

Energy Vision
2020

9

Volume 2, Technical Document

List of Preparers

Volume 2, Technical Document 9

List of Preparers

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List of Preparers

TVA Staff

MICHAEL C. ANDERSON

Position: Project Development Manager, Non-Utility Generation

Education: B.S., Electrical Engineering
M.S., Electrical Engineering

Experience: 25 years of experience in TVA transmission planning, transmission operations, industrial marketing, and new venture development.

GREGORY L. ASKEW

Position: Senior Specialist, National Environmental Policy Act

Education: M.S., Mechanical Engineering
M.S., Environmental Engineering

Experience: 20 years of experience in TVA thermal design and analysis, energy, and environmental engineering. Registered Professional Engineer.

KARLA A. BAKER

Position: Power Supply Analyst

Education: B.S., Business Administration/Economics
M.B.A.

Experience: 2 years of experience in TVA load forecasting. Previous experience includes marketing and research.

NOLAN H. BARKER, JR.

Position: Economist

Education: B.S., Economics
Ph.D., Economics

Experience: 2 years of experience in TVA load forecasting; 15 years of fossil fuel forecasting and planning.

JUDITH P. BARTLOW

Position: Natural Areas Coordinator

Education: B.S., Outdoor Recreation

Experience: 15 years of experience with TVA in resource management.

BRYANT G. BEAMES

Position: Power Utilization Engineer

Education: B.S., Mechanical Engineering

Experience: 14 years of experience in TVA demand-side management program design, demonstration, implementation, and operation. Registered Professional Engineer.

DAN E. BIRCH

Position: Manager, Demand-Side Planning

Education: B.A., Economics
M.A., Economics
Ph.D., Economics

Experience: 13 years of experience in TVA load forecasting; two years in demand-side planning. Previous experience includes teaching and research in economics at Illinois State University and the University of Tennessee at Chattanooga.

W. TERRY BOSTON

Position: Division Manager, Electric System Reliability

Education: B.S., Engineering
M.S., Engineering Administration

Experience: 23 years of experience in TVA Power Control Center, Power Supply, Transmission Construction, and managing field operations and Transmission Area Dispatch Control Centers. Registered Professional Engineer.

DALE T. BRADSHAW

Position: Senior Manager, Energy Options Development

Education: B.S., Engineering Physics
M.S., Mechanical and Nuclear Engineering
M.B.A., Finance

Experience: 21 years of experience in TVA power planning, engineering, and research and development.

PATRICIA F. BREWER

Position: Environmental Research Specialist
Education: B.S., Biology
 M.S., Plant Pathology
Experience: 10 years of experience in TVA air quality and forest effects research; 3 years of experience in environmental compliance for TVA's fossil and hydro facilities.

GERALD E. BROOKS

Position: Manager, Specialist in Energy Resource Planning & Engineering
Education: B.S., Mathematics
 M.A.T., Physics
Experience: 17 years of experience in TVA power resource planning (reliability and production cost studies). Previous experience as meteorologist in U.S. Air Force and TVA air quality program.

PHILIP D. BROWN

Position: Engineering Specialist
Education: B.S., Nuclear Engineering
 M.E., Nuclear Engineering
 M.B.A.
Experience: 19 years of experience in TVA fuel planning and evaluations.

GARY C. BULLOCK

Position: Manager, Transmission Planning Department
Education: B.S., Electrical Engineering Technology
 M.S., Electrical Engineering
Experience: 19 years of experience in planning, operations, and construction of utility transmission systems at TVA.

THOMAS F. BUTLER

Position: Project Manager/Specialist
Education: B.S., Mechanical Engineering
Experience: 23 years of experience in TVA engineering design, performance monitoring and testing, and research and development.

ROY V. CARTER

Position: Project Engineer
Education: B.S., Biology
 B.S.C.E., Civil Engineering
 M.S.E., Environmental Engineering
Experience: 18 years of experience in air pollution and environmental engineering at TVA. Previous experience includes air pollution engineering and air quality monitoring at the U.S. Environmental Hygiene Agency and the U.S. Army Construction Engineering Research Laboratory. Registered Professional Engineer.

CHARLOTTE C. CHENG

Position: Power Supply Engineer
Education: B.E., Electrical Engineering
 M.S., Electrical Engineering
Experience: 3 years of experience in TVA power resource planning. Previous experience in the electrical department at Johnsonville Steam Plant.

J. DIANE CHRISTIAN

Position: Senior Financial Analyst
Education: B.S., Business Administration
 M.B.A., Finance
Experience: 23 years of experience in TVA financial, accounting, and management positions.

JOSEPH L. COLLINS

Position: Botanist
Education: B.A., Biology
 Ph.D., Plant Taxonomy
Experience: 19 years of experience in TVA environmental review and site assessment. Previous field experience with the general flora of the Southeast United States, Peru, Panama, and Costa Rica.

RICHARD E. COLLINS

Position: Generation Technology Specialists
Education: B.S., Chemical Engineering
Experience: 20 years of experience in TVA pollution control abatement. Registered Professional Engineer.

