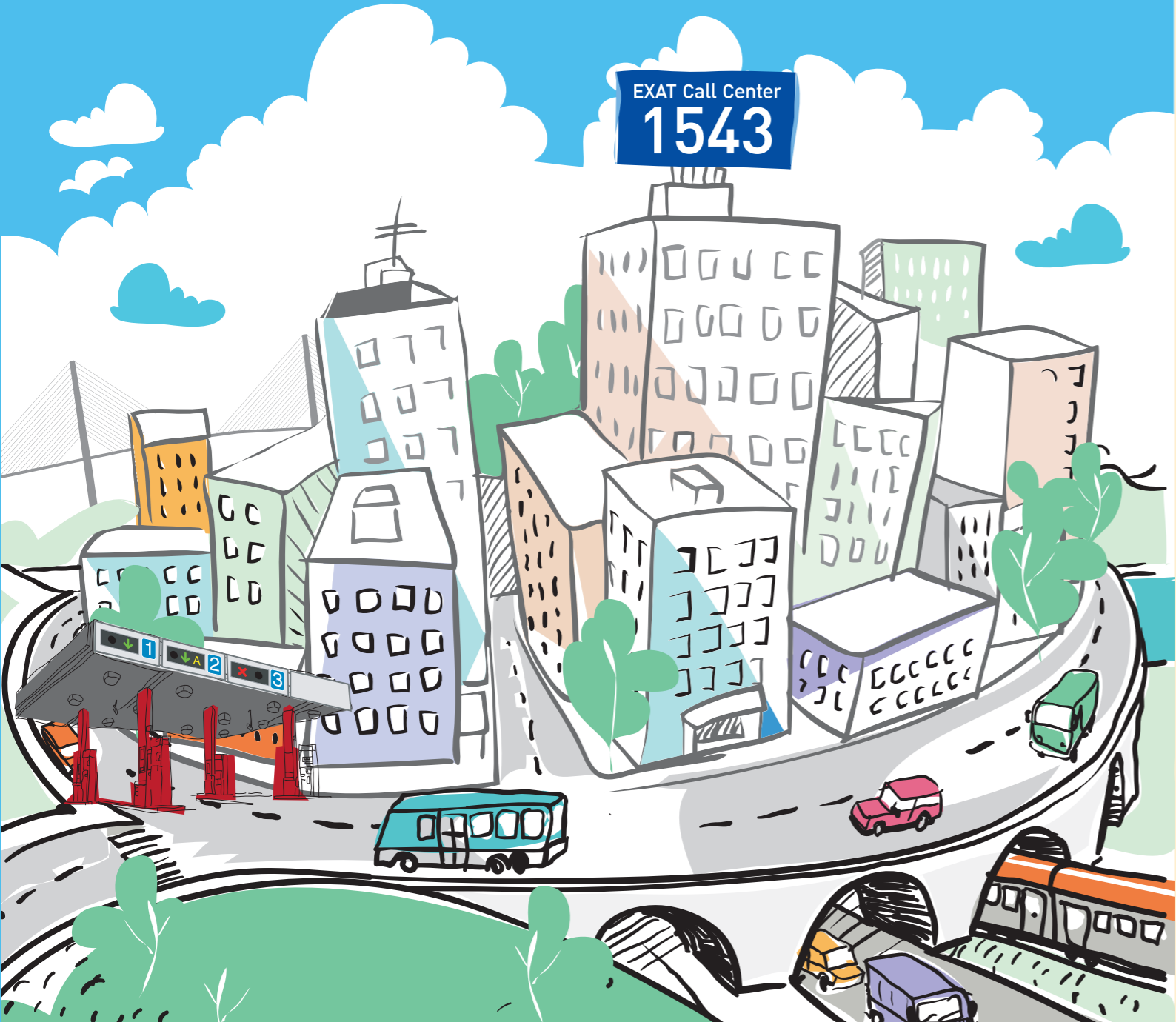




Corporate
Social Responsibility Report
2013
Expressway Authority of Thailand



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Responsibility Report

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Message from the Chairman of Expressway Authority of Thailand's Board of Directors



Expressway Authority of Thailand (EXAT) is a state enterprise offering expressway services, including construction, maintenance, and operation, with the purpose of combating traffic problems. Our target is to develop Thailand's transportation system to completely and accurately respond to the people's needs regarding swift and safe commuting. We are operating with the organization's vision of **"A choice that's worthwhile, long term development, and care for environment"** alongside our CSR vision to promote **"Low Carbon Society: LCS."**

With our concentration on pushing towards good environment and reducing greenhouse gas and air pollution emissions, we have organized a number of CSR projects and activities. These projects include **bike lanes in the expressway areas**, the **"Bikes for Thai Children from EXAT"** project, and the **"EXAT Magic Box for the Earth."** These activities follow the LCS concept and contribute to the organization's environmental goals.

Apart from the emphasis on the environment, we also foster sound relationship with the surrounding communities who are our stakeholders. We provide educational support for schools around the expressway. In addition, we develop the areas surrounding the expressway for public use and recreation such as aerobic grounds and sports fields, as well as renovate the land in our care to ward off drug addicts. We are fully aware that drug problem is a crucial aspect in the growth of the country which requires our full cooperation.

I believe that EXAT is determined to perfect the expressway services and demonstrate responsibility towards both the nearby society and the outer society. We hope to gain acceptance from all groups of stakeholders and all sectors. I am confident that our determination will push EXAT to achieve sustainable growth alongside the Thai society.

Air Chief Marshal

(Sumet Pohmanee)

The Chairman of

Expressway Authority of Thailand's Board of Directors



Message from the Governor of Expressway Authority of Thailand

Expressway Authority of Thailand (EXAT), as a state enterprise under the Ministry of Transport, is primarily responsible for solving traffic problems by constructing and managing expressway networks with a strong emphasis on convenient, fast, and efficient service. EXAT has complied with international standards in its operations in order to continuously overcome traffic problems by developing its service and expressway networks, as well as maintain its focus on economic, environmental, and social impact.

In response to the emergence of the ASEAN Economic Community (AEC), the year 2015 will see significant changes for EXAT as there are plans to expand the expressways and existing connections, as well as to construct new routes. To support economic and social expansion in all regions, the plans are not limited to the Bangkok Metropolis. Examples of such projects include the construction of Udon Rattthaya–Phra Nakhon Sri Ayutthaya Expressway, the construction of Burapha Withi–Pattaya, Chonburi, Expressway, and the construction of Khatu–Patong, Phuket, Expressway. In the future, EXAT may engage in transportation network that connects to neighboring countries under the concept "Convenient, Swift, Efficient" in order to promote Thailand as the transportation hub and a major intersection of ASEAN.

It is undeniable that the volume of service area in the expressway expansion leads to a wider scope of responsibility and impact. In light of this, EXAT has established sustainable development strategies and Corporate Social Responsibility (CSR), which have been continuously put into practice since the fiscal year of 2012. In addition, EXAT has appointed a department to supervise CSR practices and oversee more concrete monitoring, particularly CSR-after-Process. These attempts will foster cooperation between





EXAT executives, the employees, the expressway users, and the surrounding communities, who are all significant stakeholders.

Following the EXAT Strategic Corporate Social Responsibility Master Plan (2011–2015), EXAT has focused on developing towards a Low Carbon Society (LCS) by reducing carbon dioxide and prioritizing environmental concerns in the work processes. Furthermore, EXAT has applied the ISO 14001: 2004 regarding environmental management standard with Chalong Rat Expressway, which is a significant CSR-in-Process of the company. This certification serves as a model for other expressway operations to increase awareness of impact and environmental management as required by international standards.

Moreover, in the fiscal year of 2013, EXAT organized projects and activities that emphasized social benefits, e.g. develop the empty areas under the expressway for public use, create public parks and sports grounds for the communities and nearby society, build a solar energy learning center, allocate areas for OTOP City display, etc. Since the communities around the expressways are EXAT's important stakeholders, we pay serious attention to the impact caused by our operations by collaborating with external organizations to best benefit this group of stakeholders.

EXAT emphasizes transparent and accountable communication with the stakeholders concerning operational impact in dimensions associated with sustainability. Towards this end, the company has prepared a CSR Report based on Global Reporting Initiative (GRI)'s Reporting Framework. In 2013, EXAT was awarded Outstanding from the Sustainability Report Award arranged by Thai Listed Companies Association. It is our pride to be recognized for our social responsibility practices. Not only that, the award helps improve the awareness and engagement of the personnel in the organization as well.

As the Governor of the Expressway Authority of Thailand, I sincerely hope that our determination to achieve performance objectives as well as sustainability strategies will contribute to the strengthening of our organization and future prosperity of Thai society and economy.

Aiyanat Tinapai

(Mr. Aiyanat Tinapai)

The Governor of Expressway Authority of Thailand



1. Corporate Social Responsibility Vision, Mission, and Strategies

EXAT's mission, vision, and responsibility regarding society and environment weighs significantly in its consideration of the impact from operations including the periods prior to, during, and after the construction. EXAT places emphasis on encouraging its employees to pay serious attention to the environment and the communities surrounding the expressway on which direct impact falls.

EXAT has an environmental policy and management that correspond with the ISO 14001:2004 standard where the scope established in the environment manual. The policy and management have been conducted with conscious and engagement in environmental protection and safety to employees and staffs, related persons, and the public. Moreover, EXAT has a continuous and systematic improvement of operations as well as control of their impact in order to effect sustainable transportation development.

The Corporate Plan of the fiscal year 2012–2016 and the strategic plan of the fiscal year 2012 have stated a vision which portrays a position that EXAT would like to be in the future, as well as the organization's responsibilities incurred from the impact of operations, core missions, and stakeholders' expectations. The plans also include objectives, values, and operational strategies of EXAT in order to achieve the vision as follows:

1.1 Direction:

A choice of value, promising advanced development and care for environment

1.2 Vision:

Choice of value, advanced development, and care for environment

1.3 Mission:

1.3.1 To provide/develop/improve the expressways in line with the standard and safety

1.3.2 To provide innovative and value-added services

1.3.3 Manage assets with proficiency to enhance potentials of expressway business and benefits for society

1.3.4 To develop administrative management and investment systems to increase value for the organization

1.4 Corporate Goal:

1.4.1 The expressways and assets are exercised to their full capacity

1.4.2 The services have quality, safety, and are trusted by the people.

1.4.3 The business performances grow with stability and yield appropriate profits

1.5 Value:

Excellent service, visionary innovations, and flawless image

1.6 Strategies:

To drive the organization to achieve the stated vision and goals, EXAT has devised 4 operational strategies that are in correspondence with the 11th National Economic and Social Development Plan (2012-2016), the Strategy Formulation (2012-2015), the Transport and Traffic Development Plan (2011-2020), the Transportation Sector Specific Strategic Development Plan (2011-2020), the Strategic Plan of the Ministry of Transportation (2011-2015) and the Statement of Direction (SOD), as follows:

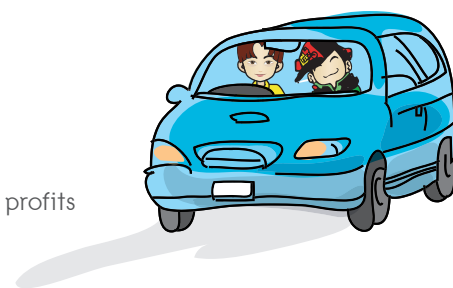
1st Strategy : Develop the business and services to contribute to efficient utilization of resources in order to yield revenues, enhance services, and solve traffic problems.

2nd Strategy : Increase efficiency in maintenance, as well as safety and environment quality control to reduce loss and deliver better quality of life for customers, the public, and society

3rd Strategy : Improve corporate administration and governance to raise efficiency and productivity of the systems and create business advantage, as well as enhance potentials and quality of life of the personnel

4th Strategy : Create specialized knowledge and innovations

Under these directions and strategies, EXAT is confident that customers will experience more convenience, speed, safety, and satisfaction from the services. The company will provide adequate environment quality for the community, the public and the people residing in the vicinity of the expressways, contributing to good quality of life in general. At the same time, EXAT offers innovative services, good governance, and support of quality of life for its personnel, thus leading EXAT to achieve its desired goals.



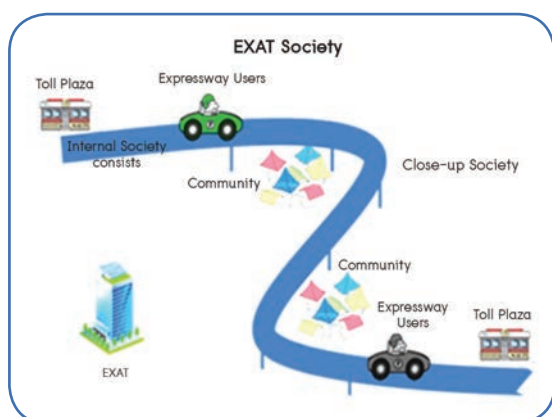
1.7 Corporate Social Responsibility Vision and Strategies:

The main operations regarding expressway services, considered part of the development process of society's infrastructure, has been EXAT's focus for over 40 years. The aims of EXAT's expressway services are to create linkage between all regions and facilitate rapid transportation, which will result in the agility of economic activities and domestic investment. In addition, there will be better distribution of development in Thai society at large, covering areas such as solution to traffic problems, creation of knowledge and innovations on expressway, consideration for environmental impacts in each step of construction and maintenance, and good governance.

EXAT treats social responsibility practices as its main mission and holds a desire that its part in the development of infrastructure corresponds with the country's sustainable development towards international standards.

EXAT realizes its role as an organization intent on achieving excellence in the expressway business that accomplishes sustainable growth, masters responsibility towards society and environment, and responds inclusively to the expectations of the stakeholders. Hence, the Strategic Corporate Social Responsibility Master Plan has been devised to cover a period of 5 years from the fiscal year of 2011-2015. The Master Plan is used as a framework for CSR practices and management in order to reflect apparent and tangible results. The significant aim of this Master Plan is to determine the organization's CSR vision in such a way that conforms with the core vision by planning for the EXAT society to be a Low Carbon Society: LCS. This vision is borne out of the recognition that the transportation sector contributes to air pollution, especially greenhouse gas emission and dust. The definition of the vision is clearly explained as follows:

The phrase "EXAT society" means the areas on which any impact resulting from EXAT's operations and decisions are in its responsibility. The areas can be divided into



The outer society

Bangkok

Thailand.

Image 1: EXAT society



Reference : Strategic Corporate Social Responsibility Master Plan 2011-2015

(1) internal society, which are office buildings, toll plazas, route alignments, and the areas underneath the expressways maintained by EXAT;

(2) the nearby society, or the communities surrounding the expressway, toll plazas and route alignments; and

(3) the outer society, or Bangkok and Thailand

"Low Carbon Society" means a society with an awareness of air pollution, which refers to greenhouse gases, including dust and noise, by means of self-development and social encouragement on mitigation of air pollution emission and adaptation with willingness and voluntary practices.

EXAT's vision of creating low carbon society involves operations heavily dealing with air pollution issues which are inherent in all its activities. Said air pollution includes greenhouse gases, dust, and noise. This vision is in accordance with the present trend of social and environmental responsibility that is increasingly active in climate change and global warming, of which carbon dioxide is a great contributing factor.

This vision reveals EXAT initiatives, efforts, and determination to lead society intent on reducing carbon dioxide emission and focusing on environmental issues. The concerns about climate change and rising amounts of greenhouse gases rank among the top of the sustainability issues that are in the interest of organizations around the world.

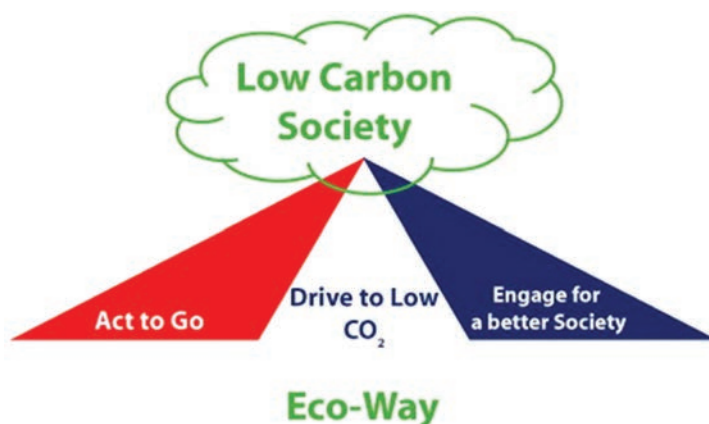
Within the scope of the vision on social responsibility, EXAT has established the strategy of Low Carbon Society for the development of social responsibility for the years 2011-2015, with the path towards low carbon society called Eco-Ways to Low Carbon Society.



The Low Carbon Society strategy comprises 3 plans as follows:



Image 2: Eco-Way to Low Carbon Society Model



Reference : Strategic Corporate Social Responsibility Master Plan 2011-2015

Table 1 : Plans and Details under the Low Carbon Society Strategy

Plans	Details
1. Social Responsibility Management Plan from Internal Development (Act to Go)	Internal development within the organization to contribute to efficient and productive operations on social and environmental responsibility, with sound management structure, provision of knowledge to create social and environmental innovations, increase employee engagement, and lead to organization-wide integration of social responsibility.
2. Social and Environmental Activity Development Plan for Low Carbon Society (Drive to Low CO ₂)	Determination of clear directions and processes of operations on social and environmental responsibility, with consideration to conformity to the organization consre strategies, laws, morality, and international standards and sustainable creation of value for important stakeholders
3. Stakeholder Engagement Plan for Mutual Social Responsibility (Engage for a Better Society)	Emphasis on both internal and external stakeholders by inducing awareness, understanding, and realization of the organization's social responsibility for stakeholders, leading to engagement in value creation for the organization, society and environment.

Implementation of said plans alongside compliance with the laws and international standards such as Environmental Impact Assessment: EIA and environmental management standard ISO 14001: 2004 hold a significance in integrating social responsibility in order to display tangible results as well as gather and evaluate data for operational comparison and improvement. Not only that, the implementation can foster confidence and establish sound relationships between EXAT and its stakeholders, contributing to the cooperation of the organization and society for sustainable development.

2. Stakeholder Engagement



EXAT and its stakeholders realize the necessity of corporate social responsibility. They hope the ideal can be practiced in response to the expectations of the stakeholders in the most precise manner, and with efficiency and effectiveness to get along with the development of the operation plan. In the fiscal year 2010, EXAT conducted a survey on stakeholders' expectations regarding its social and environmental responsibility. The survey was conducted using two methods: group discussion and in-depth interviews with senior executives, Board of Directors, employees, the labor union, expressway users, independent agencies, the press, and the communities located in the vicinity of expressways. These interviews were carried out to explore specific factors that can create mutual understanding and good attitude among stakeholders. To identify and select the stakeholders, EXAT distinguished all stakeholders into primary and secondary levels as well as categorized them on the basis of the effects they received from EXAT activities. The stakeholders were also distinguished based on the issues of response regarding complaints or conflicts against EXAT. This was applied with an analysis conducted to find a strategic connection with EXAT's key missions in order to develop the Strategic Corporate Social Responsibility Master Plan for the fiscal years of 2011-2015.



EXAT employs the AA1000SES (Stakeholder Engagement Standard), which emphasizes on quality and knowledge management support, transparency, good governance, and accountability, as the main standard in engaging stakeholders through the 2010 survey on stakeholder expectations toward EXAT's social and environmental responsibility. The standard is also adaptable to all areas of engagement, internal and external. The results of the survey can be concluded as follows:

Table 2 : Stakeholders' Attitudes and Expectations towards EXAT

Stakeholders	Stakeholders' Attitudes and Expectations towards EXAT
Expressway Users*	<p>Expressway users are strongly confident in EXAT's operations, seeing EXAT as an organization that provides excellent services and support. EXAT also expresses social responsibility through a number of activities and initiatives. However, expressway users expect EXAT to improve in areas such as traffic management on expressways, expressway safety, services, and toll charges.</p>
EXAT Senior Executives and Board of Directors**	<p>Being a senior executive or a member of the Board of Directors is considered a point of pride in the personal level, and the executives and the Board members expect the organization to conduct its business under good governance with the emphases on high safety level, low-carbon society, and the potential to elevate the quality of life of the people in the metropolis who can rely on EXAT's services. For this, the organization should develop responsibility towards the society, while all groups of stakeholders must receive sound relationships and their needs responded with the same standards of service and performance. Nevertheless, in terms of social responsibility, each plan must be synchronized towards the same direction on the same principles, with sound budget allocation and monitoring and evaluation systems, for the socially responsible operations and the positive image of the organization. This should also be conducted in preparation for the AEC in 2015. Another important issue is the work safety for EXAT employees which is seen by the executives as high, so the organization should show more responsibility towards this group of stakeholders. For the concern related to expressway users, EXAT needs to improve its services to increase its credibility in safety, convenience, and speed. Focus should also be on development of community, quality of life, and education, all of which should be seen as part of EXAT's duty.</p>
Employees**	<p>The organization is perceived as one. Employees are committed to hard work and excellent performance, as well as expect a career progress in the long run. There are, however, concerns about quality of life, remuneration, fringe benefits, and work environment. In terms of CSR, employees expect fair pay raise and promotion with clear and objective criteria for consideration.</p>
Labor Union**	<p>The labor union sees that in the operational level, EXAT provides efficient and transparent services, but there is a lack of transparency in the policy level. In terms of policies on society and environment, EXAT needs to have more clarity and interaction with the communities. CSR workshops should be provided to create engagement between internal and external working groups.</p>
Communities in the Vicinity of Expressways	<p>Transportation business in the capital and its perimeters is a strength of EXAT. However, responsibility towards public energy use and safeguarding of the government's and the people's benefits should be considered as well. In addition, the communities expect EXAT to monitor and realize the impacts from before, during, and after the construction of the expressway that affect the people's residences, which are one of the essentials of life. This is because the communities</p>

Table 2 : Stakeholders' Attitudes and Expectations towards EXAT (Continued)

Stakeholders	Stakeholders' Attitudes and Expectations towards EXAT
Communities in the Vicinity of Expressways (Continued)	fear the delay in solving the ensuing problems as EXAT is viewed as lacking in agility and freedom in problem solving, hindered, in many cases, by rules, terms and limitations of the organization. Thus, they wish that EXAT would regard the benefits of the people as top priority and emphasize less on profits.
Press	EXAT already has sound operations in terms of service, speed, and access to problems, but the publicity for the stakeholders is significantly lacking. This may lead to a negative image toward the organization. There is also a concern about corruption as EXAT is seen as vulnerable to political infiltration. Thus, values in the role between organizational culture and social expectations should be strengthened.
Independent Agencies	In general, EXAT is an efficient state enterprise under the Ministry of Transport that yields satisfactory returns, produces speed and proficiency in operations, and can respond well to state policies in terms of public care. However, there should be more disclosure about the operations and the monitoring processes so the consumers can have clearer and easier access to the information. Moreover, returning benefits to society should be focused on providing specialists on car repairs and maintenance, implementing pollution reduction initiatives, and showing social and environmental responsibility with more variety and clarity.

