Striking the Balance: Allocating Risk in a Long-Term Operation and Management Contract*

Richard J. Cooper, Partner
Chantal E. Kordula, Senior Associate

Cleary Gottlieb Steen & Hamilton LLP, New York, New York

On May 3, 2002, following a nine-month international bidding process (the "Bidding Process"), the Puerto Rico Aqueduct and Sewer Authority ("PRASA") entered into a ten-year service contract with Ondeo de Puerto Rico, Inc., an affiliate of the French company Suez, for the operation and management of the Puerto Rico water and wastewater system. The approximately U.S. $4 billion contract represents the largest operation and management contract ever awarded for water and wastewater services.

Although the outcome was successful, the result was not always certain. The environment in which the Bidding Process took place was a challenging one. At the time of the bidding, PRASA faced serious and escalating financial difficulties. The assets comprising the Puerto Rico water and wastewater system were in need of significant capital improvement. The assets were also the subject of hundreds of administrative consent orders from various U.S. federal regulatory agencies. Bidders complained that they had not had an adequate opportunity to inspect and assess the system's facilities, which numbered in the thousands. The existing private operator of the system had less than a year left under its existing contract and relations between PRASA and this operator had badly deteriorated. The heavily unionized workforce and the general public were vehemently opposed to future private sector participation in the water and wastewater sector.

Not surprisingly, participants in the Bidding Process focused early on the risks that they would be asked to assume under the service contract to be entered into by PRASA and the winning bidder (the "Service Contract"). One of the principal reasons that the process was successful was because PRASA was able to identify and prioritize at the outset the risks that it would accept and those that it would not. Ultimately, PRASA was able to structure the Service Contract in a manner that achieved its objectives but also addressed the concerns of most of the bidders.

This article will address the manner in which the risks associated with the long-term operation and management of the Puerto Rico water and wastewater system were allocated. The article first describes the objectives that PRASA sought to achieve through the Bidding Process and briefly outlines the manner in which the Bidding Process was conducted. The article then discuses the principal risks that bidders were asked to assume under the Service Contract, their reaction to such risks and how these risks were effectively allocated between PRASA and the operator of the system.[1]

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PRASA Objectives and the Bidding Process

The Puerto Rico water and wastewater system (the "System") serves the entire Commonwealth of Puerto Rico (including the islands of Culebras and Vieques), an area that covers approximately 3,500 square miles. The System is plagued by many of the ills that affect water and wastewater systems in emerging markets – budget deficits requiring governmental subsidies, high levels of unaccounted-for water, inadequate metering, large numbers of regulatory violations, an overstaffed work force, sub-optimal revenue collection, etc. Given this overall picture, PRASA's main objective for the Bidding Process was to bring in a private sector operator to manage the System in a manner that would turn the System into a world-class water and wastewater utility. This was not the first time that PRASA was looking to the private sector to improve the productivity and efficiency of the System. PRASA first turned over the operation and maintenance of the System to a private operator in 1995 and the System was managed from 1995 through June 2002 pursuant to a series of short-term management contracts. For a variety of reasons, the results achieved under the prior contracts did not match expectations and the Puerto Rican people were growing increasingly dissatisfied with the level and quality of services being provided.

Based on its past experience with private operators, PRASA approached this Bidding Process with a different philosophy. Simply contracting with a world-class operator would not be enough; PRASA determined that it needed to establish in the Service Contract a defined set of objectives that the operator would have to meet or exceed. The specific parameters that PRASA established for the System were the following: (i) improvement in both the quality and the availability of water and wastewater services to the people of Puerto Rico; (ii) elimination of PRASA's operating deficit within five years of the commencement of the term of the Service Contract; (iii) reduction in unaccounted-for water; (iv) increased compliance with environmental regulations; (v) optimization of new investments paid for by PRASA; (vi) maximization of the use of advanced technologies that reduce costs and improve operations; and (vii) timely completion of certain capital projects designed to provide water to areas with deficient water supply. PRASA felt that defining the objectives in this manner would not only result in an improved System but also would permit PRASA to closely monitor and objectively assess the performance of the operator.

Although PRASA established clear objectives for the Bidding Process (objectives that were ultimately embodied in the Service Contract), it did not dictate how these objectives should be achieved. This was left up to the bidders so that each bidder could bring its unique experience and capabilities to bear when it submitted its bid. In addition, PRASA believed that it was important that the Bidding Process not only be transparent, but that it reflect the thoughts and input of the bidders, in those instances where PRASA determined that such thoughts and input would benefit the Bidding Process as a whole.