ELIZABETH A. CREEL

Position: Manager, System Power Marketing
Education: B.S., Mathematics
 M.S., Computer Science
Experience: 19 years of experience in TVA power resource planning and bulk power marketing.

JAMES L. CROSS

Position: Vice President, System Planning and
IRP Project Manager

Education: B.S., Mechanical Engineering
M.S., Mechanical Engineering

Experience: 31 years of experience in TVA with all aspects
of utility business.

DENNIS T. CURTIN

Position: Specialist, Natural Resource Management

Education: B.S., Forest Management
M.S., Forestry

Experience: 16 years of experience in TVA natural resources
management and forestry operations.

MARTHA L. DALLOUL

Position: Manager, Specialist in System Integration
and IRP Coordinator

Education: B.A., Business
M.A., Economics

Experience: 18 years of experience in TVA load forecasting
and power resource planning.

WILLIAM A. DOYLE

Position: Manager, Transmission Planning, (Retired)

Education: B.S., Electrical Engineering

Experience: 9 years of experience in planning; 39 years at
TVA.

HAROLD M. DRAPER

Position: National Environmental Policy Act Specialist

Education: B.S., Botany
B.S., Conservation
M.S., Engineering and Policy
D.Sc., Engineering and Policy

Experience: 5 years of experience in TVA environmental
impact assessment. Previous experience in state bioenergy
and renewable energy program development, Florida
Governor's Energy Office and Mississippi Energy and
Transportation Division.

JUDY G. DRIGGANS

Position: Power Supply Engineer

Education: B.S., Engineering

Experience: 2 years of experience in TVA demand-side plan-
ning; 9 years with TVA solar and conservation programs.
Registered Professional Engineer.

RICHARD L. DRIGGANS

Position: Manager, Strategic Processes & Planning,
Resource Group

Education: B.S., Engineering
M.B.A.

Experience: 18 years of experience in TVA research and
development for electric transportation, communications,
and expert systems; strategic planning; and technology plan-
ning activities. Registered Professional Engineer.

JOSEPH P. FRUEH

Position: Manager, Special Studies

Education: B.S., Mathematics

Experience: 15 years of experience in TVA load forecasting
and power resource planning.

GARY P. GARRETT

Position: Manager, Energy Resource Planning &
Engineering

Education: B.S., Electrical Engineering
M.S., Electrical Engineering

Experience: 22 years of experience in TVA power resource
planning.

LARRY L. GAUTNEY, JR.

Position: Systems Analyst/Environmental Modeler

Education: B.S., Physics
M.S. Ed., S. Physics

Experience: 20 years of experience with TVA developing
and applying atmospheric dispersion models to support
TVA's fossil program.

JERRY L. GOLDEN

Position: Manager, Advanced Production and
Environmental Technology

Education: B.S., Mechanical Engineering
M.S., Engineering

Experience: 22 years of experience in TVA engineering
design and project/program management for air pollution
control projects; member of Acid Rain Advisory Committee,
Climate Challenge Steering Committee.

JUAN E. GONZALEZ

Position: Senior Economist for Economic Forecasting
Education: B.A., Economics, Political Science, and Mathematics
 M.A., Economics
 A.B.D., Economics
Experience: 17 years of experience in TVA economic forecasting and economic development. Previous experience includes research in economic forecasting and utility economics at the University of Florida.

CHARLES H. GOODHARD

Position: Manager, Technical Analysis (Acting)
Education: B.S., Economics
 M.S., Economics
Experience: 3 years of experience in fuel supply planning. Previous experience includes financial analysis and forecasting, market research, and load analysis.

J. BENNETT GRAHAM

Position: Senior Archaeologist
Education: B.A., English
 M.A., Anthropology
Experience: 21 years of experience for TVA in archaeological site identification, evaluation and analysis, and cultural resource compliance. Previous experience includes teaching anthropology at Wright State University and the University of Alabama; archaeological research in Southeast/Midwest United States, Costa Rica, and South Africa.

ANDREW GROTH

Position: Economist
Education: B.A., Economics
 M.A., Economics
 A.B.D., Economics
Experience: 9 years of experience in TVA regional economic forecasting and research.

JAMES A. HALL

Position: Specialist, Generation Technology
Education: B.S., Mechanical Engineering
Experience: 17 years of experience in TVA Research and Development, Power Supply, and Fossil & Hydro Power; principal investigator for repowering study of TVA power plants.

GARY H. HARRIS

Position: Manager, Services Education, Training & Development
Education: B.S., Business Administration
Experience: 3 years of experience in TVA education, training and development. Previous experience includes crude oil, natural gas, and electricity production at Chevron U.S.A. Oil Company.

MARY JANE HEAVENER

Position: Manager, Market Research
Education: B.S., Business Administration
Experience: 25 years of experience in TVA market research.

