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Waste-to-Energy Projects in Emerging Markets: Lessons Learned from Realized International Projects

Alexander Stefan Rieger

A rapidly growing population, industry and energy consumption are key indicators for emerging markets. As their economic circumstances develop quickly, emerging markets attract further capital which is accompanied by further economic growth and a need for a suitable infrastructure environment. This accelerating development leads towards big shifts in the national and global economy. It is a foregone conclusion that sooner or later, emerging markets may overtake developed countries.[1] As industrial production increases, so do social tensions and pollution. Growth in population and larger industry production lead to increased consumption rates, and as a result to a higher waste generation. The crucial question is therefore: What's to be done with all this waste? The usual approach would be to dispose the majority of the waste in landfill

[1] The Economist Intelligence Unit expects this to happen by 2030; others predict this for the year 2032.

sites which are – preferably – located far away from densely populated areas. However, as both – cities and landfill sites – expand, landfill sites are moving closer to cities, increasing social tensions and leading to no go areas where only the poorest of the poor may live. Moreover, as waste disposal capacities in landfill sites are rather limited, this is a rather ineffective way of dealing with all the produced waste.

However, driven by the enormous mountains of waste, many emerging countries are changing or already have changed their national waste strategy due to a shift in public opinion. As a recognised general guideline for a forward-looking waste strategy, the avoidance of waste is now being set as top priority above the recycling of waste, followed by incineration of waste to generate energy and using landfills only as a last resort. Often these strategies are at odds with the emerging industry with its increasing appetite for cheap energy, its rather ineffective waste disposal systems and common regulatory issues. Public Investments in state-of-the-art waste disposal facilities combined with latest waste-to-energy solutions can provide a valuable contribution to solve these problems, but require significant amounts of money in order to be successful.

A major issue for public bodies, international sponsors, lenders, investors and contractors working on the successful realization of waste-to-energy projects (PPP/PFI) is the affordability and bankability of the project in question (*value-for-money* criterion). Particularly procurements comprising the construction and operation (EPC, O&M) of such facilities show the financial and technical complexity of waste-to-energy projects. Such developments regularly comprise highly sophisticated structures requiring an enormous amount of planning, structuring, negotiating, organising, supervision and above all money. As emerging markets will be tomorrow's developed markets, they present enormous possibilities and high rewards for waste-to-energy projects, if the project parties are willing to take on the relevant risks applying to these markets and projects.

This article sets out some of the major risks and issues, particularly applicable to waste-to-energy projects in emerging markets comprising the construction and operation of relevant facilities, and shall introduce solutions which, in practice, proved to be successful.

1. Ways of realizing international projects

There are two general ways to approach waste-to-energy projects. Either, investors, developers, constructors, operators and waste suppliers are all private entities with no contact points to other state-owned or administrative entities (e.g. waste-to-energy facilities to provide an industrial park with process steam and electricity). It has become internationally popular to structure such projects by way of PPP/PFI schemes. This is often due to the classification of waste disposal as public services. Normally it is a state-owned or state-driven authority or company which is responsible for the waste disposal and hence also responsible for the realisation of such projects.

2. PPP – Public Private Partnership

Firstly introduced at the beginning 1990s in the UK, the PPP sector rapidly grew due its value-for-money and its high transparency. The development of PPP structures was also driven by limited availability of public funding, tighter public budgets, higher project costs and stricter competition laws. However, the involvement of the private sector changed quickly from simply financing to also procuring, constructing and operating whole projects. This resulted from the private sector's ability to develop innovate solutions as well as its higher expertise, effectiveness and know-how.

PPP describes an extensive and varied collection of constructive relationships between the public and private sectors. There is no comprehensive set of the categories of PPP. The role of the public sector varies; it includes acting as promoter or facilitator, joint venture partner (possibly as shareholder or active operational participant) and purchaser. In waste-to-energy projects, the public entity regularly takes on the role of waste supplier.

The reasons for using PPP for waste-to-energy projects in emerging markets are vast and various. The state might no longer be able to provide all relevant services due to regulatory changes, its competitive ability or changed political guidelines. Or the state may want to improve the quality of its waste disposal services, obtain better value for money, dispose its waste more effectively or work on its environmental footprint. A further reason for choosing a PPP structure in general is clearly that there is no up-front investment by the public sector, as funding for the erection of a waste-to-energy plant is being secured by the private sector.

