

# EASTERN WATER RESOURCES DEVELOPMENT AND MANAGEMENT PLC

Announcement no. 871

8 May 2012

**Company Rating:** A+

**Outlook:** Stable

**New Issue Rating:** -

**Rating History:**

Date	Company	Issue (Secured/Unsecured)
23/01/08	A+/Sta	-
11/10/07	A+/Alert Dev	-
20/09/07	A+/Alert Dev	-/A+
12/07/04	A+/Sta	-/A+
29/06/04	A+	-/A+

**Rating Rationale**

TRIS Rating affirms the company rating of Eastern Water Resources Development and Management PLC (EASTW) at “A+”. The rating reflects EASTW’s strengths as the sole raw water provider with a comprehensive pipeline network in the Eastern Seaboard, high barriers to entry, and low operating risk. The rating is further supported by the company’s reliable stream of cash flows and strong financial profile. However, EASTW’s strengths are partially constrained by the large capital investment requirements, the unpredictable effects of climate change, and customer concentration risk. In addition, the water resource management regulations set by the authorities remain unclear. This raises a concern over the company’s ability to service the growing demand in the future.

Established in 1992, following a Cabinet resolution, EASTW was mandated to be responsible for the development and management of raw water distribution systems in seven provinces in the Eastern Seaboard. Currently, the raw water provision services offered by EASTW focus on Chonburi, Rayong, and Chachoengsao provinces, as the commercial activities and communities in these areas continue to expand. In addition, the company also provides tap water in 11 service areas. In 2011, EASTW’s total revenue was Bt3,310 million. Raw water sales accounted for 68% of total revenue, while tap water services represented 23% of the total.

Since inception, the company’s business fundamentals have remained strong as raw water demand by industrial users on the Eastern Seaboard has grown consistently. Raw water demand is also susceptible to economic conditions, as illustrated in 2009 when raw water sales declined in tandem with the economic downturn. In 2011, raw water sales grew 6.6% from a year earlier. Raw water revenue rose to Bt2,261 million as the level of industrial activity expanded mainly in the Map Ta Phut area and because of higher demand from consumer groups. The revenue generated from the tap water business remained strong, up by 6.4% compared with the previous year. However, EASTW is exposed to customer concentration risk, as sales to the Provincial Waterworks Authority (PWA) and the Industrial Estate Authority of Thailand (IEAT), the major shareholders and key customers, comprised 65%-70% of total annual sales during the last five years. In addition, PWA had bargaining power when negotiating the raw water tariff, as shown during 2008-2011 when the company had provided some discounts to its domestic consumption customers included the PWA.

The company has initially leased and operated four water pipeline networks previously overseen by the Ministry of Finance (MOF). EASTW continues to develop its distribution network so that it connects all service areas. Although water distribution does not require complicated technology, it does require an extensive network. This capital intensive requirement does pose a significant barrier to entry. EASTW is unlikely to face a threat from any large competitor in its

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raw water service coverage area during the foreseeable future. A fully connected network enhances EASTW's ability to efficiently manage and extract water from various sources to supply its clients in all service areas. One major threat to the raw water service business is the sourcing of water supplies. Climate change could affect the volume of rainfall. The rains fill the reservoirs during rainy season and the accumulated water supply is used throughout the whole year. Moreover, to cope with increasing demand, EASTW has to continue to find new raw water sources. The new sources are often located farther from EASTW's service areas. Therefore, EASTW is likely to incur higher costs for water extraction. The additional volume of water supply is subject to approval by the Royal Irrigation Department (RID) which typically gives priority to the provision of water to the agricultural sector. During 2010-2011, EASTW was granted an additional allocation of water from the Dokkrai reservoir amounting to 20 million cu.m., and to 54 million cu.m. from the Nong Plalai reservoir. For the tap water business, although demand has grown steadily, the prospects for expansion are modest since PWA does not seem to grant any new concessions or outsource its operations.

EASTW's solid financial performance is derived from its reliable sources of income and resilient demand for water. The company's operating margin before depreciation and amortization was high at 54%-56% between 2009 and 2011. Funds from operations (FFOs) increased from Bt1,286 million in 2010 to Bt1,368 million in 2011. At the same time, total debt increased from Bt2,564 million in 2010 to Bt2,984 million at the end of 2011. The rise came because of the investment required for the third Nong Plalai-Map Ta Phut pipeline project. Cash flow protection, as measured by the FFOs to total debt ratio, was down from 50% in 2010 to 46% in 2011. However, the earnings before interest, tax, depreciation, and amortization (EBITDA) interest coverage ratio remained strong, rising from 19.9 times in 2010 to 23.8 times in 2011. As a result, the ratio of total debt to capitalization increased from 28% in 2010 to 30% in 2011. EASTW's leverage is expected to rise, as the company intends to use debt to finance part of its investments. EASTW plans to invest more than Bt4,000 million in total during 2012-2014. Meanwhile, EASTW is likely to continue its annual dividend payment.