Reference : A survey on stakeholder expectations towards social and environmental responsibility, year 2010.

Note : * Information is updated with a survey on expressway users' satisfaction towards EXAT services and image
 ** Information is updated with (1) a survey on employees' satisfaction towards EXAT and (2) a survey on employees' relationship with EXAT

To keep up to date with the stakeholder's attitudes and expectations towards EXAT, in the fiscal year 2013, 3 additional surveys were conducted for employees and expressway users, to better clarify expectations and satisfactions, namely: 1) a survey on employees' satisfaction towards EXAT, 2) a survey on employees' relationship with EXAT, and 3) a survey on expressway users' satisfaction towards EXAT services and image. EXAT will consider the results to improve its performance and solve problems regarding its operations so that standards could be maintained in support of the image of and the perceptions towards EXAT.

At the same time, GRI Reporting Guidelines are adopted as a tool to communicate with the stakeholders and reduce weaknesses in terms of public relations, with the purpose of responding to the expectations of the stakeholders to receive information on EXAT. Moreover, the GRI Reporting Guidelines are employed as criteria against which EXAT's CSR practices are evaluated, contributing to sustainable development. ■



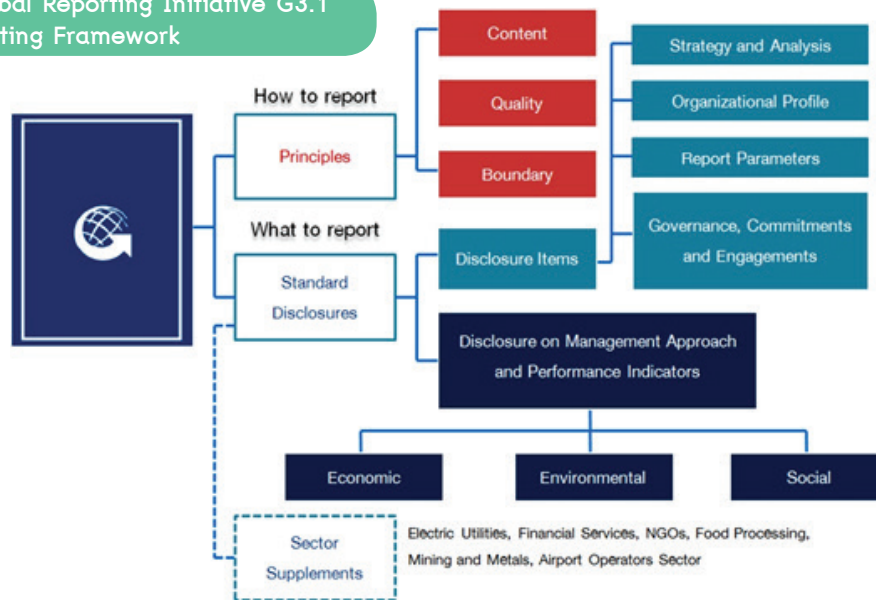


3. Reporting Guidelines

The EXAT Corporate Social Responsibility Report (CSR Report) for the fiscal year 2013 (October 1, 2012–September 30, 2013) was conducted with reference to the Global Reporting Initiative (GRI) Reporting Framework. All information in this report is disclosed as indicated in GRI G3.1 indicators which designate a report to include performances on economy, environment and society. It is EXAT's objective to conduct a CSR report every fiscal year.

In addition, in the previous fiscal year, EXAT initiated the 5 stages of reporting as suggested by GRI. The 5 stages include 1) Prepare: meetings between the executives and related employees, 2) Connect: collection of data and stakeholders' opinions, 3) Define: definition of the reporting purposes and content to determine the reporting scope, 4) Monitor: monitoring and collection of data necessary for reporting based on defined indicators, and 5) Report: design and writing of the report to organize the information appropriately for the stakeholders. The reporting process also includes requesting the Application Level Check Statement from GRI in order to verify the credibility of the organization's operation disclosure.

Figure 3 : The Global Reporting Initiative G3.1 Reporting Framework



This report is published to disclose EXAT's performance on CSR to different groups of stakeholders such as employees, expressway users, business partners, and society. The report also aims to communicate the organization's direction on CSR, particularly in management of impact from operations. The management approaches include a centralized follow-up system and data collection from responsible divisions in each field as well as data evaluation for reporting to the general public.

A survey on stakeholder expectations towards social and environmental responsibility, conducted in 2010, represented the relationship between significant stakeholders and the operations of the organization. The survey result was used as input for developing EXAT's Strategic Corporate Social Responsibility Master Plan for the fiscal years 2011-2015. EXAT has implemented the Plan as its operational directions and responsible conduct guidelines of the corporate, and also direct other activities that connect with its significant stakeholders. The Plan summarizes, categorizes, and prioritizes significant stakeholders as follows:

1. Expressway users
2. Government as an owner
3. Employees (executives, labor union, employees and workers)
4. Persons affected by expropriation
5. Business partners
6. Communities surrounding expressway areas
7. Society

Table 3: Guideline on Significant Stakeholders

Significant Stakeholders	Guideline for Significant Stakeholders
Expressway users	Treat expressway users attentively, honestly, transparently and responsibly. Provide standard and quality service. Improve and care for environment around the expressways and strictly abide by conditions and agreements made to expressway users. Acknowledge and provide channels for complaint.
Government as an owner	Operate with honesty and transparency, with the people's and government's benefits in mind.
Employees (executives, labor union, employees and workers)	Provide employees (EXAT management executives, labor union, employees, and workers) with equal and fair opportunities, compensation, competency improvement, quality of life improvement, safety in workplace and engagement.
Persons affected by expropriation	Respond to those who are affected by expropriation for new expressway projects through taking in consideration the problems and impact on their ways of life in order to determine the mitigation approaches and solutions, or minimize the impacts.
Business partners	Conduct business with business partners (concession partners and creditors) with fairness and no exploitation, as well as with respect for and compliance with the agreed terms and regulations.
Communities surrounding expressway areas	Pay attention to and create engagement in communities surrounding expressway areas. Swiftly and equally take responsibility for the communities and the impacts. Partake in the improvement of their quality of life and safety.
Society	Be considerate to and swiftly take responsibility for impacts on society. Provide care, attention, compassion, and sustainable development to society.

Reference : The Expressway Authority of Thailand. (2013). (Corporate Governance Manual). (p. 26).

3.1 Stakeholder Survey Methodology

Apart from surveying and analyzing the opinions of stakeholders, in 2010, EXAT furthered the relations with the stakeholders towards the topics included in the report. This has led to designating the report contents and preparing a system that brought about the contents. The key internal and external stakeholders were identified for the EXAT record. The data collected were primary and secondary data. The details are as follows.

3.1.1. Primary Data Collection

Discussions were conducted to receive primary data from the key stakeholder groups namely (1) the Corporate Governance Sub-Committee, which is responsible for the organization's CSR, and (2) executives in the Deputy Governor level. This is to strengthen their engagement in implementing the CSR Report.

3.1.1.1. Corporate Governance Sub-Committee

The topics reported based on the Sub-Committee meeting were traffic issues, issues regarding safety for expressway users, the time spent on traveling, and environmental issues.

3.1.1.2. EXAT Deputy Governors

After hearing the opinions of EXAT Deputy Governors, the topics covered in the 2013 EXAT CSR Report based on the GSI principles were in the economic, environmental, and social aspects.

- Economic dimension

EXAT is a state-owned enterprise operating under the government's policy and the directions outlined by respective regulatory bodies, especially the Ministry of Transport. Its key mission is to provide a traffic solution through expressway services, which is an infrastructure contributing to the country's development and affecting the economy, logistics, and travel directly and indirectly. Therefore, the worthy investments of the organization can facilitate expressway users along with benefiting the society as a whole.

- Environmental dimension

EXAT puts emphasis on environmental protection in the policy level, maintaining its commitment to implementing all activities in support of the "Low-carbon EXAT Society" policy. At the same time, it ensures eco-friendly operations through the application of the ISO14001: 2004 environmental management standard and the execution of activities such as garbage classification (at canteens), wastewater disposal, environmentally-friendly management systems, expressway cleaning, dust control, and environmental development in the vicinity of expressways. It also evaluates and monitors effects from these activities, as well as watch out for environmental problems before, during, and after expressway constructions for the benefits of community units locating nearby the expressways such as houses, temples, schools, and more.

Moreover, promoting eco-friendly services such as Easy Pass also reduces traffic jams near tollbooths and saves fuels for cars traveling through the passages under EXAT's responsibilities. The Easy Pass service in 2013 was better promoted than in 2012. Although there was a crisis hindering the service provision, EXAT succeeded in solving the problems through effective communications and public relations which created mutual understanding among the service users. Traffic reporting on the smart displays provided on expressways also helped drivers choose the best routes that maximize their time and fuel saving.

- Social dimension

EXAT maintains relevance with communities throughout its operational procedures, from finding locations, expropriating lands, and demolishing constructions, to filling lawsuits and more. Its operations also affect the living, health, and quality of life of both expressway users and communities in the vicinity of expressways, respectively.

Stakeholders should acknowledge their rights to authorizing solutions or coping with the multiple problems that might occur, while also taking part in strengthening the relations between EXAT and the communities in support of the future operations. Creating engagement with stakeholders, especially those affected by EXAT's operations, through community initiatives or activities, is among the effective solutions.

Providing safe and sound services is also the organization's main responsibility. These services include rest areas, travel information, 24-hour expressway emergency support, Easy Pass, and special services during festive seasons.



3.1.2. Secondary Data Collection

For other groups of stakeholders, the secondary data was retrieved for analysis. These groups were (1) EXAT employees in the operational level, (2) expressway users, and (3) the state as an owner of the entity.

3.1.2.1. EXAT's operational employees

According to the study on employees' relationship and satisfaction towards EXAT commissioned by Kasetsart University, employees' areas of interest are job descriptions, remunerations, fringe benefits, quality of life, and support from the organization and their supervisors. These factors are significant to operational employees' relationship with the organization and could be considered relevant to and significant for communications, thus should be included in the report.

3.1.2.2. Expressway users

According to the study on expressway users' satisfaction towards EXAT in the fiscal year 2013 commissioned by Kasetsart University, the overall satisfaction was high. Areas for improvement included communications, public relations, and information accessibility and provision. The lack of an integrated operation on the mentioned aspects may have compromised the clarity and truthfulness of the information presented. Major concerns among expressway users included expressway traffic flow, expressway safety, cash toll collection, direction signs, and traffic signs.

3.1.2.3. The state as an owner

The state as an owner of the enterprise has designated the Statement of Directions (SOD) for EXAT's mission implementations, which is considered part of CSR. The SOD covers infrastructure and transportation development to standardize services, and logistics development to improve the country's competitiveness and promote engagement of the private sector. It also includes expressway network development which supports logistics and urban developments, while also adding value to the existing assets to ensure optimal financial returns and concrete debt management plans.

3.2. Stakeholder Engagement Approaches

Throughout the year 2013, EXAT has engaged with its stakeholders by accepting opinions and suggestions. The operations were carried out for both internal and external stakeholders as follows:

3.2.1 Engagement Approaches for Internal Stakeholders

Internal stakeholders include 1) government as an owner and 2) employees (executives, employees and workers).

3.2.1.1 Government as an owner

- Ministry of Transport

Since EXAT is a state enterprise under the Ministry of Transport, discussion panels and dialogs with the Ministry through meetings, seminars and panels are held throughout the year. In the fiscal year 2013, 21 important dialogs were held. The summary were 3 mutual strategic revision meetings, 3 seminars for opinion discussion, 1 meeting to acknowledge performance and give suggestions, 13 other meetings and 1 presentation to the Minister of Finance regarding Wat Phai Ngoen Community.

- State Enterprise Policy Office (SEPO)

In fiscal year 2012, EXAT has participated in seminars for exchanging opinions and discussion panels about the operations with the State Enterprise Policy Office (SEPO) 12 times. They were 6 general seminars, 2 seminars for opinion discussion and 4 general meetings.

- Office of Transport and Traffic Policy and Planning (OTP)

OTP suggests policy and conducts traffic and transport planning, including the issues of transport safety, making it closely related to EXAT. In the fiscal year 2013, EXAT had been in discussion panels and dialogs with OTP through seminars, discussions and meetings 24 times. They were 3 general seminars, 9 meetings for opinion discussion and 10 workshops. Apart from these, there were also 2 meetings with regards to the facilitation plans and safe transport of the people during Songkran festival.

- Office of the National Economic and Social Development Board (NESDB) and related departments

EXAT, in collaboration with NESDB, held 4 workshops. Moreover, the Consumer Committee, one of the parliamentary committees, was present in 3 discussions. 1 meeting was held with the National Tourism Policy Committee.

3.2.1.2 Employees (Executives, Labor Unions, Employees, and Workers)

- A Meeting of Corporate Plan Working Committee

In the fiscal year 2013, EXAT held a meeting to consider the frameworks of the Corporate Plan draft for the fiscal years 2012-2016 and the Action Plan for the fiscal year 2015. The plans aim to categorize and allocate responsibility for each work more appropriately and collaboratively. In order to establish a policy that is the product of the opinions arising from operational employees, executives and senior executives, deputy governors and directors from each department are assigned to form a working



group. The group will exchange opinions and prepare a Corporate Plan. In the fiscal year 2013, 1 working group meeting was held.

- 2 Meetings for 'the Governor meet EXAT employees' project

The objective is to promote good relationship between the President and EXAT employees. The first meeting was held on May 27, 2013, and the second meeting was on August 9, 2013, at Chalongrat Expressway Office.

3.2.2 Engagement Approaches for External Stakeholders

The organization's external stakeholders include (1) expressway users, (2) persons affected by expropriation, (3) business partners, (4) communities surrounding expressway areas, and (5) society.

3.2.2.1 Expressway users

- Satisfaction survey after One Stop Service Rescue and EXAT Call Center

EXAT conducted 2 surveys of customer satisfaction after using EXAT Call Center 1543 service: the first time from October 2012 to March 2013 and the second time from April to September 2013.

- The fiscal year 2013 expressway users' satisfaction survey on EXAT's service and image

EXAT conducted a satisfaction survey on expressway users by hiring consultants from the Department of Marketing, Business Administration Faculty, Kasetsart University in the fiscal year 2013.

3.2.2.2 Persons affected by expropriation

During the study period of the areas, EXAT has numerous approaches to bond with the public including disseminating information and creating understanding for related organizations. EXAT holds informal discussions with various agencies regarding preliminary area study before launching the study of engineering, economic, and financial appropriateness, as well as environmental impact. Later, the public is included in the acknowledgement and discussion so that the consultants could gather all suggestions for each step of the decision making. The entire process aims to minimize impact on society. At least 3 meetings or seminars must be organized.

No 1 Once the options have been established.

No 2 After the most appropriate option has been chosen.

No 3 When the study of engineering, economic, and financial appropriateness and the detailed impact evaluation are completed for every aspect, but before the submission of the final report to EXAT

In 2013, EXAT opened for public opinion through various events as follows:

- 2 meetings were held for public opinion regarding the Katoong-Pa Tong Expressway in Phuket. The first meeting took place on April 24, 2013, at Metropole Phuket Hotel,

Amphur Muang, Phuket. The second meeting was on October 21, 2013 (the fiscal year 2014), at Phuket Graceland Resort and Spa, Amphur Katoo, Phuket.

- The 3rd meeting for public opinion regarding the Rama 3 - Dao Kanong - Western Outer Bangkok Ring Road Expressway was held on May 26, 2013, at Park Village Hotel, Rama 2 Road.
- The 2nd seminar with public participation regarding the Dao Kanong-Western Outer Bangkok Ring was held on November 11, 2012, at Park Village Hotel, Rama 2 Road, in Bangkok.
- The 3rd seminar with public participation regarding the 3rd Stage Expressway route N1 was held on December 23, 2012, at the Grand Ballroom on the 4th floor of Richmond Hotel, Nonthanburi.
- The 3rd public discussion regarding the 3rd Stage Expressway routes N2, N3, and East West Corridor took place on January 13, 2013, at Chomview Room on the 9th floor of Chaleena Hotel, Soi Ladprao 122, Bangkok. The discussion took place after the study of engineering, economic, and environmental propriety has been completed.

3.2.2.3 Business Partners

- Accident prevention during construction

EXAT sets up a procedure to examine and control the working process of contractors closely in order to create mutual understanding about accident prevention. On every occasion of a new project or new contractor, EXAT will arrange at least one meeting for mutual understanding on the topic. In the fiscal year 2013, EXAT hired two new contractors and held one meeting for each one.

3.2.2.4 Communities surrounding the expressway areas

- Community care in expressway area

EXAT holds meeting with people living around the expressway area and cooperates with community leaders as well as acknowledges their opinions about the impact from the operations and their requirements for our participation or support in the communities' activities. Each year, EXAT officers meet with communities surrounding the expressway areas on a monthly basis, mostly unofficially. The purpose of the unofficial meeting is to create a good relationship between EXAT and the communities as well as to gain familiarity and acceptance.

3.2.2.5 Society

- EXAT Call Center 1543

Besides providing traffic report on the expressway, EXAT Call Center 1543 is also a channel for consumers to submit complaints, opinions and suggestions. The Call Center operates through Interactive Voice Response (IVR) technology and EXAT call





center officers. In the past fiscal year, EXAT received 245 complaints, opinions and suggestions concerning the operations of EXAT employees, impact of expressway construction, and inconvenience or discomfort from expressway use.

- Marketing communications activities

EXAT organized the THAILAND 2020 at the Government Complex on Chaengwattana Road between 8 and 16 March 2013. The event offered information regarding expressway use and ETCS for the expressway users and the public

- Road Show

EXAT held EXAT Road Shows and promotional activities distributing expressway handbooks and Easy Pass pamphlets. The event was held at the Head Office as well as motor shows to cater to the target audience, car users. The purpose of the events is to encourage more consumers to use the expressway and the ETCS via Easy Pass. In addition, the events aim to promote a positive image of EXAT. There were 4 events as follows:

1) "The 29th Motor Show," held from November 29 to December 10, 2012, for 12 days in total at Impact Arena Exhibition & Convention Center, Muangthong Thani. The number of visitors to the event was 2,113.

2) The ACSP's "Academic Show and Share 2012" held on January 21-22, 2013, at Assumption Samutprakan School. The visitors totaled 332.

3) The "4th Super Car and Import Car Show" held between May 11 and 19, 2013, for 9 days at Impact Arena Exhibition & Convention Center, Muangthong Thani. The number of visitors to the event was 383.

4) "The 10th Thailand International Logistics Fair 2013" (TILOG 2013) was held on September 4-7, 2013, totaling 4 days, at Bangkok International Trade and Exhibition Centre (BITEC). The event received 303 visitors.

Not only do the aforementioned operations serve as a channel for stakeholders' opinions, but they also create confidence that the organization pays attention to the impact on its stakeholders. Moreover, they reflect sound cooperation within the organization, which will benefit further operations and contribute to the sustainability of Thai society as a whole.

In order to comply with international standard practices, EXAT has applied the international standards such as AA1000SES (Stakeholder Statement Standard) to connect all stakeholders and create understandings about values, image, problems and attitudes that stakeholders have towards the organization. Coupled with this, EXAT has applied the GRI (Global Reporting Initiative) Reporting Practices to establish the framework for CSR operations. The organization realizes that the ability to evaluate as well as communicate CSR performance in matters relating to the corporate's social responsibility including Economic, Environment and Social dimensions will lead to optimal impact on the organization and society.

The 2013 EXAT's Corporate Social Responsibility Report based on the GRI Reporting Framework includes additional indicators from the CSR Report of the fiscal year 2012.

