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## Private Power Financing—From Project Finance to Corporate Finance

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Limited recourse project financing of power generation projects has been widely promoted as a solution to the intractable problem of getting private credit to a sector dominated by noncreditworthy borrowers and public agencies—from the point of view of both those supplying capital and those needing it. When the lights are going out, incumbent power enterprises are financially unviable, and the public purse is nearly empty, project financing of independent power producers (IPPs) may seem the only way to get new capacity fast. In the developing world, however, the public-private partnership in project-financed IPP ventures has been disappointingly slow to produce results.

This Note argues that, to achieve substantive progress in IPP financing, limited recourse project financing will have to evolve toward structures with greater balance sheet support. The need for corporate balance sheet support for private power sector investments is gradually being recognized, and the benefits of this shift in financing structure are worth reflecting on. First, balance sheet support by the main partners in an IPP financing offers greater security to lenders and provides easier (and perhaps cheaper) access to long-term debt—critical to sustainable power sector financing given that IPPs typically depend on debt for 60 to 75 percent of their financing requirements. Second, while equity in limited recourse project finance is almost exclusively private, balance sheet support by IPP sponsors can open access to public equity markets, which are deeper and generally cheaper. Third, increased corporate balance sheet support is a corollary to the restructuring in the world's power sectors. As sector unbundling and self-generation expand choice for wholesale and (potentially) retail

consumers, and thus increase demand uncertainty, balance sheet support by IPPs will play an important role in sharing demand risk among key participants.

### Project finance is more expensive for an IPP

*Project finance* implies that the lenders to a project have recourse (or claim) only to the project's cash flows and assets. In effect, then, the project is financed "off the balance sheet" of the project sponsors. Such project finance is termed *nonrecourse* and is at one extreme of the project finance–corporate finance continuum of financing possibilities. In practice, project finance in developing countries is backed by sponsor or government guarantees provided to give lenders extra comfort. This is *limited recourse project financing*, involving at least a small degree of corporate or balance sheet support.

In traditional corporate financing, at the other extreme of the financing continuum, lenders rely on the overall creditworthiness of the enterprise financing a new project to provide them security. If the enterprise is publicly held, information on its performance and viability is usually available through stock markets, rating agencies, and other market-making institutions. This combination of security, liquidity, and information availability allows debt to be issued at a lower cost than through project finance. Further, because the enterprise's overall risk is diversified over all the activities that it is engaged in, the cost of equity is also usually lower. The financing advantage for both debt and equity makes the overall *cost of capital* lower for corporate finance.





Systematic empirical evidence specific to the power sector in the developing world is lacking, but anecdotal evidence suggests that corporate finance is indeed cheaper than project finance. Corporate financing also has significant transaction cost advantages because it avoids the high cost of negotiating the web of carefully structured legal contracts with purchasers and commercial lenders necessary under project financing.<sup>1</sup>

The IPP experience in the United States offers useful insights, and indicates that the project-financed independent generation model may not necessarily be the most efficient mode for capital formation in generation. Nor is it the dominant mode in other countries. The United States pioneered generation by independent operators on a merchant basis, and it is where the now ubiquitous term *independent power producer*, or IPP, originated. Project-financed independent generators have thrived in the United States, contributing more than half the additions to generation capacity in recent years. It has been shown that the cost of capital for a purchasing U.S. utility may be higher if it chooses to build its own generation capacity rather than purchase power from an IPP.<sup>2</sup> But much of the advantage is due to the adversarial regulatory environment in the United States, which favors IPPs. Purchasing utilities weigh the risk that state regulators will disallow investment costs against the perceived lower risk (and lower profits) of purchasing electricity from an IPP, an arrangement in which all costs can be passed through or expensed. The preference for purchasing power from IPPs is easily rationalized when one notes how many utilities and their bondholders were hurt in the 1970s and 1980s, when regulators disallowed cost recovery for large investments in capacity.

### **Increasing balance sheet support for IPPs—The evidence**

Project developers operate in a fiercely competitive market for international projects. Assuming competitive bidding, the primary source of competitive advantage lies in the ability to

find financing at the lowest cost, as differences in technical and operating abilities become virtually indistinguishable among the front-runners. (Other attributes may, however, predominate in negotiated, noncompetitive IPP deals.) In the competitive international IPP market, several trends indicate that balance sheet support is the preferred means for achieving this cost-of-capital advantage.

### **Raising capital using a parent's balance sheet**

Project developers are putting their own balance sheets at risk—or those of their parent companies—to raise cheaper debt for projects and to finance their equity contribution. Projects in which sponsors have used their own balance sheets to raise finance include the Puerto Quetzal project in Guatemala (Enron), the Puerto Plata project in the Dominican Republic (Enron), and the Upper Mahaiao and Mahanagdong projects in the Philippines (California Energy). Chinese IPP developers, such as Huaneng Power and Xinli (Sunburst Energy), an affiliate of CITIC, have also used this strategy. California Energy pioneered the largest corporate financing in the independent power business, raising US\$530 million through ten-year securitized bonds in March 1994.

### **Creating consolidated balance sheets**

Developers are pooling projects into entities that are then able to raise capital on the strength of a combined balance sheet comprising the “pooled” assets of the different projects. Providers of equity and debt then finance the business of building and operating private generation facilities rather than an individual power plant. Pooling spreads project risk. For a multinational developer, it also reduces country-specific risk. And for a developer with a few projects already under commercial operation, pooling offers the advantage of an immediate revenue stream for repaying debt and paying dividends.