#### Rating Outlook

The "stable" outlook reflects the expectation that EASTW will sustain its ability to generate cash and that its operations will not be adversely impacted by any shifts in government policy. EASTW is also expected to expand with a conservative use of leverage and well-disciplined monitoring.

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### Eastern Water Resources Development and Management PLC (EASTW)

**Company Rating:**

A+

**Rating Outlook:**

Stable

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#### KEY RATING CONSIDERATIONS

##### *Strengths/Opportunities*

- Sole raw water provider with an extensive network in the Eastern Seaboard
- High barriers to entry
- Low operating risk
- Predictable and stable cash flow
- Strong financial profile

##### *Weaknesses/Threats*

- Large capital expenditures
- Uncontrollable risk of climate change
- Customer concentration risk
- Unclear government regulations on water resource management

#### CORPORATE OVERVIEW

EASTW was founded in 1992, following a Cabinet resolution on 12 September 1992, to privatize the responsibility for raw water distribution in the Eastern Seaboard, comprising seven provinces: Chonburi, Rayong, Chachoengsao, Prachinburi, Sakaeo, Chanthaburi, and Trat. EASTW was listed on the Stock Exchange of Thailand (SET) in 1997. As of March 2012, EASTW was 40% owned by the PWA, a state enterprise responsible for providing tap water in provincial areas. Other major shareholders are Electricity Generating PLC (EGCOMP), holding 19%, Utilico Emerging Market Ltd. (10%), and the IEAT (5%).

Currently, EASTW's core operations involve raw water distribution, tap water production and distribution, and engineering services. The major revenue contribution is from raw water, which generally provides over 60% of

total revenue. The contribution of the tap water segment has continually increased from 14% of revenue in FY2005 to over 23% in 2011.

**Table 1: EASTW's Total Revenue Breakdown by Line of Business**

Unit: %

Line of Business	2007	2008	2009*	2010*	2011*
Raw water	62	69	66	68	68
Tap water	19	22	22	23	23
Engineering services and rental	12	3	10	8	7
Drinking water	4	0	0	0	0
Pipe-making	3	1	0	0	0
Other income	0	5	2	1	2
Total	100	100	100	100	100
<b>Total (Bt million)</b>	<b>2,430</b>	<b>2,437</b>	<b>2,878</b>	<b>3,107</b>	<b>3,310</b>

\* EASTW changed its accounting period from Oct-Sep to Jan-Dec in Oct 2009.

Source: EASTW

#### Raw Water Segment:

EASTW is the only raw water provider with an extensive pipeline network. The company's service areas for raw water distribution are focused on Chonburi, Rayong, and Chachoengsao provinces. As the key industrial area of Thailand, Rayong contributes approximately 66% of raw water revenue, followed by Chonburi at 33%. The remaining 1% is from Chachoengsao. EASTW has a total pumping capacity of 473 million cubic meters (cu.m.) per year, of which 200 million cu.m. are to serve the Map Ta Phut area, 130 million cu.m. for Chonburi, and 65 million cu.m. for Chachoengsao. The remaining 78 million cu.m. is from the pipeline connecting the Chonburi and Rayong service areas to secure the water supply in case of drought.

**Table 2: EASTW's Raw Water Revenue Breakdown by Province**

Unit: %

Province	2007	2008	2009*	2010*	2011*
Rayong	65	61	61	65	66
Chonburi	30	35	36	33	33
Chachoengsao	5	4	3	2	1
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* EASTW changed its accounting period from Oct-Sep to Jan-Dec in Oct 2009.

Source: EASTW

The key water resources of EASTW are three RID reservoirs: the Nong Plalai and the Dokkrai reservoirs in Rayong, and the Nong Kho reservoir in Chonburi. From 2011 onward, EASTW was granted an approval to extract a total water volume of 245.5 million cu. m. per year from those three reservoirs. In addition, EASTW can also extract

up to 70 million cu.m. of raw water per year from the Rayong and Bangpakong rivers.

#### Tap Water Segment:

Currently, EASTW provides tap water in 11 service areas under concessions granted by the PWA and local administrative agencies. The concession terms range between 15-25 years. The tap water operation is mainly conducted by Universal Utilities Co., Ltd. (UU), a wholly-owned subsidiary of EASTW. As the end of 2011, UU had total production capacity of 272,470 cu.m. per day, including 3,550 cu.m. produced in reverse osmosis facilities. The Rayong plant had the largest production capacity, contributing 22% of total tap water revenue. The company also has a six-year tap water operation and maintenance contract with Egcomp Tara Co., Ltd., in which EASTW has a 16% shareholding stake.