Putting together the content for EXAT CSR report began with the process of creating mutual understanding for the working team and EXAT executives through participation in identifying the reporting scope that covers economic, social and environmental dimensions. In order to achieve that, two workshops were held to identify the reporting aspects and performance indicators. These indicators were put through the Materiality Test in order to define indicators that are significant and relevant to the organization as established by the GRI framework. The emphases are placed on various aspects, which could be categorized into Economic, Environment and Society as follows:

Table 4 : Aspects that have passed the Materiality Test

Category	Aspect
Economic	Economic impact, Indirect economic impact
Environment	Materials, energy, water, bio diversity, air, effluents and wastes, Products and services
Society	Investment and Procurement Practices, Remediation, Safety Practices, Employment, Labor/Management Relations, Occupational Health and Safety, Training and Education, Diversity and Equal Opportunity, Equal Compensation between Males and Females, Local Communities, Corruption, Public Policy, Customer Health and Safety, Product and Service Labeling, Marketing Communications, Compliance with the Law

Afterwards, two more workshops with EXAT working team and related parties, whose responsibilities were to gather information, were held to prepare content for the report. The workshops aimed to create mutual understanding about the completeness and quality of the report as well as to clarify the storage of data that relates to the aspects chosen from the materiality test in the earlier process.

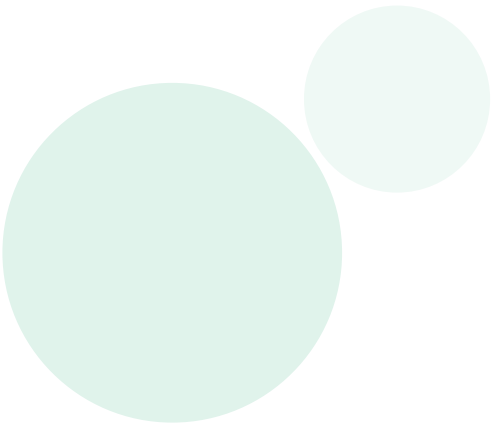
Image 4 : Reporting Content Identification workshop



The details of each performance indicator identified in this report are explained in the GRI Reporting Framework Index at the back of the report. ■

If you have inquiries or suggestions regarding EXAT CSR Report, please contact:

Society and Community Promotion Department
 Public Relations Division, Governor's Office
 Expressway Authority of Thailand
 Tel. 0-2579-5380-9 ext. 2325, 2326



4. Operations of Expressway Authority of Thailand

Owing to the traffic problems that severely damage the country's economy, with the likelihood to exponentially increase, the government has established a specific organization to study the "expressway" patterns that will alleviate and solve said traffic problems.

Expressway Authority of Thailand (EXAT) was established according to the Declaration of the Revolutionary Council No. 290 dated November 27, 1972, as a state enterprise under the Ministry of Interior. The organization was set to perform the following objectives: to construct or provide expressway services and maintenance and to manage and control public transportation businesses as well as other affairs related to the expressway. EXAT operates with the purposes of offering facilitation and speed to the public transportation system, as well as solving transportation problems and obstacles, particularly in the Bangkok Metropolitan area.

After the Bureaucracy Reform, with the Royal Decree transferring management and authority of government to Act of Ministry 2002 announced on October 3, 2002, EXAT was transferred to be under the supervision of the Ministry of Transportation and Communications, effective since October 9, 2002. Later, the law has been rectified and the Expressway Authority of Thailand Act B.E. 2550 (2007) was enforced on January 9, 2008.



At present, EXAT remains a state enterprise operating the expressway service covering the areas of Bangkok and its vicinity for the general public, with the aim to solve the traffic problems with the expressways as the organization's main mission. Throughout the years, EXAT's operations have supported transportation, which is one of Thailand's main public utilities, and conformed with the government's policy in integrative development of the country's transportation and logistics systems. The aim is to increase the nation's competitiveness, in terms of facilitation, speed, and safety, as well as to solve traffic problems on level roads. As of right now, EXAT has opened 7 routes of expressway, as well as 3 extensions, with the total distance of 207.9 kilometers.

Table 5 : Expressways in Service, Distance, and the Areas of Route Alignment

Expressways in Service	Distance (Kilometers)	Route Alignment
1. Chaloem Maha Nakhon Expressway	27.1	Bangkok
2. Si Rat Expressway	38.4	Bangkok
3. Chalong Rat Expressway (Ramintra-At Narong Expressway and Ramintra-Bangkok Outer Ring Road Expressway)	28.2	Bangkok
4. Udon Rattaya Expressway	32.0	Bangkok/Pathum Thani
5. Burapha Withi Expressway	55.0	Bangkok/ Chachoengsao/ Samutprakan
6. Bang Na-At Narong Expressway	4.7	Bangkok
7. Kanjanaphisek Expressway (Bang Phli-Suksawat)	22.5	Samutprakan



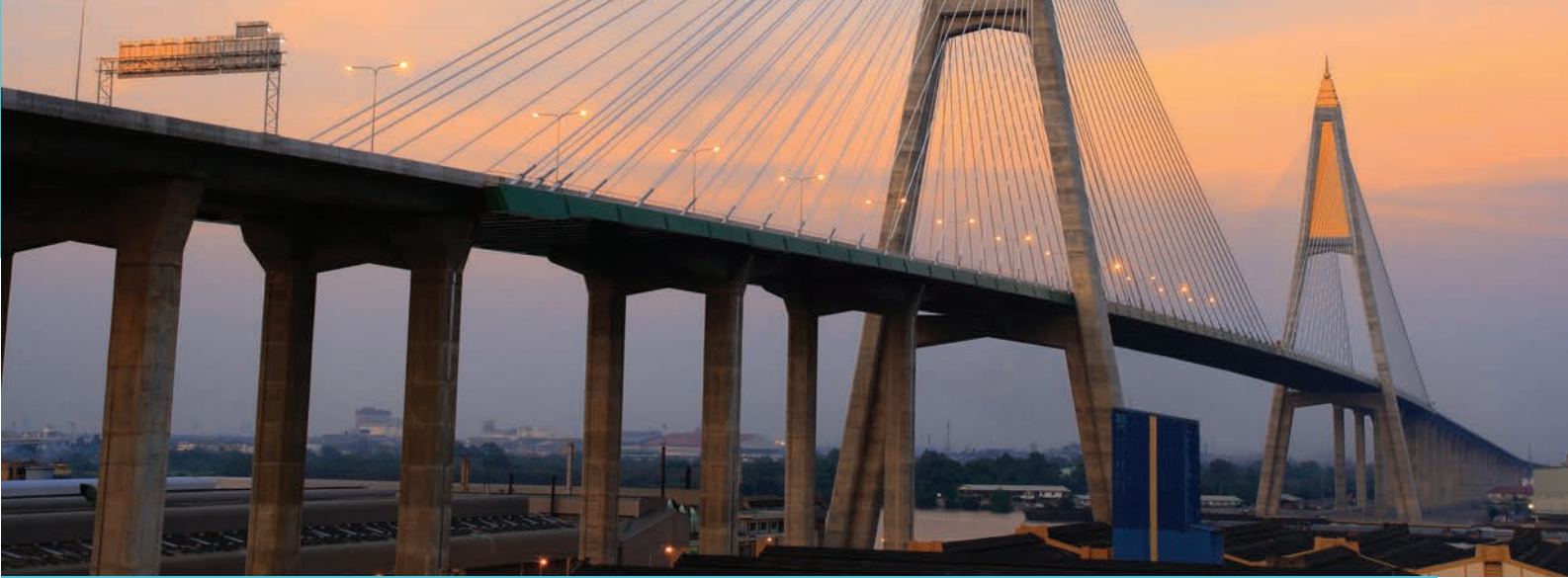
Table 6 : Extensions in Service and the Areas of Route Alignment

Extensions in Service	Route Alignment
1. Elevated expressway at the south of Suvarnabhumi Airport connecting to Burapha Withi Expressway (Additional entrance and exit for Burapha Withi Expressway to support the service of Suvarnabhumi Airport)	Samutprakan
2. Interchange between Kanjanaphisek Expressway (Bang Phli-Suksawat) and Burapha Withi Expressway (Additional entrance and exit for Burapha Withi Expressway to support the transportation between Burapha Withi Expressway and Kanjanaphisek Expressway (Bang Phli-Suksawat))	Samutprakan
3. Interchange between Kanchanaphisek Expressway (Bang Phli-Suksawat) and Industrial Ring Road (84 Years Anniversary Chaloeam Ratchadamri Interchange)	Samutprakan

Moreover, EXAT has 8 ongoing projects as follows:

1. Si Rat-Bangkok Outer Ring Road Expressway Project expected to be operational in 2016
2. Project to study the potentials and design the 3rd Stage Expressway for the North sections N1, N2, and N3 lines and the East-West Corridor
3. Project to study the potentials for the Dao Kanong-Western Bangkok Outer
4. Project to review the suitability of Si Rat-Dao Kanong
5. Project to study the potentials and design the Katoong-Pa Tong Expressway in Phuket
6. Project to study the potentials and design the Burapha Withi-Pattaya, Chonburi, Expressway
7. Project to study the potentials and design the Udon Rattaya-Phranakhon Sriyutthaya Expressway
8. Improvement project for the entrance and exit of Chaloeam Maha Nakhon Expressway and the old railroad at the At Narong flyover intersection

In the fiscal year of 2013, the total number of EXAT employees nationwide is 4,550 and 538 workers. EXAT's ranges of offices divided into Maintenance Office, Expressway and Expressway System Control Office, Legal and Land Ownership Office, Head Office, and Information Center for Expressway Users, in Bangkok and other provinces. The Head Office is located at 2380 Paholyothin Road, Sena Nikom, Chatuchak, Bangkok 10900. Telephone numbers: 02-579-5380-9, 02-562-0044, 02-940-1199. ■



5. Management Structure and Good Corporate Governance

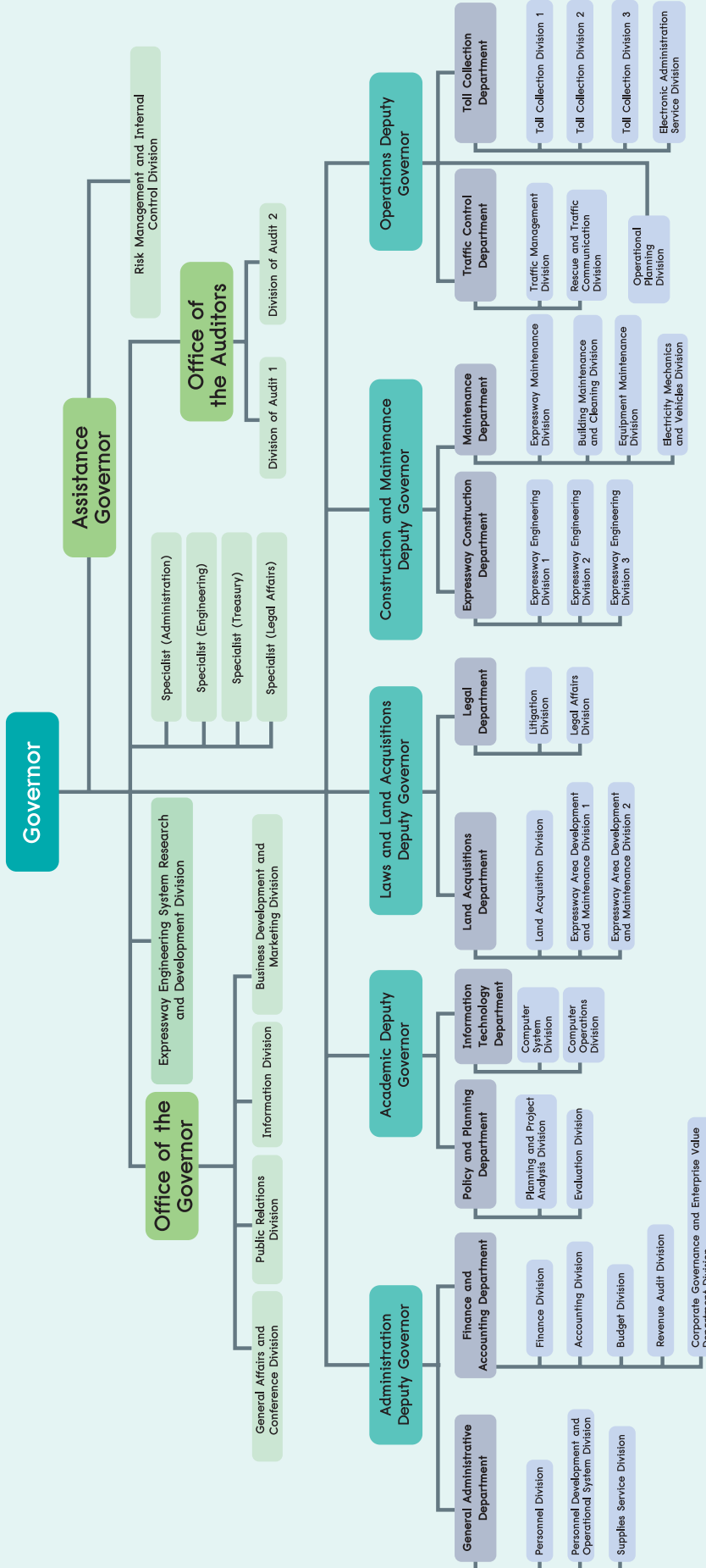
Apart from the returns from the expressway services that aimed at generating revenues to the state, EXAT also realizes the importance of an operation under the principles of good corporate governance, having restructured the organization in accordance with the EXAT Decree No. 110/2555 dated March 23, 2012. The management structure is composed of the positions of Governor, Deputy Governor, Assistant Governor, Departments, Divisions, and Offices reporting directly to the Governor, as presented in Figure 5.

The appointment procedure of the EXAT Board of Directors conforms to Section 14, Section 15, Section 16, and Section 17 of the Expressway Authority of Thailand Act, B.E. 2550 (2007). The Board consists of the Chairperson, a representative of the Ministry of Finance, a representative of the Ministry of Transport, a representative of the Bureau of the Budget, a representative of the Office of the National Economic and Social Development Board, a representative of the Royal Thai Police, and not more than four qualified persons as members. The Governor is a member and a secretary of the Board, and shall not be the Chairman of the Board. The Cabinet appoints the Chairman and the qualified persons, and assigns at least one third of the board members as Independent Directors.¹ At least one Independent Director shall be from the State-Owned Enterprise Directors' Pool compiled by the Ministry of Finance. In the fiscal year 2013, EXAT had 12 Board members in total, consisting of 10 males and 1 female, all of whom are of Thai nationality. The members are divided into 1 member in the age range between 30 and 50 years and 11 members in the age range over 50 years.

The clear management structure brings confidence and trust from the government and the people, as well as represents EXAT's commitment to good corporate governance.

¹ At the meeting No. 8/2546 held on July 30, 2003, the Board of EXAT had a motion approving the definition of the term "independence" of the members of the EXAT Board of Directors. "Independence" of the EXAT Board members is synonymous with external independence such as qualified members from the private sector, independent agencies or educational institutes with freedom to use discretion in making decisions and operating with genuine independence to effect changes and restraints in operations when needed, and with no business relationships or expectations of benefits or any other relationships with executives of state enterprises under the same Ministry, related divisions or companies, as well as no direct or indirect interests in EXAT.

Figure 5 : Organizational Structure



Reference : Expressway Authority of Thailand (2012) EXAT Directive No. 110/2555 (2012) dated 23 March 2012



1



2



3



4



5



6



7



8



9



10



11



12

- 1** Air Chief Marshal Sumet Photimane
Chairperson
- 2** Mrs. Urai Romphotiyok
Member Representing Ministry of Finance
- 3** Chatchawan Boonjaroenkit
Member Representing Ministry of Transport
- 4** Mr. Sathit Laohacharoenyot
Member Representing Ministry of Transport
- 5** Mr. Somsak Chotrattanasiri
Member Representing Bureau of the Budget
- 6** Mr. Chanvit Amatamatucharti
Member Representing the Office of the National Economic and Social Development Board
- 7** Police General Worapong Chewprecha
Member Representing Royal Thai Police Department
- 8** Professor Kumchai Jongjakapun
Luminaries committee
- 9** Mr. Thaworn Phanichaphan
Luminaries committee
- 10** Mr. Polchai Jittivilailux
Luminaries committee
- 11** Police Major General Surasit Sangkhaphong
Luminaries committee
- 12** Mr. Aiyanut Tinaphai
Committee and Secretary

For the utmost benefits of the stakeholders, the role and responsibility of the EXAT Board of Directors follow directly the duties stipulated in Article 19 of the Expressway Authority of Thailand Act B.E. 2550 and corresponds with the cabinet motion regarding guidelines in state enterprise good governance, with the emphasis on Duty of Care, Skills and Duty of Loyalty. The Board of Directors is the leader in determining the vision, directions, strategies and policies, seeking information such as laws, cabinet motions and regulations enforced on EXAT, and keeping track of any revision of related laws and regulations to better respond to the circumstances, and is responsible for the organization as a whole, including giving approval to significant strategies, policies, purposes, objectives and plans. The duties of the EXAT Board of Director also cover regularly supervising, controlling, and monitoring that the operations follow the annual corporate and operational plans, as well as organizing a reporting agenda in the monthly meetings. Apart from that, supervision of accounting, use of EXAT assets, human resources, appointment of minor committees and sub-committees, selection of EXAT Director and determination of wages or other fringe benefits, as well as terms of employment and employment termination are also considered important duties of the EXAT Board of Directors. Furthermore, every 6 months, the EXAT Board of Directors performs self-assessment both individually and as a whole. The results of the assessment are to remain confidential.

For the benefits of the organization and society at large, the Chairman and the qualified persons of the Board shall not be EXAT officials or employees, holders of political positions, and stakeholders in any contracts signed with EXAT. These restrictions exist in an effort to avoid the risk of conflicts of interest. Additionally, the Chairman, the qualified members of the Board, and the Governor must be knowledgeable and possess expertise in administration in the fields of science,



engineering, architecture, urban planning, economics, public finance, or laws, in order to ensure efficient and effective operation of EXAT.

EXAT has initiated a routine that all executives, officials, and employees present a report of conflicts of interest to the Governor on a yearly basis or on the occasion of a change in position when conflicts of interest may occur during the year. This practice is a platform for the stakeholders, especially employees and executives within the organization, to directly communicate with senior executives and the EXAT Board of Directors. In the fiscal year 2013, a case of conflicts of interest was not found. In addition, the 2013 EXAT's Code of Conducts Manual also states that violation or omission of practices stipulated in the Manual or suspicion of misconduct can be reported as complaints or preliminary observations by any EXAT employees. Their senior executives are responsible for following the respective complaint procedures. Violations of the Code of Conducts committed by senior executives shall be dealt with by higher-ranking or remaining executives. EXAT also requires regular meetings between the management and officials to maintain effective communications between the two and to provide them with opportunities to exchange opinions.

The administrative mechanisms of EXAT to achieve the vision, missions and plans of the organization refer to the establishment of committees and sub-committees which can be divided into 2 types: (1) committees according to related laws and (2) committees and sub-committees to perform assigned tasks. These mechanisms include the administration of economic, environmental and social performance, as well as related risks, depending on the social contexts, circumstances and operational plans set as the organization's missions each year.





As a state enterprise owned by the Ministry of Transport, operating under the regulations of the State Enterprise Public Office (SEPO), EXAT aims to provide sound management, operate on good governance, produce competitiveness and function as an important strategic mechanism in the country's economic and social development.

Structuring, encouraging, supporting and establishing the management system towards efficiency, transparency, and accountability are corporate governance principles that have always received emphasis and importance from EXAT. The purposes of these principles are to achieve the mission of solving traffic problems with the expressways and gain trust and confidence from the government, as an owner of the entity, and all groups of stakeholders.

EXAT has put Principles and Guidelines on Good Governance for State-Owned Enterprise year 2009 announced by SEPO into practices for any of EXAT's activities, projects and plans. Particularly, in 2011, EXAT compiled its own Corporate Governance Manual for the EXAT Board of Directors, executives, employees and workers to adhere to. This Manual also reflects the transparency, equity, and accountability of good performance without any conflict of interest, composed of 7 international standards in good governance as follow:

1. Accountability Taking responsibility for the impacts resulting from operations
2. Responsibility Having awareness in performing duties and providing services to users or other stakeholders with adequate skills and efficiency
3. Equity/Equitable Treatment Treating the organization's stakeholders with honesty, creating equity and fairness, and justifying complaints
4. Transparency Having transparency in operations and disclosure of important information to the stakeholders

5. Value Creation Increasing capability on all aspects of operations to lift up competitiveness and creating value added to the organization both in a short term and long term

6. Ethics Following EXAT's Code of Conduct and Ethics

7. Participation Encouraging public participation in expressing opinions on any operations that may affect environment, health and sanitation, quality of life, and living quality of local communities

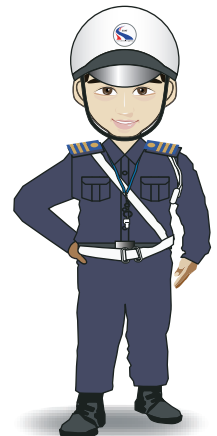
To ensure that the former EXAT operations have followed the scope set by the Corporate Governance Manual, in the fiscal year 2012, the Corporate Governance Sub-Committee has designated to arrange a meeting every month in order to be acknowledged and follow-up the operational performance along the Manual, and has also designated to report on the performance to the Corporate Governance Sub-Committee and the EXAT Board of Directors every quarter. EXAT also organizes internal control on 5 aspects according to the standards of the Committee of Sponsoring Organization of the Treadway Commission (COSO) as follows:

1. Control Environment
2. Risk Assessment
3. Control Activities
4. Information and Communications
5. Monitoring

EXAT monitoring systems are conducted in the form of continuous and regular ongoing monitoring and 2 types of separate evaluation which are: (1) quarterly Control Self-Assessment (CSA), and (2) Independent Assessment carried out by the Audit Office.

