

**CAVEAT: This Toolkit has not yet been peer reviewed within the World Bank, and as a result, it is NOT yet an official World Bank publication.**

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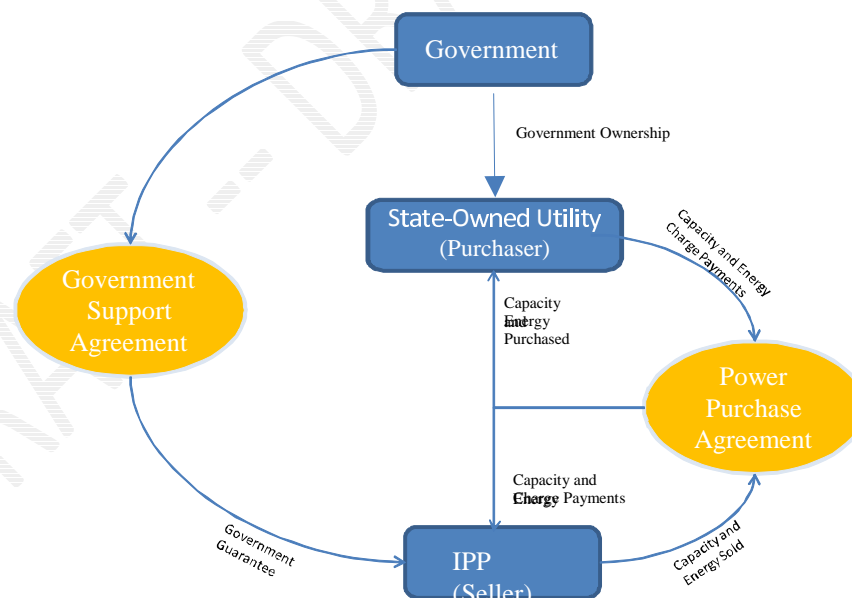
# EMERGENCY POWER PROCUREMENT TOOLKIT

## 1. INTRODUCTION

The procurement by state-owned utilities of emergency supplies of power to cope with unanticipated shortages of generating capacity is becoming an increasingly common activity in developing countries. The reasons for procurement of emergency power are varied – hurricanes or other weather-related damage to existing utility facilities; droughts resulting in diminished production from hydroelectric plants; catastrophic failures of existing generation equipment owned by the state-owned utility; or simply poor planning on the part of the concerned utility, resulting in an inability to meet increased demand.

As discussed further below, these procurements (*see* Figure 1) typically take the form of the purchase of energy and capacity from an Independent Power Producer (IPP) under a “Power Purchase Agreement” (PPA) between the IPP as the “seller” and the state-owned utility as the “purchaser.” The PPA is normally supported by a “Government Support Agreement” (GSA) – sometimes called an “Implementation Agreement” – between the IPP and the government that owns the utility (making the emergency power purchase), under which the government makes certain commitments to the IPP.

Figure 1 - Project Document Summary



The fact that these procurements are undertaken in emergency situations has led, in many instances, to significant problems. The comparative sophistication of potential private suppliers, coupled with a lack of capacity and experience on the part of the purchasing entity, has frequently led to execution of PPAs and GSAs that are financially disadvantageous for the

purchasing utility and its government owners (even if one allows for the inherently greater costs associated with emergency power). Importantly, because the emergency situation often occasions the partial or full suspension of normal procurement procedures, there is greater potential for corruption.

To address these concerns, this Toolkit was developed to assist World Bank (Bank) member countries (Borrowers) facing emergency situations that require rapid power procurements. Specifically, this Toolkit provides a model Bidding Package of procurement documents (including a model PPA and GSA) to be used to solicit the requisite supplies (an electronic copy of each document is included on the World Bank's PPP in Infrastructure Resorts Center (PPPIRC) website ([www.worldbank.org/pppiresource](http://www.worldbank.org/pppiresource)) and on the CD-ROM attached to the back cover of this Toolkit). Although these documents have been developed having regard to the Bank's procurement procedures and rules, they can be used whether or not the Bank is involved. In any event, it is critically important to note that these model documents are of a highly technical and legal nature, and should be employed only by experienced lawyers and procurement specialists to ensure that they reflect project-specific requirements and local laws.

The format of this Toolkit is as follows. After this Introduction, Part 2 of the Toolkit presents a brief discussion of the nature of power shortages and the alternative means of addressing such shortages. Many of the points in this part of the Toolkit are more fully developed in a March 2010 companion World Bank publication titled *Managing an Electricity Shortfall -- A Guide for Policymakers*.<sup>1</sup> As is indicated in that publication, the procurement of emergency power is only one of a range of possible responses to a power crisis. Other options, which are oftentimes less expensive, ought to be considered before deciding on an emergency power procurement.

Against this background, Part 3 of the Toolkit sets out a suggested methodology for procuring emergency power, referring to the model procurement documents that are found in the enclosed CD-ROM.

Finally, Part 4 of the Toolkit then presents an indicative schedule for the financing and procurement processes involved in the acquisition of emergency power.

## **2. ALTERNATIVES FOR ADDRESSING POWER SHORTFALLS**

As more fully discussed in the August 2005 World Bank report titled *Implementing Power Rationing in a Sustainable Way: Lessons Learned and International Best Practices*,<sup>2</sup> emergency power procurements occur in the event of either "energy shortages" or "capacity shortages" that create a gap between

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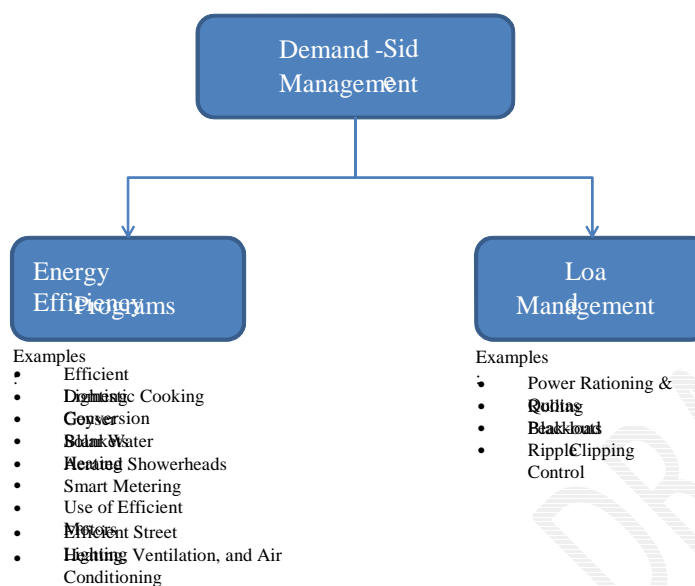
<sup>1</sup> Published by the World Bank's Energy Sector Management Assistance Program (ESMAP), and available at [www.esmap.org/esmap/node/46](http://www.esmap.org/esmap/node/46).