PRASA commenced the Bidding Process in August 2001 by issuing a request for qualification ("RFQ") to nine major international water and wastewater system operators. The RFQ invited companies to submit statements of qualification ("SOQs") describing their

technical, management, financial and legal qualifications to serve as operator of the System. SOQs were received from seven of the companies. Based on a review of the SOQs, PRASA continued the process with four companies, including the existing operator of the System. From September 2001 to January 2002, PRASA and its technical advisors conducted site visits of the System and offered prospective bidders the opportunity to review, both in data rooms and on a website that was set up for the Bidding Process, information on PRASA, including, among other things, financial records, environmental compliance records, System performance data, information regarding historical electricity and chemical consumption, System organizational information and employee information. During this period, PRASA and its consultants met with prospective bidders on multiple occasions to discuss the Bidding Process in general, technical and financial information relating to the System and the main terms and conditions of the Service Contract.

Based on these meetings, a request for proposals (the "RFP") was delivered to prospective bidders in December 2001.[2] The RFP indicated that PRASA would make a determination as to the most favorable bid based mainly on pricing considerations but also indicated that PRASA would take into account other non-financial considerations, including the bidder's responsiveness to PRASA's long-term goals for the System. At the end of January 2002, PRASA received bids in response to the RFP (the "Bids") from each of the four remaining participants in the Bidding Process (the "Bidders"). During the month of February 2002, PRASA and its advisors reviewed and analyzed the Bids and met with the Bidders to clarify certain aspects of their Bids. At the beginning of March 2002, an initial draft of the Service Contract was delivered to the Bidders and the Bidders were given the opportunity to comment on the draft. The initial version of the Service Contract was based on the terms outlined in the RFP. PRASA understood that Bidders would inevitably object to those aspects of the Service Contract that were unacceptable to them and drafted the initial version of the Service Contract accordingly. The expectation was that in a competitive environment Bidders would be discouraged from making extensive comments to the Service Contract.

PRASA and its advisors met with the Bidders on multiple occasions during the months of March and April 2002 to discuss their comments to the draft Service Contract and to inform the Bidders how these comments impacted PRASA's assessment of their Bids. Bidders were invited to present updated and improved proposals addressing those aspects of their Bids that they had been informed raised concerns for PRASA. On the basis of the updated bids, PRASA selected the winning bidder on April 29, 2002 and executed the Service Contract with the winning bidder on May 3, 2002. Because the contract under which the System was being operated expired on June 30, 2002 and the winning bidder was required to take over operation of the System on July 1, 2002, there was only a limited time for a transition period. It was therefore essential that PRASA and the winning bidder execute the Service Contract as soon as possible after the award of the contract so that this transition period could commence. It was mainly for this reason that PRASA and its advisors had spent two months in simultaneous discussions with all four of the Bidders. The strategy was to get as close as possible to a final form of Service Contract with each of the Bidders in order to avoid a situation where, once the winning bidder was announced, that winning bidder might seek to exploit the tight

time schedule by exercising its increased leverage on PRASA and renegotiating various aspects of the Service Contract.

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Maintenance, Repair and Replacement Risk

One of the critical elements of the Service Contract and one that distinguishes it from other service or management contracts, including prior ones that PRASA had entered into, is the fact that the operator is fully responsible for the maintenance, repair and replacement ("MRR") of the assets of the System.[3] While maintenance of the assets of a system is certainly something that one might expect to fall within the purview of a system operator, repair and replacement of assets are generally considered closer on the continuum to capital improvements and the type of responsibility that is more typical in a concession arrangement. In effect, in a service or management contract, the private sector participant typically provides specific services in respect of the water and wastewater system (*e.g.*, maintenance, meter reading, billing, collection or connection services) or agrees to manage the system for a limited period (*e.g.*, five to ten years) on a fixed fee basis with, in certain cases, an incentive fee for improvements in service. The private sector participant is not responsible for the funding of capital improvements, which funding obligation remains with the owner of the system. By contrast, in a concession arrangement, the private sector participant is responsible for capital improvements in addition to the operation and maintenance of the facilities. Because the concessionaire acts as the *de facto* owner of the system for the term of the concession, the concessionaire is incentivized to make long term capital improvements to the system because these investments will presumably generate more revenue for the concessionaire and the twenty to thirty-year term that is typical of a concession permits the concessionaire sufficient time to fully amortize its investment. The private sector participant generally invoices the consumer directly and the payment received is meant to cover operation and maintenance expenses, as well as debt service in respect of the financing of capital improvements and the private sector participant's return.

