



*Since 1985*



**BROWN & KYSAR, INC.**

**STATEMENT OF QUALIFICATIONS**

**2017**

***Power in Partnership***

**BROWN & KYSAR, INC.**

1315 SE Grace Ave., Suite 201 Battle Ground, WA 98604

(360) 687-3966 [www.bki.cc](http://www.bki.cc)



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## WHO IS BROWN & KYSAR

***We strive to be the premier full-service engineering consulting partner for small and midsize public utilities in the Pacific Northwest.***

### **Well-Respected History**

Our firm started 32 years ago (1985) as Rex Brown Consulting Engineers (RBCE). RBCE was founded by Rex D. Brown, an amicable engineer from Texas. Rex and his engineering staff developed a market niche serving the needs of public utilities that had little or no engineering staff. They nurtured small public utilities by promptly responding to their challenges and needs.

That tradition continues today at BKI on a larger scale. The business expanded in 1990 when Rex hired Erik Kysar to complement his client-centered approach. Earning a strong reputation over the years, the firm was eventually bought by Erik in 2006. Erik became both principal and owner, changing the firm's name to Brown & Kysar while honoring Rex's legacy.

### **Our Obsession**

BKI continues to specialize in providing consulting services to public power utilities in the Pacific Northwest.

***Our obsession is growing relationships with public utilities while supplying boots-on-the-ground support to help utilities do what they do best: provide exceptional service to their customers.***

### **Broad Experience**

BKI prides itself on employing multi-disciplinary individuals with a wide variety of experience. Team members have experience working with public utility boards, smart grid systems, mining operations, industrial and commercial electrical systems, renewable energy developers, equipment manufacturers, and others. Our combined experience equates to more than 200 years in the electric utility industry.

Over the past 32 years alone BKI has performed numerous system planning studies, electric distribution, transmission and substation design projects for public power utilities in the Pacific Northwest, specifically Oregon & Washington. Since its founding, BKI has worked exclusively with Electric Cooperatives, Rural Electric Association's, Public/People's Utility Districts and Municipalities who are and always have been the core of our customer base. Such a large number of successfully completed projects with numerous Pacific Northwest public utilities demonstrates the outstanding qualifications, specialized experience and technical competence of the BKI Team.

### **High Expectations**

Our experience helps us make wise and innovative design decisions, control both engineering and project costs and streamline schedules.



## OVERVIEW OF SERVICES

The team at BKI has extensive experience with the following utility-related services. In addition, BKI always has at least one engineer available for 24-hour emergency calls (360-687-3966). Our specialty is providing a broad range of services to a very niche market – the small public utilities with less than 50,000 meters. We pride ourselves on our core focus of growing great people and supporting communities

### Distribution

- Route Selection
- Right-of-way
- Easement Procurement
- Project Management
- Permitting
- Construction Administration
- Construction Inspection
- Surveying
- Overhead
- Staking
- Underground
- Materials Specification
- Materials Procurement
- Poles (All types)
- Roadway Lighting
- Residential & Commercial
- Fiber Optic Infrastructure
- Relaying & Protection
- PLS-CADD - 3D Modeling
- Sectionalizing Studies

### Planning

- System Comprehensive Plans
- Long-Range Work Plans
- Load Forecasts
- Current Work Plans (CWPs)
- Borrower's Environmental Reports (BERs)
- USDA Rural Utility Service (RUS) Documents
- Permitting for Local, County, State & Federal
- Environmental Issues

### Power Supply

- Net Metering
- Renewable Energy
- BPA Rates
- Small Generation (Hydro, Wind, Solar)

### Transmission

- Route Selection
- Right-of-way
- Easement Procurement
- Project Management
- Permitting
- Poles
- Overhead
- Underground
- Surveying Staking
- PLS-CADD-3D Modeling
- Materials Specification & Procurement
- Geotechnical Engineering
- Structural Engineering

### Construction Admin.

- On-site Inspections
- Field Staking
- Contract Coordination
- Construction Surveying
- Programming
- Testing
- Commissioning
- Real Estate Issues

### Substations

- Spill Containment
- Transformers
- Bus Work
- Structural Design
- Site Selection & Procurement
- Geotechnical Engineering
- Surveying
- Civil Engineering
- Steel Detailing
- Concrete Design
- Material Specification
- Land Use Planning

