Manual of Best Practice Principles for Independent Power Producers

Endorsed by APEC Energy Ministers,
Edmonton, Canada, August 1997

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Prepared by the APEC Energy Working Group
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Contents

Foreword **7**

Principles of Best Practice **11**

Annex **17**

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APEC MEMBER ECONOMIES

APEC Member Economies:

Australia
Brunei Darussalam
Canada
Chile
People's Republic of China
Hong Kong, China
Indonesia
Japan
Republic of Korea
Malaysia
Mexico
New Zealand
Papua New Guinea
Republic of the Philippines
Singapore
Chinese Taipei
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India
Mongolia
Pakistan
Peru
The Russian Federation

APEC Manual of Best Practice Principles for Independent Power Producers

FOREWORD

The Genesis of this Document

In response to the urgent need to encourage and facilitate greater business sector investment in power sector infrastructure projects in the region, APEC Energy Ministers, at their inaugural meeting in Sydney in August 1996, directed the APEC Energy Working Group (EWG) to implement, as a matter of the highest priority, the work program of the Ad Hoc Business Forum on Regional Cooperation for Power Infrastructure (the Business Forum). This "Manual of Best Practice Principles for Independent Power Producers" (IPPs) is a direct product of that work program.

The manual has been developed by the EWG in consultation with the Business Forum, the Electricity Regulators' Forum and the consultancy team of Norton Rose and Worley International Limited, who were contracted by the EWG to prepare the comparative study and report *Developing Transparent, Efficient and Effective Procurement Processes for Power Infrastructure in APEC Member Economies*. This report was completed in May 1997 and forms the main background material for this manual.

An APEC Best Practices Workshop for IPPs was held at the East-West Center in Honolulu, Hawaii on 23-24 April 1997, to discuss the consultants' preliminary findings. The workshop was chaired by Dr Sippanondha Ketudat, Senator and Chairman of the National Economic and Social Development Board of Thailand, and attended by 90 participants from 14 APEC member economies across the region. Workshop participants included senior representatives of the business and financial sectors (including multilateral lending agencies), regulators, members of the IPP industry, lawyers and advisers, and relevant Government officials.

The Developing Role of IPPs

IPPs have been a major source of new power generation capacity in many of the developed market economies in the APEC region. Faced with serious capacity and energy shortages that cannot be remedied from public resources, many developing economies have also turned to private investors to

expand electricity supply. In particular, this movement towards the use of IPPs has met a large and immediate financing gap in developing member economies by mobilising direct foreign investment in the power sector.

IPPs in developing economies have tapped new forms of financing in international capital markets. Properly structured IPP projects can also stimulate the development of local capital markets and bring the discipline of the capital market to support competition in the power sector.

Private sector involvement in the power sector has also led to impressive construction and operational efficiency gains, and it has often been preceded by reform programs addressing the structure and ownership of the power sector.

IPPs are not the only answer to power sector development needs in APEC member economies but, handled correctly, they can undoubtedly make a major contribution and are an attractive option for financing future investments in power infrastructure. To date, a majority of IPPs have been developed in the absence of predictable and transparent regulatory mechanisms - an approach which has attracted a limited volume of capital to the sector. To increase investment in the sector, member economies will need to recognise that further development towards competitive markets will take place over time.

Critical Success Factors

Based on the material submitted to the consultants and the comments received at the Best Practices Workshop, the Workshop Chairman agreed that these critical success factors are necessary for a successful IPP outcome: transparency, predictability, reduction of risk and encouragement of competition. Reduction of risk in this context means the elimination of uncertainties and other factors which can unnecessarily increase the cost of IPP development.

Of equal importance is the ability of IPPs to recover a reasonable wholesale price for the electricity generated, which is in turn dependent on the existence of a commercial pricing environment for retail as well as wholesale electricity supply.

Where these features have been incorporated into the institutional and regulatory frameworks, procurement practices, power purchase agreements (PPAs) and other agreements and financing arrangements, IPP programs have had the following desirable features:

- Where conducted in a fully transparent environment, IPPs have promoted open competition and thus encouraged lower cost development;
- Where projects have been soundly structured, most of the project risks have been the responsibility of the private sector;

- The private sector has provided wider access to capital markets, better management skills, access to latest technology and generally implemented projects faster than the public sector;
- Project financing is "off" the government's balance sheet, allowing governments to allocate scarce resources to other priority areas such as rural development, poverty alleviation, education and health; and
- Governments have been able to benchmark existing public sector units against comparable private sector operations, for example in power generation. This is resulting in both IPPs and existing public utilities improving their performance.

