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Briefing paper: Mindanao at an energy crossroads

Mindanao, in southern Philippines, is the country’s second largest island group, occupying one-third of the country’s total land area. The region depends largely on agriculture and supplies 40% of the country’s food. Mindanao is also known for its rich mineral and metal deposits. However, it is currently the least developed region in the country, wracked by poverty and conflict.

The Philippine government is keen to develop Mindanao’s energy infrastructure as part of the island’s development plan. Mindanao relies mainly on hydropower, which particularly this year, posed problems due to lack of water coupled with increasing demand in power supply.

According to the Power Development Program of the Department of Energy (DOE), Mindanao needs an additional capacity of 850 MW to be installed for the period 2006-2014. The Mindanao electricity grid currently has an installed capacity of approximately 1,929 MW, of which almost 1,000 MW is hydro, 232 MW is coal, about 100 MW is geothermal, and the balance is oil/diesel fired.ⁱ

At present there is only one coal fired power plant in Mindanao with a capacity of 232 MW. The plant became operational in 2006 and is located in Villanueva, Misamis Oriental. But plans to build more coal plants in Mindanao are underway.

Coal companies in Mindanao

Four major coal-fired power plants are currently being proposed in Mindanao, with two projects led by the Alcantara-led Conal Holdings and the country’s biggest energy player, San Miguel Energy.ⁱⁱ

Conal Holdings Corporation plans to build a US\$450-million 200 MW coal-fired power plant in Kamanga in Maasim, Sarangani. San Miguel Corporation plans to build a US\$150-300 million, 150-300 MW coal-fired plant in General Santos City with coal coming from the Daguma Coal mine in nearby Lake Sebu, by 2012. San Miguel bought three coal mines in Mindanao, Daguma Agro Minerals Inc., Bonanza Energy Resources Inc., and Sultan Energy Mining and Development Corp.

All these projects threaten not only communities around the sites but also the rich Tinoto-Tampuan coral reef, a protected area just beside the planned Conal power plant. The projects are likely to also impact Mindanao’s agricultural gains. Other social issues such as the displacement of indigenous peoples are on the rise. Mine sites are also militarized which further fuels social conflict in the area.

Most of the coal projects are being built to power mining operations.ⁱⁱⁱ None of these projects are expected to provide electricity to the more than six hundred barangays in Mindanao which still do not have access to modern energy services. Primarily due to their remoteness, these towns do not have access to power from large scale centralized plants.

Logically, bringing electricity to these remote villages should be the government priority. But this cannot be achieved through centralized energy systems that are currently in the plans. In contrast, community-based renewable energy projects by NGOs such as Amore and Yamog^{iv} are models in bringing electricity where it is needed, something that is much harder to achieve with a centralized energy grid.

Because of such projects, Mindanao now leads the country in decentralized energy systems which have proven to be the more energy appropriate model for the country. In this respect, renewable energy has a very significant role in achieving the electrification targets in Mindanao in a way that large centralized baseload plants cannot.

Mindanao is at a crossroads. The choice is between decentralized energy systems that will facilitate the uptake of renewable energy, and coal which will lock Mindanao into fossil fuel based centralized energy systems.

Clean energy for peaceful and sustainable development

Energy is central to reducing poverty, providing major benefits in the areas of health, literacy and equity. The Millennium Development Goal of halving global poverty by 2015 will not be reached without adequate energy to increase production, income and education, create jobs and reduce the daily grind involved in order to just survive.

Access to electricity will be important in alleviating poverty and promoting and maintaining peace. Halving hunger will not happen without energy for more productive growing, harvesting, processing and marketing of food. Improving health and reducing death rates will not happen without energy for the refrigeration needed for clinics, hospitals and vaccination campaigns. The world's greatest child killer, acute respiratory infection, will not be tackled without dealing with smoke from cooking fires in the home. Children will not study at night without light in their homes. Clean water will not be pumped or treated without energy.

Many of the areas in Mindanao without access to electricity are located in remote, island barangays including the conflict areas in Mindanao. Hence access to energy is quite challenging given that the immediate extension of distribution lines is not possible in these barangays. The only other possible approach is mini- or micro grids, stand-alone renewable energy systems and other rural electrification energy technology that will be managed by communities.

Mindanao's current decentralized energy systems can be key to easing the way for more and more renewables to come in, and they can provide the framework that can propel the island group toward the sort of decentralized smart grid that will make the Energy [R]evolution possible. Any new coal project will reverse Mindanao's gains, away from the direction of sustainability.

Access to clean energy therefore will be the most crucial. Clean energy has an important role to play in Mindanao's sustainable development, and now is the time to intervene before more coal plants are built in the island. There are options available to Mindanao other than coal -- options that work. Mindanao with a renewable energy scenario opens doors to a green development pathway for the island, and less conflict with equal access and sovereignty of energy for all.

Coal cannot be an option for Mindanao. Aside from causing climate change, coal use causes toxic pollution, destroyed livelihoods, displaced communities, health effects on the respiratory and nervous systems, acid rain, smog pollution, and reduced agricultural yields. In many countries, while coal brings prosperity to a select few, it plunges entire communities into misery. Coal causes great harm to people and the planet and its negative impacts far outweighs any of its perceived benefits.^v

The Philippine government must realize that its task is to ensure Mindanao's sustainable development with a future powered by clean, peaceful, renewable energy. This way, further human and societal damage, as well as ecological degradation and devastating climate change impacts, can be avoided. The government must prioritize and support green investments which will help put Mindanao on a low-carbon growth pathway, instead of pursuing investments which are harmful to society, peace and order and the environment. New interventions are needed to secure the island's sustainable future. This requires technological leapfrogging, bold policy innovations, and a new solidarity across social classes and generations.

ⁱ 2009 Power Sector Situationer. DOE

ⁱⁱ <http://www.businessweekmindanao.com/2010/09/more-power-plants-to-spur-mindanao%E2%80%99s-devt.html>

ⁱⁱⁱ <http://zamboangatimes.ph/articles-submitted/40-business/364-mining-industry-to-raise-power-demand-in-mindanao-by-1000mw.html>

^{iv} Alliance for Mindanao Off-Grid Renewable Energy Program is a project that brings solar power to remote Mindanao communities. Yamog Renewable Energy Development Group is a micro-hydropower developer and runs the Mindanao Community Based Renewable Energy Project.

^v True Cost of Coal. Greenpeace. 2009.