Research Report

Group of Twenty

Addressing the financial effects of the transition to fossil fuel dependency to renewable energy

MUNISH

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Forum	Group of Twenty
Issue:	Addressing the financial effect of the transitition from fossil fuel depedancy to renewable energy
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Introduction

Since the industrial revolution, and some may argue even further back in time, energy has been the epicenter of economical and political planning. The importance of energy has been increasing since then with both global powers, such as the Soviet Union and its gas supply or certain other superpowers that have based their long term strategic planning on fossil fuel supplies, and developing nations placing enormous importance on their fuel production. The fossil fuels have been the main source of energy production and quite frankly they make the world go round, thus creating dependency on these types of fuels. The dependency on fossil fuels was intensified even more with the lack of alternatives and even though research and development of alternatives has been adequately financed there is currently a lack of cost efficient alternatives.

However, as the global society developed and as time passed certain issues regarding the usage of fossil fuels have been identified. The development of environmental consciousness and the creation of environmental pressure groups as a result, have countered the usage of fossil fuels due to the high levels of pollutions that they cause and the strong link between emissions from such fuels and several climatic phenomena, also prompting response from national governments. Furthermore the scarcity of the fossil fuels and the ever shrinking reserves together with the more than significant time required for fossil fuels to be naturally produced have sent shockwaves to the governments of a great number of states that maintain a long term planning on their energy policies. Another reason would be the fact that the alternatives to the fossil fuels, the renewable sources of energy are, mostly, widely and almost universally accessible which apart from the dependency on the actual fuels could eradicate the dependency on other states that have the role of the fossil fuel suppliers, as in the situation of the Russian Federation and several Member-States of the European Union.

Since the 1990s a considerable effort has been made to narrow down the global dependency on fossil fuels, which also made the existence of alternatives a must. One of the first landmark treaties that aimed towards the reduction of fossil fuel dependency is the widely known Kyoto Protocol which significantly influenced the concept of energy, by setting objectives on the limitation of fossil fuels' usage and by drafting a legal framework on additional concepts, such as that of emission trading. Hence the concept of the alternative sources of energy started being seriously developed which is set to provide sustainable, clean and widely accessible energy solutions.

The development of this long discovered concept seemed promising, although in reality progress has been slow and limited despite the "boom" in the funding and implementation of alternative energy projects by national authorities and private corporations.

The main obstacle and the topic of this Research Report has been the financial barrier and the financial effects of the planned and intended transition from the usage of fossil fuels to the usage of the alternative forms of energy.

Definition of Key Terms

Fossil fuels

Fossil fuels are fuels formed through natural processes. Fossil fuels are non renewable, meaning that they cannot be re-used, while they need a very long period of time to be created, which makes them scarce They also tend to cause pollution through the release of harmful substances in the atmosphere and thus are environmental hazards and are known to contribute to environmental or climatic effects and changes such as the Greenhouse Effect.

Fossil fuel dependency

Most economies are dependable on the usage of fossil fuels. Ranging from automobiles to industrial productions fossil fuels are the main type of fuel used. This dependency is mainly caused due to the lack of alternatives, or the lack of cost-efficient alternatives. This phenomenon can be encountered in both MEDCs and LEDCs in varying degrees, as MEDCs require fossil fuels to sustain their production or profit from the sale and processing of such fuels through various methods and LEDCs cannot sustain renewable energy programs due to the costs and thus require fossil fuels in order to sustain the development of their economies.

Renewable sources of energy

Renewable sources of energy are those who utilize natural elements and do not become limited with usage. They have very limited consequences on the environment and at least one method of the utilization of such sources is available in every Member-State.

General Overview

The transition from fossil fuels to renewable sources of energy is a matter of time, it is however imperative that the major obstacle and primary loss from this transition be limited as much as possible. Energy, being necessary for industrial production, movement and for basic household features and applications, is a major component of production costs and also of household spending. Therefore the financial effect, unless suppressed will have an important and visible impact on the global economic growth and the national economies to a varying degree depending on their energy consumption and fossil fuel dependency. And even though it even affects households the planning must be done carefully and sustainably at the highest level, in order to retain market competitiveness in combination with the social goals as dictated by this transition.

Some of the renewable sources of energy that are more commonly used and are currently on the epicenter are the bio fuels, wind energy, solar energy and hydraulic energy.

As of 2011 fossil fuels cover 88% of the global energy requirements making the impending transition difficult due to the dependency. Given that this dependency exists the infrastructure for the development, construction, production and distribution of alternative forms of energy is nonexistent in many parts of the world, while only a few countries taking advantage of the 2000s “boom” in alternative energy projects development have managed to incorporate the logistics and necessary infrastructure of the alternative forms of energy into the existing gridline and existing infrastructure. However, even in these countries, infrastructure is problematic and lackluster

Renewable sources of energy also have higher production and plant maintenance costs. Recent reports by the U.S. Department of Energy (DOE), EDF France and a UK report published by Parsons Brinckerhoff indicate that fossil fuels are more economic by a significant margin in all three situations. Certain forms of renewable energy also face technical difficulties in production, such as the logistics in bio fuels and the conditions of operation when it comes to wind energy projects.