### Operations

- System Comprehensive Plans
- Spill Prevention, Control & Countermeasure (SPCC) Plans
- Permitting for Local, County, State & Federal
- Environmental Issues
- Power Quality
- System Modeling (WindMil)
- Coordination Studies
- Arc Flash Incident Energy Studies
- Cost of Service & Retail Rates
- Joint Use Agreements
- Current Work Plans (CWPs)
- Borrower's Environmental Reports
- USDA Rural Utility Service (RUS) Documents
- Real Estate Issues
- Vegetation Management
- Geographical Information Systems (GIS)
- Metering & Automatic Meter Reading (AMR)
- Supervisory Control & Data Acquisition (SCADA)
- Tools & Trucks
- Equipment Maintenance
- Line Crew Assignment Priorities
- Standards Development

### Environmental

- Federal/State Permits
- Pollution Prevention Plans

### Utility Development

- Long-Range Work Plans
- Load Forecasts
- Strategic Planning



# PROJECT EXPERIENCE

BKI has completed a wide variety of projects for many clients. A few representative examples are shown on the following pages. Note that these projects do not represent the entire scope of services offered, or the total number of small public utilities served by BKI. Please see the preceding “Overview of Services” section for a comprehensive list of services provided, and the below list of clients BKI proudly serves.

### Electric Cooperatives

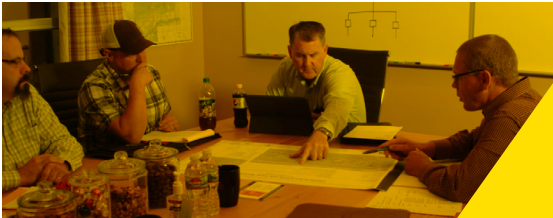
- Big Bend
- Central Electric
- Columbia Power
- Columbia REA
- Douglas
- Harney
- Orcas Power & Light
- Peninsula Light
- Surprise Valley
- Tanner
- Umatilla
- Wasco
- West Oregon
- Yakama Power
- Salem Electric
- Parkland Light & Water Co.

### Public Utility Districts

- Clark
- Mason No. 1
- Northern Wasco  
Wahkiakum.

### Municipalities

- Bandon
- Cascade Locks
- Drain
- Ellensburg
- McMinnville Water & Light
- Monmouth



## PROJECTS / PLANNING



### Long-Range Planning Study And Work Plan

As part of the USDA Rural Utility Services loan application process, BKI completed a Long-Range Plan and Current Work Plan for Harney Electric Cooperative. This involved a detailed system survey and full computer modeling of the utility's system, development of recommendations, and several written reports for submittal to the Rural Utility Service (RUS). The Current Work Plan detailed over \$40M in long-range financial investment, emphasizing proactive equipment replacement, reduction of power losses, and increased capacity.

*Client Name: Harney Electric Cooperative, Inc.  
Location: Hines, OR  
Contact: Brent Beverly  
Role: Operations Manager  
Phone 541-573-2061  
Email: [brent.beverly@harneyelectric.org](mailto:brent.beverly@harneyelectric.org)*



### 2009-2023 System Planning Study

With projected steady load growth along with an increasing pressures on reliability, Wahkiakum needed a clear vision to guide decisions for the next 15 years. BKI completed a System Planning Study that sets forth recommendations for both the Cathlamet and Grays River service areas, including a new substation and several major equipment replacements.

*Client Name: Wahkiakum County PUD  
Location: Cathlamet, WA  
Contact: Dave Trambly  
Role: General Manager  
Phone 360-795-3266  
Email: [dtrambly@wahkiakumpud.org](mailto:dtrambly@wahkiakumpud.org)*



## PROJECTS / TRANSMISSION



### T3ba'das To Manzanita Transmission Rebuild

The T3ba'das to Manzanita project was a 34.5kV to 115kV conversion through very difficult terrain. It was broken into three phases over several years due to funding constraints. In addition to design, the scope of work included geotechnical investigation, archeological investigation due to its location on tribal property, and biological investigation since it is in the tide flats of Hood Canal. The footing design in the tide flats was especially challenging, since the soil was very poor up to 80 feet deep; the footing ended up as 40 deep caissons essentially "floating" in the soil.

