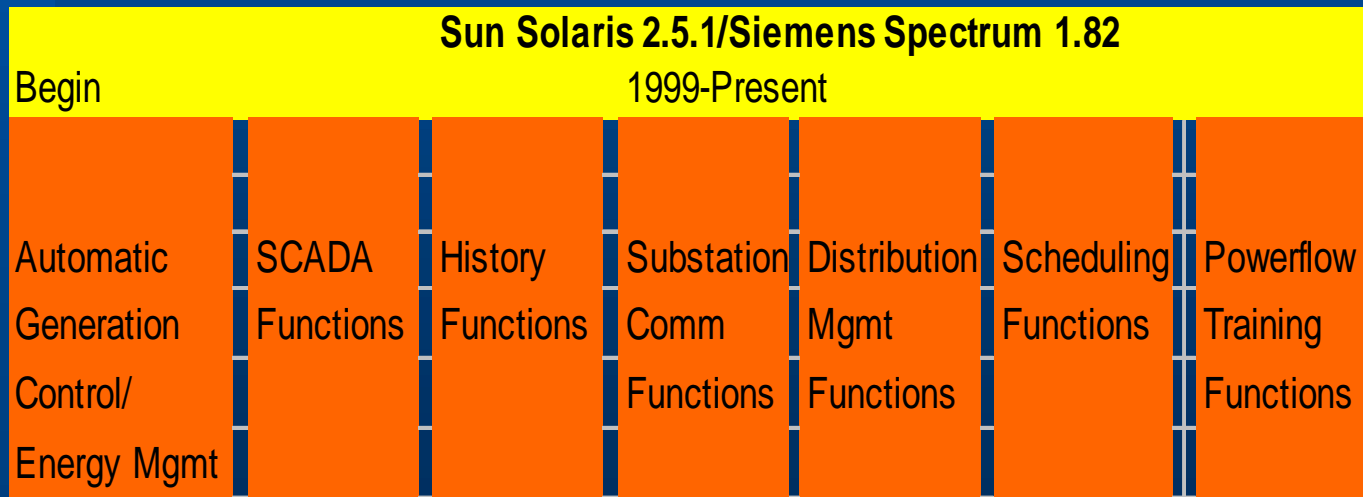


# Chugach SCADA/EMS Migration

Technical Services

# Project Description

- **What is the “SCADA/EMS System” ?**
  - **Consists of multiple software and Hardware Components**
  - **The SCADA System is a Component of Chugach’s Infrastructure That is Critical to the Reliable and Economic Operation of the Electric Power System.**



# Project Description

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- **Migrate the Existing System from the Siemens “Sun/Sinaut-Spectrum” Based Platform to the Siemens “IBM/Empower-Spectrum” Based Platform.**
- **Entails both Hardware and Software Replacement and Modification.**
- **Leverages the existing Database, Displays and Configuration Files.**
- **Provides for Future Migration through Siemens “Gateway “ Architecture to Siemens IBM based “Power CC Platform”.**

# SCADA/EMS Migration

## Purpose

- **Maintain Supportable Technology**
  - Incremental Migration vs. “Forklift Replacement”
- **Maximize Investment in Existing Chugach SCADA/EMS**
  - Existing Support Staff Knowledge
  - Become Part of Siemens Broad US Customer Base
  - Improved Vendor Training/Support
  - Well Defined Vendor Migration Path

# SCADA/EMS Migration

## Need

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- **In Order to Enhance Cyber Security and Maintain Technical Support the Existing System Requires Significant Hardware and Software Upgrades .**
- **Once Complete this System Will Be Installed As a Backup Control Center**
- **The Current System Has Been Discontinued by Siemens.**
- **Failure to Migrate Now Will Result in Lower System Availability Over Time.**
- **Failure to Migrate Now Will Require a More Costly “Forklift Replacement”**

# Migration

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- Phase I (2004)
  - Development System with Database Migration 2004
  - Detailed Migration Plan for Chugach Requirements
- Phase II (2005-2008)
  - Implement Chugach “Special” Requirements
  - Stage/Test Production System
  - SCADA/EMS On Line in late 2007/early 2008
- Phase III (2009-2012)
  - Siemens Component Based Migration

# Cashflows for Alternatives

CIP Year		Sun w/ Forklift Replacement	Migration Plan
2004-8	TOTAL	\$ 1,526,727	\$ 2,817,192 Ph I & Ph II
2009-13	TOTAL	\$ 5,735,000	\$ 1,950,000 Ph III
20014-15	TOTAL	\$ 500,000	\$ 500,000 Ongoing Future Upgrades
NPV		(\$4,588,581)	(\$3,401,321)

# Accountability

## SCADA Migration Project Organizational Chart

