

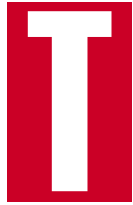


INTERNATIONAL
SECTION

WATCH THE CYCLE

Can the upward swing in global
power infrastructure investment
be sustained?

BY DANIEL I. BLANCHARD



The global power sector is now in year three of a strong cyclical recovery. As infrastructure investment cycles go, in theory at least, the power-sector cycle over the past decade has been short in duration, and volatile. The current recovery is being driven not only by rising demand for power, but also by the huge levels of liquidity in the global financial markets. As asset valuations rise, investors are beginning to question just how long the current up-cycle will last, and at what valuation levels it will top off. And as power utility balance sheets and projects become increasingly leveraged, they might also begin to consider the likely shape of the next inevitable down-cycle.

We examine these questions in the context of an overview of the sector from a global perspective.

A Bit of History

The globalization of the power sector began in the 1980s and accelerated in the 1990s following deregulation initially in North America and Europe, and later in Australia and Asia. Then, as the deregulation and privatization of power sectors elsewhere around the world became the norm, a wave of investment activity was set off primarily by U.S., European, and Asian power companies.

The sharp contraction that began in 2001 resulted from overcapacity, slowing demand, and low electricity prices, together with a sudden growth in short-term debt maturities held by a then highly leveraged industry. The dramatic collapse of the Enron business model catalyzed sector-wide credit downgrades and a tightening of financial covenants. Liquidity dried up and global-power companies scrambled to shed non-core operations and higher-risk merchant plants to avoid bankruptcy.

The Rise of Financial Investors

In the process, financial investors, both by default as creditors (U.S. and European commercial banks took possession of approximately 16,000 MW of generation assets due to defaults) and as opportunistic buyers, became increasingly larger owners of power assets. In fact, financial investors have accounted for nearly two-thirds of capacity acquired in the United States over the past few years. Private equity funds, infrastructure funds, and hedge funds have proliferated and entered the sector in a big way, and financing instruments have evolved to compete in the increasingly liquid environment. Savvy U.S. investment banks have acquired portfolios of power-generation assets and are applying the capabilities of their own energy trading arms to maximize the value of these portfolios. In the rush to lend, investor classes also have moved

beyond their traditional product offerings: Commercial lenders are making mezzanine loans, mezzanine lenders are buying equity stakes, private equity funds are managing senior and subordinated debt facilities, and hedge funds are providing all forms of capital to the sector.

Global Investment Snapshot

Global investment activity in the sector has shown considerable growth in recent years. The value of completed power sector mergers and acquisition (M&A) transactions in 2005 was a record \$157 billion, with most activity in Europe and the United States, up from approximately \$40 billion in 2003. The pace continued in 2006 with the value of proposed acquisitions through the first half once again outpacing the previous year's levels. The value of project-finance transactions in the sector grew to \$56 billion in 2005 compared with \$25 billion in 2001, and an additional \$42 billion in projects were financed during the first three quarters of 2006. Private investment is expected to remain high based on strong demand-growth forecasts, in particular in emerging markets. M&A activity in the United States and Europe also is expected to continue apace due in large part to the vast amounts of committed capital in pursuit of infrastructure investments. A recent S&P report estimates that global infrastructure funds currently have committed capital of between \$100 billion and \$150 billion in search of projects, and a large part will be invested in power.

Highly Competitive Financing Environment

The past few years have seen an amazing rise in the amount of capital available for investment in the global-power sector. This influx of capital has led to a shift in the investment environment in a number of important ways. Banks, institutional investors, and project financiers have relaxed financial performance covenants and borrowing base formulas across every major geographic market. Currently, market liquidity far exceeds deal flow. As a result, loan-pricing margins have become increasingly thin as capital competes for projects, and the equity returns being accepted by investors are falling. At the same time, asset valuations are rising and power utilities and projects once again are becoming highly leveraged.

While positive for borrowers, the aggressive underwriting environment implies an increased risk profile for capital providers and borrowers alike, and it likely is causing project sponsors to take on more debt than they otherwise might. In this environment, prudent investors might take pause in their assessment of the potential behavior of the sector going forward. The risk of course is that the power-investment cycle could compress and become more volatile than is good for the

overall financial health and stability of the sector.