<sup>2</sup> Published by ESMAP, and available at [www2.esmap.org/filez/pubs/372007120957\\_305-05+Final\\_to\\_website.pdf](http://www2.esmap.org/filez/pubs/372007120957_305-05+Final_to_website.pdf).

available supply and expected demand. *Energy shortages* occur when the existing generation units -- which, under ordinary circumstances, would be able to supply sufficient energy -- become incapable of meeting this obligation on a continuous, long-term basis. This may occur, for example, after natural disasters that shut down existing generation units or, as was the case in Brazil in 2001-2002, during periods of drought in an electric system that is dominated by hydro generation. *Capacity shortages*, on the other hand, occur when the existing electric system, working at its maximum output capability, is incapable of meeting peak demand, as was the case in California in 2000-2001. There also are situations where a combination of both energy and capacity shortages occur, as was the case in Chile in 1998-1999.

There are two categories of options available to address energy and/or capacity shortages. The first category, called supply-side management, focuses on increasing the available supply of energy and/or capacity. Emergency power procurement is one of the methods that seek to augment supplies to address a short-term power crisis. Another method is power imports from neighboring countries, if available. The second category, called demand-side management, focuses on managing demand by influencing the quantity and pattern of energy use by end-users. Demand-side management programs (see Figure 2) can include energy-efficiency programs that encourage the use of more energy efficient technology (such as compact florescent lights instead of incandescent lights) and can also include peak-load reduction programs (such as interruptible load tariff arrangements and direct load control programs). Demand-side management programs may also involve more drastic measures that institute supply rationing among (or quotas for) customers, possibly combined with rolling blackouts.

Figure 2 – Demand-Side Management



The following sections in this part of the Toolkit discuss three possible alternatives to emergency power procurements. The first alternative, namely power imports, is a supply-side option. The second alternative, namely energy efficiency, and the third alternative, namely energy rationing and quotas, are both demand-side options.

## 2.1 Power Imports

Power imports have occasionally proven to be an effective tool in dealing with short-term energy and/or capacity shortages. For example, in 2009, Zambia successfully used power imports to mitigate a 210 MW shortfall created by vegetation that blocked the waterway of one of the country's major hydro electric power plants. Zambia's imports were undertaken within the technical and legal framework of the Southern African Power Pool (SAPP) that was created to pool regional resources to manage electric supply and demand in several countries.

Even though the existence of SAPP likely facilitated the imports in the case of Zambia, power imports without an established power pool may be possible through a new framework between the importing buyer and the exporting seller. The two principal elements of this framework are likely to be (i) the power purchase arrangements with neighboring suppliers, and (ii) the interconnection of the relevant transmission systems. Depending on, among other things, the infrastructure costs (*e.g.*, the cost of designing and constructing the transmission lines, substation(s), meters, instrumentation and controls,

etc.); the commodity costs of imported power; and the timeframe within which supplies can be available, power imports may present an attractive alternative to addressing energy and/or capacity shortages.

## 2.2 Energy Efficiency Programs

Energy efficiency programs aim to reduce metered electricity consumption by changing specific end-use devices or systems without affecting service levels to customers. One of the lesser known facts about energy consumption is the extent to which small adjustments in the way energy is consumed can translate to large overall reductions in demand. For example, lighting accounts for approximately 19 percent of global energy use, of which residential use accounts for 31 percent, at an annual cost of \$260 billion. The bulk of the technology used for lighting is outdated, even in industrialized countries. Many technology options to improve lighting performance from the traditional incandescent bulb have been developed (*e.g.*, compact fluorescent lighting (CFL), fluorescent tube lighting, electronic ballasts, Light-Emitting Diode (LED) lighting, etc.). Replacing a 60 watt incandescent light bulb with an equivalent 15 watt CFL bulb could result in an energy savings over the life of the CFL bulb of at least US\$0.01 per kilowatt hour, or \$75 per kilowatt in peak load savings.<sup>3</sup> The World Bank Group has funded programs in many countries to replace incandescent lights with CFL bulbs, resulting in significant savings in demand. These include programs in Poland, Mexico, Argentina, Czech Republic, Hungary, Latvia, Peru, Philippines, South Africa, Sri Lanka, Vietnam, Uganda, Rwanda, Timor-Leste, Senegal, Morocco, Uruguay, Pakistan, Bangladesh, India, Indonesia, Mauritius, Ghana, and China.

## 2.3 Energy Rationing and Quotas

Energy rationing and quotas can be used to mitigate short-term energy shortages through either voluntary or involuntary programs. Voluntary programs include the use of time-of-use metering, in conjunction with tiered and interruptible electric tariffs that provide customers with price signals and incentives to shift or curtail their loads during periods where shortages are anticipated. By reacting to price signals, customers decide when and how much energy should be used or saved, thus creating a new demand curve based on customers' willingness to pay for the energy used. These programs typically require investments in metering systems and planning to introduce new tariff structures in sufficient time for customers to plan their energy use. They also require electric tariffs to be structured to reflect, as closely as possible, the short-run marginal costs of producing and transmitting the energy consumed.

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<sup>3</sup> These savings assume a CFL bulb life of 6,000 hours, 5 hours per day of use, and a cost of \$1.50 for each bulb. Energy is supplied through a transmission and distribution network that has 20 percent annual technical losses and a conservative power factor of 0.7.

Involuntary programs involve assigning a quota to each customer and designing a tariff system that imposes severe penalties on customers that exceed their assigned quotas. The most successful of such programs was implemented in Brazil in 2001-2002. Brazil's generation system was largely comprised of hydroelectric power plants that were constructed to make use of the country's abundant water resources. Although hydro generation can be one of the cleanest and cheapest sources of energy in an electric grid's generation stack, it is subject to changes in the environment that impacts water flows. Brazil's power system was no exception.

Brazil implemented reforms in its power sector in 1997 to attract private investment to meet future energy demand, and to privatize its existing generation, transmission, and distribution assets.<sup>4</sup> Although the reforms attracted much interest among, and significantly increased the participation of, private investors in Brazil's power sector, the implementation of many projects was delayed due to a lack of coordination of public policies and the absence of a comprehensive sector plan. At the same time, there was a sustained period of gradual decline of water available for hydropower generation, which meant that Brazil regularly had to have recourse to its stored water reservoirs. The declining hydropower generation led to the implementation of some load reduction measures as early as 1999, but the government's primary focus was on supply-side solutions through private sector participation. The initial plan was to construct as many as 40 privately owned and funded gas-fired power plants over 3-4 years to augment and diversify Brazil's existing hydro-based generation. However, by 2001, the gradual decline of water levels in reservoirs and the delays in implementing the new gas-fired power plants combined to create an immediate and significant shortfall in available energy to meet existing demand. In response, Brazil imposed a quota system to ration its existing generation resources.