Encouraging Power Infrastructure Investment

The principles outlined in this manual are not intended as an attempt to harmonise practices on IPPs throughout the region - that would not be realistic. However, to the extent that principles of best practice are more widely known and better understood, this document will help to address the issue outlined by APEC Energy Ministers at their first meeting in Sydney in August 1996. That is, the need to reduce business costs and create conditions that efficiently allocate capital to the power infrastructure sector.

APEC Energy Ministers:

- recognised that this manual provides guidelines for best practice in IPP development,
- endorsed the principles outlined,
- encouraged APEC members to consider the application of these non-binding principles in line with their own domestic policies.

Edmonton, Canada
27 August, 1997

AGREED PRINCIPLES OF BEST PRACTICE FOR IPPs

IPPs (Independent Power Producers) are defined here as typically limited-liability, investor-owned enterprises that generate electricity either for bulk sale to an electric utility or for retail sale to industrial or other customers with certain conditions (based on the World Bank definition).

The following agreed principles of best practice for IPPs are based on prevailing regional and international best practice in terms of the regulatory, institutional and procedural arrangements for IPPs. They are structured around four themes:

- institutional and regulatory structures;
- tender/bid processes and evaluation criteria;
- power purchase agreements and associated tariff structures; and
- financing and its implications.

As a general rule, each of the agreed principles reflect the critical success factors considered necessary to underpin a successful IPP outcome: transparency, predictability, reduction of risk and encouragement of competition.

The best practice features associated with each of the agreed principles are explained in more detail in the Annex. The incidence of the best practice features in APEC member economies was examined by the consultants in their comparative study and the results included as an annex to their report.

Institutional and Regulatory Structures

1. Energy sector policies formulated to create a stable framework for power sector development and to facilitate competition through options such as power sector reform and restructuring, and the separation of generation and transmission functions.

Best practice features include:

- *Established legislative framework*
- *Clear energy sector policies and framework for policy-making*
- *Separation between regulator and utility*
- *Separation between generation and natural monopoly transmission functions*
- *Competitive market in electricity generation and energy supply*

- *Complementary development of the transmission grid, including through private investment*
- *Environmental and other public policy objectives incorporated and made transparent to electricity sector participants*

2. Reforms which lead to electricity utilities functioning as commercially viable entities under a regulatory framework which ensures fair treatment between the utility and private sector participants.

Best practice features include:

- *A commercial environment with performance targets set for the publicly owned utilities, commercial tariff policies in place and a competitive and stable market in fuel supply*
- *Laws enabling foreign ownership and control of IPPs*

3. Simplification of the approvals process for IPP projects and the underlying regulatory framework in order to reduce uncertainties and delays - this might involve handling the process through a coordinating agency.

Best practice features include:

- *Consistent central and provincial government regulations and approval processes*
- *Clear, published and transparent approvals process*
- *Independent regulation*

Tender/Bid Processes and Evaluation Criteria

4. Procurement processes for IPP projects which form an integrated part of energy sector development and reflect sound environmental policies to ensure the identification of appropriate projects.

Best practice features include:

- *Rules governing selection of projects matched to energy, industry and environmental policies, as well as power development planning*
- *A diversified program of generation capacity expansion*

5. Formulation and publication of procedures and objective evaluation criteria for awarding power projects, which are designed to foster competition and cost-effective development.

Best practice features include:

- *Full bid information packages and standard documentation available for bidding and negotiation*

6. Competitive bid procedures implemented for selected projects to be awarded to the private sector. (Recognising that alternative procedures, including the consideration of unsolicited bids, may be appropriate in certain circumstances).

Best practice features include:

- *Competitive bid process with published timetable and independent scrutiny*

7. Competitive bid procedures structured to include pre-qualification of bidders and pre-bid conferences.

Best practice features include:

- *Bid securities set at an appropriate level*

8. Provision of detailed information in bid documents regarding the utility's planning requirements and its analysis (for example, of avoided cost) in relation to the projects being bid, so as to encourage genuine competition between bidders.