#### Engineering Services Segment:

The engineering services business of EASTW involves the provision of water-related services, such as wastewater treatment, water leakage reduction, and a consulting service for water distribution and production systems. The contribution from this business is minimal and fluctuates based on contract terms.

#### RECENT DEVELOPMENTS

- **RID grants additional allocation of water from Dokkrai and Nong Plalai reservoirs**

During 2010-2011, EASTW was granted an approval to increase the amount of water extracted from two reservoirs: the Dokkrai and the Nong Plalai. The allocation rose from 96 million cu.m. to 116 million cu.m. per year from the Dokkrai reservoir and 66 million cu.m. to 120 million cu.m. per year from the Nong Plalai reservoir. The higher allocation will help the company secure a sufficient supply of raw water in the Rayong and Chonburi service areas for the next few years.

- **Investment in Thab Ma pond project**

In August 2011, the company's board of directors approved the Thab Ma pond project in Rayong. The pond can hold up to 32.5 million cu.m. of raw water to service growing demand in the area. The total project cost is Bt1,530 million and is expected to be completed in 2014.

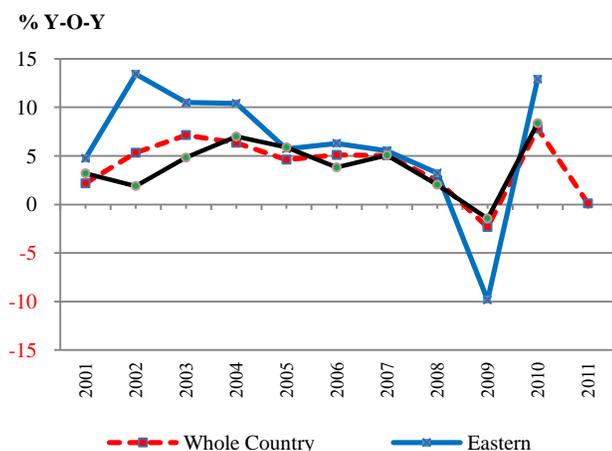
#### INDUSTRY ANALYSIS

- **Flooding in the fourth quarter of 2011 may affect the regional economy and production lines at factories in the eastern region**

After a sharp drop in 2009, the gross regional product (GRP) of the eastern region grew rapidly, at 12.90% year-on-year (y-o-y) for 2010. This rate was higher than

the growth rate of 8.37% for Bangkok and vicinity and the average of 7.81% for the whole country. However, production at factories in the eastern region may have been affected by the flooding which gripped much of Thailand during the last quarter of 2011. The GRP of the eastern region in 2011 is expected to be slow significantly, to a level comparable to the national growth rate of gross domestic product (GDP). Based on the National Economic and Social Development Board (NESDB), the national GDP grew by only 0.1% in 2011. Thai economy is projected to recover in the second half of 2012, after manufacturing operators in flooded area resume normal operation. According to the Office of Industrial Economics, the Manufacturing Production Index (MPI) reported a downturn in production in the first quarter of 2012. The MPI dropped to 175.70 from 189.37 in the same period a year earlier. The drop confirms the impact of flooding to manufacturing sector. However, it is expected that production will resume strongly in the second half of the year to support the economic growth of the whole country. The NESDB forecasts that total investment will grow by 14.20% in 2012, which should drive manufacturing production higher for the full year.

**Chart 1: Growth Rates of Eastern Region GRP and National GDP**



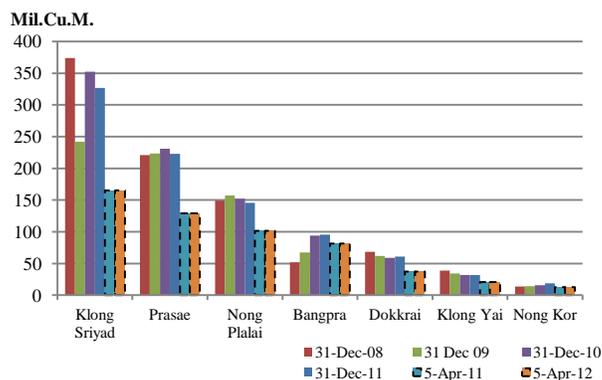
Source: Office of National Economic and Social Development Board (NESDB)

▪ **Flood focus leads to reductions in water storage**

Since 2010, the amount of water available from the large reservoirs has risen considerably, due to heavy rains in many areas of Thailand. Four large water reservoirs in the eastern provinces, i.e., Klong Sriyad, Prasae, Nong Plalai, and Bangpra have a combined capacity of 948.75 million cu.m. The water supply of these reservoirs rose from only 73% of total capacity at the end of 2009 to 88% in 2010 and 83% in 2011. Nonetheless, owing to flood

concerns in 2012, the amount of accumulated water of some reservoirs was drained to prepare for the annual surge in rainfall. In April 2012, the water levels in these reservoirs dropped to a level of 50%, from over 60% in the same period a year earlier.