KATHY A. HECK

Position: Manager, Public Participation
Education: B.S., Education
 M.S., Industrial/Organizational Psychology
Experience: 4 years of experience in TVA Nuclear Mechanical Quality Control; 9 years of experience in Individual and Organizational Development.

MARK K. HILL

Position: Specialist, Generation Technology
Education: Bachelor of Mechanical Engineering
Experience: 16 years of experience in TVA Research and Development, Fossil & Hydro Power, and fluidized bed combustion; principal investigator for TVA's greenhouse gas emissions reduction activities.

JOHN W. HUTTON

Position: Staff Support Manager, TVA Nuclear
Education: B.S., Mechanical Engineering
Experience: 20 years of TVA experience in nuclear power plant operations, engineering, planning, and licensing.

ROBERT E. IMHOFF

Position: Systems Analyst/Atmospheric Modeler
Education: B.S., Engineering Science
 M.S., Environmental Engineering
Experience: 20 years of experience in measuring and modeling atmospheric concentrations due to emissions from TVA sources.

WILLIAM F. IRISH

Position: Manager, Specialist in System Business Planning

Education: B.S., Economics
M.S., Economics
Ph.D., Economics

Experience: Experience in TVA risk management, evaluations of call and put option proposals, and system forecasting. Previous experience as staff economist for the North Carolina Utilities Commission.

PHILIP H. IVEY

Position: Area Communications Manager, TVA Energy Communications Staff

Education: English and Social Studies

Experience: 16 years of experience in business communications; 9 years of experience in print and broadcast media.

GARY L. JACKSON

Position: Manager, Bulk Power Marketing

Education: B.A., Mathematics
Ph.D., Economics

Experience: 15 years of experience in TVA load forecasting, generation planning, strategic planning, business evaluation, and competitive market assessments. Previous experience includes teaching at the University of Tennessee at Chattanooga.

SCOTT C. JONES

Position: Power Supply Engineer

Education: B.S., Electrical Engineering

Experience: 4 years of experience in TVA power resource planning. Previous experience includes working in System Engineering at Watts Bar Nuclear Plant. Registered Professional Engineer.

JOHN D. JOSLIN, JR.

Position: Environmental Scientist

Education: B.A., Psychology
M.S., Human Development
M.F., Forestry
Ph.D., Forestry

Experience: 12 years of experience at TVA in research on air pollution effects on forests, soils, and streams. Previous experience in teaching, soil mapping, and horticulture.

EDWARD L. JULIAN

Position: Fuel Supply Analyst

Education: B.S., Geology
M.S., Geology
Ph.D., Mineral Economics

Experience: 15 years of experience in TVA fuel market analysis, price forecasting, and fuel supply planning. Previous experience includes teaching and research in geology and industrial and resource economics at North Carolina State University and Pennsylvania State University.

HANK E. JULIAN

Position: Hydrogeologist/Civil Engineer

Education: B.S., Civil Engineering
M.S., Civil Engineering

Experience: 6 years of experience in hydrogeologic characterization studies, groundwater modeling, and research. Previous experience includes technical consulting as an environmental engineer.

J. MICHAEL KELLY

Position: Senior Technical Specialist

Education: B.S., Biology
M.S., Plant and Soil Science
Ph.D., Forest Ecology/Soils

Experience: 25 years of experience in research and analysis of air pollution impacts on terrestrial ecosystems. Certified Professional Soil Scientist and Fellow of the Soil Science Society of America.

DAVID B. LAMB

Position: Manager, Marketing Product Development

Education: B.S., Agricultural Engineering

Experience: 27 years of experience in energy end use applications, program development, implementation, and evaluation.

ALAN L. LARSON

Position: Quality Manager

Education: B.A., Economics
Ph.D., Economics

Experience: 15 years of experience in TVA load forecasting and planning. Previous experience includes teaching and research in economics at the University of Tennessee at Chattanooga.

JON M. LONEY

Position: Manager, Environmental Management

Education: B.S., Geography
M.S., Geography

Experience: 23 years of experience in environmental planning, review, and management related to energy, natural resources, and economic development.

JILL S. LUEDTKE

Position: Demand-Side Planning Specialist

Education: B.A., Economics

Experience: 2 years of experience in demand-side planning at TVA. Previous experience in demand-side planning and integrated resource planning with the Public Service Commissions of Michigan and Maryland.

STEVEN K. MACEY

Position: Power Supply Engineer

Education: B.S., Mechanical Engineering

Experience: 22 years of experience in TVA environmental engineering and demand-side and resource planning. Previous experience as design engineer on Skylab and Space Shuttle. Registered Professional Engineer.

ROBERT A. MARKER

Position: Recreation Specialist

Education: B.S., Outdoor Recreation Resources Management

Experience: 24 years of experience in recreation planning and management.

SCOTT P. MARTELLO

Position: Economist

Education: B.A., Economics
M.S., Economics

Experience: One year of experience in TVA load forecasting.

