



## **Compressed Natural Gas (CNG) System - Vehicle Program Management**

A targeted program management driven organization focusing on CNG Vehicle development has a consistent, standardized process in a robust standardized system. This system needs to be compliant with TS 16949, ISO 9000, FMVSS and CMVSS standards. Having this system established, understood and utilized creates a real differentiating factor in the marketplace which delivers these OEM production ready CNG Vehicles efficiently to stated scope, time, cost and quality targets.

Participants will bring information on specific company projects to be worked on during this training for real application of these concepts, tools and techniques.

- First, the basics of CNG Vehicle program management are discussed to gain a common understanding of the standard practices, tools and techniques that are utilized. Team interactions with clearly defined roles and responsibilities are emphasized. This system is also compliant with TS 16949 and ISO 9000 quality systems.
- Next, participants will focus on Scope, Time, Cost, Quality, Change and Risk Management subjects, understanding the standard practices, tools and techniques that are applied. Focus is on the FMVSS and CMVSS standards and how to comply with them for these CNG Vehicle programs.
- Lastly, participants will build specific tools to fully understand Scope, Time, Budget, Change and Risk's impact on their specific CNG Vehicle program. There is also a discussion on Human Resources, Communication and Procurement subjects.



## Course Syllabus

### **I      IDENTIFYING INFORMATION**

**Course:** CNG System – Vehicle Program Management  
**Prerequisite:** CNG System – Engineering Vehicle Integration  
**Time Frame:** 40 total contact hours  
**Instructor:** Daryl Patrishkoff, PMP  
Chief Executive Officer, CPS  
BS in Vocational Industrial Education  
MA in Business Management  
30 years in the product design engineering profession  
20 years managing sales, operations & plant business units  
**Mobile:** (248) 505-7426  
**E-mail:** [DPatrish@comcast.net](mailto:DPatrish@comcast.net)

### **II      REFERENCE MATERIALS**

1. A Guide to the Project Management Body of Knowledge 4<sup>th</sup> Edition, by PMI
2. Design for Six Sigma, by Kai Yang
3. Advanced Product Quality Planning and Control Plan, 2<sup>nd</sup> Edition by AIAG
4. Potential Failure Mode and Effects Analysis, 4<sup>th</sup> Edition by AIAG
5. Production Part Approval Process, 4<sup>th</sup> Edition by AIAG
6. Complete fundamentals of Project Management as outlined by the industry standard from the Project Management Institute (PMI). [www.pmi.org](http://www.pmi.org)
7. Federal Motor Vehicle Safety Standards
8. Canadian Motor Vehicle Safety Standards
9. CNG United Installation Certificate Program
10. CSA Vehicle Fuel Systems Inspector Certificate Program

### **III      COURSE GOALS AND OBJECTIVES**

1. Understand and interpret program management principals
2. Understand and interpret project scope, time and cost
3. Understand and interpret stated project quality targets
4. Understand and interpret project integration and change management
5. Understand project human resources, communication, risk and procurement
6. Understand FMVSS and CMVSS standards as applied to CNG Vehicles
7. Understand the installation and inspection techniques for CNG Vehicles



#### **IV      METHODOLOGY**

This course is a micro view of CNG Vehicle program management, dealing with detailed interpretation of meanings and applications of the PMI standard as applied to executing company projects. Each module will introduce new material that will prepare the student for the projects to be completed.

##### **Lectures**

Each detailed subject will be presented in a lecture format outlining the theory and standardized accepted methodology. A PDF file of the lecture material will be provided for the student's personal use as reference material. Lecture note outlines will be distributed to the students for each lecture to help the student capture personal notes. A short video showing the concept covered will be used to facilitate a discussion regarding application.

##### **Specific Industry Examples**

Real life industry examples will be covered that detail application of the theory to demonstrate how different companies apply these tools and techniques. This will give the students a clear understanding of how and why these techniques are utilized at different companies and industries in different manners.

##### **In-Class Assignments**

Using the theory and industry examples the student will conduct several projects that outline each key principal as in-class projects. These projects will increase in complexity as the students further develop their skills in applying these tools and techniques. The students will present their work to the group for review and discussion.

##### **Specific Company Application**

As a summary of the training we will apply these tools and techniques on a specific CNG Vehicle company project that is currently in development by the students. This will build a standard methodology on how to appropriately apply project management at your company.



**V COURSE OUTLINE & ASSIGNMENTS**

**Module 1**

Introduction to Program Management	PowerPoint lecture
Project Charter & Scope	PowerPoint lecture
In-Class Assignment, Charter & Scope Documents	Complete & present
CNG Vehicle Program Group Project	PowerPoint lecture

**Module 2**

Project Timing	PowerPoint lecture
In-Class Assignment, Timing Chart	Complete & present
Product & Project Budget	PowerPoint lecture
In-Class Assignment, Product & Project Budget	Complete & present
Key Product Characteristics (KPC) & Safety Related Items	PowerPoint lecture
FMVSS & CMVSS Standards	PowerPoint lecture
In-Class Assignment, FMVSS & CMVSS	Complete & present
Defining Quality Targets	PowerPoint lecture
In-Class Assignment, Quality Targets	Complete & present

**Module 3**

Project Integration	PowerPoint lecture
Change Management	PowerPoint lecture
Project Human Resources	PowerPoint lecture
Project Communications	PowerPoint lecture
Project Procurement	PowerPoint lecture
Risk Management	PowerPoint lecture
In-Class Assignment, Risk Management	Complete & present

**Module 4**

Industry Example – Manufacturing	PowerPoint lecture
Industry Example – Original Equipment Manufacturer	PowerPoint lecture

**Module 5**

CNG United Installation Certificate	PowerPoint lecture
CSA Vehicle Fuel Systems Inspector Certificate	PowerPoint lecture
Company Specific Group Program Plan	Complete & present