

Hello and welcome to project finance modeling course.

Today we will review Quezon power plant case study which will show how proper risk allocation made it possible to finance construction of 800 million dollar power plant. Perhaps most significantly, the Quezon project was the first private project in the Philippines financed without the benefit of a sovereign guarantee by the government.

Quezon power plant is located in the Philippines, in Quezon city. It is a coal-fired power plant, with installed capacity of 440 megawatt, which was built under build-own-operate concession agreement with the government of Philippines.

Quezon power plant signed a power purchase agreement for 25 years, with total project cost of over 800 million US dollars and attracted debt financing of 607 million on non-recourse basis.

Construction of the project started in December 1996 and was completed in January 2000.

Before, we delve into project analysis, let's spend some time to review the development of Philippines' power industry.

From 1971 to 1987, the National Power Company of Philippines or NPC, had sole responsibility for developing and operating the country's generating facilities.

In 1987, in response to persistent power shortages, the government opened up power generation to private companies. However, independent power plant or IPP was still required to negotiate and sell the power to NPC.

So, little progress was made due to inability of NPC to move quickly and the power crisis continued.

At the height of the crisis, the government pushed through several private power projects under a "fast-track" approval process. The Ministry of Finance also guaranteed NPC's financial obligations to purchase the power at agreed upon rates, thus eliminating a major risk for IPPs.

The first IPP came on line in 1991. By year-end 1996, 30 projects with a combined capacity of almost 5,000 megawatt had been completed. By 1997, new IPP capacity had largely solved the immediate power crisis, but demand for electricity was forecast to increase at more than 7 percent annually through 2010.

Like many countries in the region, the Philippines fell victim to the Asian crisis in 1997 and 1998. Local currency depreciated, and the power cost increased significantly in the Philippines. High power costs caused the government to start the review process of IPP contracts with an objective to establish if those contracts had any irregularities. Although, some changes were made to the contracts of 30 IPPs, none was material enough to require lender's approval.

The origins of the Quezon project could be traced to a decade-old relationship between Manila Electric Company, or Meralco, and Pacific Manufacturing Resource or PMR. Meralco was the largest power distributor in the Philippines and had contracted with PMR to conduct a total-quality management program. The power crisis became increasingly severe during the course of this program and PMR saw an opportunity to develop an Independent Power Plant, or IPP. PMR and Meralco signed a Memorandum of Agreement to develop Quezon power plant.

PMR sought the participation of a strategic U.S. partner to assist in the development and ownership of the project. After extensive competition, Covanta Energy Group, a leading operator of independent power facilities, was selected as the co-development partner.

After an extensive negotiation led by Covanta, the project signed a 25-year, take-or-pay power purchase agreement, or PPA, with Meralco in August 1994.

Following the PPA negotiations, Covanta completed a co-development agreement with Bechtel Enterprises' subsidiary InterGen. Bechtel Enterprises was a leading developer and merchant banker in the engineering and construction industry.

In December 1995, Quezon signed operations and maintenance contract with Covanta's subsidiary. Then, it executed the transmission line agreement with Meralco, the EPCM contract with Bechtel subsidiaries and the coal supply agreements with Indonesian coal miners. In December 1996, when all important approvals were secured, the partners made their initial equity contributions, and construction commenced. We skipped some contracts such site lease agreements and management contract to focus on the most important aspects of the project.

Let us now review the most important contracts that Quezon signed.

The PPA was signed with private distribution entity Manila Electric Company or Meralco. Meralco was the largest power distributor in the Philippines, however its franchise with the government was due to expire in 2003, although it was widely expected to be renewed.

PPA was structured as take or pay contract meaning that the buyer has to pay the project company once the power has been delivered. Even if the buyer decides not take the delivery of the power, some minimum payments, called capacity fees, have to be made. These capacity fees cover the project company's fixed costs, debt repayments and equity returns.

In addition to capacity fees, Quezon's PPA included variable O&M and energy fees which were pass through fees to Meralco. Pass through fees mean that whatever those costs are, they are passed to Meralco.

All payments under Quezon's PPA were indexed to US dollar, except the local O&M expenses.

The project's revenue in the first year was projected to be 237 million under the PPA.

So essentially, under the Quezon's PPA, revenue risk and exchange rate risk were passed to the power off-taker.

Next, let's review the EPCM contract.

The EPCM contract was structured as two contracts – EPC fixed price, turn-key contract and Construction Management contract. The counterparty to both contracts was Bechtel Enterprises though its subsidiaries. Bechtel was experienced engineering company and investor in infrastructure, mining and, oil and gas projects throughout the world. Bechtel was also a major shareholder in Quezon project through its subsidiary InterGen.

The EPCM contracts had completion date and performance guarantees, therefore the risks of construction delay, completion date and project performance upon construction completion were transferred to the Bechtel.

Now, let's review the operations and maintenance contract.

O&M contract was signed with Covanta Energy, which was also the second largest shareholder of the project. Covanta Energy was an experienced power plant operator in the United States.

Under the O&M contract, Covanta Energy would receive bonus payments if the project performed well, however it would pay the penalties if the project performed worse than specified.

Furthermore, the plant's technology was commercially proven, and therefore it was highly expected that plant under such experienced operator as Covanta would perform well.

So, the risk of performance during the project's operation was transferred to Covanta Energy.

Next, let's review the coal supply contracts.

There were two coal suppliers from Indonesia – PT Adaro and PT Kaltim.

Coal supply agreements were structured as put or pay contracts. Under put-or-pay contract, a party agrees to supply a raw material for a certain price during a stated period and agrees to pay for an alternative supply if it cannot perform.

Coal supply agreements were also backed by financial guarantees from reputable Deutsche bank.

So, the risk of coal supply was taken by the coal suppliers.

The final category of risk involved currency and country risk. To minimize currency risks, both the debt and the Meralco PPA contract were denominated in U.S. dollars.

Political risk mitigation came in three forms. The project purchased an Eximbank guarantee for expropriation, political violence, and currency inconvertibility. Second, Meralco's payment obligations were absolute and unconditional. Finally, the Philippines foreign currency debt rating had been recently upgraded.

Moreover, Quezon equity investors felt that the country risk would decline over time. The country had a working democracy, so the threat of a revolution or violent upheaval was small. Further, after many years as a laggard, the government had implemented an economic reform program that was widely heralded.

So, at the end of 1996, the project reached financial close stage.

Equity came from Bechtel's subsidiary InterGen and Covanta Energy. PMR, the company which initiated the project was awarded 2% equity in the project, although it did not make any equity contribution.

75% of the project costs were financed with debt, which came from the US EXIM bank and bond investors.

Putting it all together, we can see the relationship between the parties.

InterGen and Covanta Energy provided equity capital.

US EXIM Bank and bond investors provided debt financing.

Bechtel was EPCM contractor under fixed price, turn-key EPCM contract.

Covanta Energy was O&M contractor.

Adaro and Keltim are coal suppliers.

And, Meralco was power offtaker.

It is a good place stop. We will continue with Quezon case study in the next lesson.