The quota system adopted by Brazil consisted of monthly energy consumption targets for almost all consumers; a set of trading quotas; establishing bonuses for consumers (typically, large consumers) that limited their consumption to below their allotted limits; and penalties for those that violated those limits. Quotas were different for each consumer class, consumption level, and electric grid zone. They were set up as percentages of consumption based on similar periods during the previous year. For example, each residential household above 100 kilowatt hour (kWh) per month was assigned a quota corresponding to 80 percent of its average consumption. In other words, while consumers were required to reduce their monthly consumption, there were no limitations in terms of the time of day or days within the month. This was consistent with the type of shortage in Brazil's power system, which was energy, not capacity, constrained. Other targets included 90 percent for rural consumers, 80

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<sup>4</sup> For a more detailed discussion of Brazil's efforts to deal with its power crisis, see ESMAP publication, *supra* note 2.

percent for commercial consumers, 75 to 90 percent for industrial consumers (depending on the type of industry), and 65 percent for government buildings.

The system also allowed consumers the flexibility to trade their quotas. This flexibility helped improve energy allocation among industrial consumers, and effectively created a market wherein large consumers reallocated energy savings among themselves in the most efficient way. Specific rules for trading and notification of the concerned utilities were put in place in a relatively short period of time. Although the government tried to establish Brazil's wholesale energy market as the location for quota trading, many of the trading was actually done on a bilateral basis between consumers and through new local markets that emerged for that purpose.

Although the system had some drawbacks and took a considerable amount of political will to pass into law, the resulting energy savings were very significant. After implementing the system, Brazil was able to reduce its load by 20 percent in comparison with the prior year's consumption. This savings figure is particularly impressive in that it is adjusted to reflect the impact of new customers that were connected to the grid for the first time after the quota system was instituted. When these customers are excluded, the energy savings are closer to 25 percent of the prior year's load. This astounding success was largely achieved due to the strong public commitment to the energy-savings effort. In fact, in southern Brazil, where quotas were not implemented, the people engaged in load reduction efforts as a result of appeals in the media and for fear of more drastic load-reduction measures in future dry seasons.

### **3. EMERGENCY POWER PROCUREMENTS**

As discussed above, demand-side management initiatives provide the least-cost options for addressing generation shortfalls. However, these initiatives typically require planning and political will to implement that may not be available in cases of *immediate*, unforeseen short-term shortfalls. Supply-side initiatives may, under such circumstances, be unavoidable. Among such initiatives, emergency power procurement represents one of the fastest methods to inject additional supplies in the shortest possible time, second only to power imports from within an established operating power pool. However, this speed comes at a high cost and, as such, reliance on emergency power for periods in excess of three (3) years is highly inadvisable. In fact, because emergency power is usually expected to last for only short periods, it is often referred to as "rental" power.

#### **3.1 Overview of the Model Documents**



In the past, the World Bank has provided assistance to Borrowers to help procure emergency power. The form and extent of such assistance is typically determined by the Bank on a case-by-case basis (*see* Annex I for a more detailed discussion of the Bank resources available for such assistance). In support of these efforts, the Bank has developed a set of procurement documents that are designed to take into account the Bank's procurement guidelines for use by Borrowers to secure emergency power on an expedited basis. These documents consist of templates for (a) the General Procurement Notice and the Specific Procurement Notice; (b) the Bidding Document Package; and (c) the Bid Evaluation Report. Copies of these templates are included in the CD on the back cover of this Toolkit or can be accessed online at the PPPIRC website ([www.worldbank.org/pppiresource](http://www.worldbank.org/pppiresource)).

The templates are not prescribed standardized forms, and the use of these templates is not a prerequisite for approval of Bank funding. However, they incorporate provisions found in procurement documents previously approved by the Bank under the Bank's abbreviated emergency procedures described in Annex 1. The use of other forms may delay the review process, since Bank staff will likely require additional time to review and comment upon unfamiliar documents. It should also be noted that, although the enclosed templates were developed to be used on Bank-funded projects, they can be used whether or not the Bank is involved.

### **3.2 The General and Specific Procurement Notices, and the Evaluation of the Statements of Qualification**

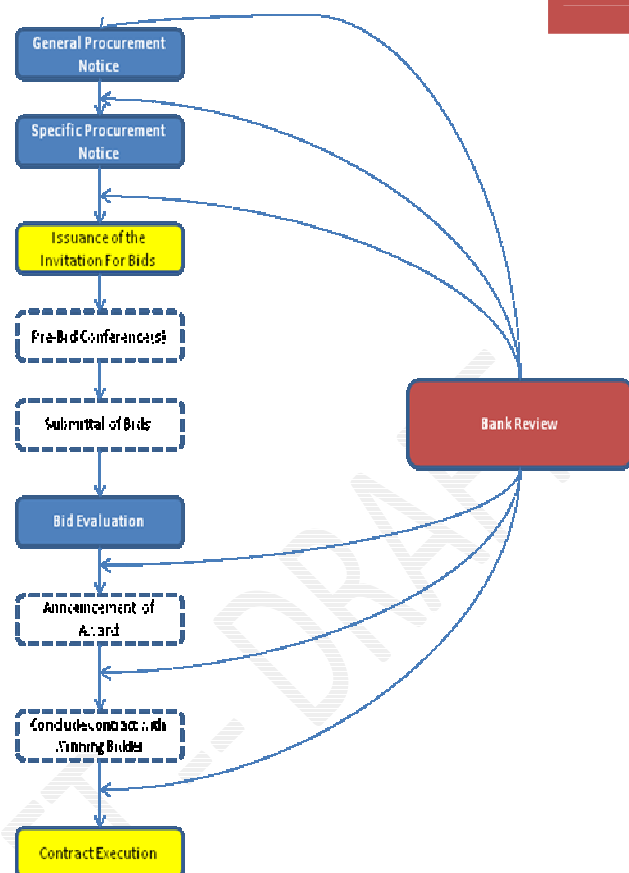
As discussed in more detail in Annex 1, the Bank's *Procurement Guidelines under IBRD Loans and IDA Credits* (the Bank Procurement Guidelines) prescribe a set of requirements that all Bank-funded projects must adhere to. Among those requirements are the advertisement requirements, which provide that the Borrower must prepare and submit to the Bank a General Procurement Notice (GPN) to be published in the online *UN Development Business* (UNDB) and the Development Gateway's online *dgMarket*. This applies to any Bank-financed project that includes procurement of goods on the basis of "International Competitive Basis" (ICB), as defined in the Bank Procurement Guidelines. The GPN is intended to provide potential bidders with a general notice of upcoming procurements associated with a Bank-funded project. As such, it should contain information concerning the Borrower (or prospective Borrower); the amount and purpose of the loan/credit that the Borrower seeks or will seek from the Bank; the general scope of the forthcoming procurements; the name, telephone and fax numbers, the e-mail and street addresses of the Borrower's agency responsible for the procurements; the website address of the website where Specific Procurement Notices will be posted, where applicable; and the scheduled availability date of the bidding documents, if known. The bidding documents, including related prequalification documents, should not be released to the public earlier than the date of the GPN's publication.

