

Recognition and disclosure of environment maintenance activity PT. Pertamina Geothermal Energy

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ABSTRACT

Global warming, climate change, carbon emissions, disaster, threatened species, waste, etc are externalities of growth and development of the industries and human activities and needs. Sustainable Development is a concept that is offered to achieve balance and sustainability. Company as one of the contributors in environmental damage responds it by corporate social responsibility and environmental management system. This study aims to explore the implementation of environmental accounting for sustainable value creation and explore the recognition and disclosure of the maintenance activities within the PT. Pertamina Geothermal Energy (PGE). The research method is qualitative exploratory. The results show that the company has been carrying out various environmental activities either directly or indirectly related to the production process. Accountability for the implementation of these activities encourage creating sustainable added value for the company. PGE perform recognition and disclosure of environmental activities and costs according to the principles of environmental accounting and PSAK No. 33. PGE has environmental income from the sale of carbon credits CDM's program is recognized as other income. In addition, PGE has been compiled Sustainability Report according to the guidelines of Global Reporting Initiative (GRI).

ABSTRAK

Pemanasan global, perubahan iklim, emisi karbon, bencana, spesies terancam, limbah, dll adalah eksternalitas pertumbuhan dan perkembangan industri dan kegiatan serta kebutuhan manusia. Pembangunan Berkelanjutan adalah konsep yang ditawarkan untuk mencapai keseimbangan dan keberlanjutan. Perusahaan sebagai salah satu kontributor dalam kerusakan lingkungan meresponnya dengan tanggung jawab sosial perusahaan dan sistem manajemen lingkungan. Penelitian ini bertujuan untuk mengeksplorasi implementasi akuntansi lingkungan untuk penciptaan nilai berkelanjutan dan mengeksplorasi pengakuan dan pengungkapan kegiatan pemeliharaan dalam PT. Pertamina Geothermal Energy (PGE). Metode penelitian adalah kualitatif eksploratori. Hasil penelitian menunjukkan bahwa perusahaan telah melakukan berbagai kegiatan lingkungan baik secara langsung maupun tidak langsung terkait dengan proses produksi. Akuntabilitas untuk pelaksanaan kegiatan ini mendorong terciptanya nilai tambah berkelanjutan bagi perusahaan. PGE melakukan pengakuan dan pengungkapan kegiatan lingkungan dan biaya sesuai dengan prinsip-prinsip akuntansi lingkungan dan PSAK No. 33. PGE memiliki pendapatan lingkungan dari penjualan kredit karbon Program CDM diakui sebagai pendapatan lain. Selain itu, PGE telah menyusun Laporan Keberlanjutan sesuai dengan pedoman Global Reporting Initiative (GRI).

1. INTRODUCTION

Environmental damage has been paid attention by the people in various parts of the world as the complexity of human activity and industrial development. The emerging international forums include: Earth Summit 1992 in Rio de Janeiro that

recommends the application of Environmental Accounting (Panggabean and Deviarti, 2012). The 1997 United Nations Framework Convention on Climate Change (UNFCCC) created the Kyoto Protocol, signed by 191 countries (UNFCCC, 2013). Forum Center for Social and Environmental

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Accounting Research (CSEAR) that has been held 25 times until September 2013.

Companies in different parts of the world are encouraged to carry out social and environmental responsibility (SER) to form a complex and integrated environmental concern in corporate activities, from supply chain, conversion and sales activities. SER's activities are complemented by the application of environmental accounting to improve the efficiency and effectiveness of environmental management (Almilia and Wijayanto, 2007). Environmental Accounting by Environmental Accounting Guidelines includes identification of costs and benefits of environmental conservation activities, provision of facilities, supporting communication processes for sustainable development, maintenance of community relationships and the transition of effectiveness and efficiency of environmental conservation activities (Panggabean, 2012).

