

## Seminar's Title:

### EPC (Engineering-Procurement-Construction) Project Management

#### Purpose and Background:

EPC contracting, one of the most prominent forms of contracting agreement in the construction industry, is used by a contractor to design the project facility, procure the necessary equipment and materials in order to build and deliver the functioning facility to its client, either directly or by subcontracting part of the work. Companies that deliver EPC projects are commonly referred to as EPC contractors whose revenues are derived from executing projects for clients on a cost-reimbursable, or lump sum basis. The contractor carries the risk to complete the project's agreed work scope on time, within the client's approved budget and meet their requirements and expectations. Clients with large complex, industrial projects choose the EPC contracting with turn-key delivery, commonly known as a Lump Sum Turn Key (LSTK) contract.

This course is designed to give participants a good knowledge of EPC project management. It provides participants with the knowledge of EPC activities from initial feasibility studies, to detailed engineering, construction and operations management of the actual project facilities and their benefits in effectively and efficiently managing EPC projects that they can apply immediately in their EPC project environment.

#### Learning Objectives

To provide practical coverage of all basic aspects involved with managing an EPC contract. The seminar covers how EPC contracts are set up, why owners choose EPC contracts, project management activities from the EPC contractor's point of view and what owner should be looking for during commissioning and start-up.

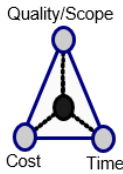
#### Key Benefits of Attending

- Provide participants with the basic knowledge of EPC project management and their benefits in effectively and efficiently managing construction projects.
- Learn practical skills, concepts and principles of the EPC approach to be adapted to specific project environments.
- Understand the characteristics of an EPC contract.
- Identify and perform the key EPC processes as well as their implementation to increase the probability of success of a project and meet Owner's requirements and expectation.
- Ensure effective management of Quality/Scope, Time and Cost parameters in EPC contracting.

#### Who Should Attend

This seminar is for those responsible for managing EPC projects of any size desirous to learn how to effectively use knowledge of basic, practical and formal EPC project management principles





and methodologies in their day-to-day work. These include EPC Managers/Engineers, Technical Directors, Procurement Managers, Contract Managers, Contractors, Suppliers and other professionals working in any industry.

## **Outline**

The seminar is scheduled for three (3) days; each day starting from 8:30 AM to 4:30 PM with two fifteen minute breaks (morning and afternoon).

### **DAY 1**

#### **The EPC Overview**

- Project delivery systems
- Why owners choose EPC contracting?
- The EPC process
- EPC Project Management: a form of contract.
- EPC challenges

#### **EPC Project Management**

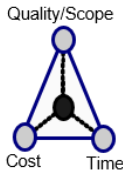
- Construction project life cycle and its phases
- Basic EPC project management activities
- The EPC matrix organization and the project task force
- The EPC contract and its financial implications
- EPC project planning and control cycle

#### **Planning and Scheduling**

- Project planning
- Organizing the planning
- Preliminary project planning
- Project planning
- Project schedule
- Schedule control

#### **Cost Estimating & Budgeting**

- Types of cost estimates
- Estimating methods
- Definitive estimate
- Cash flow forecast
- Earned value management
- Budgeting & cost control



## **Risk Management Planning & Control**

- Risk identification
- Risk register
- Risk analysis
- Risk selection matrix
- Risk response plan
- Risk monitoring & control
- Risk lessons learned

## **DAY 2**

### **Engineering**

- Evolution and refinement of conceptual engineering
- General layout and design criteria
- Front End Engineering Design (FEED)
- Detail design
- Preparation of construction drawings and specifications
- Technical evaluation of tenders for equipment

### **Procurement**

- Source and availability of materials
- Preparation of contractual documents
- Calling for tenders and award of contracts
- Expediting
- Shop inspection
- Logistics

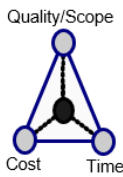
## **DAY 3**

### **Construction Management**

- Supervision and coordination of the work of contractors
- Contractors progress monitoring and control
- Administration of contracts
- Verification of contractors' claims
- Construction labour relations

### **Commissioning**

- Preparation of operation manuals
- Operating personnel training



- Pre-operational checks
- Trial runs and performance tests

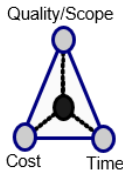
## Video Presentation, Exercise and Case Study

### **Seminar's Instructor: Dr. Nghi M. Nguyen, Ph.D., P.E., PMP, M.ASCE.**

President and CEO of NDV Project Management Services, Inc (NDV) since 1995, Dr, Nghi Nguyen has had more than 30 years of progressive, domestic and international consulting and training experience in the field of project/program/portfolio management on major construction, aerospace, defence and high-technology projects with leading Canadian and U.S. corporation such as the SNC-Lavalin Group, Lockheed Martin, CAE and the Canadian Space Agency and NASA. Prior to founding NDV in 1995, he served as Program Control Manager for the multi-billion dollar Canadian Patrol Frigate (CPF) program, the largest and most complex shipbuilding program in Canadian history for Lockheed Martin Canada (formerly Unisys Systems Canada).

