

# Protecting the Solar Energy Industry in India During a Pandemic Outbreak

Solar power is a fast-developing industry in India. As of end February this year, the country's solar installed capacity reached 34.404 GW. India has set an ambitious target of installing 100 GW solar energy capacity by 2022.

The ongoing COVID-19 pandemic has heavily affected the industry, impacting solar power projects in various aspects. These include:

**Global supply chain:** The most significant near-term impacts on renewable plants that are already contracted or under construction may be felt through supply chains. While China, which is India's main supplier of PV panels, is limping back to normalcy, the road is very arduous and time-taking. There will be delays in projects and provisions around cessation of work that needs to be incorporated in on-going projects. Chinese firms supply about 80% of solar cells and modules, which form up to 60% cost of a total project, to India.

**Power demand:** The electricity demand in India dropped from 163.73 GW on 20 March to 127.96 GW on 25 March when the country started its lockdown. As the government extends the lockdown to contain the coronavirus outbreak further, it is expected that there could be business losses. Unfortunately, these losses will have to be absorbed by companies in the absence of a pandemic insurance cover (which is excluded in almost all Indian insurance policies).

**Delay in project:** The lockdown on all non-essential businesses, which cover solar construction projects has resulted in projects delay. Material needed are stuck on roads. These will lead to delay in the commercial operation date. While the project insurance policies exclude pandemics, this could become a new request from the Independent Power Producers (IPPs).

**Labour shortage:** Even as some relaxations in the lockdown and restart of some economic activities are expected, project developers continue to be wary and

cautious of the labour shortage. Workmen who have gone back to their homes across the country are not expected to return soon. Most solar projects are in villages and local authorities may be reluctant to allow the migrant workers to travel out. The bigger concern is the roof-top projects in factories and plants where commissioning will be slowed over the next few quarters.

## Mitigating the risk

Project delays on the solar construction projects can significantly impact India's flagship target to generate 100GW of solar energy by 2022. To mitigate this impact and risks from the COVID-19 outbreak, various actions are undertaken to support India's solar energy industry. As of end March, the Indian government has allowed solar energy companies to cite force majeure clause over coronavirus disruption. This move could be a relief to project developers as otherwise they would face fines through no fault of their own.

## What will happen again?

Experts with diverse backgrounds all over the world are working towards faster development of vaccines against COVID-19, including six Indian companies. Nevertheless, epidemics of infectious diseases are occurring more often, and spreading faster and further than ever, in many different regions of the world according to the World Health Organisation (WHO). The background factors of this threat are biological, environmental and lifestyle changes, among others.

Although the healthcare and response system may improve after the pandemic crisis, in terms of testing, reporting, communication and intervention, epidemic should be included as one of the major risks the solar energy industry needs to seriously consider and factor into companies' business continuity plan in the future.

## Alternative risk transfer solutions for solar energy companies

Normally, the conventional insurance programme does not cover loss of revenue due to insufficient labour or suppliers' shutdowns. To trigger the business interruption coverage, property damage is a pre-condition for that to happen.

To overcome this challenge, a unique risk transfer solution, called epidemic risk transfer solution, is recently developed. Unlike traditional insurance, this solution does not take property damage as the trigger of insurance indemnity. Instead, it pays a claim based on the severity of an epidemic outbreak.

This provides an effective risk transfer for solar energy companies. It can help to cover some extra cost that may be incurred, for example workers' quarantine cost and worksite cleaning cost, as well as the loss of revenue due to the delay in start-up because of an epidemic and/or pandemic outbreak of known or unknown origin. The solution can be tailor made depending on the project size, construction period and company's budget. It can be offered as either a parametric or indemnity-based policy.

The capital market could also be another solution provider. A very well-known insurance-linked securities (ILS) related to epidemic outbreak is the pandemic catastrophe bonds sponsored by the Pandemic Emergency Financing Facility (PEF) established by the World Bank. The mechanism of the pandemic catastrophe bond is similar with the traditional catastrophe bond.

If there is a pandemic outbreak in the world before the maturity of the bond and payout triggers are met, the bond issuer will not return the principal and interest to the bondholder. The bond principal amount will then be converted into an anti-epidemic fund. If the triggers are not met, the bond issuer will return the principal and interest amount to the investor as agreed. The interest rate of the pandemic catastrophe bond is higher than that of other bonds in the market.

## Protecting the solar energy industry in India

It would still take months or longer for us to know the full economic impact from the COVID-19 crisis. However, we have already seen its massive impact on solar energy industry in India. The government, India solar energy industry and global community are taking constructive and preventive measures to

mitigate the losses and risks, especially in the post-pandemic recovery phase, ensuring that India stays on its path to pursue clean energy.

Going forward, there are unique risk transfer solutions available to protect the investment interest of the industry. It is impossible to predict when the next 'black swan' event can happen and impact the industry. Being ready for the unknown risk can always save vulnerable entities in difficult times while waiting for the light at the end of the tunnel to come.

*\*The article was first published in [SOLARQUARTER](#).*

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