

BARRIERS TO FINANCING INDIAN RENEWABLE ENERGY

RENEWABLE ENERGY PROJECT FINANCE AND GOVERNMENT SUPPORT PANEL -- THE LEGAL PERSPECTIVE

US-INDIA RENEWABLE ENERGY SUMMIT
US-INDIA BUSINESS ALLIANCE CONFERENCE

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I. GENERAL CONSIDERATIONS

- A. Today, approximately 135,782 MW of electric power capacity (including nearly 30,000 MW of captive generation) is generated in India, including 10,407 MW¹ of renewable power. However, larger hydro power is scored/counted outside of the renewable power figures at 34,261 MW. The GOI seeks to convert this captive power from substantially diesel-fired, to biofuels-fired, units.
- B. Today, approximately 100 million gallons per year of biodiesel capacity (versus nearly 750 million gallons per year capacity in the U.S. by year's end 2007) and 767 million gallons per year of fuel ethanol capacity (versus approximately 13 billion gallons per year capacity in the U.S. by year's end 2007) exists in India. By December 31, 2007, India's fuel ethanol capacity is projected to be in a range of 1.3-1.6 billion gallons per year. Biodiesel capacity is projected to be more than 150 million gallons per year at year's end. These are nascent industries, entirely based in the private sector, with tremendous upside potential.

¹ Renewable power includes small hydro, biomass gas, biomass power, urban and industrial waste power and wind energy.

- C. The 11th 5-Year Plan has required 77,778 MW of new electric power to be built, including 10,000 MW of renewable power. In the 10th 5-Year Plan, India built 24,000 MW of its required 34,000 MW of electric power. The GOI has stated that the 11th 5-Year Plan for infrastructure, including power, would require approximately \$492 Billion (of which approximately \$240 Billion would represent debt and \$140 Billion of this debt will come from the private sector). The GOI has not set a target for biofuels in the 11th 5-Year Plan.
- D. The GOI, since early 2000, repeatedly has set fuel ethanol-blend mandates on a regional basis for petrol. However, it has not carried them out in any dedicated manner. Nevertheless, as of November 1, 2007, the GOI has mandated fuel-ethanol blending in petrol mandatory nationwide. As of October 1, 2008, the mandatory blend percentage will increase to 10%. The GOI does not have a similar mandate for biodiesel. Nevertheless, it has considered a mandated biodiesel blend range of 5% to 20% in diesel fuel.

- E. There is no legislation in India which deals exclusively with renewable energy. This sector is governed by the provisions of the Electricity Act, 2003 (“Act”) which is the principal statute governing the electricity sector in India. The National Electricity Policy, 2005 and the Tariff Policy, which were formulated in terms of the Act, contain provisions for the promotion of renewable energy sources.
- F. In 2005, the World Institute for Sustainable Energy (“WISE”) together with National Law School, Bangalore, prepared “*The (Draft) Renewable Energy Act*”.

1. Since the release of the model legislation, WISE has held several seminars to discuss the model legislation and also constituted a working group to further develop and refine the legislation. WISE's initiative for the Model Renewable Energy Law for India also has garnered support from the Renewable Energy and Energy Efficiency Partnership and the Renewable Energy and International Law Project.
2. A delegation led by Dr Pramod Deo, Chairman, Maharashtra Electricity Regulatory Commission and G.M. Pillai, the Founder Director General, WISE, submitted the model legislation to Vilas Muttemwar, Minister for New and Renewable Energy, Government of India in August 2007. The current draft proposes to increase the target for electricity generation from renewables to 10 percent by 2010 (as against 2012 currently) and 20 percent by 2020, of the total electricity generated in the country (and not as a percentage of installed capacity). Thus, this draft legislation would be akin to a national renewable portfolio standard ("RPS"), which mandates are in place, in different required percentages, State-by-State, in the energy legislation of over 50% of the States in the U.S.

