



SPOTLIGHT

TATA CLEANTECH CAPITAL LIMITED: DRIVING GREEN INVESTMENT IN INDIA

INTERVIEW WITH MANISH CHOURASIA, MANAGING DIRECTOR OF TATA CLEANTECH CAPITAL LIMITED

Tata Cleantech Capital Limited (TCCL) recently joined the Green Bank Network. TCCL is a joint venture, operating since 2013, owned 79.5 percent by the Tata Group, a major conglomerate headquartered in India, and 19.5 percent by the International Finance Corporation (IFC), a global development finance institution and part of the World Bank Group. TCCL is a little different from traditional green banks in that it is a private sector for-profit green financing enterprise, rather than a public entity. It aims to create and mainstream new financing markets in green sectors in India.

We spoke with Manish Chourasia, Managing Director of TCCL, about TCCL's mission, business model, challenges particular to operating in India, and present and anticipated future investment areas.

Why did Tata decide to have a green investing arm, and how did you come to partner with IFC?

To answer this question, I must tell you about Tata Group. Tata Group is a 151-year-old group of companies, headquartered in India. It is a multinational conglomerate, operating in over 100 countries with more than \$110 billion (USD) of annual revenue. Twenty-nine companies in the group are listed on public stock exchanges, with a total market value of about \$158 billion. What is unique about the group is that philanthropic trusts own two-thirds of its equity. Thus, out of every three dollars that are distributed as profits by the group, two dollars go for philanthropy. That philanthropy has been used to build institutions of national importance, like one of the best engineering research institutes in India, the Indian Institute of Science, and two cancer research hospitals, one in Mumbai and one in Kolkata, which are among the best in the country, The Energy & Resource Institute, set up to tackle the depletion of natural resources and energy scarcity, and the Tata Institute of Social Sciences, which has made a significant contribution to policy, planning, action strategies and human resource development, are other examples of institutions funded by Tata Group.

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Tata Group has also been ahead of its time in adopting best practices for the industry. Back in 1877, the group established gratuity and pension funds, which are mostly pension benefits, and in 1910 the group initiated eight-hour work shifts. These reforms were instituted before they became mandatory by law.

So the philosophy of giving back to society as part of the business has been a part of Tata Group from the very beginning. The founder, Shri Jamsetji Tata, said that "in a free enterprise, the community is not just another stakeholder in business, but is the very purpose of its existence." It is only natural that, with this philosophy, Tata Group pursued the idea of starting a climate finance company with private money. In this way, we are very different from the other green banks, which use public funds.

We decided to partner with IFC, as the two institutions had a shared vision on the need to combat climate change and on the importance of a dedicated financial institution to achieve this. IFC has been quite active in India in financing segments where there is a market gap, and, currently, cleantech is one such segment. In addition, there is a strong cultural fit between the two institutions in terms of pursuing a developmental agenda with sustainability at its core.

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How would you define TCCL's mission?

Essentially, our mission is to fill the market gap in India in funding projects that can combat climate change. There are a lot of possibilities today in this area, but the financing ecosystem is not there yet in the emerging markets.

Our mission is to identify the right projects, build a financing ecosystem around them, and bring them to mainstream so that other investors can come in. It is very much the green bank model of using limited funds to create an ecosystem that can encourage private investors to come in at scale, except that unlike most other green banks, we use private funds to create ecosystems.

What is your business model for achieving your mission?

We are striving to create a platform through which (i) climate investors can make investments in the cleantech sector and (ii) we mainstream green projects so that a new class of investors is attracted to it. To achieve this end, we have structured ourselves as what is called a “non-banking finance company” in India. We have about \$130 million of equity capital and retained profits, and we leverage this capital by market borrowings like any other bank.

On the liability side, we have several sources of financing. First, we borrow from the Indian banking system. Second, we borrow in the Indian capital markets by issuing non-convertible debentures and bonds. Third, we borrow from international climate investors. For example, we have a 20-year line of credit from the Green Climate Fund (GCF) for solar rooftop projects. We have also issued green bonds to and sourced green loans from foreign banks and development financial institutions such as Bank of America and Dutch development bank FMO. We use our capital and this outside funding to invest in our diverse climate projects.

On the asset side, we invest by providing senior debt to the project. Based on our due diligence and negotiations with the sponsors, we structure the transaction and then invite other lenders to participate in the senior debt. We typically would take anywhere from 25 to 100 percent of the senior debt for a project, generally taking 100 percent only for small projects. The project sponsor typically provides the equity for the project. The projects we fund usually have a tenure of about 10 to 17 years, but often, we can refinance them in about two to three years after the projects are commissioned and stabilized and then use the capital returned to fund new projects. During the past six years, we have done about \$1.25 billion in funding, although our current portfolio is approximately \$700 million, as quite a few of our funded projects have been refinanced.

