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# A Case for Performance Based O&M Contracts

Part 1 of 3

## Introduction

The current practice is for owners or users to hire service providers for operations and maintenance contracts on plant capacity basis with a very general rule of thumb or with marginal increment in last year's rates. While the service provider commits better service, better response time and better complaint management, the client or end user generally feels that there has been under-delivery. The service provider has records of complaint received, attended and closure times to prove his performance. While the client feels that he is paying high for the given quality of service, the service provider feels that he is getting paid a pittance and is over-stretching his budgets, and all complaints are getting attended within the committed time frame with a few exceptions.

If one analyses, the reason why the system always leaves both the parties dissatisfied is that the contract itself measures the time taken to respond and the time taken to resolve. The more the complaints, the lower will be the average

time of response. Hence, both the owner and the service provider carry on with the dangerous norm of averages within the time frames.

## A Typical Scenario

Why do I call it dangerous?

Consider the situation of a 24/7 operation with service level agreement of 99% uptime. Assume that everything was working fine for the entire year except for 3.5 days (84 hours) at a stretch when the entire system was down. Will this incident be seen from the contractual viewpoint or the satisfaction viewpoint? Is the service provider right or is the client's dissatisfaction justified? Is it dangerous?

An IT support service norm states that you should have 100% standby for 24/7 operations with 99% uptime, 200%

standby for 99.9% uptime, and 400% standby for 99.999% uptime (1 hour maximum breakdown/year). All units are kept operating in parallel at a maximum of 20-25% load to meet this uptime guarantee.

The HVAC end user or client would desire similar uptime, but can the designer convince the client to budget that much in the design? Is the client ready for that kind of investment in the HVAC plant or products?

Coming back to the issue of why there is so much dissatisfaction in the service



## About the Author

**Rakesh Sahay** is a Founder Director of Veratvatva Engineering Consultants, which is involved in Ultra High Efficiency building and campus designs in both commercial and industrial sectors. He is a BEE Accredited Energy Auditor and GRIHA Certified Trainer with over 20 years of experience in auditing, commissioning and performance engineering of facilities, in addition to design. He also practices energy targeted and profit sharing SLA driven Operation and Maintenance.

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provider as well as the client, logically if one party is happy and the other aggrieved, then it makes at least some sense. But very rarely, if at all, it is observed that a client or end user is happy with what they are receiving against what they are paying or, vice-versa, a service provider is happy receiving what he is receiving for what he is providing.



The question goes back to how the industry measures its performance or what the client perceives as good service. At a no-complaint site, having an O&M contract is perceived by the client and his commercial department as a waste of money. "Why not pay for quarterly visits and save money for the organization? Anyway, there has been no breakdown in the last two years," quips the cost optimization committee.

The service provider feels let down after having done a decent job of taking proper preventive measures. And this kind of decision is a recipe for big time failures, beneficial to none.

### Service Level Agreements

Service contracts are generally not restricted to the simple SLA of managing inside design conditions as per the plant operating design conditions. If the plant or chillers are designed or committed to operate at, say, 0.7kw/TR, AHUs are supposed to consume 9kW, etc., the inside design conditions and the energy consumption should be the basis of SLA.

Wielding the stick alone does not work. Likewise, only incentives do not work. But,



Customer Satisfaction

both together become a very powerful tool to motivate the service provider to strive for the bonus. How can a service provider claim the bonus, or how can the end user claim a penalty? The answer lies in a proper and calibrated instrumentation and data recording system, commonly known as the Building Management System (BMS). However, it needs to be effectively operational.

The responsibility for claiming the bonus also motivates the service provider to keep the BMS up and in effective condition, sending pop-ups to the end user about deviations from the design both in terms of time period and conditions.

### Implementable SLAs

Deviation of 1°C for 6 hours and deviation of 4°C for 15 minutes are the two categories where the satisfaction levels are to be measured and rationalized based on the criticality and comfort areas.

Monthly or annual energy consumption is another powerful tool for the client to engage in an actual implementable SLA. Dual meters for measuring energy from the electricity board and captive power log the actual consumption and energy and cost savings accrued, which can be shared with the service provider as bonus, subject to inside conditions being maintained.



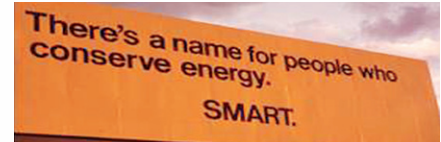
### Addressing Design Flaws

What does the service provider do if the design itself has a flaw? What happens when a space that is designed for specific design parameters is actually operating/occupied in a different manner? It is important for the service provider to technically and with calculations show and prove that the design has a flaw, which needs to be rectified. The client needs to see this in the right perspective and not create a situation of confrontation between the designer



and the service provider, else a blame game starts and the opportunity to improve the situation gets lost. Finally, no one benefits.

All this requires techno-commercial experts from the client and the service provider. People who are aware of performance analysis, energy conservation, contractual obligations, commercial implications, cash and balance, etc. can be the right people to lead this.



### Energy Saving Opportunities

The opportunities are humongous. Consider only 5% savings in energy in any facility on account of HVAC. For a city like Bangalore, for almost 100 million sqft of office space, with almost 250 million units being consumed only on account of HVAC, this 5% potential is equivalent to 12.5 million units per month, and a demand reduction of over 15MW. A huge contribution to the nation, the society and the environment is possible by this route, without any investment. It just needs an implementable and measurable bonus clause in the SLA for the service provider to encourage them to run the system optimally.



When the system is operated optimally, it also de-stresses the equipment. This itself can enhance the life of the plant, increase the uptime availability of resources and, most importantly, increase the service provider's profitability. This allows him to appoint better people and invest time in training and improving the skills sets of his manpower, with consequent social benefits.

There is a great deal the owner and the service provider can benefit with performance contracting. ❄

**In Part 2 of this article in the next issue, we shall discuss how to make this happen.**