II. BARRIERS TO FINANCING INDIAN RENEWABLE ENERGY PROJECTS – LEGAL PERSPECTIVE

A. Large power projects are difficult to finance in developing countries like India:

1. Smaller Renewable Power (Hydro And Wind) Have Been Much Easier To Finance Than Have Large Thermal (Gas-/Coal-fired) Power Projects – The So-called Mega/Super Mega Power Stations. In this regard, we have assisted in closing or are working on the following renewable energy projects in India:

- Closed the first private hydro-power project at 12MW – State of Maharastra - \$14 million Total Project Cost (“TPC”).
- Closed 2 x 8.4 MW wind power projects – State of Gujarat - \$18 million TPC.
- Closed a US \$20 million Renewable Energy Fund for a large US NGO.
- Working on a Series A private placement finance of an Indian hydro developer which, in turn, will cluster finance of up to 50 MW of small hydro-power projects in the states of Himachal Pradesh, Arunchal Pradesh, Uttar Pradesh and Punjab for a large European developer.

2. However, Larger Biofuels (Biodiesel/Fuel Ethanol) Projects Are Beginning To Be Financed At Sizes of 30 Million Annual Gallons to 100 Million Annual Gallons. In this regard, we have closed or are working on the following renewable energy projects in India:

- Closed 2 biodiesel projects in Kakinada, Andhra Pradesh, India for (i) a large U.S. venture capital company at 50 million gallons per year and which will be increased to 100 million gallons per year (with 2 x 100 million gallons per year in additional projects to be constructed) and (ii) a medium Indian biodiesel developer at 30 million gallons per year – through the UTI Ascent Fund. The U.S. VC Company project approximately has 400,000 carbon credits per year under the Kyoto Protocol monetizable at approximately \$5.6 million per year. These credits can be used as security for project loans and/or as project revenues.

- Working on a major, first-of-its-kind, solar power satellite project on behalf of a major U.S. consortium, with a goal of up to 100 satellites of approximately 1,000 MW each to be placed in a geostationary orbit (i.e., 22,500 miles above the earth) by 2030. This project is expected to send high density, low-intensity, radio frequency beams to ground-based receiving terminals located in India. There, the beams will be converted into AC-power for sale/use. The US National Space Security Office, in mid-October 2007, issued a report validating this technology, which has the potential to revolutionize the world's energy industries.
- Working on the development of an approximate US \$450 million renewable energy private equity fund on behalf of U.S., India and other investors.

3. These projects have been financed on various models –
- All equity finance (through private equity, venture capital, strategic partners, etc.) with debt finance brought in after the Commercial Operations Date, which permits better loan terms – lower interest rates, longer tenures, etc. – due to risk mitigation.
 - Project Finance Models ranging from 80%/20% to 60%/40%.
 - Private – Public Partnerships (“PPPs”) with combinations of Indian Government, private sector, multi-lateral and bi-lateral, etc., debt and equity providers.
 - Funds also will be raised through the Indian and foreign capital markets.

- B. Lack of contract sanctity has been a significant problem.
 - 1. Dabhol Power Tariffs.
 - 2. Tamil Nadu Power Tariffs.
- C. Failure of States To Uniformly Apply The 2003 Indian Electricity Act With Respect To Third-Party Sales.
- D. Long Term Tax Incentives / Low Customs Duties On Capital Equipment Are Required.

E. Need To Stabilize India's Tax Environment – Tax Regulations Change Frequently, With Tax Incentives Regularly Added and Dropped. Recently, The Government of India (“GOI”) Finance Ministry Eliminated The 100% Tax Exemption On Income Earned By Investors (“ROI”) and Lenders (Interest) For Investments And Loans Into Infrastructure Projects. The Removal Of This Important Incentive Will Increase The Costs of Developing Infrastructure Projects. However, it continues to retain the following infrastructure tax credits:

1. A 10 year tax holiday in a block of 20 years for undertakings engaged in developing/operating and maintaining/developing, operating and maintaining infrastructure facilities like power generation, roads, bridges, rail systems, water supply projects, water treatment systems, irrigation projects, sanitation and sewerage systems or solid waste management systems.

