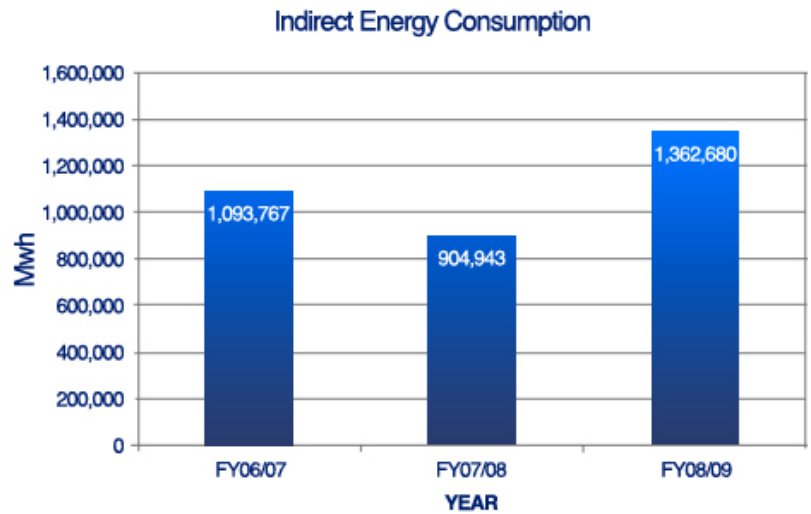
Note: Fuel oil refers primarily to heavy fuel oil and intermediate fuel oils. However, the figures include a very small proportion of diesel oil which is used for contingency and peaking purposes.

In PowerSeraya's context, our direct and primary source of energy used for our business (i.e. electricity consumption) is from the fuel oil and natural gas that we use/consume (we measure this in Tonnes or BBTU rather than Joules).

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.v Indirect Energy Consumption by energy source

From time to time the company has to purchase electricity from external sources to fulfill the energy demands of our customers. In the period FY 2006/2007 to FY 2008/2009, the proportion of energy purchased from external sources was about 9.5% on average.



Graph 7.1.v: Indirect Energy Consumption (FY06/07 to FY 08/09)

Since electricity consists of energy produced from various primary sources, we are unable to report the energy consumed by these energy sources. However, from the latest FY 2008/2009 Annual Report of the Energy Market Authority of Singapore, the country's fuel mix for electricity generation is 80% natural gas, 15.2% fuel oil and 4.5% from other fuel sources.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

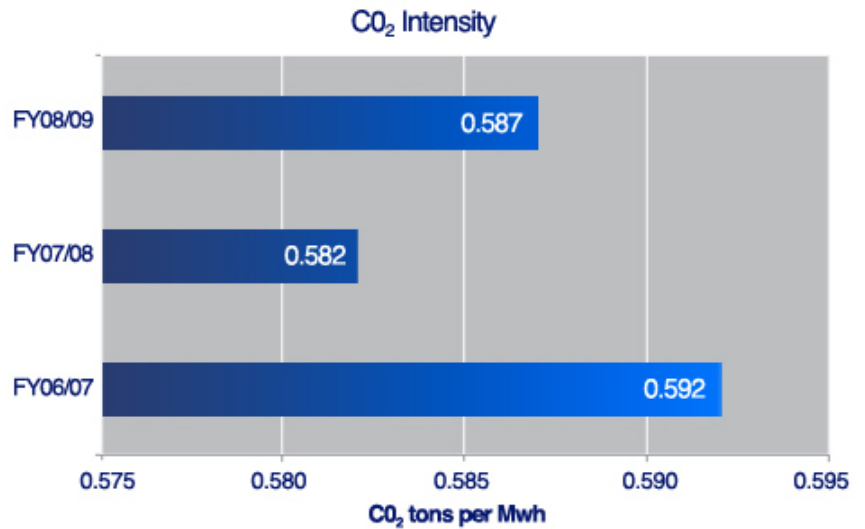
7.1.vi Emissions

Carbon dioxide emissions

Carbon dioxide intensity (a measure of the amount of CO₂ tons emitted per unit of power generated) for FY2008/2009 increased by less than 1% to 0.587 tons/MWh from the previous FY. The challenges faced by the high frequency of low natural gas pressures (which is a factor that is beyond the company's operational control) resulted in lost opportunities for the company to use less carbon-intensive natural gas to generate electricity. The low natural gas pressure incidents also meant that our natural-gas fired plants had to change over from natural gas to diesel fuel on various occasions. All these factors resulted in our plants burning less natural gas than originally planned and thus resulted in the slight rise in carbon dioxide intensity in FY2008/2009.

Looking ahead, our carbon dioxide intensity should maintain or experience a slight drop in FY2009/2010 before we see some significant decreases in FY2010/2011 when our new 800MW natural-gas fired Combined Cycle Co-generation plant becomes fully operational in 2010/2011.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS



Graph 7.1.vi (a) : Carbon Intensity Figures from FY 2006/2007 to FY 2008/2009

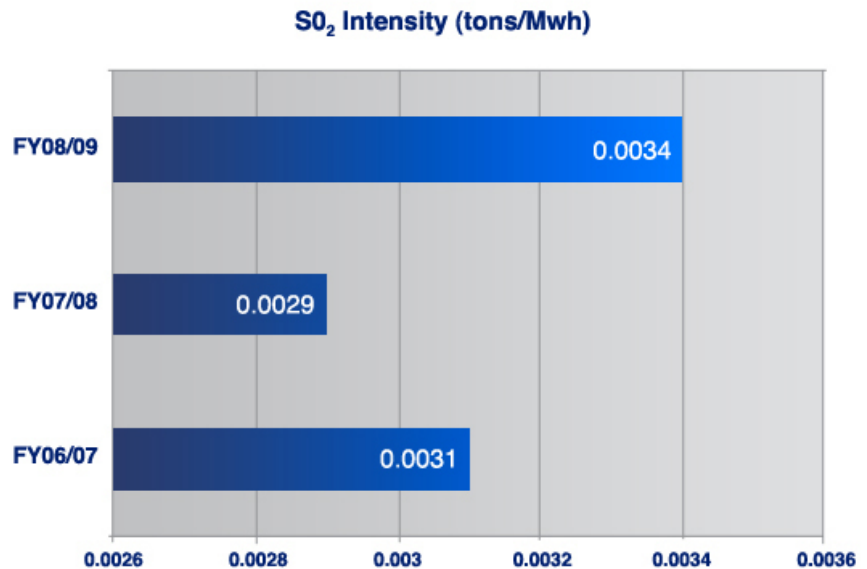
Sulphur Dioxide Emissions

Sulphur dioxide intensity (i.e. a measure of the amount of SO₂ tons emitted per unit of power generated) increased from 0.0029 tons/MWh in FY2007/2008 to 0.0034 tons/MWh in FY2008/2009. This was despite an increase in the FGD (Flue Gas Desulphurisation) unit efficiency from 92.04% in FY 2007/2008 to 94.18% in FY 2008/2009.

The high frequency of low natural gas pressure incidents which affected the smooth operations of our natural-gas fired plants resulted in our steam plants being run more frequently than originally planned. The use of fuel oil (which has sulphur content) for the steam plant operations thus resulted in more sulphur dioxide being emitted than intended.

Besides the low natural gas pressure incidents, the overhaul of our natural-gas fired plants, which lasted over 25 days in FY2008/2009, also meant that steam plants had to double up to generate electricity to fulfill energy demand. This factor also contributed to the increase in the sulphur dioxide emissions.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS



Graph 7.1.vi(b): Sulphur Dioxide Intensity Figures from FY 2006/2007 to FY 2008/2009

Reducing Sulphur Dioxide Emissions using the FGD (Flue Gas Desulphurisation) unit

The fuel oil used in our power plant operations has a relatively high sulphur content which releases sulphur dioxide into the atmosphere when burnt. Exposure to high levels of sulphur dioxide can cause breathing problems, respiratory illnesses and cardiovascular disease. To mitigate these harmful effects, we burn fuel oils with no more than 2% sulphur content in them, which is within National Environment Authority (NEA) requirements.

The resulting sulphur dioxide emissions go through a flue gas desulphurisation (FGD) unit which removes over 90% of toxic emissions. In fact in FY2008/2009, close to 95% of the sulphur dioxide emissions were removed by the FGD. Over the years, the company has made efforts to improve the efficiency of the FGD unit from 92.92% in FY 2006/2007 to 94.18% in FY 2008/2009.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Nitrogen Dioxide

We are unable to report on our nitrogen dioxide emissions at this present moment because of the difficulties in measuring the actual amount of nitrogen dioxide from the boilers on a continuous basis. Moreover, there is also no flow meter to capture the total flow of flue gas in order for us to compute the total nitrogen dioxide emissions. However, we have consistently kept the nitrogen dioxide levels below the regulatory limits set by the National Environment Agency of 700 mg/Nm³.

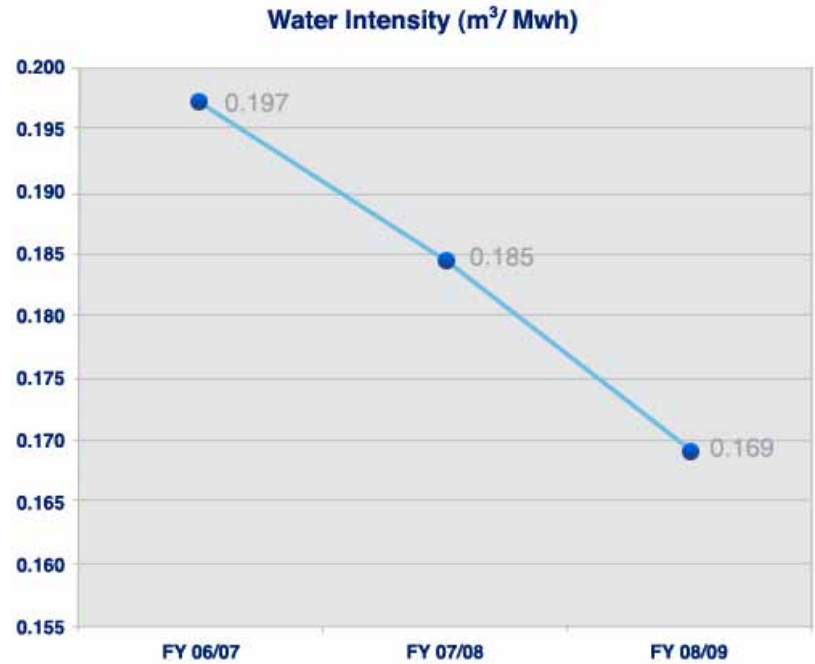
Ozone-Depleting Emissions

There were no ozone-depleting emissions from our power plant operations. However, our office air-conditioning emitted insignificant amounts of hydrochlorofluorocarbons of between 135kg and 248kg in the period FY2007/2008 and FY2008/2009.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.vii Water

Overall water intensity improved at the power plant with FY2008/2009 consuming about 0.170 m³ of water for every Mwh of power generated. This is a 8.1% drop compared to the previous year.



Graph 7.1.vii: Water Intensity Figures from FY 2006/2007 to FY 2008/2009

The proportion of desalinated water being used for power operations stands at 66% in FY2008/2009. Teething problems associated with the desalination plant since it started operations on 30 August 2007 resulted in a lower proportion of desalinated water being used for operations than originally planned. Nevertheless, our drive towards greater water self-sufficiency will continue to see renewable water sources such as desalination water being used for our power plant operations for many years to come.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Wastewater Discharge

The process of power generation results in wastewater that is treated appropriately before it is discharged into the open sea. In fact, the wastewater undergoes stringent quality checks for heavy metals, biological oxygen demand (BOD) and chemical oxygen demand (COD) to determine whether it has significant effect on fish or aquatic plants.

The wastewater samples are taken bi-yearly and sent to an accredited laboratory for tests. For the period FY2006/2007 to FY2008/2009, the wastewater discharge was in full compliance with the Environmental Protection and Management (Trade Effluent) Regulations (2005).

The BOD and COD tests measure the relative oxygen depletion effect of a waste contaminant. In FY2006/2007 and FY2007/2008, the BOD and COD tests of the treated wastewater were less than 30mg/l and 100mg/l respectively. These are well within the regulatory limits.

Other significant substances contained in the trade effluent include Total Suspended Solids (TSS), Total Metals and Oil and Grease. These substances are also monitored periodically to ensure that they are in compliance with regulatory limits.

Our wastewater discharge to the open sea is constantly kept within the 30°C regulatory limit to ensure that aquatic fauna and flora are not significantly affected by high temperatures

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.viii Waste and Disposable

A considerable amount of industrial waste is being generated at our power plants. As far as possible, we try to recycle as much of this waste to minimise stress on our country's limited landfill space.

In FY2008/2009, 97,643 tonnes of waste were generated. This included scrap metal, boiler slag, waste oil and general waste. All ash and sludge produced from the plant operations are collected and treated before it is sent to the landfill. All toxic wastes are treated in accordance with local regulations before disposal.

As far as possible, waste materials are recycled to produce by-products that can be used by other industries. For example, sulphur dioxide is recycled to produce gypsum, which is sold to the cement companies and subsequently used in the construction industry. In FY2008/2009, gypsum alone constituted about 89% of the total waste recycled at the plant.

The 87,069 tonnes of gypsum produced in FY2008/2009 is shipped overseas under the terms of the Basel Convention. The percentage of transported waste shipped internationally in FY2008/2009 dipped slightly to 89.4% from the previous FY's figure of 90.3%.



Graph 7.1.viii

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.viv Volume of Significant Oil Spills

In FY07/08 to FY08/09, PowerSeraya had no recorded oil spills. A system involving the regular recording of oil spills started in 2007. Previously, oil spills were only recorded when an incident occurs. Nevertheless, we have an oil-spill response plan, and every year we participate in the annual oil spill exercise organised by Oil Spill Response. This ensures that we are equipped to contain and minimize the environmental damage caused by an oil spill.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.x Materials Used by Weight or Volume

Unlike other industries where a significant of direct materials* are being used to manufacture products, PowerSeraya is in the business of producing electricity and steam to our customers. As such, most of our raw materials are non-renewable** such as fuel oil and natural gas. For details on the quantity of fuel oil and natural gas that is consumed by the company, please refer to 'EN3 – Fuel Consumption' which is covered in the earlier part of this Chapter.

Industrial gases as well as lubricants and grease are regular materials used by the company. Tables 7.1.viv(a) and 7.1.viv(b) captures the quantities of these two materials used over the period FY2006/2007 to FY2008/2009 from purchase orders. The top three industrial gases used in the company are nitrogen, oxygen and acetylene. Nitrogen is commonly used for overhaul or restoration works for the power generating units in the plant whereas oxygen and acetylene is used when hotworks are performed for certain maintenance activities. Lubricants are widely used in plant equipment with moving parts to effect working efficiency and reduce wear and tear.

