



Strategic Energy and Economic Research, Inc.

SEER

STRATEGIC ENERGY & ECONOMIC RESEARCH Inc. (SEER) provides energy information and consulting services to support energy decision-makers. SEER provides superior support through its integrated energy modeling system and a highly experienced and versatile senior staff. SEER's expertise in energy markets helps clients anticipate the energy future, market risks, and implement successful strategic and tactical plans. SEER helps clients manage fuel market risks, procure fuel and transportation, and provides regulatory support.

SEER is dedicated to providing the highest quality products and support to clients. Most of SEER's staff has over 20 years of experience and are recognized as leading analysts in the industry. SEER's staff has provided services and retainer packages to over 100 energy companies.

SEER offers both energy market analysis through retainer services and consulting support to provide solutions tailored to our clients' needs. The sections below describe SEER's offerings.

CONSULTING SERVICES

- Fuel Price and Emission Allowance Forecasting
- Power Price Forecasts
- Risk Analysis and Management
- Due Diligence, Prudence Reviews and Project Finance Services
- Gas Supply and Transportation Logistics
- Contract Negotiation and Fuel Procurement
- Regulatory Affairs and Expert Witness Testimony
- Sales and Load Forecasting
- Policy Analysis and Support
- Market Analysis and Planning

RETAINER SERVICES

Natural Gas SEER: This service provides a five-year monthly projection of natural gas prices at fifteen major pricing points. Risks are assessed and three price scenarios are provided for Henry Hub. Reference case prices are forecast at 15 major hubs. The market analysis includes a full supply/demand balance, and projections of electricity consumption and generation by source. Storage forecasts are issued weekly for the current and following week. Henry Hub price forecasts are updated weekly. Telephone access to SEER's staff is provided to assist clients in assessing market risk and market outlook.

Natural Gas Scenarios: Natural Gas Scenarios provides a long-term assessment of market fundamentals under alternative assumptions. Coverage includes demands by sector and region, regional wellhead, city-gate prices, prices at major trading points and production by basin.

Energy Outlook: The Energy Outlook provides a 20 year forecast of energy supply, demand and price by census region. Coverage includes wholesale and delivered prices by customer class. Supply and demand are projected by fuel source. Electricity demand is provided for five sectors and generation is provided by region and by fuel type.

Global Petroleum SEER: The Global Petroleum SEER provides monthly analysis of fundamental factors that influence oil prices and forecasts of the following: the refiner cost of crude oil, WTI, and spot prices of six grades of oil at New York Harbor. The global market balance is forecast for six quarters into the future, including the call on stocks and OPEC. Assessments of OPEC strategy and the perceptions of traders are included.

Strategic Petroleum Outlook: The strategic petroleum outlook provides a long-term assessment of oil market fundamentals discussed in light of the evolution of demand, non-OPEC supply, and OPEC policy and capabilities. This report provides both forecast data and analysis of key market uncertainties, including probability assessments and likely scenarios.

RETAINER SERVICES (CONTINUED)

Coal Monthly: (Monthly forecasts for 24 months). A forecast of ten key spot coal prices coupled with an analysis of major market drivers including production, stocks, and exports/imports.

Quarterly Coal Forecast: This 10-15 page forecast is issued quarterly and emphasizes the spot market price outlook for 7 major coal producing regions for the upcoming 8-12 quarters, supplemented by a 24-year annual forecast for each coal.

Coal Price Analysis Reports: Coal Price Analysis reports are more detailed, individual coal region-specific reports issued 1-2 times annually on each of the coal producing regions listed below. The reports cover Demand for the region's coal (with production forecasts), Mining Conditions (a section prepared by SEER's mining engineers), and a Price Forecast for individual coals produced within the region. The price forecast includes a Base, High, and Low Price Case for each coal, as well as covering several market prices for each coal (including Spot, Annual Contract, 3-year Contract, and 5-Year Contract prices).

Transportation Rate Forecasts Transportation Rate Forecasts (TRFs) provide a detailed assessment a variety of transportation modes and carriers. Individual assessments are made of each Class I Railroad (including Canadian lines) covering such areas as market strategy, investment practices, costs of operation, productivity, as well as annual rate forecasts. The TRF document includes rate forecasts rail, barge and truck.

Coal and Rail Contract Escalators: This annual publication provides both insights into current contracting trends and forecasts of the most commonly-used escalators (e.g., Implicit Price Deflator, Consumer Price Index, various PPI indices, RCAF series).

