

Research Report

Environment Commission

Promoting the sustainable and safe use of alternative energy in LEDC's, including new energy exploration



MUNISH '11

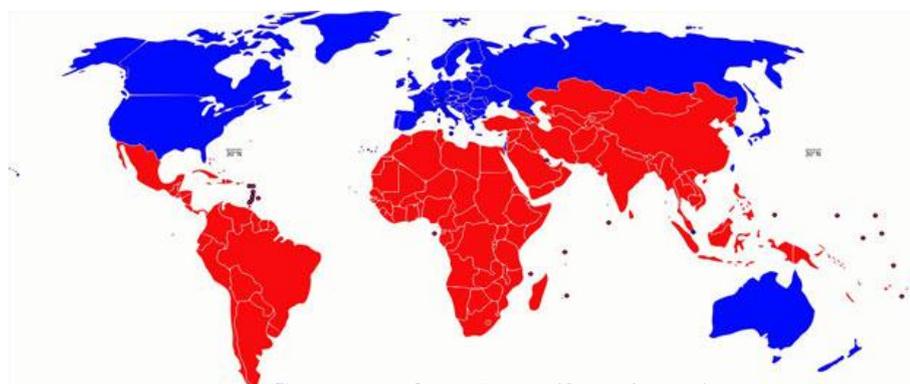


Please think about the environment and do not print this research report unless absolutely necessary.

Forum	Environment Commission
Issue:	Promoting the sustainable and safe use of alternative energy in LEDC's, including new energy exploration
Student Officer:	Gabriel Almeida
Position:	Deputy President of Environment Commission

Introduction

In the passed decades it has been noticed that *LEDC's* happen to have a higher availability to natural resources needed to generate energy through *sustainable* and *renewable* means and thus it should be considered to strongly promote these methods to *LEDC's*. Clearly shown on maps that the line North-South divide (almost fully) the *MEDC's* to the *LEDC's*. One will also notice that the equator runs mostly through *LEDC's*. This gives an almost guarantee of sun daily for long hours, which could be taken advantage of, if solar panels were being used to generate energy through *solar power*. *LEDC's* are famously known for their large agricultural industries, which can also be used to generate energy if one has the correct resources. In agriculture there is always biomass, remains of organic materials (crops, animal thesis and others). This biomass can be used to generate energy in a renewable and sustainable manner with the use of *biogas*. A lot of farmers in *LEDC's* either do not know about it or are not available to taking advantage of this. In several cases, nations have large enough rivers to generate energy through *hydro power*. *Wind power*, is another method of renewable energy generation, and alike the use of *hydro power* is used at a lower rate because not all *LEDC* nations are available to such strong wind currents, but nevertheless still efficient.



North - South Divide (South | North)
http://www.geography-revision.co.uk/global_maps.php



Definition of Key Terms

LEDC's: Less economically developed countries

MEDC's: More economically developed countries

Sustainable: able to be maintained at a constant level for unlimited time period.

Renewable: materials that are not depleted after being used.

Solar power: The transformation from the energy of the sunlight into electrical energy.

Hydro power: The use of the current of water to generate electrical energy

Biogas: The Gas that comes out of remains of organic materials (thesis, crops), when burned and used to generate energy

General Overview

The resources are all present in the LEDC's, but using them to generate energy in a renewable manner has seemed to be the issue. The issue is broken down to the fact of economics, education and ethics, in many of the cases it is either too expensive for a nation to afford, individuals are not informed about new methods of generating energy or a nation does not want to use it as it might believe to be incorrect for whatever reason.

Solar power:

Solar Power, can be and should be taken advantage of in LEDC's a large number of these nations are located in places in the world where there is sun almost daily for a large part of the twenty-four hours. Solar power is generated through the energy coming from the UV rays from the sun. The advantages of solar power is that the individual owning the panel will only have to pay once, because from then on the person will not have to pay for electrical energy. Furthermore no carbon dioxide will be emitted into the atmosphere other than, that was emitted to make the panel. One of the only disadvantages to the use of solar power is that it is very expensive to make and the possibility arises that individuals or even governments will be able to afford sufficient amounts of solar panels to use them efficiently. Currently the countries with the highest use of solar panels are USA and Spain.

Energy generated by Biogas:

Most LEDC's are well known for their vast production of agriculture goods. What many of the farmers know is that as they are farming they can be making electrical energy. Like previously stated if one uses the remaining organics materials, if with the correct equipment, they can burn it to create biogas and through it generate energy. This is arguably one of the most sustainable manners to generate energy sustainably. Although generating energy from



biogas is efficient and renewable, many farmers in LEDC's do not have the knowledge of such technique, furthermore it expensive and unless given help individuals and governments would not be able to afford a significant number.

Hydro and tidal energy:

A large number of the LEDC's have rivers wide, strong current rivers or accesses to coasts. These conditions would be ideal to generate tidal energy or hydro energy. Both of these being natural water related. Tidal would involve using the waves to create the energy whereby there would be generators by the coasts. Hydro energy would be used by putting generators in rivers, and generate the energy with the use of the rivers' current. Alike the previous mentioned methods, these two are very expensive to build. Although they are very well known, some nations are reluctant to build and use such methods to generate energy because they might have negative effects on the environment.

Wind power:

All LEDC's have accessibility to wind, some more than others, this wind should be taken advantage of to generate energy. Wind power can generate huge masses of energy and the only time greenhouse gases are emitted is when it is built after that no more. Building these wind farms (a group of wind turbines) is very expensive, and can damage the environment in which they are in, which are probably the main reasons why it is so hard to find wind farms in LEDC's.