Table 7.1.x(a) : Quantities of Industrial Gases used by the company from FY 2006/2007 to FY 2008/2009

FY	CO ₂ , N ₂ O, LPG (kg)	Other Gases (m ³)
FY 06/07	123,382	2,573
FY 07/08	3,865	2,815
FY 08/09	4,735	17,967
Total	131,982	23,354

Note: 1% of the purchases orders for industrial gases cannot be accounted as they are expressed in 'cylinders' (units of measurements) and are thus not captured in the table above.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Table 7.1.x (b): Quantities of lubricants & grease used by the company from FY 2006/2007 to FY 2008/2009

FY	Grease (kg)	Lubricants (litres)
FY 06/07	104	35,104
FY 07/08	180	25,376
FY 08/09	600	33,776
Total	884	94,256

Note: 3% of the purchases orders for lubricant & grease cannot be accounted as they are expressed in 'drums' (units of measurements) and are thus not captured in the table above

The company consumes other non-renewable materials such as equipment, chemicals and consumables but we are unable to report on their quantities used as our current operational systems are not optimally structured and programmed in a manner that enables us to collate such information in a productive way.

Our products that we sell to our customers are utilities like electricity and steam which do not involve any packaging material. As such, we are unable to report on information pertaining to packaging material since it is irrelevant to the company.

*Direct materials refers to materials that are present in a final product.

** Non-renewable materials refers to resources that do not renew in short time periods, such as minerals, metals, oil, gas, coal, etc.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.xi Recycled Input Materials

It is not common practice for Singapore companies to ask suppliers to declare the amount of recycled content in the materials that are supplied to them. PowerSeraya as a Singapore-based company with no overseas operations is no exception to this common practice.

However, the company has made small, conscious efforts to impose sustainable criteria to our suppliers for the provision of some materials. They include the supply of office paper from recognised sources such as the Forest Stewardship Council and the requirement for vendors to quote and supply stationery with the Singapore Green Label (or its equivalent).

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Our company recognises the advocacy role it can play in the initial stages by influencing our suppliers/vendors towards more sustainable practices even though the local market may not be ready to adopt it. In the months of November and December 2009, a pilot initiative was launched to encourage suppliers to make voluntary submissions of the sustainable procurement checklist (which included questions about the recycled content of the materials supplied to the company) as part of the tender/quotation submissions process. The responses to the initiative were encouraging with close to 40% (out of 18 suppliers) voluntarily submitting the sustainable procurement checklist. The findings of the checklist submissions also revealed the following:

- About 15% set energy conservation targets and the same percentage manufactured (or distributed) products using recycled materials.
- A third of them publicly made available their environmental performance.
- An estimated 43% have existing ISO 14001 environmental management programmes.
- About 85% practiced some form of sustainable transport when they delivered their goods to our company.
- Close to 30% practised green procurement

Through the above mentioned pilot initiative, it demonstrates that PowerSeraya is starting to look at the sustainability aspects of its supply chain and this sets the tone for suppliers to start thinking likewise. Looking ahead, the company hopes to make modest steps to push the envelope in the area of sustainable procurement.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.xii Compliance with Local Laws and Regulations

PowerSeraya works closely with government agencies in particular the National Environment Agency (NEA) to ensure that we keep all air emissions, wastewater discharge, hazardous wastes and other environmental impacts within the regulations stipulated by the Singapore Government.

In the period FY2006/2007 to FY2008/2009, we had no record of any monetary fines as a result of non-compliance with environmental law and/or regulations nor any non-monetary sanctions.

The existing regulatory framework for Singapore for environmental protection consists of several regulations and acts administered by the NEA for the following environmental aspects which are incorporated as part of our ISO 14001 processes:

- Air Pollution Control, for emission of pollutants
- Water Pollution Control, for the discharge of trade effluent
- Marine Pollution Control, for spillages into the marine environment
- Noise Pollution Control, for the control of environmental noise
- Waste Management, for the control of general and toxic industrial waste, recyclable material and hazardous waste.
- Hazardous Substance Management, for the purchase, storage and use of hazardous substances
- Flammable Substance Management, for the storage of flammable gases and liquid petroleum gas
- Explosive Precursors Management, for the storage and use of explosive substances
- Water Supply Regulation, for resource conservation.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

7.1.xiii Biodiversity

Singapore is a tiny city-state with a population of close to 5 million residing on a small land mass of 710.2 km² with virtually no hinterland. This is unlike cities in other countries (e.g. Melbourne with a population of about 4 million with a city area of 8806km²) that have huge rural areas with high biodiversity value. Singapore, as one of the world's most densely populated areas in the world, faces enormous challenges in urban planning and balancing residential areas for its growing population, commercial and industrial zones for economic activity and carving out green spaces for recreational purposes. Recognising the land scarcity challenges early on, the Singapore government has since incorporated green spaces into urban planning to fulfill our Minister Mentor Lee Kuan Yew (formerly Prime Minister of Singapore)'s vision of developing the country into a Garden City.

Till today, the Garden City vision still holds relevance with the country's aim to position itself as a global and vibrant city that attracts human and financial capital. Having green spaces mitigates the harsh concrete environment and contributes towards a more liveable city state that is able to provide recreational places for its residents to enjoy, relax and be inspired. This has allowed Singapore to meet the lifestyle and recreational needs of an increasingly sophisticated population, and enhanced Singapore's attractiveness as a choice destination for foreign businesses and talents.

CARING FOR THE ENVIRONMENT AT OUR PLANT OPERATIONS

Prudent planning over the years has enabled Singapore to increase its green cover from 35.7% to 46.5% between 1986 and 2007, despite the population growing by 68% in the same period. Currently, close to 10% of the total land area is set aside for parks and nature reserves. Singapore today has four nature reserves and two national parks that are protected by legislation, namely the Parks and Trees Act 2005. Besides these, there are also 22 nature areas that are covered under the Special and Detailed Controls Plan which is administered by the Urban Redevelopment Authority. This is established under the authority of the Planning Act. All the above areas are rich in biodiversity.

In the context of PowerSeraya and its subsidiaries, its power generating operations sit on land that is obtained on a long-term lease from JTC Corporation, the industrial landlord that is owned by the state. None of the land that is occupied by PowerSeraya is protected by law for biodiversity nor is it adjacent to any protected areas or any of the 22 nature areas mentioned above.



ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

“We see ourselves playing an important role in educating our employees who will in turn become environmental advocates to their families as well as the community they live in.”

Environmental sustainability is practised beyond PowerSeraya’s power plant operations to involve our employees in the workplace at the headquarters located at HarbourFront Towers. We monitor our consumption on a monthly basis. This Chapter covers our energy, paper and water consumption figures as well as our initiative to ‘green’ our IT infrastructure. All figures in this Chapter are on a calendar-year basis.

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

7.2.i Office Resource Consumption

From the significant reductions achieved in 2008 for office resource use, the aim for 2009 is to maintain water consumption at the same levels as 2008 and to achieve a 1% reduction in energy use. For the first time, we have made a commitment to reduce paper use by setting a 4% reduction target on paper use.

On the whole, the 2009 office resource consumption performed reasonably well in most areas except for water. Table 7.2.1(a) below summarises how the company fared in its office resource use in 2009.

Resource Item	2009 Actual Performance	2009 Target	Within Target
Energy	2429 Kwh / head	2498 Kwh / head	Slightly out
	199.8 Kwh /sqm/pa	215 Kwh/sqm/pa	Yes
Paper	6.6 reams / head	8.0 reams / head	Yes
Water	0.73 units/head	0.65 units / head	No

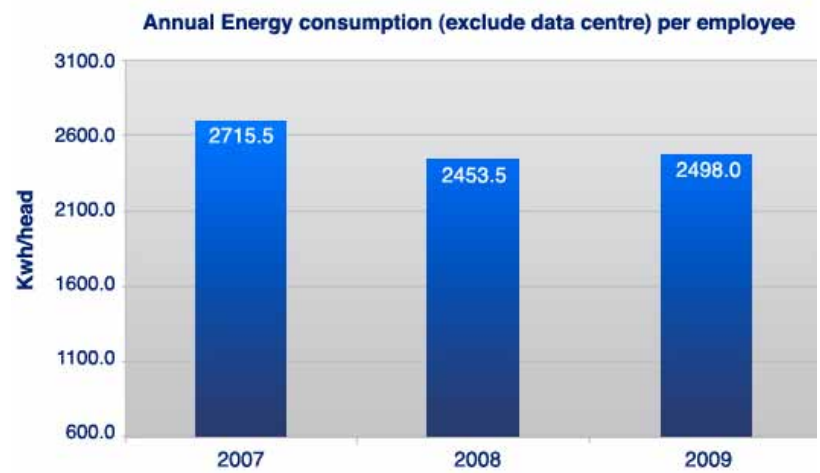
Table 7.2.i (a): Summary Table - Office Resource Performance Versus Targets for 2009

The following Chapters detail the office resource consumption figures at the corporate headquarters unless otherwise mentioned.

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

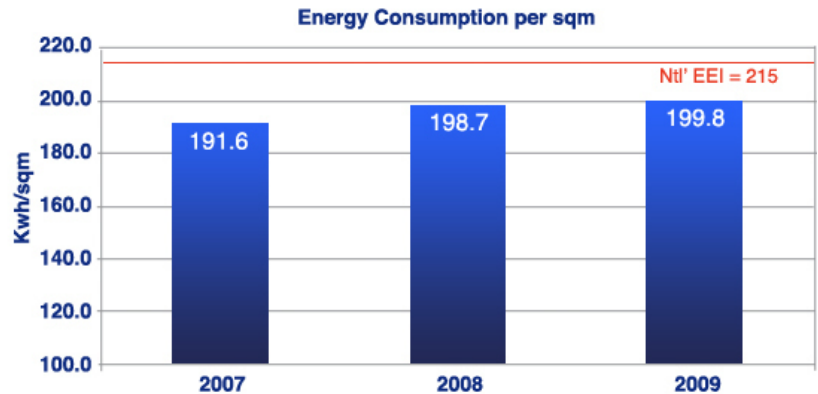
Energy Consumption

The 2009 annual consumption per employee saw a 1.8% increase over the previous year. This is slightly short of the 1% reduction target. However, if compared against the National Energy Efficiency 3(EEI) Index for office buildings of 215 Kwh/sqm/per annum, our office energy consumption (including the data centre) is well within this benchmark figure.



Graph 7.2.i (b): Office Energy Consumption per employee per annum (excluding data centre)

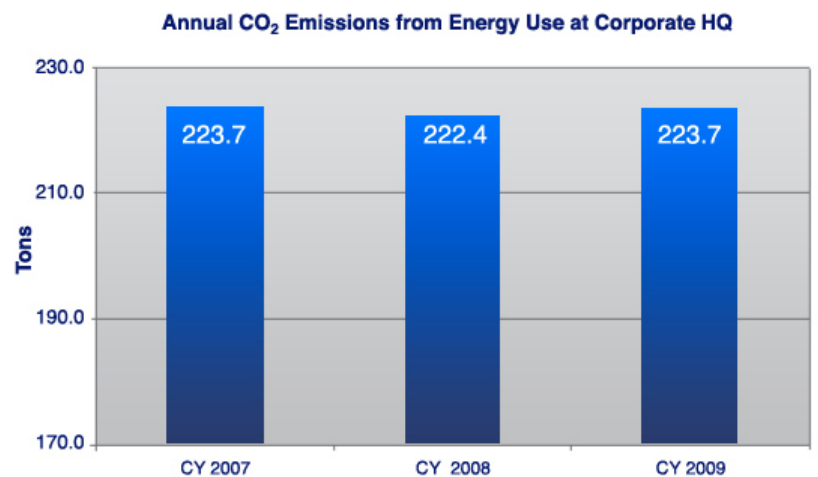
ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE



Graph 7.2.i (c) : Office Energy Consumption per sqm per employee per annum

In terms of the indirect carbon dioxide (CO₂) emissions resulting from the office energy consumption, 2009 saw a total of 223.7 tons of indirect CO₂ emissions which is a slight increase of 0.6% over the previous year.

(Note: The 2007 CO₂ emissions is based on the 2007 Electricity Grid Emission Factor (Simple Operating Margin) whereas the 2008 and 2009 CO₂ emissions is based on the 2008 Electricity Grid Emissions Factor (Simple Operating Margin) from the National Environment Agency, Singapore).

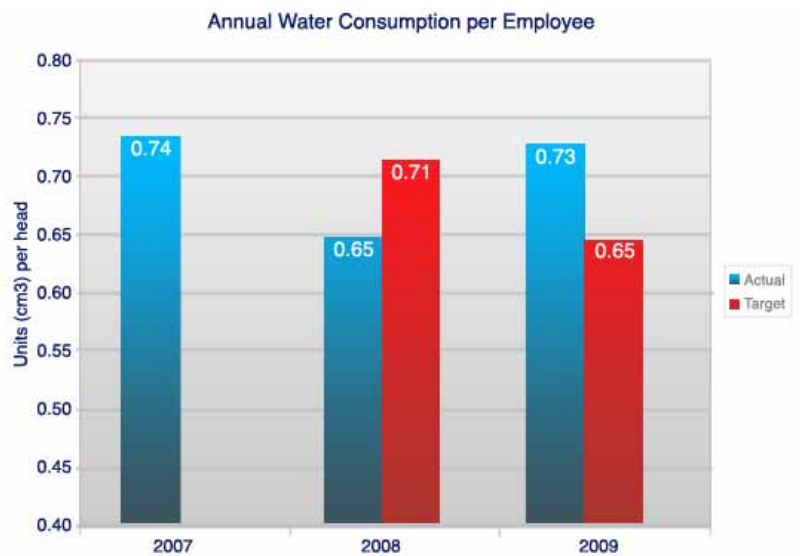


Graph 7.2.i (d) : Annual CO₂ emissions from Energy Use at Corporate HQ

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

Water Consumption

Water consumption per employee saw a 12.6% increase in 2009 over the previous year. This is due to H1N1 pandemic flu in 2009 which resulted in a heightened awareness among staff to wash their hands frequently and maintain a high level of personal hygiene. We also ceased the use of bottled water since August 2009 and this has led to an increased use of the water dispensers that contributed towards the elevated water consumption figure.