Best practice features include:

- *Utility's views indicated in bid documents*
- *Information available to bidders on preferred sites and technical parameters*

Power Purchase Agreements (PPAs) and Associated Tariff Structures

9. Retail tariffs set to reflect the economic cost of supply as a foundation for the commercial viability of power utilities, including IPPs.

Best practice features include:

- *A commercial environment, exemplified by adequate tariff structures*
- *Wholesale electricity price used as the basis for negotiating PPAs, rather than the rate of return on equity*

10. PPAs incorporating mechanisms for allowing transition to competitive

electricity markets. These mechanisms need to protect the financial integrity and viability of the project, particularly once financial close is achieved.

Best practice features include:

- *PPA tariff structure that promotes competition among generators (both IPPs and utilities)*

11. Allocation of risks under PPAs reflecting parties' ability to manage risk and the ability of markets to provide cover, for example insurance.

Best practice features include:

- *Provision in the PPA, regulatory framework or government support agreement of suitable allocation of risks associated with:*
  - *market risk / non-dispatch*
  - *foreign exchange rate changes*
  - *currency convertibility/availability and transferability*
  - *changes in fuel prices*
  - *costs due to change in law*
  - *political risk*
- *PPA includes provision for payments on termination to cover debt/ equity/ return on equity*
- *Effective governing law*
- *Effective dispute resolution and enforcement mechanisms*

Financing and its Implications

12. Clear regulatory, taxation and foreign exchange regimes established to facilitate private investment in the power sector.

Best practice features include:

- *Clear mechanisms for currency convertibility and remittances*
- *Accounting regime in place and financial information on power purchaser and other parties available*

13. Enforceable legal frameworks for creating security over project assets, applied fairly to all participants.

Best practice features include:

- *Licenses, approvals, the PPA and other documents include step-in rights and right to assign (as security)*

14. Improvement of credit standing of power purchasers to underpin the bankability of IPPs.

Best practice features include:

- *Project structure providing determined income stream*
- *Participation of developers with track record*
- *Availability of commercial insurance and political risk insurance*
- *If needed, availability of support from international lending agencies*

15. Implementation of policies to encourage the development of domestic capital markets and institutions and diversify the sources of domestic capital - for example, pensions and insurance funds - available for equity investment in electricity projects.

ANNEX: FEATURES OF BEST PRACTICE FOR IPPs

Note: A fuller discussion and explanation of best practice principles, case studies and an examination of features of actual practice in a number of member economies are contained in the consultants' report. Copies of this report can be obtained from the APEC Secretariat.

Institutional and Regulatory Structures

1. Energy sector policies formulated to create a stable framework for power sector development and to facilitate competition through options such as power sector reform and restructuring, and the separation of generation and transmission functions.

Best Practice Feature	Comments
• *Established legislative framework* • *Clear energy sector policies and framework for policy-making*	Investment in IPPs can proceed even before a predictable and transparent regulatory mechanism is in place by providing for regulation in contractual documents. Nonetheless, basic principles do need to be established to create an environment that will attract IPPs, including the articulation of an unambiguous private power policy. While recognising that member economies have different priorities and are not at the same stages of development, it is suggested that legislative and regulatory frameworks to encourage business sector involvement in the power sector should have the following characteristics: • *legislation - the relationship between government and the power industry embodied in a published law or regulation* • *regulations - establishing equal regulatory treatment of the utility and the business sector* • *regulatory bodies - separation of the regulatory and commercial functions of public utilities* • *autonomy and accountability - public utilities run as autonomous businesses subject to performance targets* • *co-ordination - energy policy that is well-tested, publicly stated and consistent with other sector policies* • *consistency - internal consistency among regulatory structures, for example, between provincial and central government approvals procedures* • *transparency - clear processes for making regulations and subject to independent review.*

