IJGlobal
A Green Street Company

Mundra UMPP - India's US$4bn international clarion call

21/05/2008

Tata Power's 4,000MW coal-fired Mundra Ultra Mega Power Project (UMPP) in Gujarat, India, reached financial close late last month and brought the booming Indian power sector to the focus of the international project finance community.

The sector has been growing for years due to strong local demand, but largely on an internalised basis after international players were scared off by infamous project finance disasters in the 1990s.

Reaching financial close on a US$4.375 billion flagship project [Projects database] in the middle of global debt market turmoil required heavy input from agency and multilateral financiers, plus the highly liquid Indian banking sector.

Chaminda Jayanetti explores the financing, and finds that many of the lessons of the past have been learnt. Risks still exist, but if they can be successfully mitigated India represents a major opportunity for the global project finance community, potentially even on a par with the Middle East.

Financing

Initially, Tata Power had wanted to finance the US$4 billion-plus project on an 80:20 debt-equity ratio. They were soon persuaded otherwise.

"When we analysed the project, we talked to the sponsors and said this is really not bankable, you've got to increase your equity contribution from about the US$800 million originally contemplated to about US$1 billion," said Rashad Kaldany, Director of Infrastructure at the IFC.

The debt-equity ratio was shifted to a 75:25 structure, with Tata Power investing Rs42.5 billion (US$1.1bn) in equity.

Dollar financing came to US$1.825 billion, arranged as follows:

- Korea EXIM - US$500m
- IFC A loan - US$450m
- BNP Paribas (95 per cent covered by Korea Export Insurance Corporation) - US$325m
- Asian Development Bank (ADB) direct loan - US$250m
- ADB (covered by Korea EXIM) - US$200m
- India Infrastructure Finance Company (IIFCL) - US$100m

The IFC A loan is priced at Libor +200bp, with a step-down after construction is complete, followed by step-ups at rough five year intervals. The IIFCL loan is also priced at Libor +200bp.

The two ECA-covered facilities are priced at a flat rate below Libor+100bp, but carry a higher up-front premium charged to the sponsor. The direct loans from Korea EXIM and ADB are priced at a flat rate in the region of Libor +200bp.

Construction work will start later this year, with the plant slated to become fully operational by June 2012. The five 800MW units will come online at four-month intervals.

Due to the long construction period, the loans are being disbursed in stages to finance each unit - with grace periods for much of the lending staggered correspondingly.

The IFC loan carries a 20-year tenor and will be disbursed in five separate US$90 million instalments, with three start times for repayment - although there is a degree of flexibility within the agreement. Repayment of the final instalment commences between four and five years after the first drawdown, depending on when it is disbursed.

The non-IFC dollar facilities all carry an 18-year tenor, except the 19.5-year ADB direct loan. The three Korean ECA facilities and the ADB direct loan have a single four-year grace period after first drawdown.

State Bank of India (SBI) was lead bank on the rupee financing, which amounted to Rs58.5 billion (US$1.46bn) arranged as follows:

- SBI - Rs20bn (US$500m)
- SBI associate banks - Rs5bn (US$125m)
- IIFCL - Rs18bn (US$450m)
- Oriental Bank of Commerce - Rs5.5bn (US$137m)
- Hudco - Rs5bn (US$125m)
- Vijaya Bank - Rs5bn (US$125m)

The rupee tranche has a 15-year tenor, and will be disbursed to finance construction of each of the five 800MW units in turn. The lending for each unit will carry a three-month grace period from the completion of that unit.

The rupee lending is priced at Sbar (State Bank Advanced Rate) -200bp. Although the pricing is below Sbar, it is a commercial price as Sbar is an advanced rate set above the basic cost of borrowing.

Doosan Heavy Industries was awarded the EPC contract for the boiler island - enabling Korean ECA lending - while Toshiba will supply the five 800MW steam turbine generators.

The project offtake will be sold under a 25-year PPA from June 2012. The offtakers are state power companies and electricity boards:

- Gujarat Urja Vikas Nigam - 1,805MW
- Maharashtra State Electricity Distribution Company - 760MW
- Punjab State Electricity Board - 475MW
- Haryana Power Generation Corporation - 380MW
- Ajmer Vidyut Vitran Nigam - 136MW
- Jaipur Vidyut Vitaran Nigam - 136MW
- Jodhpur Vidyut Vitran Nigam - 106.4MW

The offtake agreements account for the plant's 3,800MW net capacity - the remaining 200MW are used to power the facility itself.