EXAT has devised the EXAT Good Corporate Governance Guidelines for the EXAT Board of Directors, executives, employees and workers to adhere to, which will ensure transparency, equity, and accountability of good performance without any conflict of interest, composed of 8 categories as follows:

1. State's operations as owner
2. Board of Directors
3. Financial report, Administrative report, Internal control and audit
4. Role towards stakeholders
5. Transparency and disclosure of information
6. Conflicts of interest
7. Risk management
8. Ethics





Furthermore, in 2011, EXAT compiled an Ethics Manual for EXAT operations by rearranging the EXAT Code of Conduct into categories for easier memorization and selecting the acronyms "HEARTS" to reflect the determination. "HEARTS" refers to careful operations that encourage the Board of Directors, executives, all EXAT employees and workers to adopt the principles and guidelines to practice, resulting in outstanding professional culture that sets an example for society.

HEARTS



Figure 6 : Ethics of EXAT

- H Honesty
- E Equity/Equitable Treatment
- A Accuracy
- R Responsibility
- T Transparency
- S Society

"Honesty, Equity, Transparency, and Social Responsibility"



As a state-owned enterprise responsible for transport infrastructure operating specifically on building expressways, the benefits of society and the needs of the people are of paramount importance. good corporate governance that ensures the accomplishment of the organization's missions in a transparent, accountable and straightforward manner, alongside adhering to the internal code of ethics and international standards in corporate governance and internal control, is considered a form of defending the interest of the state and society at large and a mechanism in integrating social responsibility with the organization's operation. More importantly, it poses as a significant beginning for further CSR practices in other forms. ■



6. Corporate Social Responsibility of the Expressway Authority of Thailand

The main mission of the Expressway Authority of Thailand (EXAT) is to solve traffic problems and facilitate public travel focusing on expressway services within the Bangkok Metropolitan area. Plans are in place to expand services to other provincial areas that are strategic locations for public transport, while promoting Thailand's infrastructure in preparation for the official joining of the ASEAN Economic Community or AEC, which will help enhance the overall economic and social system of Thailand.

As a state enterprise under the supervision of the Ministry of Transport, EXAT fully recognizes its role and responsibility in providing a public service for improved public welfare by promoting effective and adequate public transportation in response to the public needs. EXAT also operates to solve traffic problems and facilitate public travel, facilitating traffic movement and connection to ensure rapid transportation. These are the responsibilities that are integrated into every working process at EXAT.

However, EXAT operations also have an impact on its stakeholders including those who are affected by expropriation prior to expressway construction, as well as the impact on the environment during construction, for example the use of construction materials, waste water and human waste. Communities living around the expressway area may be impacted by noise, dust and vibration from the construction as well as from those travelling on the routes served by EXAT. EXAT closely monitors these impacts following its good corporate governance and social responsibility.

EXAT's corporate social responsibility vision towards being "Low Carbon Society (LCS)" is one of the most important socially responsible frameworks that is applied to address significant issues of the organization. The vision refers to EXAT core operations which is to solve traffic problems and reduce greenhouse gases as a result of engine combustion. In addition, various CSR practices have been organized in the form of CSR-in-process such as anti-corruption awareness, and human resource recognition focusing on safety, benefits, and employee training programs as well as employees' family welfare, fair treatment, and human rights. EXAT is also responsible for providing safe and effective services for those using the expressway. Although the CSR-after-process is not related to the major work processes, it is often regarded as an element helping to promote the organization's image. It helps create better understanding and acceptance, strengthening the community by promoting social happiness, for example building good relationships between the community and the organization by supporting and participating in community development. In responding to these issues EXAT established work perimeters for employees and related functions to help increase operational efficiency in work process in line with the CSR policy.

Employees are required to develop correct understanding of CSR practices in accordance with CSR policy dated May 4, 2012, which stated that all employees from every function are required to follow the policy and put into practice with the following details:

1. EXAT will adopt international CSR standard and encourage public participation for its operations to solve environmental problems resulting from their projects
2. EXAT is committed to create CSR awareness among its employees with special focus on environmental conservation
3. EXAT will promote operational integration between different functions within the organization and those outside in order to create operational effectiveness and achieve their objectives
4. EXAT aims to be among the organizations that work in support of social contribution activities to help promote better living quality and welfare of the stakeholders
5. EXAT will disclose information related its project and CSR practices completely and accurately



6.1 EXAT Society “EXAT Family – Caring with our hearts”



Strategic objective : Structure and Operational system to facilitate human resource development and living quality

6.1.1 Benefits and Employee Care

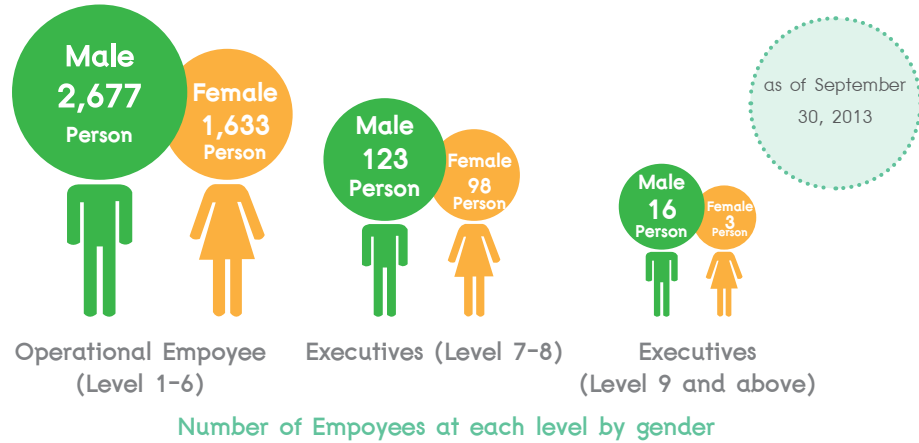
Employees are among our stakeholders, influencing the way in which the organization is moving. They support EXAT to become an efficient and effective organization while helping to promote the sustainable development of Thai society. Studies show that good employee care in the areas of quality of life, allowances and benefits, and organizational and functional support for career opportunities, are all elements motivating employee relations and satisfaction with the organization.

Therefore EXAT responds to these expectations by arranging suitable and fair benefits and allowances for every level of employee. Job advancement, opportunity and promotions are evaluated on performance in accordance with the Merit System. This is done without any prejudice and regardless of gender, religion or nationality. EXAT also ensures that employees are treated with respect by setting a minimum time limit in which to inform them of any changes such as job transfer, promotion, termination and resignation. Practices for these changes have been clearly defined in order to prevent any unfair practice or treatment. As for changes of job responsibility such as promotion, the process will be considered twice a year, each time taking one month to complete. This starts from the evaluation procedures until the official announcement of the promotion which is in accordance with EXAT Operational Procedures issue no.72 for standard practice in determining the position and its amendments, and also issue no.124 for job transfer and promotions and its amendments.

In the fiscal year 2013, EXAT had 4,550 employees and 538 workers, totaling 5,088 units of workforce (as of September 30, 2013) with employee information as follows:



Figure 7 : Number of employees at each level by gender, fiscal year 2013



EXAT employs both permanent employees and workers all of whom are hired on a full-time job basis. They can be separated by gender as follows:

Figure 8 : Number of employees and workers by gender, fiscal year 2011-2013



Table 7: Number of new employees by gender, fiscal year 2012-2013

Year	Gender	Number of New Employees	%
2012	Male	219	4.93
	Female	85	1.91
2013	Male	158	3.47
	Female	55	1.21

(as of September 30, 2013)

Table 8 : Number of new employees by age range, fiscal year 2012-2013

Number of new employees by age range	2012		2013	
	Number of New Employees	%	Number of New Employees	%
• Below 30 years	166	3.74	141	3.10
• Between 30-50 years	138	3.11	72	1.58
• Over 50 years	-	-	-	-

(as of September 30, 2013)

Table 9: Number of terminated employees by gender, fiscal year 2012-2013

Year	Gender	Number of Employees	%
2012	Male	51	1.15
	Female	24	0.54
2013	Male	74	1.63
	Female	35	0.77

(as of September 30, 2013)

Table 10: Number of terminated employees by age range, fiscal year 2012-2013

Number of new employees by age range	2012		2013	
	Number of New Employees	%	Number of New Employees	%
• Below 30 years	22	0.50	15	0.33
• Between 30-50 years	33	0.74	44	0.97
• Over 50 years	20	0.45	50	1.10

(as of September 30, 2013)

Table 11: Number of employees by diversity criteria, fiscal year 2013

Diversity	Personnel	EXAT committee	Executives (Level 9 and above)	Executives (Level 7-8)	Operational Employees (Level 1-6)
• Male		10	16	123	2,677
• Female		1	3	98	1,633
• Below 30 years		-	-	-	747
• Between 30-50 years		1	2	87	3,116
• Over 50 years		10	17	134	447

(as of September 30, 2013)

In caring for every level of employee, EXAT provides a suitable remuneration rate comprising salary, payment, bonus/rewards, allowances and benefits such as medical fees, accommodation for domestic travel and educational allowance. EXAT also arranges other benefits in the form of both cash and kind such as annual health checks, annual vacation as well as provident fund and assistance fund³. For fiscal year 2013, the cash reserve was recorded at 2,515,777,228.66 Baht (as of September 30, 2013) which included the amount paid as benefits for retired employees in 2013 at 64,639,672.40 Baht. The provident fund is managed by SCB Asset Management Company Limited under the regulations of the Thai Listed Company Association and Stock Exchange of Thailand (SET). Under the regulations EXAT is required to make payment according to the following criteria:

- Employees who have been with the organization for less than 10 years are able to deduct not less than 2% but not more than 9% of their salary. EXAT will contribute 9% of the salary towards the fund
- Employees who have been with the organization for over 10 years but not more than 20 years are able to deduct not less than 2% but not over 10% of their salary. EXAT will contribute 10% of the salary towards the fund
- Employees who have been with the organization for 20 years or more are able to deduct not less than 2% but not over 11% of their salary. EXAT will contribute 11% of the salary towards the fund



³Applicable to employees enrolled before 1 October 1996 who have not applied for provident fund membership

Besides creating financial stability for its employees after retirement, EXAT also recognizes that their fulfillment while working with the organization is important. Therefore EXAT has continued to ensure that there is a fine balance between family and professional life for its employees, for example, female employees are able to take maternity leave. In fiscal year 2013 EXAT realized that a good work-life balance is of equal importance for both male and female employees, and therefore male employees are now entitled to take paternity leave to take care of their children. One employee took maternity leave in fiscal year 2013, and returned to work after completing the period. The employee also remained with the organization one year after maternity leave. The record shows that EXAT's leave program allowed employees to arrange their time properly to take care of their children, so they are able to balance their time well between work and family.

Table 12 : Number of employees and workers by maternity leave, fiscal year 2013

Maternity leave	Male employees and workers	Female employees and workers
Number of employees eligible for maternity leave	3,268	1,820
Number of employees who took maternity leave	-	1
Number of employees who returned to work after maternity leave	-	1
Number of employees who return to work after maternity leave and remained in employment for one year afterwards	-	2*
Rate of employee return and retention after maternity leave	-	100%

(as of September 30, 2013)

Remarks * : Calculated from the number of employees who took maternity leave in fiscal Year 2012, two employees took the leave and returned to work after the leave ended and remained in employment for one year afterwards

Benefits and allowances paid to employees and workers are similar but there are some different criteria for employees and workers. Employees and workers are entitled to benefits such as life insurance, health care, disability, maternity leave and retirement benefits. However, there are differences in the details of each of these benefits, such as those in the retirement regulations as shown in table 13. The allowances paid to employees are equal between male and female without any discrimination.

Table 13 : Details of different benefits between EXAT employees and workers

Item	Details	Employee	Workers
EXAT benefits (according to restrictions)			
1 *	Hospital fees in accordance with restrictions 2008	•	•
2 *	Children's Educational Assistance in accordance with restrictions 2008	•	•
3	Child benefits in accordance with restrictions 2008	•	•
4	Childbirth in accordance with restriction issue no.48	•	•
5	Retirement benefits in accordance with the announcement of State Enterprise Relations Committee dated September 8, 2010	•	
6	Financial Assistance for Cremation based on Finance Assistance for Cremation restrictions in case of death not resulting from work	•	•
7	Compensation in case of operational hazard or sickness	•	•
8	Accident insurance for those whose work are at risk based on EXAT restrictions for individual whose work are at risk	•	•
9	Employee uniform based on restrictions no. 73, 95, 134	•	•
10	Annual Health Checks based on restrictions no. 122	•	•
11	Financial Assistance for Disaster victims based on restrictions for the Financial Assistance for Disaster victims 2008 and Financial Assistance for Disaster victims (issue no.2) 2012	•	•
12	Assistance Fund based on Assistance Fund restrictions 2009	•	
13	Provident Fund based on restrictions for Provident Fund as registered by EXAT	•	
14	Funeral rites assistance based on regulations for Funeral rites 2013, Regulations of Ministry of Social Development and Human Security for Funeral rites for government officials and government organization, state enterprise and occupational organization registered as a juristic person under the government supervision 2004	•	•
Other benefits (voluntary)			
15*	Dhipaya Insurance - Personal accidents insurance - Car insurance - Fire insurance	•	•
16	AIA Group saving insurance and Retirement Fund	•	•
17	Government Housing Bank credit for housing benefits	•	
18	Government Saving Bank credit	•	
19	Krungthai Bank credit	•	
Remarks *: Employees and workers received the same type of benefits but differ in details of each of the benefit			

Employees have rights and freedom to express their views and negotiate for organization activities, helping to encourage and develop plans for the mutual benefit of both the organization and employees. Participation or activities at policy level related to and/or having impact on employees will be exercised through the labor union that will act as a coordinating body between the management and employees. Of the overall employees, 3,200 are members of the Labor Union, accounting for 70.33 percent of the total employees.

6.1.2 Human Resource Development

EXAT recognizes that human resource development plays an essential role in promoting career advancement and job security. These are important factors that are of interest to our stakeholders since they influence employee satisfaction. EXAT organized various training programs directly related to human resource development and others not directly related to operational processes to help enhance employees' skills, management know-how, goals and learning ability throughout their lives. All of which are the responsibility of the organization towards its employees. In fiscal year 2013, EXAT organized 42 training and development courses in accordance with the operational and strategic plan with a budget of 31,143,815.73 Baht, as follows:

- | | |
|---------------------------------------|------------|
| • Strategic & Action Plan Alignment | 9 Courses |
| • Process & Job Development Alignment | 15 Courses |
| • Sustainable Organization | 7 Courses |
| • Leading and Change | 4 Courses |
| • Regulation, Law and Standard | 7 Courses |

Every level of employee was given the opportunity to attend these training courses which were sponsored by EXAT. Visits to outside organizations specializing in different fields in both the government and private sectors, as well as educational institutions and public organizations, were arranged to assist employees in broadening their future outlook and perspective. This will in turn help encourage better work performance and future career paths. In fiscal year 2013, EXAT supported 89 programs with a budget 1,820,489 Baht.

As for the employee training hours, within the fiscal year 2013, the average training hours were 27.17 hours/person/year, lower than the average training hours when compared to the previous fiscal year by 10.83 per cent. However, in 2013, EXAT placed special attention on management and executive training as seen in the record of executives at level 7-8 having the average training of 110.71 hours/person/year, 44.81 per cent higher than the fiscal year 2012 training, with the following details:

Table 14 : Employees attended training, fiscal year 2012-2013

Information of Employee Training in fiscal year 2012	(hours/person/year) fiscal year 2012	(hours/person/year) fiscal year 2013
Average Training hours of all EXAT employees		
Average Training hours	30.47	27.17
Average Training hours separated by gender		
Male	28.57	24.75
Female	33.49	31.09
Average Training hours separated by level of position		
Operations 1-6	27.64	22.73
Executives 7-8	76.45	110.71
Executives above level 9	78.50	61.84

(as of September 30, 2013)

EXAT has continued to place strong focus on employee development to strengthen organizational competency, promote healthy working environment and improve the quality of life through the following activities:

6.1.2.1 Human Resource Development

- (1) Develop evaluation system focusing on performance-based criteria
- (2) Career path
- (3) Succession plan
- (4) Talent management

6.1.2.2 Benefits and employee relations

- (1) Provide information on employee and worker benefits
- (2) Human resource development activities

6.1.3 Occupational Health and Safety

Occupational health and safety is equally important for travelers using the expressway under EXAT supervision and every EXAT employee. This is part of EXAT's internal CSR-in-process on which its management has continued to place special attention. Employees and workers are constantly exposed to various risks due to the nature of their work. Risks are present at different levels ranging from minor risks to those that could prevent employees from carrying out their normal work or those which cost them their lives. It includes employees working at toll fee collection booths, traffic control and maintenance. In fiscal year 2013, EXAT recorded accidents both within its control, and measures were introduced to reduce these accidents, and those beyond its control and caused by other people.

The 2013 safety plan helped EXAT to monitor and evaluate the work of its Safety Committee in developing effective safety measures for its employees and reviewing and improving plans for health and safety at work. This resulted in a change of record for occupational injuries or illness of employees and workers. In fiscal year 2013, there was an increase in the number of threats/risks higher than that of the fiscal year 2012. The number was recorded and separated by gender and type of accident as follows:

Table 15 : Occupational Injuries or Illness of Employees and Workers, fiscal year 2012-2013

Occupational Injuries of Employees and Workers	Fiscal year 2012 (persons)	Fiscal year 2013 (persons)
No. of injured employees from operation	12	21
No. of injured employees from operation by gender		
• Male	10	15
• Female	2	6
No. of injured employees from operation by case		
• Injured and treated	12	21
• Death	-	-
Medical treatment expense/remunerations by case (Baht)		
• Injured and treated	133,273.62	201,874.02*
• Fatalities	-	-

(as of September 30, 2013)

Remarks *: This excludes medical treatment expense/remunerations for occupational injuries or illness occurring in fiscal year 2013 with treatment continuing in fiscal year 2014

The record show that in fiscal year 2013, there were certain cases where the threats/risks were the result of uncontrollable factors, such as car accidents, caused by other people.

The information above does not include first-aid level accidents. The injury rate (IR), occupational disease rate (ODR), Lost Day Rate (LDR) and Absentee Rate (AR)⁴ are calculated in comparison with the total working days in the fiscal year 2013 (52 weeks, 5 days a week, 8 hours a day) and can be detailed by gender as follows:

Table 16: Occupational injuries, diseases, lost days and absenteeism of EXAT employees, fiscal year 2012-2013

	Fiscal year 2012	Fiscal year 2013
Injury Rate (IR) unit : person/200,000 working hours		
• Female	0.04	0.28
• Male	0.20	0.11
Occupational Disease Rate (ODR) unit : person/200,000 working hours		
• Female	No report of occupational diseases	No report of occupational diseases
• Male	No report of occupational diseases	No report of occupational diseases
Lost Day Rate (LDR) unit : person/200,000 working hours		
• Female	1.12	8.71
• Male	2.01	1.02
Absentee Rate (AR) unit : person/200,000 working hours		
• Female	no absentees	no absentees
• Male	no absentees	no absentees

(as of September 30, 2013)

⁴Absentee Rate is calculated from the absence date which means the day that employees or workers were unable to come to work for any reason, including those not related to injuries or occupational illness. This does not include absences that have been approved.

The information was recorded by the Fringe Benefit Section and analyzed for statistical information by the Occupational Safety and Healthy Environment Section, under the Personnel Division, the General Administration Department.

EXAT's preventive measures for occupational hazards under its responsibility includes those involved in its value chain, especially business partners and contractors. Although EXAT did not make any record related to the safety of those mentioned, safety guidelines were established, and safety seminars organized on EXAT safety policy as well as safety seminars for every new contract partner. Safety activities were arranged at construction sites and contractors were monitored for occupational health and safety concerns during expressway construction. Their routine work was also closely supervised to ensure that it was carried out in accordance with the contract. EXAT also coordinated closely with agencies in areas of traffic control to ensure a safe working environment during construction. Activities were organized to prevent threats/risks where contractors were required to prepare emergency plans and conduct regular practices in preparation for any unexpected or uncontrollable situations.

EXAT also places special emphasis and attention on occupational health and safety of various procedures which are not limited to operations impacting stakeholders within the organization. Training programs were organized including fire training, occupational health and safety management training, fire training and promotion of occupational health and safety in the workplace for executives and employees, especially those who had never previously attended these programs.

Besides workforce and family assistance, plans were introduced to offer advice to prevent and control the occurrence of possible risks of communicable disease and accidents. In fiscal year 2013, EXAT enhanced its normal operational plan by arranging flu vaccinations for employees to further promote good employee health, in addition to other safety issues. Evacuation practice and assistance during serious accidents caused by dangerous materials was conducted on a regular basis to ensure readiness, and the availability of prompt and appropriate aid. This will also help enhance efficiency in evacuation efforts, traffic control and communications. This annual practice was organized on July 10, 2013, at Sukha Phiban Toll plaza 5-1. Information on evacuation procedures was provided in case of fire. The training was organized for EXAT employees working at 18 Kanjanaphisek Toll plaza, 15 Chalong Rat Toll plaza, and 16 Burapha Withi Toll plaza, managed by a specialized expressway unit. This will help enhance safety of the community living around the expressway, travelers and overall EXAT operations.