*Client Name: Mason County PUD No. 1*

*Location: Shelton, WA*

*Contact: Darin Hall*

*Role: Electric Superintendent*

*Phone 360-877-5249*

*Email: darinh@mason-pud1.org*



### Worden 115Kv Transmission Line

The Worden tap is a double-circuit 115kV transmission line to a new substation. The line is all self-supporting steel poles in poor soils with a full-length static and provisions for two fiber optic cables. The two primary challenges on this project were landowners with changing requests very late in the design process, and the poor soils necessitating a challenging footing design to support the double-circuit transmission.

*Location: Walla Walla, WA*

*Contact: Jeff Dietrich*

*Role: Distribution Engineer*

*Phone 509-526-4041*

*Email: jdietrich@columbiarea.coop*



## PROJECTS / DISTRIBUTION



### Mitchell Distribution Feeder Rebuild

The BKI team managed the Mitchell distribution feeder rebuild project, including providing all qualified professional personnel, labor, supervision, equipment, materials, and tools necessary to rebuild approximately 25 miles of the 24.9-kV feeder, associated tap lines, and appurtenances.

*Client Name: Columbia Power Cooperative Association*

*Location: Monument, OR*

*Contact: Troy Cox*

*Role: General Manager*

*Phone 541-934-2311*

*Email: troycox@centurytel.net*



### Redesign Of I-84 Overhead Line Crossing

BKI redesigned the circuit for Northern Wasco's I-84 overhead crossing near US 197 after the line was damaged by a construction crew. The BKI team utilized PLS-CADD, AutoCAD, and appropriate regulations for interstate highway crossing to optimize the design. Staking sheets and guying and anchoring guidelines were drafted for NWPUD for their future use.

*Client Name: Northern Wasco PUD*

*Location: The Dalles, OR*

*Contact: Paul Titus*

*Role: Director of Engineering and Operations*

*Phone 541-296-2226*

*Email: paul-titus@nwasco.com*





## PROJECTS / SUBSTATIONS



### Multiple Substation Projects

There were multiple substation projects with the City of Centralia. Cook's Hill and North Port were greenfield 20/27/33MVA substations, including planning the size and location, design, specifications, bidding, relay and protection settings, transmission line, working with Bonneville Power Administration (BPA) for the tap and metering, and final inspection and commissioning. Ford's Prairie and Zimmerman were major remodels, which included complete rebuilds of the secondary sides, ground grid, oil containment, relaying, and exit feeders. The Yelm Hydro was a complete rebuild of a generator step-up station including transmission breaker with distance relaying, ground grid, oil spill containment, fault current analysis, and generation protection settings.

*Client Name: Centralia City Light  
Location: Centralia, WA  
Contact: Don Kerlee  
Role: Chief Substation Operator  
Phone 360-330-7512  
Email: dkerlee@cityofcentralia.com*



### Multiple Substation Projects

There have been multiple substation projects with Wasco. Tygh Valley was a major remodel of an old BPA substation including a new power transformer, transmission breaker on a transmission tap, regulators, station service, protection recloser, settings, and ground grid. Pine Hollow was a complete removal and rebuild of another old BPA substation from the transmission high-side to the exit feeders, and everything in-between. Kah-Nee-Ta consisted of a new ground grid and feeder reclosers with the associated settings. The Muddy Ranch and Rosebush consisted of ground grid upgrades. Endersby is next to a sensitive watershed area, and therefore included detailed oil spill containment equipment along with new a new ground grid with grounding wells, regulators, secondary bay, and reclosers.

*Client Name: Wasco Electric Cooperative  
Location: The Dalles, OR  
Contact: Casey McCleary  
Role: Operations Manager  
Phone 541-380-3409  
Email: caseym@wascoelectric.com*



## PROJECTS / GENERATION



### Riverbend Landfill Interconnection Study

BKI completed an interconnection study for the Riverbend Landfill methane gas generation plant owned by Waste Management in McMinnville, OR. The study was based on an initial plant size of 3.28 MW with a rating of 4.1 MVA at 0.8 power factor. Maximum future peak generation was assumed to be 8.2 MW. System upgrades and operational policy modifications were recommended to optimize integration of the generation source.