Governments also prefer to use PPP because this process avoids risks which are likely to realise during a normal privatisation process: A strict privatisation is a rather abrupt and blunt technique which too often does not respect public interests, particularly if they relate to public services. Especially in natural monopoles or with regard to asymmetric information, it may lead to a lack of competition or it may result in an unfair distribution of wealth and resources. On the other hand, in markets with high fixed costs, a strict privatisation might lead towards a ruinous competition. PPP may be able to avoid these risks and lead, in a slower process, towards a more regulated but healthy competitive market.

3. Major lessons learned

In an ideal world, waste-to-energy projects would rest on a solid financial and organisational basis, the generated revenues and expenditures would be in line with the financial model and the further given forecasts and the quality of the services rendered would meet the expectations of all parties concerned. However, unforeseen circumstances such as severe market changes (decreased market price for waste or decreased energy remuneration), poor performance or non-performance, environmental and site-related issues as well as changes in law or regulation and force majeure events

may have major adverse effects on the execution of waste-to-energy projects and particularly on the cash flows, which are usually assigned to the lenders in order to secure funding. In short, the waste-to-energy project is exposed to commercial, legal, financial, technical and natural risks. Therefore, a profound and detailed risk analysis is vital for the success of a waste-to-energy project. The results of this analysis will then influence the structuring, negotiating and drafting process during which these risks are being allocated.

The general point to bear in mind is that failure to examine the underlying legal framework of a complex waste-to-energy transaction can complicate or even invalidate the basis for the project at a later stage, so early analysis can avoid expensive adjustments later on.

As well as evaluating the likelihood of performance failures in the ordinary course of operations, laws may change, force majeure events and other events unforeseeable at the outset may occur and circumstances predictable but outside the control of the participants may arise, responsibility or liability for which needs to be addressed. In the context of the contractual payment structure, these events become critical as, in the absence of express provisions, the occurrence of an event which undermines the ability of the project parties to provide the service to the public client, e.g. to deliver or incinerate the waste and to comply with technical specifications, performance and availability obligations, is likely to have a significant impact on the cash flow of the project. It is often said that such risks should be allocated to the person best able to manage them, as this approach will produce the lowest cost to the project of addressing the risk of that event occurring: A party best able to manage a risk, for instance because of its extensive expertise in that area or greater control over the event occurring, is likely to be relatively less concerned by the prospect of the event occurring and attach less of a premium to its price of being responsible if the risk does in fact occur.

In practice – particularly if one party belongs to the public sector –, different factors such as political and accounting objectives also drive the risk allocation process. This issue is accompanied by a lack of experience, as far as *market firsts* in a certain jurisdiction are concerned. As a consequence, slightly unreasonable positions regarding the risk allocation are particularly seen on the public sector's end, particularly in competitive dialogues which lead to a strong negotiation position for the public sectors. In any event, a detailed analysis and allocation of the risks inherent in a waste-to-energy project is critical and is often considered to create efficiencies in its own right by giving rise to unambiguous contracts which allocate risks in a viable manner. While some risks are common across all waste-to-energy projects, many will be project specific. As the waste-to-energy and especially the waste-to-energy PPP market develops, a common approach is being established in relation to the allocation of various key project risks. Conceptually, the risks of changes in law and of planning or permitting delays out of the private sector's control, for example, are relatively well understood and a common position has widely emerged. In particular for waste-to-energy projects – historically not being widely accepted by the general public and often exposed to legal proceedings based on the so-called *not in my backyard effect* – such risk allocation standards may

be significant for the commercial success of the entire project. The risk of a long-term judicial review of the necessary project consents, for example, such delays usually resulting in an increase of the construction costs of the plant (e.g. due to an increase in steel prices, salaries etc.), is widely accepted as a public sector risk, however, faced some push back in the recent past.

Nonetheless, from a best practice perspective only in a non-significant number of cases a generic position may be suitable. In fact, such an approach is usually very likely to fail, as the generic model has not been adapted to the actual circumstances. Consequently, it must be ensured that waste-to-energy projects are accompanied by careful financial, legal and technical analysis and creative solutions in order to determine how to deal with risks that are likely to arise for that particular project. A common tool is to develop a *risk matrix* which identifies, from pre-construction through to operation of the infrastructure, those risks inherent in the project and describes how and by whom such risks can best be managed. A supplementary or alternative approach is to develop a textual summary of the project describing more precisely than a matrix the key project issues and analyses how the various parties' responsibilities will interface. This project or contract summary has proved invaluable from an early stage to ensure cost-effective negotiation resulting in clear and viable project structuring.

