EPC *power* management

Services to Owners & Suppliers

Project Development

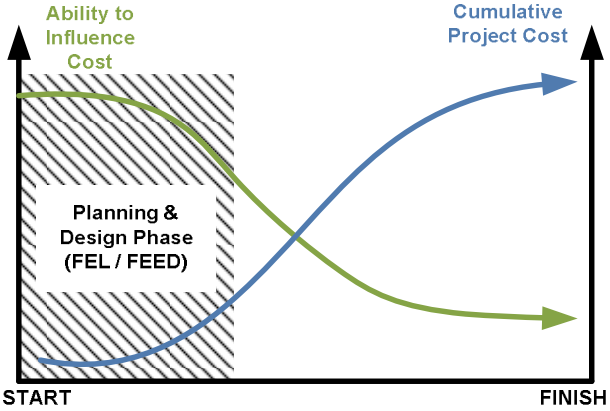
EPC *Power* Management is a unique company that combines high level knowledge with stable manpower.
We have been providing structured and stable results in technical complex environments. We do not just provide people: we provide solutions

Front-End-Loading

New business opportunities start with a bright idea and making them reality requires a lot of work and effort. Making idea's reality also requires specific expertise. EPC Power Management can offer its clients this expertise and support them in realizing their ideas. As many clients do not have the staffing capacity to perform the necessary work, EPC Power Management staff can be imbedded in the clients organization to enable optimal integration between the project and the operational organization.

The framework EPC Power Management uses to achieve this is known as Front-End-Loading (FEL) or Front-End-Engineering-Design (FEED). Both systems have the same approach, including a feasibility study, conceptual design and basic design. The benefit of this framework is robust planning and design early in a project's lifecycle (i.e., the front end of a project), at a time when the ability to influence changes in design is relatively high and the cost to make those changes is relatively low.

Though it often adds a small amount of time and cost to the early portion of a project, these costs are minor compared to the alternative of the costs and effort



required to make changes at a later stage in the project.

Front-End-Loading
This framework typically uses a stage-gate process, whereby a project must pass through formal gates at well defined milestones within the project's lifecycle before receiving funding to proceed to the next stage of work. It is common industry practice to divide front-end-loading activities into three stages: FEL1 (Feasibility Study), FEL2 (Conceptual Design), and FEL3 (Basic Design).

Basic Design

During the basic design the user requirement specification is implemented in P&ID's, site layout, norms and standards, contracting strategy and project planning. The design is optimized to enable a ± 15 % cost estimate at the end of the basic design. EPC Power has the ability and knowledge to support clients in this process.

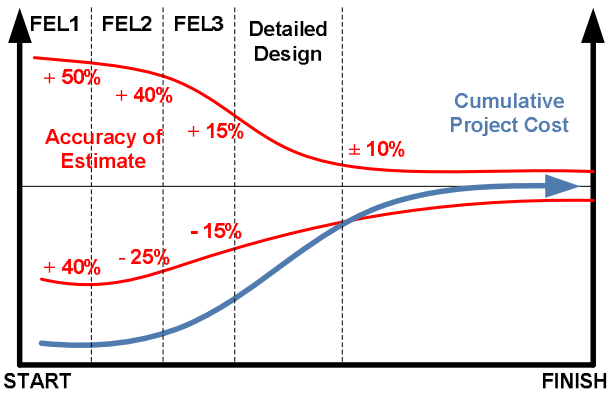
FEL1 (Feasibility Study)	FEL2 (Conceptual Design)	FEL3 (Basic Design)
• Material balance • Energy balance • Project charter	• Preliminary equipment design • Preliminary layout • Preliminary schedule • Preliminary estimate • Process flow diagram	• Purchase-ready major equipment specifications • Definitive estimate • Project execution plan • Preliminary 3D model • Electrical equipment list • Line list • Piping & instrumen-tation diagram

Feasibility Studies

Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of the existing business or proposed venture, opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success. EPC Power Management can support plant owners and suppliers with feasibility studies in the field of economics, legislation, operation and schedule.

Conceptual Design

The opportunities from the feasibility study are further developed, based on the key HSE aspects, key environmental aspects and the input of operations. Different technologies for the project are evaluated and ranked. The recommended technology / design is further optimized to enable a -25% till +40% cost estimate. During this phase, also the roles and responsibilities for the project are defined. EPC Power Management has performed many conceptual designs for oil & gas and power industry. By using this knowledge, EPC Power Management is able to systematically select the optimum user requirements specification.



When you would like to discuss your needs, please contact one of our colleagues.

Ludwig Deuninck
M: +31 6 5152 4622
@: ludwig.deuninck@epcpower.nl

Rob Droste
M: +31 6 1207 3434
@: rob.droste@epcpower.nl

EPC power management

EPC Power Management
Laan van Haamstede 45
2497 GE The Hague
E info@epcpower.nl
I www.epcpower.nl