Despite what might have been considered more typical market practice, it was critical to PRASA, for a number of reasons, that the operator be responsible for the MRR of the assets of the System. First and foremost, this shifted a huge financial risk from PRASA to the operator. Second, given PRASA's budget shortfall, PRASA was not in a position to absorb large capital expenditures on a sporadic or emergency basis. As a result, PRASA wanted to formulate an annual budget that was as fixed as possible – a budget that would consist of a pre-agreed service fee payable to the operator and certain capped reimbursables. Third, based on PRASA's prior experience of sharing responsibility for MRR with the operator of the System, PRASA sought to avoid any such sharing to do away with the large administrative burden of determining on a case-by-case basis whether a repair or a replacement of a System asset constituted an item that should be paid for by PRASA or by the operator. Related to this consideration was the fact that, after the award of the Bid, PRASA intended to reduce both the number of its managerial employees and the scope of their responsibilities, and therefore it would not have the personnel to perform such administrative functions. The plan was to limit

PRASA's staff to a few key managers, a contract administrator and minimal support staff that would monitor the operator's performance under the Service Contract. Based on these objectives, the RFP required Bidders to evaluate the projected cost of the MRR for the System over the ten-year term and include such cost in their bid for the service fee for each year of the term.

The operator's responsibility for the full MRR of the assets was the element of the Service Contract that Bidders objected to the most strongly and was the subject of extensive discussions. Although Bidders accepted the principle that the operator would have to maintain the System's assets even though this required capital expenditure on their part, they did not believe that it was appropriate that the operator be responsible for the replacement and, to a lesser extent, the repair of the System's assets. As might have been expected, they viewed repair and replacement of assets as the functional equivalent of new capital improvements, which, under the Service Contract, PRASA was responsible for funding. They argued, for example, that if a pumping station needed to be replaced, it should be viewed as a capital improvement and not part of the operator's MRR obligation. In support of their argument, Bidders stressed that the System would be better off if these types of expenditures were viewed as capital improvements rather than as the operator's MRR obligation because in many circumstances the replacement of the affected asset by the operator might not be as appropriate as a redesign and complete overhaul or consolidation of a group of assets by means of a capital improvement program.[4] Furthermore, Bidders pointed out that they had only a limited opportunity to conduct diligence on the System's extensive assets[5] and that to require them to assume full MRR risk for such assets would result in significantly higher bids than would otherwise be the case since they would naturally be overly conservative in their estimates of MRR. Certain Bidders also expressed a reluctance to incur the cost and expense associated with undertaking any additional due diligence before the award of the Service Contract had been made. Finally, Bidders indicated that if the MRR risk remained with the operator, PRASA should extend the original term of the Service Contract beyond ten years to allow the operator to amortize its MRR investment over a longer period of time.[6]

Despite the Bidders' strong objections to the operator taking full responsibility for the MRR of the System, this was a key element of the Service Contract in respect of which PRASA was unwilling to compromise. To answer some of the concerns that had been raised by the Bidders, PRASA pointed out that the service fee was composed 80% by a fixed fee and 20% by variable fee that was tied to the operator meeting certain objectives, one of which was the increase of PRASA's revenues. PRASA therefore argued that the sharing of increased revenues generated by the System, which increased revenues were presumably related in part to the MRR undertaken by the operator, was a way for the operator to get a return on its MRR investment in the System. In addition, PRASA pointed out that, while the term of the contract was ten years (an element of the Service Contract that was required to maintain the tax-exempt status of the municipal bonds that had been used to finance certain of the assets), the term was extendable for successive periods of up to ten years at PRASA's election. PRASA argued that, given the cost of conducting a bidding process, there was a strong incentive for the contract to be extended if the operator's performance was acceptable.

To the extent that Bidders felt comfortable in their ability to achieve the established contract objectives, they could effectively amortize any capital investments in the System over a fifteen or twenty year period. Finally, PRASA indicated that it did not believe Bidders would excessively price the MRR risk that they were being asked to take because the competitive Bidding Process would force Bidders to only bid the minimum they expected to have to expend.