RICHARD M. MARTIN

Position: Manager, Cost and Rate Analysis

Education: B.B.A., Economics
M.A., Economics

Experience: 18 years of experience in electric utility cost-of-service and rate design. Previous experience includes research in fossil fuel supply and transportation.

LYNN C. MAXWELL

Position: Manager, System Integration and IRP
Technical Manager

Education: B.A., Economics
M.A., Economics
Ph.D., Economics

Experience: 20 years of experience in TVA load forecasting and power resource planning. Previous experience includes teaching and research in economics at the University of South Dakota and the University of Wyoming.

MAJOR C. R. MCCOLLOUGH

Position: Project Engineer, Geographic Information and Engineering

Education: B.S., Chemistry
M.A., Anthropology
Ph.D. Anthropology (Archaeology)

Experience: 17 years of experience in cartography.

BERT A. MCDOWELL

Position: Electrical Engineer

Education: Bachelor and Masters of Electrical Engineering

Experience: 9 years of experience in planning, 15 years at TVA.

ALEXANDER IAN MCLEOD

Position: Environmental Coordinator, Customer Group & Transmission/Power Supply

Education: B.A., English Language and Literature

Experience: 4 years of experience in environmental planning and oversight. Prior experience includes 12 years in TVA Corporate Communications with focus on power resource planning and environmental issues.

JAMES F. MEAGHER

Position: Manager, Atmospheric Sciences

Education: B.S., Chemistry
Ph.D., Physical Chemistry

Experience: 20 years of experience in air quality research at TVA. Previous experience includes research and teaching experience in atmospheric chemistry and physical chemistry at Pennsylvania State University and University of Washington.

ROBERT L. MERRING

Position: Manager, Utility Planning
Education: Bachelors and Masters of Electrical Engineering
Experience: 22 years experience in power plant operation, maintenance and management; 3 years experience in power system planning.

ROBERT G. MILLARD

Position: Manager, Specialist in Load Forecast and Analysis
Education: B.S., Economics
 M.B.A.
Experience: 14 years of experience in TVA load forecasting and power resource planning.

E. CHERI MILLER

Position: Market Development Specialist in Fuel By-Products
Education: B.S., Biology
Experience: 15 years of experience in TVA environmental assessments, ground water quality, permitting, and site development work for coal combustion by-product utilization and disposal projects.

PATRICIA H. MILLER

Position: Senior Strategy Advisor
Education: B.S., Mathematics
 M.S., Mathematics
Education: 26 years of experience in utility operations, including analysis of utility industry restructuring, budgeting, and long-range planning.

JACK D . MILLIGAN

Position: Environmental Engineer
Education: M.S., Environmental Engineering
Experience: 20 years of experience with TVA in water quality.

COLLEEN M. MOORE

Position: Power Supply Analyst
Education: B.S., Electrical Engineering
Experience: 12 years of experience in TVA power resource planning and system power marketing. Previous experience in Engineering at Sequoyah Nuclear Plant.

STEPHEN F. MUELLER

Position: Senior Environmental Scientist
Education: M.S., Meteorology
Experience: 16 years of experience in TVA air quality analysis and research. Certified Consulting Meteorologist.

LEONARD J. MUZYN

Position: Senior Financial Analyst
Education: B.S., Electrical Engineering
 M.B.A.
Experience: 5 years of experience in TVA finance organizations. Previous experience as electronic design/project engineer.

NIKI STEPHANIE NICHOLAS

Position: Forest Ecologist
Education: B.A., Biology
 M.S., Ecology
 Ph.D., Forestry
Experience: 12 years of experience in forest ecology. Previous experience in science division of National Park Service and on research faculty at Virginia Tech.

DAVID E. NICHOLS

Position: Chemical Engineer
Education: B.S., Chemical Engineering
 M.S., Chemical Engineering
 M.B.A.
Experience: 25 years of experience in TVA engineering and management including preparing Title V permit applications for TVA fossil plants and research and development for chemical processes.

CHARLES P. NICHOLSON

Position: Zoologist
Education: B.S., Wildlife and Fisheries
 M.S., Wildlife Management
Experience: 16 years of experience in TVA wildlife and endangered species management and assessment.

NORRIS A. NIELSEN

Position: Meteorologist
Education: B.S., Meteorology
 M.S., Meteorology
Experience: 20 years of experience in TVA applied meteorology for power programs and environmental assessments. Previous experience as Meteorology Group Leader at Radian Corporation; and as National Weather Service weather observer.

BARBARA O. NIERI

Position: Manager, Special Projects and IRP Coordinator
Education: B.S. and M.S., Interdisciplinary
 Ph.D., Human Ecology, Planning, and Housing
Experience: 16 years of experience in TVA demand-side management, strategic, and system planning. Previous experience includes teaching and extension service at the University of Tennessee at Knoxville.

PATRICIA NORTHCUTT

Position: Team Leader, Mapping and GIS Services, Geographic Information and Engineering
Education: B.S., Geoscience, Remote Sensing
 M.A., Environmental Monitoring
Experience: 3 years of experience in TVA Remote Sensing and GIS. Previous experience includes remote sensing, GIS, and software design and development at Intergraph Corporation.