Coal will be sourced from Indonesia, and imported via Mundra Port. Tata has acquired 30 per cent stakes in Kaltim Prima Coal and Arutmin Indonesia to help secure the coal supply.

Advisers on the project were:

- SBI Capital - financial to sponsor
- J Sagar - legal to sponsor
- Chadbourne & Parke - international legal to lenders
- Amarchand - local legal to lenders

- Marsh & McLennan - insurance to lenders

India's white elephant in the room

For many international players viewing the Indian power sector, Mundra carried a country risk summed up in one name - Dabhol.

The world's largest IPP, the biggest foreign investment in India - Enron's US$2.9 billion, 2,184MW behemoth came crashing to the ground twice, firstly after the state electricity board refused to pay the high power tariff, and then finally in 2001 when it became clear there was no demand for the enormous offtake. The Indian government reneged on guarantees it had provided, and Enron walked away.

The global project finance community has not forgotten Dabhol. "Very little foreign financing and investment in the power sector has taken place since Dabhol," said Kaldany. "Given that context, of both the general credit conditions and the specifics of India, foreign investors and financiers were reluctant to provide very long-term financing that was required for this project."

In 1993, the World Bank refused to finance Dabhol after the bank's country manager presciently declared that the project was "not economically viable". Fifteen years on, and the IFC - the World Bank's private sector lending arm - committed its largest single investment in any project anywhere in the world to Mundra. What changed this time around?

The key factor was tariff-based bidding. While Dabhol's high tariff - agreed under a fast-track MoU that was never competitively tendered - meant that its power simply wasn't purchased by the state electricity board, the UMPP projects are awarded to the bidder that offers the lowest tariff.

In other words, the offtakers - all of which are state power companies and electricity boards - will actually buy the plant's power, rather than opting for cheaper rivals. The take-or-pay structure of the PPA and India's massive power requirements also reduce the project's risk profile.

"The key factor that convinced us this was a good project from a financial perspective was that it would be economically competitive," said Kaldany. "We think it will be one of the first sources of energy that the offtakers will look to, because I'm not sure a lot of the state electricity boards would like to pay huge amounts for power they're not going to buy. The economies of scale here are critical in that regard."

"Even if the power contract falls away, the price of power is so competitive that you'll still be able to sell on the Indian market because the demand is so huge," added Rohit Chaudhry, partner at Chadbourne & Parke, which advised the lenders on the Mundra UMPP deal.

The cheap tariff wasn't the only benefit of the UMPP bidding process, according to Chaudhry: "There is a competitive bid, there are certain project documents that come with the bid, and they present a risk profile which is what it is.

"A large part of the reason why things got bogged down in the 90s was the amount of time it took to get the project documents - the power contracts, the guarantees backing these power contracts - into a shape that would be financable for lenders."

Indeed, the pre-agreements mean that while many UMPP projects have experienced difficulties - some embryonic projects have been dropped and others delayed over issues such as land acquisition - these problems have often been resolved before tendering begins, and certainly by the time developers start financing the projects.

Two other aspects of the Mundra deal are fundamentally different to Dabhol. First, the developer is Indian. Tata Power knows the Indian power sector with all its attendant factors and risks - unlike Enron, the US giant that marched into India with Dabhol and came unstuck on unfamiliar ground.

Moreover, India's state electricity boards (SEBs) - the offtakers of most power projects - lack creditworthiness. The

Dabhol solution was to seek a web of government guarantees.

"The solution that people sought in the 90s," said Chaudhry, "was government guarantees from state governments, and counter-guarantees for the fast-track projects from the government of India. It led to huge delays when this was being done in the 90s. They are not on the table now."

Indeed, JBIC wanted the Indian government to provide sovereign guarantees for the Mundra deal, but the government had made it clear throughout that the UMPPs would have to operate without such protection. As a result, JBIC did not provide financing for the project.

Wrapped up in risk

That's not to say the project was without its challenges. Even with the benefits that pre-agreed project documentation brought, the flip side was that international lenders were not necessarily presented with agreements in a form they were familiar with.

