



Securing performance in Power projects

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LL.M. SHORT THESIS

COURSE: Comparative Secured Transactions

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Preface

In the last decades project finance has become very popular in financing large-scale investments. “Historically the power has been the engine of project finance”,¹ and later it has spread in other industrial sector and utilized in mining, exploitation of gas and oil, in building wastewater disposal facilities, telecommunication systems, roads, railways and metro systems.² “Potentially, you could do virtually anything through project finance techniques, as long as you isolate the revenue stream.”³

Since it is structured by them, project finance was clearly for the benefit of the private players. However, there is a trend nowadays that the public interest of the host countries may be taken into consideration as well.⁴ Project finance should promote not only the economic benefits of the project sponsors and lenders, and other participants, but should be also a vehicle of social and economic development of that country where the project is established: private participants are looking for predictable legal environment in order to make profit at lower costs; host countries, in turn, want to obtain assurance that the project will serve its public interest.⁵

The topic of the thesis focuses on power projects and tries to find out what securities may be utilized in order to secure the performance of the parties of the project documents upon which the entire project depends. The topic must be narrowed in order to fit into the side limit. I have chosen therefore power projects, since it was the first sector where project financing methods have been used, and it is still a strong sector of project financing, since the economic

¹ Cindy Collins: The few, the proud, the big...Booming international project finance work lures the heavy-hitters, *Of counsel*, November 18 1996 p. 12

² Katherine C. Baragona: Symposium: Markets in Transition: Reconstruction and development part two – Building up to a drawdown: International project finance and privatization – Expert presentations on lessons to be learned, *Transnational Lawyer* 2004 pp. 143-144

³ Collins 1996 p. 12

⁴ Catherine Pédamon: How is convergence best achieved in international project finance?; *Fordham International Law Journal*, April 2001 p. 1301

⁵ Pédamon 2001 p. 1275

development claims even more and more energy.⁶ This thesis relies mostly on academic writing of scholars and practitioners, therefore beside the relevant theories I discussed practical problems and their possible solutions as well.

In the first chapter I shall present a general overview of project finance putting emphasis on the project risks, since the project depends upon their proper allocation. Lawyers must understand the underlying mechanism in order to create an appropriate contractual structure. “Risk-allocation mechanism behind the project is what drives the legal issues, shapes the legal structure of the deal.”⁷ The principle is that the risks must be allocated to those parties, who are able to mitigate them.⁸ (I.) In the second chapter I shall present the power project emphasizing the analysis of contractual relationship, the securities given by the parties and the different types of power projects (II.).

⁶ Nan Zhang: Moving towards a competitive electricity market? The dilemma of project finance in the wake of the Asian financial crisis, *Minnesota Journal of Global Trade*, Summer 2000 p. 716

⁷ Wendy N. Duong: Partnerships with monarchs – Two case studies: Case two partnerships with monarchs in the development of energy resources: Dissenting an independent power project and re-evaluating the role of multilateral and project financing in the international energy sector, *University of Pennsylvania Journal of International Economic Law*, Spring 2005 p. 85

⁸ Philip R. Wood: *Project Finance, Subordinated Debts and State Loans*; London 1995 p. 6; Zhang 2000 p. 721

Introduction to project finance

1. In this chapter I am going to discuss the very basics of project financing, in order to establish a stable ground for the further analysis. First I try to find a proper definition of project finance introducing the main ideas and approaches to defining it; at last I try to give a precise definition (1.). Then I present the importance of project finance (2.).

1. What is the project finance?

2. The Black's Law dictionary provides such a definition that emphasizes the security aspect of the project finance. Namely, project finance is "a method of funding in which the lender looks primarily to the money generated by a single project as security for the loan."⁹ Many other definitions give emphasis for this attribute, that the loans are not backed up by assets of the project sponsor, but rather by the receivables of the project company;¹⁰ however, mentioning other factors which are important.¹¹ Finnerty highlighted the investors' interest and the separate nature of the project from every other participant as well.¹² Wallenstein¹³ furthermore

⁹ Black's Law, see: *financing*

¹⁰ "Project finance is the financing of a particular economic unit in which a lender is satisfied to look initially to the cash flow and earnings of that economic unit as the source of funds from which a loan will be repaid and to the assets of the economic unit as collateral for the loan." Nevitt, P.K., F.J. Fabozzi: Project Financing, 7th edition, Euromoney Books; London 2000 p. 1

"Project finance is debt finance technique used for the development of a public infrastructure project, where the lenders look primarily to the cash flow produced by the project to service their debt rather than to other sources of security..." Pédamon 2001 p. 1274;

"...building and operating a large-scale, long-term, revenue generating infrastructure project...capital...is provided principally by the lenders who rely for repayment on the receivables." Carl S. Bjerre: Project finance, securitization and consensuality, Duke Journal of Comparative and International Law, Spring 2002 p. 416

¹¹ "...when the lenders place primary reliance on the revenues of the new project for repayment. Also [...] lenders will use the assets and contracts of the project as security." Baragona 2004 p. 140

¹² "Project finance is the raising of funds to finance an economically separable capital investment project in which the providers of the funds look primarily to the cash flow from the project as the source of funds to service their loans and provide the return of and a return on the equity invested in the project." John D. Finnerty: Project Financing: Asset-Based Financial Engineering; New York, 1996 p. 2

¹³ "Project finance generally results in the creation of a new cash-flow producing asset." Stephen Wallenstein: Situating project finance and securitization in context, Duke Journal of Comparative and International Law 2002 p. 450

Huang and Knoll¹⁴ join to this view. Esty went further giving more emphasis on the independence of the project, and naming the two most relevant financial source of fund raising (lenders' loan as non-recourse debt and sponsors' equity contribution) in project finance.¹⁵ Collins, Zhang and Facciolo also stress the non-recourse nature of project finance.¹⁶ These definitions, however, do not reflect every aspects of project finance which are important. For instance, that project finance may be constructed in a not completely non-recourse basis, when the lenders find the future revenues of the project insufficient for financing the repayment of the loan.¹⁷ In this hybrid, limited recourse system, the lenders have opportunity, in certain circumstances, to look to the assets of the project sponsors.

3. Other definitions also stress that the main feature of project finance is that the lenders look primarily to the cash of flow of the project, however, put emphasis on the legal nature as well, when stating that project finance is a set of contracts. Penrose's definition, which is identical to the definition of Standard's & Poor, and other definitions too, emphasize the independence of the project and the projects company, that the loan is repaid solely from the revenue generated by the project, and states that project finance is mainly a group of contracts.¹⁸

¹⁴ "...sponsoring entity sets up a project as distinct legal entity and raises funds through the project, which issues securities. The investors, thus, look to the project's cash flow for their return." Peter H. Huang, Michael S. Knoll: Corporate finance, corporate law and finance theory, Southern California Law Review, November 2000 p. 183

¹⁵ "Project finance involves the creation of a legally independent project company financed with non-recourse debt (and equity from one or more sponsors) for the purpose of financing a single purpose, industrial asset." Benjamin C. Esty: Modern Project Finance, Teaching Notes; New York 2004 p. 25

¹⁶ "...borrowing gobs of money from large lenders on a non-recourse basis," Collins 1996 p. 9

"Project finance is a technique of non-recourse financing that is not primarily dependent on the credit support of the [project] sponsors or the value of the physical assets involved, but rather depends upon the expected performance of the project itself" Jay Facciolo: Project finance by Clifford Chance, Book review, Boston University International Law Journal, Spring 1993 p. 169; Zhang 2000 p. 718

¹⁷ Duong 2005 pp. 75-76

¹⁸ "A project company is a group of agreements and contracts between lenders, project sponsors and other interested parties that creates a form of business organization that will issue a finite amount of debt on inception; will operate in a focused line of business; and will ask the lenders look only to a specific asset to generate cash flow as the sole source of principal and interest payment and collateral." James Penrose: Project finance and debt rating criteria, Journal of International Banking Law 2001 p. 220; James Penrose, Peter Rigby: Project Finance and debt rating criteria: part 1, International Energy Law & Taxation Review 2001 p. 227;

"...project finance is a set of legal contracts, arrangements, and relationships that, when put together, typically creates a single-purpose operating entity that, in turn, creates a product or service." Collins 1996 p. 8

4. Other definitions highlight that project finance is a solution for off-balance sheet accounting treatment, which means that the project sponsors does not have to report the project debts in their balance sheet, therefore they can increase their ability to take more credits.¹⁹ However, the product of the post-Enron legislation, the Sarbanes-Oxley Act has taken almost completely away this “safety-net”.²⁰
5. Wood’s definition, involving banks, is quite different when stating that project finance is the financing of long-term infrastructure and industrial projects based upon a complex financial structure; it is a set of transactions under which a single project (e.g. construction of a cable network or a bridge) is developed; it is often referred to as a special area of banking.²¹
6. Miyamoto cites the ‘OECD agreement on new rules for project finance’ when defining its meaning.²² To this definition seven essential criteria is added, which are attributable to the project finance: setting up a special purpose company, appropriate risk sharing, project cash-flow is sufficient for the repayment of the loan, priority deduction from project revenues of operating costs and debt service, no sovereign repayment guarantee, asset-based securities for proceeds/assets of the project, limited or no recourse to the sponsor.²³
7. There are various possibilities of defining the notion of project finance; however, I think that emphasis should be put on its two main features: the non-recourse debt and that usually the receivables of the completely independent project company serves as security for the loan, because these features are the most distinctive from the other types of financing. There are, of course, other distinctive factors, such as the magnitude and complexity of the project which requires the sharing of project risk; allocating of which used to be one of the reasons of

¹⁹ “...project finance as a solution of balance sheet debt.” Katrina Dick: Project finance in telecoms, *Computer and Telecommunications Law Review* 2005 p. 183

²⁰ Duong 2005 p. 79

²¹ “Under project finance, banks provide finance for a single project and take a large part of the risk of the success or failure of that project.” Wood 1995 p. 3

²² “Project finance transactions are defined as a financing of a particular economic unit in which a lender is satisfied to consider the cash flows and earnings of that economic unit as the source of funds from which a loan will be repaid and to the assets of the economic unit as collateral for the loan.” Ken Miyamoto: Measuring local legal risk premium in project finance bonds, *Virginia Journal of International Law*, Summer 2000 pp. 1127-1128

²³ Miyamoto 2000 p. 1128

inventing project finance. The usual involvement of the host government/municipality (not rarely both of them are involved) which provides the concession, the land for the project or provides other incentives for the investors such as money aids or tax allowances.