Not all investor classes are alike. Pension funds and infrastructure funds are attracted by the long-term and relatively stable returns profile of the sector. Their investment time horizon is in line with the regulated nature of the power-utility sector. Private equity funds' investment time horizons range from five to seven years, more or less. This generally is a good match, though financial turnaround or restructuring at the lower end of that time frame is potentially at odds with the sector.

Hedge funds (primarily a U.S. investment vehicle) number in the hundreds and are responsible for a significant and growing level of total funds invested in the sector. Their participation, which has grown sharply over the past two to three years, has been primarily via Term-B lending. Term-B loans are medium-term, variable rate, collateralized loans from non-bank lenders with rates historically in the range of Libor+250 basis points (though they have narrowed to below Libor+175 basis points in recent power transactions). They resemble bonds with back-end amortization, but with bank-type covenants. They also are bought and sold on highly liquid secondary markets. Term-B loans are quick to market and are less restrictive from the borrowers' perspective than bank loans. Term-B lenders often make opportunistic investments that are potentially at odds with long-term industry objectives.

A U.S. power-project developer recently said, "The very thing some hedge funds are praying for is that we fail and they can take over our assets. In a way, their debt is an option for equity if a loan defaults. If I thought a deal would involve renegotiation of debt, I would never do a Term-B. I would take it to my four favorite banks instead."¹

Cyclicality in Price Margins

In the late 1990s, a greenfield gas-fired merchant-power plant in the United States could raise leveraged equity at a pretax internal rate of return of 15 percent, and strong sponsors could obtain senior debt financing at spreads no higher than 250 basis points above the risk-free rate. By 2002, financing for greenfield projects had disappeared. And for fully contracted plants, where some liquidity remained, lending margins had widened to more than 500 basis points and required equity returns were better than 20 percent in many cases.

In the current aggressive lending market, margins on similarly rated projects now are below 200 basis points, and accepted equity returns have dropped into the low teens on average. Reports indicate that equity returns even have dropped into the single digits in recent infrastructure fund investments in the UK power sector.

Given wide variances in company specific and regional risk profiles, fuel sources, plant designs, and marketing arrange-

ments and consequent corporate and project credit ratings, it is not a simple task to discern distinct trends in sector-wide asset valuations over time. Financial investors during 2003 and 2004 picked up U.S. gas-fired assets at prices as low as \$250/kW of capacity. Recently closed agreements to buy into new coal-fired generation in Texas, on the other hand, were rumored to be priced at as high as \$2,800/kW. In the UK, assets that were purchased at roughly £600/kW in 1999 were exchanged at slightly better than £100/kW in early 2004. Coal plant proposals currently under consideration in the UK are expected to cost in the range of £900/kW to £1,600/kW. Clearly, these are not apples-to-apples comparisons. However, it is plain to see that in the current environment, asset valuations are approaching prior peak levels.

Regional Trends

The current recovery in the power sector clearly is global in its reach. Yet the recovery is showing distinct characteristics in each of the major regions of the world, and the implications of a downturn in the current cycle and the potential market development impacts likely will vary on a regional basis.

Europe. The European power sector has seen the highest levels of M&A and project financing, relative to other regions of the world, during the past few years. This has been spurred in large part by EU-mandated deregulation efforts, which have induced utilities to solidify market positions by acquiring their peers. M&A transactions valued at roughly \$90 billion in 2005 tripled those of 2004. Average deal sizes doubled to nearly \$500 million as national utilities attempted to merge into regional giants. Competition to provide financing for M&A transactions also has been very aggressive. Senior debt facilities arranged for major European acquisitions announced over the past year have seen banks scrambling to participate despite pricing in the range of 20 to 30 basis points above Euribor. Examples include the €32 billion facility for E.ON's bid for Endesa of Spain, and a €50 billion facility from local Italian banks for Enel in its bid to acquire French utility Suez.

The sheer size of these deals and the strong credit ratings of the bidders are allowing them to dictate terms to the eager lending community. Bankers ought to be feeling conflicted by the choice to participate in these blockbuster deals, though, at such thin margins.