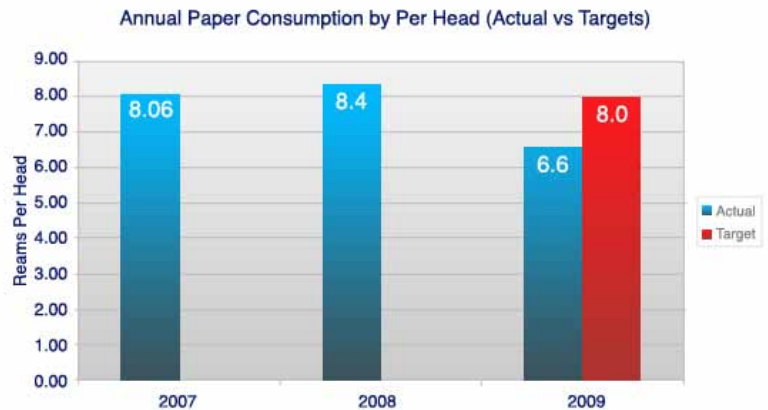
Graph 7.2.i (e) : Annual Water Consumption per employee for Office

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

Paper Consumption

Paper consumption per employee for the entire company saw a significantly decrease of 21.2% in 2009 compared to the previous year. The monthly paper tracking system which was established since April 2009 coupled with the enforcement of paper quota by logical departments contributed greatly to the reduction in paper use from a high of 8.4 reams per employee in 2008 to 6.6 reams per employee in 2009.

We are also happy to note that paper reduction achieved in 2009 more than compensated for the higher cost of using (i.e. paper from responsible forest management sources certified by the Forest Stewardship Council) which we started procuring since July 2008.



Graph 7.2.i (f) : Annual Paper Consumption per employee

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

7.2.ii Greening IT Infrastructure

We have continued our efforts in greening our IT infrastructure by deploying virtualisation technology across many more servers in our data centre. The virtualisation technology has enabled multiple operating systems to run concurrently on a single server instead of multiple servers. This saves electricity from running fewer physical servers. It also means lower cooling requirements and a reduction in office rental space. As of December 2009, we have 110 virtual servers running on 11 physical servers. This translates to an annual energy consumption savings of close to 80% and an avoidance of approximately 175 tons of carbon emissions per annum.

Assumptions: The difference in the system utilisation of the physical servers (i.e. without virtualisation technology assumed at 7%) and the VM servers (i.e. servers using virtualisation technology, assumed at 50%) is used to work out the energy savings. The power usage of the physical server (i.e. without virtualisation) is assumed at 852 watts whereas the power usage of the VM servers (i.e. with virtualisation) is assumed to be 1,225 watts. An assumption was made that the server base load utilisation is 50%, with the remaining 50% utilisation having a linear relationship to the system utilisation. The carbon dioxide emissions avoided is calculated from the energy savings from the adoption of virtualisation technology. The 2008 Electricity Grid Emission Factor (based on Simple Operating Margin), which is publicly available on the National Environment Agency web-site, is used to calculate the carbon dioxide emissions.

Note: Kindly be informed that the CO₂ emissions reported in the previous sustainability report is based on slightly different assumptions, namely i) the base load utilisation which was 20% reported previously and ii) The 2006 IPPC Guidelines for the National Greenhouse Gas Inventories and the fuel mix data from the Electricity Market Company Market Report 2007 were used as a basis to calculate the carbon dioxide emissions in

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

7.2.iii Internal Environmental Programmes

Throughout the year, the company organises environmental-related activities that seek to educate and galvanise our staff into action. The company places importance in internalising environmental-friendly practices among the staff so they too can become advocates of the environment to the community they interact with.



Eco Bazaar

In January 2009, an eco bazaar was organised at HarbourFront Towers a week before Chinese New Year. At the bazaar, items such as mini plants, stationery made from recycled material and organic foodstuff were put on sale. The main focus of the bazaar was to promote the attributes of indoor air quality in the office through the use of mini plants. Attractive incentives were provided in the form of discounts for the purchase of plants to encourage staff to own one. In addition, staff who wore green attire at the bazaar were given token gifts for their support on the green message. Overall, the bazaar drew a good response where close to 50% of the staff purchased at least an indoor plant.

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

Earth Hour

Every year since the inception of the Earth Hour Initiative (which usually falls on the last weekend of March), our company has brought this initiative to our staff by organising it during a work day. On 27 March 2009, our offices (including a few offices at our power plant) had our lights turned off at 11am. During the lights-off period, staff was encouraged to take advantage of natural lighting to do their work by rolling up the window blinds. A lunchtime awareness talk on energy conservation was organised and this was followed by energy efficiency games which provided useful tips that staff could pick up from in a fun way .

Plastic Bottle Recycling campaign

To raise awareness on the issue of plastic bottle recycling, the company organised a month long campaign to collect used plastic bottles in our office. During the period 24 June to 25 July 2009, an estimated 250 used plastic bottles were collected and subsequently recycled to construct a feature wall of the Energy Learning Hub (refer to Chapter 8.1) of our adopted school, Greenridge Secondary School.

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE

Sustainability in a Glass Jar

In October, a terrarium workshop was organised at our corporate headquarters to get staff to learn about sustainability in a fun way. The workshop, which received an overwhelming response, was led by Mr. Lee, a teaching staff from our adopted school Greenridge Secondary School.

During the workshop, staff were given an introduction of the origins of terrariums as well as the natural cycles at play within the tiny ecosystem enclosed within the glass jar. This was followed by a step-by-step demonstration of the terrarium making process starting from the development of the pebble layers, the transfer of soil and mini-plants into the glass jar and finally the watering cum cleaning process. The 20-odd staff who participated in the workshop demonstrated patience and creativity as they conscientiously crafted their terrariums. Staff also had to write a 50-word sustainability message describing how they felt about the workshop as well as explaining the linkage between terrariums and sustainability to win the 'Best Sustainability Message' contest.

To involve the participation of those who couldn't take part in the workshop, the terrariums made by staff were displayed in the office for a week. Staff were then invited to guess the terrarium of choice selected by our CEO John Ng (with mystery prizes to be won).

ENVIRONMENTAL PERFORMANCE IN THE WORKPLACE



Eco-Gift Competition

During the festive month of Christmas, we organised an environmental initiatives centered on the recycling theme. In conjunction with the Christmas Eve party at our corporate headquarters, an eco-gift competition was held to get staff to use recycled office materials to creatively wrap their gift exchange presents. Altogether, a total of more than 30 staff took part in the competition to vie for the top three prizes.

The employee who garnered the top prize had creatively wrapped her present using photocopier paper and even took pains to minimise the use of adhesive tape by using string from a used shopping bag to hold the gift package. The competition was aimed at getting staff to do something fun while caring for the environment at the same time.



The Environment & The Community



Reaching Out

Promoting Environmental Awareness to the Community



ENVIRONMENT & THE COMMUNITY

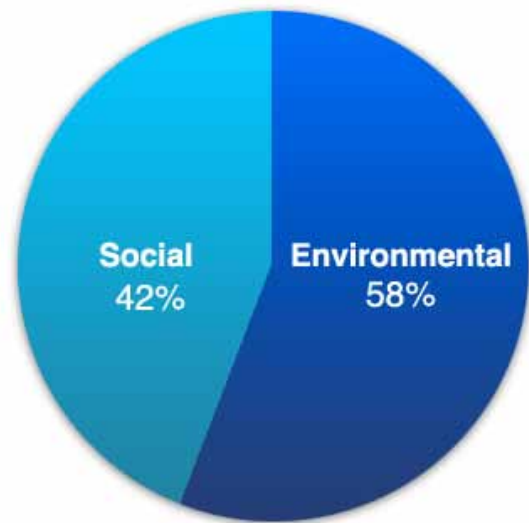
“One of the major community investments is the establishment of the Energy Learning Hub at PowerSeraya’s adopted school premises.”

PowerSeraya regards the community as one of its important stakeholders and has organised several activities to engage them on environmental issues. Our activities with the community are aimed at raising environmental awareness among the general public. It also presents opportunities for us to share with the community about our business and how we deal with the environmental impacts of our plant operations. Through our engagement with the community, they can better understand how we deal with day-to-day environmental issues as well as our role in climate-change action. Our social investments are largely channelled to provide assistance to union members and their families as well as to nurture the talents of youths through our annual book prizes and our on-going scholarship programmes.

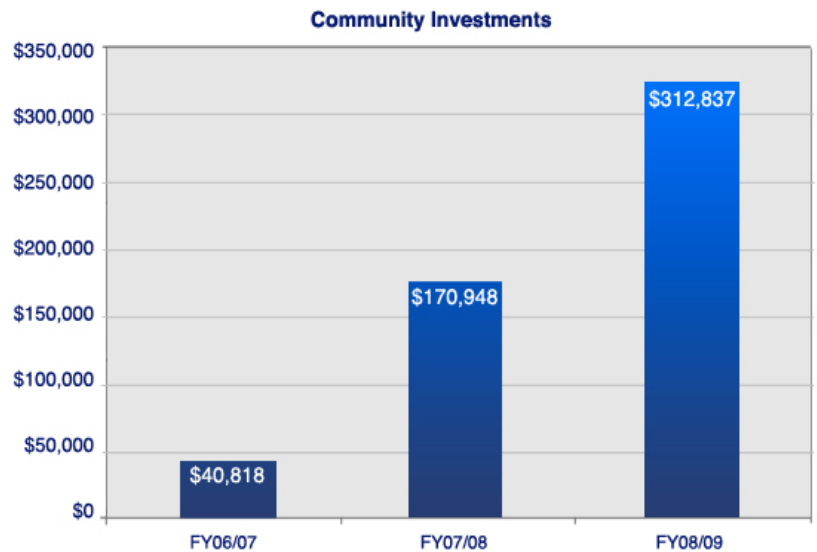
In FY2008/2009, PowerSeraya’s community investments saw a significant jump compared to the previous year. One of the major community investments was the establishment of the Energy Learning Hub at PowerSeraya’s adopted school premises.

ENVIRONMENT & THE COMMUNITY

PowerSeraya's Community Investment Profile in FY08/09



Graph 8(a) : Pie chart showing community investment composition



Graph 8(b) : Breakdown of community investments made by the company



ENVIRONMENTAL INVESTMENTS

“The Energy Learning Hub marks a significant milestone for PowerSeraya in promoting environmental stewardship to students not only within the school, but also to students from the other 10 schools in the same cluster as well as to the wider community”

Besides the significant investment in the Energy Learning Hub at our adopted school Greenridge Secondary, the company also supports environmental causes by sponsoring conferences, talks and seminars, as well as donating to environmental NGOs and schools. In addition, we also collaborate with external parties to bring about greater environmental awareness. Our initiatives with the community are driven by the Environmental Policy Statement of the CSR Policy which states the company’s commitment towards educating the community to be responsible agents to the environment. In FY08/09, close to 60% of the community investments are environmental in nature. The environmental initiatives mentioned below are up to the period ending December 2009.

Energy Learning Hub – Singapore’s first energy-centric learning hub by an energy company for youths

On 14 August 2009, the Energy Learning Hub (ELH) was finally launched at the premises of PowerSeraya’s adopted school Greenridge Secondary School. Dr. Teo Ho Pin, Mayor of the North West District and Member of Parliament for Bukit Panjang, graced the launch event as guest-of-honour. As the sole sponsor of the ELH, its opening marks a significant milestone for PowerSeraya in promoting environmental stewardship to students not only within the school, but also to students from the other 10 schools in same school cluster as well as to the wider community.

ENVIRONMENTAL INVESTMENTS

Built at an estimated cost of \$170,000, the ELH seeks to highlight the relationship between energy, the environment and climate change. Its point of differentiation lies with its main focus on energy – bringing students through a learning journey on energy sources, energy production and the importance of sustainability. The Hub raises awareness about how decisions made today can influence the energy future we have tomorrow and in so doing, inspire students to be responsible energy users themselves to mitigate the effects of climate change. As of December 2009, close to 1,100 students, teachers and parents have visited the ELH since its launch in mid-August 2009.



Energy Trail

ENVIRONMENTAL INVESTMENTS



Possible effects of climate change



Virtual Gaming

ENVIRONMENTAL INVESTMENTS



1 Degree Up Challenge

For the second consecutive time, our company organised the 1 Degree Up Challenge in celebration of World Environment Day which fell on 5 June 2009. This is an annual initiative jointly organised by our company and our landlord, Mapletree. It calls upon all office tenants in HarbourFront Towers to raise their office temperature by 1 degree with the primary objective of spreading the message of climate change through energy conservation action.

Besides having a poster campaign to raise awareness on this initiative, a mini exhibition cum energy conservation games was organised at the lobby of HarbourFront Tower One, drawing interest from office workers as well as passer-bys such as tourists.

Similar to the previous year, the initiative was well received. A participation rate of close to 70% was received – this covered close to 3,000 office workers from the 40 companies located in the office towers.

ENVIRONMENTAL INVESTMENTS

Asia Youth Energy Summit

Held over the last two days of October 2008, the Asia Youth Energy Summit 2009 aimed to provide a platform for youths to discuss on clean energy issues and sustainable development. This event, with PowerSeraya as a major sponsor, saw a large turnout of over 300 participants which included 33 foreign delegates from ASEAN, China, India, Denmark and USA. Held under the theme of “Opportunities and Challenges for Clean Energy & Energy Efficiency in Asia”, the summit covered a diverse range of topics which included keynote speaker Mr Dipal Chandra Barua, Managing Director of Grameen Shakti. Grameen Shakti is a renewable energy company that won The Right Livelihood Award for providing affordable and climate-friendly energy for the rural poor in Bangladesh.

In addition to the main conference, a job fair and exhibition was held to give the participants and members of the public an idea of the opportunities available to them in the area of clean energy and sustainable development.

ENVIRONMENTAL INVESTMENTS



NEA-Mediacorp Semakau Run

Previously known as the Semakau CEO Run, this annual event has garnered PowerSeraya's support since its inception three years ago. In 2009, PowerSeraya donated a sum of S\$12,000 to this fund-raising run in support of the works of environmental NGOs as well as social services charities namely the Singapore Environment Council, the Singapore Institute of International Affairs Haze Programme, the Restroom Association of Singapore, HCA Hospice Care, NTUC U Care Fund and the Rainbow Centre – Yishun Park School. PowerSeraya's CEO has participated in this run along with a few of the company's employees, which is held every year on Pulau Semakau, Singapore's offshore landfill island.

ENVIRONMENTAL INVESTMENTS

Clean and Green Singapore 2009

PowerSeraya has been a sponsor of the Clean and Green Singapore event – the country’s largest environmental event organised annually by the National Environment Agency (NEA) – for two consecutive years now.

The launch of the event on 31 Oct 2009, which was graced by Prime Minister Lee Hsien Loong, saw the company sponsoring among others, an energy conservation themed game booth and notebooks made from paper manufactured from sustainable forest sources endorsed by the Forest Stewardship Council.

PowerSeraya also participated in the Schools’ Carnival by sponsoring a booth for our adopted school Greenridge Secondary School to showcase their environment initiatives. The Schools’ Carnival is one of the significant events organised under the umbrella of the Clean Green Singapore, which is aimed at raising the awareness of environment among school children. For its participation, the company received a plaque by NEA in recognition of its joint partnership with Greenridge Secondary School under the Corporate And School Partnership (CASP) programme.