Subsequent to the publication of the GPN, invitations to prequalify must be announced through publication of a Specific Procurement Notice (SPN), which should contain a clear statement of the requirements for qualification. The Borrower must prepare the SPN, and submit it to the Bank, prior to publication in the UNDB and *dgMarket* online websites. The Borrower should also publish the SPN in at least one newspaper of national circulation in the country of the project and/or in that country's official gazette (if any), or on an electronic portal with free access. The SPN should also be sent to potential bidders that responded to the GPN.

In cases where “Limited International Bidding” (LIB) or “Direct Contracting” are used (again, these terms are defined in the Bank Procurement Guidelines), GPNs and SPNs are not required. As further discussed in Annex 1, LIB is essentially ICB by direct invitation without open advertisement, and is an acceptable procurement method under the Bank's Procurement Guidelines only in those specific situations discussed in the Procurement Guidelines. Direct Contracting, by its nature, does not involve bidders and, as a result, does not require the use of either GPNs or SPNs. Like LIB, Direct Contracting is an acceptable procurement method under the Bank's Procurement Guidelines only under very limited circumstances.

As indicated, the SPN will invite prospective bidders to submit a brief statement of their qualifications to undertake the proposed supply of emergency power. These statements must be evaluated by an Evaluation Committee established by the purchaser for the proposed procurement. Typically, an Evaluation Committee for this type of procurement will involve five or more individuals with significant technical expertise in regard to power generation of the type being procured. These individuals can be members of the purchaser's own staff or other government officials, and outside consultants can be used, if necessary. Of course, the members of the Evaluation Committee must have no conflicts of interest, in terms of any affiliations with the prospective bidders.

Using the summary information contained in the statements of qualification, the Evaluation Committee should disqualify any bidder that clearly lacks the capability and resources necessary to perform the power supply arrangements satisfactorily, taking into account the bidders' (a) experience and past performance with similar assignments, (b) capabilities with respect to personnel and equipment, and (c) financial position. All of the remaining prospective bidders, i.e. those that would appear to have the requisite capabilities and resources, will become the “shortlisted” bidders that will receive the Bidding Document Package described below.



### **3.3 The Bidding Document Package**

The Bidding Document Package contains a 'roadmap' of the bidding process, providing potential bidders with a detailed description of the project; the procedures for bidding; the timeframe within which to submit bids; and the evaluation criteria. As discussed below, the Bidding Document Package consists of an Invitation for Bids plus three Parts, with a number of Sections in each Part. Part 1 concerns the Bidding Procedures; Part 2 deals with the Supply Requirements; and Part 3 contains the proposed Contracts.

While the Bidding Document Package can follow any number of different forms, the attached template has been developed based on the Bank's experience with infrastructure projects worldwide and, in particular, on past emergency power procurement efforts in which the Bank provided financial assistance. The document reflects the Bank's requirements and guidelines, and is likely to be the benchmark used to gauge whether any other forms meet the Bank's requisite criteria for approval of Bank support for the underlying project. As such, the use of the template will likely streamline the Bank's review and approval process, which is particularly important in emergency situations where the Bank is asked to respond quickly to a request for assistance.

#### **3.3.1. The Invitation for Bidders**

The Invitation for Bids (IFB) is a brief document that appears immediately following the Cover Sheet for the Bidding Document Package. It identifies the GPN and SPN that were published in respect of the procurement; it refers to the funding by the World Bank for the project under which the procurement is taking place; it identifies the source of the rules applicable to the procurement; and it provides information as to the deadline for submitting bids and the contact details for the entity that is undertaking the procurement.

#### **3.3.2 Part 1 of the Bidding Document Package: the Bidding Procedures**

There are five Sections in Part 1 of the Bidding Document Package, as described below.

##### **3.3.2.1 Section I: the Instructions to Bidders**

Section I of the Bidding Document Package contains the standardized Instructions to Bidders (ITB). Amongst other matters, the ITB sets out the information that must be submitted with the

bids, and the rules governing, among other matters, bid security, amendment or withdrawal of bids, bid validity period, and bid submission.

### 3.3.2.2 Section II: the Bidding Data Sheet

Section II of the Bidding Document Package, which should be read together with the ITB, contains the Bidding Data Sheet (BDS), which provides specific information regarding the project for which the bids are being sought. The BDS also provides information on the agency making the procurement (hereinafter referred to as the “Purchaser”) which will normally be the counterparty in the PPA. Finally, and most importantly, the BDS modifies and details the provisions contained in the ITB.

### 3.3.2.3 Section III – Evaluation and Qualification Criteria

Section III of the Bidding Document Package provides the criteria to be used in evaluating bids and determining the bidders’ experience to undertake the scope of the procurement. These criteria include the following:

- *The delivery schedule, expected commercial operations date (COD), and the consequence of any deviations therefrom.* In emergency situations where power is required within a certain timeframe, the required delivery schedule and COD should be firm, and any bids offering to provide the power later than the required delivery date should be disqualified. However, the Purchaser should consider whether bidders that offer to provide the power earlier than required should be given higher credit for their bids in the evaluation process than those that simply offer to meet the required schedule.
- *Projected Operation and Maintenance Costs.* Typically, Operations and Maintenance (O&M) costs of the generation facility are included in the capacity and energy charges provided on the “price schedule forms” (discussed further below) submitted by bidders. The capacity charge, which is a fixed monthly payment to be made regardless of whether the generation facility is dispatched, includes all fixed O&M costs, such as wages of the O&M staff, vehicles and other equipment, tools, etc.<sup>5</sup> The energy charge, which is a charge for each unit of energy produced and delivered (usually expressed as a per kilowatt hour (kWh) charge), includes the costs of fuel and variable O&M, such as the costs of lubricants, spare parts, etc., incurred to generate the power.<sup>6</sup>

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<sup>5</sup> The bulk of the capacity charge is comprised of (i) the principal and interest payments to be made on the loans used to finance the generation facility and related equipment; and (ii) the IPP’s return on equity (*i.e.*, its profit margin).