Best Practice Feature	Comments
• *Separation between regulator and utility*	To help ensure predictability and consistency of regulation and fair and equal treatment of IPPs and utilities, independent regulatory agencies could be established for the purpose of separating the regulatory and commercial functions of utilities and the regulatory and policy functions of the government. Alternatively, the same result can be achieved through appropriate laws and transparent and separate accounting.
• *Separation between generation and natural monopoly transmission functions* • *Competitive market in electricity generation and energy supply* • *Complementary development of the transmission grid, including through private investment*	In the last two decades the concept of "unbundling" previously vertically integrated power utility's operations into separate generation, transmission, and distribution operations has been adopted as a means of introducing competition into as many elements of power supply operations as possible. This practice encourages competition in the generation market and can lead to significant efficiency gains for the entire system. However, investment in the generation market alone will not be sufficient to meet the continuing high rates of demand for electricity in many APEC member economies. Complementary development of the transmission grid and distribution system needs to be promoted as new generation comes on-line to avoid creating a "downstream" bottleneck to getting electricity to the market. This can be facilitated by a consistent and comprehensive energy sector policy framework. Consideration could also be given to the potential for interconnection of adjacent electricity transmission grids across state and national borders and the development of power pools to achieve operational efficiencies, conserve fuels and improve environmental impacts. In view of the potential benefits, there would be considerable merit for member economies in promoting regional cooperation and interconnections of electricity grids.
• *Environmental and other public policy objectives incorporated and made transparent to electricity sector participants*	Best practices for environmental policy with respect to the electricity sector include consistent environmental standards developed through a public participation process, fairly applied to all sector participants, and placing energy efficiency and conservation options on an equal basis with supply-side options, such as through all-source competitive bidding programs. As electricity sector reform processes mature, other options that deserve consideration include: emission caps and tradable permits; developing integrated resource planning procedures to support development of least cost resources consistent with public policy requirements; and portfolio standards for energy efficiency and renewable energy technologies.

2. Reforms which lead to electricity utilities functioning as commercially viable entities under a regulatory framework which ensures fair treatment between the utility and private sector participants.

Best Practice Feature	Comments
• *A commercial environment with performance targets set for the publicly owned utilities, commercial tariff policies in place and a competitive and stable market in fuel supply*	Commercial in this context means, amongst other things, a realistic retail pricing environment for electricity and for fuel, and a sound operating and financial structure on the part of the purchasing utility. A sound pricing environment enables IPPs to find their natural and efficient place in the development of the power sector whereas, when price distortions are present, it can be expected either that IPPs will be excluded or that there will be an inefficient use of resources. The lack of a "level playing field" can also be a problem; IPPs cannot compete fairly unless, for example, the players (the IPPs and the existing state-owned utility) have equal access to sites and fuel markets, equal access to system operation procedures, and equal treatment under the tax regime and regulatory regimes.
• *Laws enabling foreign ownership and control of IPPs*	A legal framework enabling foreign ownership and control of IPPs reduces the perceived "country risk" assessment associated with private power projects, hence reducing financing costs, leading to improvements in the competitiveness of the sector.

3. Simplification of the approvals process for IPP projects and the underlying regulatory framework in order to reduce uncertainties and delays - this might involve handling the process through a coordinating agency.

Best Practice Feature	Comments
• *Consistent central and provincial government regulations and approval processes*	Consistency of central and provincial government regulations and approvals processes avoids uncertainty, duplication of effort and costly negotiation time, all of which can be critical to the viability of a particular IPP project. Also, the approvals processes in some member economies would benefit from greater co-ordination and rationalisation. A "lead agency" or "one-stop shop" procedure for obtaining the necessary approvals can be helpful in this respect.

Best Practice Feature	Comments
• *Clear, published and transparent approvals process*	There remains a need to publish clearly the permits required for a power project, with details of each of the relevant approving authorities and the scope of its jurisdiction so that the project developers have a reasonable chance to determine whether a proposal is likely to meet the requirements for approval. Consideration may be given to incorporating in tender processes mechanisms for granting pre-approvals of projects put out to bid, subject to the winning bid meeting the published requirements for approval, thereby reducing risks of regulatory uncertainty/delay.
• *Independent regulation*	A regulatory agency with statutory independence from the government and the electricity utilities is desirable in the longer term for ensuring the consistent, fair and equal treatment of IPPs and utilities.

Tender/Bid Processes and Evaluation Criteria

4. Procurement processes for IPP projects which form an integrated part of energy sector development and reflect sound environmental policies to ensure the identification of appropriate projects.