Decline in environmental quality in Indonesia, such as exhaust emissions, global warming, and climate change, and so on has evolved into environmental, social and economic issues. The statistics of the Department of Economic Affairs and Social Affairs United Nations (2013: 94) mention the estimated CO₂ emissions of 451.412.000 metric tons, or 1.9 metric tons per capita, and energy consumption per capita of 549 kilograms of oil equivalent.

Law No.40 of 2007 concerning Limited Liability Company Article 74 liabilities SER for companies conducting their business activities in the field and/ or directly related to natural resources (SDA). Another regulation on the encouragement of environmental activities is Law no. 25 Year 2007 regarding Investment, Law no. 32 of 2009 on Environmental Protection and Management and Statement of Financial Accounting Standards (PSAK) No. 1 paragraph 12 on the presentation of environmental reports and value added reports, and PSAK No.33 Regarding General Mining Accounting.

The National Council on Climate Change (2012) states the potential of implementing the Clean Development Mechanism (CDM) program of carbon trading is very large, especially in the utilization of geothermal, flares gas, and garbage. Indonesia has potential 40% of the world's geothermal potential, one of which is managed by PT. Pertamina Geothermal Energy (PGE). PGE's sustainability of production depends on the nature and legitimacy of the community. Therefore, companies have an interest in maintaining water

availability and forest conservation, since most of the geothermal potential is in the forestry area. PGE needs to allocate costs for environmental maintenance programs and provide accountable disclosure for stakeholders.

The research problems are such as "How can the implementation of environmental accounting create sustainability value for PGE and how are the recognition and disclosure of PGE environmental maintenance activities? This is to explore the implementation of environmental accounting for PGE sustainability value creation and recognition and disclosure of PGE's environmental maintenance activities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Legitimacy is the recognition or public perception of the existence of an organization (Djajadikerta, 2014). According to Weber (1964: 382) organizations have legitimacy if their members have trust (SEP, 2010). Good corporate relationships with communities and the environment determine the legitimacy of the company (Suaryana, 2011: 9; Ghazali and Chariri, 2007; Guthrie and Parker in Agustin, 2010: 17). Justification for company activity can be formed from the disclosure of its activities to stakeholders (Zuliyati, 2011; Ghazali and Chariri, 2007; Wilmshurst and Frost, 2000; Suaryana, 2011: 9).

Freeman and Reed (1983) stated that the stakeholder is every group or individual identified and can influence the achievement of an organizational goal (Djajadikerta, 2014). Stakeholder theory states that every stakeholder has the right to obtain information about company activities not only those who have power or are dominant. The company not only views profit as the only important measure but views other dimensions of added value such as information about CSR (Belkai, 2003 in Zuliyati 2011; Suaryana, 2011; Jospita and Tandean, 2014: 6).

Disclosure of SER implementation is one of the activities that must be disclosed. This form of disclosure consists of quantitative and non-quantitative data (Tuanakota, 1986: 223). Three concepts of sufficient disclosure according to Tuanakota (1986: 221) as follows:

- a) Adequate, meaning minimal disclosure must exist.
- b) Fair, it means that the disclosures carried out contain ethical objectives.
- c) Full, meaning that all relevant information is presented. Some people assume that the

presentation of this information is not appropriate because of exaggeration.

Jenkins in Gray & Laughlin (2012) stated "in its literal rudiment, sustainability means a capacity to maintain some entity, outcome, or process over time". The statement of meaning sustainability is a capacity owned to maintain entities, results or processes from time to time. Gray & Laughlin (2012) explains that companies must implement the principles of sustainability as a necessity, especially companies that are in direct contact with the environment. Implementation of sustainability principle is supported by evolving concepts such as corporate social responsibility, environmental management, eco-efficiency and environmental accounting.

The term sustainable development was initiated by the International Union for Conservation of Nature and the United Nations Environment Program and the World Wildlife Foundation that sparked a world development conservation strategy in 1980. Brundtland, Prime Minister of Norway in World Commission on Environment and Development (WCED) report states "Sustainable development is development that meets the needs of future generations to meet their own needs" (WCED, 1987 in Jenkins, 2009: 381; Djajadikerta, 2014). Sustainable development practically involves using natural resources more efficiently, accommodating people's desires and not only reducing impacts to the environment but taking into account economic and social aspects to ensure justice and sustainability in the future (Djajadikerta, 2014).

