Long Term Service Agreements (LTSAs) play a critical role in many turbine owner’s overall asset management programmes. These agreements commit the original equipment manufacturers (OEMs) to provide, on a relatively fixed-price basis, maintenance services for the turbine components manufactured by the OEM. While LTSAs can offer many advantages to owners, these complex agreements often contain pitfalls for the unwary equipment owner – pitfalls that can cause an owner to bear an inordinate amount of risk, or result in costly disputes.

Balancing risks

**Pitfall 1 – Inappropriate allocation of prolonged start-up risks:** Under the typical LTSA, the OEM will provide maintenance for equipment that it has sold to the owner. Under most equipment procurement contracts, the OEM will have certain obligations to ensure that the equipment is capable of achieving commercially operational performance levels. As a result, an OEM may spend weeks at a site troubleshooting equipment commissioning issues, repeatedly starting the unit up, running it for several hours, and then shutting it down. The pitfall here lies in the fact that while the pricing for many LTSAs is based upon the number of hours of operation, the number of starts, or a combination of both, such pricing often fails to distinguish between hours and/or starts occurring before or after the commercial operation date (COD).

As a result, pre-COD hours/starts can be charged to the owner under the LTSA, even if they resulted from defects in the OEM-provided equipment. A strong argument exists for why the owner should not take the monetary risk of equipment defects that burn unanticipated hours and starts prior to commercial operation when it is actually the OEM who is in a better position to take on the risks related to troubleshooting defects in their own equipment. Thus, an owner would be wise to insist that the OEM shoulder this risk completely by limiting the number of pre-COD hours and starts related to equipment defects charged under the LTSA.

**Pitfall 2 – Failure to consider interface with insurance programme:** It is critical for an owner to have its property damage insurance policy on the table with the LTSA during the negotiation process, so as to be completely aware of what risks may or may not be covered by the LTSA versus the policy. For example, in most LTSAs, the OEM will be responsible for providing all unplanned maintenance, and in many cases, the OEM will actually bear some monetary risk related to unplanned outage events. Many owners will set the OEM’s ‘risk
capacity’ at an amount equal to their insurance policy’s deductible, believing that this leaves them virtually risk-free in the event of unplanned maintenance. However, this is not always the case. For example, many insurance policies will exclude coverage for defective equipment. Thus, if a defective part breaks that is valued at more than the OEM’s ‘risk capacity’, the owner may find itself stuck paying the full balance. Another pitfall involves the cross combination of an insurance policy’s excluding coverage for events arising from the use of new technologies, while the LTSA expressly allows the OEM to implement new technology.

Smart owners

Pitfall 3 – Failure to consider applicable tax law ramifications: In an international context, an owner must seriously consider the impacts of local, foreign and international laws on the parties’ activities under the LTSA. Many issues can arise, such as: how are the various parts and services provided under the LTSA taxed under the applicable tax law? Will there be taxes on the sale or use of parts? What about import and export duties?

One of the most dangerous monetary pitfalls an owner can step into is failure at the outset to understand and plan for these types of tax treatment issues. Smart owners can easily avoid this pitfall by seeking qualified tax counsel on the subject. Smarter owners will take their efforts to the next level by pursuing various planning strategies to minimize tax impacts on the contract. Depending on the taxes of the country where the project is located, such strategies may range from the complex bifurcation of the LTSA into two separate contracts (one for parts and one for services); or the more simple arrangement of separate invoices from the OEM (one for parts and one for services).

Pitfall 4 – Unintended illiquidity of parts: Typically, an LTSA will provide that the warranty for parts begins upon installation of the part into the “unit”, which will be defined as a specifically serial numbered turbine. It is also typical for an LTSA to provide that an owner cannot assign the LTSA, “or any portion thereof” (i.e., including the warranty portion) without the OEM’s prior written consent. Thus, if an owner has one or more like-kind turbines in its fleet that are not covered by the LTSA and would like to share its parts among these turbines, then these LTSA provisions will present serious problems. Specifically, the owner runs the risk of voiding the LTSA warranty on a part if it is not installed in the exact turbine covered by that part’s LTSA. In addition, the owner may be prevented from assigning the part’s warranty, for want of the OEM’s prior consent. Thus, the owner’s parts become ‘illiquid’.

The solution to this: draft warranty language so that it is not ‘unit-specific’, and allow for the free assignment of warranties to affiliates without prior OEM consent.

Pitfall 5- Lack of owner input with respect to reductions in OEM scope: Owners should avoid contractual provisions that allow an OEM the unilateral right to reduce its scope under the LTSA. One example of this would be through the issuance of new service bulletins and technical advisories. If the LTSA fails to allow for owner input on the implementation of such recommendations, the owner runs the risk of being contractually obligated to allow the OEM to implement the same, even where this would serve to reduce the OEM’s workscope. A simple solution is to require that the implementation of any advisory or bulletin only occur with the owner’s prior written approval. As OEMs continue to develop longer-lasting parts, there will be a growing likelihood that a scheduled maintenance outage that the parties originally had in mind when an LTSA was signed will be eliminated entirely from the OEM’s scope under the LTSA. Indeed, many LTSAs will have provisions that allow the OEM to use new technology (including longer-life parts) without any requirement of owner approval. While the OEM should be incentivized to develop longer-life parts, such developments can, in combination with fixed LTSA pricing, result in the owner paying for an outage that it will not receive. The solution to this lies in creating a balance between these perspectives.