Best Practice Feature	Comments
• *Rules governing selection of projects matched to energy, industry and environmental policies, as well as power development planning*	The selection criteria for IPP projects in the tender/bid process should reflect the government's policies pertaining to the power sector and the environment, and must be clearly spelled out in the bid documentation. This will help ensure that potential bidders know the "rules of the game" before proposing specific projects which meet these criteria. In this way proposed projects are more likely to contribute towards furthering the government's perceived development objectives.
• *A diversified program of generation capacity expansion*	An IPP should ideally be part of an overall deregulation program and awarded in an open, competitive market. Transparent bidding processes will also help in the selection of the least cost project option. An ongoing dialogue with the business and financial sectors should be maintained as the program is implemented.

5. Formulation and publication of procedures and objective evaluation criteria for awarding power projects, which are designed to foster competition and cost-effective development.

Best Practice Feature	Comments
• *Full bid information packages and standard documentation available for bidding and negotiation*	The package of bid documents should contain up to date general information on investing in the power sector in the relevant economy and detailed description of the type of proposals sought, with guidance to bidders on the information they are to provide, the relative importance attached to the various aspects of the proposal and a clear description of the specific evaluation criteria to be applied in assessing the bids. Price should be only one of several evaluation criteria. The package would also contain a model PPA (power purchase agreement), indicating the utility's preferred position with respect to the allocation of risks between the utility and the IPP. It is helpful to foreign investors if the documentation in bid packages is available in English as well as the local language. The adoption of standard model documents serves several useful functions, as it promotes consistency of procedure and understanding of the government's and/or the utility's desired position, and aids the creation of a level playing field by reference to which bidders may be assessed - the extent of their proposed amendments to the documents being one of the evaluation criteria. The evaluation process would benefit from streamlining (as well as the permitting process referred to at principle 3 above). Evaluation by experienced and professional personnel encourages greater market confidence in the process.

6. Implementation of competitive bid procedures for selected projects to be awarded to the private sector (recognising that alternative procedures, including the consideration of unsolicited bids, may be appropriate in certain circumstances).

Best Practice Feature	Comments
• *Competitive bid process with published timetable and independent scrutiny*	There is clear evidence to show that competitive bid processes can result in lower prices in certain member economies. Other advantages include the greater transparency of the procedure, and the ability of the government to be able to demonstrate convincingly that it has procured power at the lowest obtainable cost and on the best possible terms. Procurement procedures should, nonetheless, recognise the particular circumstances of the member economy and its stage within the reform process.

7. Competitive bid procedures structured to include pre-qualification of bidders and pre-bid conferences.

Best Practice Feature	Comments
• *Bid securities set at an appropriate level*	

8. Provision of detailed information in bid documents regarding the utility's planning requirements and its analysis (for example, of avoided cost) in relation to the projects being bid, so as to encourage genuine competition between bidders.

Best Practice Feature	Comments
• *Utility's views indicated in bid documents* • *Information available to bidders on preferred sites and technical parameters*	There is a range of possibilities open to utilities which have decided to opt for a competitive tender process and are drawing up their request for proposals (RFP). In a completely open tender, bidders will be asked to propose megawatts to add to the system, and will be relatively free to make their own decisions as to site location, technology, fuel, plant size, plant availability and other elements. At the other extreme, in a specific tender, bidders will be asked to propose a plant that has been determined as a step in the utility's expansion plan, and may be constrained by the utility's specification of all or any of the project elements - size, fuel, site, load factor, tariff profile and so on. Although an open tender will maximise opportunities for the utility to benefit from the ability of the private sector to derive its own solutions, more often than not it seems that some level of restriction is advantageous. A more restricted tender will focus bidders on specific proposals, which will fit in with the utility's strategic plan, and will offer the utility an opportunity to provide site-specific and fuel-specific detail to bidders, resulting in a situation where the same detailed information is available to all players. This is fairer and has the added benefit of resulting in more competition as bidders will be able to cost their proposals more effectively with more information which can be factored into their respective bids. An additional benefit of a more restricted tender is that it may enable governments to put approvals in place so as to clear projects in advance, thus offering a complete “package” to bidders and improving the project’s viability.

Power Purchase Agreements (PPAs) and Associated Tariff Structures

9. Retail tariffs set to reflect the economic cost of supply as a foundation for the commercial viability of power utilities, including IPPs.