8. I think, therefore, that the proper definition should give an emphasis to other factors as well. Thus, according to my opinion, project finance is a set of transactions for establishing, building and financing a single, long-term project, which is meant to allocate the project risks among the project participants and to keep the project debt out of the project sponsors balance sheet and which is usually of high importance for the host country, (which therefore usually supports the project); by setting up a new – usually domestic – corporate entity, based upon a complex financial structure where the non-recourse or limited recourse debt is repaid primarily from the money, assets and rights generated by the project.

2. Importance of project finance: the twin goals

9. Project finance is a popular way for private entities to finance one single project. It contains some advantageous attributes that are of high importance for them. Therefore, since it is structured by them, project finance was clearly for the benefit of the private players. However, there is a trend nowadays that the public interest of the host countries should be taken into consideration as well.²⁴ Project finance should promote not only the economic benefits of the project sponsors and lenders, and other participants, but should be also a vehicle of social and economic development of that country where the project is established: private participants are looking for predictable legal environment in order to make profit at lower costs, host countries, in turn, want to obtain assurance that the project will serve its public interest.²⁵

²⁴ Pédamon 2001 p. 1301

²⁵ Pédamon 2001 p. 1275

10. The twin role of project finance is, therefore, that it must be run for the benefit of the private players, because it is the only incentive of investing. In turn, host states are competing for these investments²⁶ and making their legal and economical environment more attractive, because, on the other hand, project finance must be run in the public interest, increasing local employment, compliance with health, safety and quality standards and environmental protection regulations etc.²⁷ According to Pédamon the twin goals may be achieved by the convergence of law on the state and international level, furthermore by the convergence of the practice of the private parties.²⁸
11. In this part, I am not going to discuss the modalities of this convergence as Pédamon did, since it could be a topic of another separate thesis. Rather I will only highlight these competing, sometimes crossing interests of the private parties (2.1.) and of the public considerations of the host countries. (2.2.)

2.1. Private interest

12. The main reason behind project finance is twofold from the point of view of the private parties. First, projects, especially foreign investments, include many risks. When structuring project finance, as a principle, the parties to it try to allocate them among each others to those who are best able to manage them, and, by this, mitigate those risks.²⁹ Second, by utilizing project finance, project sponsors are still able to borrow, because the project company is a total separate entity, and its debt remains off-balance sheet due to the fact, that the loan is mostly non-recourse or sometimes limited recourse to the project sponsor.³⁰ In this part I will discuss the principles and importance of risk allocation first and point out the lawyers' task in

²⁶ Miyamoto 2000 p. 1131

²⁷ Pédamon 2001 p. 1275

²⁸ Pédamon 2001 p. 1276

²⁹ Zhang 2000 p. 721

³⁰ Duong 2005 p. 76

project finance, then I will discuss every risk one by one (2.1.1.). Secondly, I turn to the advantage of the non-recourse or limited recourse nature of the debt, and to its consequence: the off-balance sheet accounting (2.1.2.).

2.1.1. Risk allocation

13. The main reason, why projects are managed through this seemingly overcomplicated method, is the gravity of projects itself: it is too costly and risky for an individual corporation to invest such a huge amount. Project finance is a way to allocate the risks, share the costs and profits after completion. The essential element here is to assess properly the risks – projects are different from this point of view, “each project carries its own basket of risks”³¹ – and allocate them to those, who are in the most appropriate position to bear and mitigate them.³²
14. According to Standard & Poor analysis there are six steps in the assessment of the project risks:
 - Evaluating the relevant project documents
 - Assessment of the technology and performance of the project
 - Analyzing the competitive position of the project’s product
 - Determination of those risks, which are presented by the counterparties to the project
 - Appraisal of the legal structure of the project
 - Evaluation of the financial risks that may affect the results³³
15. The lawyers’ job here is the prediction of the risks, and to establish such a legal structure to the project via tightly negotiated contractual language that mitigates these risks.³⁴ “Risk-allocation mechanism behind the project is what drives the legal issues, shapes the legal

³¹ Duong 2005 p. 85

³² Wood 1995 p. 6; Zhang 2000 p. 721

³³ Penrose 2001 p. 221; Penrose-Rigby 2001 p. 228

³⁴ Duong 2005 p. 77

structure of the deal.”³⁵ When allocating the risks, there is a guideline for lawyers, which helps them in arranging the legal structure. These principles are:

- Risk avoidance – when planning the project
- Loss prevention – taking preventive measures, which may reduce the loss frequency
- Risk retention – setting up reserves for financing the loan and operation in case of loss
- Risk transfer – allocating the risks contractually to those parties, that are in the best position to manage and mitigate the risks
- Purchasing insurance or surety bond – regular payment to an insurance company which, in turn, shall bear the future risks of loss.³⁶

16. In this part I have categorized the possible risks pursuant to their nature. Accordingly, I have set up three categories: a) commercial risks, b) political risks and c) force major. I will present each category as such, and then discuss in details each risk belonging to that category—mentioning the possible way to mitigate them.

a) Commercial risks

17. Commercial risks are those, which are inherent to the project. These risks rise from the project participants and not from the external environment. Commercial risks are usually shifted to the private sector participants and insurance companies.³⁷ According to Facciolo, several factors increase further these risks: the non-recourse nature of the project, which impedes the lenders to reach to the project sponsors assets if the revenue of the project proves to be insufficient; therefore the project lenders will have little value if the project does not function properly, and the fact that all of these risk are concentrated in one single project.³⁸

³⁵ Duong 2005 p. 85

³⁶ Duong 2005 p. 82

³⁷ Zhang 2000 p. 722

³⁸ Facciolo 1993 p. 170

i. Completion risk

18. Completion risk may be divided into two categories: design and construction.³⁹ The former includes incorrect or incomplete designs, the latter is broader; it includes extra costs, delays, additional works, performance deficiencies or non-completion.⁴⁰ Wood states, that usually the project lenders require either completion guarantee or guarantee of the loans; both of them are provided by the project sponsors.⁴¹ However, more common that the construction contract addresses this risk, and shift them to the contractor, since he is in the best position to mitigate.⁴²
19. One obvious way is using a fixed price to shift the risk of extra costs to the contractor.⁴³ In the event of delay or performance deficiency, liquidated damages seem to be the most proper solution, which covers the loss of revenue produced by the project;⁴⁴ moreover the warranty may be also useful in the latter case.⁴⁵ Another possible way to meet this risk is the ‘vendor equity’ structure, according to which the contractor is supposed to provide equity contribution to the project entity, which is an incentive for the contractor to keep the deadlines and to fulfill the project requirements of the construction.⁴⁶

ii. Operating risk

20. This covers the costs of manpower, non-proven technology used either when constructing the project (in case of infrastructural projects e.g. building a bridge with new technology) or when operating the project (in case of power projects e.g. producing electricity with new

³⁹ Andrea De Gaetano: Risks and security packages in project finance transactions in the Italian public sector, *Journal of International Banking Law and Regulation* 2005 p. 35; Facciolo 1993 p. 171

⁴⁰ Gaetano 2005 p. 35; Zhang 2000 p. 722

⁴¹ Wood 1995 p. 6

⁴² Facciolo 1993 p. 171

⁴³ Duong 2005 p. 86; Facciolo 1993 p. 171; Zhang 2000 p. 722

⁴⁴ Duong 2005 p. 89; Facciolo 1993 p. 171; Zhang 2000 p. 722

⁴⁵ Facciolo 1993 p. 171;

⁴⁶ Duong 2005 pp. 89-90

technology),⁴⁷ maintenance, poor operation which does not provide sufficient revenue for paying the operation and the loan etc.; practically every kind of costs that may vary during the operation of project. Gaetano has divided this category into operating risks and maintenance risks;⁴⁸ I do not follow this categorization, since he discusses the same under both notions. Although Baragona discusses natural disasters as a risk that may cause extra costs during the operation of the project,⁴⁹ I will address this issue below separately, because force major may interrupt the project at every stage.