Availability issues

Pitfall 6 – Failure to protect the owner in the absence of performance guarantees: Consider this scenario: An owner’s turbine in Eastern Europe
trips in the middle of the summer peak period. The OEM’s nearest part shop is thousands of miles away. How can the owner ensure that the OEM is required to get the equipment back online as soon as possible? Often, an LTSA performance guarantee will provide the right incentives through bonuses and/or liquidated damages for availability. Frequently, however, overall project economics result in LTAs being executed without such performance guarantees. In these cases, a common pitfall is the absence of non-financial incentives for prompt OEM response and action.

Owners can avoid this pitfall by establishing contractual requirements for OEM behavior, with clear, non-financial remedies if they are not met. For example, an LTSA can mandate a given response time for unscheduled outages or set maximum outage time requirements for scheduled maintenance outages. The LTSA should then include one or more clear owner remedies for violations of these requirements. As an ultimate remedy, owners should insist that repeated or substantial violations of unplanned maintenance performance requirements by the OEM will amount to an outright contractual default, allowing the owner to terminate the LTSA.

**Pitfall 7 – No clear right of owner to self-perform:** OEM’s attorneys will usually fight hard to ensure that their LTAs contain a provision that the parties’ respective rights are “limited to those stated in the document”. Without commenting on the acceptability of such a clause in general, it is important to note that if such a clause is ever accepted, then it forces the parties to list every right that the owner would have in any situation. While all LTAs will give an owner certain termination rights upon an OEM’s non-compliance, many LTAs will remain silent as to any other remedies. In this light, consider a situation where the OEM fails to perform a contractual obligation that is not quite so material that the owner would exercise its rights under the termination clause. Without any other listed rights, the owner’s available courses of action are limited and impractical: either terminate or do nothing. A simple provision that expressly allows the owner to perform any obligation which the OEM fails to perform (and then to backcharge the OEM) is the best solution.

**Pitfall 8 – Committing too long to an LTSA:** The most important question on every owner’s mind when entering into an LTSA (especially merchant plant owners) is whether the pricing inherent in the LTSA will remain competitive over time. As aftermarket parts continue to be developed, self-maintenance programmes will become an increasingly competitive alternative to LTAs. However, this may not be a possibility for an owner who is locked into an LTSA. Therefore, it is imperative that an owner has rights to terminate the agreement prior to its natural expiration. It is not uncommon for OEMs to object to such a position for fear of losing out on future profits.

Nevertheless, failure of the owner to consider early termination rights can set the owner up for crippling results if the pricing of the LTSA, at some point in the future, is significantly higher than available LTSA alternatives. Owners should seek some middle ground with the OEM in the hope of getting both parties to the proverbial “yes”. For example, if the reason for an OEM’s resistance on this point relates to its concern about losing out on the long term profits that accompany a long term commitment, then perhaps the parties could agree to a liquidated damages style fee, designed to provide the OEM with at least partial payment of its long-term profits. In all cases, owners must be vigilant to protect their early termination rights to ensure that the LTSA pricing will never have a material adverse effect on overall project economics.

**Termination fees**

**Pitfall 9 – No ‘true-up’ upon termination:** Most LTAs are structured so that the owner makes periodic payments to the OEM over the course of the LTSA, with the OEM accruing money in advance of performing planned maintenance. If the contract is terminated for any reason, one must question what the cash-flow balance between the parties will be at that time. Which party is ‘in the money’, and which party is not? Depending upon the reason for termination, the LTSA may require one party to pay the other a termination fee. However, if an LTSA fails to provide for a ‘true-up’ prior to the payment, then the parties run the risk that the termination fee will add insult to injury (if the paying party is already cash negative) or negate any true remedy (if the paying party is really just returning accrued cash). Thus, a required true-
up payment mechanism that precedes the payment of any termination fee will serve to protect both parties’ interests and serve as a solution for this pitfall.

**Pitfall 10 – Limited OEM obligation for last-installed parts**: Despite the long term nature of LTSAs, owners often make the mistake of not focusing on events under the contract that will occur in the distant future. For example, upon the completion of the last inspection that completes the end of the LTSA term, a number of important issues will arise, including: what quality of parts will be installed into the equipment at that time? And what obligations will the OEM have with regard to those parts after the LTSA expires? It is best for an owner to focus on and avoid these potential pitfalls from LTSA inception.

To illustrate this point, consider the scenario where an OEM installs a refurbished turbine blade during a scheduled maintenance inspection occurring in the middle of the term. Typically, the OEM will have many incentives to ensure that, during the term of the contract, the quality of the blade is such that it will last as long as possible. These incentives may include the OEM bearing a certain amount of the costs related to unscheduled maintenance, or paying liquidated damages if the equipment’s reliability does not meet certain guaranteed levels. In either case, the OEM is motivated to install top quality parts. However, once the term ends, these incentives disappear, and if one or more substandard parts are installed in the unit, an owner may be left with no remedy under the LTSA for outages caused by these ‘last-installed’ parts. In this respect, owners should insist upon a complete ‘end-of-term’ warranty for parts installed in the equipment at the last outage. The OEM should warrant these parts until the next scheduled maintenance event during which they would normally be replaced.

**Negotiate or renegotiate**

LTSAs are a significant part of any turbine owner’s business. Owners entering new LTSAs must be careful to avoid these agreements’ many pitfalls. As for owners who already have LTSAs, in most cases a pitfall can be just as detrimental to the OEM as to the owner. Consequently, these owners should not discount the possibility of renegotiating documents for the sake of improving them for all parties involved. Thus if you find yourself at the bottom of a pitfall, all may not be lost. You may be able to climb your way out.

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