6.2 A valuable choice “To make Responsible for service, Safe travel”

Strategic objective : Reliable and quality service with maximum safety and care

Expressway construction is essential infrastructure that plays an important role in the country's development. At the same time, these huge operations have an impact on the public and society. Therefore each of the investments must be optimized and considered thoroughly and carefully. At the same time, health and safety of travelers and those living in the surrounding area of the construction is equally critical.

EXAT services impact on society at large. Therefore, in addition to providing a fast and convenient transportation system, the service must also maximize safety. As a result, evaluation of impact on health and safety is conducted throughout the construction periods.

The impact analysis system was adopted which includes preventive measures and impact reduction based on the Environmental Impact Assessment Report (EIA Report) for every expressway construction project covering the periods before and during construction and after the project was operational.

In order to facilitate the public, prior to construction of an expressway EXAT is required to develop a concept to solve traffic problems and serve the public needs directly through a conceptual design that is appropriate for each route.

Safety measures are developed through a research and development process for implementation including /measures for travelers comprising (1) control of vehicles carrying dangerous materials on the expressway (2) Public Relations campaign and safety service during annual holiday periods (3) speed control for those vehicles that may exceed the legal speed limit (4) evacuation plan and practice in case of emergency and fire in the area under the expressway (5) campaigns to prevent accidents - all of which EXAT organized on a regular basis throughout the fiscal year 2013.

In fiscal year 2013, EXAT conducted road surface work on Burapha Withi Expressway adding coarseness to prevent drivers from drowsiness while driving on the expressway. The Burapha Withi Expressway is a straight, smooth and long stretch of road and drivers can be at risk from drowsiness.

Table 17 : Displays evaluation of impact on health and safety at each expressway construction phase

Impact on health and safety at each expressway construction phase	Yes	No
Product Development	●	
Research and Development	●	
Certified	●	
Production		●
Marketing & Sales Promotion	●	
Operations and Service		●
Reuse	●	
Discard and Recycle		●

Source: EXAT construction unit

As for the Si Rat Expressway and Bangkok Outer Ring Road and the project to improve the entrance and exit ramps at Chaloem Maha Nakhon and the Old Railway Road and Archnarong Interchange, EXAT adopted a design concept in accordance with the United States' AASHTO standard, which is widely used for construction and highways. The standard covers structural safety and all other expressway/risk factors including those in case of earthquake.

The standard is also included in contracts, with details of occupational health and safety for contractors to follow, including laws, regulations and other related restrictions. During construction EXAT and foremen will work closely together to ensure that the contractor strictly follows the occupational health and safety rules and regulations as well as those related to the environment as specified in the EIA approved by Office of Natural Resources and Environmental Policy and Planning (ONEP). The contractors must also follow other regulations related to accident prevention during construction, and reduce and prevent environmental impact during the construction process in order to avoid complaints as follows:

(1) Accident prevention during construction

- Monthly meeting on occupational health and safety to create better understanding and establish operational guidelines for concessionaire and foremen
- Concessionaire conducts regular checks on sites that may be at risk of accidents, for example, foundation piling and preparation for ground works

- Conduct safety audit such as fencing off construction area, erecting announcements and warning signs, light signals, lights, personal safety equipment and other construction equipment
- Concessionaire to organize morning briefing prior to daily work commencement and safety training

(2) Accident preparedness during construction

- Concessionaires are required to prepare emergency plans for situations that are considered uncontrollable. This task has already been accomplished.
- In fiscal year 2013, concessionaires organized fire and emergency practice on December 18, 2013

(3) Environmental Protection Plan during construction process

- Foremen are required to conduct close supervision of the concessionaires' work to ensure that it is carried out according to the plan stated in the EIA project report as well as those conditions stated in the contract, especially in the area of environmental protection and to minimize environmental impact during construction period. These include air quality, noise, debris and vibration. Concessionaires must follow the rules and regulations required for safety standards.
- Supervisory committee was established to monitor environmental operations during construction. Three meetings were held by the committee in fiscal year 2013.
- Working group was set up to oversee the entrances and exits as well as road condition for the residents in the area who may be affected by the project
- Barriers were erected to prevent illegal entry during construction and warning signs set up
- Sufficient lights for main road and around the construction area
- Safeguard the surrounding environment and ensure good hygiene conditions within the construction area and labor compound

(4) Prevent causes of complaints

- EXAT together with concessionaires, contractors and consulting engineers conducted studies to find all possible causes of impact and distress which could result in complaints. They are required to develop solutions to minimize complaints and provide immediate remedies
- During the construction process, EXAT and consulting engineers will supervise the work of the concessionaire to ensure that it is all carried out according to the rules and regulations, including those related to environmental aspects such as noise, debris, vibration and traffic organization during different construction phases

- Information should be publicized and talks should be held with the people living near the construction area to inform them of the activities and actions around the area to prevent future complaints

6.2.1 Service Excellence

Maximum customer satisfaction is an important element for any business operation. This will help an organization reflect its performance and constantly work to promote and improve its service standard in response to customer needs. This will also help the organization reflect its performance as a service provider, operating to ensure convenient, fast and safe public transportation with a reliable service standard. Organization performance and customer expectations will be reflected in its strategy and vision. Therefore a customer satisfaction survey is conducted on an annual basis. The results are used to achieve even greater and more effective service standards, procedures and quality. New ideas and innovations to offer new services in response to customer recommendations will in turn help promote the attitude and image of the organization. The 2013 satisfaction survey for expressway service and image was conducted among 6,000 expressway customers on seven routes and three interchanges for emergency response on the expressway, IT services, management of the surrounding areas and behavior and satisfaction for Easy Pass service. From the total number of sampling population, 56.6 percent were male and 43.4 percent were female, with the age range of between 26-35 years. The questionnaires were distributed with the application of data analysis program.

In fiscal year 2013 it was found that overall customer satisfaction for expressway services was divided into seven key areas with 5.00 as the highest rating. The overall customer satisfaction rate reached an average of 4.31. In detail, it was found that satisfaction for emergency service was 4.56, traffic flow on expressway 4.33, cash collection at toll booth 4.29, sign posts and signals 4.27, physical appearance 4.26, safety 4.25 and Easy Pass 4.10.

According to the survey it was found that customers had expectations of 39.4 per cent on the development of traffic flow on the expressway, followed by 18.2 percent for safety and 14.8 percent for cash collection at toll booths. The satisfaction on other aspects of service and Easy Pass customers was evaluated as displayed in the table below.

Table 18 : Customer Satisfaction Survey, fiscal year 2013

Service satisfaction	For fiscal year 2013	
	% of those who know about and are users of the services	Average* (Full Score 5)
Satisfaction with clarity of real-time traffic report signs	76.10	3.80
Emergency service	91.10	4.56
EXAT Call Center	85.70	4.29
EXAT website www.exat.co.th	83.10	4.16
Website www.thaieasypass.com	81.60	4.08
One stop service center	82.40	4.12
Easy Pass customer service	82.10	4.10
Physical appearance at Chalong Rat Expressway area	87.50	4.37
Physical appearance at Bang Na-At Narong (S1) Expressway area	87.70	4.38

Remarks *: The average is calculated from the number of those who know about and use each of the services

Customers were found to be dissatisfied with the malfunction of the automatic barriers, cash not credited correctly in the card, cash display not properly updated and expectations of EXAT expanding connections to other provinces.

Recommendations regarding Easy Pass included increasing the number of Easy Pass gates, the gates should be arranged conveniently on one side, reducing service fees, accelerating cash collection, increasing number of gates, service lanes and improving unclear road signs.

Recommendations from analysts stated that EXAT should focus its improvement efforts on those services that received rating below that of the overall satisfaction, for example, accelerating cash collection at entrance and exit points during rush hour, allowing suitable distance to clearly display Easy Pass signs, improving unclear signs for better vision at night, improving billboards that are too bright and affect driving vision, information distribution using mobile video tolling equipment and enhance safety. EXAT should adjust plans for public relations and marketing communications to best accommodate the behavior of recipients in different target groups, improve Easy Pass sales channel and cash credit and promote the use of Easy Pass. Due to complex processes in purchasing Easy Pass, EXAT should also change ways in which Easy Pass is marketed.

Problems related to Easy Pass in Fiscal Year 2013

It was found that there were errors in cash debit from Easy Pass which resulted in an insufficient amount of cash value recorded in the card. As a result, the barriers did not allow vehicles access through the Easy Pass gate causing heavy traffic congestion. EXAT attempted to find ways to solve this problem by immediately improving Easy Pass software. Software update was conducted during August 27–September 30, 2013, during which time Easy Pass card users were informed on a daily basis via SMS. EXAT has also arranged the following to help alleviate problems for card users:

- From August 27, 2013 until September 30, 2013, the used of cash credit service was shut down for upgrade during 22:00–04:00 hours
- Improved software to accommodate one million transactions per day. Currently there are between 500,000–600,000 users per day
- Improve software to calculate the remaining amount and to display correct amount at the gate
- Lowered the cash credit process to seven minutes
- Reduced the barrier length to 1.9 meters allowing faster operation time of 10 seconds
- Improve equipment to receive and transfer information faster at an average of 334.58 km/h while the speed is during 80–100 km/hr
- Modernized other equipment



In addition, EXAT recognizes the importance of developing Easy Pass operations analysis system to become more effective with the least impact. Therefore, a Working Group was appointed to solve problems related to Easy Pass operations analysis system in order to promptly create cooperation, better understand the problems and find possible solutions. The Committee members are entrusted with the following responsibilities:

- To evaluate, analyse and establish guidelines together with the project consultant to solve problems related to Easy Pass operations
- To Prepare operational plan to solve problems related to Easy Pass operations and submit to the Governor

- To control and monitor the operational plan to solve Easy Pass problems according to plan and report to the Governor

During August to November 2013, the committee met officially 10 times. At each meeting, the committee members considered improvements, provided suggestions, monitored and evaluated their performance to ensure that the tasks were carried out in accordance with the plan to further improve Easy Pass service.

Related information on Easy Pass can be accessed via website <http://www.thaieasypass.com> or by contacting EXAT Call Center at 1543.

6.2.2 Advanced Innovation

Customer satisfaction as a result of development and adoption of innovative equipment and the use of Easy Pass marked another successful step in EXAT operations.

In fiscal year 2013 EXAT provided expressway information to enhance customers' convenience and safety, such as information at entrances and exits, traffic signs, warning signs, sign posts using modern technology of Smart VMS or mobile applications. EXAT also adopted a research and development program to further develop Smart VMS via Data Exchange Center. Studies were conducted to improve the quality of expressway signs to provide prompt and accurate traffic and safety information.

Manuals and leaflets were published to provide information on Easy Pass and ETCS using Easy Pass card. This will help promote and encourage the use of the expressway as the preferred choice of travel on any occasion.

6.3 Future Outlook and Development “Community development and Good Corporate Governance”

Strategic objective : Support Thailand's Investment Strategy

EXAT operations contribute to community development and are carried out mainly for public benefit. Therefore the economic value through investments in the country's infrastructure each year appears in the form of expressway construction and road maintenance. During the past fiscal year, EXAT organized activities and projects that contributed indirect economic benefits such as allocation of areas for public use, namely sports ground, public garden and small park. Three areas were allocated for government activities at no cost, as follows:

Table 19 : Details of Areas Utilized for Public Benefits, fiscal year 2013

Function	Activities	Detail of use			
		Location	Size (square meters)	Rental charges (Baht)	Tax (Baht)
Bang Prong Sub District Administrative Organization	Security booths	Under Kanjanaphisek Expressway	9	14,856.75	2,122.39
Ministry of Interior	Exhibition Center for display and distribution of goods in Bangkok	Chaloem Maha Nakhon Express area on Plo-enchit Road	200	53,800.00	7,685.75
Ministry of Interior	Exhibition Center for display and distribution of goods in Bangkok	Chalong Rat Express area at U-turn area on Ramintra Road	3,200	252,800.00	36,114.50
Total			3,409	321,456.75	45,922.64

Expressway development is regarded as development of the country's public amenity system for transportation and logistics. Therefore investments and construction of new routes, road maintenance and expansion have indirect economic impact. In fiscal year 2013 EXAT made additional infrastructure investments in the amount of 3,435.83 million Baht and maintenance in the amount of 82,131,486.17 Baht.

As a wholly owned state enterprise, EXAT received government support for fiscal year 2013 as shown in table 19. In comparison with fiscal year 2012, the support was higher by 108.28 percent (in fiscal year 2012 government support was recorded at 2,154,714,453.58 Baht) with the following details:

Table 20 : Support from the government, fiscal year 2013

Type of support	Amount (Baht)
Cash support (other expenses – debt management government sector)	
• Payment of interest	910,041,600.00
• Interest on loans	3,533,000,000.00
• Tax on loans	45,734,700.00
Total	4,488,776,300.00

The social contribution activities, joint community and environmental projects, CSR, financial support or community investment throughout the year, were included in the calculation together with other operations, and translated into economic value in fiscal year 2013 in the amount of 3,382,246,991.04 Baht as shown in table 21.

Table 21 : Economic Value, fiscal year 2013

Economic Value	Amount (Baht)
Direct Economic Value Generated	
Revenues	12,901,716,800.73
Direct Economic Value Distributed	
Operating costs	4,951,730,718.31
Employee wages and benefits	2,107,726,284.29
Payments to providers of capital	1,784,927,407.64
Payments to government	0 ⁵
Community Investment	100,678,100.00
Economic Value Retained	3,382,246,991.04

(as of September 30, 2013)

⁵There are no payments to the government as EXAT is a state enterprise under the Ministry of Transport owned entirely by the state. Thus, the payments to government are included in the payments to providers of capital, which will be proportioned from the profits as the contributions to the government every fiscal year

EXAT has continued to play an important role in promoting the country's overall social and economic development by providing a modern, fast, convenient and safe transportation system, helping to effectively alleviate traffic congestion for the public and business sectors. However, all of these factors are not enough to ensure the sustainable growth of the organization. EXAT needs to pay attention to the smaller segment of society, which is the community around the expressway, which is an important stakeholder of the organization since these people will have to endure the impact before and during construction and after the project was operational.

The surrounding communities and those located along the routes are affected by expropriation in preparation for expressway construction. The construction will also affect the surrounding environment and the people's way of life within the area. Expansion of service along the travel routes also causes various physical and social transformations resulting in different needs and expectations of the people.

A thorough study must be conducted for expressway construction and network expansion projects in the areas of sustainability and engineering as well as on the aspects of economic, financial and environmental impact. The study also includes public announcements, and community participation at seminars organized to obtain public views and opinions. The feasibility study will help create better understanding among the public of EXAT operations while reducing the risk of protest, and giving people living in the affected area an opportunity and time to adapt. This will also help create better understanding of EXAT intentions and purpose to bring better quality of life and care for the surrounding community.

In fiscal year 2013, EXAT initiated four projects in its operational plan with feasibility studies conducted on engineering, economic, financial and environmental impact as follows:

- (1) Rama III Expressway and Bangkok Outer Ring Road on western side
- (2) Katu-Patong expressway in Phuket
- (3) Burapha Withi-Pataya
- (4) Udon Rattthaya-Ayutthaya

Studies are being conducted for these projects to evaluate impact on the environment and obtain public views.

Based on the operational concept, policy and future plan to expand services in Bangkok Metropolitan area, EXAT will have greater responsibility to care for the surrounding communities and affected areas.

Public surveys and hearings must be carried out prior to commencing every expressway project. Public participation will be within parameters set by the Thai Constitution B.E. 2550 (2007), the Rule of the Office of the Prime Minister on Public Consultation, B.E. 2548 (2005), and the guidelines for Public Engagement and the Social Impact Assessment regarding Environmental Impact Assessment B.E. 2549 (2006). The target group for public hearings and participation are those who are likely to be affected before, during and after the construction stages, and can be categorized into seven groups:

- (1) Individuals affected by the project
- (2) Agencies responsible for conducting reports on environmental impact analysis
- (3) Agencies responsible for evaluating environmental impact analysis reports
- (4) State agencies at various levels
- (5) Private environmental organizations, private development organizations, local academic institutions and universities, and independent academics
- (6) The press
- (7) The general public

Therefore, the possible impact of projects is analyzed, and measures established to protect and find solutions to problems arising from EXAT operations. This includes remedial measures and participation with surrounding communities to minimize the risk of complaints from those living in the nearby communities and other stakeholders. Those who may be affected, or wish to offer suggestions, are able to contact EXAT at 1543. EXAT also ensures that complaints are handled promptly, accurately and all points of complaints are answered completely. The practices are in accordance with News and Information Distribution Procedure and Complaint Acceptance and Suggestions in line with ISO14001 standardization for Environmental Management System and Quality Procedure in line with ISO9001 standards as shown in Figure 9.

Figure 9 : Complaint handling procedures

Responsible persons	Activities	Related persons	Source of information
1. Customers	Complaint/give recommendations at Tel. 1543 or complaint/give recommendations to Employee Leader at the toll gate	Agent	Form 1401
2. Agent/Employee Leader	Record complaint and put recommendations on Form 1401 and present to supervisor	Supervisor	Form 1401
3. Supervisor	Issue code information Division/Expressway information Service Section in Form 1401 by giving color code (orange, blue, green) in the Form 1401 and Form 1405; fax the forms to Director of the information Division/Head of the Expressway information Service Section for signature	Director of the information Division/Head of the Expressway information Service Section	Form 1401/1405
4. Director of the information Division/Head of the Expressway information Service Section	Sign the Form 1401 for further submit to related functions and code green to be presented to WMR	Related functions	Form 1401
5. Related functions	Monitor and review for corrective and preventive actions, improvements by related department/offices or those responsible in responding directly to customers. Send Form 1401 and advise causes of complaints and actions taken to prevent magnification, put date and how the customers were informed either by phone or in writing according to Form 1401 requirements and send to the information Division	Customers/information Division	Form 1401
6. Director of the information Division	Send Form 1401 to supervisor. In case complaints are now acknowledged, related functions must be informed to monitor progress and record the progress in Form 1407	Related persons Supervisor	Form 1401/1407
7. Supervisor	Collect, summarize and record complaints on a monthly basis, and submit to Director of the information Division	Director of the information Division	Recorded report
8. Director of the information Division	Sign the monthly complaint report and submit to top management	Information Division/Top management	Recorded report QP-EXAT-001

Reference : ISO 9001 Quality Management System, Quality Management Procedure (2012) p.3.

ISO 14001 Environmental Management Standard, Procedure for Information Service, Grievance Mechanism and Suggestion, p.5.

Within the past year EXAT received complaints from community living around the expressway areas and stake holders as follows:

Table 22 : No. of complaint cases separated by type, fiscal year 2013

Complaints in fiscal year 2013		No. of Complaints		Description
Item	Issue	Case(s)	Person(s)	
1.	Performance of EXAT employees <ul style="list-style-type: none"> - Toll fee collection - Evacuation/communication - Traffic control - Call center and operators - Others 	19	21	Most of the complaints from customers related to toll collection or Easy Pass followed by the Call Center, operator. Rescue/communication and traffic control. There are two cases which are still on pending in 2013 fiscal year.
2.	Impact from expressway construction <ul style="list-style-type: none"> - Bangpli-Suksawad - Ramintra-Bangkok Outer Ring Road - Interchange at Bangpli-Suksawad with Industrial Ring Road - Others 	1	1	Complaints related to the time of construction on Si Rat-Bangkok Outer Ring Road that affected nearby communities. The problems were already handled and settled.
3.	Land <ul style="list-style-type: none"> - Problems at entrance/exit ramps - Illegal entry into expressway area - Others 	9	6	EXAT received most complaint cases on entrance/exit ramps followed by illegal entry. However, all the problems were handled and settled except for complaints from minivan operator related to EXAT land rental area at Paholyothin Gate 2 at Si Rat expressway. The case is being handled.

Table 22 : No. of complaint cases separated by type, fiscal year 2013 (continued)

Complaints in fiscal year 2013		No. of Complaints		Description
Item	Issue	Case(s)	Person(s)	
4.	Inconvenience or distress caused by the construction and use of expressways <ul style="list-style-type: none"> - Lighting/bright spotlights - Poor road surface - Noise - Signs - Traffic management on expressway - Toll fee collection system - Toll fee collection booth - Others 	156	149	EXAT received most complaint cases on toll collection system, accounted for 31.45 percent of all cases (no.1-6), followed by traffic management on expressway, at the gate and Easy Pass lane Suksawad-Bang Koon Tien and descent lane at Prachachuen (during morning hours.) Most of the causes were due to heavy traffic during that time as well as errors and inconvenienced related to toll collection both in the normal and electronic lanes.
5.	Others (in addition to 1-4)	17	17	Most of the complaints were handled and concluded. For the three cases which have not yet reached conclusion, EXAT coordinated with all functions concerned to find possible solutions to the problems.
Total		202	194	

From the details in table 22, it can be seen that EXAT has already handled and concluded most of the cases. However, for those which have not yet reached conclusion, EXAT is currently coordinating with the functions concerned to find possible causes and solutions to the problems.

As for the complaint of noise pollution, problems of entry/exit ramps and the people who may be inconvenienced or affected in leading a normal everyday life can be regarded as violation of human rights because the noise from expressways has an impact on people's right to lead a normal life. However, in fiscal year 2013 there were no complaints of noise and from past records EXAT found that noise has never been an issue of human rights violation.