ENVIRONMENTAL INVESTMENTS

Collaboration with Nokia on the 'Recycle A Phone, Adopt A Tree' Programme

For the first time, PowerSeraya collaborated with Nokia to bring the 'Recycle a Phone, Adopt a Tree' programme to the wider community within the vicinity of its office at HarbourFront Towers. Organised in partnership with Mapletree, this two-month campaign (held from mid August to end October 2009) helped to raise awareness on the environmental benefits of phone recycling.

A booth was set up for a week at the busy shopping belt of HarbourFront Centre to educate the general public on the process of phone recycling and how it can help save the earth.

Under this campaign, Nokia will plant a tree in Indonesia for every phone recycled. A total of 353 mobile phones and related accessories were collected for recycling after the campaign ended.

With this campaign, used mobile phones sent for recycling not only help prevent any environmental hazards caused by the improper disposal of mobile phones but also help to reduce carbon dioxide emissions through carbon sinks created from trees planted by Nokia.



SOCIAL INVESTMENTS

Our social investments in FY2008/2009 saw an estimated S\$130,000 spent on 10 initiatives, including contributions towards the UPAGE (Union for Power & Gas Employees) Endowment Fund and our matching dollar donations for the twin disasters Sichuan Earthquake and Cyclone Nargis.

Twin Disaster Donation Drive

In May 2008, a donation drive involving employees of PowerSeraya was initiated to raise money for the victims of the Cyclone Nargis tragedy in Myanmar and those impacted by the Sichuan earthquake in China. With the company matching the funds raised dollar-for-dollar, close to S\$18,000 was raised and donated to the Singapore Red Cross. The funds went towards the Singapore Red Cross' relief and recovery efforts in the disaster-hit areas. This included purchasing urgent medical supplies, relief items like tents and even basic necessities such as food and water for the victims so as to safeguard the health and safety of thousands of survivors.

SOCIAL INVESTMENTS



Celebrating Family Day with the Intellectually-Disabled from Metta.

As part of the company's efforts to reach out to the socially disadvantaged, PowerSeraya invited the Metta Welfare Association for the first time to be part of its bi-annual Family Day celebrations.. Five staff volunteers hosted 27 members and their families from Metta Activity Centre, which runs programmes for intellectually-disabled people to help them develop daily living skills. Our staff volunteers assisted the Metta members with their lunch and guided them through the many game booths and activities that were organised during the event.

SOCIAL INVESTMENTS



Volunteering time for children of Child@Street 11

On 20 February 2009, 14 of our staff volunteers accompanied a group of children from Child@Street 11 to the Singapore Zoological Gardens, in an outing organised by EMC (Energy Market Company). As part of our annual social outreach programme, PowerSeraya, together with companies in the same industry – under the umbrella of NEMS (National Electricity Market of Singapore) Group – spent a fun-filled morning at the Zoo with 35 children from Child@Street 11, a child-care centre that provides care for low-income and/or dysfunctional families.

SOCIAL INVESTMENTS

Contributions to UPAGE (Union for Power & Gas Employees)

In FY2008/2009, PowerSeraya donated a combined sum of \$77,000 to the UPAGE Endowment Fund and the UPAGE Bursary Awards. The UPAGE Annual Bursary Awards are awarded to the children of UPAGE members, based on their academic performance and the financial needs of the family (the latter is based on the member's family per capita income). The UPAGE Endowment Fund was set up with the support of unionised companies under its care (including PowerSeraya) to provide an additional source of funds that will help union members in the form of subsidies and benefits such as welfare grants, leadership and training and development courses.

In early 2009, PowerSeraya also donated \$7,000 to the NTUC U Care fund to help lower-income workers and their families who were impacted by the recession caused by the global financial crisis. The funds helped ease their living expenses which included transport and utility vouchers for workers, and education-related vouchers for their children (as disbursed in previous years). The Labour Movement had also put aside funds for retrenched workers affected by the recession.

SOCIAL INVESTMENTS

Staff's Contribution to the Needy through the SHARE programme

PowerSeraya subscribes to the SHARE (Social Help and Assistance Raised by Employees) programme, where employees give to the Community Chest on a monthly basis through their salary. Our support for the SHARE programme saw PowerSeraya being awarded the Silver SHARE award in FY2008/2009. This is a milestone achievement compared to previous years where the company attained a Bronze award. For FY2008/2009 (i.e. year ending March 2009), the proportion of staff who were SHARE contributors rose to 60%, a 6% jump over the previous year.

The Community Chest is a fund-raising arm of National Council of Social Service with the purpose of ensuring that every person has the opportunity to live a life of dignity to his or her fullest potential .

(The contributions made through the SHARE programme are not included in the social investment figures shown in this report as these are direct contributions made by employees and not by the company).

Learn about our other social investments that recognise and nurture the talents of youths (refer to Chapter 9.3).

Social Performance

-Promoting a Safe,
Healthy and Nurturing
Environment



Responsible Actions

Keeping Customers in Mind in all that we do



PROMOTING A SAFE, HEALTHY AND NURTURING ENVIRONMENT

“Besides providing a safe and healthy work place for our staff, PowerSeraya has been creating a vibrant and nurturing environment where there are ample opportunities for staff to develop, as well as enjoy a good work-life balance.”

Besides ensuring that our employees have a safe working environment, the company places emphasis on creating a culture that will allow our employees to achieve a healthy work-life balance. Our staff are also given opportunities to develop themselves through training. All these factors contribute towards a vibrant and nurturing environment where human capital can be groomed to be effective contributors in the organisation.

Occupational health and safety is an important aspect of our power plant operations and this regulated system has played a vital role in maintaining our good safety record. As a company certified with OHSAS 18001, we ensure that our health and safety practices and systems adhere to the most stringent global standards and adopt a proactive approach towards promoting and communicating safety awareness at the plant.

The company’s core value of ‘Nurture’ also extends beyond our employees to the community through programmes that provide opportunities for youth to grow academically and contribute to society.



WORKPLACE SAFETY AND HEALTH

“The safety measures and procedures at the workplace have been effective in keeping the injury and fatality rates low in the company. Safety awareness is kept high among employees as well as our contractors. All these factors have contributed to our good safety record.”

The company has a Quality, Health, Safety and Environmental (QHSE) Policy which outlines our commitment to safety and health. Being certified with OHSAS 18001:1999 in November 2007 and having transferred to OHSAS 18001:2007 since June 2009 also means we have a system to identify safety and health hazards and risks as well as procedures and measures (which are reviewed periodically) to prevent accidents and incidents. The local regulation with particular influence on the compliance measures in OHSAS 18001 is the Workplace Safety and Health Act.

WORKPLACE SAFETY AND HEALTH

9.1.i Our Safety Record - Rate of Injury, Loss Day and Work-Related Fatalities

For the past three years (FY2006/2007 to FY 2008/2009), our company has had no work-related fatalities. We also managed to maintain a credible record in terms of injury and loss days. Our rate of injury, measured by the average frequency rate (AFR*) and our rate of loss days, measured by the average severity rate (ASR*), is well under the national average** over the same three-year period.

Besides staff safety, the company takes an active role in managing contractors' safety. Over the three years (FY2006/2007 to FY 2008/2009), there have been no work-related fatalities by contractors. The average severity rate (ASR) for contractors has also been under the national average over the same three-year period. The average frequency rate (AFR) for contractors registered a significant improvement in FY2008/2009, with a decreased accident rate which was below the national average in that year.

Details of the AFR, ASR and work-related fatalities are shown in the table below.

Table 9.1.i (a) : Staff Safety Record

	PowerSeraya (FY06/07, FY07/08, FY08/09)	National Average (2007, 2008, 2009)
AFR	2.24, 0, 1.08	1.9, 1.9, 1.9
ASR	60.39, 0, 47.66	125, 116, 112
Fatalities (Work-related)	0, 0, 0	3.1, 2.9, 2.8

Table 9.1.i (b) : Contractor Safety Record

	PowerSeraya (FY06/07, FY07/08, FY08/09)	National Average (2007, 2008, 2009)
AFR	0, 3.45, 1.44	1.9, 1.9, 1.9
ASR	0, 16.39, 4.33	125, 116, 112
Fatalities (Work-related)	0, 0, 0	3.1, 2.9, 2.8

*AFR is the number of accidents per million man-hours worked and ASR is number of man-days lost per million man hours worked.

**The national average figures were taken from the Workplace Safety and Health Indicators released by the Ministry of Manpower Singapore and they are expressed on a calendar year basis versus the company's safety figures which are on a financial year basis.

WORKPLACE SAFETY AND HEALTH

9.1.ii Workplace Safety Programmes

At PowerSeraya, we organise regular safety programmes to educate staff as well as contractors about the importance of safety in their daily operations. Safety training is included as part of the PowerSeraya's overall training plan. Staff attend courses such as first aid training, safety for lifting supervisors and the confined space safety assessors training conducted at MOM (Ministry of Manpower)'s accredited safety training centre.

The safety and health policies and regulations of the company are also communicated through handbooks that are made available to every employee and contractor involved in plant operations. We believe that it is everyone's responsibility to take ownership of their own safety as well as the safety of those working in the surrounding areas.

WORKPLACE SAFETY AND HEALTH

Annual Safety Week

The annual Safety Week held usually in March celebrates the past year's efforts that have contributed to the good safety record of the company's plant operations. The Safety Week will kick off with a ceremony where staff are given certificates of appreciation for the safety programmes that they have implemented in their respective work areas. The Senior Vice-President (SVP) of the Utilities Group, who is in charge of the entire power plant operations, then shares the preceding year's safety performance with both staff as well as contractors, and goes on to announce the safety theme and plans for the year. A week-long line up of safety initiatives follows after the launch ceremony.

In 2009, an online safety quiz and a mobile safety exhibition were organised to increase awareness on safe work practices and to educate staff and contractors on the causes and preventive measures of accidents. A safety video show was also screened at the cafeteria throughout Safety Week to remind staff and contractors on adopting safe practices in confined spaces and forklift driving as well as lock and tag out procedures. Practical safety sessions were also organised to educate staff on the use of fire extinguishers and how to perform first aid, with demonstrations on first aid and Cardio-Pulmonary Resuscitation (CPR) done by the St. John's Ambulance Association.

WORKPLACE SAFETY AND HEALTH

Regular Safety Programmes and Exercise Drills

Besides safety week, regular safety programmes are organised throughout the year to educate staff and contractors. In fact, new staff and contractors are required to attend a safety orientation training programme prior to starting work at the power plant. The Utilities Group also conducts a bi-monthly Safety Drive, which is a series of safety programmes mapped out by each department. Besides department-sharing sessions on safety activities, the Health, Safety and Environment (HSE) Department also invites external parties to conduct talks on safety and health from time to time.

Every year a large-scale emergency evacuation drill is held in the plant and it involves the participation of our contractors. Prior to the drill, both staff and contractors will attend meetings to familiarise themselves with the emergency evacuation procedures and routes. Through this major drill exercise which is held on an annual basis, employees and contractors were able to better appreciate their respective roles and responsibilities in an emergency evacuation situation which would serve them well should an actual situation occur in the plant. The company has also involved Singapore Civil Defence Force (SCDF) in the drill to familiarise and test each other's emergency response procedures and response timings. The recent fire Evacuation Drill that was held on Thursday, 17 December 2009 saw a total of 132 staff and 214 contractors participating in the drill. The response time of 19 minutes by staff and contractors was commendable given that it was a better performance compared to the previous year's exercise.

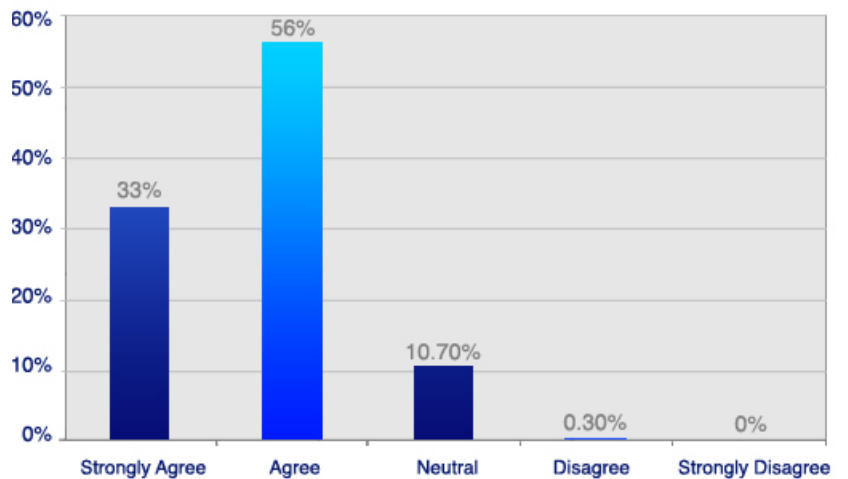
WORKPLACE SAFETY AND HEALTH

9.1.iii Safety Culture Survey

To assess the effectiveness of our safety programmes and gather feedback on our safety management practices, a safety culture survey is conducted every year. The safety culture survey comprehensively covers a wide spectrum of safety topics such as the effectiveness of the overall management of plant safety, the ownership that staff team and staff supervisors have on safety matters, the communication aspects of safety, the extent to which safety programmes have enhanced safety awareness and the management of near-miss incidents.

In 2009, the safety culture survey saw the participation of 235 staff and 200 contractors. The survey findings revealed that 89% of staff and 92.18% of contractors either agree or strongly agree that PowerSeraya has implemented an effective safety management system. The survey ratings is based on a rating scale ranging from 5 (Strongly Agree) to 1 (Strongly Disagree). Compared to the previous year, the 2009 safety ratings by staff saw a marginal 1% drop which is a slight deviation from the OSH Committee target of achieving zero 'neutral' position (i.e. 2009 to maintain the same levels as 2008).