2. A 10 year tax holiday in a block of 15 years for undertakings involved in developing/operating and maintaining/developing, operating and maintaining ports, airports, inland waterways or inland ports.
3. A two-tier benefit of a 100% tax holiday for the first 5 years and a 30% tax holiday for the subsequent 5 years is available to undertakings which begin providing telecommunications including broadband networks and internet services.^{2/}

F. Excessive Numbers of Permits, Clearances and Other Governmental Authorizations At the Central/Federal, State and Local Government Levels – Single Window Clearance/Pre-Vetted Projects Are A Must.

^{2/} Investing in India, KPMG, FICCI

- G. Heavy Regulation of Labor – Difficult to Scale Down Jobs During Economically –Depressed Times. Like The Power Sector, The Labor Sector Is Subject to “Concurrent Jurisdiction,” Meaning That the Central and State Governments Each May Adopt Regulations. This Approach Over-Complicates The Area.
1. Difficult To Attract Contract Labor for Short-Term Projects.
 2. If More Than 100 Employees, Then One Needs Express Approval From The GOI Ministry Of Labor To Eliminate An Employee – Thus, One Must Structure A Company In Order To Give Persons -- “Officer And Other Titles”, So That They Are Not Held To Be Low-Level Employees.

- H. Requirement for No Objection Certificates (“NOCs”) From a previous JV partner where subsequent investment is in the same field – potential for abuse. While Press Note 1 (2005 Series) is an improvement over Press Note 18 (1998 Series), it still leaves uncertainty for foreign investors and is not retroactive. Also, investing today into an existing, pre-Press Note 1 (Series 2005) established joint venture could subject the investor inadvertently to the same Press Note 18 (Series 1998) adverse legal issues.
- I. Poor infrastructure acts as deterrent to foreign investment in the manufacturing sector. The GOI must privatize government-owned enterprises to attract substantial necessary foreign capital.
- J. High Duties – Must lower duties on raw materials and imported goods. India continues to have the highest customs duty rates in Asia, if not the world. The 2007 Budget did lower the peak rate of basic duties for non-agricultural products from 12.5% to 10%, and the effective overall duty rates from 36.74% to 34.13%. However, these rates remain substantially too-high.

- K. India's Court System (a Unitary Court System) is plagued by intractable delays. Substantial backlog/delays in cases: If no new cases were filed, it would take approximately 350 years to clear the current court case backlog (not including administrative judicial and quasi-judicial case backlogs).
- L. Purchase Preference Policy – gives state and GOI-owned companies a 10% bid amount preference in government contracts. GOI Secretary of Commerce & Industry, Ajay Shankar, advised the US-India Business Council in mid-October 2007 that the GOI intends to commence a “phase-out” of this government preference in 2008.
- M. India only has 16 years' experience in opening markets. The regulatory environment is still evolving rapidly – expect change.

- N. Corruption is still rampant in India – not so much top-level corruption (e.g. receipt of project permits as permit requirements are reduced), but “frictional corruption” across the lower levels – inspectors, meter readers, etc. Encourage a corporate culture of saying “no” to corruption. Strict U.S. Foreign Corrupt Practice Act (“FCPA”) compliance adherence is an absolute necessity. Do not avail yourself of the FCPA “facilitating payments” exemption/exception, as it is a gray area that can lead to FCPA violations and host country anti-bribery law violations. Once a company is recognized as clean, then attempts to collect payoffs/bribes will drop.
- O. Choose your states wisely. Each has different level of development and different levels of market –friendliness. Further, less than 10 states have reformed their state electricity boards for thermal generation, hydro generation, and transmission and distribution by subjecting these entities to non-political control with boards of directors and officers chosen from former judges, the international community, finance agencies and others that are not appointed by state politicians.
- P. State elections rarely are good for the incumbents. Expect political instability every 5 years, particularly at the state government level.