*Client Name: McMinnville Water & Light*  
*Location: McMinnville, OR*  
*Contact: Gail Shaw (now at Tillamook PUD)*  
*Role: Systems Engineering Supervisor*  
*Phone 503-842-2535*  
*Email: gshaw@tpud.org*



### Yelm Hydro Upgrades

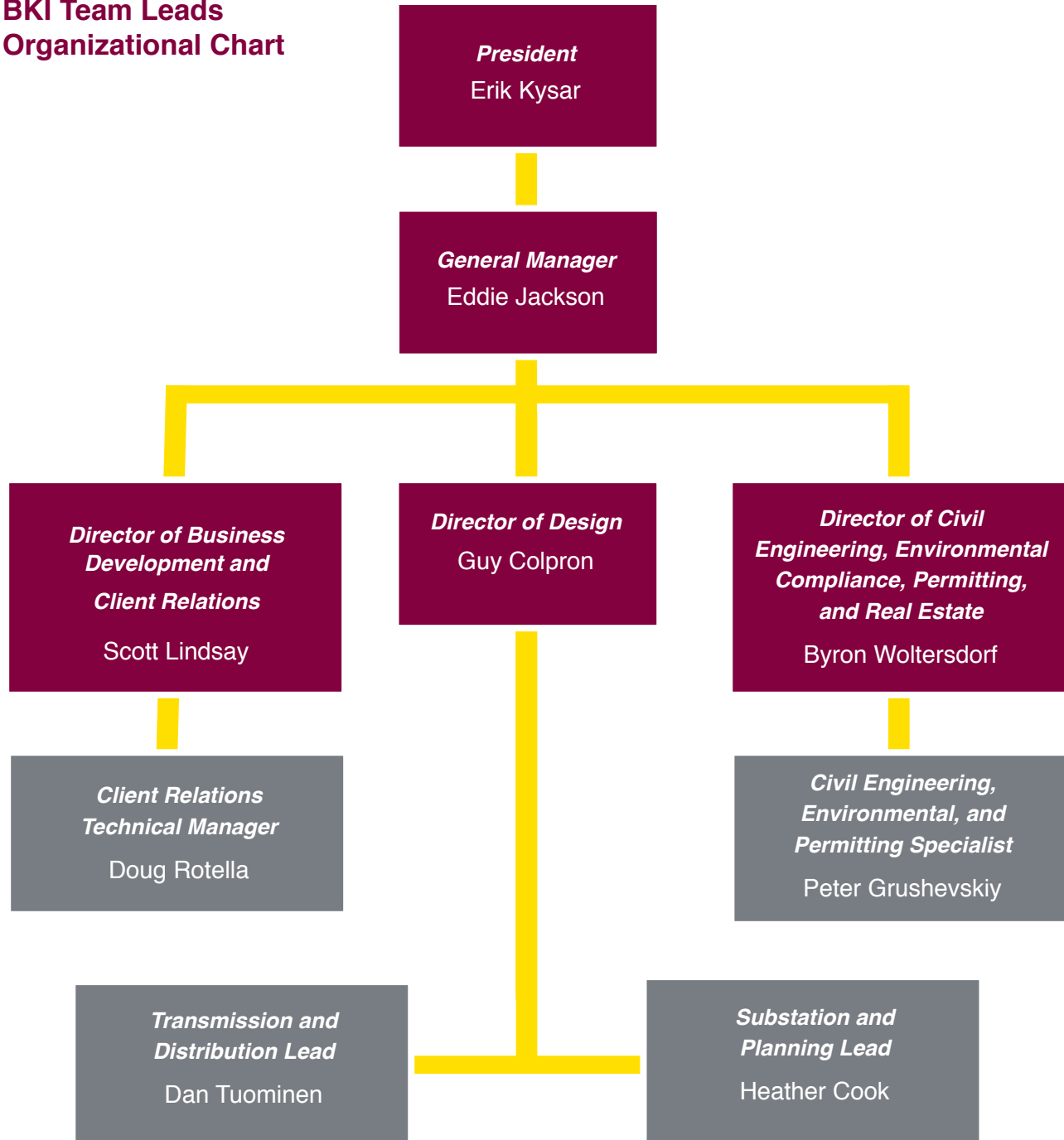
Yelm Hydro is a run-of-the-river hydroelectric project on the Nisqually River. The plant contains three generators, nominally rated at 3MW, 3MW, and 6MW respectively. BKI's scope of work consisted of multiple projects over several years. One phase included the upgrade of all controls and protection at the hydro plant, including the protection coordination with BPA. Another included the BPA metering and monitoring. A third consisted of developing as-built documents for the entire station. There were also multiple additional projects such as safety controls at the spillways, providing an alternate source of station service, etc