Although PRASA was unwilling to compromise on the operator's full responsibility for MRR, PRASA did seek to address the Bidders' concerns with respect to their ability to conduct the due diligence required to accurately price the MRR. The manner in which this was accomplished served the added purpose of achieving PRASA's own goal of turning stated commitments in the Service Contract into objectively measurable parameters. Based on the review and evaluation of PRASA's technical consultants, each of the main assets of the System was assigned a baseline operating standard and a baseline asset condition rating. The operating standard reflects the level at which the asset could be operated and the asset condition rating reflects the physical condition of the asset. The idea is that the established operating standard and asset condition rating of each asset is the baseline measurement against which the operator's performance under the Service Contract will be monitored and assessed. It is expected that the operator will either improve or, at a minimum, maintain such standard or rating. The baseline standards and ratings assume improved operating performance and asset condition based on best practices and the standards established in the Service Contract. That is, in establishing the standards and ratings for the assets, there was a presumption that these assets had been (and would be) operated in accordance with the very high standards set forth in the Service Contract even though such assets may not have been operated or maintained on this basis in the past. Based on the classifications that each asset received, the asset was either classified as a Class A or a Class B asset. The operator is required to operate the Class A assets and the Class B assets in such a manner as to comply with best practices and all applicable laws, subject, in the case of the Class B assets, to certain existing conditions of the assets (as detailed in existing regulatory actions) that prevent full compliance with applicable law. The operator is required to move as many Class B assets into the Class A category as possible by means of the performance standards required under the Service Contract. The operator is not, however, responsible for increased regulatory compliance with respect to a Class B asset that can only achieve such compliance by way of a capital improvement (given that PRASA is responsible for approving and funding such measures).

Once this strategy was developed by PRASA and its consultants, Bidders were supplied with extensive information for all of the assets that had been rated, including detailed condition and performance ratings by outside consultants. Bidders were given the opportunity to discuss the performance standards and ratings with PRASA and its technical consultants and to comment on the appropriateness of these standards and ratings. Bidders conceded that they derived some comfort from the fact that, because a baseline had been developed for each of the assets, they had a better sense of what might be needed in terms of MRR for the System and were in a better position to price this factor. However, Bidders still expressed the concern that there was not enough time and that they had not done the appropriate due diligence on the assets to

determine whether the standards and ratings assigned to each of the assets were appropriate or artificially elevated. Bidders indicated that they would need to spend some time actually operating the System to see whether certain assets were in fact capable of being operated as PRASA suggested and to ascertain the exact physical condition of the assets. PRASA was reluctant to let the agreement on these baseline ratings be delayed until after the execution of the Service Contract. In effect, the baseline standards and ratings of the assets are a key element of the Service Contract in that they establish the basis for the monitoring of the operator's performance under the Service Contract. PRASA ultimately determined that the condition of the Class A assets would be stipulated prior to the execution of the Service Contract and that the parties would have six months from the operator's takeover of the management of the System to agree on the condition of the Class B assets.[7]

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Performance Risk

The Service Contract provides that as compensation for the performance of the operation and management services, the operator is paid a service fee. The service fee consists of a fixed component, a reimbursable or pass-through component and a variable component. The fixed component of the service fee is the fixed fee that was proposed by each of the Bidders in their Bids and that is subject to adjustment for inflation in the manner indicated in each Bid. The pass-through component consists of reimbursement by PRASA for the operator's cost of electricity (up to a certain maximum annual volume guaranteed by the operator in its Bid) and the cost of property and casualty insurance premiums.[8] The variable component of the service fee consists of: (i) incentive payments that the operator receives for meeting certain articulated PRASA goals (*e.g.*, increase in PRASA revenues, reduction in electric power consumption) and (ii) extraordinary items (*e.g.*, cost relief for uncontrollable circumstances), which may be a charge or a credit.

Upon review of the first Bids received in January 2002 and discussions with the Bidders about these Bids, PRASA and its consultants noted two things: (i) Bidders did not seem to have given much weight to their ability to achieve the incentives for improved services that were available and (ii) while all of the Bids discussed in elaborate detail both the measures that the Bidders would take to address all of the goals that PRASA had articulated for the System and the timeframe within which the Bidders expected such goals to be achieved, the actual Bids did not include concrete commitments in this regard. This was problematic from PRASA's perspective for a number of reasons. First, because Bidders were not factoring the incentives into their calculation of the service fee, their projected rate of return was entirely embedded into the fixed fee and they were effectively not taking any of the risk associated with their failure to meet the objectives that gave rise to the payment of the incentives. Second, to the extent that the fixed fee was calculated such that it was sufficient for the Bidder to receive its projected rate of return, any achievement of the incentives would be a windfall for the operator at the expense of PRASA. Third, PRASA was concerned that although Bidders were promising in their Bids that they would achieve the goals established by PRASA for the System, because there were no concrete commitments in this regard, PRASA would have no recourse if the goals were not achieved within the required timeframes or at all.

