



Dar Al Riyadh Insight #52

Capital Efficiency - Lever #1 – CAPEX

Dar Al Riyadh Insights reflect the knowledge and experience of our Board, executives and staff in leading and providing PMC, design and construction management services. Dar Al Riyadh believes in the importance of broadly sharing knowledge with our clients and staff to improve project outcomes for the benefit of the Kingdom of Saudi Arabia.

Lever #1 – CAPEX

CAPEX or capital cost improvements begin by realizing that approximately 10% of CAPEX is related to engineering and 90% related to procurement and construction. The owner's PMC can significantly impact CAPEX costs in five principle ways:

- Ensure that the developed design basis meets owner's project requirements (OPR), without undue contingencies, redundancies or factors of safety. This entails ensuring that our design basis documents (baseline centric documents) have been sufficiently challenged from this "scope control" perspective and that subsequent reviews are not unduly conservative. Said another way, the design is *fit for purpose*.
- Ensure that the appropriate level of design is undertaken to reflect the delivery form selected for the project (design build may require less detailed design for off-sites, infrastructure and utilities). Further, challenge and eliminate non value adding engineering process steps and simplify others where possible. This mind set of fit for purpose execution processes and continuous process improvement is essential to driving the CAPEX dimension of capital efficiency.
- Drive down construction costs by ensuring that construction is an integral part of the basis of design. This is accomplished through development of a construction basis of design (CBOD) coincident with addressing the owner's project requirements (OPR). This is much more than constructability. Project execution processes must be reconfigured to reflect this element of an expanded basis of design. A framework for a construction basis of design is laid out in an earlier Insight.
- Ensure supply chain strategies that drive lower CAPEX costs are fully supported by modified work processes and the client contracting and project organizations
- Enhance confidence levels associated with early stage estimates to improve capital certainty (one of three primary concerns expressed by owners together with schedule certainty and capital efficiency). This supports cost certain or cost incentivized contracts