III. HISTORIC INDIA POWER PROBLEMS:

- A. Lack of credit worthiness of the State Electricity Boards.
- B. Substantial cross-subsidies and politicized tariff setting -- farmers receive free power / industry pays more than its share.
- C. Inadequate offtake and payment guarantee mechanisms.
- D. Inadequate fuel supply and transportation agreements with significant issues involving how to cover risks between the SEBs, Coal India/Gas Authority of India (“GAIL”) and the Railways/GAIL.

IV. RISK MITIGATION SECURITY MECHANISMS – AS LENDERS AND INVESTORS REQUIRE PROTECTION

- A. Mitigate the risks associated with the SEBs through
 - (i) widespread SEB restructuring and (ii) improvement in the security and payment mechanisms in arrangements with the IPPs.
- B. The Deputy Chairman of the GOI Planning Commission, Montek Singh Ahluwalia, recently stated that a GOI Committee has been established to review the adequacy of payment and lender security with the intent to better existing security mechanisms and/or create new security products to protect investors and lenders in the energy and other infrastructure sectors.

C. Irrevocable LOCs

1. In a typical power purchase agreement (“PPA”), the generating company submits an invoice within an agreed timeframe. The invoice is generally payable through an irrevocable revolving letter of credit (“LOC”), issued by the concerned State SEB through its banks.
2. These LOCs generally contain 45-90 days of expected power purchase payments. However, in case of a default, the bank simply may refuse to renew the LOC (which generally is an automatically renewing financial payment instrument of revolving 12 month terms), and the generating company may end up facing substantial risks.

D. Escrow Accounts

1. An escrow arrangement is another mechanism to protect against the SEB credit risk. It is usually a complex arrangement, whereby an escrow agent is appointed for the specific project.
2. The escrow agent establishes escrow accounts, an SEB account and a generating company account. Such agent also creates a charge and hypothecation over the SEB receivables. In the event of a default in payment, the escrow agent transfers an equal amount of receivables from the SEB escrow account to the generating company's account. It is advisable to retain some amount as security in the escrow account in order to provide effective security to the generating company.
3. However, there are a number of difficulties involved in the escrow account security mechanism. One such problem is the simple failure of an SEB to fund the escrow account.

- E. Hypothecation Agreements, State Guarantees, GOI Counter guarantees
 - 1. In such case, a hypothecation agreement can be protective, as it would shift payments of power purchasers, in the event of a default, from the SEBs directly to the electricity generator.
 - 2. State Government guarantees and GOI counter guarantees also would assist secure the lenders and protect the investors by guaranteeing payments, if the LOC and Escrow Account mechanisms have failed.

F. SEB Reforms

1. In the long run, reforms must concentrate on how the SEBs may collect more revenues through (i) more efficient collection mechanisms, (ii) power theft control (more than 45% of power is stolen), and (iii) market-linked tariff regimes, as well as through the privatization of the electricity distribution sector.
2. Few SEBs of states, such as Orissa, Delhi, Haryana, Karnataka and Andhra Pradesh, have taken positive steps towards (i) unbundling power generation, transmission and distribution assets into new entities and (ii) corporatizing those entities with leadership less subject to political whims.

G. PTC Power Purchases

1. Innovative structures, wherein agencies such as the Government of India-owned (Power Trading Corporation (“PTC”)) are intermediate buyers of power (i.e., back-to-back PPAs with SEBs requiring power), and effective offtake risk mitigation measures, also have enhanced the potential of new projects to achieve financial closure and better ensure success.
2. In a milestone in the evolution of India’s power sector, the Hyderabad-based Lanco Group’s 300 MW thermal power project in the State of Chhattisgarh became the first power company to achieve financial closure on the strength of a PPA with the PTC. All Indian private sector projects previously had secured financing from banks and financial institutions on the basis of executing sophisticated PPAs with SEBs.

3. The process of achieving Lanco's financial closure has accelerated following the creation of an inter-institutional group ("IIG") of lenders. The IIG consists of the IDBI Ltd, State Bank of India, ICICI Bank and Power Finance Corporation.
4. Dozens of projects have achieved financial closure in India, since the IIG was established in January 2004. Many of these projects, financially closing on "all – India finance" (i.e., no foreign lenders) basis, have reached such closings, only because project sponsors, unlike previously, have agreed to accept fuel and other project risks. International leaders and equity sponsors will not accept these fuel and project risks.