To address these concerns, PRASA separated its main goals for the System into three categories. The first category consisted of critical System goals, namely the increase in PRASA revenues (which would go to reducing PRASA's deficit), the reduction in unaccounted-for water and the movement of Class B assets into the Class A category. With respect to these goals, PRASA asked each Bidder to establish specific measures or timeframes within which the goals would be achieved and the form of Service Contract was amended to provide that failure to achieve these measures or timeframes established by the Bidders would give rise to an event of default that would give PRASA the right to terminate the contract. The second category of goals consisted of certain other important but less critical goals, most of which addressed System performance (*e.g.*, leak detection assessments, timeframe for repairs, System flushing) and customer satisfaction (*e.g.*, timely response to emergency calls, increased customer service ratings, implementation of public outreach campaign). With respect to these goals, PRASA established penalties that would be payable by the operator for failure to meet the targets established in its Bid and later incorporated into the Service Contract. Finally, the third category of goals addressed areas in which achievements by the operator would either reduce PRASA's costs or increase its revenues. These goals included reduced electricity use, electricity cost management[9], increased PRASA revenues and general improved performance based on twelve parameters. With respect to these goals, the operator received the incentive payments that were part of the variable component of the service fee.

At first, Bidders were somewhat taken aback by PRASA's proposal and it was clear that they had not expected their Bids to be deconstructed for purposes of introducing additional obligations into the Service Contract. The main complaint (expressed mostly with respect to the increased revenue commitment) was that, while it was one thing for an operator to project what it might be able to accomplish with respect to matters such as increased revenues or reduction of unaccounted-for water, it was quite another matter to hold the operator to its projections and to provide, in certain cases, for termination of the Service Contract if the projections were not met. In response to this, PRASA first argued that the Bidders were in a better position than PRASA to assume the risk of the projections that the Bidders themselves had included in their Bids. Second, PRASA indicated to Bidders that, for purposes of the three goals that gave rise to termination of the Service Contract, the projections that Bidders committed to could be lower than those in their Bids on the theory that some cushion was appropriate. Third, PRASA told Bidders that, with respect to the increased revenue commitment, to the extent that a Bidder had committed to a particular level of revenues and such level was not achieved, the Bidder could avoid termination of the Service Contract by paying PRASA, as a penalty, the difference between the actual level achieved and the committed level. Finally, PRASA indicated to Bidders that in order to distinguish between Bidders that were willing to make commitments with respect to revenue increases and those that were not, in evaluating the Bids, PRASA would credit a Bidder the amount of increased revenues that such Bidder had committed to by discounting the Bidder's fixed fee by such amount (thus improving its bid). Once Bidders understood that the amount of their respective revenue commitments could seriously influence the outcome of the Bidding Process, Bidders reconsidered their initial reluctance to make the required commitments. Once Bidders committed to certain levels of

increased revenues as part of their Bids, PRASA was able to push Bidders to reduce their fixed fee and rely on the incentives that they would earn (as part of the variable portion of their service fee) to obtain their required return on investment.

The Service Contract also provides that certain breaches by the operator of its obligations constitute events of defaults that give PRASA the right to terminate the Service Contract. Many of the events of default are tied to the baseline performance standards and asset condition ratings that were established to monitor the operator's performance of its operation and MRR responsibilities, the elements of the Service Contract that go to the essence of the operator's obligations. These include (x) the failure of an asset to meet its baseline operating standard, which failure is not cured pursuant to a remediation plan approved by PRASA or an independent expert, (y) an asset receiving a reduced asset condition rating which is not cured pursuant to a remediation plan approved by PRASA or an independent expert, and (z) System-wide performance failures that are tied to a certain percentage of the assets not meeting the required performance standards (the rationale being that PRASA does not want large portions of the System to be constantly under remediation plans). In addition, as discussed above, there is an event of default for the failure of the operator to meet certain performance guarantees established by the operator for the reduction of accounted-for water, the increase of System revenues and the movement of Class B assets to Class A. Finally, there is a series of other standard events of default typical for a contract of this nature, including: (i) the failure to obtain and maintain the security required under the Service Contract, (ii) the deterioration of the credit rating of the operator's guarantor and the failure of the operator to provide credit enhancement in such circumstances, (iii) payment default, (iv) a change in control of the operator and (v) the abandonment by the operator of the assets.

