



**KEYNOTE SPEECH**  
**Director for New Renewable Energy and Energy Conservation**

at

**Workshop on**  
***WASTE TO ENERGY***

December 02, 2009

Distinguished Guest,

Ladies and Gentlemen

First of all, I would like to express my appreciation to *Indonesian Netherlands Association* (INA) for organizing this workshop. It is a great pleasure for me to have the opportunity to deliver the keynote speech at the Workshop on “Waste to Energy”. High appreciation to Mr. Ab van Ravestein, Director General Agency Netherland and Mr. Piem Kieskamp from SNV.

I would also like to extend my warm welcome to all participants, speakers and colleagues attending this workshop. I am sure that your participation will contribute greatly to the success of this event.

Ladies and Gentlemen

The renewable energy issue has been one of the main focuses in the world right now as cleaner and sustainable alternative for fossil energy. Although most of the countries in the world are still heavily dependent on fossil energy, mostly oil, the fossil energy reserved tends to decline and diminish. The similar condition is also faced by Indonesia. Up to now, Indonesia's energy demand is still dominated by fossil energy. Data on year 2008 shows that oil share to total energy mix is around 48.4%, followed by natural gas (28.6%), coal (18.8%), and the rest is from renewable energy, specifically large hydro and geothermal.

Ladies and Gentlemen

Realizing the risk of depending too much on one kind of energy source, Government of Indonesia issued the Presidential Regulation No. 5 Year 2006 on National Energy Policy. The National Energy Policy has set long term targets in energy sector, namely that by the year 2025 energy elasticity should be less than 1 and the utilization of primary energy mix should be optimized, with the composition as follows: oil to be less than 20%, gas to be at least 30%, coal at least 33%, new and renewable energy should be at least 17%. The new and renewable energy sources include large hydro, liquefied coal, geothermal, solar, wind, micro hydro and biomass.

Otherwise, following the issuance of Law No. 30 year 2007 on energy, Government of Indonesia will prioritized the development of renewable energy sources, not only for securing domestic energy supply, but also for increasing energy access for poor people or people living in rural and isolated areas, creating job opportunities, and ensuring environmental protection.

Ladies and Gentlemen,

Indonesia has an abundant biomass potential, not only wood, but also agriculture waste, such as sugar cane, palm oil, rubber, paddy, cassava and coconut, which are easy to discover all over rural areas in Indonesia. Biomass utilization (including agricultural waste) has contributed a significant number in Indonesia final energy consumption, particularly in industrial and household sector. However, in the past, waste potential and utilization issues has not been addressed significantly in the national energy policies and programs. Agricultural waste as a renewable energy source should have a proper consideration and management.

Ladies and Gentlemen

Generally, to improve biomass utilization for energy, Indonesian Government put two priorities in biomass development, namely for fuel and electricity generation. Biomass for fuel is used to substitute petroleum-based fuel in transportation sector such as biodiesel and bioethanol, and in household sector, namely biogas and biokerosene. For electricity generation, the biomass utilization consist of: utilization of agriculture wastes in direct combustion, substitution of petroleum-based fuel to biofuel (biooil/pure plant oil), and utilization of biogas for small scale electricity generation.

Ladies and Gentlemen

Specifically, utilization energy from waste exist in Palm Oil Mill (POM). POMs have utilized biomass from agricultural waste for electricity generation. DGEEU and ADB has been studied on Generation from Oil Waste in year 2006. Based on this study, waste from Palm Oil Mill such as Empty Fruit Bunch (EFB), POME (Palm Oil Mill Effluent) can be used in several technology as follows: Electrical Interconnection to PLN, Remnant Oil Recovery, Biomass Gasification, Biogas Capture of POME Digestion, Bio Diesel, Organic Diesel, and Biomass Power Plant. Almost all of technologies are mature technology categorized and viable economically.

Ladies and Gentlemen

As renewable energy will become a major part in national energy security and environmental protection, we welcome participation and assistance from every stakeholder in renewable energy development, including waste utilization. I believe that this workshop will come up with some sound recommendations in the development of waste utilization that will be beneficial to all Indonesian people.

Finally, I hope this workshop will be successful and fruitful. Thank you for your attention and participation.

Directorate New Renewable Energy and Energy Conservation

Ir. Ratna Ariati, M.Sc