We fund both large utility-scale projects and smaller projects. Our larger projects tend to be mainly in the renewable space. The large solar or wind projects can be anywhere from 10 to 200 megawatts. The smaller projects we fund are typically in the energy efficiency, small hydro, and solar rooftop segments.

The fundamental point is that there is no trade-off between the development agenda and making good returns; you can do both.

We aim to create new markets in green sectors. We are not here simply to participate in markets that have already been mainstreamed. What I believe we have demonstrated in the past six years is that we can engage in development investment in the green space and mainstream the investments without compromising on the returns to shareholders. Since we commenced operations about seven years ago, we have financed more than 190 transactions, and so far, our portfolio performance has been excellent. The fundamental point is that there is no trade-off between the development agenda and making good returns; you can do both. And this is important because if your projects are not viable economically, your model will never be scalable. In financing projects, we try to structure them financially in such a way that significant risk is mitigated, and debt service is in line with cash flows. Sometimes, we have relied on other climate investors to achieve this end, by way of first-loss guarantees or long tenure low-cost funds to specific sectors that have the potential to get mainstreamed—for example, a 20-year

low-cost loan from GCF for the solar rooftop sector, as mentioned earlier.

We are also active in advisory services for green investments and have done assignments for clients such as the World Bank, the German development consultancy GIZ, IFC, the Alfanar group of Saudi Arabia, and Canadian Solar. These assignments have been in both the financial advisory and the techno-commercial advisory space.

Finally, as we are committed to ensuring the long-term viability of our investments, we also evaluate resilience in our projects, covering social and environmental aspects. Typically, resilience is taken into account when a project is in the planning stages. What is challenging, however, is predicting how severely climate change will adversely affect the project. But while you may be able to gauge what will happen in the next five to seven years, we have found it harder to go out farther than that. For example, a power purchase agreement (PPA) is typically for 25 years and we have found it more challenging to gauge climate change events over that kind of time frame. As of now, we rely mostly on insurance to mitigate this risk.

While currently we have focused only on senior debt as an asset class, going forward we are keen to explore other products such as mezzanine debt, venture capital, and equity through a fund structure with like-minded climate investors. We are also exploring organizing a debt fund to help develop the green bond market in India.

It sounds like you've had to become experts yourselves in green technologies.

Evaluation of any project requires a full 360-degree view involving diligence on technical, commercial, legal, and financial issues. To make the right decision, it is important for us to understand the nuances of the cleantech sector, including some understanding of the technology and other aspects concerning relevant regulatory and legal matters. With focus merely on financial structuring, we would never be able to create a scalable model and achieve our mission. Hence, we are striving to create a balanced team, that has well rounded expertise in areas such as technical, commercial and legal. We have been striving to do this partly by building expertise within TCCL and partly by relying on outside partners.

What challenges have you faced that are particular to operating in India?

One of the biggest challenges relates to the enforceability of contracts. Typically, a wind or solar project developer enters into a power purchase agreement to provide power for 25 years or so. These sectors have seen a great deal of technological innovation and growth, and as a result, the cost of power has come down significantly. The utilities that are the purchasers under these PPAs, understandably, may seek to renegotiate these contracts. In the past, these attempts have not been successful and contracts have been enforced according to their terms. However, during these attempts, there have been delays in payments by the utilities that in turn exert financial pressure on the project sponsors to keep their debt commitments.

Another challenge is the high cost of capital. Interest rates in India are significantly higher than the global average. Typically, for a renewable energy project, the capital cost is high because of the high interest rates, but the variable costs are almost nil as there is no need for any raw material. Therefore, the cost of power mainly reflects the cost of capital and thus if the cost of capital—basically, the interest rates—continues to be high, the cost of power can never come down.

Compare, for example, the situation in Germany. Germany does not have nearly the solar resources of India in terms of irradiation, but the cost of capital in Germany is much lower. Therefore, the cost of power is almost the same in India as it is in Germany, even though the solar irradiation in India is much better.

Another issue in India is that the solar and wind developers tend to be very aggressive in their bids when participating in auctions. Essentially, in reverse auctions, they sometimes make a bid to provide solar or wind power at a very low price in order to win the bid. But such a price may be too low to have a viable project, so the project may end up not being funded. Under the Electricity Act in India, the auction price cannot be renegotiated, so, in this case, the project may not get built.