Most of the Bidders generally accepted all of the events of default proposed by PRASA with some minor modifications (*e.g.*, longer period of time were requested to cure a default). One Bidder, however, had a number of problems with these provisions. The Bidder took the position that a failure of an asset to meet its baseline operating performance standard should only apply to water and wastewater plants, and not any of the other assets that comprise the System, and only if 15% of the average annual volume were affected. Along the same lines, the Bidder argued that the failure of an asset to maintain its asset condition rating should constitute an event of default only if 20% of the assets were affected and if the operator had not remedied the condition in at least 90% of the assets. In both cases, the Bidder proposed that the operator have 120 days to cure the default taking into account operating priorities (*e.g.*, if the operator's resources were put to better use in the performance of other operator obligations, the operator would be excused from its cure obligation). In addition, the Bidder deleted the event of default for System-wide performance failure. Finally, the Bidder increased the cure period for the failure to perform a material obligation under the Service Contract from 90 days to 180 days and provided that the cure period would be tolled if the operator were contesting the determination that a performance failure had occurred. Had the Service Contract included these comments, PRASA's ability to terminate the Service Contract, in comparison to the other Bids, would have been significantly restricted because of both the elimination or modification of various events of default and the fact that

the operator would be in a better position to contest the occurrence of a default.

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Risk of the Unknown

A final area of risk associated with the transaction involved various miscellaneous provisions of the Service Contract that had the potential of affecting the operator's return under the service contract. For the most part, these provisions related to risks that were either not within the control of parties (*e.g.*, uncontrollable circumstances and inflation risk) or that PRASA has determined should be borne by the future operator (*e.g.*, labor risk). These included the inflation index used to escalate the annual fixed fee, the uncontrollable circumstances that would excuse the operator's non-performance under the contract, the excess costs resulting from uncontrollable circumstances that the operator would be required to bear and the operator's ability to control a workforce that remained a public workforce.

Inflation. The RFP that was distributed to the Bidders in December 2001 provided that each Bidder was required to bid a fixed fee that would be payable by PRASA for the first year of the term of the Service Contract. The RFP further provided that this fixed fee would be adjusted for inflation in every year beyond the first year of the term. The inflation index proposed for such escalation was the U.S. Consumer Price Index. All of the Bidders objected to the choice of this index, resulting in lengthy discussions on the topic. The main argument was that approximately 65% of the fixed fee represented the cost of labor and that the U.S. Consumer Price Index (historically about 3%) did not adequately reflect increases in labor costs in Puerto Rico which meant that the operator would be solely bearing the bulk of the risk of inflation. Bidders proposed instead that the inflation escalator be the Puerto Rico Consumer Price Index (historically closer to about 5%). PRASA was opposed to this idea because the basket of goods comprising the Puerto Rico Consumer Price Index had not been revised in some time and it was not clear whether the index still accurately reflected Puerto Rican inflation. In addition, increases (and/or decreases) in the cost of chemicals and other goods and services used by the operator were more likely follow the U.S. Consumer Price Index. To address this impasse, PRASA decided to allow Bidders to devise their own method of inflating their fixed fee and even indicated that, if Bidders preferred, they could provide PRASA with a different fixed fee for each year of the Service Contract into which they could embed inflation at whatever rate they chose.

Once Bidders were given the opportunity to devise their own inflation index, they came up with widely varying proposals. One of the Bidders included inflation in its fixed fee for the first five years of the Service Contract such that no adjustment to the fixed fee would be made in the first five years regardless of the level of inflation. For the remainder of the term, this Bidder's fixed fee was subject to escalation for inflation only to the extent that inflation (based 50% on the U.S. Consumer Price Index and 50% on an index reflecting the cost of labor in Puerto Rico) exceeded 4.5%. In short, after the fifth year of the Service Contract, the Bidder's fixed fee included the effects of inflation assuming that the index did not exceed 4.5% per annum. This structure was particularly attractive to PRASA because it meant that PRASA bore no inflation risk for the first five years of the term and after that, PRASA bore

inflation risk only to the extent that it exceeded 4.5%. Given historical inflation levels, PRASA was able to fairly accurately determine the inflation exposure to which it might be subject in the last years of the Service Contract. Another Bidder proposed an inflation index that was based 35% on the U.S. Consumer Price Index and 65% on labor inflation, which labor inflation was tied in part to the wages that the operator was able to negotiate under the collective bargaining agreements with the PRASA unions. This option was much less attractive to PRASA because it meant that (i) PRASA would bear inflation risk in the first five years, (ii) such risk was not easily quantifiable and (iii) the risk was tied to the outcome of the operator's negotiations with the labor unions, negotiations in which PRASA was not allowed to participate based on the terms of the Service Contract and over which it had no control.