<sup>6</sup> The bulk of the energy charge is comprised of the commodity and transportation costs of fuel used to produce each kWh delivered at the delivery point.

In the event that the Purchaser wishes to procure power in different lots, it may be possible to seek separate bids for these lots so that the Purchaser can evaluate and award the lots to different bidders. This situation may arise in instances where, for example, a Purchaser requires emergency power in different parts of the country where different bidders may have comparative advantages and disadvantages, and where no one bidder can provide the lowest possible price for all lots simultaneously. In such cases, the Purchaser can provide the criteria of how it will evaluate the bids for the separate lots in Section III of the Bidding Document Package, pursuant to the requirements of ITB 36.6. However, this issue does not typically arise in most emergency situations because the Purchaser can usually absorb the emergency power purchased onto its grid close to the load center, and use its transmission and distribution network to distribute this power throughout its system. Furthermore, the nature, experience, and sophistication of typical bidders in emergency power procurements are such that they can provide multiple lots of power in different locations for competitive prices. Thus, it is usually unnecessary to structure the solicitation to allow award of multiple lots to different bidders. This is important because it is advisable to try to avoid complications that will invariably arise if the procurement involves multiple lots.

After determining the lowest-evaluated bid, the Purchaser's Evaluation Committee (which is normally the same Evaluation Committee that evaluated the initial statements of qualification and produced the list of shortlisted bidders -- see Section 3.2, above) should conduct a post-qualification analysis of the ability of the selected bidder to undertake the proposed emergency power supply, based on the more detailed information found in the selected bidder's bid document (see ITB 38). Specifically, the Purchaser should ensure that the bidder has a minimum threshold of credit and liquid assets, with the amount of the threshold being dependent upon the size of the procurement (*e.g.*, the larger the procurement, the more credit and liquid assets the bidder should be required to demonstrate). The Purchaser also should ensure that the selected bidder has an appropriate level of experience providing emergency power during the recent past. As a benchmark, bidders should provide evidence of this experience under contracts in the past two to five years for amounts of emergency power, in each engagement, equal to or exceeding the amounts to be procured by the Purchaser. The bidders also should provide evidence of their management staff's experience in dealing with mobilizing, installing, and operating generation facilities in emergency situations. This evidence can be in the form of verifiable curriculum vitae of key staff members.

#### 3.3.2.4 Section IV – Bidding Forms

Section IV of the Bidding Document Package provides the forms that bidders should complete to provide the Purchaser with the requisite information about each bidder and their respective bids. The "Bidder Information Form" requires general information about the bidder, including the bidder's legal name or, in the case of a joint venture, the names of the joint venture partners, and the country, year, and legal address of bidder's registration. Bidders are also required to provide a copy of their formation documents (*e.g.*, articles or memorandum of association, joint venture agreement, etc.) and audited financial reports for the prior three (3) fiscal years. In the case of a joint venture, the joint venture partners are required to provide similar information in the "Joint Venture Partner Information Form" that the joint venture bidder submits in the "Bidder

Information Form.” The joint venture partner information should be required so as to ensure full transparency with respect to disclosure of all the entities with which the Purchaser will transact.

Bidders will submit their bids using the “Bid Submission Form,” and the “Price Schedule Forms,” that are included in Section IV of Part 1 of the Bidding Document Package. It is important that bidders are given the specific instructions provided in the forms, and required to adhere to the forms’ structure and substance in order to ensure transparency and receipt of bids in a manner that will facilitate their evaluation. In this vein, bidders are required to disclose the names of any person(s) to whom a commission, gratuity, or fee has been or is to be paid with respect to the bidding process or the execution of a contract for the procurement. Bidders also are required to confirm their bids by expressly stating (a) the total price of their bids for energy supplied during a twelve-month operating period expressed in terms of capacity, energy, and fuel charges for each kWh supplied at an assumed 100 percent load factor;<sup>7</sup> (b) the total amount of capacity to be made available at that price; (c) the reference fuel price used; (d) the total expected mobilization and demobilization costs; and (e) the contract period during which the capacity will be made available at the bid price.<sup>8</sup>

Bidders also should be required to provide bid security to guarantee that their bid will remain valid for the period required in ITB 21. In the event a bidder refuses to enter into a power purchase arrangement with the Purchaser based on its bid, the Purchaser could collect the bid security as a penalty. The “Bid Security (Bank Guarantee)” is usually completed by a creditworthy commercial bank to guarantee the named bidder’s commitment to keep its bid open for the required validity period. In the event that the bidder fails to honor this commitment, the Purchaser can request that the bank pay the amount of the bid security. In the case of a joint venture bidder, the “Bid Security (Bank Guarantee)” should name the joint venture (as opposed to one of the joint venture partners) as the bidder, because, as the bidder, the joint venture is the entity with the obligation to keep its bid open for the bid validity period. Naming one or more of the joint venture partners, and not the joint venture entity, as the “bidder” creates a risk for the Purchaser that the guarantor (*i.e.*, the commercial bank providing the guarantee) may refuse to honor the guarantee in the event that the joint venture entity does not meet its commitment. In that case, the guarantor would be guaranteeing the obligations of the joint venture partner(s) named in the bid security, not the joint venture entity itself, and, thus, if the joint venture fails to

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<sup>7</sup> The power purchase arrangement with the winning bidder is likely to take the form of a take-or-pay obligation where the bidder will make available the required capacity and the Purchaser will be required to pay for this capacity irrespective of whether the Purchaser actually dispatches the generation facility. This arrangement requires the Purchaser to pay the winning bidder the entire amount of the Capacity Charge bid each month regardless of dispatch. The Energy and Fuel Charges, on the other hand, will be due for each kWh actually dispatched and delivered as agreed in the power purchase agreement. Under the arrangements in the attached sample bidding package, there is no minimum dispatch obligation. Accordingly, if the generation facility was not dispatched in a given month, only the Capacity Charge would be payable.

<sup>8</sup> This attached sample Bidding Document Package is based upon an arrangement whereby the IPP is required to provide a continuous supply of electricity, at 100% load factor. If a different arrangement is contemplated, such as an arrangement whereby the load factor would be variable, it may be necessary to request additional information from the bidders, such as efficiency curves. See Footnote 9 in Section IV of Part 1 of the attached Bidding Document Package.

meet its commitments to the Purchaser, the guarantor arguably could have no obligation to pay the bid security upon demand.

