



PDHonline Course P104H (8 PDH)

Project Cost Management

Instructor: William J. Scott, P.E.

2020

PDH Online | PDH Center

5272 Meadow Estates Drive
Fairfax, VA 22030-6658
Phone: 703-988-0088
www.PDHonline.com

An Approved Continuing Education Provider

PROJECT MANAGEMENT ASSOCIATES, INC

*2100 Southwinds Circle
Birmingham, Alabama 35244*

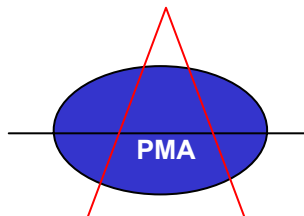
Presents

Project Cost Management

Via

WEB BASED LEARNING

Author: William (Bill) J. Scott, PMP, PE



Module 3

Project Procurement Management

Procurement of materials and subcontracts is often a major factor in overall project financial outcome. While we can directly control our internal resources, we rely on commercial contracts to help us control the materials and services provided by suppliers. Subsequently, we must have a strong understanding of the entire procurement process.

The main function of the Procurement Manager or the Procurement Department is to purchase the proper materials, equipment, or activities as outlined in the project or engineering requisitions. The purchasing of such goods and services is required to be completed in the time frame as set forth in the project schedule or dictated by the Project Manager.

It is the responsibility of the Procurement Manager or department to prepare the final contract document as a vehicle that will get the work completed and protect the company (BUYER) from any future harm or damage. You are relying on the selected supplier to do the work for you and receive compensation for the services.

There are nine major steps to the purchasing process, the steps are as follows and will be discussed in depth:

1. Qualification of the bidders
2. The bid package
3. Solicitation of bids
4. The bidding process
5. Evaluation of the bids
6. Making the deal
7. Formal Award
8. Contract Administration (contract follow up and maintenance)
9. Contract close out

Step 1

Qualification of Bidders

This is the process of searching out and selecting the right vendors, suppliers or contractors to perform in the proper time frame as designated in the contract that will be put in place. The bidder qualification stage is one of the most critical elements of the purchasing cycle. A quality supplier will save the Procurement Manager both time and money in the future.

If a poor quality supplier is selected the final contract output will always be at risk. The outcome may not only be poor quality or workmanship, the courts may determine the closure of the contract.

In order to have a successful qualification of your bidders the key steps to determine are:

- The bidder's capability to bid the project in the allocated time frame.
- The bidders experience in the particular industry, and how well they have performed in the past. It would also be helpful to know how they have performed in other industries.
- The bidders past experience with projects that are similar in nature (size, type, process, or equipment) in the US. In order to carry this step further the following information is required.
 - Contact prior customers as required.
 - Contact names and telephone numbers.
- The financial information of the bidders must be known:
 - Obtain a Dunn & Bradstreet report if possible.
 - Average annual revenues of bidding entity for the last 2 years.
 - Bonding capacity.
 - Bonding rates.
- The bidders execution capacity:
 - Who will be the PM?
 - Who will be the PE?
 - It would be advisable to obtain resumes of the people who will be working on the project.
 - Do they have the proper staff to execute the work?
 - Engineering staff support?
 - Field support if required?
 - Bidder's capacity to handle the full scope?
 - What portion of the work will be subcontracted to a lower tier supplier?
 - What systems are in place to manage the lower tier suppliers?
 - Legal entity that will be submitting the bid?
 - Analyze the bidder's information to determine if they are capable of performing the specified work.

Step 2 The Bid Package

1. Scope of work:

- The objective of this step is to identify what is to be purchased.
- What is to be supplied?
- What is not included in the scope?
- What is to be installed /supplied by the owner or others?
- Are all technical issues covered in the bid package?

2. Drawings & Data:

- What do we want?
- Where do we want it?
- Who does what?
- How do we want it?
- All interface drawings must be included.

3. Specifications:

- What standard of quality do we want?
- How do we want it to work or function?
- End user specifications should be included if and when appropriate.

4. Extra work, How to Handle:

- Lump sum.
- Time and material plus %.
- Time and materials plus a fixed fee.
- Unit price.

5. Schedule:

Start dates:

- Bid due date
- Contract award date
- Engineering
- Fabrication / Delivery
- Installation
- Checkout
- Startup

Finish dates:

- Engineering
- Fabrication / Delivery
- Installation
- Checkout
- Startup

Progress invoicing dates:

- Determine invoice dollars based on agreed upon dates or progress percent complete.
- Start payment terms, (net 30, 45, or 60).

Other milestones date:

- Commercial operation
- Performance testing
- Unit acceptance

6. Terms and conditions
7. Warranties
8. Guarantees

Step 3 Solicitation of Bids

- Preparation of the RFQ/RFB/RFP document (request for quote/bid/proposal)
- Selection of bidders / bid list.
- Complete bid package to all.
- Addenda must be in writing and sent to all bidders.