**Chart 2: Water Levels in Major Eastern Reservoirs**

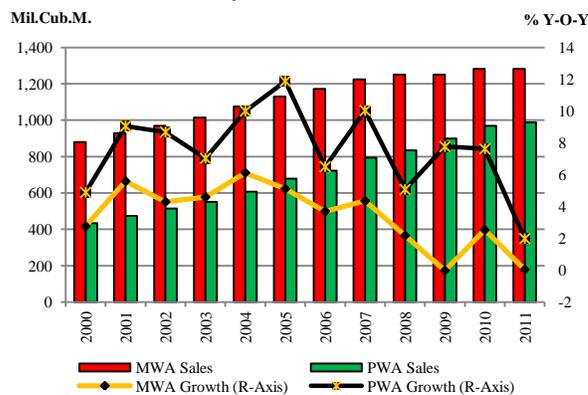


Source: Royal Irrigation Department (RID)

▪ **Demand for piped water in Thailand has room to grow**

According to the Metropolitan Waterworks Authority (MWA) and PWA, demand for piped water in Thailand has continuously increased for the past 10 years. During the past decade, demand for piped water rose from about 1,300 million cu.m. in 2000 to 2,270 million cu.m. in 2011, or an average annual growth rate of 4.97%.

**Chart 3: Piped Water Sales in Thailand**



Sources: Metropolitan Waterworks Authority (MWA) and Provincial Waterworks Authority (PWA)

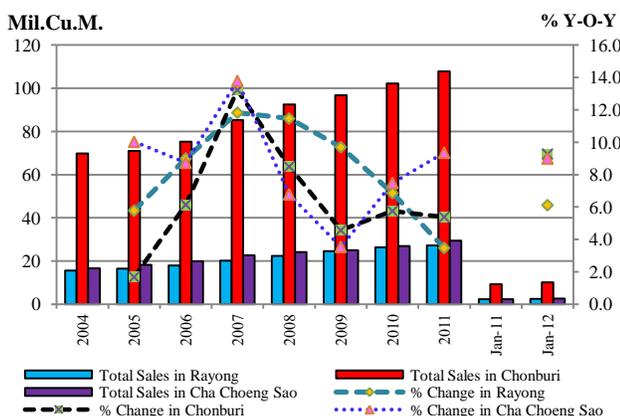
The MWA sold about 60% of the piped water used in three provinces (Bangkok, Nonthaburi, and Samut Prakan); the remaining used in all the other provinces was sold by the PWA. PWA's area coverage is much larger, but less developed than those of MWA. From the past record,

although volume sold of piped water by PWA was less than MWA, the growth rate was much higher. The future demand has a high growth potential due to the expansion of many communities in PWA's servicing areas and the development of many rural areas currently unable to access piped water.

▪ **Demand for piped water in the eastern region continuously grew**

Chonburi, Chachoengsao, and Rayong are three provinces that consume about 80% of piped water sold in the eastern region. Piped water consumption in Chonburi accounted for about 50% of total consumption in the eastern region. Chachoengsao and Rayong provinces consume about 13%-15% each. Demand for water in these three provinces equaled 164 million cu.m. in 2011, a 5.74% growth from a year earlier. Water consumption in these provinces has continuously grown, rising by the total of 64 million cu.m. between 2004 and 2011, or an average annual growth rate of about 8%. This growth rate was more than double the average annual growth of 3.26% of national GDP during the same period. Overall, demand for water in the eastern provinces is expected to grow in 2012, along with stronger economic growth. The NESDB expects GDP will grow between 5.5% and 6.5% in 2012.

**Chart 3: Water Sales in Chachoengsao, Chonburi, and Rayong**



Source: PWA

**BUSINESS ANALYSIS**

EASTW's low business risk is attributable to the reliability of its sales, high barriers to entry, and a comprehensive pipeline network on the Eastern Seaboard. Tap water demand in its existing service area is growing at a steady rate, but there is limitation of receiving new concessions from the PWA.