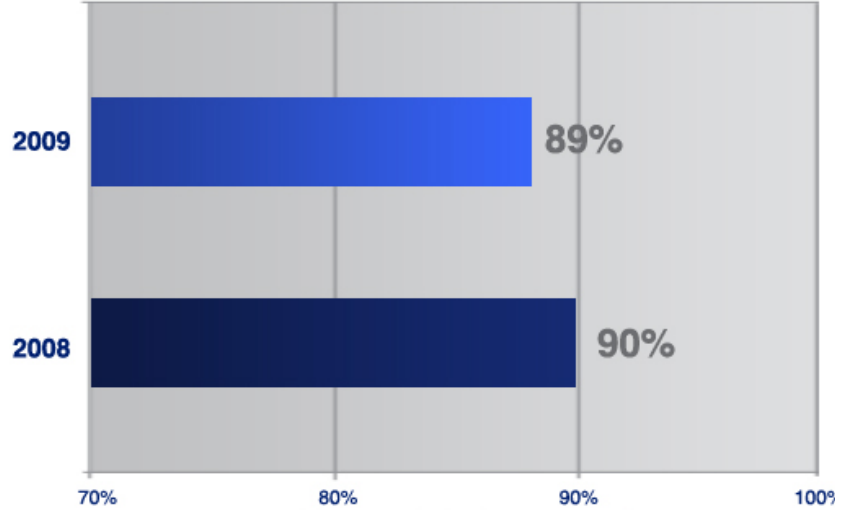
2009 Safety Survey Findings on Overall Safety Management (STAFF)



Diagrams 9.1.iii (a): The 2009 Safety Survey Ratings *by Staff*

WORKPLACE SAFETY AND HEALTH

Comparison of 2009 versus 2008 Safety Survey Findings on Overall Safety Management (STAFF)



Diagrams 9.1.iii (b) : The 2009 Safety Survey Ratings - *Staff who Agreed or Strongly Agreed that the company implemented an effective safety management system*

2009 Safety Survey Findings on Overall Safety Management (CONTRACTORS)

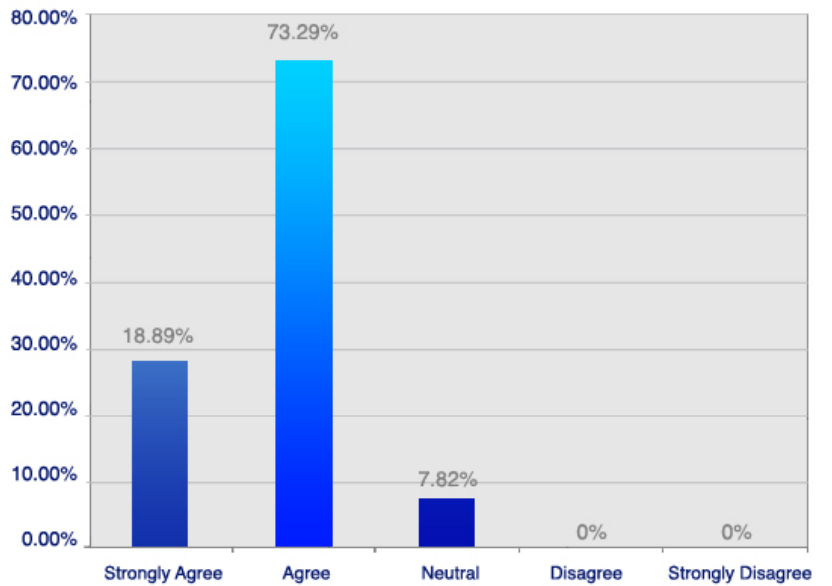


Diagram 9.1.iii (c) : The 2009 Safety Survey Ratings *by Contractors*

WORKPLACE SAFETY AND HEALTH

9.1.iv Occupational Health

Workplace Noise Hazards

Noise arising from the operations of the power plant is one of the occupational health risks which may often be taken for granted but it is one not taken lightly in the company. Every year, all staff who operate in noisy environments at the power plant (excluding staff in office desk-bound roles) are required to undergo an audiometric examinations for early detection of hearing impairment.

Some of the measures to mitigate staff risk exposure to unacceptable noise levels include the implementation of noise control measures at high risk areas and the regular monitoring of noise levels. Work areas and machines with excessive noise are identified and signs are posted at such places to warn staff of the potential noise hazards, highlighting the need to don hearing protectors in these areas. To reinforce the importance of wearing hearing protectors, noise education talks are held on a monthly basis to maintain a high level of awareness on the noise hazards and safety measures that staff should adopt.

WORKPLACE SAFETY AND HEALTH

Risks of Communicable Diseases to Workforce Stability

Protecting the workforce from the risks posed by the pandemic flu (e.g. H1N1 flu virus) is one of the enterprise risks being identified by the company. The speed and reach in which communicable diseases such as SARS and H1N1 has spread around the world in previous years has shown to us the vulnerability that corporations can be subjected to when such diseases reach pandemic proportions. This is especially so for power generating companies like PowerSeraya which provides the essential service of supplying reliable electricity to fuel the country's needs on a round-the-clock basis.

As such, the company has business continuity plans in place to minimise the spread of pandemic flu at the workplace. Some of the measures that have been incorporated in the business continuity plans include setting out temperature-taking and quarantine/isolation procedures, minimising contact between incoming/outgoing working shifts if required and taking into account social distancing.

During the last outbreak of the H1N1 pandemic flu virus, the business continuity plans were activated and implemented in alignment with the country's alert level issued by the Ministry of Health, Singapore. Temperature-taking procedures were implemented at all entry points of the organisation, measures were established to limit staff's overseas travel and they were educated on the importance of being socially responsible and to observe personal hygiene. A list of pandemic flu clinics in close proximity of the workplace was also identified and communicated to all staff to ensure that they knew where to receive the nearest treatment should the need arise.



STAFF WELFARE

“There is emphasis in nurturing our human capital which includes not only training, but also creating the conditions for our employees to achieve a work-life balance either through our workplace policies or recreational activities that promote family life.”

PowerSeraya believes in having a healthy work-life balance as part of the strategy of keeping staff productive, motivated, engaged and loyal. We achieve this through pro-family policies and practices, and the initiatives of the Vibrancy@Seraya Club - a group of employee volunteers who organise activities that promote workplace health and family life. We also nurture human capital by giving our employees opportunities to receive training so they can enhance their competencies, skills and personal development

Pro-family practices

Over the years, PowerSeraya has developed pro-family policies to cater to the demands of working parents who need to juggle work and family commitments. Some of these include flexi-work arrangements for staff upon request and the flexible/staggered start-time which was introduced recently in April 2010.

Other pro-family practices, which are compliance-driven, include the extended maternity and childcare leave. In addition to this, the company also provides childcare sick leave for female employees and paternity leave for male employees, both of which are over and above what is stipulated in the Singapore Employment Act.

To encourage staff to have a healthy family life, the Vibrancy@Seraya Club organises recreational activities for employees and their family members to participate. We also have a Flexible Benefits Plan which gives employees a fixed sum per year to cover expenses on insurance, dental, holiday and children's education. The company also holds corporate memberships to the Singapore Zoological Gardens, Singapore Science Centre and Sentosa Island so that our staff can have family outings at these popular attractions.

STAFF WELFARE

Maternity Leave

FY	No. of female employees who gave birth (A)	No. of maternity leave days taken (B)	Average maternity leave days per female employee (C) = (B)/(A)
05 / 06	5	270	54
06 / 07	6	340	56.7
07 / 08	7	504	72
08 / 09	5	482	96.4
4-Year Period	23	1596	69.4

Table 9.2 (a) : Maternity leave statistics in the company from FY05 to FY08

Childcare Leave

FY	Empolyees who took childcare leave	No. of childcare leave days taken (B)	Average childcare leave days per employee (C) = (B) / (A)
05 / 06	98	230.5	2.4
06 / 07	100	214	2.1
07 / 08	105	219	2.1
08 / 09	123	472.5	3.8
4-Year Period	426	1136	2.7

Table 9.2 (b) : Childcare leave statistics in the company from FY05 to FY08

Childcare Sick Leave

FY	No. of female employees (A)	No. of childcare sick leave days taken (B)	Average childcare sick leave days per female employee (C)
05 / 06	8	24	3.0
06 / 07	9	33	3.7
07 / 08	16	53	3.3
08 / 09	25	57	2.3
4-Year Period	58	167	2.9

Table 9.2 (c) : Childcare sick leave statistics in the company from FY05 to FY08

Paternity Leave

FY	No. of paternity leave days taken
05 / 06	9
06 / 07	10
07 / 08	9
08 / 09	30
4-Year Period	14.5

Table 9.2 (d) : Paternity leave statistics in the company from FY05 to FY08

STAFF WELFARE

9.2.i Providing healthcare needs and promoting a healthy lifestyle

PowerSeraya provides healthcare benefits and opportunities to encourage employees to stay healthy. Workers covered by the Comprehensive Co-Payment Scheme or the Medisave-Cum-Subsidised Outpatient Scheme have their medical expenses substantially paid for by the company. Employees can also make use of the Flexible Benefits Plan to pay for medical insurance.

To promote a balanced lifestyle, we organise sports and health-related activities. Keep-fit programmes including badminton, bowling and pool are organised weekly or fortnightly, and in-company tournament games such as sepak takraw are organised every year.

We also sponsor employees to participate in events like the JP Morgan Corporate Chase Challenge and the annual Jurong Island Dragon Boat Race. They are also encouraged to join an annual health screening exercise at subsidised rates so that they can take a personal interest in their own well-being.

Company/staff events

PowerSeraya organises annual events to celebrate staff efforts and achievements, as well as to foster staff bonding. The Vibrancy@Seraya Club organises and alternates between a dinner and dance or a family day event each year. To encourage greater camaraderie, informal events such as the financial year-end party or festive celebrations such as Christmas parties, are also held. Each year, employees also receive long service awards in recognition of their contributions to the company.

STAFF WELFARE

9.2.ii Nurturing Human Capital

With Singapore's drive to increase worker productivity by 2% – 3% each year for the next decade, plus the ageing population growth of the country, the need to optimise the talents of each and every individual becomes more imperative than ever as a key driver to maintain the company's sustainability over the long-term.

Nurturing and retaining talent is important to PowerSeraya. We believe in investing in our staff's training and development to achieve productivity growth, create value for the organisation and to also provide satisfying careers for our employees. In PowerSeraya, we provide a diverse range of training opportunities for our employees. These include seminars, workshops and conferences, in-company training programmes, on-the-job training, practical attachments and courses that lead to an academic qualification or professional certification.

Good and consistent performing employees are given opportunities to apply for company support for part-time academic or professional qualifications that are directly linked to their job scope. As of December 2009, the company has sponsored 33 employees to upgrade their skills and expand their knowledge base. Of these, 22 are taking degree courses or courses that lead to professional certification.

At PowerSeraya, all employees receive regular performance and career development reviews where their performance is appraised by their supervisors against set targets. The supervisors also discuss the training and development needs of the employee during the performance appraisal process where competency or skills gaps are identified to determine the training needs of the employee for the following year.

STAFF WELFARE

In FY2008/2009, we invested about S\$532,867 in training, a dip from FY2007/2008's S\$730,000. Similarly, the average training hours received per employee saw a reduction from 33.4 in FY2007 to 17.2 in FY2008. The dip in training expenditure in FY2008/2009 was not due to insufficient training budget allocated for the year but was due to a lack of utilisation of the training budget allocated to the Management Development Programme as the second half of 2008 and early 2009 saw many key staff busy with the divestment exercise of the company and were thus not available to attend external training. This resulted in the rather modest training budget utilisation of 53.3% for FY2008/2009. The divestment exercise was in itself an intense learning experience for those involved although it was not costed in dollars or time.

Although the training expenditure dipped in FY2008/2009 compared to the previous year, the average training investment of \$1,284 per employee in FY2008/2009 is still higher than the median training expenditure per employee of S\$982 from the Mercer 2008 Corporate Benchmark Monitor Singapore Survey.

	FY 06/07	FY 07/08	FY 08/09
Total Training Expenditure (in SGD)	901,000	730,000	532,867
% Training Budget Utilisation	66.7%	63.5%	53.3%
Average Training expenditure per employee (in SGD)	2,365	1,802	1,284
Average Training hours per employee	52	33.42	17.20

Table 9.2.ii (a) : Training Statistics for the FY05 to FY09 period

STAFF WELFARE

Competency-based recruitment practices

We believe in hiring based on the competencies required, following our technical competency inventory for each position from which we draw up the job description. As a testimony to our philosophy and practice, we signed the Employer's Pledge of Fair Employment Practices in 2006. PowerSeraya also embraces diversity and has been diversifying the workforce to meet changing business needs. Job applications are open to all and candidates are recruited based on their merits with no discrimination against race, gender or nationality.

Equal Remuneration

The base salary* ratio of Female to Male (as at March 2009) for the company is 0.86 : 1.00. The company's gender wage gap compares favourably with an ILO (International Labour Organisation) publication titled *Work, Income and gender equality in East Asia : Action guide 2008* (pp 34) which shows that the Ratio of Estimated Female to Male Earned Income[^] for Singapore is 0.51 : 1.00.

The compensation policy in the company is based on merit relative to the role in the company. Staff in a particular role are compensated based on their skills and experience, performance and contribution, market value of their position, regardless of gender, race or nationality. This aligns with the principle of equal remuneration for men and women for work of equal value in the organisation which is a principle that is enshrined in the collective agreement (as per the ILO Convention 100 on Equal Remuneration ratified by Singapore) that our union has established with the company. The company has a structured remuneration system that assigns each employee to a particular grade/category that commensurates with the job responsibilities held by the employee in the organisation. To each employee grade/category is a corresponding salary range. Our performance management system ensures that the performance of every employee is appraised on an annual basis and this rigorous system of measurement provides an objective basis to make salary adjustments in tandem with the employees' performance, facilitated by other information from market salary benchmarking studies.

* Base salary is the average salary of men or women excluding benefits, bonuses, allowances and any variable wage component.

[^] Estimated earned income is based on measurements of the average earnings of male to female workers (i.e. known as the raw or unadjusted earnings ratio).

STAFF WELFARE

Race

PowerSeraya's ethnic distribution has a good representation of the minority ethnic groups and reflects our philosophy of giving equal employment opportunities to all ethnic groups.

Ethnic Group	National Ethnic Distribution ¹ (%)	PowerSeraya Ethnic Distribution (%)
Chinese	74.2	60
Malay	13.4	28.4
Indian	9.2	7.9
Others	3.2	3.7

Table 9.2.ii (b) : Ethnic Distribution of the Workforce
(as of December 2009)

1. The ethnic composition of the resident population in Singapore in 2009 from the Department of Statistics Singapore.

Nationality

The increasing proportion of foreign nationals serves to meet our business needs (e.g. for specialised engineering expertise at the power plant) and is in tandem with our view of developing an organisation with the diversity of languages and cultures that would be an invaluable asset should the company embark on its regionalisation plans. Over the past five year period FY2004/2005 to FY2008/2009, the percentage of foreign born nationals increased by five percentage points. On the other hand, the percentage of foreign born nationals in senior management remained relatively stable between 11.1% to 12.5% in the period FY2006/2007 to FY2008/2009.

YEAR	FY04/05	FY05/06	FY06/07	FY07/08	FY08/09
Foreign Born Nationals (%)	2.7%	3.7%	4.7%	7.2%	7.7%
Foreign Born Nationals (%) in Senior Management Team	Not reported earlier		12.5%	11.1%	11.1%

Table 9.2.ii (c) : Foreign Born Nationals in the Workforce

STAFF WELFARE

Gender

To better tap the female workforce in Singapore, we have also been consciously increasing the female mix in the workforce, subject to the merit-based recruitment system. Over the past five years, we have seen an estimated increase of eight percentage points in the proportion of female employees over the FY2004 to FY2008 period. In fact, the percentage of the total workforce comprising female employees at the corporate office headquarters is over 60% in FY2007/2008. This is higher than the Singapore's average of 43.3% (Source: National Statistics for Labour Force in 2008 by Gender). The proportion of female employees within the senior management team in FY2008/2009 is roughly the same as the previous year.