Step 4 The Bid Process

1. Pre-Bid Meeting: A pre-bid meeting should be required if this is prudent to the outcome of the bid, all vendors must attend. The meeting will serve as an open forum for all suppliers to have questions answered which were not specifically addressed in the RFQ /RFB/RFP. Meeting minutes must be prepared by the owner/purchaser covering all questions raised the resulting answers. The minutes must be issued to all bidders; generally a date will be set at the meeting when the minutes will be issued.
2. Documents:
 - Specifications (include any special condition\ s that the owner has required)
 - Drawings and Data
 - Schedule
 - Terms and Conditions
 - Letters and Addenda (written to all)
3. Timing:
 - The bidding process is time sensitive.
 - Bids are due at a specified date and time.
 - No exceptions for any reason.
 - If the bid date is extended, it must be extended for all.
 - State an anticipated award date.
4. Ethics:
 - Do not play one vendors bid against another to obtain a lower price.

- Be honest and above board with each potential vendor.
- Neither request nor accept bids from unqualified vendors.

Step 5 Evaluation of the Bids

In the analyzing of the bids, the goal is to determine which supplier is the most qualified to supply the material and who has the most complete bid. Selecting the right supplier will make the contract execution cycle move to the final goal of contract completion much easier. Making a supplier selection based solely on price alone will most likely cost additional money at some point in time during the contract. In 75% of all contracts the low bidder has usually left some phase of the project out of the price and will ask for a cost adder at a later date. The following steps are used to foster a complete bid review.

- Develop a spreadsheet comparing all cost items.
- Analyze the bids from all aspects with all required departments or personnel.
- Rate the offerings (ratings are used to make the analyzing process objective).

The attached sample spreadsheets will offer a clear picture for selecting the qualified supplier.

Step 6 Make the Deal

Negotiations

The negotiation stage is where the “gives and takes” will take place; the goal here is to walk away with a “WIN WIN” deal for both parties. Remember one key point at this time; you will be working with the seller through out the life of the contract.

- Objectives of Negotiations:
 - Obtain a fair and reasonable deal for both companies.
 - Develop a good relationship with the seller; you may need the services of the seller on future contracts.
- Negotiation Tactics - to exclude from your contract award:
 - Attacks.
 - Personal Insults.
 - Good Guy / Bad Guy
 - Deadline.
 - Lying.
 - Limited Authority.
 - Missing Man.
 - Delay.
 - Extreme Demands.

- Withdrawal.
- Fait Accomplishments.

In contract award “MAKING THE DEAL” all cards must be put on the table. It is the purchaser’s obligation to be truthful, do not hide any aspect of the project from the potential supplier. The following guidelines will make for a smooth contract award:

- Clear up all technical issues first.
- Clear up all commercial issues second.
- Clear up all price issues third.
- Ask (once) for the best and final technical, commercial, schedule offering and price.

Step 7 Contract Award

- Verbally make the deal.
- Issue a letter of award.
Normally a contract will take time to prepare; the best way to authorize a supplier to start work is by issuing a letter of award that describes the key components of the contract. Which will include the following points:
 - Authorize them to start work.
 - Start the schedule clock.
 - State contract price.
 - State scope.
 - State what Terms and Conditions apply.
 - Issue all respective contact points for information.
- Formal Contract:
 - Write and issue an “As Purchased Contract”. The contract will include all aspects of the negotiated deal and all relevant correspondence. Be careful about including the seller’s proposal as part of the contract; this may limit your contract effectiveness due to unforeseen articles buried in the proposal. Remember to include all relevant information and specifications for the customer’s document package.

Step 8 Contract Administration

- Only work from an “as purchased” contract plus all formal change orders.
- Respond to the supplier’s request for information (RFI’s) in a timely manner. Responses should be in writing.
- Respond to contractor’s written correspondence in a timely manner. Responses should be in writing.
- Write contract change orders in a timely manner.
- Pay invoices on time.

- Be aware of your obligations.
- Put the supplier on notice (written) when they fail to perform in anyway.
- Check work / follow up.
- Shop / field inspection.
 - Take pictures.
 - Make videos.
 - Take notes.

Step 9 Contact Close Out

- Work only from an “as purchased” contract plus all formal change orders.
- Work Verification:
 - Has the work been completed per the contract?
 - Has the quality requirement been met?
- Documentation:
 - Receipt of all required documents per the contract Terms and Conditions.
 - As built drawings.
 - O & M manuals.
 - Instrument calibration / settings.
 - Material certifications.
 - Alignment records.
 - Equipment turn over reports.
 - Etc.
- Resolution of all claims and disputes.
- Release of lien forms.
- Warranty:
 - Issue a letter stating the start and end date of the warranty period.
 - Who is the contact for warranty claims?
- Service:
 - Who is the contact for service work?
 - What are the service rates and time frame for rate increases?
- Final payment and release of retention / bonds / LC.
- Formal contract closure:
 - Letter to the supplier stating the contract has been completed.
 - Internal memo to all required parties stating the contract is closed.
 - Close contract file.