3.1. Risk analysis and identification of structural issues

When contemplating participation in a waste-to-energy project, whether from the public or private sector perspective, it is vital to thoroughly analyse the legal circumstances of the project and to identify at an early stage legal issues that will need to be addressed in the contract or project documentation. Often, this process is not straightforward. This particularly applies to *market firsts* in emerging countries.

The effective identification, valuation and a successful management of risks are essential to the structure of all successful waste-to-energy projects. As all relevant project parties may have different strengths, they may have also different views on risks and approaches on risk-preventing or different attitudes on solving problems. This leads towards a highly complex allocation of responsibilities and risks between the parties. Usually the risks are transferred (out of the public sector and) towards the private sector. This is accompanied by a reimbursement of the financing parties by the other parties. However, even the best risk allocation is worthless if in case of risk realisation it is unclear which party shall bear this risk. Therefore, it is crucial that the allocation of risk and responsibility is reflected by a detailed, precise and complete contractual documentation. These documents shall reflect and emphasize the obligations and responsibilities of each project participant. This is vital to all project contracts, be it a PPP/PFI project agreement, financial documentation, an EPC (sub-) contract or an O&M (sub-) contract.

A balanced risk allocation is also the reason for not involving the sponsors directly but for creating a new company. This so-called special purpose vehicle (SPV) is an instrument for covering risks. Sponsors are often unwilling to expose their own balance sheets

by contracting directly with the public sector for this type of infrastructure project. In practice, sponsors will typically form these SPVs, whose sole purpose is to own and operate this unique business. In this way, only the equity capital injected into this SPV is at risk if there is a failure to implement the project as planned. In emerging markets with political risks and unclear legislation, such limitation of risks will be essential for most private sector companies in order to obtain any required board approvals for the participation in and realization of such projects. A further major advantage of the SPV is that it can combine the skills and reserves of different sponsors necessary to provide the range of construction and operational expertise and resources needed for the project. Moreover, equity investors will provide funding only where the likely reward is commensurate with the risks involved, with the consequence that equity investments are priced higher than bank debt or capital markets funding which is exposed to lower risks.

As the SPV is set up without any material resources of its own, relying therefore completely on the support and the resources provided by the other project members, the waste supplier – especially the public sector in PPP schemes – often tries to obtain influence or even vetoing rights concerning any disposal over the SPV's share capital or changes in the identity of major sub-contractors. From the promoter's point of view, this ensures that the SPV continues to have the resources needed to perform the waste-to-energy project.

The revenue stream is the most important and most relevant part of a waste-to-energy project. Besides remuneration for energy and heat, the main asset of the waste-to-energy project is the remuneration for disposed waste. This is usually paid by the public sector to the project company by way of unitary charges/gate fees or any other models that have become acceptable in the market. The so-called revenue stream will then distribute the profit upwards towards the sponsors and other risk bearers. This will be further analysed in the following.

3.2. Implications of local legal background

The success of waste-to-energy projects in emerging markets will also depend on the legal framework in place, including practicable PPP and procurement law. Answering questions like: *What is the structure of the procurement process and what are the evaluation criteria* or *Is private property protected* are vital for a successful waste-to-energy project. Therefore, it is absolutely essential that the project partners create an understanding of the local legal background and traditions.

For example, as far as projects in the Arab Middle East are concerned, in many countries the Sharia has an enormous impact on the local law (e.g. Qatar, Saudi Arabia, Kuwait). It either is the relevant law or is at least used to interpret the codified law. As a general rule, under the Sharia it is forbidden to demand interest (*Riba*). Even though it is discussed whether or not this refers only to usury, this may have major effect on the structure of a waste-to-energy project and the respective cash flows. The revenue stream and the financial model might be at risk if this principle is being applied.

Further, it has clearly become a trend to implement specific PPP jurisdiction in emerging countries. These regulations were created to improve the investment climate and shall lead towards an increase of successful PPP projects. The regulations implement specific prerequisites for the private partners of the PPP project during the tendering process. The private partner has to verify its financial ability to implement the project or else it might be excluded from the tender, if it fails to prove a certain margin of equity. Often private partners are also excluded if they were liable for non- or poor performance in past PPP projects. Not all of the PPP codes proved to be successful. All participants of waste-to-energy projects should therefore assess local PPP regulation in detail based on consultation with local counsel as they might have a large impact on the project.