21. This risk is often met by passing through the extra-costs to the purchaser by fixed price or by proceeds retention accounts.⁵⁰ Furthermore, as Baragona suggests, the chance of occurrence of this risk may be prevented by employing experienced operation and maintenance contractor, who is familiar with the proven technology, or experienced technical adviser. Furthermore she advises to conclude business interruption insurance which should cover at least the operational and loan repayment costs.⁵¹ Another alternative way of mitigation of this risk is 'vendor equity' financing as in the case of completion risk; here the operation and maintenance contractor is supposed to contribute.⁵²

iii. Supply risk

22. The project needs different resources (fuel, gas, mineral etc.) in order to operate it. The risk is whether their quality and quantity satisfies the project,⁵³ or whether the supply is delayed, interrupted or the price increases.⁵⁴ However, the latter seem to fit better into the market risk category, I shall discuss it here, since it may indirectly affect the quantity of the supply.

⁴⁷ Wood 1995 p. 7

⁴⁸ Gaetano 2005 p. 35

⁴⁹ Baragona 2004 p. 158

⁵⁰ Wood 1995 p. 7

⁵¹ Baragona 2004 p. 158

⁵² Duong 2005 p. 90

⁵³ Gaetano 2005 p. 35

⁵⁴ Zhang 2000 p. 722

23. According to Wood, this risk can be defeated only by initial expert evaluations.⁵⁵ Although, Baragona agrees with him saying that an independent supply consultant should confirm the adequacy, availability and reliability of supplies; she went further, demonstrating that long-term supply contract, contracting with experienced supplier and involvement of the supplier in the project also mitigates these risks.⁵⁶ Gaetano adds that the long-term supply contracts must contain 'put or pay' clause, in order to be effective, according to which the supplier is obliged to sell fixed quantity at a fixed price, and the supplier bears any extra costs that are incurred by shortfall in the supply. If the shortfall cannot be covered by cover purchase because of the nature of the goods to be supplied, then financial penalty should be envisaged.⁵⁷ Duong join to Baragona in the issue of supplier involvement to the project, saying that under 'vendor equity' financing the supplier is directly interested in supplying the fuel, raw material, mineral etc. in the required quantity and quality, at the fixed price.⁵⁸

iv. Market risk

24. This contains two elements: on the one hand the risk of the change of the market demand, which is twofold, because either the change on the supplier or on the purchaser side may happen; and on the other hand the host government may introduce price control which may affect both sides as well.⁵⁹ Fluctuation either it the market demand or in the market price may be disastrous to the project, because it may prevent the sale of the project product, thereby affecting the project's cash flow.⁶⁰ Therefore, after completion of the project, this kind of risk is whereupon the project depends.

⁵⁵ Wood 1995 p. 7

⁵⁶ Baragona 2004 pp. 156-157

⁵⁷ Gaetano 2005 pp. 35-36

⁵⁸ Duong 2005 p. 90

⁵⁹ Wood 1995 pp. 6-7

⁶⁰ Baragona 2004 p. 157

25. This risk is mostly dealt with by the particular contracts between the project company and suppliers or purchasers.⁶¹ Purchase contracts should be concluded for long term and with fixed price,⁶² linked to inflation,⁶³ which usually contains ‘take or pay’ clause, thereby the purchaser is obliged to pay the agreed, fixed price even if he refuses to take the delivery.⁶⁴ Baragona adds further methods of reducing the rate of this risk: employing independent consultant, who assesses the market demand, keeping higher debt service coverage ratios to support the project during periods of market downturns, diversification of re-sale markets to mitigate dependence on one single market and/or costumer.⁶⁵

v. Insolvency risk

26. This covers the cases, when the contractors become insolvent and cannot perform their contractual obligations. Any contractor may be insolvent, suppliers, purchasers, insurers, banks etc. What is important in this case is whether the project sponsors have sufficient financial resources to keep the project alive. Banks may take the credit risks of the purchasers of the project product; however, contractors’ obligation usually has to be bonded.⁶⁶

vii. Environmental risk

27. Pollution generated by the project, or clean-up cost of such pollution are belonging here; furthermore changes in law on environmental protection might become an issue as well. This risk can be mitigated by initial environmental audit and by insurance.⁶⁷

⁶¹ Wood 1995 pp. 6-7; Zhang 2000 p. 723

⁶² Baragona 2004 p. 157

⁶³ Gaetano 2005 p. 35

⁶⁴ Zhang 2000 p. 724; Gaetano 2005 p. 35

⁶⁵ Baragona 2004 p. 157

⁶⁶ Wood 1995 p. 9

⁶⁷ Wood 1995 p. 8

b) Political risks

28. Political risks include the risks caused by governmental actions,⁶⁸ which creates new circumstances for the project.⁶⁹ These are considerable especially in the developing countries.⁷⁰ The risks belonging here may vary country to country, however, the most common risks are: expropriation, changes in law, currency inconvertibility, devaluation, war, civil unrest, lack of enforcement, export prohibitions, increased tax and royalties etc.⁷¹
29. Political risk may be mitigated in many ways. The most important: strategic importance of the project to the host country, obligation to the host government to provide security, assessment of the host country's location, investment history, economical strength, externalization of the project company forming it abroad, choosing external law governing the main contracts, conclusion of political risk insurance (extremely expensive).⁷² Other option is the government participation to the project even under 'vendor equity' financing system, if the government is one of the contractors⁷³ (in case of power project, government is usually the power purchaser).

i. Legal risks

30. "Credit cannot exist without the oxygen of the legal system."⁷⁴ The legal system of the host country, where the project is located, is expected to provide efficient means to enforce the rights arising out of the project documents. The legal risks are connected to this point. The investors want to know that they can rely on the predictable judiciary and enforcement.

⁶⁸ Baragona 2004 p. 157

⁶⁹ Gaetano 2005 p. 36

⁷⁰ Wood 1995 p. 7

⁷¹ Wood 1995 p. 7; Baragona 2004 p. 158; Zhang 2000 p. 722

⁷² Wood 1995 pp. 7-8; Baragona 2004 p. 159

⁷³ Duong 2005 pp. 89-93

⁷⁴ Miyamoto 2000 p. 1131

Investors are looking for a “safe, stable and predictable legal environment”,⁷⁵ that is why they choose English or New York law as governing law for their relevant contracts.⁷⁶ Since project finance is a vehicle for developing the social and economic strength of the host countries,⁷⁷ there is a trend that states are competing for these investments.⁷⁸ The states are therefore interested to establish a safer and more attractive investment environment.⁷⁹ Thus, in order to mitigate the legal risks, there is a need for convergence of the laws of the different states, thereby creating a more convenient and familiar legal environment for the investors.⁸⁰ There are three ways how to achieve this goal: first is to standardize the contracts by the state, second is to enact general legislation to project finance, third is to enact legislation specifically to those sectors which are mostly involved in project finance.⁸¹

31. Standardization of the contracts occurred in the United Kingdom, when the British government launched the Private Finance Initiative, which created model form terms and conditions.⁸² This effectively reduces the costs associated with tender documents, legal fees and negotiations.⁸³ However, e.g. in a developing country this solution would still not provide stable legal environment to the enforcement.
32. In Italy the parliament enacted the Merloni Ter (later amended by Merloni Quarter), which is an act governing the concessions of public projects.⁸⁴ In this law the Italian legislation provided for provisions that lenders are usually seeking: right to compensation if the legal circumstances changes,⁸⁵ step-in rights and first priority interest⁸⁶ by mean of floating charge;

⁷⁵ Pédamon 2001 p. 1275

⁷⁶ Collins 1996 p. 10; Miyamoto 2000 p. 1134

⁷⁷ Bjerre 2002 pp. 429-430; Pédamon 2001 p. 1275

⁷⁸ Miyamoto 2000 p. 1131

⁷⁹ Pédamon 2001 p. 1275

⁸⁰ Pédamon 2001 p. 1275

⁸¹ Pédamon 2001 p. 1278

⁸² Pédamon 2001 pp. 1279-1280

⁸³ Pédamon 2001 p. 1280

⁸⁴ Gaetano 2005 p. 34; Pédamon 2001 pp. 1281-1282

⁸⁵ Gaetano 2005 p. 36

⁸⁶ Gaetano 2005 pp. 37-38, 40; Pédamon 2001 pp. 1282, 1284

however, introduction of the latter was not without any problem, since it is a common law device which should be inserted into a civilian legal system.⁸⁷

33. In Turkey a series of sector specific laws have been enacted, each of them contains provision to the private projects. These laws are mostly dealing with concession agreements, categorizing them among the private law contracts; however, do not address the issues of step-in rights and compensation.⁸⁸
34. As to the private players, their best option is to refer any disputes arising out of the project documents to arbitration,⁸⁹ and thereby avoid the inherent instability of the host countries' legal systems. This opportunity is open even in the case, when the other party to that contract is the host country.⁹⁰

ii. Permitting risk

35. Project lenders may hesitate to provide money, if the project might be blocked or delayed due to the lack of necessary permits. Therefore Wood holds the obtaining the most crucial consents of the host government as a precondition of the borrowing under the credit agreement.⁹¹ The permitting risk can be overcome by an agreement between the project company or project sponsors and the host government.

iii. Monetary risks

36. This includes inflation, currency devaluation or changing exchange rate risks and interest rate risks beyond the parties' expectations. All of them may affect the project companies' financial ability to repay the loan, and to pay the operational costs, since usually the project generates

⁸⁷ Pédamon 2001 p. 1282

⁸⁸ Pédamon 2001 pp. 1284-1286

⁸⁹ See Christophe Dugué: Dispute resolution in international project finance transactions, *Fordham International Law Journal*, April 2001 pp. 1264-1283 and Dinesh D. Banani: International arbitration and project finance in developing countries: Blurring the public/private distinction, *Boston College International and Comparative Law Review*, Spring 2003

⁹⁰ Pédamon 2001 pp. 1284, 1286

⁹¹ Wood 1995 p. 6

revenue stream in local currency, however, it must serve its debt in hard currency⁹² (e.g. US dollar or Euro).