Pooling has two other benefits. First, it enables project developers to tap *public* equity mar-

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kets—most private project developers finance the equity component of a project privately. Second, it enables developers to raise cheaper debt on a corporate finance basis. IPP sponsors that have used this approach include Consolidated Electric Power Asia (CEPA), the San Francisco-based Bicoastal Energy Investors Fund (EIF), and Huaneng Power International (HPI) of China. CEPA raised debt and equity in the capital markets on the basis of its corporate strategy of building multiple power plants in Asia. EIF securitized its equity interests in sixteen independent power projects in the United States, creating a synthetic balance sheet and issuing US\$125 million of seventeen-year bonds. And HPI, which owns 2,900 megawatts of capacity under commercial operation and has another 5,900 megawatts under construction, raised US\$332 million by listing its IPP business on the New York Stock Exchange in October 1994.<sup>3</sup>

### **Pursuing mergers and acquisitions**

Industry consolidation has become a steady trend in the IPP business. Notable transactions among international players include the purchase of CMS Generation by HYDRA-CO Enterprises, the purchase of Magma Energy by California Energy Inc. (creating an enterprise with annual revenues exceeding US\$400 million), and the acquisition of J. Makowski Co. Ltd. by PG&E Enterprises and Bechtel Enterprises to form International Generating Co. Ltd. It has been argued that the increasing size and scope of projects is the main factor driving this change. Smaller companies are at an important disadvantage in international capital markets compared with larger players, with their greater experience, capitalization, and track records. Although these mergers and acquisitions could be driven by a number of strategic objectives, increased balance sheet support in project development is clearly one of them.

### **The IPP financing challenge**

Private financing needs to be tailored to the changing structural relationships in the sector.

Core generation, transmission, and distribution functions are being separated, competition is being introduced in wholesale and retail markets, and technological progress is rapidly increasing the number of cost-effective options for decentralized self-generation or cooperative generation. This restructuring will require a redefinition of the underlying assumptions in power sector financing.

The financial challenge will be to find ways to provide lenders with adequate long-term revenue security when the new industry structure might not allow utilities to guarantee demand risk and price risk for the maturities required. Traditional project finance is based on allocating demand risk to the purchaser, whether an integrated utility, a central generator and purchaser, a distribution utility, or a large consumer. This risk allocation works well because purchasers have a monopoly franchise area, which they are obliged to serve. But as direct access to consumers is encouraged—whether or not the sector is broken up—purchasing utilities will face increased demand risk as the loss of retail customers becomes a greater possibility.

The key to any debt-based financing is the ability to provide adequate security through a contract or other credible evidence of future revenue streams. Innovative sharing of demand risk between market players—the power seller, the power purchaser, and the financier—will become necessary. An IPP developer's ability to bear any of the demand risk will depend in part on its willingness to provide corporate assets and revenues as a backstop for lenders.

The view that well-capitalized corporate entities will be the ones able to meet financial markets' requirements in a competitive environment seems to be confirmed by market responses. Most recent additions to generation capacity in the United Kingdom—the model of sector unbundling—have been corporate-financed IPPs. And witness the efforts by industry players in the United States to create highly capitalized enterprises as competition for final consumers looms on the horizon. The



recently announced US\$1.26 billion merger of Public Service Co. of Colorado and Southwestern Public Service Co. is a reaction to the perceived increase in demand risk stemming from plans for wider retail competition—the utilities are noncontiguous and plan to build a connecting transmission line to share generating resources.

## Conclusion

Greater corporate finance support will make it possible to raise private capital for independent power financing from wider, deeper, and cheaper sources. But innovative strategies will be required from governments, lenders, investors, and power sector enterprises alike. The following strategies are worth considering:

- Encourage the formation of large, well-capitalized independent generation companies. Purely private and quasi-private variants of the Huaneng merchant generation model in China might be workable in large power systems. Healthy competition should be engendered through prudent regulatory reviews of the market power of the IPP in a particular system.
- Encourage divestiture of commercially operating (and perhaps underperforming) generation plants by incumbent utilities to IPP developers. These sales should be conditional on the purchaser's commitment to making specified investments. By making positive revenue streams available to IPP developers immediately, such transactions would give them the financial base to invest in multiple plants.
- In IPP prequalification under competitive bidding, give greater weighting to IPP developers with businesses listed on a stock exchange and to those with well-capitalized balance sheets. The strategic goals of publicly held entities are likely to be more transparent and longer term because of these entities' obligations to public shareholders.
- Encourage project sponsors to use balance sheet support for subordinated debt and quasi-equity portions of the project financing plan in order to increase corporate financing. This

strategy would ease the overall financing costs of projects and could be a transitional strategy for meeting the huge financing needs for IPPs in developing countries.

<sup>1</sup> See Anthony A. Churchill, "Beyond Project Finance," *Electricity Journal* 8(5): 36–44, 1995.

<sup>2</sup> For the only systematic presentation of information on this issue, see Edward Kahn, Steven Stoft, and Timothy Belden, "Impact of Power Purchased from Non-Utilities on the Utility Cost of Capital," *Utilities Policy* 5(1): 3–11, 1995.

<sup>3</sup> The proclaimed success of this transaction is controversial, as the share price of Huaneng dropped from US\$14.25 at listing (October 1994) to about US\$9 in mid-1995.

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