Moreover, some emerging markets have implemented specific foreign direct investment regulations. In general, such regulations apply if the foreign equity capital of a national company exceeds certain percentages. Besides other requirements, the investment would need the prior approval by the national government. Furthermore, foreign investment regulations may also result in a limited transferability of shares or specific pricing procedures. Specific registration requirements for foreign investors could be mandatory or lead to high fines in case of violation. Sponsors should be aware of limitations to the amount of equity they are allowed to hold within one company. This could lead to widespread issues concerning the financial structure of the project, as the total amount of foreign equity may be restricted, e.g. if a single foreign investor may not hold more than 10 percent of the equity. In such cases an alternative financial model needs to be found.

3.3. Debt to equity ratios

The balance between debt and equity funding is a matter to be determined by the risk profile of each project. However, risk capital or true equity is a scarce commodity. Equity investors will provide funding only where the likely reward is commensurate with the risks involved, and as a result equity investments are priced higher than bank debt or capital markets funding which both are exposed to lower risk.

Affordability issues are central to all infrastructure developments but, whilst this might tend towards highly leveraged debt-financed transactions, some element of true equity investment will normally be required in PPP waste-to-energy schemes where the private sector is required to bear real project risks. Sponsors having substantial debt and other financial providers will seek generally to minimise the risk of not being repaid by taking an active role in ensuring the project has a viable structure. As a result, a typical waste-to-energy project is financed by 15 percent to 25 percent with private equity and by 75 percent to 85 percent with limited recourse debt.

3.4. Revenue stream

The structure of the revenue stream is at the heart of any waste-to-energy project. The by far most important is the remuneration paid by the waste supplier, e.g. a public entity such as a local waste management authority, to the SPV. The other relevant income

stream is the remuneration the SPV receives for the produced heat or delivered energy. In general, this revenue stream promotes the scheme as an income stream generated according to the terms of the contract. The payment of this income stream will be dependent on the level to which the project services are provided, so that the risk of the services not being provided to the required standard rests with the SPV or with any subcontractor operating the plant on behalf of the SPV. In short: no service, no fee.

The revenue then flows upwards to the sponsors or financial debt lenders, as they are holding the financial risk. This results in an only very small capital base for the SPV. Therefore, the project agreement needs to clarify to which amount the revenues may stay at the SPV for daily businesses.

3.5. Sponsors agreement: teaming up with the *right* partners

Only a few corporate organisations possess the range of skills and resources required to implement a complex waste-to-energy scheme. Accordingly, most waste-to-energy projects will be carried out by a consortium of organisations which bring together the requisite skills, e.g. financial investors, plant operators, technology providers and civil engineering contractors. In the past, it turned out that international bidders had a significantly higher probability of success in PPP processes, in case they teamed up with local companies, such as civil contractors, mechanic-biological treatment providers, technical consultants and any other companies which may have a closer link to local authorities – it frequently turns out that such local companies are deemed to have a better understanding of the authorities' requirements and *speak their language*.

Under these circumstances, it will be the consortium members that jointly incorporate the SPV as the entity through which they channel their investment. This approach insulates the consortium members from their own and others' liabilities, basically limiting their exposure to the amount of their equity investments in the SPV (and any collateral protection they may give). This approach also isolates the project's income stream and protects it from being diluted by other business activities which the consortium members may carry out. These arrangements are usually reflected in shareholder agreements, equity subscription and subordinated loan agreements including the necessary securities.

3.6. EPC and O&M agreements

As the SPV does not have the skills to perform or carry out a project from its own resources, it will need to obtain those resources externally, usually by way of contract with the consortium members themselves, or members of the corporate groups of the consortium members. The obligations that the SPV has under the project agreement will be reflected in a number of such *back-to-back* subcontracts to the maximum extent possible. The main subcontracts for waste projects will commonly include an engineering, procurement and construction contract (*EPC-Contract*) for building the waste-to-energy and/or MBT facilities, operation and maintenance contracts (*O&M-Contract*) to operate them, and, if necessary, one or more other service agreements depending on the range of services to be provided, e.g. interim services until full operation of the relevant facilities.