37. Inflation may be met by indexing the service charges and the product price to the inflation rate.⁹³ Currency devaluation makes cost of making payment increased, however, it can be avoided either by agree in hard currency or by indexing the charges to the fluctuations of the exchange rate.⁹⁴ Wood mentions currency swaps or options as interim measure in case of urgency, since such means are hardly available during the entire project.⁹⁵ Interest rate risks may be met by implementing hedging policies⁹⁶ or by interest cap or swap agreements; the latter may be used again only as an interim measure in case of urgency.⁹⁷

iv. Risk of expropriation

38. This risk is rather common in developing countries. However, its occurrence is quite rare, if happens, it is usually fatal to the project, thus it does not seem inappropriate to address this issue here separately. To avoid this risk, Duong suggests four different steps: 1, Project sponsors and lenders should keep low profile in the host country and appoint experienced personnel whose task is to keep good relationship with the host country's government. 2, The investors should take into consideration the social and economical interests of the host country and utilize the local industry, employ local personnel. 3, Investors should diversify the project geographically if it is possible. 4, Government should participate in the project thus becoming one of the equity providers and directly interested in the success of the project.⁹⁸

⁹² Zhang 2000 pp. 724-725

⁹³ Gaetano 2005 p. 36

⁹⁴ Zhang 2000 p. 725; Baragona 2004 p. 158

⁹⁵ Wood 1995 p. 8

⁹⁶ Baragona 2004 p. 158

⁹⁷ Wood 1995 pp. 8-9

⁹⁸ Duong 2005 pp. 82-83

c) Force Major

39. The risk of damage in the project, either before its completion or after it, may vary case by case depending on the nature of the project. It includes every kind of damage regardless its cause – natural disaster, catastrophic mechanical failure or a third person causing harm deliberately may be a form of force major.⁹⁹ The casualty risk may be met by insurance;¹⁰⁰ however it must be point out that many insurance policies will exclude force major events or these kinds of insurances are extremely expensive.¹⁰¹

2.1.2. Non-recourse or limited recourse debt – off-balance sheet treatment

40. The other main reason of utilizing project finance is that the project sponsors remain able to borrow. In Project finance the receivables are isolated inherently “from the moment of their inception”, because it is generated not by the project sponsors, but by the project company.¹⁰² Similarly project company enters to the project agreements, consequently any debt incurred, is the debt of the project company itself. The lenders cannot seek security in the assets of the sponsors; the debt is non-recourse to the sponsors. Because the project company is a total separate entity and the loan is mostly non-recourse to the project sponsor, its debt remains off-balance sheet.¹⁰³ This is an advantage for the sponsors, since the leverage is increased on its balance sheet,¹⁰⁴ and the sponsors may remain able to comply with the covenants included in total different loan agreements.¹⁰⁵ However, Huang and Knoll points out, that the project

⁹⁹ Penrose 2001 p. 222; Penrose-Rigby 2001 p. 228

¹⁰⁰ Wood 1995 p. 7

¹⁰¹ Penrose 2001 p. 222; Penrose-Rigby 2001 p. 229

¹⁰² Bjerre 2002 p. 417

¹⁰³ Dick 2005 p. 183

¹⁰⁴ Wallenstein 2002 p. 450

¹⁰⁵ Facciolo 1993 p. 172; Baragona 2004 p. 142

sponsors does not have the opportunity to ‘siphon off’ the cash flow from a viable project in order to finance the sponsor general debts.¹⁰⁶

41. The non-recourse nature of the debt is a disadvantage from the lenders’ point of view, since the number of available securities is narrower; the security package focuses only on the project company’s assets, especially on its cash-flow.¹⁰⁷ Therefore the lenders usually require commitments from the sponsors,¹⁰⁸ such as guarantees, warranties or covenants e.g. providing a contingent financial commitment during the construction period¹⁰⁹ or there may be no changes in the project plans without the consent of the lenders.¹¹⁰ These commitments turn the non-recourse debt into a limited recourse one, according to which the lenders have some recourse to the assets of the project sponsor.¹¹¹
42. The Sarbanes-Oxley Act blurred somewhat this clear picture due to the fact, that it requires to disclose the liabilities incurred by the project,¹¹² however, the Act is only to promote transparent accounting practice, therefore providing more secure ground for the prospective lenders.¹¹³

2.2. Public interest

43. Under this notion the interest of the host country should be meant. Project finance helps to develop those industries or services, for which the host country does not have sufficient financial source or technical knowledge. By developing the mining, oil or gas production,

¹⁰⁶ Huang-Knoll 2000 p. 184

¹⁰⁷ Gaetano 2005 p. 38

¹⁰⁸ Penrose 2001 p. 222; Penrose-Rigby 2001 p. 229

¹⁰⁹ Zhang 2000 p. 719-720

¹¹⁰ Wood 1995 p. 27

¹¹¹ Duong 2005 p. 76

¹¹² Duong 2005 p. 78

¹¹³ Duong 2005 p. 81

electricity generation, railway or telecommunication system, project finance has deep impact on the economy of the host country, and it has a broad social effect as well.¹¹⁴

44. The host countries should take their chance and make as much profit as they can from the projects, and, meantime, avoid the negative externalities, such as polluting the environment or non-compliance with safety or quality standards of the host country.¹¹⁵ The project may create new workplaces, which may result better-trained and more educated work force;¹¹⁶ however, the obligation to employ local personnel may be burdensome to the project participants.¹¹⁷ The project may bring new technologies in the host country and may stimulate the economy.¹¹⁸
45. The host countries may want to ensure that the new products or services generated by the project will be available for the public at lowest price possible.¹¹⁹ At this point the private and public interest are clearly crossing each other, since the lowest price may be achieved, from the host countries point of view, by entering to the open market. In contrary, from the private interest point of view, the project participant intend to provide stable market and price for the product or service generated by the project, since the stable revenue stream is whereupon the entire project depends. Conciliating these contrary interests is one of the most difficult tasks in project finance; and usually the private participants' interest wins over the public.

¹¹⁴ Bjerre 2002 p. 429

¹¹⁵ Pédamon 2001 p. 1275

¹¹⁶ Bjerre 2002. p. 430

¹¹⁷ Pédamon 2001 p. 1290

¹¹⁸ Bjerre 2002 p. 430

¹¹⁹ Zhang 2000 p. 734

Financing power projects

46. If we look upon the history of project finance, we shall find that its initial engine has been power,¹²⁰ and the need for it has not been lessened. The economic development has led to increased energy demand, which required new power facilities, building of which has exceeded the ability of the developing countries. Therefore these countries had to turn to private financing to complete power projects, which are usually ‘greenfield’¹²¹ projects.¹²²
47. In this chapter, I turn to the participants to the power projects, introducing them one by one (1.), then I draw the structure of power projects, emphasis is given to the contractual relationships (2.). At last I will show the different types of power project and try to find a proper solution that is able to achieve the twin goals of the project finance (3.).

1. Participants in power projects

48. Power project participants are those, who are interested in the power project, and make profit. I do not use intentionally the notion of stakeholders, because under that notion I mean others, who do not make profit directly from the project, although they are affected by it; such as the workers who are employed, or the citizens in whose neighborhood the project is established. However, they are strongly affected by the project; they do not invest into it. Thus, in the following section I am going to introduce the participants in the project finance one by one: the project sponsor (1.1.), the project company (1.2.), the project lender (1.3.), the EPC contractor (1.4.), the O&M contractor (1.5.), the fuel supplier (1.6.), the power purchaser (1.7.) and the host government (1.8).

¹²⁰ Collins 1996 p. 10

¹²¹ Greenfield project means that the project is build on a site, which has not been used for that purpose before. Therefore the essential infrastructure, utilities must be built with the project. Thus, greenfield projects require usually more money to invest.

