

# Trade in Renewable Energy: Importance and Challenges

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## 1. Introduction

The problem of degradation of environment by the pollution being created by burning of fossil fuels is certainly an important issue, which is being addressed, but not in a required manner. One of the most important things, which can effectively help in addressing the environmental pollution concerns, is the adoption of renewable energy as the emissions from the burning of fossil fuels is the major concern. This is the ace in the deck of transformations needed to save our planet from degradation. Easy access and implementation of renewable energy systems is the condition precedent for the widespread use of the renewable energy hence the international trade in RE systems must be given priority. However there are a lot of hurdles in trading the Renewable Energy (RE) systems and the instruments and technologies used in those systems. We shall discuss those issues and probable solutions further in this article.

## 2. Importance of Renewable Energy

The trade in RE systems is the most important so as to increase the availability of RE. There are broadly four things that can facilitate trade of RE carriers. Firstly the technologies that will help in long distance RE transmission such as installing power grids in continents for efficient electricity transmission or transporting renewable fuels with the fossil fuels. Other technologies that produce renewable energy like hydrogen from electrolysis are being developed that are not only land-efficient but can also be traded easily for long distances. Second factor that would increase and help the trade in RE is the social sentiments towards the RE and the availability of land to support the implementation, storage and usage of RE. Third such factor is economic viability of RE. RE systems are generally costly to implement and there are certain technologies which are making RE at the cheaper cost and these RE's can be transported efficiently. Fourth factor is offsetting the loss of fossil fuel industry by using the existing potential of land in generating and transporting the RE.<sup>1</sup> There is a strong relationship between trade and RE consumption. Increase in trade has the positive effect on RE technology transfer and

effects the awareness and consumption of RE in the long run.<sup>2</sup>

## 3. Challenges in Renewable Energy

The above-mentioned factors certainly affect the implementation and access of the RE generally but the trade in RE is not left frictionless in the arena of trade laws and often disputes arise. One such famous case is Canada-FIT program. In this case the support of the governments for their domestic products was extensively studied in the context of RE systems and the import of RE. Subsidies provided by the states to their domestic products and the policies that mandate the use of domestic items are at the Center of most of the disputes at WTO and so was in this case. The probable solution to this problem domestic priority and the competitiveness of the foreign RE and its components can be the exemption of RE systems in trading internationally and making dedicated legal instruments (agreements) for trading in renewables.<sup>3</sup> Besides these concerns there is another issue with the stance of World Trade Organization (WTO) in relation with Local Content Requirements (LCR) in any product. There is a well known principle of National Treatment in International Trade Law according to which the importing country must not be biased towards the goods or products of another country and must not favor the products of their own and should ensure equal market treatment of domestic and foreign products through regulations and other such instruments. WTO is of the view that LCR even when used for the environmental purposes violate the National Treatment Principle. The Subsidies and countervailing Measures Agreement (SCM) also does not provide any relief in this regard as it does not identify the RE as a separate product and hence RE is subject to same treatment as other products and services.<sup>4</sup> Such an approach of the regulator of world trade and the helplessness of the nations in keeping up with the regulations and general international agreements is problematic for the trade and

<sup>1</sup>Schmidt, J., Gruber, K., Klingler, M., Klöckl, C., Camargo, L.R., Regner, P., Turkovska, O., Wehrle, S. and Wetterlund, E., 2019. A new perspective on global renewable energy systems: why trade in energy carriers matters. *Energy & Environmental Science*, 12(7), pp.2022-2029.

<sup>2</sup>Jebli, M.B. and Youssef, S.B., 2015. Output, renewable and non-renewable energy consumption and international trade: Evidence from a panel of 69 countries. *Renewable Energy*, 83, pp.799-808.

<sup>3</sup>Espa, I. and MarínDurán, G., 2018. Renewable Energy Subsidies and WTO Law: Time to Rethink the Case for Reform Beyond Canada–Renewable Energy/Fit Program. *Journal of international economic law*, 21(3), pp.621-653.

<sup>4</sup>Batra, M. and Bafna, N., 2018. Renewable Energy: The WTO'S Position On Local Content Requirements. *39Energy Law Journal*, 401 (2018), pp.402-41.

execution of RE and creates friction in the path towards a decarbonized society.

Trade in renewables is shown to have direct relation with its consumption. Income is also a variable, which has strong affect of RE consumption.<sup>5</sup>

An important thing which is to be dealt with while implementation and adoption of RE is that the stakes of fossil fuel industry, extraction refining usage, are high. Also the perception of people towards energy and the present technology together does not allow the easy transformation towards the decarbonized society. There is a lot of inertia of carbon emissions due to the abovementioned factors. This inertia of carbon emissions is called Carbon Lock-in. We have to find a way, which gives the stakeholders of fossil fuel industry enough time and means to transform to a decarbonized society which uses alternative sources of energy.<sup>6</sup> The trade in fossils has evolved since it's an very old phenomenon but trade in RE is at its nascent stage and hence the things like Carbon Lock-in creates a lot of baggage to be carried while trading in RE.