These four types of sustainable and safe manners of generating energy are arguably the most common and most efficient. As stated when talking about them, their main problem is that they are expensive to build, are not too well known in LEDC's and sometimes may have negative impacts on the environment they are placed in. The world has been thinking about working sustainably since a little before 1970's, but ever since a huge focus was placed on industry sustainability rather than energy sustainability. In addition to that, it was mostly MEDC's who started following this safe and sustainable idea and the LEDC's fell behind.



Major Parties Involved:

United Nations Development Program:

The United Nations Development Program (UNDP) is an UN body which focuses on helping connecting of countries to knowledge, and resources allocation, to secure

people better living conditions. The UNDP does works such as research for possible sustainable energy methods in LEDC's; they also try to educate the people in LEDC's of these methods of sustainable energy use. They believe if sustainable and safe energy can be put into LEDC's, it will help them economically, socially, and environmentally and help them reach the Millennium Development Goals. In 2010 the UNDP were able to support 125 countries, helping in on sustainable development of generating energy.



United Nations Environment Program:

The United Nations Environment Program (UNEP) is an UN body which promotes better care of the environment by informing the populations of nations and they help fund some activities which aim to improve the environment. The UNEP energy branch, aims to promote sustainable, renewable and safe energy all over the world in the long-term. They help LEDC's in making choices when starting projects to generate energy, and furthermore they pass on knowledge about sustainable energy and how to use it safely.

Sustainable and Renewable Energy in Brazil:

The Programme of Incentives for Alternative Electricity Sources (PROINFA) is a Brazilian governmental organization that is promotes and creates new sources of sustainable and renewable energy in Brazil. They are funded by the Brazil's Federal bank and with the money the build generators to generate sustainable energy. They are currently focusing on wind power, hydro power and use of biomass to generate energy. Their aim is to produce at least 10% of Brazil's energy through sustainable means. Brazil is currently one of the LEDC's with the highest use of renewable energy, with the help of dam in the Amazon River, and fueling their cars with sugar can ethanol.

Sustainable and Renewable Energy in India:

India is also one of the highest users of renewable energy involving the LEDC's. They have invested heavily on solar panels which are currently working. These solar panels are located all over India, and they are taking advantage of how much sun light they have. India has now also invested in creating wind farms on their coast lines. Currently India is the top LEDC's investor on renewable and sustainable energy and number 3 in the world. They are currently working on 143 different projects on building points to generate energy sustainably.

Previous Attempts to resolve the issue

Previous attempts to revolve this issue have been attempted by UNEP and UNDP. These attempts involved educating both governments and the populations of LEDC's, and funding different projects in LEDC's to make sustainable energy possible in some countries. Their



attempts were successful to a certain extent, because they got the knowledge through but little action was really taken physically, understandably though seeing as they are only 2 non-governmental organization with limited amount of capital.

Possible Solutions

It can be concluded that the issue, involves knowledge of sustainable and renewable means of generating energy and money to create the generators. If MEDC's come together to fund organization such as UNEP, UNDP or any other or new organizations, in order for them to help. Furthermore these organizations would also work to research for new manners to generate energy sustainably and safely. The UN body would monitor these NGO's to make sure the money would be used for the right reason and wisely.

Appendices

Follow this link to see current UNEP works:

<http://www.unep.org/themes/energy/?page=programmes>

Follow this link to see current UNDP works:

<http://www.undp.org/energy/>

Bibliography

North South Divide - *Wikipedia, the Free Encyclopedia*. Aug. 2011. Web. 8 Sept. 2011.
<http://en.wikipedia.org/wiki/North-South_divide>.

Solar Power Information: Solar Power. 2009. Web. 11 Sept. 2011. <<http://www.solar-power-information-site.com/>>.

"Environment and Energy | UNDP." *Home | United Nations Development Programme*. 2011. Web. 11 Sept. 2011.
<<http://www.beta.undp.org/content/undp/en/home/ourwork/environmentandenergy/overview.html>>

UNDP | Environment and Energy | Energy Sustainability. Web. 9 Sept. 2011.
<<http://www.undp.org/energy/>>.

"Solar Power." *Wikipedia, the Free Encyclopedia*. Aug. 2011. Web. 11 Sept. 2011.
<http://en.wikipedia.org/wiki/Solar_power>.

"Renewable Resource." *Renewable Resources - Wikipedia, the Free Encyclopedia*. Aug. 2011. Web. 11 Sept. 2011. <http://en.wikipedia.org/wiki/Renewable_resource>.

"Sustainable Development." *Sustainable Development - Wikipedia, the Free Encyclopedia*. Web. 11 Sept. 2011. <http://en.wikipedia.org/wiki/Sustainable_development>.

, In Scopus. "ScienceDirect - Renewable Energy : Incentive Policies for Promoting Wind Power Production in Brazil: Scenarios for the Alternative Energy Sources Incentive Program (PROINFA) under the New Brazilian Electric Power Sector Regulation." *ScienceDirect - Home*. Feb. 2008. Web. 11 Sept. 2011.
<<http://www.sciencedirect.com/science/article/pii/S0960148107000286>>.



"Programme of Incentives for Alternative Electricity Sources (PROINFA)." *Programme of Incentives for Alternative Electricity Sources (PROINFA) - World Resources Projects*. Web. 11 Sept. 2011. <<http://projects.wri.org/sd-pams-database/brazil/programme-incentives-alternative-electricity-sources-proinfa>>.

"5 Top Countries for Renewable Energy Investment." *Green & Sustainable Business News | Triple Pundit*. Web. 11 Sept. 2011. <<http://www.triplepundit.com/2008/09/5-top-countries-for-renewable-energy-investment/>>.