3.7. Method statements and specifications

The concerns of the public sector are to ensure that the waste facilities it needs are delivered on time, at a certain cost and in accordance with its specifications. In the conventional PPP approach to public sector procurement, this is achieved by the public sector engaging its own technical advisers and consultants who prepare detailed design and construction requirements for the private sector to implement. Invariably, these will largely be made up of *input* based requirements, with the public sector specifying in detail how the work should be done (for example, the building materials to be used).

Under a PPP scheme, the public sector is concerned mainly with the specification for the (waste incineration / waste pre-treatment) service it needs to receive. How these services are made available is a matter for the private sector to determine. The corollary is that the private sector bears the risk if its solution fails to achieve the required service level. The requirements of the client are, therefore, set out in *output* terms (describing what the public sector needs to achieve) as opposed to *inputs* (specifying what the private sector is to provide).

In reality, it is an oversimplification to say that all the public sector needs to do is to specify the service it requires and leave the rest to the private sector, but this is the basic idea. The private sector will want to clarify what it must do to perform its obligations and be satisfied that this is achievable and remunerative. Equally, the public sector will be keen to ensure that the level of service is adequate and represents good value for money, so it will seek to obtain firm, fixed and detailed commitments from the private sector as to how its requirements will be satisfied. The development of these contractor's proposals or *method statements* is a time-consuming but vital part of the negotiation process in any PPP scheme. Early, disciplined involvement of all stakeholders in the project (including operators, EPC-contractors, EPC-subcontractors and service providers) will help to create a viable project solution and avoid unaffordable *wish lists*.

3.8. Creation of flexible agreements

Waste-to-energy projects have a long project term which might easily extend over 25 to 30 years. The needs of the participants may develop significantly, particularly in relation to the composition of the waste to be delivered by the relevant waste supplier. This has implications for a structure under which the other parties commit to provide a fixed service for a largely inflexible price (albeit subject to periodic benchmarking or market testing). The waste supplier will want (and need) to retain the flexibility to change its specification, i.e. the waste composition, over the contract term, recognising that any significant variation will have a cost consequence. On their part, sponsors and funders will not want to accept open-ended commitments to make changes and will want to be sure that any changes will be viable and properly priced.

It has become market practice to incorporate, as part of the project documentation, a *change* or *variation* procedure which aims to provide a mechanism for the implementation of such changes, and to provide a basis for calculating the consequences for the payments and any consequential adjustments in the project's allocation of risk.

One area of particular sensitivity to the private sector is change to the physical elements – the facilities – of the project during the construction phase. This period is traditionally the phase of the project carrying greatest risk and the private sector is reluctant to introduce new uncertainty at this stage. The knock on consequences of a particular change will be difficult to predict and any event which jeopardizes the project timetable (and therefore introduces the risk of payment of liquidated damages by the contractor and a delay to commencement of operation) will be resisted strongly.

3.9. Life cycle approach

The general approach to waste-to-energy projects and the need to offset the higher financial cost of the project by risk transfer leads, in practice, to higher financing costs of any capital infrastructure expenditure required for the project to be offset by lower running costs over the life of that infrastructure. In theory, by making the same party responsible for building as well as maintaining a waste-to-energy facility, and pricing the work on that basis, a cheaper *whole life cost* for that asset can be achieved than in a case where separate unconnected entities were responsible for the two phases of the asset's life. At the two extremes, expensive build tends to lead to cheaper upkeep and vice versa. The best value for money solution over the whole life of an asset generally falls somewhere between the two extremes, and by giving one party responsibility for both, the optimal solution can (at least in theory) be found.

From a practical perspective, it is worth noting that proper consideration of the costs of the whole life cycle is in particular true for waste projects. Given the complexity of a waste-to-energy facility compared with a rather simple CCGT plant and the inhomogeneous nature of waste (and waste residues such as bottom ash and fly ash) which may also substantially differ from time to time, it is important selecting the proper technology which allows flexibility during the 25 to 30 years operational time.

Otherwise, there is a high risk to run into expensive and long-term disputes regarding the performance and availability of the plant during the operational phase, which may put the whole financial model at risk and at the same time may irreparably damage the relationship between the parties of the project in question.