¹²² Zhang 2000 pp. 716-717

1.1. Project Sponsor

49. Usually called as ‘equity investor’ is the either foreign or domestic entity; he makes the equity investment. The project sponsor or more frequently sponsors are the participant that construct the structure of the project, and organize all of the other parties.¹²³ If there are more project sponsors, then they usually form a partnership, or a joint venture, this way the project sponsors establish the project company which owns the project.¹²⁴ Frequently, there are additional equity investors, which are usually the other project participants;¹²⁵ e.g. in ‘vendor equity’ financing model the contractors, suppliers or even the host government may opt to contribute in the project entity.¹²⁶

1.2. Project Company

50. Project company is a special purpose entity, its only task is to develop, own and operate the project;¹²⁷ however its activity is not as restricted as in securitization.¹²⁸ It is set up by the sponsors as completely independent legal entity; moreover other equity contributors may participate as well.¹²⁹ According to Baragona, there may be five basic forms of ownership: 1, corporation formed either under the jurisdiction of the host country or in other jurisdiction; 2, general partnership, under which the sponsors form a separate legal entity, but not a separate taxable entity, therefore it is frequently used, when the tax benefits are significant, however, general partners shall be severally liable, thus sponsors usually create first a wholly owned,

¹²³ Baragona 2004 p. 148

¹²⁴ Baragona 2004 pp. 148-149

¹²⁵ Baragona 2004 p. 149

¹²⁶ Duong 2005 p. 90

¹²⁷ Zhang 2000 p. 718

¹²⁸ Bjerre 2002 p. 421

¹²⁹ Baragona 2004 p. 144

single purpose company, which shall act as the general partner; 3, limited partnership, in which the limited partners have only limited control over the project; 4, limited liability company; 5, ownership agreement, which set forth the conditions under which the parties develop and operate the project, share the loss and profit.¹³⁰

51. Wood discusses the question, whether the sponsors should form the project company in the jurisdiction of the host country, he collected its possible attractive features: it isolates the risks, there are often local tax allowances, local project company avoids the covenant of the sponsors included in the credit agreements;¹³¹ similarly he mentions the disadvantages of this solution: political risk is increased, domestic tax position may be worse.¹³²

1.3. Project Lender

52. The project company turns to the lenders to finance the project. The lenders may be commercial banks (foreign or domestic lending foreign or domestic currency respectively) funding institutions such as pension funds,¹³³ export credit agencies to finance suppliers and international agencies lending development credits.¹³⁴ The lenders provide the vast majority of the amount necessary to the projects. The debt-equity ratio is usually ten-twenty percent equity and eighty-ninety percent debt.¹³⁵ The debt from these lenders are senior debt, which means that they have the first right to the project assets.¹³⁶ The debt is non-recourse to the project sponsors. This is a disadvantage from the lenders' point of view, since the number of available securities is lower; the security package focuses only on the project company's

¹³⁰ Baragona 2004 pp. 145-146

¹³¹ Wood 1995 p. 9

¹³² Wood 1995 p. 10

¹³³ Baragona 2004 p. 146

¹³⁴ Wood 1995 p. 4

¹³⁵ Collins 1996 p. 11; Baragona 2004 p. 146

¹³⁶ Baragona 2004 p. 146

assets, especially on its cash-flow.¹³⁷ Therefore the lenders usually require the project sponsors,¹³⁸ to provide guarantees, warranties or covenants.¹³⁹ In some case the project lenders set forth that there may be no changes in the project plans without their consent.¹⁴⁰ These commitments turn the non-recourse debt into a limited recourse one, according to which the lenders have some recourse to the assets of the project sponsor.¹⁴¹

53. When providing credit, the project lenders rely on the feasibility study prepared by the project sponsor. The feasibility study shows the viability and profitability of the project, which is the main ground for the lenders when deciding whether to provide the loan or not. The study analyzes the technical, financial, and other aspects of the project; it contains the project description, sponsors' arrangements, governmental arrangements, construction, supply and power purchase agreements, sources of funds, market study, financial projections and assumptions.¹⁴²

1.4. EPC Contractor

54. EPC (engineering, procurement, construction) contractor enters into an EPC contract with the project company, under which the contractor undertakes to design and construct the project; usually for a fixed price, thus bearing the responsibility for late completion and cost overruns.¹⁴³ The EPC contractor enters into separate agreements with subcontractors and suppliers of raw materials and equipment needed for the construction of the power plant, in order to perform the EPC contract. In 'vendor equity' financing model the EPC contractors

¹³⁷ Gaetano 2005 p. 38

¹³⁸ Penrose 2001 p. 222; Penrose-Rigby 2001 p. 229

¹³⁹ Zhang 2000 p. 719-720

¹⁴⁰ Wood 1995 p. 27

¹⁴¹ Duong 2005 p. 76

¹⁴² Baragona 2001 p. 148

¹⁴³ Baragona 2001 p. 149

may opt to contribute in the project entity,¹⁴⁴ and may either retain its share after the completion of the project, or sell it.¹⁴⁵

1.5. O&M Contractor

55. The O&M (operation & maintenance) contractor is a specialized entity with experience and technical knowledge necessary to operate and maintain the power plant. The O&M contractor concludes the long-term O&M contract with the project company, under which the contractor is responsible for the day-to-day operation.¹⁴⁶ The contractor is liable for any loss of profit that is associated with the operation or maintenance of the power plant. Under ‘vendor equity’ financing model the operator may opt to contribute in the project entity, and thereby becoming interested in the proper operation of the power plant.¹⁴⁷ However, it must be noted that the operator is often the project company itself.¹⁴⁸

1.6. Fuel Suppliers

56. Fuel supplier enters into a long-term contract with the project company in order to provide the necessary quantity and quality of fuel at a fixed price for the operation of the power plant;¹⁴⁹ thus the supplier bears any risk of change in the fuel price. The type of fuel supplied depends on the type of the power plant. It is usually gas, oil or coal; however it may be uranium, plutonium or thorium for a nuclear plant, or other type of material which may produce heat

¹⁴⁴ Duong 2005 p. 90

¹⁴⁵ Baragona 2001 p. 149

¹⁴⁶ Baragona 2004 p. 149

¹⁴⁷ Duong 2005 p. 90

¹⁴⁸ Wood 1995 p. 4

¹⁴⁹ Baragona 2004 pp. 149-150

(e.g. in many countries thermophilic biogas plants use organic manure¹⁵⁰). Moreover it might happen that there is no need for fuel e.g. in case of windmills or hydroelectric dams, which use renewable energy when generating electricity. In this case there is no fuel supplier and fuel supply agreement in the project structure. The fuel supplier may also participate as equity provider in the project company.¹⁵¹

1.7. Power Purchasers

57. The power purchaser enters into a long-term, fixed price¹⁵² (thus bearing the risk of market change) power purchase agreement with the project company which provides the entire revenue stream of the power project,¹⁵³ upon which it depends; thus this participant is a key figure. The power purchaser can be the host government, municipality, or public utility company.¹⁵⁴

1.8. Host Government

58. The project improves the host country's economy and provides social benefits. Thus, states are competing for these projects¹⁵⁵ and making their legal and economical environment more attractive. Moreover governments may enter into implementation or incentive agreement, under which it provides incentives for the prospective investors, such as tax allowances or direct money donations. Government may play an active role as well by providing equity to

¹⁵⁰ Krieg&Fischer Ingenieure GmbH: Biogas-large-scale plant construction p. 1-4

¹⁵¹ Duong 2005 p. 90

¹⁵² Baragona 2004 p. 149

¹⁵³ Duong 2005 p. 75

¹⁵⁴ Duong 2005 p. 75

¹⁵⁵ Miyamoto 2000 p. 1131

the project company¹⁵⁶ or by entering into the power purchase agreement as power purchaser.¹⁵⁷ However, government may opt only being a passive player and only issue permits and conclude concession if it is required by its law.

2. The contractual structure of power projects

59. The contracts set out the contractual structure of the project finance; the contracts define the role and obligations of all parties, the contracts allocate the project risks; the contracts deal with the method of financing, building, owning and operating the project; the contracts set out the remedies in the event of default or failure in performance.¹⁵⁸ In project finance “contract is the king.”¹⁵⁹ However, one must keep in mind that the contractual provisions should be adjusted to the legal framework of the host country.¹⁶⁰
60. The lawyers’ activity regarding the contracts may be divided into three major categories. The first is the negotiation of the contracts. The second is the drafting of these contracts structuring the project. The third is managing the matters related to the financing.¹⁶¹
61. In this section, I will analyze the main contracts to the power projects: the land sale and purchase agreement (2.1.); the loan and security agreement (2.2.); the EPC contract (2.3.); the O&M contract (2.4.); the fuel supply agreement (2.5.); and at last but not at least the power purchase agreement (2.6.). I will present the main obligations under each agreement and then the legal techniques that secure these obligations to be performed.

¹⁵⁶ Duong 2005 p. 90

¹⁵⁷ Duong 2005 p. 75

¹⁵⁸ Baragona 2004 p. 150

¹⁵⁹ Wood 1995 p. 13

¹⁶⁰ Baragona 2004 p. 150

¹⁶¹ Collins 1996 p. 11

2.1. Land Sale and Purchase Agreement

62. Site arrangements are to provide the location where the power plant can be erected.¹⁶² The purchaser is the project company, the seller may be either private person or rather persons, or public person, such as the host government or the municipality. Usually, the project company – especially in case of greenfield projects – purchases the site, however, a long-term lease is not unimaginable.¹⁶³

2.1.1. Obligations of the parties

63. The obligation of the seller is the transfer of ownership without any kind of encumbrances. Furthermore – in case of greenfield projects – the seller may undertake to perform some additional works closely related to the site; such as providing access to the public utilities, building of roads to the site, removal of physical impediments (e.g. trees) before passing over the site. The purchaser undertakes to pay the purchase price pursuant to the provisions of the contract regarding the currency, method and timing of payment.

2.1.2. Securities of performance

64. In case of default from the seller's side, the proper incentive to conform to the contract is penalty or liquidated damages¹⁶⁴ which should be deducted from the purchase price, regardless whether the default occurs in connection with the transfer of ownership or the

¹⁶² Facciolo 1993 p. 170

¹⁶³ Baragona 2004 p. 152

¹⁶⁴ It depends on the legal system of the host country. In civilian legal systems penalty is allowed, while in common law jurisdiction only liquidated damages may be agreed.

additional works undertaken. The seller's default delays the project, which can be remedied by penalty or liquidated the damages.