PENNY K. O'DELL

Position: Manager of Electronic Media
Experience: 18 years of experience in graphics and graphic design.

AMY T. PARKER

Position: Manager, Fuel Supply Analysis
Education: B.S.B.A., Accounting
Experience: 3 years of experience in oversight related to TVA's fossil fuel supply requirements; fuel accounting/financial functional areas of TVA. Licensed Certified Public Accountant.

BEVERLY J. PATTERSON

Position: Computer Graphics Technician, Geographic Information and Engineering
Education: A.A., Graphic Arts/Drafting
Experience: 10 years of experience in TVA cartographic production. Previous experience in cartographic work with government contractors.

LAURIE SHERMAN PEARL

Position: Recreation Planner
Education: B.S., Forestry and Wildlife
Experience: 17 years of experience in TVA recreation resource planning and management.

SAMUEL C. PERRY

Position: Landscape Architect – Technical Supervisor
Education: B.L.A.
Experience: 25 years of experience in TVA Reservation and Site Planning.

PAUL A. PIER

Position: Environmental Scientist
Education: B.A., Forest Science
 M.S., Forest Physiology
 Ph.D., Crop Physiology
Experience: 7 years of experience in TVA biological research on air pollution effects and trace gas emissions.

M. WALTON POWERS

Position: Power Supply Engineer
Education: B.S., Mathematics
 M.S., Mathematics
 Ph.D., Mathematics
Experience: 15 years of long-range planning experience including power resource planning and fuel supply planning.

F. RUSSELL ROBERTSON

Position: Manager, Commercial and Industrial Marketing
Education: B.S., Electrical Engineering
 M.S., Electrical Engineering
Experience: 15 years of experience in TVA market planning and delivery of utility programs to the marketplace; test and evaluation of solar and renewable technologies.

SUSAN HUMBER ROSS

Position: Manager, Specialist in System Integration and IRP Coordinator
Education: B.A., Economics and English
Experience: 15 years of experience in TVA energy efficiency and marketing programs.

MARK O. SANFORD

Position: Manager, Nuclear Corporate Licensing and Generation Planning
Education: B.S., Nuclear Engineering
 M.S., Chemical Engineering
Experience: 4 years of experience with TVA in developing and evaluating new electricity generation options. Previous experience in design, construction, operation, and maintenance of nuclear power plants.

STEVEN C. SETTLE

Position: Fuel Supply Analyst

Education: B.B.A., Business Management
M.S., Industrial Organizational Psychology

Experience: 12 years of experience in oil and natural gas fuel market procurement and market analysis. Previous experience in other procurement fields.

RICHARD A. SHINN

Position: Manager, Transmission Development

Education: B.S., Electrical Engineer

Experience: 24 years of experience in TVA transmission planning and development.

JOHN W. SHIPP, JR.

Position: Manager, Environmental Services

Education: B.S., Civil Engineering
M.S., Civil Engineering

Experience: 20 years of experience in TVA environmental services, including water resources, hazardous materials handling, and emergency operations. Registered Professional Engineer. Certified Hazardous Materials Manager.

ROY E. SIEBER

Position: Project Manager

Education: Aeronautical Design

Experience: 15 years of experience in TVA industrial marketing, new product development, and demand-side planning. Previous experience includes resource planning at the New York Power Pool and Long Island Lighting Company.

R. CRAIG SMITH

Position: Manager, Conservation and Load Management

Education: B.A., Urban Studies and Planning

Experience: 3 years of experience in TVA demand-side planning and program implementation. Previous experience includes DSM program implementation at Pacific Gas and Electric and Pacific Power and Light Companies; regulatory experience at Michigan Public Service Commission.

MICHAEL CHARLES SMITH

Position: Senior Economist

Education: B.A., Mathematics
M.A., Economics

Experience: 15 years of experience in TVA economic development research and forecasting. Previous experience includes energy demand forecasting at Oak Ridge National Laboratory and teaching and research in economics at the University of Tennessee at Knoxville.

MEREDITH H. SNYDER

Position: Power Supply Analyst

Education: A.S., Mechanical Engineering
B.S., Mathematics
M.Ed., Education

Experience: 9 years of experience in load forecasting and nuclear operations. Previous experience includes teaching in Hamilton County and at Chattanooga State Technical Community College.

JOANNE V. SWANSON

Position: Decision Analysis Specialist

Education: B.S., Business Administration
M.B.A.

Experience: 20 years of experience in TVA power resource planning.

BYRON D. STEWART

Position: Manager, Bulk Transmission Planning

Education: B.S., Electrical Engineering

Experience: 24 years of experience at TVA in planning.

ROBERT E. TAYLOR

Position: Specialist, Peaking and Energy Storage

Education: B.S., Engineering Science
M.S., Aerospace Engineering

Experience: 23 years of experience in TVA power plant engineering and research and development.