Elkington (1997) mentions Triple Bottom Line of Business is a picture of attention to aspects of Planet, People and Profit to realize corporate governance and sustainability. The illustration of the relationship explains that sustainability is an integrated approach to the environmental, social and economic aspects that lead to sustainable growth in corporate profits.

Environmental accounting by Steele and Powell (2002) is the identification, allocation and analysis of the flow of raw materials on the impact on the environment and its relationship to finance (Beer & Friend, 2006: 549). Environmental accounting is a provision of information to monitor, evaluate the use of resources, and reduce the environmental impact of the company's operations (Suaryana, 2011: 15; US EPA in Panggabean, 2012: 1011). Standard items of environmental disclosure are not yet standard, but there are guidelines from several institutions including the Economic and

Social Council of the United Nations, Earnst and Ernst, ICAEW and GRI (Susilo, 2008: 152).

The Ministry of the Environment (2002) calls environmental conservation costs an investment and related expenses for prevention, mitigation and/ or avoiding environmental impacts, natural disaster repairs, and other activities calculated or measured based on monetary values. Hansen and Mowen (2007: 783) state that the cost of environmental failure can be reduced by a greater investment in prevention and detection activities. This cost reduction model is in accordance with the concept of the total quality cost model that the lowest environmental cost occurs if there is no damage points at all.

The Ministry of the Environment (2002) in the Environmental Accounting Guidelines states that environmental benefits are all benefits from prevention, mitigation and / or avoidance of environmental impacts, impact removal, post disaster recovery, and other activities that can be accounted for in units. Four categories of environmental conservation benefits based on business operations i.e.; 1) associated of resources into business operations, 2) associated with environmental impact and waste emissions, 3) associated with the goods and services produced, and 4) associated with transport and other operations. The financial benefits gained by firms on these activities are in part a savings due to good environmental management.

Djajadikerta (2014) mentioned the report on social and environmental activities there are three kinds of annual reports. Second, individual reports (not financial statements) such as Triple Bottom Line (TBL) reports, CSR reports, Corporate Social & Environmental Responsibility (CSER) reports and sustainability reports. Third, other reports such as websites, newsletters, newsletters and more. Djajadikerta (2014) states that disclosure of social and environmental aspects is a necessity. Bewley and Magnes (2008) stated that environmental disclosure provides an advantage as a distinct value. Sustainability reporting is the practice of measurement, disclosure, and is an effort to create accountability for internal and external stakeholders to achieve organizational performance toward sustainable development (GRI in Djajadikerta, 2014). Sustainability reporting has three elements of disclosure namely economic, environmental and social (Djajadikerta, 2014; Suaryana, 2011: 12).

According to the International Geothermal Association, carbon emissions generated by

geothermal power plants are 12.5% lower than other energy sources (PGE, 2014). Utilization of geothermal requires the role of business entity. Obligations of geothermal mining permit holders pursuant to Law no. 27 year 2003 article 29:

1. understand and comply with laws and regulations in the field of occupational safety and health, environmental protection, and meet applicable standards;
2. managing the environment includes activities to prevent and control pollution and restore environmental function and reclamation;
3. prioritize the use of goods, services, as well as engineering and design abilities in the country in a transparent and competitive manner;
4. providing support to research and development activities of geothermal science and technology;
5. to provide support for creation activities, competence development, and human resources development in the field of Geothermal;
6. implement community development and empowerment programs;
7. Provide periodic written reports on the work plan and implementation of Geothermal Mining Business activities to the Minister, Governor and Regent / Mayor

PSAK provides an opportunity for the company to disclose the reporting of SER activities listed in PSAK No. 1 (revised 2009) paragraph 12:

"Entities can also present, separate from financial statements, environmental reports and value added statements, especially for industries where environmental factors play an important role and for industries that consider employees to be an important reporting user group. The additional report is outside the scope of the Financial Accounting Standards".

