

Step 15

Analyze Con- tractual Needs

A contractual needs analysis determines how the project should be divided into contracts, what types of contracts should be let, and whether prequalification procedures are warranted. The results of the feasibility study are used as an input to the Project Definition document, discussed in the next step.

Contractual needs analysis can be considered a 3-part process.

1. Break the project down into its component tasks, and examine the functional relationship of these tasks (see Figure 15.1).
2. Review in-house resources to determine their capability and availability to undertake any of the tasks (at least the internal project management function must be undertaken by the administration).
3. Group the various tasks into logical contracts.

The scope of each contract should be designed to maximize constructive competition, while keeping related work together to ease management and control. Typically, separate contracts can be let for the provision of electronic equipment, power equipment, and such civil works as site preparation, buildings, access roads, towers, and fences.

How the work is divided among contractors depends mainly on the availability of personnel within the administration to administer and control contracts. The more contracts let, the greater the resources needed to manage them.

15.1 Contract Classifications

Contracts may be classified according to what is provided, and all combinations are possible:

- engineering,
- equipment,
- installation,
- engineer and furnish,
- furnish and install,
- engineer and install, and
- engineer, furnish and install.

Usually the availability of resources within the administration determines which of these functions to include in any contract.

Engineer-furnish-and-install (turn-key) contracts have the advantage of making a single contractor totally responsible for completion and performance. But these contracts can be difficult to control, if the specifications are not absolutely complete, correct, and clear. Turnkey contracts also tend to reduce the amount and quality of competition.

Which engineering functions, and how much of each, are turned over to the contractor should be carefully considered. The contractor's engineer has a vested interest in the contract and consequently may be biased. Be particularly wary of how you specify items that are not readily measurable during the term of the contract, such as propagation and noise performance.

Furnish-and-install contracts can be advantageous, or even mandatory, when installing specialized equipment. And they have the advantage of making the contractor responsible for the installed performance of the equipment. However, separate contracts for the furnish and the install phases often increase competition.