R. LARRY TAYLOR

Position: Manager, Electric System Operations

Education: B.S., Electrical Engineering
M.B.A.

Experience: 2 years of experience in TVA in areas of power system operation, bulk power marketing, and interchange operations. Previous experience includes consulting for the electric power industry; Vice President, Power Delivery at Florida Power & Light Company.

J. DANIEL THOMAS

Position: Project Leader, Forest Resources Information System
Education: B.S., Forest Management
 M.S., Forestry
Experience: 12 years of experience in TVA Forest Resources Inventory and Analysis Project; 2 years Forest Inventory, TVA.

TOMMY R. THOMPSON

Position: Specialist, Generation Technology
Education: B.S., Mechanical Engineering
 M.S., Mechanical Engineering
Experience: 18 years of experience at TVA in fossil-fired power plant engineering, including conceptual design, detailed design, contract management, technical supervision, and project management. Previous experience includes nuclear power plant engineering. Registered Professional Engineer.

FRANK C. THORNTON

Position: Specialist, Atmospheric Sciences
Education: B.S., Environmental Sciences
 M.S., Forestry
 Ph.D., Forest Soils
Experience: 9 years of experience in air pollution effects at TVA. Previous experience includes post-doctoral work in mineral nutrition of woody plants and metal toxicity in United States and abroad; agricultural consultant.

CHARLES R. TICHY

Position: Historical Architect
Education: B. Architecture
 M.A., Historic Preservation
Experience: 16 years of experience as TVA Historical Architect. Previous experience includes State of New Jersey Office of Historic Preservation; historic architect for Nassau County, New York.

EDDIE TRAMEL

Position: Johnson City Customer Service Center Manager
Education: B.S., Electrical Engineering
Experience: 26 years of experience in TVA working with customers and distributors in marketing, conservation, rate and contract administration, and program development and management.

RALPH J. VALENTE

Position: Project Engineer
Education: B.S., Meteorology
 M.S., Engineering
Experience: 15 years of experience in TVA air quality research. Extensive experience in ground-based and air-borne monitoring and model evaluation studies.

L. CHRISTY VALERIO

Position: Economist
Education: B.S., Agricultural Economics
 M.S., Agricultural Economics
 M.S., Public Policy and Public Administration
 Ph.D., Economics
Experience: 4 years of experience in TVA regional economic forecasting. Adjunct Professor at Tusculum College.

CAROLINE M. WALLER

Position: Computer Graphics Technician, Geographic Information and Engineering
Education: High School Diploma
Experience: 18 years of experience in graphics composition and computer graphics.

BARRY B. WALTON

Position: Assistant General Counsel, Environmental
Education: B.A., Political Science
 J.D., Law
Experience: 22 years of experience in TVA's General Counsel's Office practicing environmental and natural resource law.

JOHN WATKINS

Position: Economist
Education: B.S., Math
Experience: 25 years of experience in TVA load forecasting and 15 years in revenue forecasting.

FRANCES P. WEATHERFORD

Position: Senior Environmental Scientist
Education: B.A., Biology
Experience: 20 years of experience in air quality research, monitoring, and other technical services related to air quality compliance.

KATHY S. WHITAKER

Position: Manager, Transmission, Distribution and End-Use

Education: B.S., Civil Engineering
M.S., Engineering

Experience: 12 years of experience in TVA engineering disciplines; special assignment serving as the Public Participation Manager for TVA's Integrated Resource Planning development.

JAMES O. WHITE

Position: Project Manager, Industrial Marketing, and IRP Coordinator

Education: B.S., Geography/Biology
M.S., Planning

Experience: 20 years of experience in TVA regional development studies, and project management and evaluation. Previous experience includes community land use planning.

JAMES T. WHITEHEAD

Position: Manager, Reliability Analysis

Education: B.S., Electrical Engineering

Experience: 26 years of TVA experience, primarily in planning.

DALE V. WILHELM

Position: National Environmental Policy Act Liaison

Education: B.S., Mathematics
M.S., Meteorology

Experience: 20 years of experience in interdisciplinary environmental review. Previous experience as Agency NEPA Advisor.

JAMES F. WILLIAMSON, JR.

Position: Environmental Scientist

Education: B.S., General Science/Zoology
M.S., Wildlife Ecology
Ph.D., Fisheries and Wildlife Sciences

Experience: 4 years of experience in environmental reviews and preparing environmental documentation. Previous experience in forest and wildlife-related software and data-base development and forest biometrics.

NEIL M. WOOMER

Position: Senior Limnologist

Education: B.A., Botany
M.S., Biology
Ph.D., Limnology

Experience: 15 years of experience in TVA aquatic monitoring and assessment. Previous experience as chief ecologist for water quality studies, Arkansas Department of Pollution Control and Ecology.

B. J. WRIGHT

Position: Manager, Customer Communications

Education: B.S., Communications
M.B.A., Marketing

Experience: 12 years of experience in TVA employee, marketing, and strategic communications; visitor relations; speechwriting; and advertising.

