



Renewable energy – the future for the developing world

THE **INTERNATIONAL SOLAR ENERGY SOCIETY (ISES)** CONTINUES TO RAISE AWARENESS OF THE GLOBAL IMPACT OF CLIMATE CHANGE, AND HOW RENEWABLES NEED TO PLAY A VITAL ROLE – ESPECIALLY IN DEVELOPING COUNTRIES. IN THIS ARTICLE, ISES OFFERS A POLICY PERSPECTIVE AFTER A NUMBER OF SUCCESSFUL WORKSHOPS IN AFRICA.

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The majority of the global population lives in the developing world. It is in the direct global interest that the renewable energy transition be immediate, rapid and orderly, which requires shouldering the responsibility of both national policies and international cooperation.

It has often been stated that if the developing world were to follow the wasteful energy example set by some industrialised nations, the global impact would be devastating. The developing nations accuse the industrialised nations of destroying the environment by over-consumption, while the industrialised nations accuse the developing nations of destroying the environment by over-population. Both are right.

International Solar Energy Society (ISES) White Paper

In 2003, ISES launched its first White Paper entitled 'Transition to a Renewable Energy World'. Written by Dr Donald Aitkin of the USA, this paper

serves to guide Governments – at all levels – through the policy measures and initiatives needed to steer a renewable energy (RE) transition. It makes clear that this transition – one that is critical for our continued, sustainable development – is an opportunity to be embraced, rather than a hurdle to be overcome.

After the success of the first White Paper, ISES recognised the need to expand upon the paper's policy guidelines and focus on the developing world. Thus a second white paper was commissioned and written by Professor Dieter Holm of South Africa. This publication, 'Renewable Energy Future for the Developing World', is intended to be a ready-to-use guide of national energy policy, and strategies for developing countries. It covers several topics including the technological status and potential of specific renewable energy sources; national and international drivers of renewable energy (RE) applications; and policies to accelerate the application of renewable energy in developing countries.



60% of the energy growth in the next few decades will take place in the developing world where about two billion people are living without access to electricity. The White Paper explores and discusses the developing world's fundamentally unique opportunity for investing their energy infrastructure in renewable energy sources.

Renewable energy is a 'win-win' solution for developing countries as they have an opportunity to carry out cutting-edge renewable energy growth policies, and bypass the out-dated fossil-fuel century's technology. Moreover, the developing world has vast amounts of untapped renewable resources, while very little is being harnessed. One obvious example is sunshine in Africa; an area with high solar radiation, yet limited use of solar energy technologies.

Transition required

Our current commercial energy system uses concentrated and finite resources. The technology to exploit these diminishing resources has become cheaper during the course of the last century through economies of scale, supported by government protection and infrastructure investments.

With solar energies, natural resources are diffuse, more evenly spread over the world and are freely available to all. However the capital costs of the technologies to harness the free energies are currently often a barrier because the economies of scale have generally not yet taken effect.

The pressing challenge and top priority for the human race is to move away from squandering the sun's stored energy by transitioning to the universal use of renewable energy from the sun.

Where does the developing world fit into the renewable energy transition?

As the world moves towards the global village in terms of modern communication, the sense of sharing one planet and concerns about our common future are increasing.

There are very pronounced dissimilarities between developing countries with respect to prosperity and stability. These dissimilarities are so large in the rate and direction of change that the term 'developing countries' becomes questionable.

However there are also similarities:

- The economies of developing countries are heavily dependent on agriculture – often at the subsistence level, with mining where mineral resources have been explored. Beneficiation through secondary industries is rarely found, but tourism plays an important role;
- Infrastructure is often basic, with a constraining scarcity of skills in engineering, and technical or professional skills to execute its design, building and maintenance.

It should be stressed that the developing world is not simply a poor man's version of the industrialised world. It is not a world predominantly driven by the belief in work ethic, entrepreneurship and personal responsibility or by the money value of time. It does not believe that all human issues can ultimately be solved in a technological manner. In general, women are the maintainers of traditional culture values where the welfare of the family in the household plays a central role.

The developing world does not necessarily have to follow the energy route of the industrialised nations, but can learn from their experience and mistakes. This insight opens up several unique opportunities for development. Combining the rapid advancement of renewable energy technologies in the industrialised world with the largely untapped renewable energy resources in the developing world, will demand concerted effort from both parties.

A global race towards renewable energy has already started. Some nations and some international corporations are positioning themselves to take advantage of the inevitable transition. There is no time to be lost, since the peak of oil production is most likely to occur within the current decade (*Heinberg, 2003*). The later the transition, the more painful and costly it will be.

The cycle of change in energy technologies has been shown to last about half a century, the time span of two human generations. That is the planning horizon of wise governments. Long-term thinking is what sets the true statesman apart from the mere politician.

Policies to accelerate the transition

Key stakeholders have to be aware of the interactions of energy with poverty, the environment and peace. Campaigns prioritising energy

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