Technological advancements and intensive research is reducing the cost of RE generation and it is projected that by the year 2050, RE generation, consumption, trade, investments, etc. would add 2.4% in the global GDP and create jobs in millions if the implementation is proper and timely.<sup>7</sup> The trade in RE has been discussed in depth since decades and the need of its liberalization has been prominent in all the discussions and researches. Reducing barriers to trade, specially tariffs, in RE and ensuring favorable domestic as well as international policies can effect the deepest penetration of RE in the farthest areas of the world and specifically the developing countries as there are the people who benefit the most from the affordable renewable energy. Also most developing countries have the potential for low cost production of different kinds of RE and increased demand and trade of RE will definitely improve the economy of developing countries.<sup>8</sup>

<sup>5</sup>Amri, F., 2017. Intercourse across economic growth, trade and renewable energy consumption in developing and developed countries. *Renewable and Sustainable Energy Reviews*, 69, pp.527-534.

<sup>6</sup>Seto, K.C., Davis, S.J., Mitchell, R.B., Stokes, E.C., Unruh, G. and Ürges-Vorsatz, D., 2016. Carbon lock-in: types, causes, and policy implications. *Annual Review of Environment and Resources*, 41, pp.425-452.

<sup>7</sup>IRENA, 2020. *Global Renewables Outlook: Energy Transformation 2050*. Available at: <https://www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020> (Accessed on: 2/6/2020)

<sup>8</sup>Steenblik, R., 2005. "Liberalisation of Trade in Renewable-Energy Products and Associated Goods: Charcoal, Solar Photovoltaic Systems, and Wind Pumps and Turbines", *OECD Trade and Environment Working Papers*, No. 2005/07, OECD Publishing, Paris, Available at: <https://doi.org/10.1787/216364843321> (Accessed on: 2/6/2020).

#### 4. Conclusion

It can be understood that RE is the future and there is not yet any discovery or invention that can help in de-carbonization of our planet while keep on using the fossil fuels for energy. Having said that it is important to take strong measures to develop a system, locally as well as globally, which helps in transformation to RE usage and is socially, educationally, institutionally, economically and technologically ready to adopt the change, rather it should be wanting the change. The trade in RE will play the most important role in this transformation and for the trade to be smooth it is of utmost importance that we make a common global policy framework or an agreement which favors the trade in RE and which provides the effective and easy implementation of RE. Also the countries must formulate enabling domestic policies that will favor RE more than fossil fuel energy.

#### References

- [1] Amri, F., 2017. Intercourse across economic growth, trade and renewable energy consumption in developing and developed countries. *Renewable and Sustainable Energy Reviews*, 69, pp.527-534.
- [2] Batra, M. and Bafna, N., 2018. Renewable Energy: The WTO'S Position On Local Content Requirements. *39Energy Law Journal*, 401 (2018), pp.402-41.
- [3] Espa, I. and Marín Durán, G., 2018. Renewable Energy Subsidies and WTO Law: Time to Rethink the Case for Reform Beyond Canada-Renewable Energy/Fit Program. *Journal of international economic law*, 21(3), pp.621-653.
- [4] IRENA, 2020. *Global Renewables Outlook: Energy Transformation 2050*. Available at: <https://www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020> (Accessed on: 2/6/2020).
- [5] Jebli, M.B. and Youssef, S.B., 2015. Output, renewable and non-renewable energy consumption and international trade: Evidence from a panel of 69 countries. *Renewable Energy*, 83, pp.799-808.
- [6] Schmidt, J., Gruber, K., Klingler, M., Klöckl, C., Camargo, L.R., Regner, P., Turkovska, O., Wehrle, S. and Wetterlund, E., 2019. A new perspective on global renewable energy systems: why trade in energy carriers matters. *Energy & Environmental Science*, 12(7), pp.2022-2029.
- [7] Seto, K.C., Davis, S.J., Mitchell, R.B., Stokes, E.C., Unruh, G. and Ürges-Vorsatz, D., 2016. Carbon lock-in: types, causes, and policy implications. *Annual Review of Environment and Resources*, 41, pp.425-452.
- [8] Steenblik, R., 2005. "Liberalisation of Trade in Renewable-Energy Products and Associated Goods: Charcoal, Solar Photovoltaic Systems, and Wind Pumps and Turbines", *OECD Trade and Environment Working Papers*, No. 2005/07, OECD Publishing, Paris, Available at: <https://doi.org/10.1787/216364843321> (Accessed on: 2/6/2020).