CASSANDRA L. WYLIE

Position: Statistician

Education: B.S., Forestry
M.S., Forest Biometry

Experience: 10 years of experience in TVA data analysis of atmospheric effects on forests.

DENNIS H. YANKEE

Position: Programmer/Analyst

Education: M.S., Geography

Experience: 7 years of experience with Geographic Information Systems.

TVA Consultants

CLINTON J. ANDREWS

Position: Assistant Professor of Public and International Affairs, Princeton University

Education: Sc.B., Mechanical Engineering
S.M., Technology and Policy
Ph.D, Regional Planning

Experience: 17 years of experience in energy sector including integrated resource planning methods. Author of more than a dozen refereed articles on IRP, contributions on related topics, including *Regulating Regional Power Systems* (Quorum/IEEE, 1995).

JOHN R. BROOKS

Position: Principal, Brooks Jenkins (Communications and Design Agency)

Education: B.A., Journalism

Experience: 25 years of experience in corporate communications and agency management. Extensive experience in the transportation and energy fields, including a ten-year assignment at the Institute of Nuclear Power Operations. Accredited by the International Association of Business Communicators.

LORI CLEGHON

Position: Art Director, Graphic Advertising, Inc.

Education: A.S., Advertising Arts

Experience: 6 years of experience in graphic design and print media.

MAXIM R. DUCKWORTH

Position: Research Analyst, Energy Group, Tellus Institute

Education: B.S., Physics
M.A., Physics

Experience: Experience in electric power system modeling and planning analysis at Tellus Institute. Involved in TVA project to investigate potential level of competition from other electricity providers over the next 25 years.

LOIS HOGAN

Position: Senior Counselor, Jackson Jackson & Wagner

Education: B.S., Journalism
M.A., Holistic Education

Experience: Specializes in organization development, group facilitation, management training, development and production management of graphic systems, and community relations and public participation groups. Contributor, *pr reporter*, the international weekly professional newsletter; Contributor, *Public Relations Practices, Managerial Case Studies and Problems*, Center and Jackson, 1989, 1995. PSRA National Conferences, Council on Advancement and Support of Education (CASE) Community Relations Conference, and American Institute of Cooperatives. Accredited by the Public Relations Society of America. Certified in Group Facilitation, Interface Foundation, Boston.

JOHN I. JAMES

Position: President, The Cube, Inc.

Education: B.F.A., Graphic Design

Experience: 5 years of experience in management; 5 years in information technology; and 10 years graphic design.

HEIDI KROLL

Position: Research Associate, Energy Group, Tellus Institute

Education: B.A., Economics

Experience: Experience in the acquisition and analysis of economic, energy use, and conservation-related data underlying integrated resource planning research in utility and regulatory settings; tracking development of TVA's first comprehensive Integrated Resource Plan, on which Tellus is advising the TVA's Board of Directors. Participated in a comprehensive survey of utility and regulatory Integrated Resource Plan practices throughout the United States and helped draft proposed Integrated Resource Plan rules for the Kansas Corporation Commission and the Colorado office of Energy Conservation.

BRUCE LANDREY

Position: Principal, Landrey & Hunt, Inc.

Education: B.S., Journalism

Experience: 20 years of experience in public relations, investor relations, advertising, media and community relations, and government affairs. Previous experience includes vice president of public relations for TVA, director of investor relations for Portland General Corporation, director of corporate communications at Portland General Electric Company, and strategy development at Edison Electric Institute, the Electric Power Research Institute, and the U.S. Committee for Energy Awareness.

CHAS LAW

Position: Owner, Chas Law Design

Education: A.A.S., Communications Graphics Technology

Experience: 4 years of experience in publication design. Previous experience includes teaching computer graphics, graphic design, and photography at Pellissippi State Technical Community College.

RICHARD B. MCLEAN

Position: Principal/NEPA Manager, PTRL Environmental Services

Education: Ph.D., Marine Biology

Experience: 21 years of experience in environmental assessment.

ISOBEL PARKE

Position: Senior Counselor, Jackson Jackson & Wagner

Education: B.A., History
M.A., History

Experience: Specializes in strategic planning, crisis communication, emerging issues, environmental and waste disposal issues, coalition and consensus building, and naming strategies and graphic concepts. President, New Hampshire Timberland Owners Association, 1986-87; President, Rockingham County Woodland Owners Association, 1987. Contributor, *Public Relations Practice, Managerial Case Studies and Problems*, Center and Jackson, 1989, 1995. Accredited by and a Fellow of the Public Relations Society of America.

GABRIELLE RATLIFF

Position: Database Administrator, Geophex Ltd.

Education: B.S., Computer Science

Experience: 2 years of experience in computer programming.

MARY REVENIG

Position: Graphic Designer, DesignWorks

Education: B.F.A., Painting and Drawing

Experience: 26 years of experience in publication design.