3.10. Pricing models

Inherent in the concept of whole life responsibility is the concept of risk management. In the approach to risk management it is important to understand the underlying principle of a waste-to-energy *unitary charge* (or: *gate fee*), which is often the basis of payments made by the waste supplier to the SPV (price per tonne of delivered waste to the facility, frequently secured by strict bring-or-pay obligations). As a basic rule, the revenue stream only flows if the services which the relevant participant, e.g. the waste supplier, requires are available and provided at the required standard.

Alternatively, the waste-to-energy market uses also capacity or availability models to remunerate the delivered services. Under such a structure, the authority typically pays to the SPV a certain (monthly) service fee solely for securing a specific capacity

or availability of the SPV's waste-to-energy plant in question. If the authority actually does not deliver the full amount of contract waste in a month, it is still obliged to pay the full service fee, as long as the plant was made available to it.

For the private sector, one of the major benefits of this model is that the risk of the predictability of specific amounts of waste being available for incineration is transferred to the public sector.

3.11. Securization of financing: bankability

Over the last few years, the number of traditional funders of PPP/project financing schemes has continuously decreased. At the same time, due to the increasing lack of funds available in the market, the lenders have been able to significantly strengthen their negotiation positions and their overall influence on the projects in question.

As a general principle, timing the involvement of the debt funders in the negotiation process is critical to the efficient management of the process. While the premature involvement of lenders can increase bid costs without real benefit, their participation at a too late stage can mean significant renegotiation of the commercial terms, if these are considered by the lenders to be unacceptable. The current market approach is to involve lenders at commercial bid stage, in order to secure their agreement in principle to the commercial risk allocation. In practice, lenders will wish to qualify their support by making it subject to their subsequent detailed analysis of the project that is, *due diligence*.

When contemplating the project structure and preparing tender documentation, the public sector needs to be realistic in determining what the bidders can provide in terms of risk management. The public sector should be aware of the realistic limitation on the risks which sponsors can accept and lenders are prepared to lend against, and draft their documentation accordingly. This does not mean that the public sector should simply accept at face value the private sector's preferred approach, and the level and category of risk which funders are prepared to lend against will vary from sector to sector and from project to project according to competitive forces. For both public and private sectors, a realistic and pragmatic approach will greatly enhance the attractiveness of the project and is likely to shorten the period of negotiation.

The lenders regularly turn their attention to the viability of the underlying business plan and financial model. Against the general understanding of the viability of the scheme, lenders will be particularly keen to ensure that the income stream of the SPV is sufficiently robust to ensure that debt service can continue despite unfavourable and uncertain economic and political circumstances. This will necessitate an extensive sensitive analysis of the financial model and an analysis of the projected revenue stream. Lenders will want to ensure that within the parameters of the likely levels of availability and performance elements of the relevant charge, service or gate fee, the revenue stream remains sufficient to service their debt and to continue to satisfy the cover ratios set out in the financial covenants of the credit documentation.

In PPP waste-to-energy projects, as in any traditional project finance schemes, lenders will rely on the SPV to manage its business so as to earn the revenue to service debt. Although lenders will insist on taking security over the waste-to-energy plant and any related assets that comprise the scheme, they are realistic in acknowledging that the value of that security, in its traditional sense, is rather limited. Therefore, lenders recognise that their principal security instrument is the income stream which the SPV receives. To the extent that the SPV starts to underperform, this revenue stream is put in jeopardy and, accordingly, sponsors will want reasonable cure possibilities.

In addition, lenders will usually seek to reserve rights to *step-in* and operate the project where the SPV fails to do so adequately. The rights of the lenders to step-in, and the obligations and liabilities that lenders assume by doing so, will be the subject of detailed negotiation on each project. Another relevant factor is that the public sector body is obliged to pay compensation to the SPV in the event that the contract is terminated. The reason for doing this is that the public sector will inevitably require access to the asset following termination, and the acquisition of the asset has a value which should be recognized, that is, the public sector should not receive a windfall

4. Final remarks

Emerging countries will be facing various challenges in implementing waste-to-energy and PPP structures, as it requires a change in mindset by the local customers (and the relevant authorities) which are sometimes not used to pay for the disposal of waste and sometimes suffer from a general lack of experience with the realization of major infrastructure projects. It is also crucial to attract foreign investors by way of practicable legislation with transparent procurement processes and reasonable bid costs. At the same time, a market-standard risk allocation to the satisfaction of all parties involved as well as good *value-for-money* will be key for the successful realization of such projects.

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