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Energy from the sun

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ALL energy or almost all energy comes from the sun. There are some like hydro, wind, and wave action that come from a different source. But the big proportion of energy comes from the sun. Our oil, gas, and coal came from the sun through development of photosynthesis and the production of hydrocarbons together with compression. Happily, the world, for a little over two hundred years, used hydrocarbons for electricity and transportation. First coal was used basically for heating in winter. We in the tropics do not really need hydrocarbons for weather comfort. But within the past hundred years the development of cars and airplanes has used gas and oil. Earlier, coal and wood fuelled boilers to run railroad trains and ocean-going ships that cut dependence on winds for sailing the ships. I can just imagine huge galleons stuck in the middle of the sea with no winds to move them forward under the blistering sun. These were the doldrums which sailors dreaded. Oil engines have saved them from this.

We have been fortunate with electricity produced mostly from coal, gas, and oil. Then we had the boon of gasoline and diesel to run our cars and planes and to some extent our communications systems,

Recently we have been harvesting energy directly from the sun with solar panels. But we can depend on them for only about four hours of the day. Therefore, there is need for storage batteries, which jack up the costs and the potential of pollution. But recently there has been news that a small company has made a breakthrough in collecting the energy from the sun so that coal, gas, and oil will be obsolete or obsolescent. The big investors from all over the world from the Americans to the Saudis down to the Chinese are rushing to make investments in this company. The process, chemical or something else, is so efficient that it will be equivalent to making the equivalent of oil for less than a dollar a barrel. I do not know the process of this conversion of direct energy from the sun but some people are already touting its wonders and the big investors are supposed to be pouring in their billions into this breakthrough company. Such cheap power will certainly be disruptive of economies. After the transition, it would be grand to have cheap power for the whole world and the source will be available for everybody in the world.

Let's get back to reality. It will take another 20 or more years to commercialize this new energy source. So in Mindanao, for example, the government has to lease

out or sell the big hydros that they have to make electricity available at reasonable costs and for the development of Mindanao. Both the Agus and the Polangui River hydro sources are well maintained by dedicated government employees of whom the country can be proud. What is needed now is to enhance them to make power affordable for the industrialization of Mindanao, as Mr. Filemon Rodriguez and Pres. Quezon had envisioned these projects. As mentioned earlier Mr. Ernie Aboitiz when he was in charge of power in Mindanao identified over 20 large hydro power projects that could be harnessed. One with real potential is the harnessing of the Agusan River which will also make the Agusan flood plains into rice fields. With rice in Agusan and corn in the Cotabatos, Mindanao will be food self sufficient.

Energy sources will be in great flux in the next decades and hopefully the breakthrough that they are touting is a reality. Just imagine the Philippines with cheap power. We can have self sufficiency for everyone's food needs. Our problem will be only in how to distribute them. Our problem will be in how to keep people employed in the arts and technology.

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