An additional factor that must be taken into consideration is the damage to the nations that export fossil fuels, many of whom are developing.

Major Parties Involved and Their Views

There are several parties, including organizations and states, involved directly and indirectly in the issue of the sustainable financial transition to the renewable sources of energy. Some of these are the following

The United Nations (UN)

The United Nations has pressured and provided a governing body for several treaties and actions. One of its important initiatives was the United Nations Framework Convention on Climate Change (UNFCCC) whose member countries have spearheaded the effort to reduce emissions of pollutants. Other UN bodies that support the effort are United Nations Environment Programme (UNEP)

The European Union (EU)

The European Union retains a policy on climate control and has agreed on related framework such as the introduction of bio fuels in the Union's Member States.

The International Renewable Energy Agency

Its operations include the promotion of sustainable and cost effective renewable energy, which can aid in reducing the financial transition effect. It is headquartered in Abu Dhabi which has its own importance given that the United Arab Emirates have one of the 7th biggest oil reserve.

The United States of America (USA)

The only key state which refused to ratify the Kyoto Treaty and did not set any binding targets, although it has a presence at non binding treaties and convention. Under the Obama administration it has been expected to move towards more alternative energy friendly policies, despite the internal pressure by lobby groups and key people in the Congress to utilize the American shale gas reserves, thus extending the fossil fuel dependency in country with the highest energy consumption.

The Renewable Energy Policy Network for the 21st Century (REN21)

Launched in 2005 it provides a forum for "international leadership in renewable Energy Policy" and provides information and expertise to developing countries on the matter

UN involvement, Relevant Resolutions, Treaties and Events

- United Nations Framework Convention on Climate Change (UNFCCC), May 9th 1992
- Kyoto Protocol, December 11th 1997
- Doha Amendment to the Kyoto Protocol, December 8th 2012
- Renewable Energy Directive of the European Union, April 23rd 2009 (2009/28/EC)

Evaluation of Previous Attempts to Resolve the Issue

Previous attempts on finding solutions to reduce emissions have mostly failed due to key Member States not participating or no binding goals being set. Agreeing to limit emissions is one of the primary motives towards developing renewable energy policies. Despite the fact that certain nation states or regional organizations, such as the EU, do wish to contribute and have contributed as part of non binding or binding treaties on the reduction or emissions or national agendas and regional organization binding policies there has been no complete and universal transition policy. These attempts have nevertheless formed landmark policies and a precedent and continuation or support can help extend their effects. Furthermore the global financial situation has led to the cancellation or postponing of several policies on renewable energy sources, which has had a blow on progress.

Possible Solutions

Achieving a cost worthy production of renewable energy will in the most optimistic estimates take at least half a decade. It is therefore important to organize the transition in such a way that the producers can offer competitive prices but also in affordable terms to the consumers. Subsidizing these forms of energy and placing a binding timeframe is the best solution and a solution already initiated by the European Union, though with limited success due to the decrease in funding which is a result of the global financial situation. Placing

emphasis on a national basis to the exact source of renewable energy that each nation has a productive advantage on is also likely to lead to reduced costs, but that may require an extensive and broad technical study. For example, as mentioned above, Brazil has achieved in creating a bio fuel consumption model which has largely prevailed over petrol consumption. This is also due to the fact that Brazil has a vast amount of sugar and molasses crops that are needed for the production of bio fuel, and thus this makes it cost effective.

This transition should also be supported by long term measures in order to keep developing its economic competitiveness and make it productively self sustainable in the near future and thus limiting the subsidies. The best solution towards this path is financing Research and Development (R&D) projects and initiatives. Information and technological advantages deriving from these projects will have to be shared in order to reach maximum effectiveness although this may be a concern to private corporations and nations with comparative advantage or those who already possess such schemes on their own financing. Providing incentives or emphasizing on educational institutions could be a solution. Moreover a plan must be created in order to ensure that the benefits of the transition and the policies to combat the negative aspects of the transition are shared to a degree that is to be decided with the developing countries so that the transition is first and foremost complete and also of equal advantages on a universal level, given that developing countries may have less incentives to aid in the transition, especially if they are fossil fuel producers, or may not have the financial or technical means to provide policies such as subsidies.

Expanding on the above, certain local or regional schemes can be supported or magnified to an international scale. A good example would be the European Union Competitiveness and Innovation Framework Programme's (CIP) Intelligent Energy Europe (IEE) scale. This also guarantees that the transition is spread evenly throughout every element in the economy, such as the small and medium size corporation in the mentioned case.

Additionally a legal and binding framework could be put in place as to avoid internal pressures in Member States who may choose to give preference to fossil fuels otherwise. This could be due to strong lobbies of oil, coal and gas companies who may wish to secure their future and thus preventing solutions for the cost efficient production of fossil fuels would be an aim.

You may list the possible solutions and explanations in the same form that the body of the report is to be written. The beginning of each paragraph must be indented. I strongly

recommend that you include strong and viable possible solutions because this is what will induce good ideas and resolutions from delegates. Don't be afraid to be original or creative in listing and explaining these possible solutions.

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Appendix

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