It is also difficult to obtain long-term fixed-interest-rate financing in India. In order to have predictable cash flows, projects need long-term (10 to 15-year) fixed-interest-rate financing, but this kind of financing is not generally available in India. Therefore, the developers tend to take loans on a floating-interest-rate basis, which means that if interest rates go up, the viability of a project can be adversely affected.

In theory, the developer could enter into a floating-to-fixed interest rate swap, but it is difficult to get a swap with a term of more than three or four years for the same reason that it is difficult to get a long-term fixed rate loan. Similarly, if a developer seeks a foreign currency loan with a fixed interest rate, the developer would have to get a currency swap into Indian currency, but these swaps are expensive. Also, it difficult to get cross currency swaps of long tenure as the market is not deep enough.

Another aspect of operating in India is the necessity of understanding the local conditions because these local conditions drive the way we approach particular financings.

For example, India is a federal republic, divided into states. Each state may have a different renewable energy target and a different policy framework. It is important for us to understand the commercial consequences of the policies that affect our lending.

Apart from this, India has its own set of peculiarities, which can make project execution challenging at times.

Let me give you a specific example. India has a Land Ceiling Act that limits the amount of land that an individual can own. If you are trying to do a 50 megawatt solar project, say, you would need about 200 acres of land. This is a huge amount of land to have to acquire and it may have to be acquired from many different individuals. As these locations are remote and land records are not digitized in India yet, doing a title search on the land can become a huge challenge.

It is also important to know the local conditions. If you are doing a solar project, you need water to clean the solar panels, but if the ground water level is too low, sufficient water may not be available for this purpose. Thus, an alternative cleaning solution must be found. Or a particular location may be susceptible to sandstorms that can damage the solar panels. It is therefore very important to have a deep understanding of the local conditions.

Where do you see the biggest potential for future growth in terms of green technologies or products?

India is fundamental to the fight against global warming as its economy is likely to grow by more than 6 to 7 percent per annum over the next few decades, powered by its young workforce. Any slackness from India could derail the entire global effort to combat climate change. Given this strong macro driver, we are likely to see huge investments in India in the renewable energy, electric vehicle and energy efficiency sectors.

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In the solar and wind sectors, while the current capacity is 67 gigawatts (GW), the country has the potential to build capacity up to 1050 GW, given the huge wind and solar resources available in India. Capacity of about 500 GW is a possibility by 2030, which will require investment of \$240 billion, including funds required for building the transmission network.

Similarly, in the electric vehicle sector, the government is pushing for rapid adoption as it is one of the key ways to solve the problem of vehicular pollution in the country and also to reduce dependence on oil imports. India has dubious distinction of having 13 of the 25 most polluting cities in the world. Our estimate is that from minuscule levels now, India will have about 18 million electric vehicles by 2030 requiring investment of \$260 billion, including associated infrastructure for charging.

In addition, we will see huge investments in the efficiency of energy use for heating and cooling in industry and in commercial buildings, residential appliances, solar pumps for agriculture, and municipal lighting. We expect investment of about \$50 billion in this segment by 2030. Finally, in a few years, energy storage is expected to become competitive and attract large investments.

How do you assess your market reputation?

In Tata Group, we have a very formal process for stakeholder feedback, which includes a formal customer satisfaction survey conducted by an independent agency. In these surveys, we track our performance based on standalone scores measuring various parameters, including net promoter score, a measure of customer willingness to recommend a company's products or services. Our scores are also benchmarked against the competition.

The result of these surveys confirms that we are now recognized as a significant player in the cleantech industry. But we are still learning. Every year, we try to improve, learning from others. It is important to be humble about what we have done because there is so much more to do.

GREEN BANK NETWORK

The Green Bank Network's Spotlight highlights the GBN's newest member.

The Green Bank Network (GBN) is a membership organization managed by NRDC and the Coalition for Green Capital that was founded in December 2015 to foster collaboration and knowledge exchange among existing Green Banks, enabling them to share best practices and lessons learned. The GBN also aims to serve as a source of knowledge and a network for jurisdictions that seek to establish a Green Bank. The GBN members are the Clean Energy Finance Corporation (Australia), Connecticut Green Bank (U.S.), Energy Efficiency and Renewable Sources Fund (Bulgaria), Green Finance Organisation (Japan), Green Investment Group (UK), GreenTech Malaysia, NY Green Bank (U.S.), Rhode Island Infrastructure Bank (U.S.), and Tata Cleantech Capital Limited (India). Visit us at greenbanknetwork.org/about-gbn.



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