As an internationally recognized project management consultant and trainer, Dr. Nguyen has assisted clients with project management approaches to effectively and efficiently complete projects and attain their objectives. He is a specialist in project management training, consulting, definition, development, identification of project objectives, constraints and methodologies. Dr. Nguyen worked as a project management consultant for the Canadian Space Agency (CSA) on projects associated with the International Space Station (ISS) program, the 16-nation effort, lead by NASA, to build the permanently orbiting laboratory in space, the largest and most sophisticated international engineering project ever undertaken in the history of the world as well as for SNC-Lavalin International on China's Three Gorges hydro-electric development project, the largest construction project in the world to date, and was involved in a number of projects in the Information Technology (IT) and Oil and Gas (O&G) sectors, among them was the construction of the \$ 5 billion Hibernia Oil Production Platform in St John, Newfoundland, Canada. Dr. Nguyen has delivered project management seminars for the American Society of Civil Engineers (ASCE), International Institute for Learning, Inc (IIL) in the USA, EuroMatech and Britannia of the U.K., Glariden Global in Singapore and various organizations in Asia and Vietnam as well as those associated with the engineering organizations worldwide.

An internationally recognized speaker, author and presenter, Dr. Nguyen has written and presented numerous technical papers on project/program management related topics in international conventions and congresses in Canada, the U.S., Europe, Asia and the Caribbean, sponsored by professional associations such as the Project Management Institute (PMI), the American Consulting Engineering Council (ACEC), The Association for the Advancement of Cost Engineering (AACE) International, American/Canadian Society of Civil Engineers (ASCE/CSCE), the Pan-Pacific Business Association (PPBA), the American Institute of Aeronautics and Astronautics (AIAA), the Caribbean Council of Engineering Association (CCEA) and the Paris-based association Francais des Ingenieurs et Techniciens d'Estimation et de Planification de Projets (AFITEP). Since 1995, Dr. Nguyen has conducted numerous project management seminars for thousands of project managers practising in all industries in a variety of topics in



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many countries including Canada, the U.S.A., the U.K., France, Spain, Germany, the Netherlands, Austria, Norway, Switzerland, Cyprus, China, Hong Kong, Thailand, Singapore, Malaysia, Japan, Indonesia, Vietnam, Australia, New Zealand, the U.E.A.(Dubai and Abu Dhabi), Kuwait, Saudi Arabia, Colombia and Barbados.

Educated at McGill and Concordia Universities in Montreal, Quebec, Canada, Dr. Nguyen holds B.S., M.S. and Ph.D. degrees in Civil Engineering and Construction & Project Management, is a Certified Project Management Professional (PMP) and has been a part-time professor at the Faculty of Engineering and Computer Science at Concordia University, teaching project management courses at both undergraduate and graduate levels since 1997. He has also lectured under the United Nations Development Programme (UNDP), McGill University Executive Institute, the Maastricht MBA programme (a joint programme between the Maastricht School of Management of the Netherlands and the School of Industrial Management of Ho Chi Minh City University of Technology, Vietnam) and is a registered civil engineer and project manager in both Canada and the USA. Dr. Nguyen was certified as a PMP (Project Management Professional) by the Project Management Institute (PMI) in 1995. He served as a member of the Canadian Advisory Council (CAC), set up by The Standards Council of Canada (SCC) to participate in the development of the International Organization for Standardization (ISO)'s project management standard released in September 2012 as ISO 21500 for project management as well as provided recommendations as Draft Reviewer and Contributor to the PMBOK® Guide – Fifth Edition of the Project Management Institute (PMI) released in January 2013, both considered by project management professionals worldwide as globally and internationally accepted project management standards. Dr. Nghi Nguyen has also been serving the same role to the “soon-to-be-released” PMBOK® Sixth Edition to be published in 2017 by PMI.