Emission Allowance Price Forecasts: SO₂ And NO_x Emission Allowance Price Forecasts (EAPFs) covering both SO₂ and NO_x are provided quarterly in a 10-15 page document covering 25 years, and monthly in a 5-page report forecasting on a month-by-month basis for 24 months. In addition, a series of 8 Background Papers are furnished the client annually covering such topics as

Mercury, Global Warming, PM_{2.5}, the relationship between emission allowance prices and coal prices, SO₂/NO_x equipment cost assumptions, etc.

Nuclear Power Outlook This publication is produced annually, providing both an assessment of key issues affecting nuclear power as well as a unit-by-unit forecast of generation to the year 2020. Uranium price forecasts are also included.

Coal in the Electric Power Industry: Compliance Strategies and Competitive Power Generation Position 2000-2025: This is a series of plant-by-plant (and unit-by-unit) reports covering coal-fired power generation in all electricity regions. The following is included: A discussion of plant ownership, location, generation and pollution control equipment, capacity factor, coal tonnage and specifications, contract and procurement strategy, transportation modes and alternatives, maps depicting coal plant locations and transportation routings, and clean air compliance strategy (SO₂ and NO_x). For individual plants (and boilers) for 2000-2025, a forecast of the delivered cost of coal is provided in Excel (separated between mine-mouth and transportation costs, including separate identification of truck, rail, barge, and transshipment rates), by coal region and type of coal. For each coal unit, a forecast is provided of the annual capacity factor and generation, fuel and O&M costs, pollution control equipment and/or allowance price costs for SO₂/NO_x/CO₂ reduction, and emission levels. Tables are shown depicting transportation routings and distances, by mode and specific rail carrier, for existing and potential routings

“Our Perspective On...” This quarterly publication informally and qualitatively explores major energy issues of the day. Generally only 3-5 pages in length (although at times they have exceeded 20 pages), it is an opportunity to address underlying energy concerns not always immediately discernible in data or forecasts. Past topics range from an examination of the revived interests in constructing new coal plants, to the impact of electricity deregulation on emission allowance prices, to the newfound volatility in coal markets.

KEY STAFF BIOGRAPHIES

Michael Lynch, President and Director of Global Petroleum Service, has 25 years experience analyzing global energy markets, particularly oil and gas. He has numerous publications in six languages and speaks regularly at international conferences, serving as the only outside expert witness at the last two International Energy Forums, the biennial joint IEA/OPEC ministerial level meetings. He is the primary author of Global Petroleum SEER and Strategic Petroleum Outlook.

Mr. Lynch's previous work has included computer modeling of the world oil market and estimation of the economics of supply for both world oil and natural gas (including LNG supply) and market behavior under normal and disrupted conditions. He has also given testimony and advice to committees of the U.S. Congress and the United Nations, the World Bank and the International Energy Agency

Prior to joining SEER Mr. Lynch was Vice President of WEFA's Global Oil service. He has been Director, Asian Energy and Security, Center for International Studies, Massachusetts Institute of Technology, and held a number of research positions there. Both his B.S. and M.S. degrees in Political Science are from the Massachusetts Institute of Technology.

Ron Denhardt, CEO and Vice President, Natural Gas and Power, has 25 years experience in the energy industry, focusing on natural gas and electric power. He is well known as one of the top gas analysts in North America. He is the primary author of Natural Gas SEER and Natural Gas Scenarios 2003.

Mr. Denhardt's experience includes: strategic planning, acquisition analysis, regulatory analysis, market evaluations, fuel planning, supply contracting, risk mitigation, transportation, pricing, storage field evaluation, developing electricity demand and system load shape models, and investment decision analyses. He has served as an expert witness in many natural gas proceedings.

Prior to joining SEER, Mr. Denhardt was Vice President of WEFA's energy service was a principal at Jensen Associates, Inc. and a consultant at DRI. He has a B.S. in Finance from the University of

Maryland and a Ph.D. in economics from the University of Minnesota.

John Dean, Senior Consultant, Coal and Environmental Analysis, has over 25 years forecasting experience in the coal, coal transportation, and air environmental fields. In covering the short-term, he writes monthly articles on the significance of developments in the coal and emissions allowance markets. In addition, he has conducted site-specific coal and emissions price forecasts for numerous electric power and industrial companies, written extensively on coal procurement issues, and directed market/policy analyses covering such issues as the impact of differing environmental legislation on inter-regional coal market shifts and emission allowance availability and pricing. John has given expert testimony before public utility commissions in Ohio and Pennsylvania, has provided written testimony before the US Congress and the Surface Transportation Board, and has conducted litigation research in a wide range of cases.