▪ **Extensive network in Eastern Seaboard creates barrier to entry**

One of EASTW's strengths is its monopoly status as the sole large-scale provider of raw water in the Eastern Seaboard. EASTW is the only raw water supplier with an integrated pipeline network. Initially, the company leased and operated four water pipeline networks, previously overseen by the MOF, serving Rayong, Chonburi, and Chachoengsao provinces. EASTW has continually developed and improved its pipeline network to serve the surging demand. At present, the pipeline network is fully connected, linking its three major service areas: Rayong, Chonburi, and Chachoengsao. The network enables the efficient allocation and channeling of water, fed from multiple sources, to all service areas, including areas where water is scarce. With a fully-connected pipeline network, the operating costs are more controllable, as EASTW has the option of sourcing water from rivers or reservoirs and pumping through less energy-consuming channels. In addition, the third Nong Plalai-Map Ta Phut pipeline project is expected to be completed by the end of 2012. The new pipeline will serve a rise in raw water demand from a third petrochemical complex and the resumption of suspended projects in the industrial areas of Map Ta Phut. Currently, the entire pipeline is laid, and the pumping station is over 50% progress. Once completed, the third pipeline will add another 105 million cu.m. per annum of raw water distribution capacity to the Map Ta Phut area. The new pipeline is expected to cover growing demand in the medium term. EASTW's comprehensive network makes it uneconomical for any newcomer to compete in the company's service areas. Beside the capital investment needed to build a pipeline, laying a new pipeline network requires rights of way to be approved by several government agencies. Moreover, the water resources in this area are quite limited. The risk of clients using their own water reserves is not expected to materially impair EASTW's strong business profile. Construction of a reserve pond needs a large piece of land and a source for water. Therefore, reserve ponds are typically small in volume and used by industrial customers primarily as a backup water supply.

▪ **Secured sufficient water supply**

EASTW sources its water principally from three reservoirs and two rivers. The RID grants five-year contracts, which are renewed every five years, to allow EASTW to draw 245.5 million cu.m. of water per year from the Dokkrai, Nong Plalai, and Nong Kho reservoirs. As of 20 April 2012, the total water volume of the three reservoirs was 143.4 million cu.m. or about 56% of full storage capacity, compared with 165 million cu.m. or about 64% of full storage capacity during the same period last year.

Although the level of water stored in those three reservoirs dropped markedly compared with the same period a year earlier, the level is regarded acceptable. EASTW has closely monitored the volume of water stored in order to prevent a shortage. Moreover, EASTW also has pipelines linked to the Rayong and Bangpakong rivers which could supply up to 70 million cu.m. per year of raw water. The company also entered water supply agreements with Thai Industrial Water Co., Ltd. and Siam Water Resource Co., Ltd., to purchase up to 18 million cu.m. per annum of raw water for the next seven years. In addition, during 2010-2011, the RID allowed EASTW to extract an additional 20 million cu.m. of raw water from the Dokkrai reservoir and another 54 million cu.m. from the Nong Plalai reservoir due to strong demand for raw water. The additional volume of water supply is subject to the RID's approval. Although the RID has always permitted EASTW to extract more water than stated in the contract, the RID usually gives priority to the agricultural sector. Therefore, EASTW has to continue to find new sources of water supply. The new sources are generally located farther from EASTW's service areas. Thus, EASTW is likely to incur higher costs for water extraction. In 2011, the company's total service capability was 281.5 million cu.m., compared with sales volume of 261.5 million cu.m. Taking into consideration a compound annual growth rate (CAGR) of 4% of raw water sales volume during the past five years, existing level of service capability will be sufficient to serve the demand only for the next couple of years.

In 2012, EASTW started the Thab Ma pond project in Rayong for a total cost of Bt1,530 million. Scheduled to be completed in 2014, the project will add 32.5 million cu.m. of water storage volume.

Also, EASTW is studying the feasibility of recycling waste water and supplying it as raw water to industrial customers.

As EASTW's main sources of supply are from natural resources, climate change still poses a major threat to the company's business profile. EASTW set up a drought warning system, a monitoring procedure to be followed when water levels in the reservoirs reach critical points. In the event of a serious drought, the RID maintains the right to reduce the water supply allocated to EASTW. The water sourced from the Rayong and Bangpakong rivers should take into consideration the needs of the nearby communities.

▪ **Sustainable moderate growth**

EASTW supplies raw water to three major customer groups: consumers, industrial estates, and other manufacturers outside industrial estates. EASTW's main service area is the Map Ta Phut industrial area,

which is the hub of the Thai petrochemical industry and home to many manufacturers. A large portion of its sales is derived from industrial estates and manufacturers. Sales to industrial estates and manufactures ranged from 63% to 66% of total raw water sold during the last five years. Meanwhile, the PWA is the key purchaser of water for consumer uses, that is, raw water used to produce tap water. Tap water is mainly consumed in Chonburi province since it is a popular tourist destination. Sales to consumers constitute approximately 33% to 37% of raw water sold annually.

Raw water sales contributions from Rayong, Chonburi, and Chachuengsao have averaged 66%, 33%, and 1%, respectively.

During the past 10 years, EASTW's raw water sales volume grew at CAGR of 8.5%. The growth in the raw water segment, to a certain extent, fluctuates from the growth of the industrial sectors on the Eastern Seaboard, investment promotion laws, and the availability of land for further expansion. The expansion of the industrial community also leads to higher prosperity and population growth in the surrounding areas. On an annual basis, raw water demand is susceptible to changing economic conditions. For example, in 2009, the amount of raw water volume sold by EASTW declined by 1.4% y-o-y, then rebounded by 11.2% y-o-y in 2010 and 6.6% y-o-y in 2011, respectively, mirroring the economic downturn and recovery.

