

# Reliability Based Design - Building Reliability into Capital Projects

## *Course Outline*

### **Session 1:**

- World-class operations and low cost producer paradigm
- Relationship between reliability and safety
- Lowest installed cost vs. lowest life cycle cost
- Procurement/stores relation to capital projects; balance risk and working capital objectives
- Installation/startup; designing for minimal startup & transition losses and early life failures
- Operating; support operability in the design process

### **Session 2:**

- Supporting maintainability in the design process
- Strategy for implementation – leadership, alignment, and organizational principles
- Executive as leader for supporting change
- Reliability-based design for life cycle cost, targeted uptime/reliability goals and use of RCM/FMEA
- Use of overall asset utilization in the design and capital project process

### **Session 3:**

- Front end loading and its effect on success
- Determining the investment required for applying life cycle cost principles
- Key questions to ask for assuring application of reliability and life cycle cost principles
- Using payback vs. discounted cash flow/ROI
- Assessing reliability practices in your project
- Process flow diagram for designing for reliability

### **Session 4:**

- Self-audit of design practices for reliability
- Development of policy statement for applying reliability and life cycle principles to capital projects
- Review development of asset management policy