65. The purchaser's default can be avoided simply by an additional escrow agreement, to which the parties are the seller, the purchaser and a bank. At the time of conclusion of the land sale and purchase agreement the purchaser pays the entire purchase price to an escrow account held by the bank. The bank may make payments only upon the written and irrevocable consent of the purchaser, which must be given if the seller has performed its obligation in conformity with the land sale and purchase agreement. The penalty or liquidated damages are deducted by the bank automatically by each day of delay, in accordance with the escrow agreement.
66. In this transaction, securing purchaser's payment is inherent in the structure of the transaction, while securing the seller's performance gives only *in personam* rights to the purchaser. However, the payment of the penalty or liquidated damages is automatic, independent from the seller, thus, the remedy of the default is more easily executable.

2.2. Loan and Security Agreement

67. Under this agreement the borrower is the project company, which borrows the necessary amount to the completion and operation of the power plant. The lenders may be commercial banks (foreign or domestic lending foreign or domestic currency respectively) funding institutions such as pension funds,¹⁶⁵ export credit agencies to finance suppliers and international agencies lending development credits.¹⁶⁶ The lenders provide the vast majority of the amount necessary to the projects, since the debt-equity ratio is usually ten-twenty

¹⁶⁵ Baragona 2004 p. 146

¹⁶⁶ Wood 1995 p. 4

percent equity and eighty-ninety percent debt.¹⁶⁷ The loan is senior debt, which provides preferential right for the lenders to the project assets.¹⁶⁸ The project assets contain mainly the receivables generated by the project, and other assets of the project company that may be encumbered.

68. The debt is non-recourse to the project sponsors, which is a disadvantage from the lenders' point of view, since the number of available securities is lower; the security package focuses only on the project company's assets, especially on its cash-flow.¹⁶⁹ Therefore the lenders usually require the project sponsors,¹⁷⁰ to provide guarantees, warranties or covenants.¹⁷¹ In some case the project lenders set forth that there may be no changes in the project plans without their consent.¹⁷² These commitments turn the non-recourse debt into a limited recourse one, according to which the lenders have some recourse to the assets of the project sponsor.¹⁷³
69. This contract set forth the amount of the loan and the condition, such as maturity, interest rate and fees, according to which it must be repaid.¹⁷⁴ Furthermore the agreement regulates the lenders security interest and other rights (security package), which is supposed to provide safe position to the lenders.

2.2.1. Obligations of the parties

70. The lenders obligation is to provide the loan in accordance to the provisions of the agreement. In turn, the project company undertakes to repay the loan, interest and fees.¹⁷⁵

¹⁶⁷ Collins 1996 p. 11; Baragona 2004 p. 146

¹⁶⁸ Baragona 2004 p. 146

¹⁶⁹ Gaetano 2005 p. 38

¹⁷⁰ Penrose 2001 p. 222; Penrose-Rigby 2001 p. 229

¹⁷¹ Zhang 2000 p. 719-720

¹⁷² Wood 1995 p. 27

¹⁷³ Duong 2005 p. 76

¹⁷⁴ Baragona 2004 p. 151

¹⁷⁵ Baragona 2004 p. 151

2.2.2. Securities of performance

71. The securities given to the lenders may vary and the security package must always be adjusted to the given project. The security package must be construed in a way that provides control for the lenders over the project assets and the project itself. Two main devices in achieving this goal are the floating charge-like security interest¹⁷⁶ and the step-in rights.¹⁷⁷ The first provides control over the project company and all of its assets,¹⁷⁸ giving a first priority security right¹⁷⁹; while the latter gives the right to the project lenders to take over the entire project upon default of the project company in the repayment of the loan. The step-in right is usually secured by pledging the project company's shares.
72. Security package usually contains the followings: mortgage on the real property; liens on the project company's movable assets, intellectual property, patents, trademarks; pledge on the shares of the project company and on the bank deposits and accounts; assignment of letter of credits, bonds and guarantees; assignment of insurance proceeds; assignment of all project agreements; assignment of operating revenues.¹⁸⁰
73. Pledging the project company's share – e.g. in Italy – gives the right to the lenders to nominate directors,¹⁸¹ which strengthen the control over the project company's activity. This quasi security is a proper addition to the *in rem* security interests. The nominated director may prevent additional indebtedness, which may threat the lenders priority;¹⁸² voluntary

¹⁷⁶ Floating charge and its US counterpart, floating lien is not available under every jurisdiction, especially not in developing countries. (In Hungary this is called Vagyont terhelő zálogjog) Tibor Tajti: Comparative secured transactions, Budapest 2002 p. 310-312

¹⁷⁷ Pédamon 2001 p. 1282; Gaetano 2005 pp. 37-38

¹⁷⁸ Gaetano 2005 p. 37

¹⁷⁹ Pédamon 2001 p. 1282

¹⁸⁰ Baragona 2004 p. 152; Penrose-Rigby 2001 pp. 230-231

¹⁸¹ Gaetano 2005 p. 38; Penrose 2001 pp. 227-228

¹⁸² Penrose 2001 p. 223; Penrose-Rigby 2001 p. 230

bankruptcy filing,¹⁸³ help to monitor the project company's accounts and books, and to check the compliance with the covenants.¹⁸⁴ In some jurisdiction the same result may be achieved by the 'golden shares', a special class of shares issued by the project company.¹⁸⁵

74. Different types of covenants may support the lenders' security interests. These are usually: disbursement control,¹⁸⁶ progress report,¹⁸⁷ covenant not to amend,¹⁸⁸ completion covenant,¹⁸⁹ dividend restrictions,¹⁹⁰ debt and guarantee restrictions,¹⁹¹ financial covenant,¹⁹² anti-filing covenant¹⁹³ and reserved discretion.¹⁹⁴
75. Project lenders usually require other participants in the project to enter into a subordination agreement. This results that payments made by the project company to such participants are subordinated to the payment of the loan.¹⁹⁵ Furthermore, by concluding direct agreement, project lenders have the right to intervene in the contractual relationships between the project company and other project participants. The direct agreement contains the right to information and right to intervene in order to avoid the termination of project agreement because of the default of the project company.¹⁹⁶

¹⁸³ Penrose 2001 p. 227

¹⁸⁴ Baragona 2004 pp. 151-152

¹⁸⁵ Penrose 2001 p. 228

¹⁸⁶ This requires the project company to certify – usually by presenting invoices – the use of the funds. Baragona 2004 p. 151

¹⁸⁷ The project company is expected to report periodically the status of the project. Usually certification by an independent consultant is required. Baragona 2004 p. 151

¹⁸⁸ The project company cannot change the project without the consent of the lenders. Wood 1995 p. 27; Baragona 2004 p. 151

¹⁸⁹ This requires the project company to complete the project in accordance to the specifications without altering the project plans. If amendment is necessary, the lenders' consent is required. Baragona 2004 p. 151

¹⁹⁰ Payment of dividends is restricted until the loan is not repaid. Penrose-Rigby 2001 p. 230; Baragona 2004 p. 151

¹⁹¹ The project company is usually completely prohibited to borrow, because this additional debt would jeopardize the first priority right of the lenders. Penrose-Rigby 2001 p. 230; Baragona 2004 p. 152; Wood 1995 p. 28

¹⁹² The lenders may require the project company to maintain certain liquidity or debt service coverage ratio or reserves in case of market downfall. Baragona 2004 pp. 151-152; Wood 1995 p. 27

¹⁹³ This covenant prohibits the project company to file bankruptcy. Penrose 2001 p. 228

¹⁹⁴ These may be positive or negative covenant which restricts the exercise of certain rights. Gaetano 2005 p. 40

¹⁹⁵ Baragona 2004 p. 152

¹⁹⁶ Gaetano 2005 p. 40

2.3. EPC Contract

76. This contract is for the building of the project facility: the power plant. Furthermore, the completion risks are allocated in this contract:¹⁹⁷ mainly shifted to the EPC contractor.¹⁹⁸ The parties to the contract are the project company as principal and the EPC contractor, which is an entity experienced in this field. The most important terms are the project description, the price (fixed or cost plus), method of payment, completion date and performance guarantees.¹⁹⁹

2.3.1. Obligations of the parties

77. The contractor undertakes to design and build the power plant,²⁰⁰ which must achieve the target performance set forth in the contract.²⁰¹ To procure the raw materials and equipment belongs also to the contractor's obligations.²⁰² The contractor may employ subcontractors in designing and in constructing the facility.²⁰³ In turn, the project company undertakes to pay price pursuant to the provisions of the contract regarding the currency, method and timing of payment.

¹⁹⁷ Wood 1995 p. 14

¹⁹⁸ Duong 2005 p. 86

¹⁹⁹ Baragona 2004 pp. 150-151

²⁰⁰ Wood 1995 p. 4; Duong 2005 p. 75

²⁰¹ Baragona 2004 p. 151; Duong 2005 p. 88

²⁰² Duong 2005 p. 88

²⁰³ Duong 2005 pp. 87-88

2.3.2. Securities of performance

78. In case of delay or if the performance is below the specifications, the contractor is obliged to pay penalty or liquidated damages,²⁰⁴ while the contractor may be entitled to bonus payment if the performance exceeds the expected level.²⁰⁵ In case of deficient performance contractor may provide warranty as well. However, if the delay or failure is attributed to the action of the host government, these costs must be shifted to it or to the power purchaser. This may be settled in the power purchase agreement.²⁰⁶ Contractor's responsibility for cost overruns is secured usually by fixed price²⁰⁷ or by liquidated damages.²⁰⁸ The risk of the insolvency of the contractor may be covered by bonding.²⁰⁹
79. For securing the project company's payment, the escrow agreement scenario may be utilized as one of the simplest method, where the amount is held back "on a milestone or completion work basis".²¹⁰ Furthermore, the contractor may utilize retention of title security on the equipment.
80. In this transaction, securing project company's payment is inherent due to the escrow agreement, furthermore retention of title gives to the contractor *in rem* security rights;²¹¹ while securing the contractor's performance gives only *in personam* rights. However, the payment of the penalty or liquidated damages is automatic, independent from the seller, thus, the remedy of the default is more easily executable.