Gender Mix of Company

YEAR	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09
Females in PowerSeraya	14.2%	15.4%	17.8%	20.6%	21.8%
Females in PowerSeraya's Senior Management Team	0%	0%	0%	11.1%	12.5%

Table 9.2.ii (d) : Gender mix of workforce

Gender Mix by Workplace Location as of FY 2008/2009

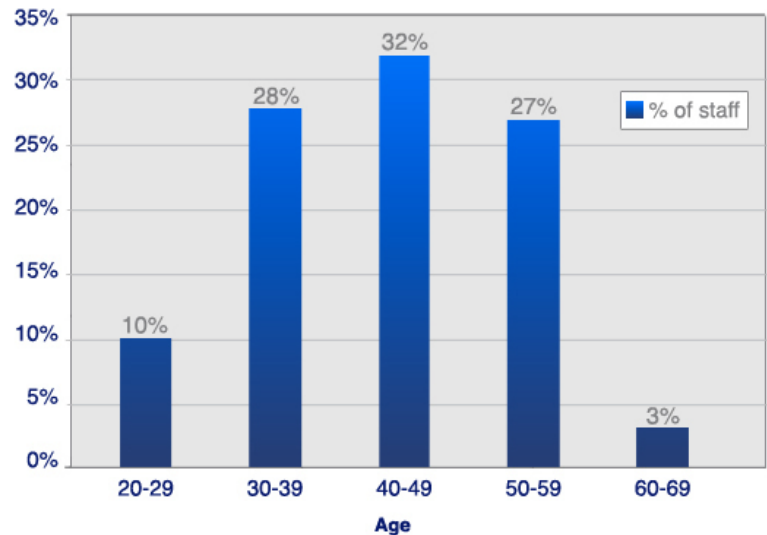
LOCATION	FEMALES (%)
Pulau Seraya & Jurong Power Stations	4.7
Corporate Headquarters	65.5

Table 9.2.ii (e) : Gender mix of workforce by location

STAFF WELFARE

Age-Profile of Workforce

The workforce at PowerSeraya generally has an older age profile compared to the national average. For example, 63% of our employees are 40 years old and above versus the national average of 53.8 % (Source: Singapore Workforce, 2009 from Manpower Research and Statistics Department Singapore Nov 2009). This is partly due to a significant proportion of long-serving staff in the company. For example, the average length of service of staff in the company is 16 years. Graph 9.2.ii(f) below shows the detailed age groups of staff within the company.



Graph 9.2.ii (f) : Age Profile of PowerSeraya Staff

STAFF WELFARE

9.2.iii Staff Strength And Employee Turnover

The number of full-time* employees increased to 414 in FY2008/2009. This 2.7% increase over the previous year is mainly due to new employees taken on to support our expansion plans. In FY2008/2009 we had one part-time** employee. The company also allows for flexi-work arrangements upon request by our employees. In FY2008/2009, we have one female employee working on a tele-commuting basis to achieve a better balance between work and child-minding commitments.

Staff turnover in FY2008/2009 stayed at the same levels as the previous year of 9.4%. Our turnover rate compares favourably to the 2009 Singapore's All Industries Average Turnover Rate of 23.1% and is still below the Petroleum, Chemical and Pharmaceutical Industry Turnover Rate of 10.8 % for the same period.

The company's pro-family practices and its continued emphasis on providing a nurturing environment, where employees can achieve work-life balance and career development, helped to keep staff turnover below the industry average.

* There are two types of full-time employees in PowerSeraya Ltd. Those under the old scheme (permanent employment) and those under the two- or three-year renewable term contract subject to satisfactory employee performance.

**Part-time are deemed to work less than 30 hours a week as stipulated in the Singapore Employment Act.

STAFF WELFARE

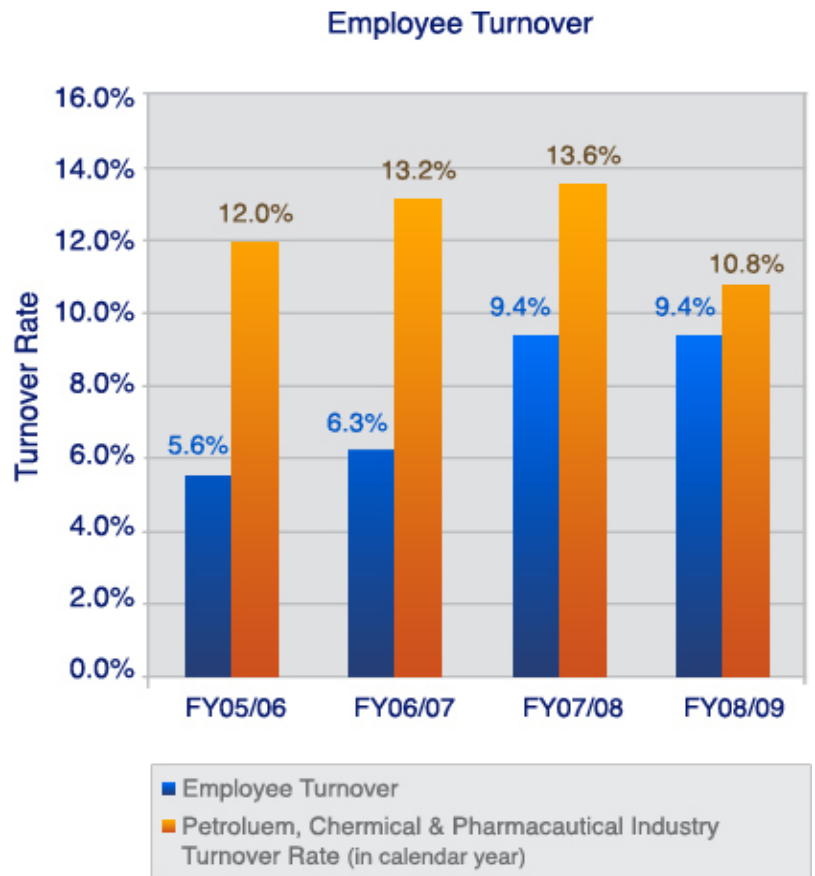


Diagram 9.2.iii (a) : Employee Turnover Statistics for the period FY05/06 to FY08/09
(Note: The Petroleum, Chemical & Pharmaceutical Industry Turnover figures are on a calendar year basis, from 2006 to 2009)

STAFF WELFARE

9.2.iv Labour Practices and Basic Human Rights

With a strong emphasis on nurturing human capital in our company, basic human rights becomes an issue that cannot be ignored, especially since it has an impact on the working conditions and labour practices of the organisation. PowerSeraya, as a company based in Singapore with no overseas operations outside the country, naturally aligns its labour practices accordingly with the Singapore government's stance on human rights.

Singapore is an active member of the ILO (International Labour Organisation) and fully supports the ILO's framework and priority agenda for decent work, and upholds both in spirit and practice the fundamental principles of the core labour standards.

To date, Singapore has ratified 24 ILO conventions, including five of the eight conventions which are grouped under four fundamental principles and rights at work, namely:

- Freedom of Association and Right to Collective Bargaining
 - Convention 98
 - Right to Organise and Collective Bargaining (please refer to Section 5.3.i : "Stakeholder Engagement - Employee and their trade union to have an idea of how this principle of human rights is being practised in the organisation")
- Elimination of all forms of forced or compulsory labour
 - Convention 29
 - Forced Labour
- Effective abolition of child labour
 - Convention 138
 - Minimum Age
 - Convention 182
 - Worst Forms of Child Labour
- Elimination of discrimination in respect to employment and occupation
 - Convention 100
 - Equal Remuneration (please refer to Section 9.2ii to have an idea of how this principle is addressed in our organisation)

STAFF WELFARE

The above mentioned ILO conventions are translated and incorporated locally into The Singapore Employment Act, which governs the labour practices of all companies operating in Singapore. PowerSeraya complies fully to the Singapore Employment Act and as such its operations do not encounter any risks for incidents of child labour, forced/compulsory labour.

Human Rights in Investment Agreements and our Supplier Chain

PowerSeraya does not operate within, or are partners in ventures or in regions where the protection of human rights is of significant concern. As such, our active investments, which are mainly local if not all, are not subject to any human rights criteria in screening.

Similarly, PowerSeraya does not have overseas operations that employ workers in countries where human rights are of significant concern. Neither do we outsource any work to human rights sensitive countries. Despite little risk exposure to the company to human rights abuse, we require all our suppliers to adhere to the Singapore regulations on labour practices (in particular the Singapore Employment Act where the ILO conventions described earlier have been incorporated). In addition to this, our contract documents includes clauses that requires suppliers to: 1) adhere to certain fair wage practices, 2) allow the freedom for the supplier's workers to be members of trade unions and; 3) forbade the use of illegal foreign workers in works performed for the company.

STAFF WELFARE

How Work Discrimination is Handled

There are no recorded incidents of discrimination at work during the reporting period. PowerSeraya's Code of Ethics provides a whistle-blowing channel where employees can report on any inappropriate acts (including acts of discrimination) that puts the interests of other employees or the organisation itself at risk. The company also has a standard procedure where employees can raise their grievances or disagreement to any company practices (including discriminatory practices).



NURTURING THE COMMUNITY

“Our core value of ‘Nurture’ extends beyond the company to the community through the social programmes it provides for youths to develop themselves academically and socially.”

Nithiah Nandan Book Prize

In 2009, the book prizes worth S\$1,000 each were awarded to four of PowerSeraya employees’ children at the Nithiah Nandan Book Prize giving ceremony which was held in conjunction with the long service awards for our employees. Set up in year 2007, this book prize was created in honour of the late Mr Nithiah Nandan, the former executive secretary of the Union for Power and Gas Employees (Singapore) for his support for lifelong education and dedication to serving others.

The book prize recognises the exemplary performance of the employees’ children who have excelled in their areas of interest outside the academic field or who have made meaningful contributions to the community or the environment. As of December 2009, seven of our employee’ children have received this book prize.



NURTURING THE COMMUNITY



PowerSeraya Scholarship Programme

Between two to six outstanding undergraduates from Nanyang Technological University are selected every year to receive this prestigious scholarship award worth S\$8,000 per annum. In 2009, the company gave out four scholarships (two new and two renewals). The two new awardees, both second year undergraduates - in business and in aerospace engineering - were also given internship opportunities in PowerSeraya.

The PowerSeraya Scholarships Programme which was set up in 2008, is a bond-free programme. The scholars are chosen from students pursuing courses in the College of Engineering, the College of Science and the Nanyang Business School from their second year of study onwards. While students are selected primarily on their academic and CCA (Co-curricular Activities) performance, students who have handled environmental projects or contributed significantly to the community are strongly considered for the scholarship programme.

NURTURING THE COMMUNITY



Internships

Every year, we accept interns from tertiary institutions, who are posted to relevant departments and guided by a senior officer. Through this internship opportunity, the students can appreciate how their fields of study can be applied in real working life. In FY2006/2007 to FY2008/2009, we had a total of 17 interns.

10

Social Performance
-Product Responsibility

Taking Responsibility
for Tomorrow



KEEPING CUSTOMERS IN MIND IN ALL THAT WE DO

“By providing our customers with the information and tools to help them conserve energy, we empower them with the knowledge to use electricity more efficiently. Our products help to mitigate our customer’s risk exposure to energy price volatility. In addition, we play an active role in maintaining an efficient and competitive electricity market.”

The company, through its retail arm Seraya Energy, has been educating customers to better manage their energy consumption which will in the long run help to mitigate the effects of climate change action. We provide customers with information that allow sustainable choices in relation to efficient use of energy. Additionally, Seraya Energy has developed a diverse range of innovative products to help our customers minimise their risk exposure to fluctuating energy prices as well as to cater to the specific needs of our eco-conscious customers. Our active participation and compliance to the Electricity Market rules contribute towards a wholesale electricity market that operates in an efficient, fair and competitive manner for the benefit of end consumers. We believe this responsible approach has resulted in many satisfied customers which is important for the long-term sustainability of our business.



CUSTOMER SATISFACTION

Following the 2007 customer satisfaction survey conducted by Synovate (refer to last year's sustainability report for survey details) which revealed that 81% of our customers gave a 'Good' rating and above, our company was interested to find out if high customer satisfaction rate translated to repeat purchases or loyalty. As such, Seraya Energy (subsidiary of PowerSeraya) engaged Advantage Consulting in June 2008 to conduct a customer survey using Net Promoter Score to better understand our customers. A total of 54 key customers across 15 industry types and customer segments responded to the survey which sought to determine customer's perceptions of Seraya Energy versus other competitors. The survey also provided insights on product and service factors which our customers were satisfied with.

The survey findings:

- Customers were generally happy with Seraya Energy competitive pricing package.
- Price is the main concern for customers when selecting a service provider.
- When customers opt out of a contract, it is usually due to:
 - price
 - poor service and
 - other factors which are beyond their control.
- As long as price is within customers' acceptable price range, service becomes the next important factor for consideration.

CUSTOMER SATISFACTION

The survey also revealed that our customers were generally happy and satisfied with our range of products and customer service levels. Factors which our customers were satisfied with include:

- i) flexible and competitive electricity package,
- ii) professional account management,
- iii) helpful and polite customer care team and;
- iv) good follow-up from marketing.

However, factors that can be improved include greater communication on the latest package offers in tandem with the dynamic market situation as well as the accessibility of Seraya Energy staff to attend to urgent queries.

Some of the other interesting survey findings revealed that customers were looking for value for money product offerings. Although price is an important consideration by customers, other factors also feature significantly in a customer's decision. Price is often compared relative to other factors such as the excellent service which Seraya Energy continuously strives to provide its customers.



INNOVATIVE PRODUCTS TO HELP REDUCE CUSTOMER'S RISK EXPOSURE TO ENERGY PRICE VOLATILITY

Seraya Energy is able to offer flexible and competitive electricity packages that cater to the risk appetite of the wide spectrum of customers. It tailors product packages that are compatible with the customer's risk appetite especially when electricity prices in Singapore are tied closely to the volatility of fuel oil prices. One example includes the FixedPlus product where customers can lock their electricity rate for a specified contract period. This helps to eliminate the risk of fluctuating electricity prices. For the less risk adverse customers, IndexPlus product follows closely the prevailing rates of the energy cost at all times, thus allowing customers the option to pay at the prevailing energy rate. All these products are win-win innovative solutions where customers can be assured that the electricity packages bought has taken into account acceptable risks, while PowerSeraya can gain from the sale profits of such packages.