Best Practice Feature	Comments
• *A commercial environment, exemplified by adequate tariff structures*	One of the critical enabling factors for IPPs is the ability to recover a reasonable wholesale price for the electricity generated. However, the fixing of a reasonable wholesale price requires in turn that a commercial pricing environment exists, including for retail electricity supply. Without this, the public sector utility purchasing the power from the IPP will not be commercially viable. As stressed by the World Bank, tariffs should be determined by two basic principles: they should reflect the economic costs of supply and should be set so as to make power utilities financially viable. To achieve the above objectives, the agreed tariff structure also needs to minimise cross-subsidies and, where they exist, make them transparent.
• *Wholesale electricity price used as the basis for negotiating PPAs, rather than the rate of return on equity*	

10. PPAs incorporating mechanisms for allowing transition to competitive electricity markets. These mechanisms need to protect the financial integrity and viability of the project, particularly once financial close is achieved.

Best Practice Feature	Comments
• *PPA tariff structure that promotes competition among generators (both IPPs and utilities)*	The conventional tariff structure under a PPA is somewhat rigid, in the sense that it "locks in" assumptions about funding costs and other fixed costs which may (indeed, can be expected to) change over the life of the contract, which can be as long as 30 years. Tariffs should be structured to reward the IPP for operational efficiencies and share the benefits that result from lower financing costs and risk reduction methods. No single tariff structure is preferable for all projects, although the two part tariff (ie. comprising a capacity charge and an energy charge) better enables the utility to operate a "merit order" dispatch system, meeting load at the lowest cost by bringing generation plant on stream in order of marginal cost. The form of tariff chosen should ensure that the plant is operated as far as possible in its correct merit order, thus encouraging competition amongst generators.

	Some economies, including examples within APEC, such as the State of Victoria in Australia, operate a competitive wholesale pool whereby generators bid against each other and so determine prices. The bids will establish the dispatch merit order, and the energy price established in the spot market will be determined by the bid of the marginal generator dispatched in each half hour.

11. Allocation of risks under PPAs reflecting parties' ability to manage risk and the ability of markets to provide cover, for example insurance.

Best Practice Feature	Comments
• *Provision in the PPA, regulatory framework or government support agreement of suitable allocation of risks associated with:* - *market risk/non-dispatch* - *foreign exchange rate changes* - *currency convertibility/availability and transferability* - *changes in fuel prices* - *costs due to change in law* - *political risk*	*Market risk/non-dispatch* If the market price of electricity shifts during the life of the PPA, the IPP will continue to receive the price set out under the PPA. This will provide the determined income stream from which to meet debt financing costs. Above this point, the IPP should be able to accept some market risk. From the power purchaser's perspective (and that of participants in general, interested in fostering an open and competitive market) , there is a case for saying that the PPA should incorporate a mechanism for anticipating changes to a more open and competitive market structure, although the added complexity this may introduce into negotiations needs to be recognised as a potential obstacle to this approach. *Foreign exchange rate changes; currency convertibility/availability and transferability* IPPs may involve foreign currency exposure in the construction phase, because of the need to import technology, and during the operation phase in relation to fuel costs because fuel will be imported or, even if supplied from an indigenous source, the fuel may be priced by reference to US dollar prices on the global market. The financing of IPPs may involve foreign currency debt where the local market has not the depth of international markets or where interest rates or debt tenors may be unattractive. There will be a foreign exchange risk where the debt servicing (and other payment obligations under the project contracts) is in foreign currency but the payments to the IPP under the PPA are in local currency. Where this foreign exchange mismatch occurs, the investor and developer will seek to pass through the foreign exchange risk to the offtaker under the PPA, with provision for tariff adjustment. An alternative is partial adjustment of the tariff under the PPA within a specified band, so that the risk is partially passed through and shared by the IPP and offtaker.

Changes in fuel prices

The basic position usually is that fuel is a "pass through", although the energy charge may not reflect the actual fuel cost incurred by the IPP, if the PPA is constructed assuming a given efficiency (which may be adjusted for degradation), in which case the IPP assumes the risk of over or under performance. The risk of fuel supply failure requires consistency between the provisions in the fuel supply agreement and the PPA. A utility will be unwilling to pay for availability to an IPP unable to generate because of fuel supply interruption, and mechanisms are necessary to bridge this gap, for example, facilities for the plant to operate on back up supplies or alternative fuel when the primary fuel supply is interrupted.