²⁰⁴ Wood 1995 p. 14; Baragona 2004 p. 151; Duong 2005 p. 89

²⁰⁵ Baragona 2004 p. 151

²⁰⁶ Duong 2005 p. 89

²⁰⁷ Baragona 2004 p. 150; Duong 2005 p. 86

²⁰⁸ Wood 1995 p. 14

²⁰⁹ Wood 1995 p. 15

²¹⁰ Baragona 2004 p. 150

²¹¹ Under the UCC art. 9 retention of title is real security giving *in rem* right, however English treats it as quasi-security, while under German law it gives only *in personam* rights. Tajti 2002 pp. 93-94, 279-281

2.4. O&M Contract

81. The operator is often the project sponsor itself,²¹² therefore this contract is concluded only if the project company hires a skilled and experienced operator to operate and maintain the power plant.²¹³ The contract is usually concluded for long period of time, and for fixed fee.²¹⁴

2.4.1. Obligations of the parties

82. The O&M contractor undertakes to operate and maintain the facility in accordance with production and cost provisions of the contract.²¹⁵ In turn, the project company undertakes to pay the fixed fee²¹⁶ and – in addition – the bonus payment if the performance exceeds the expected level.²¹⁷

2.4.2. Securities of performance

83. The fixed fee shifts the risk of cost over runs to the operator, in addition in the event of default, the operator is obliged to pay penalty or liquidated damages, which covers the loss of income or profit. The execution of the damages is easily manageable by retaining the regularly paid fee. In addition, the bonus payment may be an incentive of excellent performance.

²¹² Wood 1995 p. 4

²¹³ Facciolo 1993 p. 170

²¹⁴ Baragona 2004 p. 152

²¹⁵ Duong 2005 pp. 73, 75

²¹⁶ Wood 1995 p. 5

²¹⁷ Baragona 2004 p. 152

2.5. Fuel Supply Agreement

84. Fuel supplier enters into a long-term contract with the project company in order to provide the necessary quantity and quality of fuel at a fixed price for the operation of the power plant;²¹⁸ thus the supplier bears any risk of change in the fuel price. The payment is structured on a put-or-pay basis, meaning that the fuel supplier must either deliver the fuel, or pay the cost of the cover purchase from another source made by the project sponsor.²¹⁹ By fixing the price the fuel pricing risk is shifted to the supplier.²²⁰
85. The type of fuel supplied depends on the type of the power plant. It is usually gas, oil or coal; however it may be uranium, plutonium or thorium for a nuclear plant, or other type of material which may produce heat. Moreover it might happen that there is no need for fuel e.g. in case of windmills or hydroelectric dams, which use renewable energy when generating electricity. In this case there is no fuel supplier and fuel supply agreement in the project structure.

2.5.1. Obligations of the parties

86. The supplier undertakes either to supply and deliver the fuel necessary for the operation²²¹ or to pay the difference in price and costs incurred by the cover purchase made by the project company.²²² In turn, the project company undertakes to pay the purchase price.

²¹⁸ Baragona 2004 pp. 149-150

²¹⁹ Baragona 2004 p. 153

²²⁰ Zhang 2000 p. 723

²²¹ Wood 1995 p. 15

²²² Baragona 2004 p. 153

2.5.2. Securities of performance

87. The put-or-pay clause ensures that the power plant will not run out of fuel, and put the risk of additional costs of the cover purchase on the supplier, thus securing the performance of the supplier. Utilizing escrow agreement to secure the payment of the project company may be a proper solution. Both solutions give only *in personam* security to the parties.

2.6. Power Purchase Agreement

88. The power purchase agreement is the cornerstone of power projects, because it provides the revenue stream upon which the entire project depends.²²³ The receivables in power projects are payable only by one obligor: the power purchaser.²²⁴ Under this long-term agreement the project company sells the produced electricity to the power purchaser, who, in turn, pays the purchase price on a take-or-pay basis.²²⁵ This means that the power purchaser has to pay the purchase price even if he refuses to take the delivery.²²⁶ Thus, the power purchase agreement provides a guaranteed market for the produced electricity and stable revenue stream,²²⁷ thereby providing security for the lenders.²²⁸
89. The payment in power purchase agreements is divided into two parts: capacity payment and energy payment. Capacity payment meant to cover the fixed costs such as construction costs, fixed operation and maintenance costs, fixed fuel costs, insurance cost, return on the equity and the loan; while energy payment covers the variable cost in fuel and operation: this part of

²²³ Duong 2005 p. 74; Zhang 2000 p. 723

²²⁴ Bjerre 2002 p. 422

²²⁵ Zhang 2000 p. 724

²²⁶ Baragona 2004 p. 153; Wood 1995 pp. 15-17

²²⁷ Zhang 2000 p. 736

²²⁸ Steven Ferrey: Small power purchase agreement application for renewable energy development: Lessons from five Asian countries, Asia Alternative Energy Program, World Bank, February 2004 p. 19

payment is supposed to allocate the risk of inadequate market price to the power purchaser.²²⁹

This kind of cost-plus pricing allows the project company to increase the purchase price at will in order to recover the increased costs.²³⁰

90. The power purchase agreement is the proper mean to allocate most of the risks. By fixing the power purchaser obligation it shifts the market risks on the power purchaser.²³¹ Since he is the only purchaser, the only remaining risk is, whether he can perform his obligation.²³² If the purchaser is the local government, then the political risks may be mitigated in this agreement as well. A hard currency denominated power purchase agreement can allocate the currency volatility risks.²³³

2.6.1. Obligations of the parties

91. The obligations of the parties to this contract are simple despite of their importance. The power purchaser has to pay the purchase price set forth in the power purchase agreement, while the project company has to sell the produced electricity.

2.6.2. Securities of performance

92. The project company usually is required to issue out-put guarantee, which is meant to secure its performance.²³⁴ In turn, the investors' interest is to keep the power purchase agreement alive, since it is the sole source of the revenue. Therefore the power purchaser has a very limited right to terminate the contract: only after the expiration of time period for curing the

²²⁹ Zhang 2000 pp. 723-724

²³⁰ Zhang 2000 p. 736

²³¹ Zhang 2000 pp. 723, 734-735

²³² Zhang 2000 p. 735

²³³ Zhang 2000 pp. 725, 736

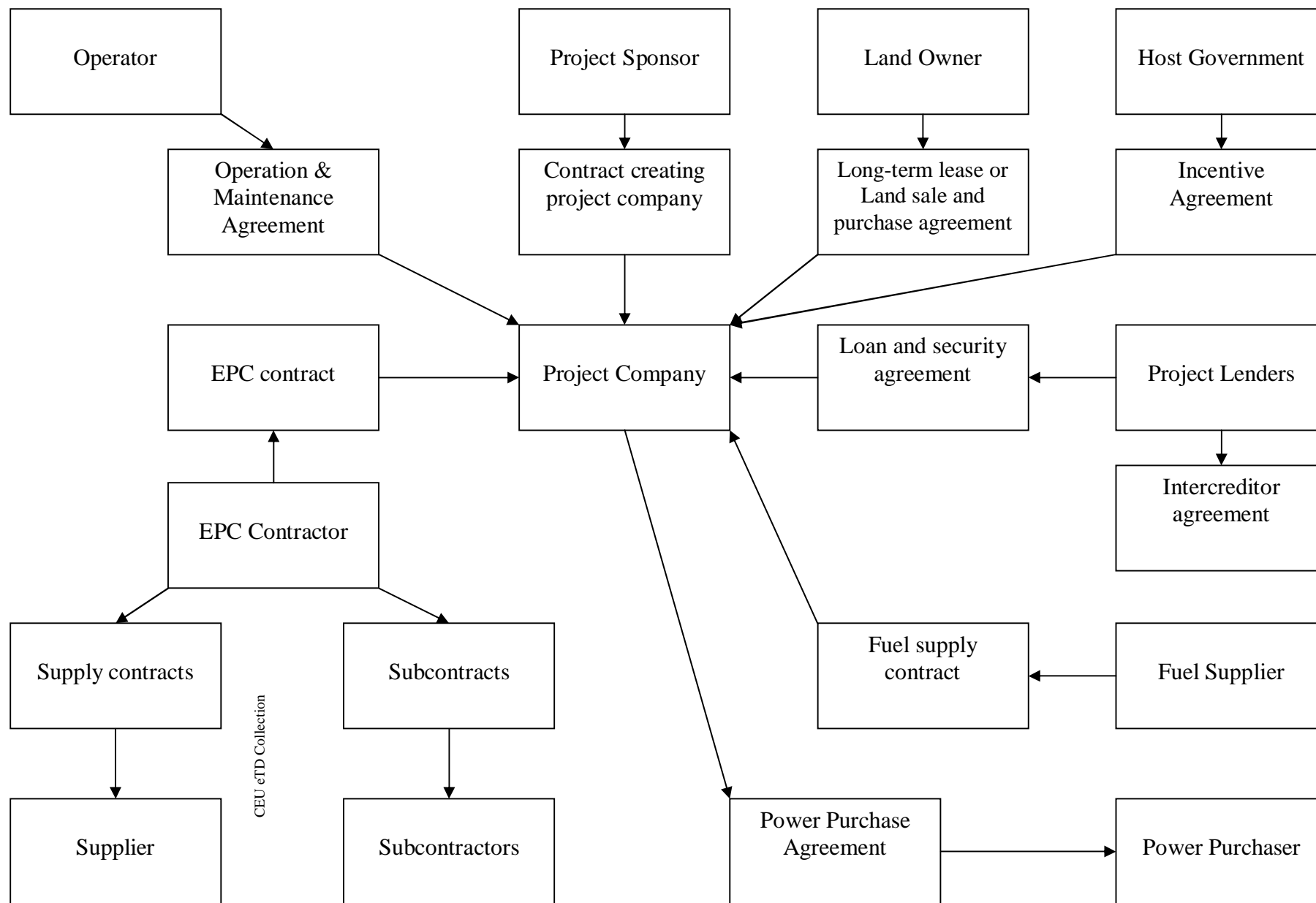
²³⁴ Ferrey 2004 p. 25

default; however, even the project lenders have right to cure any default.²³⁵ The payment of the power purchaser must be secured for the entire project period; usually government guarantee is required from the host government, which secures the obligation of the power purchaser.²³⁶