### 3.3.2.5 Section V – List of Eligible Countries

In the event that World Bank Group financing is used for the procurement, paragraph 1.8 of the Procurement Guidelines provides specific rules with respect to the eligibility of bidders from certain countries to bid for Bank-financed projects.

### 3.3.3 Part 2 of the Bidding Document Package: Supply Requirements

There is only one Section in this Part of the Bidding Document Package, as described below.

#### 3.3.3.1 Section VI –Supply Requirements

Section VI of the Bidding Document Package includes the commissioning schedule of, and general technical requirements for, the generation facility. The commissioning schedule should reflect the Delivery Schedule that is part of the Evaluation Criteria in Section III of Part 1, discussed above. In addition, Section VI includes the technical details of the generation facility from which the emergency power is to be generated, including, amongst other matters, (a) the interconnection voltage and method; (b) the site location; (c) site ambient conditions; and (d) facility components and bidder's responsibility for fuel procurement, transportation, and storage.

### 3.3.4 Part 3 of the Bidding Documents Package: Contracts

There are two Sections in this Part of the Bidding Document Package, containing, respectively, the Power Purchase Agreement and the Government Support Agreement that are being offered to the bidders. These two agreements form the core of the procurement and the key legal contracts that the winning bidder (i.e. the power producer) will sign. In addition to these two key agreements, there may be, depending on the nature of the transaction and the conditions and local laws in the country where the procurement is taking place, a number of other subsidiary agreements. These could include an interconnection agreement, a site lease agreement, easement/right-of-way agreements, and/or payments in lieu of taxes agreement(s), all of which may or may not be included as annexes to the GSA. However, in most cases, only the PPA and the GSA will be required to provide for implementation of the emergency project.



### 3.3.4.1 Section VII: the Power Purchase Agreement

The PPA is a legal contract between the Purchaser and seller under which the Purchaser can purchase capacity, energy, and/or ancillary services from the seller. Revenue from these sales helps the seller to raise the financing to pay for the design, installation, ownership, operations, and maintenance of the generation assets to be used.<sup>9</sup> The agreement defines the roles of, and provides the allocation of risks between, the Purchaser and seller. Typically, the seller is responsible for risks associated with the installation, financing, ownership, operations, and maintenance of the generation facility. The Purchaser, on the other hand, is responsible for risks associated with, among other things, electric transmission; fuel commodity and, in certain instance, transportation costs; currency convertibility and exchange rate risk; expropriation; changes in law; and taxes. Because of the short-term nature of an emergency power project, it also may be reasonable to expect the Purchaser to be responsible for securing and permitting the seller unfettered access to the generation facility site, and for pre-existing environmental conditions at the site.

The following is a summary of some of the key provisions of the PPA (with references to the Sections of the sample PPA included with this Toolkit):

<b>Purchaser</b>	Typically, the Purchaser will be a state-owned enterprise authorized by law to provide electric generation, transmission, and/or distribution services in the country.
<b>Seller</b>	Seller will be the winning bidder from the procurement process.
<b>Contract Capacity</b>	Seller will commit to make available to Purchaser <i>[enter the amount in megawatts of emergency power that is required by Purchaser]</i> megawatts (MW) for dispatch, at Purchaser's sole discretion, in each hour of each year during the term.
<b>Purchaser's Obligations</b>	Purchaser will be obliged to purchase the entire <i>[enter the amount in megawatts of power]</i> output of the generation facility by Seller commencing on the commercial operations date of the facility until the expiry of the term of the PPA, subject to the terms and conditions of the PPA. (Sec. 2.1.1).
<b>Seller's Obligations</b>	Seller will be obliged to install, own, operate, and maintain the generation facility commencing on the agreed commercial operations date until the expiry of the

<sup>9</sup> One of the key elements to the successful financing of a generation facility by an IPP is the acceptance of the PPA by the bank(s) which are financing the project (which, depending on the type of financing that may be offered, may include the World Bank).



<b>Obligations</b>	term of the PPA, subject to the terms and conditions of the PPA. Seller will be prohibited from selling or delivering any electric energy from its generation facility to any person or entity other than the Purchaser. (Sec. 2.1.2).
<b>Term</b>	The term of the PPA will commence on the later to occur of (i) the date upon which the PPA and the GSA are executed and delivered by each of the parties and (ii) the date the conditions precedent set forth in the PPA are satisfied or waived by the party to whose benefit they accrue. The PPA will expire on an agreed date after the commercial operations date of the facility, unless earlier terminated in accordance with the PPA's terms. The Purchaser may extend the term of the PPA, by appropriate notice to Seller and on the same terms and conditions, for a number of months not to exceed an agreed period. (Sec. 3.1 and 3.2).
<b>Site License</b>	Purchaser will grant the Seller, without any additional payments, a license to enter and use the site, as described in the PPA, to install, operate, and maintain the generation facility from which to deliver the emergency power required by Purchaser. (Sec. 4.1 and 5.1).
<b>Auxiliary Power</b>	Purchaser will provide to Seller auxiliary power, subject to availability and the Purchaser's ability to deliver such power, for construction, startup, commissioning, testing, and emergencies. Seller will pay Purchaser for such power in accordance with Purchaser's then prevailing tariff rate for industrial facilities. (Sec. 5.4).
<b>Title to Generation Facility</b>	Title to the generation facility will be, at all times, with the Seller. (Sec. 4.8).
<b>Operating Procedures</b>	Purchaser and Seller will jointly develop operating procedures for the generation facility that are consistent with the terms of the PPA, the design and operating limitations of the facility, the design and limitations of the interconnection facilities and the transmission grid, and the draft procedures provided by Seller in accordance with the PPA requirements. These procedures will address, amongst other matters, the operational interface between Purchaser and Seller, including the method for day-to-day communications, key personnel lists, clearances and switching practices, outage scheduling, capacity and energy reporting, and operations logs. (Sec. 5.3).
<b>Scheduled and Forced Outages</b>	Seller may schedule a maintenance outage at a time that is reasonably acceptable to Purchaser. However, Seller is obligated to provide replacement capacity during any scheduled or forced outage to ensure that the available capacity from the generation facility remains equal to or greater than the Contract Capacity. (Sec. 7.4 and 7.5).

