

# G. PAUL GRIMSRUD

## SPECIALIZED PROFESSIONAL COMPETENCE

Over 30 years of professional experience providing research and consulting services to electric and gas utilities, merchant power plants, and government agencies. Specialties include development and application of advanced methods for electric system planning and dispatch, merchant plant bidding, data acquisition and control, optimal resource allocation, and capital asset management. Extensive experience in estimating replacement power costs due to cycling-related forced outages (over 100 fossil power plants), and in testifying on the cost impacts of major forced outages. Served seven years on the Palo Alto Utilities Commission.

## EXPERIENCE SUMMARY

- Engineering economics
- Operations simulation
- Utility system planning
- Economic decision analysis
  - Retire/Mothball/Lite Extend
  - Repair/Replace/Mitigate
- Plant tariffs and bidding
- Data acquisition/control systems
- Plant operation cost forecasts
- Unit reliability/availability analysis
- Expert testimony
- Financial risk analysis

## INDUSTRIES

- Fossil and nuclear power generation
- Electric transmission
- Waste water
- Hydropower
- Water supply
- Petrochemical

## RECENT WORK

- Assessed value of generation assets for owner, and made “life extend/retire/mothball” recommendations for various units in system.
- Managed several asset valuation projects for clients contemplating either purchase or sales of generation assets. These projects include some or all of the maintenance expenditures; transmission and fuel supply constraints; and future cost of environmental upgrades.
- Developed power plant cost forecasts for long-term power contract preparation.
- Prepared testimony and testified before various state commissions on the impact of generation unit cycling on variable maintenance and operations costs, and the implications on IPP avoided costs.
- Involved as testifier in law suits regarding “business interruption” damages of power plant outages
- Developed economic decision tools for addressing how to optimize capacity maintenance and capitol expenditures, including determining optimal strategies for inspection, repair, and replacement for equipment.

## EDUCATION AND PROFESSIONAL BACKGROUND

- B.S. (Physics), University of Puget Sound (1968)
- M.S. (Ocean Engineering), University of Rhode Island (1970)

- Utility Commissioner for City of Palo Alto, Electric, Water, and Gas Utilities (1991 to 1996); Chairman of Commission for Two Years

## **SELECTED REPORTS, PUBLICATIONS, AND INVITED LECTURES**

*Long-term Cost Projections and Value Assessment for Salt River Project shared Coal Plants Navajo, Four Corners, and Mohave*, Report to SRP (December 1999).

*Capitol and major maintenance cost forecasts and evaluation of operational variables that affect costs* (H.R. Milner, Battle River, and Sheerness Stations), Report to Alberta Power Limited (October 1998).

*Reliability and Maintenance Analysis for the Suncor Energy, Inc. Millennium Project*, Report to Suncor Energy, Inc. (September 1998).

*Capitol and Maintenance Cost Forecasts for California Assets*, Report to AES Corporation, (November 1997)

*Increasing Hydro Use: One Solution to Controlling Rising Utility O&M Costs, Hydro Review*, Volume XVI, Number 5 (with Steven A. Lefton) (September 1997).

*Risk Based Economic Decision Model for CEDM Inspection and Repair Management at Palo Verde Nuclear Generating Station*, Fourth EPRI Workshop on PWSCC of Alloy 600 in PWRs, Daytona Beach, Florida (February 25-27, 1997).

*Cost of Cycling Estimates for Representative Public Service Company of Colorado Fossil Generating Units*, Report to Public Service Company of Colorado (December 1996).

*Cost of Cycling Estimates for Representative Fossil Generating Units*, Confidential Reports to Three Clients (1996).

*Steam Plant Reliability and Capacity Management*, Report to Alcoa of Australia (December 1995).

*Capital Asset Recommendations for City of Burbank Generation System*, Report to City of Burbank (October 1995).

*Managing Utility Power Plant Assets to Economically Optimize Power Plant Cycling Costs, Life, and Reliability*, Presented at EPRI Cycling Conference (September 1994).

*Total Cost of Cycling Fossil Power Plants*, APTECH Reports to 12 Utility Companies (1991 to 1999).

## **ADDITIONAL INFORMATION**

For more information regarding APTECH's personnel and services, please contact our Corporate Headquarters in Sunnyvale, California (USA) at (408) 745-7000 or visit our website (<http://www.aptecheng.com>).