6.3.1 Image of transparency

Besides offering service excellence as a government organization, EXAT has continued to help promote and maintain the country's benefit. Therefore, operation in a straightforward and transparent manner is of the highest importance. Operational audits can be conducted with special focus on public benefit as the top priority, and in line with government policy.

Good corporate governance principles are adopted and implemented to prevent corruption in any activities, which has helped promote EXAT's transparent image in accordance with its vision. Clear operational guidelines include risk evaluation for corruption in every working process or in the performance of officers at every level from operational to executive, including preventive measures and penalties in order to create greater awareness of the consequences of corrupt acts.

To promote understanding and enhance work ethics among employees and executives, EXAT has laid a firm foundation through introduction of training programs related to fraud. In fiscal year 2013, EXAT organized various training programs for every level of employees, including on the job training, with the following details:

Table 23 : Training related to anti-corruption, fiscal year 2013

Program/ Curriculum	Objective	Attendees
EXAT and good corporate governance	To help executives and employees understand the principles and guidelines of good corporate governance for state enterprises that can be integrated in their work performance to create mechanisms and good corporate governance within the organization. This will lead to transparency, reliability and ability to generate economic value and sustainable growth in the future.	Employee level 1-6 Executives above level 7
Responsibility and transparency are at the heart of operations of government officials	To promote ethics and morale to develop the transparent and responsible performance of government officials	Employee level 1-6 Executives above level 7

Table 23 : Training related to anti-corruption, fiscal year 2013 (continued)

Program/ Curriculum	Objective	Attendees
Disclosure of procurement and price calculation information	The training will help create better understanding of operational guidelines for those attending the programs. The disclosure of information and expenses related to procurement and price, together with correct calculation, will lead to transparent procurement processes that can be audited.	Executive above level 7 (Head of Section and above)

The above information indicates the number of employees at each level, and percentage of employees at executives and operational level, who attended the training programs related to fraud prevention in fiscal year 2013, as follows:

Table 24 : Employee information Received fraud prevention training, fiscal year 2012-2013

Level	Fiscal Year 2012		Fiscal Year 2013	
	No. of trained employees (persons)	%	No. of trained employees (persons)	%
Operational level 1-6	1,976	47.19	1,064	24.69
Executive level 7-8	196	83.40	173	78.28
Above level 9	18	81.81	18	94.74

(as of September 30, 2013)

EXAT established and intensified its measures in response to fraud prevention to show its commitment to operate with transparency. The operational-related regulations allow functions responsible for employee discipline to take legal action fairly without any prejudice. In 2013 disciplinary action was taken against three employees.

Effective communication is essential in maintaining the transparent image of an organization. By so doing, stakeholders will be able to review, and be well equipped with, accurate information of the organization's performance. Enhanced communication channels will also help strengthen relationships with key stakeholders. In fiscal year 2013, the Public Relations Division's plans and projects were set up to promote the organization's image and public service. These plans have been

carefully reviewed internally to ensure clear and accurate communication and public information, which also covers marketing communication activities, advertising, marketing promotion and EXAT sponsorship.

6.4 Care for the Environment “Towards Low Carbon Society (LCS)”

Strategic objective : Effective Resource Management

The environment is an important factor in sustainable operations. This factor is regarded on a global basis as international risk on which every sector of the economy must emphasize awareness. This is because the size of the impact covers large area of the society. If this issue is ignored it could lead to more damages and impact.

As for EXAT, environmental issues related to organization including wastes and air pollution such as dust, carbon dioxide gas, Green House Gas (GHG), use of natural resources, energy, biodiversity as well as maintaining the ecosystem and climate change. All of these are of great importance to the organization and at the same time they impact the society at large.

EXAT fully recognized the possible environmental impact which may occur throughout its operations especial those related to constructions of large structures. Therefore EXAT places special attention to every part of its operations which reflects in its social responsibility vision of "EXAT Society is a Low Carbon Society (LCS)", accenting its commitment to create environmentally friendly operations. This prompted EXAT to introduce its environmental policy, impact evaluation and monitor environmental quality throughout its operations as well as environmental impact and initiatives for resource management.

6.4.1 EXAT Environmental Policy

To put further emphasis on environmental commitment, the initiative to create "EXAT Society is a Low Carbon Society" has been included in its CSR vision. EXAT announced its CSR policy on May 4, 2012, to bring greater awareness and understanding among employees, who are required to strictly follow this policy and practice it in every process of operations.

EXAT encouraged its employees and workers to strictly follow the ISO14001:2004 standardization. In 2013, EXAT announced its environmental policy as principles and guidelines for employees, workers and related individuals as follows:

- (1) Placing special emphasis on the control of noise, dust, waste water from office use, traffic management and accidents
- (2) Ensuring safety of customers, employees and individuals related to the work on the expressway for clear objective, target and procedures, with regular review and improvements
- (3) Following legal requirements, restrictions, and standards related to environmental problems to prevent and reduce environmental impact on employees and workers, related persons and the public, around and at the workplace
- (4) Creating awareness among employees and workers and those involved in maintaining environmental quality, to ensure responsible use of energy and natural resource consumption
- (5) Promoting environmental policy among employees, workers, public and related individuals

6.4.2 Evaluation of impact throughout EXAT operations



EXAT evaluation of environmental impact covers general evaluation from expressway construction where EIA is required for pre-construction period, monitoring and controlling quality during construction and after the project was operational period. EXAT also evaluated product life cycle used for road re-surfacing, analyze environmental impact to establish preventive measures or reduce impact as a result of construction works.

6.4.2.1 Evaluation of general impact from expressway construction

Prior to construction of expressways, EXAT conducted a thorough analysis of environmental impact and is required to monitor and maintain environmental quality within the area. This can be done by establishing plans to control environmental quality to be within the standard requirements at every stage of operations for the periods before and during construction and after the project was operational with the following details:

(1) The Pre-Construction Period

EXAT conducted studies for suitability and environmental impact in the construction of the expressway at every stage. This includes suitable plan for appropriate engineering, economic, financial and environmental impact. Environmental Impact Assessment (EIA) is conducted to evaluate likely impact, and all of the EXAT projects already in service have been approved.

(2) The Construction Period

EXAT follows measures to reduce and monitor environmental impact during construction period as stated in the project's EIA. EXAT also follows the resolution of the Traffic Management Committee related to minimum concept/procedures required to reduce environmental impact from road construction or construction project through a community. EXAT also follows the resolution of the Air Pollution Committee for Bangkok and communities in Thailand in controlling the amount of dust from transport of construction materials.

(3) The Post-Construction Period

After completion of project, EXAT continues to monitor environmental quality along the expressway by hiring consultants to administer those aspects stated in the EIA related to air quality, noise level, vibration, and water quality. In case the environmental quality deviates from standard values, EXAT will determine additional preventive measures to solve the environmental impact to alleviate problems for those who may be affected as a result.

6.4.2.2 Life Cycle Assessment for Overlay Rehabilitative Pavement

EXAT started its research and development to evaluate environmental impact throughout its cycle of operational procedures, to review the level of environmental impact and to establish appropriate preventive measures. As a result of the research using the product life cycle evaluation method in accordance with ISO14040 standard, four major procedures were adopted as follows:

- (1) Determine product target and parameter of product responsibility, and evaluate product usage and other details necessary for study
- (2) Analyze product's environmental/record comprising process flow chart, data collection, determine system parameter and type and quantity of raw materials to be used, water, energy, waste discharge and area required for each process

- (3) Evaluate impact by impact classification and characterization. All the impacts resulting from the use of resources and waste discharge will be classified and quantified numerically according to the type of environmental impact, with additional weighting in accordance with importance
- (4) Evaluate improvement through a study and evaluation of possible opportunities to systematically reduce environmental impact of the product

EXAT together with research team applied product life cycle assessment principle in accordance with the ISO14040 standardization for its Life Cycle Assessment for Overlay Rehabilitative Pavement. The assessment perimeter starts from acquiring of raw materials, production, transportation, utilization and discard by landfills.

According to the study of Asphalt rehabilitative pavement it was found that the most important environmental impact was the build-up of cancerous substance during Asphalt production process and the rehabilitative process and landfills.

From the study EXAT was able to take part in reducing the impact by reusing of the existing surface instead of landfills. This helped reducing the amount of CO₂ emitted by 93 per cent.

6.4.3 Environmental impact and Management initiatives

From impact assessment at each stage of operations allowed EXAT to recognize possible impact on soil, dust, GHG, noise, ecosystem and biodiversity. EXAT was able to learn and analyze other impacts critical to its operations and make appropriate preparations to reduce environmental problems likely to occur as well as determine preventive measures, closely monitor and control environmental quality including introduce initiatives to manage these impacts effectively.

6.4.3.1 Soil impact

Expressway construction is the main operation of EXAT that will impact the surrounding community especially soil erosion as a result of construction work such as excavating/land filling, groundwork building, drilling and piling.

EXAT established construction measures to reduce such impact. When construction is near water sources during summer, the soil surface must be carefully compressed to offer smooth surface in case the soil will be overturn to protect erosion especially during the rainy season. Construction on river bank areas will not be carried out at the same time. The working areas will be open only when needed. Fast growing plants are often planted on the river bank, and barriers erected around where soil surface is /exposed to help reduce the amount of soil residue entering the water, treatment of waste water from temporary office buildings and labor compounds using on-site septic tanks before releasing

into the public water system. The amount of treated water should at least equal the amount of daily output of waste water. This includes construction of footpaths during the rainy season, the contractor must inform the construction plan to local authority at least 30 days in advance and garbage disposal into surrounding water is strictly prohibited.



6.4.3.2 Air Pollution

Air pollution is an important issue for good quality of life as far as health is concerned. EXAT, as an organization responsible for facilitating traffic, plays a critical role in regulating air pollution. Therefore, EXAT emphasizes operating in accordance with Air Pollution restrictions for the Bangkok area and communities in Thailand. Contractors are well supervised to ensure that they follow such restrictions conscientiously. All EXAT projects are carried out responsibly and with the aim of reducing air pollution, for example, establishing suitable size and location of Easy Pass booths to balance and reduce impact at the start of the operations to help ease traffic congestion, suitable plan for /exposed soil surface to prevent dust particles and obtaining authorization from responsible functions/ authorities prior to road works. The construction must be carried out in an area enclosed to at least two meters above ground level. Throughout the construction water should be sprinkled at least three times a day to help reduce the amount of dust, construction materials and transporting trucks must be properly covered, and wheels and body of trucks must be thoroughly cleaned prior to leaving the site. At night, the road surface is well cleaned to eliminate dirt and soil throughout the construction area. When road construction is complete, it must be covered with Asphalt concrete and the process must be carried out before 5:00AM. Masks to protect from dirt are provided for the labor force during the construction period, and regular maintenance of machinery is conducted.

6.4.3.3. Dust control

In addition, EXAT has established measures to control the amount of dust produced as a result of construction of buildings, roads and public amenities as well as transportation of construction materials. This is done in accordance with rules and regulations on dust control for different types of construction set by the Office of the Noise and Air Quality Pollution Control Department (2004). EXAT regulations to control the amount of dust produced from different types of construction are divided as follows:

(1) Construction of roads and public amenities

Starting from dust control and preventive measures, which are regarded as part of the contract, including site control such as solid two meter high fence, supporting shield for fallen materials, frequent spraying of water to keep the site clean and surface with permanent materials. EXAT also follows the regulations of the National Promotion of Environmental Quality Act 1992 no.55 and no.68 for the measure of dust quantity in case of complaints to help control, prevent and maintain and solve dust-related problems

(2) Dust control from Transportation of materials

Control measures are applied for transportation of construction materials by trucks whereby the trucks must be cleaned and fully covered to prevent stone, soil and sand debris from falling onto the roads according to legal requirements

6.4.3.4 Greenhouse Gas (GHG)

The EXAT CSR vision is to create a LCS by reducing operations that emitted CO₂ gas and produce different types of air pollution. EXAT plays an important role in establishing operational sustainability in the area of Climate Change. There are operations which directly relate to EXAT CSR-in-process such as feasibility studies and monitoring of environmental impact of expressway service in the Bangkok Metropolitan area, activities for environmental quality management in accordance with ISO14001, ensuring cleanliness on expressways and controlling the amount of dust caused by traffic, developing the surrounding areas and acquiring Green IT such as computer and scanner. Additionally, there are activities organized in support of the LCS vision which are indirectly related to CSR-after-process. In fiscal year 2013 EXAT recorded financial and case/cash expenses related to risk and opportunity as well as Climate Change in the amount of 19,419,800 Baht.

EXAT also applied Life cycle assessment of product in accordance with the ISO14040 standardization to assess environmental impact from the use of construction materials for expressway construction such as Asphalt concrete. Asphalt is an important material for rehabilitative pavement which requires energy. During the process, it releases Greenhouse Gas, the cause of Global warming in comparison with energy used and GHG emission for rehabilitative pavement between Warm Mix Asphalt (WMA) and Hot Mix Asphalt (HMA) to find ways to manage the environment.

From the research, summary on GHG emission can be summarized as follows:

Table 25 : Emission of Greenhouse gases (GHG) from EXAT

Key operations	Calculation method	GHG Emission
Asphalt concrete, hot mixture (HWA)*	CML Baseline 2000	222 Ton-CO ₂ e ⁷
Asphalt concrete, warm mixture (WMA)*	CML Baseline 2000	242 Ton-CO ₂ e ⁷
Traffic on Chalongrach Expressway during rush hour	CML Baseline 2000	242 Gram-CO ₂ e/Km ⁸
Road resurfacing on 1 km of concrete	Indicator-99	382 Ton-CO ₂ e ⁹

Remarks * Value of GHG emission, starting from extraction of raw materials to production and transportation of Asphalt

⁷Watchara Surawong, Ekarin Luengwilai and Sakda Panwai: Comparison of energy use and Greenhouse gas emission from the construction of Asphalt road surface between Warm Mix Asphalt (WMA) and Hot Mix Asphalt (HMA) by using Evaluation of Product Life Cycle principle, Bangkok: Expressway Engineering System Research and Development, EXAT, 2013

⁸Watchara Surawong, Nirand Kongrit, and Jeema Soralump: Evaluation of Product life Cycle in road surface renovation, Bangkok

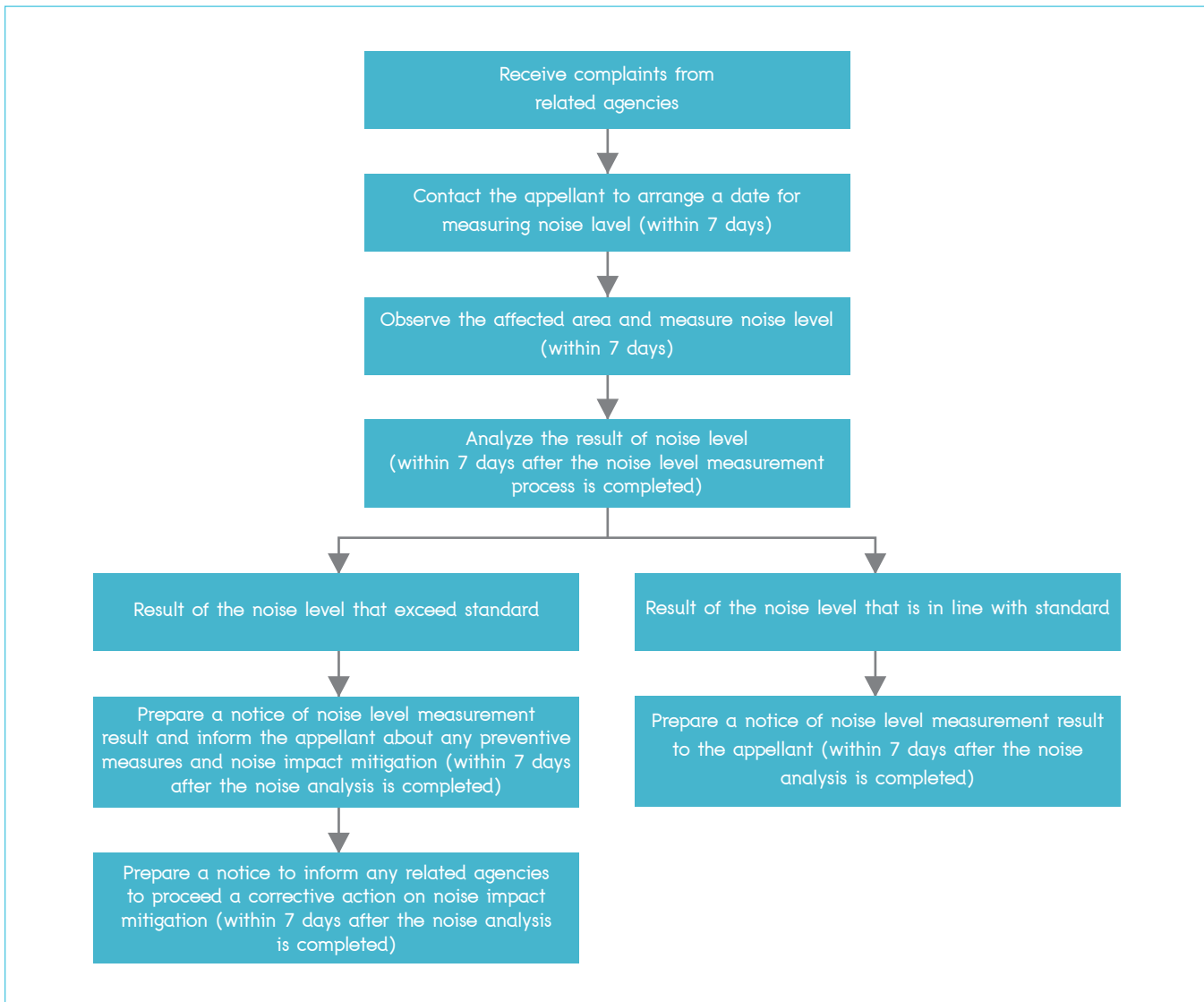
⁹Watchara Surawong, Nantawan Pitakpanich, Nirand Kongrit and Sakda Panwai: Evaluation of Environmental Impact as a result of traffic on Chalongruch Expressway using Product Life Cycle Analysis, Bangkok

6.4.3.5 Noise impact

EXAT followed measures to reduce noise impact from expressway to ensure good health of its employees and workers as well as those living in the surrounding community by operating in accordance with the announcement from the National Environmental Committee issue no.15 (2540) issued in accordance with the National Environmental Promotion and Quality 2535 in determining general noise level. This was announced in the Government Gazette issue no.114, part 27, dated April 3, 1997. Important operations include opinion survey among those who may be affected from noise prior to construction to find out their needs and establish appropriate construction plans to avoid school hours.

In addition, piles are often use for drilling during construction to help reduce noise. Construction work is usually carried out during day time (07.00-18.00) and transportation of materials is done during the night to help reduce impact from noise. No iron sheets will be placed on the road while construction work is on-going. However, in case iron sheets are to be used, they will be of special thickness to help reduce noise and vibration. Weekly inspection of equipment is conducted to ensure minimum noise from heavy machinery. Maintenance of large machinery will be conducted at a maintenance center outside of the construction area. Installation of large equipment and machinery such as power generators in nearby areas and equipment to help reduce vibration should also be installed such as spring and rubber sheet as per recommended requirements. In case of noise complaints, EXAT is prepared to respond as shown in Figure 10:

Figure 10 : Process and conditions for solving noise problems



To prevent health hazard to employees and those living in the surrounding community which may occur as a result of long term exposure to noise, measures have been established to prevent and reduce above-standard noise levels as follows:

- (1) Preventive measures for noise at general level
 - (1.1) Campaign among expressway customers to utilize fuel efficient vehicles without engine modification and regularly maintain the engines
 - (1.2) Coordinate closely with expressway police to ensure good traffic flow and reduce congestion at toll plazas as well as on the expressway
 - (1.3) Coordinate with departments responsible for noise level to conduct checks on noise level at toll plazas and on the expressway

- (2) Preventive measures for noise level within the toll collection booths
 - (2.1) Campaign and activities among customers, for example encouraging drivers not to accelerate on exiting the toll booths to reduce noise level and unnecessary expense
 - (2.2) Training for employees for better understanding and greater awareness of possible danger at work related to exposure to noise above standard level. Provide recommendations and practice for employees to protect themselves from high noise levels by using appropriate noise-protection gear and equipment
 - (2.3) Arranged annual hearing ability test for employees working in toll collection booths. In case disabilities or hearing deterioration is found, employees may be switched to other toll plaza with lower noise levels or switched to other units
 - (2.4) Suitable working hours are arranged for employees who working outside office buildings and may be at risk of over exposure to above-standard noise level at toll plazas and control center. This is to avoid being exposed to those noises for long periods, not more than eight hours a day
 - (2.5) Established precaution measures by measuring noise level in toll collection booths and around the control center every three and six months. Toll booths which may be at risk are selected, in particular those located on lanes allocated for large trucks and Easy Pass. They often have more vehicles passing through each day. Noise measurement is conducted to help reduce impact for employees

As a result of the above measures for environmental quality around toll plazas, office buildings and along the expressway, in fiscal year 2013 there was no report of noise level above the required standard and there was no tendency to increase.