Uncontrollable Circumstances. The Service Contract provides that the operator will be entitled to relief from the performance of its obligations in the event that uncontrollable circumstances affect the operator's performance. Uncontrollable circumstances are defined as events or circumstances that are beyond the control of the operator and that could not have been foreseen by the operator or avoided by the exercise of due diligence (*e.g.*, Acts of God, hurricanes, earthquakes, wars, etc.). In addition to performance relief, the operator is entitled, in certain cases, to schedule and cost relief upon the occurrence of an uncontrollable circumstance. The Service Contract requires the operator to absorb, on an annual basis, the first 5% of any cost increase (up to an annual cap of U.S.$1 million) resulting from an uncontrollable circumstance and then allows the operator to seek reimbursement from PRASA for amounts in excess of this cap. The rationale is that neither party is responsible for uncontrollable circumstances and therefore the cost of the uncontrollable circumstance should be borne by both parties. Furthermore, to avoid continuous requests for schedule and cost relief (something that PRASA had experienced under prior contracts), the Service Contract limits the operator's ability to make claims for schedule and cost relief to once per year unless the cost increase (or series thereof) exceeds U.S. $5 million in any given period of time. Finally, to the extent that an uncontrollable circumstance results in a cost increase to PRASA over a certain threshold, PRASA has the right to sever from the scope of the Service Contract the service affected by the uncontrollable circumstance. In the same manner as the operator's exposure to uncontrollable circumstances is capped at U.S. $1 million in any given year, the idea behind the severance provision is to limit PRASA's exposure for uncontrollable circumstances and to provide it with an alternate option for managing an uncontrollable circumstance if it does not believe the operator is doing so in an effective manner.

In general, Bidders did not have many objections to these provisions of the Service Contract. Part of the reason for this may have been that the risk to which they were exposed as a result of uncontrollable circumstances was clearly quantifiable and something that they could easily factor into their Bids or for which they could obtain insurance. However, one Bidder did have a number of comments to the uncontrollable circumstances provisions of the Service Contract. First, the Bidder did not agree that the operator should absorb the first 5% of the annual increase in costs due to an uncontrollable circumstance. Second, the Bidder sought to reduce the annual threshold to be met before the operator can seek cost relief from U.S. $5 million to U.S. $1 million. Finally,

the Bidder did not agree that PRASA should have the right to sever services affected by an uncontrollable circumstance if the cost to PRASA of the cost relief requested by the operator exceeded a certain threshold. When compared to the other Bids, the cumulative impact of these changes had the effect of shifting the bulk of the risk of uncontrollable circumstances to PRASA. It is interesting to consider why, in a competitive bidding environment, a Bidder would focus on these types of comments. In effect, as mentioned above, the annual U.S.$1 million of uncontrollable circumstances that the operator is required to bear is something that the Bidder could have easily factored into its Bid or obtained insurance for and the U.S.$5 million annual threshold for requesting cost relief is really a twelve-month (at most) cash flow issue.

Labor Arrangements. Despite the fact that the PRASA employees were to remain public employees, PRASA sought to provide the operator with as much control over the management of the labor force as legally possible. The Service Contract gives the operator the responsibility and the right to manage all aspects of the PRASA workforce, including the right to hire, fire and discipline PRASA employees. In addition, the operator is given the responsibility to negotiate amendments to the existing and new collective bargaining agreements. If PRASA revokes this right at any time or fails to ratify a collective bargaining agreement that the operator and the PRASA unions have agreed to, the operator is entitled to performance, schedule and cost relief from its obligations under the Service Contract to the extent that they are affected thereby.

Most Bidders generally agreed that, given the provisions of the Service Contract and the changes that were being made at PRASA, the operator could effectively control the PRASA employees even though they remained public and that labor unrests were risks that they could assume. One Bidder, however, suggested a number of changes to the labor provisions of the Service Contract to further solidify the operator's control over the workforce. In addition, this Bidder took the position that the operator should receive performance, schedule and cost relief if and to the extent that (i) the PRASA unions failed to negotiate in good faith (as determined by arbitration) a new collective bargaining agreement or (ii) PRASA interfered in the operator's negotiations with the PRASA unions. This was problematic because it largely shifted to PRASA the risk of the operator's failure to achieve a successful negotiation with PRASA unions. In addition, the proposed criteria for shifting such risk – failure to negotiate in good faith and "interference" in negotiations – are extremely difficult to determine conclusively and substantially increased the risk of disputes among the parties.

Although the Bidders' reactions to each of the miscellaneous provisions of the Service Contract described above affected PRASA's evaluation of the Bids, no one element was dispositive as to whether the Bidder would be awarded the Service Contract or not. In evaluating the Bids, PRASA considered a number of factors, including, among other things, the amount of the fixed fee and the inflation adjustment applicable thereto, increased revenues guaranteed by the Bidders, System commitments in excess of that required by the RFP and the level of risk that the Bidders were prepared to assume. Nonetheless, the Bidders' reactions to various provisions of the Service Contract during the Bidding Process was essential for PRASA to determine whether the risk allocation that it had proposed in the

Service Contract was appropriately balanced or not.