European power companies generally are exposed less to potential cyclical volatility than their U.S. counterparts. The predominant business model remains one of vertical integration of generation, transmission, and distribution, and ownership of the sector is highly concentrated with a relatively small number of large national and regional utilities holding dominant market shares. Market liberalization, contrary to

expectations, has not led to any significant entrance of startups. Concern over security of supply has pushed utilities to acquire upstream and midstream gas-supply assets, reducing the potential impact of exogenous shocks, and further consolidating the sector. These factors support increasing market power and earnings potential, which underpins current strong balance sheets and credit quality. Approximately 95 percent of rated utilities in the EU are ranked investment grade by major ratings agencies. Europe's large utilities are able to finance construction largely with low-priced corporate loans based on their own balance-sheet strength.

North America

The past two years also have seen a sharp rise in the number and size of M&A transactions within the U.S. power sector. A number of multi-billion dollar transactions proposed in 2005 were finalized subsequently, and in 2006 there were more than 10 completed deals of greater than \$500 million each, valued altogether at more than \$17 billion. A key driver has been the repeal in early 2006 of the Public Utility Holding Company Act, which has reduced barriers to asset acquisitions and simplified approval processes. Given the industry size and the number of local and regional utilities, the outlook for continued consolidation remains strong. New plant construction also has been on the rise. Project financings valued at \$6.4 billion were closed on 14 power plants during the first half of 2006, nearly double the previous year's period. Merchant plants and hybrid short-term contracted plants are making a comeback due in part to the creativity of financial investors. And coal-fired plants are being considered once again due to the increase in natural-gas prices and a renewed policy push for U.S. energy independence.

The U.S. sector finds itself most exposed to the cyclicity of the industry relative to other regions of the world. Operating within a comparatively open, competitive, and increasingly deregulated market. In addition, the U.S. market remains more disaggregated than the European market.

The recent growth of the sector in the United States, in contrast to the past, is being financed via highly liquid instruments placed with hundreds of institutional investors, as opposed to small groups of relationship banks. The implication is that the time frame within which changes in market sentiment are translated to share valuations has been reduced. This may result in increased speed in the recognition of market information. However, it may also be a source of increased volatility.

Asia and Australia

The total value of power sector transactions in Asia rose to more than \$15 billion in 2005 from \$6 billion in 2003. The

largest of these include the \$1.9 billion takeover by two Indian companies of the previously Enron-owned Dabhol assets, and the \$1.6 billion purchase by Hong Kong's CLP holdings of SPI Australia's power assets. Significant new capital has been raised over the past couple of years via IPOs in Singapore and Hong Kong, and via Australian infrastructure funds active in the region. Australia has witnessed sector consolidation as natural gas retailer Alinta recently won approval for its \$6.8 billion purchase of the country's largest power utility (AGL Energy). While India and China are the two fastest growing markets in Asia, the majority of investment under way is largely funded by state-owned entities.

The GCC Region

Rapid population growth together with sustained high oil prices (the region supplies about half of the world's oil production) is supporting a booming construction sector across the Cooperation Council for the Arab States of the Gulf (GCC) region and a staggering rate of growth in demand for electricity. In the past five years, 20 projects with total new capacity of more than 17,500 MW have achieved financial close, raising some \$15 billion of debt in the process, and another 8,600 MW currently are under tender. During the next five years, it is estimated that the region will demand an additional \$25 billion in capital for the sector.

The trend in lending has been toward increasing levels of leverage, longer tenors, and narrowing price margins. This clearly follows from improved sovereign credit ratings, significant liquidity, and competitive lenders. All projects across the region are supported by 20-year off-take agreements (except in Oman, where 15-year contracts are the norm) and government guarantees of various designs. The six GCC countries all are rated investment grade by major credit rating agencies.

Pricing of debt facilities has averaged in the range of 80 to 150 basis points. Pricing on the most recent financings (in particular in Qatar and the UAE) reportedly has been below 40 basis points for financing during construction, with refinancing of 10- to 15-year term debt rising to around 70 basis points. In many cases, arranger fees also are being reduced.

Global institutions, mostly European and increasingly Asian, are the leading providers of syndicated loans in the region. While regional banks typically are relied upon for syndication, they have been less willing to accept the longer tenors and reduced margins that international banks have been willing to take. At present, the long-term fundamentals in the region override political concerns. Lenders apparently believe that any political tensions or destabilizing activity in the region will be short-term in nature.