"What the lenders basically had to get comfortable with was the fact that a large number of the key project documents could not be changed. So the risk profile was what it was in those documents. That needed some getting comfortable with," Chaudhry told *IJ Online*.

Another challenge was apportioning construction risk. The fiercely competitive tariff-based bidding had put such a squeeze on project costs that in order to win the tender, Tata Power had jettisoned the wrapped EPC contracting structure that is typical in large power projects.

Instead of having one EPC contractor responsible for all subcontractors and the entire construction process, the contracting was structured on a cheaper 'unwrapped' basis - with a variety of contractors all responsible for their own particular part of the project.

This might make for cheaper EPC arrangements, but it also raised the prospect of different contractors not coordinating properly, leading to project overruns and overspends - increasing construction risk. Factor in that Mundra was using highly-efficient supercritical technology that had never been operational in India before, and the construction risk profile cast a long shadow.

Chaudhry said the risk was ultimately parcelled out between the different parties to the deal: "It's a nuanced approach, where there is a sharing of risk in a way that everyone got comfortable. It's split out between a certain level of risk taken by contractors, a certain level taken by lenders and a certain level taken by the sponsors.

"Coal supply and coal transportation was also a big issue, because not all of it had been entirely tied down by the time we reached financial closing. There was some analysis done as to how to deal with that going forward and there's a whole structure associated with that."

Enter, the dollar dealers

Partly due to Dabhol, partly due to the high liquidity of Indian banks, most Indian power deals of late have been fully financed through rupee lending - witness Tata Power's Maithon facility [Projects database] or GVK Srinagar [Projects database].

But according to Phuntsok Wangyal of SBI Capital markets, which acted as financial adviser to Tata Power on Mundra, the UMPP deal always envisaged using a dollar financing tranche.

"From the developer's perspective, at the time of bidding, there is an expectation that ultimate funding will be a mix of domestic and fully hedged foreign currency funding," he said. "Currently, foreign currency funding benchmarked to Libor, even if fully hedged, is actually very low compared to what these developers have to pay for domestic funding."

"The difference between the level of domestic interest rates and interest rates in the international market makes it much

more effective for the developer to seek dollar currency loans. International interest rates are very low today, despite the subprime crisis," added Sanjeev Singhal, assistant general manager of project finance for SBI.

"The Indian markets are extremely liquid," added Chaudhry, "but when you're talking about a project of this size, even the Indian banks would be stretched a little bit to put so much money in one project. Also, there's a huge amount of equipment that's being imported, that has offshore costs, or non-rupee based costs. So it makes sense to have foreign currency lending for the project."

Despite the entrance of dollar financing, Indian banks played a major role in structuring the deal - unlike in the 90s, when they were viewed as bit-part players. "Now, the biggest piece in these deals is actually the Indian banks," said Chaudhry. "In Mundra, the Indian banks had almost US$1.5 billion. They have a strong voice in how they want these financings to be structured, a very good understanding of the Indian market and great relations with the sponsors. They are sort of leaders in the lending group that is structuring the deal."

However, a key role played by the dollar lenders was in providing long-term debt. Due to the risks associated with such a large, expensive first-of-a-kind project, few lenders were keen to provide long-term maturities. The IFC stepped in with 20-year financing - longer than the Indian banks were able to provide - and the other dollar lenders fell in line.

IFC manager of power Darius Lilaoonwala said: "We went in pretty early saying that we were comfortable taking 20-year risk, and I'm sure that gave comfort to the other financial institutions that they were also able to go close to 20 years."

However, the credit crunch wrecked the IFC's plans to syndicate a US$300 million B loan. The plans were ditched after commercial banks proved unwilling to purchase tickets. "We tried very hard to provide the long-term financing that the project required by mobilising commercial debt," said Kaldany, "but there simply wasn't the appetite to go to 18-20 years."

The IFC also dropped a proposed US$50 million equity investment after Tata Power decided to provide the project equity in full.

The IFC A loan could be syndicated post-financial close, once the debt market has calmed down. "We could think of selling down US$50-100 million," said Lilaoonwala. "We will still keep a significant chunk on our own books, but it has a good impact if we can demonstrate that these transactions can then be sold down at a later stage.