RICHARD A. ROSEN

Position: Executive Vice-President, Director and Senior Scientist, Energy Group, Tellus Institute

Education: B.S., Physics and Philosophy
M.A., Physics
Ph.D., Physics

Experience: Research on integrated resource planning energy conservation; electric generation planning issues; and modeling studies of long-range energy demand, utility system reliability, energy demand curtailment, and environmental externalities and energy planning. Experience in integration of supply-side and DSM options into integrated resource planning, including consideration of the costs of environmental externalities.

RICHARD M. SANDVIK

Position: Energy-Related Projects Consultant

Education: B.A., Economics
J.D.

Experience: Experience in consulting for such firms as Bonneville Power Administration, U.S. Generating Company, and TVA. Previous experience includes General Manager and Director, Legal Department and Director of Strategic Issues Management for Portland General Corporation, and Senior Assistant Attorney General for the Oregon Department of Justice.

RICHARD E. SAYLOR

Position: Program Manager, Geophex Ltd.

Education: M.S., Environmental Science

Experience: 16 years of experience in environmental and safety assessment.

KATHY L. SHASSERE

Position: Database Administrator, PTRL Environmental Services

Experience: 15 years of experience in computer science.

DALJIT SINGH

Position: Research Associate, Energy Group, Tellus Institute

Education: B.Tech, Electrical Engineering
 M.S., Electrical Engineering (Power Electronics)
 M.S., Electrical and Computer Engineering (Computer Systems Engineering)
 M.S., Technology and Policy

Experience: Experience in electric system planning, including power plant performance assessment, evaluation of power supply technologies, transmission and distribution, cost/benefit analysis, and emission control technologies. Also worked on resource bidding and evaluation of qualifying facilities and independent power producing facilities.

STEPHEN L. THUMB

Position: Partner, Energy Ventures Analysis

Education: B.S., Chemical Engineering
 M.B.A., Finance

Experience: 7 years of experience directing oil and natural gas practice. EVA senior financial analyst for natural gas procurement, natural gas/oil industry analyses, forecasting, acquisition and divestiture analysis. Previous experience includes over 15 years in related industry positions.

DOUGLAS H. WALTERS

Position: Senior Consultant, Strategic Decisions, Inc.

Education: B.S., Electrical Engineering
 M.S., Industrial Engineering
 Ph.D., Industrial Engineering

Experience: 22 years of electric utility planning experience with TVA, primarily in economic analysis and decision and risk analysis.

CHRIS WATTS

Position: Contractor, Operations Simulation Associates, Inc. (OSA)

Education: B.S., Engineering

Experience: 9 years of experience in resource planning at a utility. Previous experience as utility consultant.

THOMAS A. WINDHAM

Position: Cartographic Design Specialist

Education: B.F.A., Graphic Arts

Experience: 5 years of experience in cartographic design and production.

Review Group Consultants

STEPHEN R. CONNORS

Position: Director, M.I.T. Electric Utility Program,
Director, M.I.T. Analysis Group for Regional
Electricity Alternatives

Education: B.A., Anthropology
B.S., Mechanical Engineering
S.M., Masters in Technology and Policy

Experience: Participant of the Massachusetts Institute of Technology Energy Laboratory's Analysis Group For Regional Electricity Alternatives (AREA). Worked with New England's electric utilities, regulatory agencies, and business, consumer and environmental concerns to identify long-range strategies. Experience includes a broad range of energy and environmental issues ranging from electricity planning and regulation to identification of cost-effective emissions reductions, domestic and international.

BARBARA A. MACMULLAN

Position: Senior Analyst, National Economic Research
Associates, Inc.

Education: B.S., Natural Resources
M.A., Economics

Experience: Experience in research and analysis for the electric utility industry, including comparing cost of electricity from nuclear and coal plants, statistical analyses of nuclear and coal capital and operating costs and analysis of utility conservation programs. Assisted clients in all aspects of regulatory proceedings, including reviewing expert testimony, preparing cross-examination of opposing witnesses, and testifying on behalf of electric utilities in regulatory and other proceedings concerning the economics of nuclear power plants. Previous experience as a consultant evaluating economic losses in wrongful death and accident cases.

GEORGE M. MCCOLLISTER

Position: Principal, Spectrum Economics, Inc.

Education: B.A., Mathematics and Chemistry
M.A., Mathematics
Ph.D., Economics

Experience: Specializes in econometric and statistical analysis for energy supply planning and calculation of economic damages in civil litigation. Applied these skills for ten years as a consultant, and for several years as a staff economist at two large investor owned utilities. Examples of projects include energy demand forecasting, probabilistic energy supply planning, conservation and load management program savings evaluation, econometric modeling to value natural resources, statistical hypothesis testing in discrimination cases, expert testimony and management of economic experts in civil litigation.

JOHN H. WILE

Position: Vice President, R. J. Rudden Associates, Inc.

Education: B.A., Economics
Ph.D., Economics

Experience: 20 years of diversified experience in the practice areas of utility pricing, electric generation and transmission planning, financial and economic analysis, strategic and resource planning, regulatory policy analysis, and related management and organizational consulting.