Absence of a competitive market in fuel supply may result in a monopoly supplier not accepting seller's liability. The consequence is that the risk of paying the higher cost of secondary fuel if the primary fuel supply is interrupted is passed through to the utility, which results in higher cost to consumers.

Costs due to change in law

If there is a change in applicable licensing or environmental requirements or change in the regulation governing the operating procedures of the plant (for example, through the introduction of a grid code), which would adjust the IPP's costs of producing power, the price under the PPA is adjusted (subject to any negotiated minimum amounts or exceptions).

Political risk

Political risk (force majeure) clauses will usually provide cover against expropriation. The degree to which risks of political instability such as war, terrorism or riot are passed through to the power purchaser will vary. The force majeure clause will commonly excuse performance of the contract if a change in law or regulation makes it impossible to fulfill, or if the IPP is subjected to arbitrary or unilateral government action, such as revocation of licences or permits. The extent to which force majeure risks generally are allocated under the project contracts will be a matter for commercial negotiation, and insurance will play an important role.

It may be possible for the PPA to be extended where construction of the power plant is delayed or operations are subsequently interrupted by force majeure.

Best Practice Feature	Comments
• *PPA includes provision for payments on termination to cover debt/ equity/ return on equity*	Termination rights are a significant ingredient of a PPA's protection against regulatory risk. Some economies have imposed a regulatory obligation on the utility to buy power within pre-defined parameters, placing power projects in a strong position. Others involve a centralized power procurement agency which runs mandatory tendering processes, which also tend to weaken the monopoly buyer's bargaining position. However, in most developing markets there is no such obligation and the host utility is in practice in a very strong bargaining position. The level of termination and expiry payments is ultimately critical in defining the degree of protection the PPA gives against regulatory and other risks. The protection of lenders is a major feature of termination payment structures. Some power purchasers rightly point out that this structure protects lenders not just against regulatory risks, but also against the risk of non-performance by the project and for that reason there is sometimes a deduction from the debt floor on any termination payments. The treatment of equity and equity returns on termination varies considerably and may not necessarily protect equity return in full.
• *Effective governing law* • *Effective dispute resolution and enforcement mechanisms*	As an alternative to local law, English law and New York law are often chosen for the documentation for business sector / private investment in power projects, even in cases where none of the participants in the project is based in the relevant jurisdiction. The added certainty of applying a well developed body of law relating to contracts is usually the primary reason for choosing such a governing law. Another reason is the availability of legal expertise qualified to advise on the meaning of complex documents under these laws. Internationally applied legal systems such as English law also enable parties from differing jurisdictions to agree on a "neutral" system of law, thereby avoiding one or other party seeming to be favoured by choice of its local law to govern the relevant project contracts. A related aspect of the legal structure of a PPA is the mechanism for resolution of dispute enforcement procedures. Again, in projects involving cross border participation, the desire to avoid one or other party being favoured by the choice of forum may result in an international centre being chosen. Singapore, for example, offers a well developed structure for conducting arbitration disputes. The absence of rules under local law for recognition of judgments by foreign courts / arbitration centres is an impediment to adoption of the above approach and may, therefore, add to the perceived regulatory risks attaching to a project.

12. Clear regulatory, taxation and foreign exchange regimes established to facilitate private investment in the power sector.

Best Practice Feature	Comments
• *Clear mechanisms for currency convertibility and remittances*	Without the ability to convert local revenues into foreign currency (in which the project company may be required to pay its lenders and suppliers), a project may not be able to be financed. Currency devaluations equally may result in the project being unable to meet its finance obligations. Currency availability and transferability can also be an issue: convertibility does not necessarily imply transferability in some economies. Therefore these aspects may also need to be considered.
• *Accounting regime in place and financial information on power purchaser and other parties available*	In a project finance transaction for a power plant, lenders (as well as developers) will take a keen interest in the terms of the project contracts and the financial standing and guarantees provided by the counter-parties to such project contracts. Lenders will need to ensure that the power plant has the benefit of the necessary project contracts, entered into by the project company with parties of significant financial standing, reputation and technical expertise.