"One way of looking at it is to wait until construction is completed and most of the risks are over, and sell down at that stage."

The coal truth

The IFC was also confronted with a dilemma over the plant's environmental impact. A huge coal-fired power plant such as Mundra will release large amounts of CO2 emissions, and the IFC was on the receiving end of impassioned lobbying - and occasional vitriol - from environmentalists urging it to ditch the project and focus on solar power instead.

The IFC needed both a rationale to justify financing the project, and some way of mitigating its harmful environmental impact.

The rationale, according to Kaldany, comes from its mandate: "400 million Indians do not have access to electricity, mainly in the poorest areas of the country. Our mandate is to help with development. Access to power is critical for the poorest people in India.

"If you're going to achieve these large increases in generating capacity, you can do some hydro, you can do some wind power, you can do some solar power, but you cannot avoid having to use coal. The question is, is the technology optimal, reducing the amount of CO2 emissions relative to standard technology?"

What swung the IFC behind the project was India's insistence that Mundra - indeed, all UMPPs - use 'supercritical' technology. Supercritical coal-fired turbines are more efficient than standard units - those used at Mundra have a 41 per

cent efficiency rate, higher than the average coal-fired plant in India or even OECD countries. Higher efficiency means lower relative emissions.

"The fact that they decided to use supercritical technology was critical for us," said Kaldany. "We thought the Indian government was very responsible in moving in that direction."

Mundra has provided the IFC with the chance to crystallise its environmental agenda in the global power sector going forward. The IFC will prioritise reduced consumption, improved efficiency and renewable or - failing that - gas-fired generation in the power sector.

"But there are many countries that have no real alternative other than to use coal," said Lilaoonwala, "and when we support coal, our objective is to try and encourage countries and projects to use the most efficient technologies possible.

"You only get supercritical units above a certain scale - approximately 5-600MW appears to be the lower limit - but when you are looking at building larger projects, typically more than 1,000MW, then it is feasible to consider supercritical or other highly efficient technologies."

"Our criterion going forward is that for anything above 1,000MW total capacity, we will require supercritical technology," Kaldany adds.

IFC you next time - or not

The IFC believes it played a key role in the Mundra financing - not just providing debt, but conducting social and environmental impact studies and giving other lenders confidence that the project was safe to finance.

"This is a first ultra mega project that is part of a programme that the government of India is launching," said Lilaoonwala. "It was very important for us to support this first project, to help the government make sure that this programme of large projects takes off."

But with as many as eight UMPPs on the way - and with the next in line, Sasan UMPP [Projects database], heading to the debt market shortly - can the IFC afford to come in on all the financings? Does it need to?

The IFC's answer is no - or not yet, at least.

"At this time, we are not considering financing any more UMPPs for the foreseeable future," Kaldany told *IJ Online*. "This is a very large exposure for us, and we think we played a major role in terms of demonstration effect, but we need to first see how this one goes. We are hoping the other two - Sasan and Krishnapatnam [Projects database] - will be easier to finance now that we have the first one going.

"We'll be observing what happens and if there's a role and a need for us, we will consider it, but we don't have any plans at this time to get involved in any more."

With the IFC seemingly out of the picture for UMPP financings, at least in the immediate future, other lenders will have to step up to the plate.

And according to SBI's Singhal, even if foreign lending does fall short on Sasan and Krishnaptnam, there is enough liquidity in the Indian banking sector to plug any gaps. "Some banks may have issues with what quantum of funds would be available for specific sectors, but the government and reserve bank are alive to this situation and whatever needs to be done, will be done."

"I would expect that Sasan and Krishnapatnam would have a significant commercial bank tranche," said Chaudhry. "I would also expect though, that even if multilaterals like IFC and ADB are not in the financing, they would certainly have an ECA component, depending on where they source equipment from."

"Given the profile of the Sasan and Krishnapatnam projects," Singhal added, "I'm sure there would be other lenders and

agencies willing to step in and lend whatever is possible. I don't think there is any apprehension that these projects would not get funded or that the debt would not get tied up."

India - the new Middle East?

The last time a part of the world opened up to independent power projects to meet supply shortfalls in a climate of rapid economic growth, it turned into an international project finance bonanza - namely, the Middle East.

