

RALPH S. OLSON

Senior Consultant, 2003 - Present

Mr. Olson has more than 30 years of experience at Puget Sound Energy in energy supply development, energy supply management, fuel supply development, fuel acquisition, fuel transportation and project management. He directs contract administration, project feasibility studies, economic analysis and contract negotiation for a wide variety of energy supply projects, including coal, natural gas, oil and hydro in addition to wind, geothermal and purchase power contracts.

EDUCATION

- Bachelor of Science in Engineering, Chemical Engineering; University of Washington
- Master of Science in Engineering, Nuclear Engineering; University of Washington
- Management Program, Business; University of Washington

MARSTON EXPERIENCE

- **PRB Coal Gasification Scoping Study**

Technical consultant on a study performed for a confidential client to evaluate the technical and economic feasibility of producing and delivering to markets a cost effective substitute natural gas. Study evaluated green field mine development, reviewed and made recommendations on gasification technologies suitable for the characteristics of feed coals and evaluated natural gas transportation options to deliver the product to trading hubs. Cost estimates of mining, gasification and gas transportation were developed.

- **Australian Coal Resource Evaluation**

Principal Consultant on studies to evaluate the Western Coal Field in New South Wales Australia for domestic thermal coal production and to perform a pre-feasibility study on the most favorable resource identified in the study.

OTHER EMPLOYMENT

PUGET SOUND ENERGY, Director, Energy Supply, 1972 - 2003

Selected Projects:

- **Colstrip Units 1&2 and Colstrip Units 3&4 - MT**

Principal coal supply contract administrator as Chairman of the Mine Operating Committee and Fuel Subcommittee for Colstrip Units 3&4 and the person responsible for all coal supply agreement negotiations for Colstrip Units 1&2 until 2000. Responsible for audits, coal price negotiations, coal price dispute resolution, coal purchases, coal quality issues and long-range fuel studies for new fuel supply options and transportation infrastructure requirements.

- **Colstrip Units 1&2 and Colstrip Units 3&4 - MT**

Management Committee member, responsible for administration of Puget Sound Energy's 50% ownership of Colstrip Units 1&2, a 660MW facility, and 25% ownership of Colstrip Units 3&4, a 1480MW facility, as well as a 97MW purchase power contract sourced from the Colstrip Project.

- **Centralia Steam Electric Power Plant**

Management Committee member responsible for administration of Puget Sound Energy's ownership of the Centralia power plant, a 1300 MW facility, including budget reviews, power plant modifications and upgrades, until its sale in 2000. Responsible for oversight of fuel procurement, from the local mine as well as from the Power River Basin and long range fuel studies and plant modifications required to meet Clean Air Act requirements. Participated in and directed the successful sale of the power plant, representing Puget Sound Energy's interest and that of the other non-operating owners on significant contract issues.

- **Natural Gas Transportation**

Negotiated long-term extensions for natural gas transportation agreements with Williams Pipelines West for Puget Sound Energy and administered these and other transportation agreements totaling over 250,000 mmBtu/day of capacity. Directed the negotiations of the transporters for the expansion of the Williams Pipeline in the Rocky Mountains to meet system needs. Directed the contract negotiations for the construction of a major pipeline to serve the industrial and residential loads in Everett, Washington.

- **Natural Gas Storage**

Managed the joint project responsibilities for Puget Sound Energy as owner-operator of the Jackson Prairie Natural Gas Storage Reservoir. Work included ongoing expansions of both capacity and deliverability.

- **Natural Gas and Fuel Oil**
Purchased natural gas physicals and transportation for electric power plants, purchased fuel oil, arranged for its transportation either by truck or pipeline, and storage at various steam and combustion turbine power plants. Directed negotiation of master purchase and sale agreements for spot purchase of natural gas physicals and financials.
- **Hydroelectric Power**
Negotiated and administered long-term purchase power contracts from Douglas County PUD, Chelan County PUD and Grant County PUD. Administration included review and authorization of plant upgrades and modifications, environmental and fish habitat issues and financial analysis.
- **Project Development**
Responsible for project development to meet over 900MW of long-term energy and capacity requirements of Puget Sound Energy. Projects include wind, coal and natural gas driven generation. Project selection includes use of RFPs, RFQs and direct negotiations.
- **Purchase Power Contracts**
Responsible for administration of all of Puget Sound Energy's long-term purchase power contracts, including PURPA contracts, totaling over 3,000 MW of capacity and energy.