PSAK provides for provision of environmental management activities (paragraphs 8-14). The Company acknowledges such provision if there are strong indications that an obligation has been incurred as a result of its activities and a reasonable basis. Estimates of costs for environmental management due to exploration and development activities are recognized as assets (deferred expense) whereas if the resulting mining activities are recognized as an expense. Disclosures of environmental management activities include accounting policies relating to accounting treatment for imposition of costs, disclosure of ongoing or ongoing environmental management activities (IAI, 2011).

3. RESEARCH METHOD

This research uses a qualitative exploratory approach. Berg (2001: 230) exploratory case study is one case study research design that is an actual replication usually used for pilot studies, major planning or a comprehensive study. The data used are from PGE management interviews in accounting and environmental functions and sustainability reports as well as annual and other documents. The research procedure includes problem formulation, secondary data collection (literature study), preliminary interview, observation, discussion and field research, data selection, data analysis and interpretation of research results.

4. DATA ANALYSIS AND DISCUSSION

The result of value added analysis that resulted or obtained by the company from the effort of the implementation of environmental activity. Value added of environmental activity of PGE as follows : (1) CDM Revenue: CER (Carbon Emission Reduction) Sales to developed countries. (2) Increased loan funds with soft interest rates: The World Bank distributes clean technology fund (CTF) and IBRD assistance programs, with the requirements of the ESIA (Environmental Social Impact Assessment) and other institutions such as JICA (Japan International Cooperation Agency) requiring AMDAL as a condition. Interest on loans is not more than 5% per annum, (3) Increased grant/ foreign assistance or technical grants: Technical grants/ grants for study or project implementation. examples: grants from the Dutch government for reservoirs, geoscience and drilling advisors, New Zealand Government grants for Front End Engineering Design (FEED) etc., (4) Cost Saving: companies avoid larger costs for countermeasures such as pollution control or lease fees and legal sanctions. In addition, the low cost of capital due to the company's environmental reputation will lower the cost of capital of the company, (5) Environmental achievements : K3LL ISO 14001, OHSAS 18001 and Gold PROPER and other awards, (6) Increasing bargaining positions when lobbying or negotiating with regulators: PGE have adequate bargaining positions in the lobbying process eg regarding the arrangement of forest transfer licenses for development projects, AMDAL permits and others by providing examples of good practices in previous projects on environmental aspects, (7) Customer Satisfaction: The environment is one aspect of customer satisfaction, (8) Corporate image: good perception of company in the eyes of society or parties concerned, 9. Availability of natural resources: increases the capacity of natural

resources such as fluids undergoing geothermal cycles within the earth so that production proceeds. Other resources: such as water, clean air, and biodiversity.

The added value encourages the company's sustainability in accordance with the above theories on sustainability, giving recognition or legitimacy from the community or stakeholders that will strengthen the company's position and development operations or business enterprises in various regions and in the future. It requires accountability in providing information to stakeholders. Environmental Protection Manager, Sukardi (2014) stated that at least strive for environmental performance remained at the same level or level from the previous year.

PGE has run a variety of environmental activities categorized according to Hansen and Mowen ranging from prevention activities, detection activities, internal and external countermeasures activities. PGE emphasizes prevention activities, thereby, the sustainability of corporate activities and the possibilities of added value can be enjoyed by PGE in the form of financial and non-financial benefits. Recognition and Disclose of Costs are classified as follows: (1) Project costs: All costs incurred when the process of study, exploration and development are recognized as project costs and capitalized into assets of a particular working area, (2) Production costs: costs incurred when a given work area is assigned and designated as an operational area to generate economic value recognized as production cost. Asset depreciation (project) becomes one of production cost.