*Client Name: Centralia City Light*  
*Location: Centralia, WA*  
*Contact: Jerry Blue*  
*Role: Chief Powerhouse Operator*  
*Phone 360-556-2372*  
*Email: jblue@cityofcentralia.com*



## THE BKI TEAM

### BKI Team Leads Organizational Chart





## **THE BKI TEAM**



### **Years Of Experience**

25

### **Education**

B.S., Electrical Engineering  
Portland State University,  
1992

### **ERIK KYSAR, P.E.**

#### **PRESIDENT, PRINCIPAL ENGINEER**

Erik's primary management vision is to establish and maintain a premier client-based consulting firm for small and mid-sized public utilities in the Pacific Northwest. He has the unique foresight from both his consulting and management experience to assist and develop long-term visions, directions, and philosophies for the future, helping clients understand their needs and develop a sustainable plan of action to address those needs.

Erik's engineering and management career spans over twenty five years. He has dealt with all aspects of public utilities including system evaluation, load forecasting, system studies and long range plans. Erik also has extensive experience in distribution, transmission, permitting, contracts, retail rates, right of way and easement procurement, construction administration and system design.

Erik has successfully assisted numerous utilities in developing a vision for their system, creating multiple five, ten, and fifteen year long-range comprehensive plans with load forecasts, system modeling, financial forecasting and budgeting.

Erik has been involved with virtually every project performed at Brown & Kysar to varying degrees. If Brown & Kysar has designed, Erik has been a part of it. Erik's main focus recently has been long range planning and system protection, and he acts as the lead for these areas with his extensive expertise.

### **Areas Of Expertise**

- Transmission
- Distribution
- Substations
- Coordination Studies
- Long Term Planning Studies
- Feasibility Studies
- Interconnection Studies

### **Licensing**

P.E., Oregon  
P.E., Washington  
P.E., Nevada  
P.E., California



## **THE BKI TEAM**



### **Years Of Experience**

19

### **Education**

B.S., Electrical Engineering  
Tennessee Technology  
University, 1998

### **EDDIE JACKSON**

#### **GENERAL MANAGER & PROJECT MANAGER**

Eddie has extensive experience working with public utilities. Eddie served the city of Pulaski, TN for 14 years, beginning as Design Engineer and obtained the role of Vice President of Engineering and Operations. Eddie was responsible for the design of the entire system. Eddie was also responsible budgeting and developing the system for future growth and maintenance. Often working with a constrained budget, he guided the utility into the first CAD drawings, standards, GIS mapping system, outage management system, electronic relaying retrofits for the substations, fiber optic deployment, system coordination and balancing, redundant capacity tie circuits, system-wide reliability and critical load protection for the system while meeting time and budget constraints.

The following is a small sample of the projects Eddie has been involved with:

#### **Clark Public Utilities**

- Union Ridge-Enterprise transmission line
- Orion subdivision
- Cedars subdivision
- Underground McGillivray Blvd.

#### **Northern Wasco County PUD**

- I-97 distribution crossing
- Tie-Line Upgrade-Webber & 1st Street

#### **Western Oregon Electric Cooperative**

- Buxton distribution

#### **Engineering design experience in part includes:**

- Acquire and import elevation data for route
- Model line and structures in PLS-CADD/POLE
- Point load drawings for poles
- Overhead & underground construction dwgs.
- Installation & material specifications
- Construction administration support

#### **Areas Of Expertise**

- Transmission
- Distribution
- Substations
- Systems
- Protection



## **THE BKI TEAM**



### **Years Of Experience**

28

### **Education**

B.S., Electrical Engineering  
Washington State University  
1988

### **GUY COLPRON, P.E.** **DIRECTOR OF DESIGN**

Prior to coming to BKI Guy was with Idaho Power for 28 Years. Guy was the Engineering Leader for Power Production Engineering and Construction for 12 years and the Engineering Leader for System Protection and Communication Group for 6 years.