<b>Fuel Supply</b>	Seller will be responsible for securing and maintaining a reliable source of supply of fuel of a quality and in quantities sufficient to generation the net energy output dispatched by Purchaser at any one time. Seller will be required to maintain, on or in close proximity to the generation facility at all times, not less than five (5) days supply of fuel. (Sec. 7.8).
<b>Advance Payment of Mobilization/Commission Costs</b>	Subject to Seller's submission of the Mobilization Security, Purchaser will pay Seller an agreed amount to cover Seller's cost for mobilizing and commissioning the generation facility. (Sec. 10.1).
<b>Capacity Payment</b>	For each month during the Term, the Purchaser will pay Seller a Capacity Payment calculated in accordance with Schedule 7 of the PPA. This payment will be based on the actual amount of capacity, not to exceed the Contract Capacity, made available by Seller to Purchaser in each hour during the month. (Sec. 10.2).
<b>Energy Payment</b>	For each month during the Term, the Purchaser will pay Seller an Energy Payment calculated in accordance with Schedule 7 of the PPA. This payment will be based on the amount of energy actually delivered by Seller to Purchaser at the delivery point, and take into account the costs of fuel and variable O&M incurred to generate each kWh delivered. (Sec. 10.3).
<b>Delay Liquidated Damages</b>	If the generation facility does not reach commercial operations by an agreed date for any reason other than a delay caused by the Purchaser, Seller will pay Purchaser an agreed amount as liquidated damages for each week by which commercial operations are delayed beyond the agreed date. However, the cumulative amount of the liquidated damages paid by Seller will in no event exceed an agreed limit. (Sec. 10.5.1).
<b>Availability Liquidated Damages</b>	Beginning on the commercial operations date of the generation facility, Seller will pay Purchaser liquidated damages for each kWh below the Contract Capacity that Seller fails to deliver. The cumulative amount of liquidated damages paid by Seller will in no event exceed an agreed limit. (Sec. 10.5.2).
<b>Energy Supply Liquidated Damages</b>	If the Seller failure to deliver the energy volumes committed to Purchaser in any hour, the Seller will pay the Purchaser an agreed amount as liquidated damages, up to an agreed cumulative limit. (Sec. 10.5.3).
<b>Delivery Performance Security</b>	Within seven (7) days of the date of signature of the PPA, Seller will provide Purchaser security, in the form of an unconditional and irrevocable letter of credit in an agreed amount, to secure Seller's obligations to pay liquidated damages when due. (Sec. 11.1).

when due. (Sec. 11.1).

**Operations Security**

On or before the commercial operations date of the generation facility, Seller will provide to Purchaser security, in the form of an unconditional and irrevocable letter of credit in an agreed amount, to ensure the completion and proper operation and maintenance of the facility. (Sec. 11.2).

**Mobilization Security**

Within seven (7) days of the date of signature of the PPA, Seller will provide Purchaser an unconditional and irrevocable letter of credit valid for a period commencing on the date of issuance and ending on a date that is at least two (2) months after the guaranteed commercial operations date of the generation facility. This security is intended to guarantee repayment of the advance mobilization payments made by Purchaser to Seller in the event that the generation facility is not commissioned by a guaranteed commissioning date. (Sec. 11.3 and 11.4).

**Seller Security**

Purchaser will provide Seller an unconditional and irrevocable letter of credit in an agreed amount to secure Purchaser's obligations to make payments of the Capacity Charge and Energy Charge pursuant to the terms of the PPA. (Sec. 11.5).

**Force Majeure**

The PPA will have a Force Majeure provision that would excuse non-performance of an obligation (except the obligation to make payments when due) as a result of events beyond the control of the affected party. (Sec. 15.1, 15.2 and 15.3).

**Taxes**

Each party will be responsible for all present and future national, local, or other lawful taxes, duties, or other levies resulting of their operations. (Sec. 16.1).

**Events of Default**

The following events will constitute an Event of Default if not cured within any applicable cure period:

- (a) Seller's failure to post and maintain any of the required security;
- (b) Purchaser's failure to provide and maintain Seller's Security.
- (c) Seller's failure to commence construction of the generation facility within twenty (20) days following the effectiveness of the PPA;
- (d) Seller's failure to commission the generation facility by the agreed commercial operations date;
- (e) Either party's failure to make payments when due;
- (f) Either party's bankruptcy, dissolution, or insolvency;
- (g) Over 10 percent reduction of capacity available from the generation

facility when compared to the Contract Capacity;

- (h) Tampering with the metering equipment; and
- (i) Material breach by either party of its respective obligations in the PPA.

In the event of occurrence of an Event of Default, the non-defaulting party will have the right to terminate the PPA, draw on any applicable security, and pursue any remedies available to it in law and/or equity. (Sec. 17.1 through 17.6).

**Governing Law** The laws of the country where the project will be implemented. (Sec. 21.13).

It is important to note that the PPA template provided in this Toolkit envisages a short-term arrangement for the provision of emergency generation. In other words, the agreement contemplates a transaction to address temporary or unanticipated shortfalls in generation supplies to provide the Purchaser the opportunity and flexibility to implement longer term solutions to mitigate the cause of such shortfalls. The agreement is not designed or intended to govern long-term power sales between the counterparties.

#### 3.3.4.2 Government Support Agreement (GSA)

The GSA provides the winning bidder (i.e. the seller of electricity) with government guarantees against certain risks within the government's control. For example, the GSA requires provides that the government will waive import and re-export duties and taxes on the generation equipment used in seller's facility. The government also must provide all consents, licenses, and approvals required under national laws for seller to construct, own, operate, and maintain the generation facility, and must indemnify seller against costs incurred by seller resulting from changes in law that have a material adverse effect on seller's facility.

The following is a summary of some of the key provisions of the GSA (with references to the Sections of the sample GSA included with this Toolkit):