John's previous experience includes fuel procurement and coal analysis and DRI, as well as coal and electric power policy and regulatory positions at the US Department of Energy.

James T. Jensen, Senior Consultant International Gas, is well known as an expert on international gas and LNG. He has written extensively on energy questions. For 30 years he was president of Jensen Associates Inc (JAI). At JAI, Mr. Jensen directed economic studies of major gas supply, pipeline and LNG projects throughout the world. These have included American and Eastern Hemisphere pipeline projects as well as LNG prospects for projects involving Algeria, Indonesia, Nigeria, Norway, Qatar, and Trinidad. One of the recent assignments was an analysis of the comparative economics of LNG and pipeline supply to China, Japan and Korea undertaken as a part of a major review of the prospects for natural gas infrastructure in Northeast Asia by the Asia Pacific Energy Research Centre.

KEY STAFF BIOGRAPHIES (CONTINUED)

Susan Haltmaier, Director of Electric Power & Environmental Analysis, has over 20 years of experience in the energy industry. She previously managed both the Global Oil Practice and North American Energy Consulting for the DRI Energy Group. She directed a major multi-client government study on the future of the global electric power industry and has conducted many electricity restructuring projects for individual utilities. She was a member of an Expert Steering Group on the Environmental Implications of Supports to the Energy Sector at the Pollution Prevention and Control Division of the OECD's Environment Directorate. Ms. Haltmaier received her B.A. and M.Sc. degrees in economics from Wellesley College and the London School of Economics, respectively

Robert J. Weiner, Director of Risk Management, is Chairman of the Department of International Business, and Professor of International Business and International Affairs, at the School of Business and Public Management, George Washington University, where he teaches international financial management, international financial markets, and international portfolio management. He is concurrently Member Associe, GREEN (Groupe de Recherche en economie de l'energie et des Ressources Naturelles), Departement d'economique, Universite Laval, Quebec. Dr. Weiner's areas of expertise include trading and risk management in energy derivatives markets, oil futures & options price spreads and inventory behavior, volatility and speculation in petroleum markets, taxation and fiscal exposure of oil-exporting states, and privatization and the behavior of state-owned enterprises in the world petroleum market. His Ph.D. is joint from Harvard Business School and Economics Department.

James Fay, Director of Market Research, has over 20 years experience in the energy industry in new product market research and analysis, new business development, strategic planning, and forecasting. He has directed projects to provide retail energy market intelligence and analysis for energy utilities and related companies in the energy industry. He is the author of more than 50 industry reports and invited papers, and has conducted more than 15 industry workshops on technology markets and value creation in deregulated energy markets. Mr. Fay has

a degree in Mechanical Engineering from the University of Illinois and a degree in Geology from the University of Wisconsin.

Lori Smith Schell, Director of Regulatory Affairs & Fuel Procurement, has over 15 years of experience in the energy industry, in risk management and fuel procurement, including policy analysis work done at the U.S. Department of Energy and Los Alamos National Laboratory. She was Director of Energy Risk Management for Trigen Energy Corporation and she has provided contractual, regulatory, and deliverability risk evaluation for many project-financed natural gas-fired cogeneration projects. She has also provided expert witness testimony in numerous natural gas pipeline proceedings at the Federal Energy Regulatory Commission (FERC). Dr. Schell received a Ph.D. in Mineral Economics and Operations Research from the Pennsylvania State University and a B.A. in Economics from the University of Washington.

Thomas G. Burns, Director of Strategic Planning, has 39 years of experience in operations, management, and strategic planning in all sectors of the international oil and gas business. He has operating experience in petrochemicals, refinery management, and marketing operations. He was the Science Policy Advisor at Chevron Corporation and General Manager of the Executive Staff of Chevron Overseas Petroleum, Inc., Chevron's international exploration and production subsidiary. He has developed and negotiated investment and acquisition opportunities for Chevron Chemical Company. Mr. Burns has a BS and MS degree from the Massachusetts Institute of Technology,

Mark S. Coleman, Director of Statistical Analysis is an applied econometrician with 15 years experience developing sophisticated and original analytical and quantitative solutions for business and investment problems in finance, investment and securities research, and econometric forecasting. He has conducted extensive research in applied finance and econometric forecasting. His current areas of research include real options analysis. Mark has an ABD and MA in Economics from Boston College, and a B.A. in Applied Mathematics and Economics from the University of Massachusetts at Amherst.