In principle, in accordance with SFAS 33, paragraphs 6 and 7, that costs at the exploration and exploitation stage are capitalized to deferred assets or deferred expenses, but PGE does not record the cost of environmental activities as a provision of environmental restoration because geothermal energy is a renewable resource, and its activities are not based on a contract covering a certain period and the difficulty of reliably estimating the provision of environmental restoration costs (PGE, 2013: 31). Paragraph 8 of PSAK 33 states that the provision of environmental management should be recognized if two conditions occur. First, the existence of evidence or a firm and reasonable basis for the incurrence of such obligations.

Mahadi (2014) revealed that in addition to environmental costs PGE has revenue from the clean development mechanism program from the

sale of CER (carbon emission reduction). The income is recognized as other income for the company. These revenues indicate a direct financial benefit from the activity of reducing exhaust emissions that have been certified so as to produce the economic value.

The company's expense accounts regarding environmental activities based on the information of the Consolidation Manager Assistant, Agung Kurniawan are two Work Environment & Safety Service and Charitable Donations & Contributions (COMDEV) accounts. Both accounts are part of General and Administrative Expenses. The Work Environment and Safety Service account is included in the group section of the Maintenance & Repair account while the Charitable Donations & Contributions (COMDEV) account is included in the group of Certification, Donations, And Memberships accounting for corporate CSR costs.

The researcher further attempted to identify PGE's load accounts which were the post of environmental activities. Exploration Expense accounts generally contain environmental activities. Among the account groups that include the study conducted by the company's topography, geology, geophysics, geochemical, and gravity studies have an influence in determining the feasibility of the project and the design or planning as well as the well installation design so that the fluid flow process can be better which means it is an activity environment in the category of preventive activities. Prevention activities are also included in other exploration expense account groups. The account group includes cement well activities, infrastructure improvements, cellar production, reservoir studies and simulations, rock and geochemical studies, and fluid analysis services that all form the basis of the design and preparation of the infrastructure so as to reduce negative impacts on the environment. The burden of training, education is posted in training accounts, education & recruitment. Such accounts in the context of environmental activities record the implementation of K3LL-related training, such as training for supervision, H2S H2S hazard work competence courses, mitigation or alertness to deal with pollution or accidents. PGE has a Fuel & Utilities Expense account group, which consists of load accounts for electricity, water and other charges and chemical expenses used in operations. These accounts record the energy or materials used by PGE. Chemical material has a function also to reduce the occurrence of contamination.

The Material & Equipment Consumed account group contains accounts that record PGE expenses in the use of production materials, equipment, production facilities, and equipment reconditioning. The accounts do not clearly describe as part of the environmental activity and indeed generally recognize the equipment or materials used by PGE in the production process. The account group includes the burden of purchasing fuel (energy), recording the burden on the use of laboratory equipment and equipment, as well as the expenses for the use of medical equipment and equipment, as well as HSE (health safety and environment) equipment.

Equipment maintenance and repair activities are recorded in the Maintenance & Repairs account group. Expenses included in the account group include liquid waste management, HSE programs, injection pumps and others. Certain accounts do not expressly disclose that the burden is for pollution control but in general, for example installation services which include the cost of electrical installation and piping. This pipeline installation is one of the integrated parts of pollution control.

Tax, Retribution, and Fines account groups have accounts that record the company's environmental cleanliness fee, vehicle test, fire extinguishers, liquid waste treatment, Building Permit (IMB), interruption permit/ HO levy, surface water utilization tax, as well as third party claim costs such as damage to crop damage, palm oil compensation, trial costs and so on.

Group insurance accounts include insurance against fire risks, protection of common events, earthquakes, lightning, natural disasters, third party claims, and insurance for asset protection against fire, earthquake and natural disaster risk. This account records the cost of anticipating external failures or unforeseen circumstances may harm the company or the environment.

Certification, Donation, and Member account groups include CSR costs, measurement tools, human safety and environmental studies, legal fees, audit fees including energy audits, ISO 14001 and MK3LL, waste disposal fees, and hygiene service fees and research costs. The last account group is Depreciation, Depletion and Amortization. Depreciation of production assets or intalasi includes the assets of waste management, reinjection well installation and others. In addition, the account group includes amortization of research and development.