* * *

In allocating risk in a long-term operation and management contract, the first critical step is for the owner of the system to determine which risks it is willing and able to assume (either in part or in full) and which it is not. With respect to those risks that the owner is unable or unwilling to assume (in the case of Puerto Rico, the MRR of the assets for example), the owner will need to assess the impact on the transaction of allocating a particular risk to the operator. In certain cases, the operator may not object to bearing the risk either because it is a risk that the operator is comfortable or accustomed to bearing or because the potential benefits of the transaction are such that the operator is willing to assume the risk. In other cases, the owner may find that its stance with respect to certain risk is such that no operator is interested in the transaction and the owner may need to reevaluate the proposed structure of its transaction or take steps to mitigate the effects of the particular risk (*e.g.*, share the risk in some manner with the operator, provide additional access or information regarding the relevant risk, offer greater incentives if the risk is assumed). With respect to the risks that the owner is willing and able to assume (in part or in full), the key is to strike a balance between the owner and the operator of the system and to allocate the risks to the party that is in the better position or better equipped to bear the risk.

* Presented at the American Water Works Association 2003 Annual Conference in June 2003.

1 The views expressed in this article are those of the authors and do not, in any way, represent the views of any other party or person.

2 The RFP sought proposals from bidders to perform the following services: (i) operation and management of the assets of the System; (ii) performance of all maintenance, repair and replacement activities related to the assets; (iii) management of the entire workforce and performance of all labor, administrative and financial functions; (iv) performance of all residuals and sludge management services; (v) management of all water purchase and related activities; (vi) management of all pre-treatment programs including industrial pre-treatment; (vii) implementation and maintenance of all management information systems; and (viii) at the request of PRASA, performance of program management services for capital projects.

3 The operator's MRR obligation was the main difference between the Service Contract and the contract entered into with the prior operator. The short-term nature of the prior contract would not, however, have permitted the prior operator to absorb such MRR risk.

4 Bidders also expressed concern about PRASA's ability to refuse to undertake a capital improvement. Indeed, certain Bidders sought to protect themselves against the potential consequences of such an event by providing that if PRASA did not approve a capital improvement that was suggested by the operator, PRASA would be responsible for the operator's projected savings that would have resulted from such capital improvement. Another Bidder suggested that if the operator proposed a capital improvement and PRASA choose not to do it, the operator should not be responsible for the failure of the asset to meet the contracted standards established therefor.

5 The System consists of approximately 133 water treatment plants, 72 wastewater treatment plants, over 1500 water and wastewater pump stations and several wells, tanks, dams, reservoirs and ancillary facilities.

6 As a result of these concerns, the markup of the form of Service Contract submitted by Bidders sought to limit in various ways the operator's responsibility for MRR. One Bidder suggested that the operator should not be required to assume the risk of replacing "all" or "substantially all" of any of the water and wastewater plants and pumping stations. Another Bidder was unwilling to accept the risk of "major" replacements or repairs to the extent that such replacements or repairs were caused by obsolescence, catastrophic failure or uncontrollable circumstances or if it was not economic (from the operator's perspective) to replace or repair the asset. Finally, another Bidder expressed the view that the operator should have a period of one year to run the System and get a sense for the condition of the assets before committing to undertaking the responsibility for the full MRR.

7 If the parties are not able to agree on the condition of the Class B assets, the Service Contract provides that either party may refer the matter to an independent expert for a final resolution that is binding on the parties.

8 PRASA decided that the cost of property and casualty insurance should be a pass-through cost because, in the wake of September 11th, the cost of such premiums had

significantly increased. The thought was that, instead of Bidders factoring the higher cost of property and casualty insurance premiums in their Bids, PRASA should pay for these costs directly and possibly get the benefit of any re-stabilization of the cost of such insurance, something that was expected to occur over the ten-year term of the Service Contract. The electricity charge was also structured as a pass-through cost because there is only one supplier of energy in Puerto Rico and, as a result, the operator is not in a position to change or control the price of energy. However, the operator is expected to use energy efficiently and, as part of its Bid, each Bidder was required to indicate a guaranteed maximum electricity usage amount. To the extent that the operator uses more energy than the guaranteed maximum, PRASA is not required to reimburse such excess amount. If the operator uses less energy than the guaranteed maximum, the operator receives an incentive payment for reduced electricity usage.

9 The electricity cost management incentive was structured around the operator's ability to manage and operate the System in such a manner that resulted in savings to PRASA in electricity costs due to various factors, including reduction in demand charges and reduction in electricity consumption during peak rate periods.