



Presentations & Seminars

technology resources international, inc.

PRESENTATIONS & SEMINARS

Technology Resources International, Inc. is now offering a number of seminars and presentations of interest to the Petroleum Equipment Industry. Current topics include vapor recovery technology, robotic fueling, alternative fuels and project economics. All presentations can be customized to meet specific client needs. For example, recently we made a presentation on ORVR/Stage II and included material on equipment failure due to gasoline quality problems. Below is a summary of each topic and a short background on TRI.

Vapor Recovery Technology

This presentation traces 25 years of developments in vapor recovery and reviews changing requirements imposed by EPA and CARB. It develops costs for various alternatives and explains current problems between Stage II and vehicle Onboard Refueling Vapor Recovery (ORVR). As ORVR issues change, they will be included in this presentation; we are participating in the industry-wide effort with CARB in addressing the problem.

Robotic Fueling

Two years ago, Shell Oil Company announced a major project in automated fueling and late last year unveiled the first prototype Shell Smart Pump in Sacramento, CA. This presentation reviews the development of robotic fueling over the last 30 years, starting with Amoco's 1968 mechanical robot and ending with current efforts by Shell, AutoFill (formerly TransRobot), Robosoft and Tankanlagen Salzkotten. It develops economics for robotic fueling and discusses marketing studies and special applications. As new developments are announced, they will be reflected in ongoing revisions.

Alternative Fuels Vehicles

Last year Ford announced it was investing \$400M in the Mercedes-Ballard fuel cell development project, while General Motors

recently joined forces with Amoco to develop fuel cell cars. What future impact, if any, will these, as well as electric, natural gas and propane vehicle projects and enforcement of the Energy Policy Act (EPACT) of 1992 have on the fuels distribution industry? This presentation reviews the driving forces and economics for the alternatives and speculates on future impact to the industry.

Economic Evaluation of Projects

This seminar provides a short overview of methods used by major oil companies in the evaluation of projects, or it can be expanded to a one or two day training course on evaluation methodology. Topics covered include the time value of money, discounted cash flow rate of return, rational price calculations, profit and loss statements, economic value added and risk analysis. The topics are integrated through common examples and the seminar concludes with a review of the interrelationships of performance measures.



Technology Resources International, Inc.

provides services in technology evaluation and planning, product development, testing and implementation for the petroleum and petrochemical industries. The company specializes in retail service station and petroleum product distribution technology, including the associated electronics, point-of-sales equipment, payment systems, credit and smart cards, robotic fueling, environmental and safety issues and alternative fuels technologies, such as compressed natural gas and natural gas and electric vehicles. It also provides assistance in equipment certification and standardization activities and training in all of the above areas. In addition, TRI provides litigation support services, covering service station technology, safety, and environmental systems. Recent TRI publications in service station technology, alternative fuels and robotic fueling are available on the [TRI Publications](#) page.

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