**Table 3: EASTW's Raw Water Sales Volume Breakdown by Customer Type**

Unit: %

Customer	2008	2009*	2010*	2011*
Industrial estates	63	64	65	66
Consumers	37	35	33	32
Manufacturers	1	1	2	2
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* EASTW changed its accounting period from Oct-Sep to Jan-Dec in Oct 2009.

Source: EASTW

**Table 4: EASTW's Year-on-Year Growth Rate for Raw Water and Tap Water by Value and Volume**

Unit: %

	2007	2008	2009*	2010*	2011*
<b>Growth Rate in Sales Value</b>					
Raw water	14	9	15	11	7
Tap water	37	15	13	13	9
<b>Growth Rate in Sales Volume</b>					
Raw water	6	8	-1	11	7
Tap water	30	9	8	10	6

\* EASTW changed its accounting period from Oct-Sep to Jan-Dec in Oct 2009.

Source: EASTW

Demand for tap water is quite resilient. EASTW has reported a significant growth in sales since the start of its operation because of two factors: increased demand and capacity in its existing service areas, and the expansion of its service areas. In 2011, tap water sales grew by 9% y-o-y. Tap water revenue has been driven by plants in Sattahip, Bangpakong, Chachoengsao, and Rayong. The revenue contribution from tap water services has risen from 9% of total revenue in FY2003 to 23% in 2011. EASTW could produce 272,470 cu.m. per day of tap water by the end of 2011. Going forward, the growth prospects are modest, as the PWA continues to construct its own tap water plants and does not plan to grant any new concessions or outsource its existing services. Thus, EASTW's expansion efforts will focus on servicing the tap water needs of municipalities.

▪ ***Future prospect of raw water service hinges on raw water demand***

The outlook for raw water service remains positive in the near future as many suspended industrial projects in the Map Ta Phut area have resumed, driving more demand. Moreover, according to the Board of Investment (BOI), the total value of investment promotion applications submitted to the BOI climbed to Bt231,000 million or up by 106% during the first quarter of 2012, compared with the same period last year. The rise was driven mainly by petrochemical industry and electronic appliances industry whose locations are primarily in the east. In addition, many manufacturers from the central region are considering relocating to the eastern region, avoiding the flood problem experienced in late 2011.

However, the raw water demand growth may be restrained as environmental concerns in the Map Ta Phut has led to the area being declared a pollution control zone. The designation may slow or block further development.

Another factor that may hinder demand for raw water is the climate conditions. A high volume of rainfall, as a result of the La Nina effect in 2011, lessened raw water demand from customers, especially the PWA. The PWA could directly access the Bang Phra reservoir as a source of raw water and reduced the volume of water bought from EASTW. Last year, the Bang Phra reservoir held a significant amount of water and this volume is expected to be maintained in the coming year.

In addition, the RID has invested in a pipeline to bring water from the Phra Ong Chao Chaiyanuchit canal to the Bang Phra reservoir. The project, which is expected to be finished in 2014, would help maintain a high water level in the Bang Phra reservoir. Thus, the PWA will benefit from this project as it can buy raw water from the Bang Phra reservoir directly from the RID at cost lower than the water supplied by EASTW.

▪ ***Exposed to customer concentration risk***

EASTW's major customers are the PWA and the IEAT, which contributed 41% and 26% of total revenues in 2011, respectively. Both have been the top two customers for years with sizable and reliable consumption. Despite the customer concentration risk from the PWA and the IEAT, both of these organizations are government agencies, each with an acceptable risk profile, whose key responsibilities are crucial to supporting economic growth. Notably, with its large purchase volume, the PWA possesses negotiating power. When EASTW implemented new raw water tariff scheme classified by type of user in 2008, the PWA negotiated a price reduction from Bt8.5 per cu.m. to Bt7 per cu.m. for May to December 2008. In addition, during 2009-2011, the tariff for household consumption was discounted by around 6%, as negotiated by the PWA.

▪ ***Capital expenditures to rise***

In order to cope with rising demand in the medium to long term, a secured and sufficient water supply is necessary for EASTW. Capital expenditures are primarily dedicated to the construction of water storage ponds and the improvement of the efficiency of its network to reach nearby water sources. EASTW has invested in the Bang Phra project to improve its distribution system and increase capacity in the Chonburi service area. Currently, the supply of water in Chonburi around 50-60 million cu.m. per annum is supported by the Rayong system at a relatively high cost. Upon completion of the Bang Phra project, EASTW will add up to 40 million cu.m. of water per year to service the Chonburi area at lower cost. The total project cost is Bt975 million and it is expected to be completed in 2013.