GCC power and water projects are expected to be buffered

largely from global cyclicity in the sector. Projects in the region, however, would be affected if there were to be a dramatic and extended decline in global oil prices (as would the overall economies of the region). Given current supply-and-demand dynamics, this is not anticipated.

Latin America

Private participation in Latin American power during the past five years has averaged approximately \$4.5 billion annually, and deals in the region during the first half of 2006 totaled \$1.4 billion. Brazil is the largest market by far with more than \$15 billion of investment since 2000, followed by Mexico with \$6.5 billion. While the pace of development has reflected the slow pace of reform throughout the region, the overall investment environment has improved steadily since 2003 for a number of reasons. Demand growth has been strong, ranging from 4 percent to 8 percent across the region, local currencies have strengthened against the dollar, and most countries have been able to access favorable financing terms. Cash flows linked to strengthening local currencies, together with overall growth, have allowed companies to de-leverage balance sheets, extend tenors, and reduce foreign exchange and interest rate risk on outstanding debt. The majority of project financings in the region are funded with conventional bank debt and bonds.

Barriers to project development in the region remain, and generally include political, regulatory, tariff, and tax-related uncertainties. Despite these, numerous successes can be pointed to during the past couple years. For example, after a four-year delay, during which time numerous rounds of agreed tariffs had to be renegotiated, the 310-MW TermoFortaleza combined-cycle gas turbine plant in the underdeveloped region of northeast Brazil achieved financial closure in early 2006. Spanish utility Endesa, via Endesa Brasil, is the sole equity partner in the project. The risks of regulatory backtracking on PPA agreements and tariff levels, however, were reflected in the financing costs. Senior debt of \$55 million from the IFC was priced at Libor+250 basis points, and an IFC-syndicated loan of \$68 million was priced at Libor+225 basis points. Notably, however, these margins were much below the earlier negotiated prices of greater than 400 basis points back in 2001. Other large power-project financings have been undertaken elsewhere in Latin America during 2006, including the \$245 million 143-MW Olmos Hydro and Irrigation Project in Peru and the \$370 million Brazil PCH Small Hydro Projects.

A range of factors should continue to support this cyclical trend: ongoing deregulation globally, high energy prices, modest interest-rate environments across most regions, and large

pools of investment capital focused toward infrastructure.

Financial investors increasingly have become aggressive, reducing pricing margins dramatically as available capital competes for quality deals. Asset valuations are being pushed to new highs, and companies once again are increasing their financial leverage at the expense of more rational balance sheets and credit ratings.

Power utilities in the United States and Europe now seem intent on increasing their size and market shares once again. A large share of investment in these markets is being driven by M&A financing. These regions would appear to be most exposed to a downturn in the current cycle. The European market is less exposed than the United States given the relative high levels of market concentration and vertical integration within the sector. In the emerging markets, investment activity is being driven in large part by greenfield project developments. This is being driven by strong population growth, and efforts to expand service to previously unserved regions.

Events that could catalyze a reversal in the current upward trend include economy-wide factors such as inflationary pressures and rising interest rates, which would in turn impact credit ratings and increase the costs of debt and equity. A major industry default also would put investors on alert. A lurking concern, given the current "easy money" environment, would be any moves within the industry to venture into businesses beyond the core competencies of the sector, as was the case during the last cycle.

The creativity of financial institutions in developing new investment vehicles is helping to set the pace of investment activity in the sector. Financial investors, unlike corporate investors, are skilled at generating significant returns throughout the cycle. Investment banks with both generation asset portfolios (built up during the 2001-2004 period) and energy trading operations are especially well positioned. Ultimately, financial investors will begin backing out of the sector. That shift likely will coincide with the high point in the current cycle. The increased ownership of assets by investor types that do not hold the stability of the sector as a priority has catalyzed the upside of the cycle and may very well exacerbate the downside. Investment models that exhibit a long term commitment to the sector, however, will help to reduce volatile cyclical swings in the sector. ■

Daniel I. Blanchard is a consultant at Taylor-Dejongh. Contact him at dblanchard@taylor-dejongh.com.

Endnote

1. 2006. "B Sharper." *Project Finance*. July/August 2006. <http://www.projectfinancemagazine.com/default.asp?Page=7&PubID=4&ISS=22232&SID=642161&SM=ALL&SearchStr=term-b>.