Besides products that are customised to suit the customer's risk appetite, Seraya Energy has also created a new product called Greenplus that aims to bundle energy offerings with features that can help our customers to be energy efficient. These products support the Sustainability Blueprint's goal of having 80% of Singapore buildings energy efficient by 2020 and thereby appeals to the growing trend of environmentally conscious customers.



HELPING OUR CUSTOMERS TO CONSERVE ENERGY

Seraya Energy has conducted orientation programmes that aim to get customers familiar with obtaining online information on their energy consumption pattern to assist in their energy conservation efforts. Some customers have found the information useful in shifting their consumption patterns from peak to non-peak period in efforts to gain electricity bill savings while conserving energy at the same time. Further, Seraya Energy periodically updates their website on useful energy conservation tips which our customer can easily adopt to save energy and reduce carbon dioxide emissions. In the recent years, Seraya Energy has also made conscious steps to save paper by promoting e-billing to its customers. Since the e-billing feature was introduced about 13 months ago, we now have 9.61% of our customers who are on e-billing. Till today, Seraya Energy is still actively promoting e-billing.



RESPONSIBLE MARKETING AND ADVERTISING

In Singapore, the Singapore Code of Advertising Practice (SCAP) provides guidelines that promote a high standard of ethics in advertising through industry self-regulation. The SCAP is formulated against considerations to the national law, international law and practice, including the International Code of Advertising Practice published by the International Chamber of Commerce. The basic premise of the SCAP is that all advertisement should be legal, decent, honest and truthful.

SCAP is the guiding principle of ASAS (Advertising Standards Authority of Singapore) which is an advisory council to the Consumers Association of Singapore (CASE). In a situation that an investigation into a misleading advertisement uncovers an unfair business practice, ASAS may refer to CASE for action to be taken under the Consumer Protection (Fair Trading) Act. Under this ACT, it is an unfair practice for a retailer to make false or misleading claims.

PowerSeraya and its subsidiaries, with its operations based in Singapore, adhere to the abovementioned codes and regulations in its marketing-related or advertising activities. There have been no incidents of non-compliance.



OUR ROLE IN AN EFFICIENT AND COMPETITIVE ELECTRICITY MARKET

Singapore's wholesale electricity market is a gross pool where all electricity generated (from licensed power generation companies like PowerSeraya) is sold into the pool. All electricity consumed is also bought from the pool, except for cases of grandfathering*. The wholesale electricity market determines prices for electricity all year round in half-hour timeslots using a pricing algorithm which minimises costs by balancing electricity demand with the offers to supply electricity. Power generation companies (or 'gencos' for short) compete with one another by offering prices to supply electricity (in half-hour timeslots) into the wholesale electricity market. The wholesale electricity market thus serves as a platform for open and free competition to take place by allowing multiple gencos to compete in the supply of electricity as opposed to the traditional model of a single monopoly supplier of electricity which charges regulated tariffs for electricity provision.

Electricity generation is a licensable activity under the Electricity Act (Singapore). Gencos are required by their electricity licences (granted by the Energy Market Authority of Singapore (EMA)) to abide by the Singapore Electricity Market Rules ("Market Rules") which requires them to register as market participants and be subjected to the Market Rules. The Market Rules play an important role in ensuring that the wholesale electricity market operates and functions in manner that is consistent with the efficient and fair operations of a competitive market. In doing so, it creates a level playing field for gencos to compete in the wholesale electricity market, resulting in competitive electricity prices for end consumers in the contestable market**.

OUR ROLE IN AN EFFICIENT AND COMPETITIVE ELECTRICITY MARKET

The Market Surveillance and Compliance Panel (MSCP) is an independent body set up under the Market Rules that is charged with policing the compliance with the Market Rules and is empowered to impose financial penalties for breaches of the Market Rules. The financial penalties are collected by the wholesale electricity market operator Energy Market Company Pte Ltd (EMC) and are used to reduce the electricity price paid by consumers.

In determining breaches of the Market Rules, the MSCP among other things such as awarding costs may also impose financial penalties. Financial penalties have been imposed for cases where there have been significant impact on the wholesale electricity market or negligence. There have been two breaches of the Market Rules by PowerSeraya which have resulted in the imposition of financial penalties. Both of these breaches were caused by human error and not by any intentional nor deliberate acts by PowerSeraya to disrupt the smooth operations of the wholesale electricity market. PowerSeraya fully understands the important role of the wholesale electricity market in determining competitive electricity prices for the benefit of consumers in the contestable market and has taken corrective action to prevent a recurrence of these breaches caused by human error. Details of the breaches are provided below.

OUR ROLE IN AN EFFICIENT AND COMPETITIVE ELECTRICITY MARKET

One breach occurred on 23 August 2005 and was determined to be a breach by the MSCP on 24 August 2006 which imposed a financial penalty of \$7,500 and costs of \$800. The breach was due to human error. One of PowerSeraya's generating units, SER G3, had tripped. PowerSeraya had to reflect the trip by making changes to the offers from SER G3 but another generating unit SER CCP 1 was selected by mistake. This resulted in a breach of the Market Rules as the change to the offers from SER CCP1 were within the gate closure period (a time period where offers are not to be changed except due to permissible exceptions) even though there were no permissible exceptions applicable such as incidents due to tripping. The MSCP had assessed that the breach had significant impact on the wholesale electricity market. PowerSeraya has since then put in place remedial measures (combination of extra training and IT solution) to prevent such recurrence. Details of the breach are publicly available at the Electricity Market Company website (www.emcsg.com)

The other breach occurred on 28 February 2009 and was determined to be a breach by the MSCP on 21 August 2009 which imposed a financial penalty of \$12,500 and costs of \$800. The breach was due to human error which resulted in data corruption, resulting in offer variations made in addition to a PowerSeraya trader's inputs. These additional offer variations resulted in a breach of gate closure with no permissible exceptions applicable. The MSCP had assessed that the breach had significant impact on the wholesale electricity market. PowerSeraya has since then put in place remedial measures in the form of an IT solution to prevent such recurrence. Details of the breach are publicly available at the Electricity Market Company website (www.emcsg.com) .

OUR ROLE IN AN EFFICIENT AND COMPETITIVE ELECTRICITY MARKET

PowerSeraya's Enterprise Risk Management Department had a role in assessing the mitigation measures implemented in the aftermath of breaches of the Market Rules, on whether adequate measures have been undertaken. The breach of 28 February 2009 was reported to PowerSeraya's Risk Management Committee.

** Grandfathering in this context refers to the exemption from the requirement to hold a licence to generate electricity that has been granted to six companies. The exemption is granted subject to certain conditions such as not injecting electricity into a transmission system. It is also granted to companies who generate electricity from self consumption, that is embedded generators, and whose generation facilities were installed before 1 January 2003 which was the date of commencement for the National Electricity Market of Singapore (NEMS), the wholesale electricity market arrangements which replaced the previous wholesale electricity market arrangements, the Singapore Electricity Pool.*

*** Contestable market refers to the consumers classified as contestable. Consumers classified as contestable enjoy competitive rates from the wholesale electricity market. Such consumers are mainly large industrial and commercial consumers (consumers with average electricity consumption of 10,000kWh or more) which make up to about 75% of the electricity demand in Singapore according to EMA. The non-contestable market comprises domestic consumers and consumers with average electricity consumption lower than 10,000Kwh per month, making up approximately 25% of the total Singapore electricity demand. This group is currently not eligible to become contestable, as well as larger consumers who have not switched to become contestable. These consumers are subject to regulated tariffs for electricity. The contestable market falls under Phases 0, 1 & 2 of the Singapore's government initiative to liberalise the electricity market. Phase 3, which is yet to be implemented as of December 2009.*



GRI Content Index

GRI Content Index

Table 11.1 – GRI Performance Indicators

*FY refers to the period starting from 1st April of a particular year to 31st March of the successive year. For example, FY08/09 refers to the period 1 Apr 08 to 31 Mar 09.

All dollar values are denominated in Singapore currency.

No.	GRI	Performance Indicators	FY 06/07*	FY 07/08*	FY 08/09*	Section Ref	Remarks
A) ECONOMIC PERFORMANCE							
1	EC1	1a. Total Revenue (In S\$'000)	2,623,607	2,792,837	3,576,561	4.2	
		1b. Total Costs (In S\$'000)	2,436,766	2,554,720	3,388,148		Refer to Annual Report 2008/2009 (Pg 46)
		1c. Total Earnings (In S\$'000)	168,060	218,296	171,850	4.2	
		1d. Employee Compensation (In S\$'000)	40,135	42,844	51,932		Refer to Annual Report 2008/2009 (Pg 68)
		1e. Total Assets (including leased assets) (In S\$'000)	1,894,618	2,113,450	2,313,450		Refer to Annual Report 2008/2009 (Pg 47)
		1f. Shareholder's funds (In S\$'000)	1,073,426	1,212,749	1,197,896		Refer to Annual Report 2008/2009 (Pg 48)
		1g. Earning per share (in S\$)	0.19	0.25	0.19	4.2	
		1h. Return on Equity (%)	16.11	19.1	14.26	4.2	
		1i. Donations and other community investments (In S\$'000)	46.54	170.95	312.84	4.2	

2	EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Refer to Chapter on Climate Change			6.4	
3	EC3	Coverage of the organisation's defined benefit plan obligations (in S\$'000)	Not reported previously		4,700	4.6	
4	EC4	2a. Significant financial assistance received from government	NIL	\$34,000	NIL	4.3	
5	EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	Refer to Chapter on Economic Performance			4.4	
6	EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation	Refer to Chapter on Human Capital on our hiring practices			9.2.ii	
		% Foreign Born Nationals in Senior Management team	12.5%	11.1%	11.1%	9.2.ii – Table 9.2.ii(c)	
7	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial,	NIL		Energy Learning Hub investment	4.5	

		in-kind, or pro bono engagement						
8	EU9	Provisions for decommissioning of nuclear power sites	There are no nuclear power sites in Singapore. As a company with power generation operations in Singapore, this indicator does not apply.					
9	EU10	Planned capacity (MW) against projected electricity demand over the long term	3,100 (licensed)	3,100 (licensed)	3,100 (licensed)	<u>3</u>		
10	EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime	42.75	42.1	41.98		It is commercially sensitive in the Singapore business environment to report on the generation efficiency of thermal plants by energy source. What we can report are efficiency figures for the entire power plant.	
11	EU12	Transmission and distribution losses as a percentage of total energy	Not applicable as the company does not participate in any transmission and distribution business activities.					
B) ENVIRONMENTAL PERFORMANCE								
12	EN1	Materials used by weight or volume	Refer to Chapter on Environmental Performance			<u>7.1.x</u>		
13	EN2	Percentage of materials used that are recycled input materials	Refer to Chapter on Environment Performance			<u>7.1.11</u>		
14	EN3	Fuel Oil consumed for power generation (in tons)	1,550,551	1,295,196	1,241,630	<u>7.1.6</u>		

		Natural gas consumed for power generation (BBTU)	34,860	34,457	32,160	<u>7.1.6</u>	
15	EN4	Indirect energy consumption by primary source (in Mwh)	1,093,767	904,943	1,362,680	<u>7.1.5</u>	
16	EN8	Total water consumption for power generation (m3)	2,186,600	1,992,500	1,713,055 (66% from desalination plant *, 34% from water utilities)	<u>7.1.7</u>	* Owned Desalination plant provides renewable water source
17	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	NIL			<u>7.1.12</u>	
18	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Not applicable as the company operations is not located in (nor located adjacent to) areas of high biodiversity value.			<u>7.1.12</u>	
19	EN16	Total direct GHG emissions (CO ₂ only) by weight in tons per MWh arising from power generation	0.592	0.582	0.587	<u>7.1.6</u>	
20	EN17	Other indirect GHG emissions (CO ₂ only) by weight (in tons)	223.7 (calendar year 2007)	222.4 (calendar year 2008)	223.7	<u>7.2.1</u>	
21	EN18	Initiatives to reduce GHG emissions and	Energy efficiency improvements	Energy efficiency improvements	Energy efficiency improvements	<u>6</u>	

		reduction achieved	& Fuel switching	& Fuel switching	& Fuel switching		
22	EN19	Emissions of ozone-depleting air emissions by weight (kg)	157.5	135	247.5	<u>7.1.6</u>	
23	EN20	SO2 emissions by weight (in tons/MWh)	0.0031	0.0029	0.0034	<u>7.1.6</u>	Within regulations
		NO2 emissions by weight (in tons/MWh)	Not available	Not available	Not available	<u>7.1.6</u>	
24	EN21	Total water discharge by quality and destination (includes thermal discharge)	BOD: <20mg/L COD: <20mg/L TSS: <30mg/L Total Metals: <1mg/L Oil & Grease: <10mg/L Temperature: < 30°C	BOD: < 10mg/L COD: <40mg/L TSS: <10mg/L Total Metals: <1mg/L Oil & Grease: <5mg/L Temperature: < 30°C	BOD: < 30mg/L COD: <100mg/L TSS: <20mg/L Total Metals: <1mg/L Oil & Grease: <5mg/L Temperature: < 30°C	<u>7.1.7</u>	Within regulatory limits
25	EN22	Total weight of waste by type and disposal method	Toxic Industrial Waste: 7,035 tons Recyclable Waste: 126,156 tons General Waste: 540 tons Total = 133,731 tons	Toxic Industrial Waste: 8,611 tons Recyclable Waste: 96,090 tons General Waste: 562 tons Total = 105,263 tons	Toxic Industrial Waste: 10,300 tons Recyclable Waste: 86,859 tons General Waste: 485 tons Total = 97,643 tons	<u>7.1.8</u>	Within regulations
26	EN23	12. Total number and volume of significant spills	No recorded oil spills	No recorded oil spills	No recorded oil spills	<u>7.1.9</u>	
27	EN24	Weight of transported (import & export) or treated waste deemed hazardous under the terms of the Basel Convention	125,909 tons (gypsum) 65 tons (boiler slag)	95,056 tons (gypsum) 0 ton (boiler slag)	87,069 tons (gypsum) 242 tons (boiler slag)	<u>7.1.8</u>	Within regulations

		% of transported waste shipped internationally	94.2	90.3	89.4	<u>7.1.8</u>	
28	EN26	Initiatives to mitigate SO2	Flue Gas Desulfurization System	Flue Gas Desulfurization System	Flue Gas Desulfurization System	<u>7.1.6</u>	
		% of SO2 mitigated	92.92	92.94	94.18	<u>7.1.6</u>	
29	EN28	Monetary value of significant fines	NIL	NIL	NIL	<u>7.1.12</u>	Within regulations
		Total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	NIL	NIL	NIL	<u>7.1.12</u>	
30	EN27	Percentage of products sold and their packaging materials that are reclaimed by category	Not applicable for the company's business where products do not involve packaging materials			<u>7.1.10</u>	

