CRUISE SHIP SHORE POWER PROJECTS

Lessons Learned

AAPA, Mazatlan 2009

Mike Watts
Division Manager
Cochran, Inc.
2005 - First Shore Power installation in Seattle for Princess Cruise Lines

- Project was completed in 6 months
- Included Design, Coordination, Engineering, Procurement, Installation, Testing & Commissioning
- $1.6 Million Budget

2006 - Second Shore Power Installation in Seattle for Holland America
Main Metering Equipment, Transformer & Secondary Equipment
Ship Side Equipment
Today

- Vancouver BC
  - Currently in construction on two separate shore power systems
- San Francisco & San Diego
  - Final contract negotiations
- Long Beach & New York
  - Early discussion
Lessons Learned

- Developed a more compact design of the main equipment
- Introduced an Auto-Tap selector switch for the main transformer
- Developed the “Jib & Socket” cable management system
- Designed testing equipment to test and commission the system without a ship
- Understanding the importance of the system standards.
Automation

- Ability for internal shore power components to communicate more efficiently
- Monitor shore power system remotely
- Consumption log for all connected ships
- Substantiation for emissions reductions
- Provides shore status directly to the ship
**Future Opportunities**

- Educate Port staff and officials on shore power fundamentals
  - Basic components and their function
  - Construction and equipment lead times
  - Required equipment and options per site specifics
  - Understand Port requirements and concerns
- Begin early coordination with the local utility
Future Opportunities (cont.)

• Identify contracting vehicle
• Confirm contract requirements
• Develop solid budgets
  - Equipment pricing is consistent with standard design
  - Site specifics drive the pricing
  - Revise throughout design process
• System operations and support after construction
• Education and Communication!
• Identify and outline the overall process
Annual Support

- Servicing and maintaining the shore power equipment
- Provide local labor to support actual connections to insure a safe operation by a Licensed High Voltage Electrician
- Cochran can monitor the system remotely