Guy has been involved in the following recent projects at BKI:

#### **Salem Electric**

- Read Substation Conversion

#### **Peninsula Light Company**

- Purdy Substation Rebuild

#### **Western Oregon Electric Cooperative**

- Bacona-John Lee Road Distribution

#### **Western Oregon Electric Cooperative**

- Pihl Road Distribution

#### **McMinnville Water & Light**

- NW Hill Road Distribution

#### **Columbia Rural Electric Association**

- System Wide Sectionalizing Plan

#### **Design experience includes:**

- Substations 15kV-138kV
- Automatic Voltage Regulators
- Power System Stabilizers
- Graphical User Interface
- Distributed Control Systems
- SCADA RTU's
- Protective Relaying
- System Modeling

#### **Areas Of Expertise**

- Substation
- Protection
- SCADA
- Generation

#### **Licensing**

- P.E., Idaho



## THE BKI TEAM



### Years Of Experience

21

### Education

B.S., Civil Engineering  
Washington State University,  
1996

### BYRON WOLTERS DORF, P.E.

#### DIRECTOR OF CIVIL, ENVIRONMENTAL & PERMITTING

Byron has over 20 years of experience in planning and civil engineering projects, having served as an Engineer, Planner, and Manager in both private consulting companies and public utilities. Since 2014, Byron has led BKI's Civil Engineering, Permits, Real Estate, and Environmental Team. Byron has a wide range of experience with civil engineering, permitting and environmental regulation, and has administered and updated SPCC and pollution control and mitigation plans for a variety of projects. He has also worked with utilities to develop Best Management Practices for erosion control of projects adjacent to water bodies.

The following is a small sample of the projects Byron has been involved with:

#### Peninsula Light Company

Five projects performing Right of Way (ROW), environmental and erosion control permitting for overhead to underground conversions

#### Clark Public Utilities

Three projects performing review and design of underground cable replacements

#### Columbia Power Cooperative Association

Alder Creek to Mitchell, 25 miles distribution line rebuild and relocation - performed Oregon Department of Transportation (ODOT) & Bureau of Land Management (BLM) permits, ROW and easements

#### Harney Electric Cooperative, Inc.

Field to Quinn River, 52 miles, rebuild existing distribution line to a transmission line with distribution under-build within the existing ROW - performed BER, RUS and BLM permitting, foundation and guying design

#### Northern Wasco County PUD

1st to Weber distribution wood pole replacement with both wood poles and self-supporting steel poles - performed ROW, geotechnical and foundation design

#### Areas Of Expertise

- Transmission
- Distribution
- Substations
- Land use
- Civil Engineering
- Permitting
- Easements and ROW's
- Environmental review
- Structural design

#### Licensing

- P.E., Oregon
- P.E., Washington
- P.E., Nevada



## THE BKI ACCOUNTS TEAM



### **SCOTT M. LINDSAY** DIRECTOR OF BUSINESS DEVELOPMENT AND CLIENT RELATIONS

Scott has been a public power advocate for much of the last 20 years. Scott has worked for the Northwest Public Power Association (NWPPA), Washington PUD Association (WPUA), Energy Northwest, Northern California Power Agency (NCPA), Transmission Agency of Northern California (TANC) and many other public power utilities over his career. Scott is on BKI's executive team and helps position BKI for future growth, while striving to maintain the high level of service BKI clients have come to expect.

#### **Years Of Experience**

21

#### **Education**

B.S., Communications  
Management University  
of Portland, 1993

#### **Areas Of Expertise**

- Energy Legislative & Regulatory Policy
- Business Strategy
- Strategic Planning
- Association/Board Relations
- Industry Marketing/Networking
- Energy Technology



### **DOUG ROTELLA** CLIENT RELATIONS TECHNICAL MANAGER

Doug's background includes working as an Electrical Engineer, Project Manager, Power Plant Operator, Licensed Journeyman Electrician (WA, OR and AK) and Licensed Electrical Administrator (WA). Doug was formerly the General Manager for Specialty Engineering before joining the BKI team. He has extensive experience with managing field and shop services for substation and distribution electric apparatus, electrical construction project management, working with line crews, and supporting operations personnel.

#### **Years Of Experience**

25

#### **Education**

B.S., Electrical Engineering  
Arizona State University,  
1988

#### **Areas Of Expertise**

- Substation Maintenance Programs
- Construction Project Management
- Field Services
- Business Strategy
- Industry Marketing/Networking