Could India do the same?

Singhal was positive about the outlook. "The spectre of Dabhol is past now, and there is a lot of growth taking place. The power needs of the country are very large, the demand-supply gap is likely to persist for quite some time, and I think the policy framework is quite robust. So those are positive factors, and foreign lenders as well as foreign developers are keen to participate in the growth story."

Chaudhry took a measured view, balancing the huge demand for power, careful deal structuring, substantial local liquidity and strong economic growth against the lack of liquidity in the global debt market. "Everyone hopes that India continues to move forward in a manner that's sustainable and the economic growth story continues to develop the way it has. If all of those happen, then I think there's a good chance that a lot of these projects will be replicated and will be highly successful. If any of those falter, things could change.

"If India is really successful in how it implements these projects, and it gets to the stage where the Middle East was, that would be a huge story."

Indian developers are starting to eye dollar financing for non-UMPP power deals. Adani Power secured a US$500 million dollar tranche from Standard Chartered Bank for its Mundra Port Phase III power plant [Projects database], while Lanco Infratech is also mulling dollar financing for two projects it was recently awarded.

One project financier, in the India office of an international bank active in recent Indian power deals, said that foreign commercial lenders were getting more familiar with the country.

"The banks are getting used to the general contracting structure and the norms in India," he told *IJ Online*. "The focus has moved on to efficiency of cost and control over fuel - that is where things have changed and that is what is giving a lot of comfort to lenders, because it essentially makes the developer that much more accountable for delivering on the agreed parameters."

However, he added that in hybrid rupee-dollar financings, international dollar lenders will still take two or three months longer than Indian banks to sanction debt for a project.

"The due diligence is far stricter for international banks than for local banks," he said. "The local banks are aware of the operating environment and they need to be educated that much less, whereas any new lending agency coming into India will require that much time to come up the learning curve in terms of local laws, regulations, and local developers' track records.

"But then again, it's not as if all structures will fly with foreign banks because they come with a certain pre-set notion of how a PPA should look and how an offtaker's finances and balance sheet should look. Whereas Indian lenders are used to seeing how the Indian power sector works."

However, even if India does become the epicentre of international project finance activity, the signs are that the developers of power sector projects will remain the Indian giants.

Few foreign developers currently own power plants in India, and with the exception of global funds investing in India, the trend on the developer side going forward appears to be that of Indian companies bidding for international projects. Reliance has pre-qualified for the Al Dur IWPP in Bahrain, while GMR and Reliance were reportedly failed bidders for the acquisition of Singapore's Tuas Power.

Conclusion

If nothing else, the Mundra UMPP financing should at least clear the path of uncertainty and unmitigated risk for the Sasan and Krishnapatnam projects to proceed relatively smoothly.

"I would strongly suspect that Sasan and Krishnapatnam will have similar allocations of risk to Mundra," said Chaudhry. "People have already gone through the analysis on Mundra, and I suspect there'll be some useful lessons coming out from Mundra for Sasan and Krishnapatnam."

But beyond simply demonstrating that the UMPP projects are capable of reaching financial close - and within the pre-agreed timescale - Mundra signals that the Indian power sector has matured from the lessons of Dabhol and is open for international business.

Risk factors still exist; whether the global project finance community feels these are outweighed by the opportunities offered by this huge market will become clear as future UMPP deals seek international commercial lending without the support of multilaterals and development banks.

The project at a glance

Project Name	Mundra Ultra Mega Power Plant (UMPP)
Location	Gujarat, India
Description	4,000MW coal-fired power plant
Sponsors	Tata Power
EPC Contractor	Doosan Heavy Industries
EPC Sub Contract 1	Toshiba - boiler supply
PPA	25-year PPA
Total Project Value	US$4.375bn
Total equity	US$1.1bn
Equity Breakdown	Tata Power - 100 per cent
Total senior debt	US$1.825bn
Debt:equity ratio	75:25 debt-equity
Legal Adviser to sponsor	J Sagar
Financial Adviser to sponsor	SBI Capital
International counsel to banks	Chadbourne & Parke
Local counsel to banks	Amarchand
Insurance adviser to lenders	Marsh
Date of financial close	24 April 2008