The Thab Ma pond project will add an additional 32.5 million cu.m. of water storage to serve rising demand in Rayong, especially in the Map Ta Phut area. The project is scheduled to be completed in 2014 at a total project cost of Bt1,530 million.

For the tap water segment, capital expenditures shall be lower as no new bidding concessions are available. In 2012, EASTW plans to expand the capacity of the Sattahip waterworks by 12,000 cu.m. per day. The project is expected to be completed in 2013 at a total project cost of Bt160 million. The total capacity at the Sattahip waterworks will be 43,200 cu.m. per day after expansion and the total tap water capacity of the company will increase to 284,470 cu.m. per day in 2013.

Capital expenditures needed during 2011-2014 shall total approximately Bt4,000 million.

**FINANCIAL ANALYSIS**

EASTW's financial profile remains strong, characterized by high margins and stable operating cash flows. The level of leverage is modest, given the significant investments completed in FY2006. However, leverage is expected to increase as the company has several large capital expenditures planned during the next few years.

**▪ Healthy profit margins**

In 2011, EASTW's total revenue increased by 6% y-o-y to Bt3,250 million, driven by growing demand for both raw water and tap water. In 2011, revenue from raw water sales rose by approximately 6.8% y-o-y to Bt2,261 million and revenue from tap water sales grew by 8.5% to Bt768 million. Revenue is expected to continue to grow considerably in 2012, supported by a new raw water tariff structure which was implemented in March 2012. The tariff increased by approximately 8% on average across all user groups.

The operating margin has held at high levels, ranging from 54%-56% during 2009-2011. However, the margin will continue to be pressured by rising electricity costs and the higher cost of water pumped from more distant sources. Electricity cost represents the largest and rising portion of total raw water operating cost, or about one-third of total operating cost. The company's pretax return on permanent capital ratio slightly improved from 15.5% in 2010 to 15.9% in 2011.

**▪ Cash flow protection has steadily increased**

The ratio of funds from operations (FFOs) to total debt weakened during FY2006-FY2007, reflecting higher debt levels needed to finance water-shortage prevention projects. The ratio has steadily increased from 17.4% in FY2007 to 47.4% in 2009 and to 47.8% in 2010, as the

company repaid a substantial amount of debt and operating cash flow continuously improved. In 2011, however, the ratio decreased to 45.8% as EASTW borrowed more to finance its capital expenditures, such as the third Nong Plalai-Map Ta Phut pipeline. Nevertheless, EASTW's FFOs will benefit from a cut in the corporate tax rate from 30% in 2011 to 23% in 2012 and 20% in 2013-2014. The EBITDA interest coverage ratio has continuously improved, rising from 13.2 times in 2009 to 19.9 times in 2010, and to 23.8 times in 2011. EASTW's financing charges are expected to increase as the company plans to finance part of its capital expenditures with debt. TRIS Rating believes the predictable and stable cash flows of EASTW will provide an adequate cushion against future increases in financial obligations.

**▪ Leverage is expected to rise**

After reaching a peak of 50.6% in FY2006, EASTW's ratio of total debt as a percentage of capitalization declined to a low level of 26.5% in 2009, due to the low level of investment in that period. The leverage ratio climbed to 28% in 2010 and to 30% in 2011, as debt-funded capital expenditures rose. EASTW plans to invest approximately Bt4,000 million in new projects during 2012-2014. Thus, leverage should gradually increase in the intermediate term.

### Financial Statistics and Key Financial Ratios\*

Unit: Bt million

	----- Year Ended 31 December -----					
	2011 **	2010 **	2009 **	2008	2007	2006
Total sales	3,250	3,066	2,826	2,379	2,401	2,365
Gross interest expense	78	90	120	174	253	224
Net income from operations	1,008	912	807	568	449	513
Funds from operations (FFOs)	1,368	1,286	1,085	923	791	734
Total capital expenditures	1,176	1,315	394	375	789	3,404
Total assets	10,784	9,885	9,148	9,331	9,822	9,653
Total debt	2,984	2,564	2,289	2,936	4,535	4,486
Shareholder equity	6,933	6,585	6,341	5,974	4,667	4,361
Operating income before depreciation and amortization as % of sales	55.61	54.92	54.94	50.37	43.36	42.67
Pretax return on permanent capital (%)	15.85	15.53	14.25	9.69	8.42	10.03
Earnings before interest, tax, depreciation and amortization (EBITDA) interest coverage (times)	23.79	19.88	13.22	7.01	4.22	4.66
FFOs/total debt (%)	45.84	50.15	47.40	31.43	17.43	16.35
Total debt/capitalization (%)	30.08	28.01	26.51	32.94	49.06	50.56

\* Consolidated financial statements

\*\* Starting from October 2009, EASTW changed the accounting period from October-September to January-December.