V. CONTINUING INDIAN POWER FINANCE PROBLEMS

A. In sum, foreign investors and financiers require:

1. sanctity of contracts (including the purchase of, and full payment for, contracted power),
2. strictly honored-payouts for purchased power under binding guarantees (i.e., payment (i.e., counter guarantees) and debt (i.e., sovereign guarantees) security mechanisms), and
3. the knowledge and practice that invoices will be paid in full and regularly without requiring litigation to ensure each payment.

VI. PROTECTING YOUR INVESTMENT

- A. Engage qualified counsel, accountants and consultants at the outset.
- B. Need for Upfront & Well-Considered Tax and Corporate Structuring, using limited liability vehicles and Double Taxation Avoidance Treaties (U.S., Mauritius, Singapore, Cypress, UAE).
 - 1. Reduction of tax and non-tax liabilities through limited liability vehicles/firewalls.
 - 2. Use of bilateral investment treaties/agreements.
- C. Special Economic Zones (“SEZs”) have a 100% tax holiday. Currently, there are more than 396 SEZs with GOI approval (additionally, 149 SEZ applications have been notified, and 180 SEZ applications have received In Principle Clearance, from the GOI), after the GOI lifted the 150 SEZ approval restriction.

- D. Project and Partner Due Diligence Are Key Exercises.
 - 1. Ensure that your partner is trustworthy and has the financial ability to implement the investment.
 - 2. Enshrine IP protection in all contracts.
- E. Contracts Require Certain Protective Clauses:
 - 1. Neutral-country arbitration is a must
 - a. e.g., London venue with ICC, UNCITRAL, London Court of International Arbitration Procedural Rules.
 - b. if pressed into arbitration in India, bifurcate the arbitration clause so that smaller disputes are arbitrated in India and larger ones are arbitrated in a neutral country.

2. A “forward waiver” provision requiring Indian joint venture partners to provide No Objection Certificates (“NOCs”) upon request of the U.S. partner to avoid future problems in entering into similar industry ventures with other parties. The foreign party in such circumstances must demonstrate that the new investment would not adversely impact the existing joint venture – Press Note No. 1 (2005 Series) versus Press Note 18 (1998 Series).
3. Strong Indemnification Clauses.

4. Force Majeure – this provision permits suspension of contractual obligations under certain circumstances.
5. Compliance with U.S. Foreign Corrupt Practices Act (FCPA) and Indian anti-bribery laws – accusations particularly can adversely affect public company stock. A recent Price Waterhouse report demonstrates that 30% of over 5400 companies' representatives surveyed stated that they were asked to pay bribes to obtain government licenses in India over the past two years. Of these companies facing bribery requests, 60% said they lost their bids to competitors for refusing to pay bribes.
6. Need for insurance requirements to protect transactions, such as political risk insurance against expropriation, arbitration award enforcement insurance, etc.

VII. KEY POLICY AREAS TO ADDRESS:

- A. Provide long-term, stable government policy support through updated new energy legislation and regulations.
- B. Reduce technology, commodity and financing risks respectively through intellectual property filings (e.g., marks, copyrights, patents, etc.), hedging (e.g., futures contracts, swaps, pollution credits trading, etc.), and security (e.g., guarantees, LCs, escrows, insurance, long-term feedstock/fuel and off-take agreements, pollutional credit pledges, etc.) protection mechanisms.
- C. Consider the use of domestic and international venture capital and private equity, capital markets (AIM / London Stock Exchange, Bombay Stock Exchange, Indian National Stock Exchange, Deutsche Borsche Exchange, Dubai Stock Exchange), and other funding mechanisms.

- D. Establish a federal carbon credit market with national trading exchanges for the monetization of carbon credit offsets to create new project revenue/income streams.

VII. CONCLUSION