²³⁵ Ferrey 2004 p. 63

²³⁶ Ferrey 2004 p. 18

Contractual links in Power projects



3. Different types of power projects

93. Pursuant to the way of selling the project product, the electricity, one may distinguish two different types of power projects. First the power purchase agreement based model came into existence that serves well the interests of the project sponsors and lenders; namely the private interests (3.1.). In the 1990s another type was created which was more responsible to the needs of the host countries, power purchasers and end-consumers; namely to the public interests (3.2). In order to conciliate these two types of interests and achieve the twin goals of project finance, following Zhang's idea, it seems to be necessary to combine the two already existing models (3.3.).

3.1. The Power Purchase Agreement based model

94. The main interest of the sponsors and the lenders is to provide a stable revenue stream, which enables the project company to finance the operation of the project and repay the debts. In order to achieve this, the power purchase agreement is the mean, since it provides a guaranteed market for the product generated by the project, at a fixed price;²³⁷ thus enabling power projects to be the most suitable for project financing.²³⁸ Power purchase agreement is the proper place to address the market risks²³⁹ and to allocate them to the power purchasers, who, in turn, shift them to the end consumers.²⁴⁰ Furthermore the monetary risks may be mitigated, if the denominated currency is US dollar or Euro.²⁴¹

²³⁷ Zhang 2000 p. 736

²³⁸ Duong 2005 p. 84; Zhang 2000 p. 718

²³⁹ Zhang 2000 p. 732

²⁴⁰ Duong 2005 p. 87

²⁴¹ Zhang 2000 p. 736

95. Since the only risk of the project sponsors and lenders is whether the power purchaser is able to perform its obligation,²⁴² this model encourages new investments. However, it has only few incentives to minimize the production costs, since, due to the fact that the power purchase agreement provides guaranteed demand and price, the competition is almost completely eliminated.²⁴³

3.2. The merchant power model

96. Contrary to the power purchase agreement based model, the merchant power model does not guarantee market for the produced electricity, and does not set forth a fixed price for long term. The project, after completion, immediately enters into the open market, where they have to produce electricity as cheap as possible, if they want to sell it. This model serves the interest of host countries, power purchasers and end-consumers, since, due to the competition, it is “the most efficient and competitive way to create more reliable, lower-cost power, without the risk and cost falling on the costumers”.²⁴⁴ The trend of the electricity industry is the move towards this model.²⁴⁵
97. In the merchant power model the project sponsors and lenders take true commercial risks, since the market risks are not shifted to the power purchasers; the risk of insufficient market demand or low market price remains with the project companies.²⁴⁶ The short-term pricing mechanism does not provide proper consideration for the invested amount; therefore this model strongly discourages investments, especially into greenfield projects.²⁴⁷ As a consequence, investors have combined project and corporate finance techniques, and

²⁴² Zhang 2000 p. 735

²⁴³ Zhang 2000 p. 736

²⁴⁴ Zhang 2000 pp. 734-735

²⁴⁵ Zhang 2000 p. 739

²⁴⁶ Zhang 2000 p. 733

²⁴⁷ Zhang 2000 p. 735

increased the equity contribution up to fifty percent; that is how the project risk is shifted more on the project sponsors.²⁴⁸

3.3. Meeting the twin goals: the hybrid model

98. Considering the above mentioned advantages and disadvantages of both models, it seems to be reasonable to combine them in a way that eliminates the disadvantages. The power purchase agreement based model is well suited for the investors, since it provides proper revenue stream, thus, encouraging long-term investments into greenfield project, which are the most beneficial for the host countries as well. In turn, this model eliminates competition; therefore there is no incentive to develop technology, or reduce production costs, which is shifted to the power purchaser. Merchant power model provides a proper solution for this problem by entering to the open market and facing with true competition, therefore provides low price electricity for the costumers, but it does not provide consideration for the huge amount invested into the project, thus, discouraging large-scale investments.
99. The hybrid model, which combines the elements of both models, should be structured in a way, which satisfies both the public and private interest: provides cheap electricity and proper consideration. In this part, following Zhang's idea, I will show the two possible way of such combination. First, the two-step approach (3.3.1.), and then the two-tier approach (3.3.2.).

3.3.1. Two-step approach

100. Power projects require high initial expenditures, especially greenfield projects. The project company has to pay off the loan plus interest, and must finance the operation of the project.

²⁴⁸ Zhang 2000 p. 735

Therefore the price of the produced electricity may be reduced only if the loan is repaid. Therefore the project company will be unable to compete effectively right after the completion of the project.²⁴⁹

101. One possible answer is to divide the operation period into repayment and post-repayment periods. In the first period, a traditional power purchase agreement would provide the sufficient revenue for the project company; in the second, the project company enters into the competitive market.²⁵⁰ This approach provides the investors consideration, and in the second period pushes them to reduce the price.

3.3.2. Two-tier approach

102. The other possible and – in my opinion – more proper answer to the above mentioned problem is based on the distinction of capacity payment and energy payment. Traditionally capacity payment is meant to recover the fixed project costs, in turn; the energy payment should cover the variable costs.²⁵¹
103. In this solution the power purchase agreement recovers only the fixed costs, which are the cost of the repayment of the debt, and the fixed operation costs – the power purchase agreement covers only the capacity payment. The energy payment can be recovered on the competitive market, which covers the variable costs, the project sponsors equity return and the profit. This approach provides “equal competitive opportunities to new greenfield projects” from the moment of beginning of operation, and provides the lenders “adequate degree of comfort”, only the project sponsor have to bear the market risks.²⁵²

²⁴⁹ Zhang 2000 p. 737

²⁵⁰ Zhang 2000 p. 738

²⁵¹ Zhang 2000 p. 738

²⁵² Zhang 2000 pp. 738-739

Conclusion

What could be learnt? The thesis contains four main ideas that are worth to conclude:

- 1) I tried to find a proper definition of project finance, which precisely shows its main attributes. In my opinion: project finance is a set of transactions for establishing, building and financing a single, long-term project, which is meant to allocate the project risks among the project participants and to keep the project debt out of the project sponsors balance sheet and which is usually of high importance for the host country, (which therefore usually supports the project); by setting up a new – usually domestic – corporate entity, based upon a complex financial structure where the non-recourse or limited recourse debt is repaid primarily from the money, assets and rights generated by the project.
- 2) There is a trend nowadays that the public interest of the host countries may be taken into consideration as well. Project finance should promote not only the economic benefits of the project sponsors and lenders, and other participants, but should be also a vehicle of social and economic development of that country where the project is established: private participants are looking for predictable legal environment in order to make profit at lower costs, host countries, in turn, want to obtain assurance that the project will serve its public interest. The twin goals of project finance is, therefore, that it must be run for the benefit of the private players, because it is the only incentive of investing. In turn, host states are competing for these investments and making their legal and economical environment more attractive, because, on the other hand, project finance must be run in the public

interest, increasing local employment, compliance with health, safety and quality standards and environmental protection regulations etc.

- 3) The participants may utilize any available legal mean that is able to secure, or at least supports the security of, the other contractual party's performance. The participants must properly assess the securities and other legal means under the jurisdiction, where the project is established, then select and use those which are the best in that particular project. In order to make a proper selection, the participants must assess the project risks, analyze them and then allocate among each other.

The lawyer's job here is to assess the risks, allocate them by structuring the contractual relationships between the parties and to select the most proper legal means to ensure the parties' performance, since the fate of the project depends upon it.

- 4) Power purchase agreement based model guarantees a stable market at fixed price for the electricity produced by the power plant. This is of highest importance for the investors, since the power purchaser provides the sole revenue stream of the project. However, this model is not pressing the project company to develop technology and to reduce the production cost, thereby reducing the price. The merchant power model provides incentives for that, however, it does not provide stable revenue therefore discourages large-scale investments.

The proper solution is to combine these two models either in accordance with the two-step approach or with the two-tier approach, because the hybrid model – although requires higher equity contribution – provides proper consideration for the invested amount and incentive to keep the price low. Meantime the project remains able to compete effectively.

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