## Rating Symbols and Definitions

TRIS Rating uses eight letter rating symbols for announcing medium- and long-term credit ratings. The ratings range from AAA, the highest rating, to D, the lowest rating. The medium- and long-term debt instrument covers the period of time from one year up. The definitions are:

- AAA** The highest rating, indicating a company or a debt instrument with smallest degree of credit risk. The company has extremely strong capacity to pay interest and repay principal on time, and is unlikely to be affected by adverse changes in business, economic or other external conditions.
- AA** The rating indicates a company or a debt instrument with a very low degree of credit risk. The company has very strong capacity to pay interest and repay principal on time, but is somewhat more susceptible to the adverse changes in business, economic, or other external conditions than AAA rating.
- A** The rating indicates a company or a debt instrument with a low credit risk. The company has strong capacity to pay interest and repay principal on time, but is more susceptible to adverse changes in business, economic or other external conditions than debt in higher-rated categories.
- BBB** The rating indicates a company or a debt instrument with moderate credit risk. The company has adequate capacity to pay interest and repay principal on time, but is more vulnerable to adverse changes in business, economic or other external conditions and is more likely to have a weakened capacity to pay interest and repay principal than debt in higher-rated categories.
- BB** The rating indicates a company or a debt instrument with a high credit risk. The company has less than moderate capacity to pay interest and repay principal on time, and can be significantly affected by adverse changes in business, economic or other external conditions, leading to inadequate capacity to pay interest and repay principal.
- B** The rating indicates a company or a debt instrument with a very high credit risk. The company has low capacity to pay interest and repay principal on time. Adverse changes in business, economic or other external conditions could lead to inability or unwillingness to pay interest and repay principal.
- C** The rating indicates a company or a debt instrument with the highest risk of default. The company has a significant inability to pay interest and repay principal on time, and is dependent upon favourable business, economic or other external conditions to meet its obligations.
- D** The rating for a company or a debt instrument for which payment is in default.

The ratings from AA to C may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within a rating category.

TRIS Rating's short-term ratings focus entirely on the likelihood of default and do not focus on recovery in the event of default. Each of TRIS Rating's short-term debt instrument covers the period of not more than one year. The symbols and definitions for short-term ratings are as follows:

- T1** Issuer has strong market position, wide margin of financial protection, appropriate liquidity and other measures of superior investor protection. Issuer designated with a "+" has a higher degree of these protections.
- T2** Issuer has secure market position, sound financial fundamentals and satisfactory ability to repay short-term obligations.
- T3** Issuer has acceptable capacity for meeting its short-term obligations.
- T4** Issuer has weak capacity for meeting its short-term obligations.
- D** The rating for an issuer for which payment is in default.

All ratings assigned by TRIS Rating are local currency ratings; they reflect the Thai issuers' ability to service their debt obligations, excluding the risk of convertibility of the Thai baht payments into foreign currencies.

TRIS Rating differentiates a "structured finance product" from other debt instruments by attaching the "(sf)" identifier next to the original letter rating symbol. The "(sf)" identifier is assigned to all debt instruments that are deemed to meet the definition of a "structured finance product" defined by the Securities and Exchange Commission (SEC). The addition of this subscript to the rating symbol does not change the definition of the letter rating symbols mentioned above.

TRIS Rating also assigns a "Rating Outlook" that reflects the potential direction of a credit rating over the medium to long term. In formulating the outlook, TRIS Rating will consider the prospects for the rated company's industry, as well as business conditions that might have an impact on the fundamental creditworthiness of the company. The rating outlook will be announced in conjunction with the credit rating. In most cases, the outlook of each debt obligation is equal to the outlook assigned to the issuer or the obligor. The categories for "Rating Outlook" are as followed:

- Positive** The rating may be raised.
- Stable** The rating is not likely to change.
- Negative** The rating may be lowered.
- Developing** The rating may be raised, lowered, or remain unchanged.

TRIS Rating may announce a "CreditAlert" as a part of its monitoring process of a publicly announced credit rating when there is a significant event that TRIS Rating considers to potentially exerting a substantial impact on business or financial profiles of the rated entity. Due to an insufficient data or incomplete developments of the event, such as merger, new investment, capital restructuring, and etc., current credit rating remains unchanged. The announcement aims to forewarn investors to take a more cautious stance in investment decision against debt instruments of the rated entity. CreditAlert report consists of a "Rational" indicating warning reasons, a "CreditAlert Designation", and a current credit rating. Rating Outlook is withheld in the announcement.

CreditAlert Designation illustrates a short-term rating outlook indicative of the characteristics of impacts on the credit rating in one of the three directions (1) *Positive* (2) *Negative* and (3) *Developing*.

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