6.4.3.6 Impact on Ecosystem and Biodiversity

EXAT recognizes the importance of maintaining the balance of ecosystems and biodiversity. Therefore policies were established to bring about participation of employees and society in environmental conservation through various projects. This included the construction of Khatu-Patong route in Phuket province. This is a project to construct a new road extension from the existing road to offer direct connection of eastern areas of Phuket with Patong. This construction is a combination of elevated road, bridge and tunnel to reduce distance and offer faster travel time. A feasibility study on engineering, economic, financial and environmental impact is being conducted, and is expected to take some 15 months to complete, starting from February 14, 2013. The study was conducted on roads connecting Patong and Khatu, and Tambon Khatu-Ampur Khatu. The project included elevated road and tunnel with six traffic lanes (with three connecting lanes) with a length of 3.4 kilometers. The tunnel will pass under the Nakkerd mountain range.

The project passes four nature reserves, namely nature reserve areas 5, 6, 7, 8 as stated in the announcement from the Ministry of Natural Resources and Environment Specification of Environment Protection Areas and Measures for Phuket 2010. Some parts of the tunnel will pass under Nakkerd Forest, a national reserve under the Ministry regulation issue no.621 (1973), and some parts will pass under water layer 1BR and layer 2 based on the announcement of southern water layer quality 1989 with geographical details shown in figure 11.

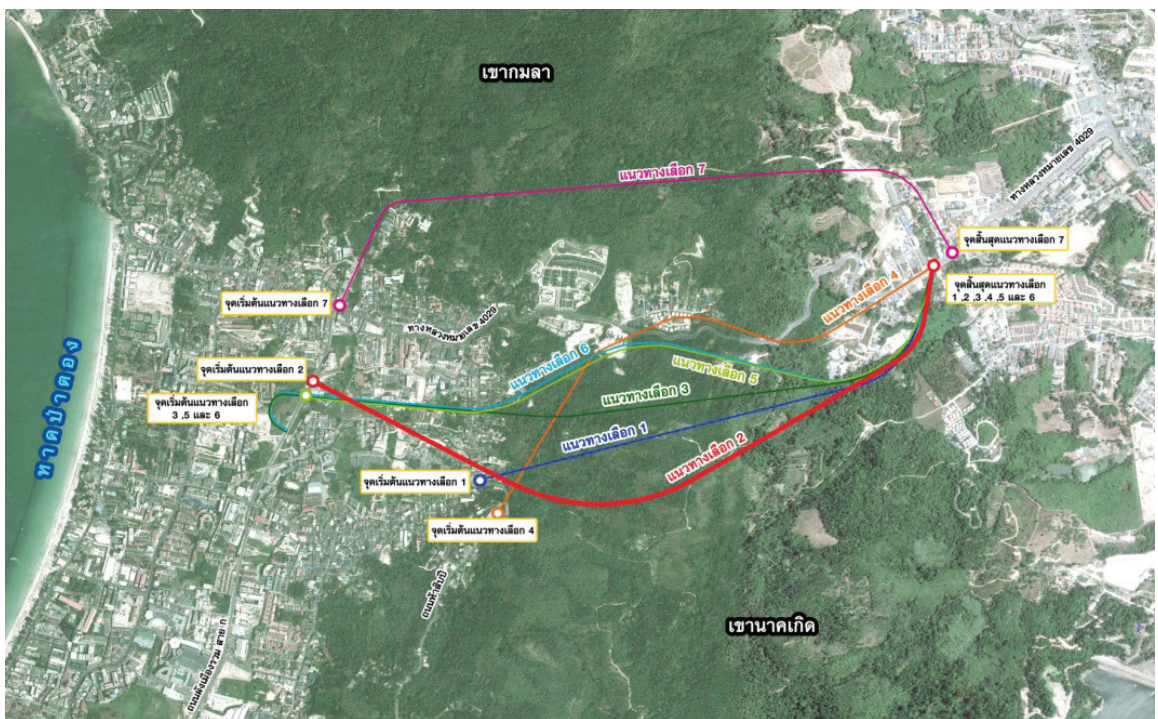


Figure 11 : Location and route alignment of Khatu-Patong project

The initial phase of the feasibility study shows that EXAT places special importance on evaluating operational impact on biodiversity in the area.

In fiscal year 2013 EXAT organized various important projects to improve, develop and alleviate environmental impact in Bangkok Metropolitan area with the objective of conducting environmental checks on quality of physical resources, namely air quality, noise level and vibration along six main expressways namely the Chalong Rat Expressway (Ramintra-Outer Ring Road), Kanjanaphisek (Bang Phli-Suksawat), Chaloe Maha Nakhon and Chalong Rat Expressway (Ramintra-Archnarong), Burapha Withi and Bang Na-At Narong to find trend of environmental quality and impact on the people as a result of expressway operations. The results were as follows:

(1) Measure of environmental quality along the expressway: The result of measurement of environmental quality can be summarized as most of the environmental quality is within standard requirements comprising air quality, but the measure of noise level at Burapha Withi was found to be over the standard limit. The result of noise level, forecast using mathematical model, found that only specific noise from the expressway has value within the standard, but there are other origins of noise which may result in a noise level above standard such as traffic noise from Bang Na-Trad. However, EXAT has established plans to monitor noise level in the area constantly.

(2) Monitor operations to follow preventive measures to reduce environmental impact : Following a careful review of operational preventive measure to reduce environmental impact on Bang Na-At Narong Expressway, Chalong Rat Expressway, Kanjanaphisek (Bang Phli-Suksawat)and Burapha Withi, it was found that EXAT had carried out its operations completely in accordance with the measures required, as specified in the analysis report on environmental impact, comprising air quality measures, noise level, vibration, water quality, land ecosystem, water ecosystem, garbage and waste, socio-economic, transportation, safety and physical appearance.

6.4.3.7 Initiative to Evaluate environmental impact from automatic toll collection system

In 2013 fiscal year EXAT published research paper on An Evaluation of Electronic Toll Collection System: An Application of Non-Stop Lane) to create understanding of its effectiveness compared to other types of toll collections, its benefits as well as environmental impact, energy consumption and air pollution.

The Easy Pass lane is able to serve 850 vehicles per hour since drivers are required to slow down, which prompted the study to evaluate the effectiveness of an application of non-stop lane, using the Easy Pass system to compare with the existing use in two ways. One was on the traffic engineering aspects (speed at which a vehicle travels in passing through and time taken to pass the lane). The other aspect was environmental impact (fuel consumption, toxic gas by using GPS Probe Vehicle information for analysis.) It was found that the non-stop lane was more effective as drivers were able to drive at the speed of 60 km/hr which was 10 seconds faster than the Easy Pass lane. It helps reducing fuel consumption and emission of toxic gas by 20 percent compared to Easy Pass (outside rush hour). When the results were used in calculating expenses, it was found that over the next 10 years the non-stop lane will help save fuel consumption by 19.09 percent and reduce accumulation of toxic gas by 36.54 percent when compared with Easy Pass.

Future development of non-stop lane will help reduce environmental problems and pollution. However, a careful study needs to be conducted on the existing behavior of users. This is because users who have no Easy Pass card will also be able to pass through the non-stop lane. Therefore, measures need to be established to accommodate such situations, for example, surveillance camera to capture license plate, fines on renewal of license plate or post-paid system should be applied to offer more choices for toll collection in the future for greater convenience.

6.4.4 Resource management

Effective resource management is a critical issue for which every sector, and personnel in each function, must take joint responsibility. Most of the resources must be transformed into usable substance. The process of transformation will involve the use of natural resources in various ways. EXAT places strong emphasis on sustainable use of resources by separating them as follows:

6.4.4.1 Material Management

Effective material management system will help reduce operating costs and consumption of resources for production. EXAT projects related to sustainable material management are the management of resources both construction materials and office equipment. One of the important construction materials used for the construction of expressways is Asphalt concrete as shown in table 26, and office equipment is among the top three for largest quantity usage as shown in table 27.

Table 26 : Amount of Asphalt separated according to its use, fiscal year 2012-2013

Used of Asphalt	Amount used (tons)	
	Year 2012	Year 2013
Improve road surface of Chaloem Maha Nakhon Expressway	17,611.73	1,625.00
Improve road surface of Bang Na Expressway	-	1,215.00
Improve road surface of Burapha Withi Expressway	1,536.38	-
Improve road surface of Kanjanaphisek Expressway (Bang Phli-Suksawat)	2,160.00	-
Improve road surface of Chalong Rat Expressway	1,109.32	-
Total	22,417.43	2,840.00

Table 27 : Top three office equipment by quantity usage, fiscal year 2012–2013

Used office materials	Amount used (kilogram)	
	Year 2012	Year 2013
Thick recycled A4 paper 80 grams	25,792.50	25,365
Thick A4 paper 80 grams	51,137.50	56,017.50
Large double-ply toilet paper with the length of 300 meters/roll	19,572.30	21,395.70

Remarks: comparison of weight from one large roll of toilet paper weighing 0.9 kg and one ream of A4 weighing 2.5 kgs

6.4.4.2 Waste Management

EXAT has continued to develop and improve its waste and dangerous waste management systems through employee participation by discarding waste in separate containers which are clearly prepared and labeled. These include general, recycled, dangerous and contaminated waste. Cleaners will check and put the discarded waste into correct containers for further evaluation and corrective action. Dangerous and contaminated waste will be separated and treated according to the legal requirements. EXAT places special emphasis on increasing efficiency of recycled waste for future reuse at offices and on the expressways.

6.4.4.3 Water Resources

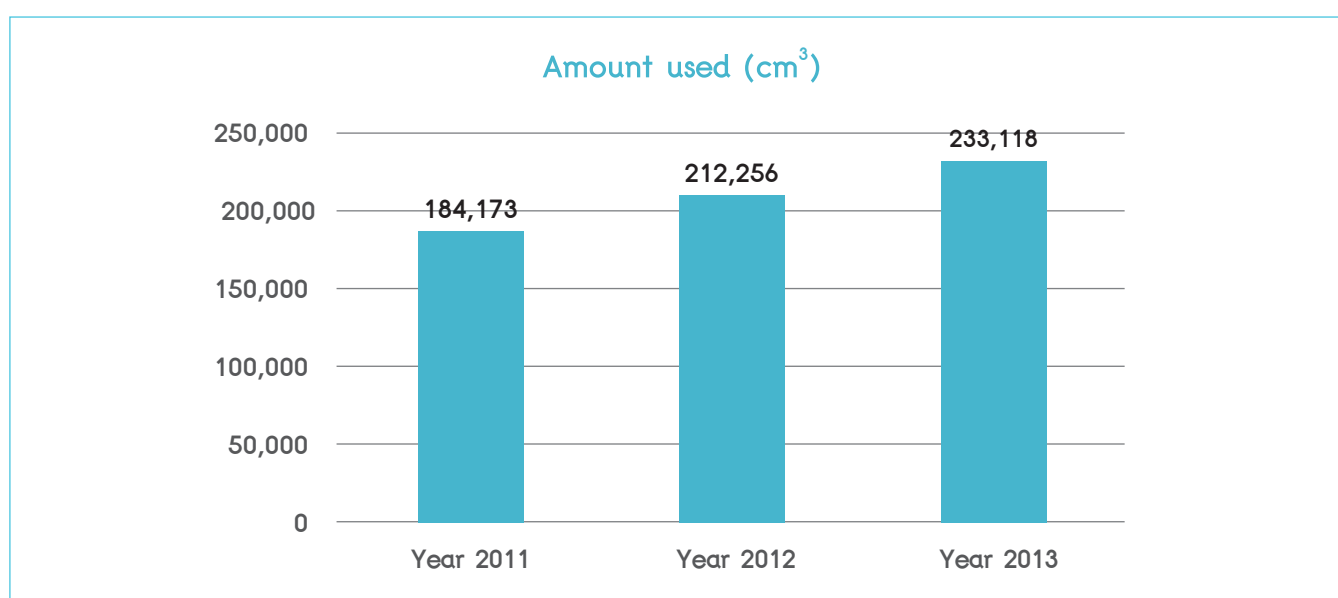
Water may not be a key resource used in expressway service but water is used in large quantities for construction work, cleaning, and spraying to reduce dust particles on the expressway. Therefore EXAT places special importance on the use of water resources, collecting information and ensuring effective management of water resources, and monitoring the use of water in office buildings at key operating locations as follows:

Table 28 : Amount of water consumption by sites of operation, fiscal year 2012–2013

Area	Source of water	Amount used (cm ³)	
		Year 2012	Year 2013
Head Office	Water supply	20,699	17,910
Land Acquisition Department Building	Water supply	10,770	9,841
Control Center Building 1 (Klongteoy) (Traffic control Department)	Water supply	28,941	30,932
Control Center Building 3 (Maintenance Department)	Water supply	25,744	26,597
Control Center Building 4 (Maintenance Department)	Water supply	4,562	4,321

Table 28 : Amount of water consumption by sites of operation, fiscal year 2012-2013 (continued)

Area	Source of water	Amount used (cm ³)	
		Year 2012	Year 2013
Maintenance Center at Sathu Pradit (Maintenance Department)	Water supply	815	2,725
Toll plaza building at Chaloem Maha Nakhon	Water supply	29,382	39,775
Toll plaza building at Chalong Rat	Water supply	9,689	11,716
Toll plaza building at Burapha Withi	Water supply	17,299	20,292
Toll plaza building at Bangpli-Suksawad	Water supply	53,489	58,720
Ramintra-Outer Ring Road	Water supply	4,663	5,727
Elevated expressway at the south of Suvarnabhumi Airport connecting to Burapha Withi	Water supply	861	907
Scaling/Weighing Gate at Bang Khun Thian	Water supply	169	541
Scaling/Weighing Gate at Bang Kaew	Water supply	2,826	153
Interchange for Bangpli-Suksawad with Burapha Withi	Water supply	1,219	1,382
Park & Ride	Water supply	14	14
Building at Puchao Saming Phrai	Water supply	1,114	1,567
Total		212,256	233,118



(as of September 30, 2013)

Figure 12 : Amount of EXAT water usage, fiscal year 2011-2013

The reason for the annual increase in the amount of water usage was due to operational expansion and increase in the number of employees. However, EXAT has continued to place special emphasis on effective use of water resource.

6.4.4.3 Electrical power

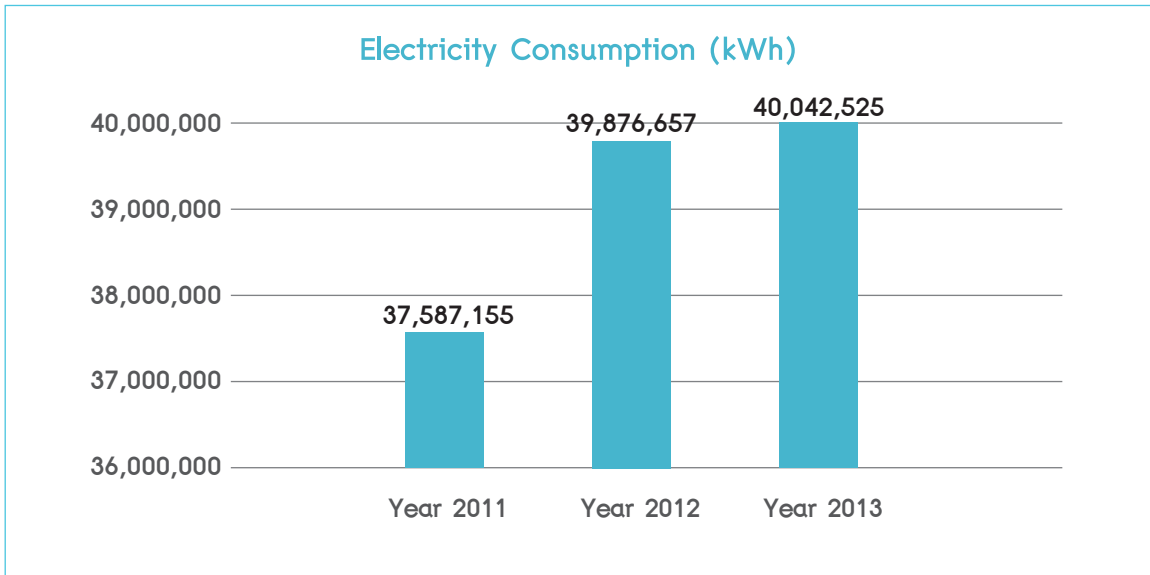
The use of electrical power to light routing and toll plaza areas is necessary and also very important for the safety of travelers in those areas, as well as the use of electricity in office buildings.

Effective operations will help manage energy consumption and better accommodate need for energy as demand continues to rise. EXAT therefore appointed a Working Group for energy management at its Head Office, located at Chatuchak, with EXAT Deputy Governor holding the position of Chairman, while top executives and employees from related functions are represented as members. This reflects EXAT's strong commitment to reducing environmental impact. EXAT also announced its 2013 Building Energy Conservation Policy at Head Office as follows:

- (1) To operate and develop appropriate energy management systems by incorporating energy conservation in its functional operations in line with the legal requirements and other restrictions
- (2) To improve effectiveness of energy resource consumption on a regular basis to ensure that it is appropriate for the work, technology and good operational guidelines
- (3) Determine plans and targets for energy conservation each year and communicate them to employees to create better understanding and to put them into practice
- (4) Energy conservation is the responsibility of every employee, and worker must follow the measures, monitor and report in accordance with the Energy Conservation Promotion Act (2nd revision) B.E. 2550 (2007)
- (5) Create employee awareness of energy conservation and responsible use of energy
- (6) Provide necessary support including human resources, budget, working hours, training and participation in giving recommendations for energy development
- (7) Annual review of policy, target and operational plan for energy consumption

EXAT recorded energy consumption at office buildings, toll plazas, expressway routes and other related areas for future analysis to find ways to reduce future consumption. In fiscal year 2013, total energy consumption throughout the organization was recorded at 40,042,525 kilowatts-hour or accounting for average energy value of 114,153.09 Gigajoules¹⁰. Amount of electrical energy consumption at office buildings and toll plazas is shown in Figure 13.

¹⁰1 kilowatts-hour equals to 0.0036 Gigajoules



(as of September 30, 2013)

Figure 13 : Amount of electricity consumption, fiscal year 2012-2013

Electrical energy consumption in fiscal year 2013 recorded the area with the highest consumption as the electricity meter at the expressway, which included lighting on and underneath the expressway and spotlight at building and weighing gate, at 24,339,812 kWh as shown in figure 14.



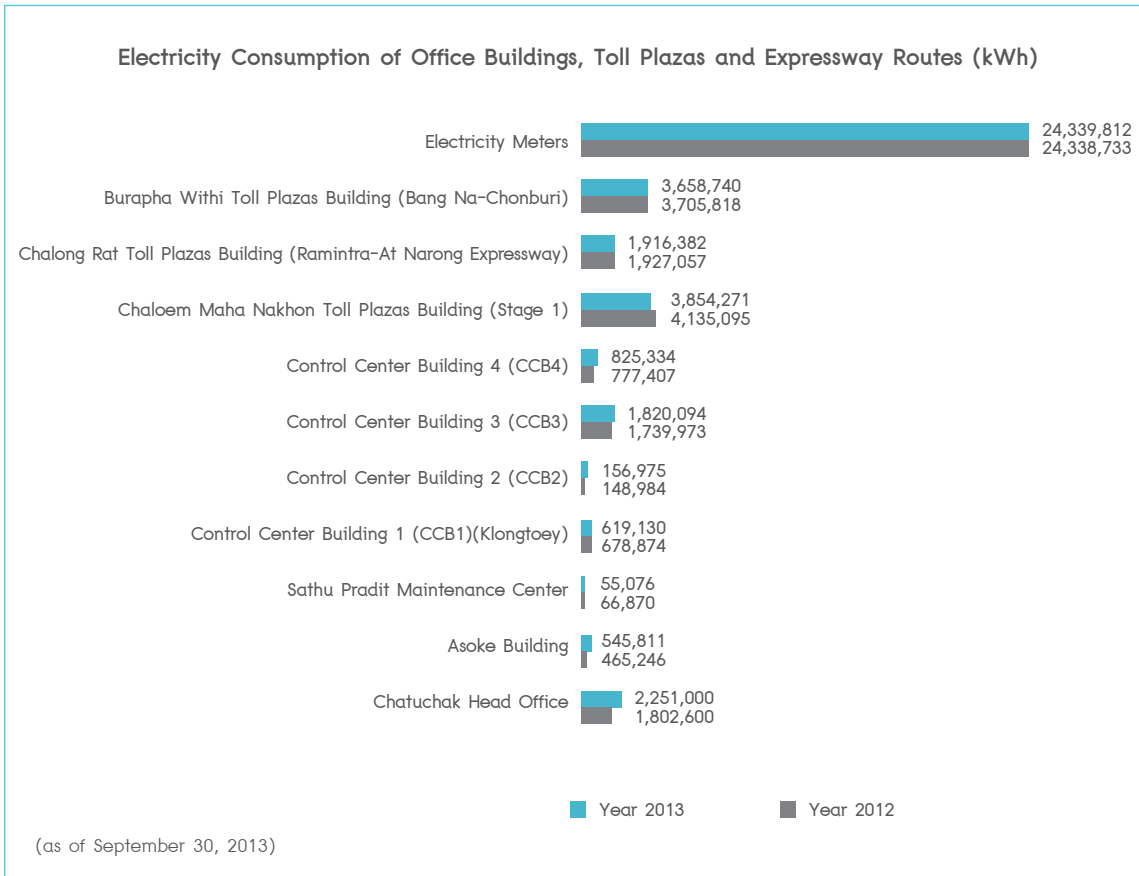


Figure 14 : Amount of electricity consumption by site of operations, fiscal year 2012-2013

In fiscal year 2013 EXAT placed extra emphasis on effective energy management by conducting studies, tests and establishing an energy consumption development plan. Building energy consumption was improved by changing the air conditioning system to a more efficient type, changing light bulbs from T8 to LED and using alternative energy at toll plaza.