C) SOCIAL PERFORMANCE							
31	LA1	16a. Total employees (full-time)	381	403	414	<u>9.2.3</u>	
		16b. Total employees (part-time)	0	0	1	<u>9.2.3</u>	
		16c. Total employees (contract basis)	0	0	0	<u>9.2.3</u>	
		16d. Total number of interns	6	4	7	<u>9.2.3</u>	
		16e. Female employees of total workforce (%)	17.8	20.6	22.2	<u>9.2.ii – Table 9.2.ii(d)</u>	

		16f. Females in senior management (%)	Not reported earlier	11.1%	12.5%	9.2.ii – Table 9.2.ii(d)	
		16g. Foreign born nationals of total workforce (%)	4.7	7.2	7.7	9.2.ii – Table 9.2.ii(c)	
32	LA2	17a. Total no. of employee turnover	24	38	39	9.2.iii	
		17b. Rate of employee turnover (%)	6.3	9.4	9.4	9.2.iii	
33	LA4	Percentage of employees covered by collective bargaining agreements (%)	56.96	53.85	52.0	5.3.i	
34	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	Refer to Utilities Group Restructuring exercise			5.3.i	
35	LA7	Rate of injury (including fatalities) - Staff	AFR = 2.24	AFR = 0	AFR = 1.08	9.1.i	
		Rate of lost days - Staff	ASR = 60.39	ASR = 0	ASR = 47.66	9.1.i	
		Rate of work-related fatalities - Staff	0	0	0	9.1.i	
		Rate of injury (including fatalities) - Contractor	AFR = 0.00	AFR = 3.45	AFR = 1.44	9.1.i	
		Rate of lost days - Contractor	ASR = 0.00	ASR = 16.39	ASR = 4.33	9.1.i	
		Rate of work-related	0	0	0	9.1.i	

		fatalities - Contractor					
36	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Refer to audiometric tests and H1N1 Pandemic Flu			9.1.iv	
37	EU21	Contingency planning measures, disaster/ emergency management plan and training programs, and recovery / restoration plans	Refer to Chapter 5.2i on 'Managing Emergencies and Crisis'			5.2.i	
38	LA10	Total training investment (\$)	901,000	730,000	532,867	9.2.ii	
		Average training expenditure per employee (\$)	2,365.50	1,802	1,284	9.2.ii	
		Average training hours per employee	52.0	33.42	17.20	9.2.ii	
		Training places per employee	2.63	1.69	1.71	9.2.ii	
39	LA12	Percentage of employees receiving regular performance and career development reviews.	100%	100%	100%	9.2.ii	
40	LA13	Composition of governance bodies and breakdown of	Refer to employee demographics (race, gender, diversity)			9.2.ii	

		employees per category according to gender, age group, minority group membership, and other indicators of diversity					
41	LA14	Ratio of basic salary of men to women by employee category	Refer to Chapter on Equal Remuneration			9.2.ii	
42	SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	Refer to the CDM Stakeholder Consultative Session for our latest 800MW Combined Cycle plant under Chapter 'Climate Change and Us'			6.5	
43	SO2	Percentage of business units analyzed for risks related for corruption	100%	100%	100%	5.2.ii	
		Total number of business units analyzed for risks related for corruption	100%	100%	100%	5.2.ii	
44	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	Refer to Chapter on Managing Fraud Risk			5.2.ii	
45	SO4	Actions taken in response to incidents of corruption	No incidents of corruption			5.2.ii	

46	SO5	Public policy positions and participation in public policy development and lobbying	Refer to Chapter on Stakeholder Engagement - External Commitments			5.3.ii	
47	SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	NIL			10.4	
48	HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	Refer to Chapter on Human Rights			9.2.iv	
49	HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	Refer to Chapter on Human Rights			9.2.iv	
50	HR4	Total number of incidents of discrimination and actions taken	Refer to Chapter on Discrimination at Work			9.2.iv	
51	HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support	Covered by Collective Agreement	Covered by Collective Agreement	Covered by Collective Agreement	5.3.i	

		these.					
52	HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	Refer to Chapter on Human Rights			9.2.iv	
53	HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures taken to contribute to the elimination of forced or compulsory labor	Refer to Chapter on Human Rights			9.2.iv	
54	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	Refer to Chapter on Product Responsibility in respect to innovative products and information on energy conservation. .			10.2 - 10.3	
55	PR5	Customer satisfaction levels	No customer survey this year	81.4% ('Good' rating & above)	Refer to Customer survey findings by Advantage Consulting	10.1	
56	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising,	Refer to Chapter on Product Responsibility			10.4	

		promotion, and sponsorship					
57	PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services (in S\$)	8,300	NIL	13,300	<u>10.5</u>	

Table 11.2 – References for Standard Disclosures and Management Approaches

Standard Disclosure	Section
Strategy and Analysis	
1.1 – CEO's Message	<u>1</u>
1.2 – Key impacts, risks and opportunities	<u>3.1,6.4</u>
Organisational Profile	
2.1 – Name of Organisation	<u>3</u>
2.2 – Brands, products, services	<u>3</u>
2.3 – Operational structure of the organisation	<u>3.2</u>
2.4 – Location of the organisation's headquarters	<u>3</u>
2.5 – Number of countries in which the organisation operates	<u>3</u>
2.6 - Ownership	<u>3</u>
2.7 – Markets served	<u>3</u>
2.8 – Scale of the organisation	<u>3</u>
2.9 – Significant changes during reporting period	<u>3</u>
2.10 – Awards/Achievements	<u>3.3</u>
Report Parameters	
3.1 – Reporting Period	<u>2</u>
3.2 – Previous reports (if any)	<u>2</u>
3.3 – Reporting cycle	<u>2</u>
3.4 – Contact point on report queries	<u>2.2</u>
3.5 – Defining the report content	<u>2.2</u>
3.6 – Report boundary	<u>2.1</u>

3.7 – Specific limitations on scope/boundary of the report	2.1
3.8 – Basis for reporting on subsidiaries	2.1
3.9 – Adherence to GRI Indicator Protocols	2.1
3.10 – Effects of restatements from previous reports (if any)	2.2
3.11 – Changes from previous reporting periods (if any)	2
3.12 – GRI Content Index	Table 11.1
3.13 – Assurance	12
Corporate Governance, Commitments and Stakeholder Engagements	
4.1 – Governance Structure of the organisation	5.1
4.2 – Chair of the highest governance body	5.1
4.3 – Members of the Board	5.1
4.4 – Mechanisms for providing direction and recommendation to the Board	5.1
4.5 – Linkage between compensation for the Board and sustainability performance	5.1
4.6 – Process to avoid conflict of interests	5.1
4.7 – Qualification and expertise of the Board in guiding sustainability strategy	5.1
4.8 – Internally developed statements of mission, values, etc	5.1
4.9 – Procedures for the Board to oversee sustainability performance	5.1
4.10 – Process to evaluate the Board's performance on sustainability	5.1
4.11 – Precautionary principle	5.2
4.12 – Subscription to external charters, principles	5.3.ii
4.13 – Membership in associations with advocacy organisations	5.3.ii
4.14 – Stakeholder groups	5.3
4.15 – Basis of identification and selection of stakeholders	5.3
4.16 – Approaches to stakeholder engagement	5.3.1
4.17 – Key topics and concerns raised during stakeholder engagement	5.3.1
Management Approaches	
Economic	4.2 , 3.1
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Labour	9 , 9.1 , 2 , 9.2
Society	4 , 4.5 , 5.2.i , 5.2.ii , 7
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Product Responsibility	10.4

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Third Party Assurance

Independent assurance statement

To the Management and Stakeholders of PowerSeraya Limited

For the second year, Ere-S Pte Ltd was commissioned by PowerSeraya Ltd to provide assurance that the content of its Sustainability Report is accurate, reliable and supported by solid data collection systems. For qualitative information, the assurance is based on evidence that the statements truly reflect PowerSeraya's operational and strategic activity.

Scope and objectives

The assurance engagement was executed in accordance with the AA1000 Assurance Standard (AA1000AS 2008). Following a Type 2 assurance of the standard, we evaluated the adherence to the AA1000 AccountAbility Principles (AA1000APS 2008) and the reliability of the performance information contained in the Sustainability Report.

The audited information included figures and statements on CSR initiatives, strategy, policies, procedures, key performance indicators, management systems and associated processes. Information not related to sustainability and already supported by existing documents, such as the Annual Report, was not covered in the audit. This includes all or part of the organisation profile, corporate structure and corporate financial and economic performance, technical descriptions of buildings and plants, equipment and production processes. Ere-S did not assure the Sustainability Report for the GRI Application Level check but did evaluate all new indicators and other relevant information found in the GRI index table.

We provided a moderate level of assurance with management-level data verification and evidence gathering from diverse sources. We did not execute multi-level research to determine materiality and stakeholders relevant to the company. However, the company's sustainability systems and processes were evaluated using the inclusivity, materiality and responsiveness criteria of the AA1000 AccountAbility Principles. The quality of the Sustainability Report content was evaluated using the GRI G3 quality principles.

The assurance engagement was conducted at the corporate headquarters, Pulau Seraya Power Plant and Jurong Power Station between June 21 and July 14, 2010.

Responsibility and independence

The responsibility of Ere-S was to execute the assurance engagement, prepare the assurance report and this assurance statement for the management of PowerSeraya alone and for no other purpose. The management of PowerSeraya was responsible for the preparation of the Sustainability Report and all statements and figures contained within it.

Ere-S was not responsible for any prior work on the Sustainability Report. The activity of Ere-S is independent to PowerSeraya and contains no other financial interest in their business operation.

Methodology

During the preparation phase, we reviewed the Sustainability Report content and the company's CSR framework, procedures and policies to identify the relevant elements to be audited. Statements and data sets were classified according to the relevant data owners and the type of evidence required for the audit process.

We interviewed 18 individuals, including the CEO, group heads from Corporate Services and Utilities, and managers of key business units Environmental, Human Resources, Legal & Regulatory Affairs, Energy Markets, Seraya Energy, Corporate Finance as well as the President of the Union of Power & Gas Employees. Specific questions on the adherence to AA1000 principles were asked during the interviews and evidence of the relevant data, collection and calculation methods as well as information on the underlying processes were collected and evaluated. Audited information included internal publications, data sheets, certificates, emails, policies, reports, press releases and web sites of external parties.

After each interview, we provided recommendations to allow immediate amendment by the PowerSeraya sustainability reporting team. We checked the final version of the Sustainability Report to confirm the actions had been taken following those recommendations.

Findings and observations

On the basis of our review, nothing has come to our attention that causes us to believe that the sustainability framework of PowerSeraya does not adhere to the AA1000 AccountAbility Principles. In addition, the findings of the assurance engagement provide confidence, within satisfactory limits, that the reported performance information provides a reliable and fair representation of the PowerSeraya sustainability profile and is supported by comprehensive and verifiable data and underlying management processes.

Notwithstanding new ownership of the company, which implied operational and strategic changes, we have found that PowerSeraya's commitment to improve its CSR performance has remained steadfast since the last reporting exercise in 2009.

We are also pleased to see that recommendations for improvement expressed during last year's assurance engagement have been followed for this reporting exercise. These include the disclosure of more information on sustainability performance such as the indirect emission of CO2 from purchased electricity, and expanding the scope with specific material issues in the area of human rights, although the latest are yet not covered by formal policies and data collection processes.

Evaluation of reported sustainability performance

Based on the work undertaken, we are confident that the Sustainability Report content satisfies the requirements of GRI G3 quality principles. The report is detailed and comprehensive with a significant number of GRI indicators. Historical and comparable figures are disclosed for the majority of the elements and the inclusion of negative aspects of the company sustainability performance provides a fairly balanced view.

On the basis of a moderate level of assurance, the report shows a satisfying level of accuracy and reliability. We have found evidence for all elements audited with only a small number of cases where the data source was not properly reflected in the report due to incorrect transcription or calculation. These minor inaccuracies were immediately corrected by the sustainability reporting team. The team also followed the majority of the other recommendations expressed by Ere-S, which covered the insertion of additional statements, figures and indicators.

We recommend the disclosure of more measurable targets covering all relevant sections of the report and GRI categories. Similarly, new or improved guidelines and data collection processes could be developed for data sources not reported yet but deemed material, such as input materials, recycled materials and customer satisfaction level.

Evaluation of the adherence to AA1000 AccountAbility Principles

Inclusivity - How the organisation engages with stakeholders and enables their participation in identifying issues and finding solutions.

We have found evidence of processes for engagement with all stakeholder groups mentioned in the Sustainability Report. The most significant interaction and feedback mechanisms include regular staff management dialogues, supplier meetings, customer surveys and safety surveys. Stakeholder involvement in decision making is essentially seen through the frequent meetings with the union. In the areas of environment and health & safety, stakeholder engagement is strong and supported at all levels of the company.

However, for other sustainability areas such as impact on the community, stakeholder engagement is limited and made on a per project basis. Although most of the social and labour issues in Singapore are covered by regulations and government bodies, PowerSeraya could benefit from more structured and specific engagement processes with the community, NGOs and suppliers to assess their needs and perception of the company.

Materiality - How the organisation recognises issues that are relevant and significant to it and its stakeholders.

We have found that PowerSeraya has applied appropriate methodologies to identify its material issues. Assessment of priority and significance of these issues is done through feedback obtained from stakeholders and the work done during the sustainability reporting exercise. The inclusion in the report of new GRI indicators related to human rights and the GRI Electric Utility Sector Supplement shows the efforts made in redefining the materiality scope.

Areas of improvement include embedding formal processes in the company's management system to re-evaluate and identify current and emerging material issues on a regular basis. Inclusivity of stakeholders will play an important role in that aspect.

Although we did not find any high materiality issues that PowerSeraya has not addressed within the Sustainability Report, further development of the scope could be considered in the areas of community impact in the region surrounding the power plant, and labour practices other than health & safety in the supply chain.

Responsiveness - How the organisation responds to stakeholder issues and feedback through decisions, actions, performance and communication.

PowerSeraya responsiveness to stakeholders concerns and expectations is seen through diverse interaction mechanisms and other processes embedded in the management system, such as the ISO14001 and the OHSAS 18001.

Mechanisms to inform stakeholders include customised publications for employees, shareholders and customers as well as more global outreach such as the company website, education programmes to the community and a detailed Sustainability Report based on internationally recognised standards (GRI and AA1000).

The above findings and additional suggestions for improvement have been presented to the management of PowerSeraya in a more detailed assurance report.



Singapore, 16 July 2010

A handwritten signature in black ink, appearing to read "Jean-Pierre Dalla Palma".

Jean-Pierre Dalla Palma, Director and Lead Auditor

A handwritten signature in black ink, appearing to read "Poh Shuxian".

Poh Shuxian, Director

Ere-S Pte Ltd is a consulting company specialising in business sustainability and provides services in the domains of CSR strategy design and implementation, stakeholder engagement, sustainability reporting, sustainability report assurance and training.



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