**Government** The government of the country in which the project will be implemented.

<b>Company</b>	The winning bidder and counterparty to the PPA (i.e. the seller).
<b>Term</b>	The term of the GSA will commence on the later to occur of: (a) the date that the last of the PPA and GSA is signed and delivered by each of the parties thereto; (b) the effectiveness date of the PPA. Unless early terminated pursuant to the provisions of the GSA, the term will expire on the later of (i) an agreed date and (ii) the date when the parties have fulfilled their obligations under the GSA. The term of the GSA will be extended for the same period as any extensions of the PPA, and may thereafter be extended further for an additional period on terms mutually agreeable to both parties. (Sec. 2.1-2.2).
<b>Fuel Purchase and Equipment Transportation</b>	The Company will ensure that none of the fuel it purchases for use in the generation facility is resold on the local market. (Sec. 3.4). The Company will also make all arrangements for the delivery and receipt of all equipment required to construct, operate, and maintain the generation facility and for transportation of this equipment to the project site as necessary. (Sec. 3.5).
<b>Consents and Approvals</b>	The Company will be responsible to complete and file all the required applications for all applicable consents and approvals required to implement the project. (Sec. 4.1). The Government will use all reasonable efforts to expedite or cause to be expedited consideration of these applications and issuance or re-issuance of the required consents and approvals by all applicable authorities. (Sec. 4.3).
<b>Government Support</b>	With support from the World Bank, as necessary, the Government will guarantee the obligations of the Purchaser under the PPA to make payments when due. (Sec. 5.2). The Government also will waive customs import/export duties and taxes on the generation facility's equipment, fittings and accessories, spare parts, tools, consumables, and other items required by the Company to operate and maintain the facility. (Sec. 5.3).
<b>Tax</b>	The Company will be responsible for all applicable taxes, fees, and charges, except those specifically provided for in the GSA. (Sec. 8.1). The assessment or imposition by the Government of any tax on the Company or its operations will not constitute a breach or default under the GSA so long as such tax is assessed, imposed, or applied generally to all companies operating within the country in accordance with applicable law. (Sec. 8.2).
<b>Change in Law</b>	The Government will reimburse the Company for any costs incurred by the Company as a result of compliance with any changes in law that has a material adverse effect on the generation facility, provided, however, that the Company demonstrates the costs of compliance and that the Company makes any claims for reimbursement within three (3) months of the date when the Company incurs such costs. (Sec. 9.1). For the avoidance of doubt, the Government will not have any obligation to reimburse the Company for any costs incurred by the Company as a result of a change in tax as discussed above. (Sec. 9.2).

**Company Events of Default** The following will constitute a Company Event of Default:

- (a) Any statement, representation, or warranty by the Company proving to be incorrect, in any material respect, when made, and such failure has a material adverse effect on the Company's ability to perform its obligations under the agreement or on the obligations or liabilities of the Government;
- (b) Any breach by the Company of its obligations in the agreement that remains uncured after sixty (60) days from the date of notice of such breach, provided that the Company may have additional time to cure the breach if the Company has commenced and is diligently pursuing the cure and more than sixty (60) days are reasonably required to effectuate the cure;
- (c) The Company's failure to make any payments when due under the agreement or the PPA that remains unpaid for thirty (30) days after their due date;
- (d) Revocation of licenses or consents during to an act or omission by the Company;
- (e) The PPA is terminated by the Purchaser for breach by the Company under that agreement; and
- (f) The assignment or transfer of the Company's rights or obligations in the generation facility without obtaining the prior written consent of the Government, or the transfer, conveyance, loss, or relinquishment of the Company's right to own and/or operate the generation facility or to occupy the site without the prior written consent of the Government. (Sec. 10.1).

**Government Events of Default** The following will constitute a Government Event of Default:

- (a) Any material breach by the Government of the GSA that remains uncured after sixty (60) days from the date of notice by the Company of such breach, provided that the Government may have additional time to cure the breach if the Government has commenced and is diligently pursuing the cure and more than sixty (60) days are reasonably required to effectuate the cure;
- (b) The PPA is terminated by the Company for breach by Purchaser under that agreement; and
- (c) Dissolution of Purchaser under the PPA, except for an amalgamation, reorganization, reconstruction, or further privatization where the

Government, without interruption, arranges to provide financial assistance to the succeeding entity or entities on substantially the same terms and conditions as are applicable to the Purchaser. (Sec. 10.2).

- Remedies** Upon the occurrence of an Event of Default, the non-defaulting party may, at its option, terminate the GSA by sending notice of such termination to the defaulting party. Nonetheless, if the defaulting party is able to cure the default within ten (10) days from the date of delivery of the termination notice, the non-defaulting party will not have any rights of termination as a result of such cured default. (Sec. 10.3).
- Force Majeure** The GSA has a Force Majeure provision that excuses non-performance of an obligation (except the obligation to make payments when due) as a result of events beyond the control of the affected party. (Section 11.1, 11.2 and 11.3).
- Governing Law** The laws of the country where the project will be implemented. (Sec. 16.12).

### 3.4 The Bid Evaluation Report

Once submitted by bidders, the bids must be evaluated in a comprehensive, transparent, and reasonable manner. At the end of this process, a Bid Evaluation Report should be issued that provides, at a minimum, the following:

- a description of the project;
- procurement process Information, including
  - copies of the GPN and SPN;
  - a list of companies responding to the advertisement;
  - the short-list of companies that were chosen to receive the Bid Documents Package, and a summary of the prequalification information relied upon and methodology used to select companies on the short-list;
  - a summary of any pre-bidding conferences and information disseminated therein;
  - a list of the bidders submitting bids (including name, address, contact person, and jurisdiction of registration of each bidder), the official date and time of bid submission, and compliance status against the bid submission deadline;
- a tabular summary of bids submitted and any applicable conditions on the bids;

- the evaluation of each bid against the bid evaluation criteria, including explanation of the Bid Evaluation Committee’s assessment of the information submitted by each bidder;
- a discussion of any due diligence conducted by the evaluation committee on the bidders, and any conclusions reached with respect to any information discovered as part of this effort; and
- a ranking of submitted bidders in accordance with the bid evaluation criteria, and a recommendation for any award, including reasoning for the recommendation.

The Bid Evaluation Report would include completed versions of the Bid Evaluation Forms developed by the Bank to meet the foregoing criteria. These forms are included on the CD-ROM enclosed with this Toolkit and on the PPPIRC website at [www.worldbank.org/pppiresource](http://www.worldbank.org/pppiresource).

Once completed, the Bid Evaluation Report should be shared with the Bank staff for review for consistency with the Bank’s Procurement Guidelines. When this review is completed, the Bank may issue a “no objection” letter for award of the contract or may request additional information/clarifications from the Borrower to fully assess the evaluation process. It is important to note that, although the Bank’s staff can, under certain circumstances, advise the Borrower on best practices in undertaking the evaluation process based on the Bank’s experience, the Bank staff are prohibited from participating in the evaluation process itself, which is the responsibility of the Borrower. The Bank staff’s review is limited to ensuring that the process comports with the requirements of the Procurement Guidelines, a criteria required for issuance of the Bank’s “no objection” letter, which is likely to be a condition of the Bank’s continued funding of the project.



#### 4. INDICATIVE FINANCING & PROCUREMENT SCHEDULE

The schedule for undertaking an emergency procurement depends on a number of variables that are almost entirely dependent on cooperation and coordination between the Bank and the Borrower. The steps required to complete the process are interrelated and involve dissemination of information and documents from the Borrower to the Bank's staff for review and comments. With an extremely high level of collaboration and intense effort, it may be possible to complete the process of applying for and securing Bank support (subject to the type and requirements of the support the Borrower seeks from the Bank) and procure emergency generation in 20 weeks or less. The following indicative schedule provides an example of the activities to be completed within this timeframe.