EXAT improved the energy management system at all five buildings at its Head Office, chatuchak. The procedures included determining energy conservation policy, stimulating and improving staff morale, and improving news and public information system for PR and investments. From the information of machinery and main equipment evaluation it was found that electrical equipment contributing significantly to building energy consumption are air conditioners and light bulbs. Initial evaluation found that there were 224 air conditioners accounting for electricity consumption of 1,571,526.60 kilowatts-hour/year and 4,515 light bulbs accounting for 293,784.24 kilowatts-hour/year.

For operational improvements EXAT decided to order 70 new and more efficient air conditioners in place of its existing split type air conditioners that were over 10 years old. This enabled EXAT to reduce electricity consumption by 151,719.83 kilowatts-hour/year or 546.2 Gigajoules per year. The 257 fluorescent bulbs size 36W were replaced by slim TX bulbs size 28W, helping to reduce electricity consumption by 4,262.30 kilowatts-hour/year or 15.3 Gigajoules per year. The above calculation was based on air conditioners and T8 light bulbs that were turned on 8 hours a day for 243 working days in a year.

From the record, it was found that energy saving was below target. It aimed to achieve a reduction of 8.01 percent but the results of the above changes of electrical equipment only helped to reduce the consumption by 0.213 per cent. This may have been due to the fact that only aging light bulbs were changed and there was delay in the procurement process to acquire more efficient air conditioners since no suppliers matched the required specifications. Therefore EXAT is currently in the process of improving the specifications for the procurement of air conditioners.

6.4.4.4 Fuel Consumption

Fuel is essential for maintenance work and operation of machinery as well as vehicles used for all EXAT operations. In fiscal year 2013 the total fuel consumption was recorded at 1,603,754 litres and NGV of 6,796,536 kgs, accounting for 542,396.61 Gigajoules. Different types of fuel are displayed in Figure 29.



Table 29 : Fuel consumption for vehicles, fiscal year 2013

Fuel consumption for vehicles in fiscal year 2013		
Type	Quantity	Energy value (Gigajoules)*
Diesel	999,733.270 Litres	522,190.68
Gasohol 95	314,312.800 Litres	10,510.62
Gasohol 91	287,463.140 Litres	9,612.77
Gasohol E20	2,244.621 Litres	72.01
NGV	6,796.536 Kilograms	10.53
Total		542,396.61

(as of September 30, 2013)

Remark * Each fuel type in quantity can be converted to energy value as follows:

- Diesel : 1 Litre equals to 0.036 Gigajoules
- Gasohol 95 and Gasohol 91 : 1 Litre equals to 0.033 Gigajoules
- Gasohol E20 : 1 Litre equals to 0.032 Gigajoules
- NGV : 1 Kilogram equals to 0.00155 Gigajoules

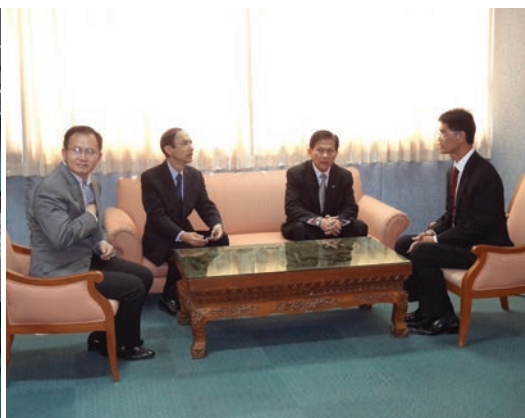
In addition, EXAT established measures in preparation for generation of electricity in case of outage or short circuit in fiscal year 2013. The total amount of diesel fuel used for generation was 1,549.60 litres or equivalent to the average energy value of 809.4 Gigajoules¹¹.

The results for fiscal year 2013 indicate the highest use for diesel, which is the main fuel used by EXAT. In addition to diesel, EXAT also uses Gasohol and NGV as energy sources.

In fiscal year 2013, electrical energy, and alternative energy used when there were / outages, accounted for 657,359.10 Gigajoules. From past operations it was found that EXAT should have new measures or innovation to replace existing energy for more effective energy management together with energy conservation which will lead to effective and sustainable development of the organization. ■

¹¹1 Litre equals to 0.2642 US Gallon, 1 US Gallon equals to 0.138 Gigajoules

7. Engagement in Corporate Social Responsibility Practices of the Board of Expressway Authority of Thailand



In addition to its efforts to solve traffic problems, the Expressway Authority of Thailand (EXAT) continues to place special emphasis on Corporate Social Responsibility in support of its goal of achieving a low carbon society while maximizing corporate operational efficiency. Projects and activities are organized regularly to serve the needs of every social segment, including stakeholders. EXAT Board members are dedicated to promoting sustainable environmental protection in line with its CSR development strategy under the corporate 5-year CSR Master Plan (2011–2015). CSR is integrated into EXAT operations and business decisions, focusing on practices that are in line with international standards and Global Reporting Initiative (GRI). Its operations are based on recognizing the importance of stakeholders, and involvement of EXAT with stakeholders while maintaining a direct role in CSR, helping to further enhance its CSR operational efficiency which will lead to CSR integration throughout the organization.

Last year EXAT organized various activities to promote good governance in the form of visits, seminars, social activities, religious ceremonies, training programs and interactive meetings. All of which reflect EXAT's strong awareness and commitment towards CSR-in-process with the solid support and participation of its board members, executives, employees, and workers. It is recognized that effective CSR practices start with resilient good governance within the organization.

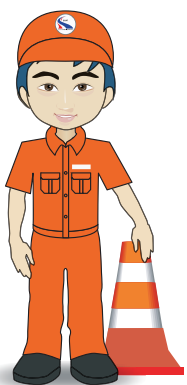
Mr. Chanwit Amatamatuchart and Police Major General Surasit Sankapong, EXAT board members, joined a training program for good governance to enhance better understanding among members of the board and subcommittee, as well as executives and employees. The training program began on August 16, 2013, from 13:00-15:30 hours, at the Nonsee-1 Room, 4th Floor, KU Home, Kasetsart University.

An interactive meeting entitled "Good Governance, Challenges and Organization Sustainability" was organized to provide a broader outlook on good governance through an exchange of views and ideas. Mr. Sumet Pomanee, Chairman of the Board, and Police Major General Surasit Sankapong and other board members participated in this meeting.

Besides good governance, the board including Mrs. Urai Rompoyok and Mr. Chanwit Amatamatuchart recognized the issue of fraud and the importance of transparency. They have become major social issues today and require immediate corrective measures. Therefore a training program entitled "Responsibility and Transparency: The Heart of Government Officials" was organized at the Nonsee-1 Room, 4th Floor, KU Home, Kasetsart University. Mr. Klanarong Chanthik, Member of the Office of the National Anti-Corruption Commission (NACC), was invited as a guest speaker.

As for public service, Mr. Aiyanut Tinaphai, the Governor, continues to place special importance on public safety and security, especially during long holidays and festive periods when traffic is heavily congested, causing inconvenience and risk to public transport. Police Major General Surasit Sankapong, EXAT board member, joined a campaign to promote public safety and security as well as facilitate public transport during the 2014 New Year period. The campaign started on December 23, 2013, at 08:30 hours, at Toll Plaza Bang Kaew 1, Kanjanaphisek. Representatives from all functions concerned were invited to join for effective preparation.

The dedication, unity and attentiveness of EXAT employees are the core strength of the organization and the Board fully recognizes this fact. Therefore, Mr. Aiyanut Tinaphai, Governor, and Police Major General Surasit Sankapong attended the EXAT 41st Anniversary Celebration on November 27, 2013, at Room 2301, Building 2, 3rd Floor, EXAT, Chatuchak, on Phaholyothin Road, where Buddhist religious ceremonies and offerings were held in the morning. The afternoon sessions included the presentation of royal decorations and certificates for outstanding traffic control officers achieving the "5s" corporate objectives.



8. Awards and Recognition



Sustainability Report Award

EXAT received the Sustainability Report Award presented by the CSR Club of Thai Listed Companies Association, Stock Exchange of Thailand (SET) and Thaipat Institute in recognition of its outstanding Sustainability Report for the year 2013¹². This award recognizes the role of an organization in relation to CSR and sustainability, and its effort to provide information on corporate operations and management approach as well as economic, social and environmental performance reflecting both positive and negative elements, which in turn help develop the organization to achieve sustainable growth.

¹²Reported in the Performance Report 2012, but actual ceremony took place in 2013



Plaque of Appreciation

On August 9, 2013 at the Prince Palace Hotel, Bangkok, a Plaque of Appreciation was presented to EXAT in recognition of its support in establishing the Information Center of Ministerial Level for the year 2012. The award reflects EXAT's role in excellent information distribution in line with the principle of IT information disclosure and transparency.



Certificate for Drug Prevention and Protection Measures within Work Premises

This certifies that EXAT operates in accordance with the government's policy in fighting drugs within the Bangkok Metropolitan area through the use of a systematic approach and introduction of campaigns on a constant basis. As a result, EXAT passed the evaluation and was awarded the certificate with three year validity from August 23, 2013, until August 22, 2014.



Plaque of Appreciation

This Plaque of Appreciation was presented in recognition of the support provided for the construction of a Knowledge Center for Special Children in Meeburi area, and also the Kidney Center, following a project organized to promote Meenburi local culture and the San Saab Canal for sustainable tourism. EXAT recognizes the importance of the young generation who will become an important element of the nation's future development and expansion.





GRI Content Index

The assessment of this report is declared at level B of the GRI Application Level. All performance indicators are referenced from the GRI G3.1 Guidelines.

Standard Disclosures

Profile Disclosure		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
1.	Strategy and Analysis				
1.1	Statement from the most senior decision maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.	●	-	1-3	
1.2	Description of key impacts, risks, and opportunities.	●	-	1-3	
2.	Organizational Profile				
2.1	Name of the organization.	●	-	Cover Page	
2.2	Primary brands, products, and/or services.	●	-	Cover Page	
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	●	-	28-29	
2.4	Location of organization's headquarters.	●	-	26	
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	●	-	24-25	Covers operation in Thailand
2.6	Nature of ownership and legal form.	●	-	24-25	
2.7	Markets served.	●	-	24-25	
2.8	Scale of the reporting organization. (including geographic breakdown, sectors served, and types of customers/ beneficiaries).	●	4-5	26	
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	●	-	-	No significant change
2.10	Awards received in the reporting period.	●	-	86	
3.	Report Parameters				
	Report Profile				
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	●	-	12	Fiscal Year (October 2012 – September 2013)

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● – Fully Reported ◐ – Partially Reported

Profile Disclosure	Reported	Page in AR	Page in CSR	Direct Answer / Explanation
3.2 Date of most recent previous report (if any).	●	-	-	Fiscal Year (October 2012 – September 2013)
3.3 Reporting cycle (annual, biennial, etc.)	●	-	12	Annually
3.4 Contact point for questions regarding the report or its contents.	●	-	23	
Scope and Boundary				
3.5 Process for defining report content.	●	-	12, 22-23	
3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	●	-	12	
3.7 State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	●	-	-	Only primary data is collected from internal stakeholders. And, The reporting process doesn't cover all of EXAT's supply chain
3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	●	-	12	The reporting process doesn't cover all of EXAT's supply chain
3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	●	-	71, 79, 83	Calculation of GHG emission, conversion of energy unit into joules
3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	●	-	-	No significant change
3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	●	-	-	More involvement from higher executive level in defining report content process
GRI Content Index				
3.12 Table identifying the location of the Standard Disclosures in the report.	●	-	90-100	
Assurance				
3.13 Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	●	-	-	No external assurance

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● - Fully Reported ◐ - Partially Reported

Profile Disclosure		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
4.	Governance, Commitments, and Engagement				
	Governance				
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	●	-	27-29	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	●	-	27	The Governor is not the Chairman of the Board of Directors
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	●	-	27	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	●	31-32, 63, 66	-	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	●	35-36, 44, 50-51	-	
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	●	-	30-33	
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	●	-	27	
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	●	-	32-35	
4.9	Procedures of the highest governance body for overseeing the organization'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.	●	-	34-35	
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	●	-	33-34	

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● – Fully Reported ◐ – Partially Reported

Profile Disclosure	Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Commitment to External Initiatives				
4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization.	●	-	33-35	
4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	●	-	-	ISO 9001, ISO 14001, ISO 14040, GRI
4.13 Memberships in associations (such as industry associations) and/or national/ international advocacy organizations in which the organization Has positions in governance bodies, Participates in projects or committees, Provides substantive funding beyond routine membership dues, or Views membership as strategic.	●	-	-	No membership in any associations
Engagement				
4.14 List of stakeholder groups engaged by the organization.	●	-	13	
4.15 Basis for identification and selection of stakeholders with whom to engage.	●	-	8, 12-13	AA1000SES
4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	●	-	15-21	
4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	●	-	9-11	



Remarks :
AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013
● - Fully Reported ◐ - Partially Reported

Disclosure on Management Approaches

Management Approaches		Page in AR	Page in CSR	Direct Answer / Explanation
DMA EC	Disclosure on Management Approach EC			
	Economic Performance	●	56-59	
	Indirect Economic Impacts	●	56-57	
DMA EN	Disclosure on Management Approach EN			
	Materials	●	76-77	
	Energy	●	79-83	
	Water	●	77-78	
	Biodiversity	●	73-75	
	Emissions, Effluents, and Waste	●	69-71,79	
	Products and Services	●	69-72, 74-76, 79-83	
DMA LA	Disclosure on Management Approach LA			
	Employment	●	38,41-42	
	Labor/ Management Relations	●	43	
	Occupational Health and Safety	●	46-48, 52-53	
	Training and Education	●	44-45	
	Diversity and Equal Opportunity	●	41-64	
DMA HR	Disclosure on Management Approach HR			
	Non-discrimination	●	38-64	
	Child Labor	◐	64	Comply with the Thai Labor Law
	Forced and Compulsory Labor	◐	64	Comply with the Thai Labor Law
	Remediation	◐	63-64	
DMA SO	Disclosure on Management Approach SO			
	Local Communities	●	58-59, 61-63,	
	Corruption	●	72-75 63-64	
DMA PR	Disclosure on Management Approach PR			
	Customer Health and Safety	●	49-50	
	Product and Service Labeling	●	55	

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● - Fully Reported ◐ - Partially Reported

Sustainability Performance Indicators

Economic

Economic Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Economic Performance Indicator					
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	●	-	57	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	●	-	70	
EC3	Coverage of the organization's defined benefit plan obligations.	●	-	41-42	
EC4	Significant financial assistance received from government.	●	-	57	
Indirect Economic Impacts					
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	●	-	56-59	

Environmental

Environmental Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Materials					
EN1	Materials used by weight or volume.	●	-	76-77	
EN2	Percentage of materials used that are recycled input materials.	●	-	76-77	
Energy					
EN3	Direct energy consumption by primary energy source.	●	-	82-83	
EN4	Indirect energy consumption by primary source.	●	-	79-82	
EN5	Energy saved due to conservation and efficiency improvements.	●	-	82	
Water					
EN8	Total water withdrawal by source.	●	-	77-78	Use only water supply

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● – Fully Reported ■ – Partially Reported

Environmental

Environmental Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Biodiversity					
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	◐	-	73-75	
Emissions, Effluents, and Waste					
EN16	Total direct and indirect greenhouse gas emissions by weight.	◐	-	68-69	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	◐	-	65-66, 68-69	
EN22	Total weight of waste by type and disposal method.	◐	-	77	
Products and Services					
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	●	-	68-71	

Human Rights

Human Rights Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Non-Discrimination					
HR4	Total number of incidents of discrimination and corrective actions taken	●	-	38, 42, 64	No incidents of discrimination
Child Labor					
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	●	-	-	No incidents of child Labor
Forced and Compulsory Labor					
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	●	-	-	No incidents of forced or compulsory labor

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● – Fully Reported ◐ – Partially Reported

Human Rights

Human Rights Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Remediation					
HR11	Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms.	●	-	61-62	No grievances related to human rights

Labor Practice and Decent Works

Labor Practice and Decent Works Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Employment					
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	●	-	39-40	Number of workforce is not categorized by region as EXAT operation is based in metropolitan area only
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	●	-	39-40	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	●	-	42-43	
LA15	Return to work and retention rates after parental leave, by gender.	●	-	42	
Labor/ Management Relations					
LA4	Percentage of employees covered by collective bargaining agreements.	●	-	44	
Occupational Health and Safety					
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.	●	-	46-48	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	●	-	48	No counseling programs for workforce member and their family. And, occupational activities with a high incidence or high risk of specific disease is not identified

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● – Fully Reported ◐ – Partially Reported

Labor Practice and Decent Works

Labor Practice and Decent Works Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Training and Education					
LA10	Average hours of training per year per employee, by gender, and by employee category.	●	-	44-45	
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	●	-	44-45	
Diversity and Equal Opportunity					
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	●	-	41	

Social

Social Performance Indicator		Reported	Page in AR	Page in CSR	คำอธิบายเพิ่มเติม
Local Communities					
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	●	-	58, 65-67	
SO9	Operations with significant potential or actual negative impacts on local communities.	●	-	61-62, 66-67	
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	●	-	59-60	
Corruption					
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	●	-	63-64	

Remarks :

AR – EXAT Annual Report 2013, CSR – EXAT CSR Report 2013

● - Fully Reported ◐ - Partially Reported

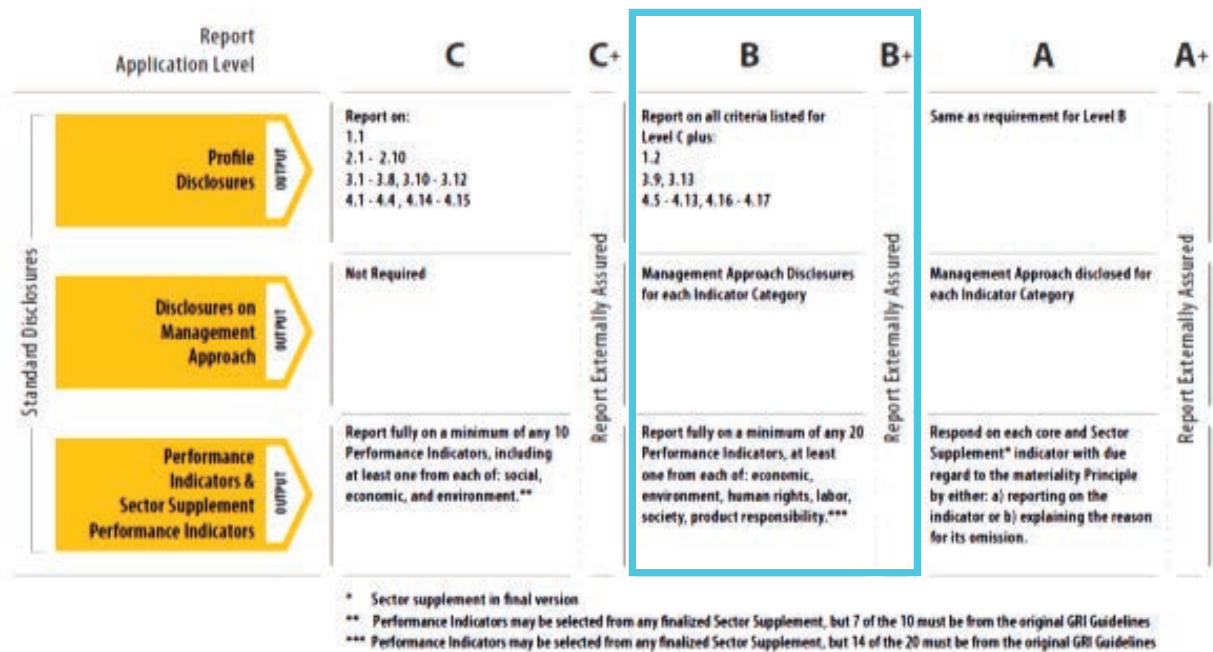
Product Responsibility Performance Indicators

Product Responsibility Performance Indicator		Reported	Page in AR	Page in CSR	Direct Answer / Explanation
Customer Health and Safety					
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	●	-	50, 67-68	
Product and Service Labeling					
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	●	-	55	Significant service information is safety use of expressways and Easy Pass manual
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	●	-	52-53	

Remarks :

AR — EXAT Annual Report 2013, CSR — EXAT CSR Report 2013

● - Fully Reported ◐ - Partially Reported





Statement GRI Application Level Check

GRI hereby states that **Expressway Authority of Thailand** has presented its report "EXAT Corporate Social Responsibility Report 2013" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 28 August 2014

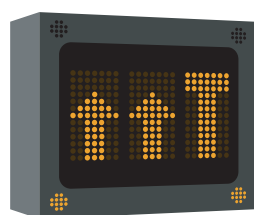
A handwritten signature in black ink, appearing to read "Ásthildur Hjaltadóttir".

Ásthildur Hjaltadóttir
Director Services
Global Reporting Initiative

The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 22 August 2014. GRI explicitly excludes the statement being applied to any later changes to such material.









Expressway Authority of Thailand

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