13. Enforceable legal frameworks for creating security over project assets, applied fairly to all participants.

Best Practice Feature	Comments
• *Licences, approvals, the PPA and other documents include step-in rights and right to assign (as security)*	Where step-in rights are granted, lenders will need to be aware that, in practice, the exercise of such rights may be extremely difficult if (as is usually the case) the licence granted by the government to the project company to operate the power plant is not capable of being transferred to the lenders or their appointee without the government's consent. Nonetheless, the terms under which the licence is issued will be carefully considered by lenders, especially the power of revocation or refusal to renew (if the licence is issued for a limited period of time). Lenders may seek to have their position recognised by the licensor, so that they are advised in advance of any proposal to modify or revoke the licence, and given an opportunity to remedy the cause for the proposed action on the part of the licensor.

	In each case, lenders need to be aware of the limitations of their security and to ensure that their security is structured so that it is as effective as possible within the constraints of the particular legal system.

14. Improvement of credit standing of power purchasers to underpin the bankability of IPPs.

Best Practice Feature	Comments
• *Project structure providing determined income stream*	Lenders require a contractual structure which assures them that income will be generated from the project. In a private power project, the sale of power provides the revenue to meet the financing and other costs and return on investment, and the PPA is the central contract under which the risks of the project are allocated. For this reason, the PPA will be of fundamental importance to the lenders as well as to the developers. Important matters will include: • *the term of the agreement - from the lenders' perspective, this should be at least the life of the loan* • *responsibilities of the parties during construction of the power plant, for example in relation to the construction of new transmission lines and connection of the power plant to the electricity grid* • *the basis upon which electricity is to be sold, for example by reference to availability of the power plant to generate electricity (whether or not it actually does so); or by reference to a minimum off-take amount (under which the power purchaser will be liable to pay specified liquidated damages if it fails to purchase a minimum amount of electricity)* • *the pricing formula and how this addresses the need to recover the power plant's fixed and variable costs* • *the basis upon which penalties will be payable or other remedies arise in favour of the power purchaser, in the event of failure by the power plant to generate electricity as required under the PPA. Lenders will be concerned to ensure that penalties are not punitive (for example, because they are not cost based) and that the power purchaser's remedies will not prejudice their security rights over the project* • *what the financial position of the project company will be if an event of force majeure occurs either during the construction or operation of the power project.*

Best Practice Feature	Comments
• *Participation of developers with track record*	A developer's ability to take a project to financial close, at which point the financing arranged for the project becomes available, is crucial. Lenders will, as part of their evaluation of the viability of a project, attach weight to the developer's financial strength and past experience in the development and financing of projects of a similar size and technology. Since the viability of a project will depend on the matrix of relationships involved between not only the power purchaser and the project company but the counter-parties to the other project agreements, financiers will assess the standing of these other participants by the same criteria as the main developers.
• *Availability of commercial insurance and political risk insurance*	Once the analysis of project risks has been undertaken, the lenders will require appropriate insurances to be put in place with reputable insurers. For a power plant, the major insurances would usually be: • *contractor's all risks* • *third party liability* • *advance loss of profits (covering losses due to delay in completion of the power plant due to certain risks)* • *marine cargo* • *workmen's compensation* • *(possibly) business interruption (covering loss of revenue incurred as a result of interruptions owing to certain risks after completion of the power plant)* The ability to obtain insurance can be crucial to financing. In major infrastructure projects where insurances are taken out with local insurance companies, lenders often require reinsurance of a substantial part of the insurance cover to be taken out with international reinsurers. Export credit agencies ("ECAs") and other lenders place importance on having a direct right to claim under the reinsurance policies in certain circumstances, bypassing the insurer. Thus, the willingness of local insurers such as The People's Insurance Company of China to grant an assignment of their rights under the insurance policies in favour of the lenders may be critical to financing.

Best Practice Feature	Comments
• *If needed, support from international lending agencies*	The range of financing options available to a project in a developing economy may be enhanced if the project can attract support from ECAs or multilateral lending agencies, whose role is to promote development. This support may be in the form of some kind of political risk cover for commercial lenders, although the participation of international government lending agencies may of itself give confidence to commercial lenders. For example, in Indonesia, the support of ECAs which undertook non-guaranteed project risks was considered to be a significant factor in bolstering the position of commercial banks in the Paiton project.

15. Implementation of policies to encourage the development of domestic capital markets and institutions and diversify the sources of domestic capital - for example, pensions and insurance funds - available for equity investment in electricity projects.

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