Disclosure of PGE's environmental activities has been conducted both in terms of quantitative and qualitative disclosure. PGE's quantitative disclosure is made in the financial statements either in the form of expenses, income or environmental assets owned by PGE. In addition, PGE also discloses it in the CALK regarding accounting policies concerning such charges, and on environmental management provision obligations. This is in accordance with PSAK 33 concerning the disclosure of environmental activities in paragraph 14.

PGE has disclosed its environmental activities in more detail in its Sustainability Report and Annual Report. As mentioned earlier, more detailed disclosures on the aspects of sustainability or the environment through sustainability reports are in line with the GRI (Global Reporting Initiative) index. Detailed disclosure of environmental activities is also undertaken in other reports such as reports on the implementation of AMDAL, UKL / UPL and other reports as required by the Government or related agencies.

Disclosure of the sustainability or environmental aspects that PGE has undertaken in the Sustainability Report (SR) has been verified by the National Center for Sustainability Reporting (NCSR). The contents of the Report are stated to have fulfilled the requirements of application level B with adequate presentation. the application level provides an overview of how the GRI G3.1 guidelines have been implemented. The contents of the PGE sustainability report have an outline of economic, social and environmental sustainability. PGE states the objectives of the sustainability report are:

"... to convey comprehensive information to all stakeholders by taking into account the values of sustainability. PGE believes that transparent reporting is an important part of our efforts to achieve sustainability "(PGE, 2013: 6)

The preparation of this report takes into account the sustainability concepts that link products, operating activities, environmental protection, and social awareness to the communities in which we operate (PGE, 2013: 7).

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Conclusion of this research are as follows:

1. The Company has implemented various environmental activities either directly or indirectly related to the production process. These environmental activities have started from prevention activities to external failure

handling activities. The implementation of environmental accounting plays a role to provide information about the various environmental activities for the stakeholders. Accountability for these environmental activities adds value to the company so as to generate PGE sustainability value. These added value include financial and nonfinancial benefits such as CDM revenue, cost saving, soft loan and grant assistance, bargaining position, corporate image, customer satisfaction, and availability of natural resources that will support the company's operations.

2. PGE has treated these environmental activities in accordance with environmental accounting principles and PSAK 33, although management claims to have not understood the term environmental accounting, PGE has prepared a Sustainability Report as a more detailed form of disclosure that contains environmental performance or aspects sustainability based on the Global Reporting Initiative. PGE has both identifiable expense and income accounts are environmental activity accounts, PGE has an environmental income from the sale of carbon credits of the Clean Development Mechanism program.

Suggestions for further research are as follows:

1. more detail discussing about environmental management accounting in PGE.
2. more detailed research on the added value generated, especially cost saving resulting from the implementation of a good environmental management system.
3. analyze the reports on the environmental activities prepared or published by PGE either public documents or management reports.

Suggestions for PT. Pertamina Geothermal Energy are as follows:

1. The need to optimize the disclosure of environmental activities as a superior value of the implementation of environmental activities. Such disclosure needs to be disseminated through an official website communications tool owned by the company.
2. The need for an understanding of environmental accounting so that management can better apply it and can be a consideration tool in determining policies or decisions about environmental activities, cost, efficiency as environmental costs are a substantial burden for PGE.
3. The PGE and K3LL financial sections need to consider preparing the environmental cost

financial statements as internal management consumption as a tool to assist decision-making in both efficiency and environmental performance.

4. The need for PGE to express the capital costs that are driven by environmental activities, so that can be seen by the investment stakeholders on environmental activities can reduce the cost of capital. It is the closing of the article which reflects the essence and reasoning of the research by the writer. It is also logically based on the evidence taken from, and presented by the writer in paragraphs. Implication, limitations, and suggestions are also presented in paragraphs without numbering. It is the closing of the article which reflects the essence and reasoning of the research by the writer. It is also logically based on the evidence taken from, and presented by the writer in paragraphs. Implication, limitations, and suggestions are also presented in paragraphs without numbering.

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