

Introduction: **The geopolitics of energy in India - The impact of renewables**

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Our first objective is to demystify the social mosaic that is India, which, with its relatively recent geopolitical reality, dates only since 1947. Historic India, before partition, encompassed Pakistan and Bangladesh territories. These regions, inhabited for several tens of millennia by highly developed civilizations, with multiple influences, covering 5 million km<sup>2</sup>, lead us to be cautious about the multiple indigenous traditions. The democratic ideal, at the heart of the national project, allowed the adoption of a constitution on January 26, 1950, thus providing a matrix of constantly evolving geopolitical integration. It is necessary to emphasize that India has a time zone of its own, in addition to operating with different calendars, to which we sometimes humorously attribute the acronym IST (Indian Stretchable Time) to refer to a so-called punctuality "relative." India is recognized as the largest exporter of brains to the United States, and the ambiguity of political and trade relations with China is delayed by value-added industrial and technological transfers to the territories. Africans with the same cleavages between rurality and urbanity.

India's energy needs are growing rapidly, and renewable production targets demand increasing investment. Hydroelectric development is very present in India: several power stations have been built in the Himalayas or elsewhere, where certain rivers are harnessed and large dams are built such as the Tehri Dam in Uttarakhand, on the Bhagirathi, one main tributaries of the Ganges; or the Sardar Sarovar Dam, along the Narmada River, in Gujarat. During the construction of each dam, the local populations resist, but several villages are still forced to move.

Other forms of energy production are being considered, to this end, in 2010 the Gujarat Solar Park was established, a solar energy production park, the first and still the largest in the whole of Asia, bringing together several companies. Several regions, such as Tamil Nadu, are also relying on wind power. These various efforts, however, are still in their infancy, and several other avenues must be explored for India to meet its energy needs.

Managing human waste is not India's only environmental challenge. The treatment of wastewater, often of industrial origin, is also a very acute problem. As environmental standards are poorly developed in India, several industries dump their waste directly into the surrounding waterways. The Ganges, this sacred river where hundreds of

millions of villagers drink directly, is one of the most polluted rivers in India, despite the fact that the industrial wastewater treatment market is estimated at USD 12 billion.

India holds a long-standing relation in high esteem and this Indo-European alliance in the fields of energy provides prospects for global harmonization in the situation of crises that we are experiencing at the global level.

Nothing is more valuable for a business wanting to establish itself in India than having members of Indian origin on its team.

The secret hearths of inventions in India represented in paradoxical ways and Gymnosophist philosophies have fascinated ever since Solinus (Latin historian of the 3rd century AD) himself taking up Herodotus (Greek historian of the 5th century before the Christian era), and, we are able to abandon our Western presuppositions in order to understand India and its cultures as they are experienced by its population, without any “civilizing” inclinations, but indeed creative through sober technologies and renewable energies.

Will the Indians now be able to transform the test by substituting low-carbon energies for coal in order to be globally competitive by accelerating trade and interactions that are permitted ?

India is cooperating with Russia, a long-standing partner on subjects such as renewable energy, liquefied natural gas projects, as well as nuclear. Relations with the United States are also important to maintain security, investment and connectivity.

With regard to the European countries and the United Kingdom, whose links are historical, cooperation and innovation are present on various levels such as space research, economic relations, defense, culture and education.

As you know, there were projects around EPRs that are put on hold for several reasons, including the seismicity of the regions concerned.

The initiative launched jointly between France and India called the Indian Solar Alliance was launched at COP21 in 2015.

ISA is the premier international organization headquartered in India and primarily aims to promote solar electricity in sunny areas between the Tropic of Cancer and the Tropic of Capricorn.

Most of the ISA member states are very poor countries, which will be able to unite and negotiate with oil-rich countries to ease the monopoly on oil and gas.

Unstable states like Afghanistan, Uzbekistan and Turkmenistan, due to their abundance of solar energy, can also come together and form an institutional body to harness solar energy.

For India, this will also save forex reserves. It was also one of the reasons why India decided to privatize coal plants. India, however, remains the second largest importer after China. I think we are a long way from getting rid of coal, but the first step was to reduce the import of coal and use existing resources. Choices that are not optimized for the environment today are still being made for economic and survival reasons as long as the price of these renewable energy projects is not accessible or green finance offers more sustainable solutions.

The solar projects effort received a major boost with the ambition of Prime Minister Narendra Modi, who had set a national solar target of 175 GW by 2022 and 450 GW by 2030 by the various renewable energies including the hydroelectric.

Some of the factors to take into consideration are that India has a growing need for energy with its growing middle classes and its ambition to be the leader of the Fourth Industrial Revolution by relying on frugal innovation for progress towards an economy of value and regeneration, while reducing the impact of greenhouse gases. Hence its need to switch to renewable energies as quickly as possible.

The last factor we take into account is The Silk Road, which, according to history, is the beginning of a path towards gentleness in general, gentleness of relations: economic, political, cultural ...

This is China's initiative with the One Belt One Road (OBOR) project, aimed at investing billions of dollars in infrastructure projects, including railways, ports and power grids, in Asia, in Africa and Europe.

OBOR includes the Maritime Silk Road and the Silk Road Economic Belt (See figure 2 on page 4)

**Figure 1 : The Main Silk Roads between -500 and +500 (Toponyms in Latin)**

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**Figure 2 : One Belt One road “The new silk roads”**

<https://www.futuribles.com/fr/revue/425/les-nouvelles-routes-de-la-soie-sur-la-nature-des/>

China's growing collaboration with its neighbors in India has created tensions for India over the challenge of managing its relationship with its larger neighbor and maintaining a competitive position in Asia.

All the stake and the uncertainty of the future of these projects lie in the management of the relations between these two giants.

In this context, the Blue Dot network is a G7 initiative involving Canada, France, Germany, Italy, Japan, Australia and India for infrastructure projects to bring more transparency in the decisions taken.

In the context of geopolitics, we realize that the new borders are no longer only physical, but rather defined by the exchange of economic values.

In the past, the East has built up a heritage based on the Spirit, while the West has mastered the material to develop exchanges and sharing.

The projects carried out between Europe and India can help strike a balance between these two requirements and achieve more harmonious modes of operation while respecting the memories of the world and the populations.

The Frugal Company, based in France, promotes and supports projects with a positive environmental impact through the approach of frugal innovation, and helps to create bridges between companies, associations, entrepreneurs and of course between India and Europe.

It is a vector of innovation that promotes frugal innovation through training, consultancy missions and its participation in transformation projects.

It is based on the conviction that the role of renewable energies and the shift from the perception of the value of economic growth to environmental valuation for society could influence the course of geopolitics, and that in this context India has an important role to play.