# ctc technology & energy

engineering & business consulting

# **Engineering, Business Planning, and Negotiations**

Fiber and Wireless Communications Engineering 

Network Design 

Network Monitoring and Testing

Grant Strategy/Management/Compliance 

Feasibility Studies 

Business Case Analysis and Business Planning

## **ABOUT**

CTC is an independent, woman-owned consulting firm that offers a unique combination of qualifications and capabilities in broadband engineering, business planning, financial analysis, network strategic planning, and grant program administration.

Founded in 1983, we primarily serve public sector clients: State and local governments, municipal and cooperative utilities, universities, non-profits, tribal governments, and municipal utilities.

- Comprehensive services for broadband network planning, design, engineering, and construction oversight
- Expertise across communications technologies, including fiber, fixed wireless (licensed and unlicensed), low-Earth orbit satellite, hybrid fibercoaxial, microwave
- Singular experience developing public-private partnerships to secure broadband infrastructure and services for public and non-profit users
- Nationwide experience planning, negotiating, designing regional and statewide fiber networks for higher ed, government, K-12, public safety, tribal governments, and non-profits
- Woman-owned business nationally certified by WBENC and numerous states
- Full-lifecycle grant management services, from strategy, program design, and execution to postaward compliance, oversight, and reporting

### **MISSION**

CTC partners with governments, communities, and organizations to drive broadband expansion and improve access to the digital skills and services that power our economy, society, and democracy.

We are unaffiliated with equipment providers, network operators, or construction contractors. We act solely for the benefit of our clients, protecting their interests and those of their stakeholders and constituents.

# **SAMPLE CLIENT PROJECTS**

Broadband Equity, Access, and Deployment (BEAD)
 Program and Capital Projects Fund (CPF) grant
 program implementation for state broadband offices

- Subgrant program design and implementation; grant management system administration; independent grant application review (technical, financial, operational capacity); environmental and historic preservation (EHP) compliance (NEPA and NHPA Section 106); subgrantee project budget evaluation and monitoring; grant program compliance (field inspection); reimbursement request reviews; and federal and state grant program reporting.
- Supporting broadband offices in 17 states with BEAD grant programs: Alabama, California, Connecticut, Delaware, Georgia, Illinois, Kansas, Maryland, Minnesota, Montana, Nevada, New Mexico, New York, North Carolina, Oregon, Vermont, and Wyoming
- California Department of Technology (CDT)
  - Engineering planning and oversight of 8,000+ mile fiber Middle-Mile Broadband Network
  - Supervision of design, construction, maintenance, and operation
  - System-level design document that served as the basis for the development of Caltrans construction specifications, material selection, network electronics, and design attributes
  - Preliminary models around costs, construction labor, crew requirements, material supply, material warehousing, and other logistical aspects of the MMBN deployment
  - Procurement strategy and bid specifications for Job Order Contract (JOC) construction contracts
- Alabama Department of Economic and Community Affairs (ADECA)
  - Grant program development, implementation, and monitoring (BEAD, CPF, and SLFRF)
  - Development and administration of the Alabama Broadband Connectivity for Students program a \$100 million statewide initiative that provided free internet access to more than 200,000 lowincome students during Covid lockdowns
- San Francisco, CA
  - Design, cost estimate, and public-private partnership model for citywide FTTP
- Seattle, WA
  - FTTP feasibility study
  - Market research, financial projections for multiple buildout approaches, and risk assessment

#### Nevada Gold Mines

- FTTP construction oversight, engineering, and operations services for a public benefit FTTP network deployed through a partnership between NGM and Anthem Broadband in Elko, Nevada
- One Maryland Broadband Network
  - Strategy and planning for statewide fiber optic infrastructure to serve public anchors, with additional capacity for lease to private sector
  - Business plan and pro forma; project management; outside plant design, QA/QC
- Los Angeles Department of Water and Power (LADWP)
  - "Assessment and Strategic Plan" for LADWP's Fiber Optic Enterprise
  - Business, technological, and operational opportunities to expand FOE's revenues without compromising its core mission
- Washington, D.C. DC-NET
  - Business plan, financial forecasts, and service pricing for city-owned fiber network
  - Business plan and strategic planning for use of city infrastructure for FirstNet

#### Atlanta

- Technical and business strategy for city-owned fiber network to serve government anchors, enable Smart City applications
- Engineering, design, and cost estimation  $\circ$
- Business case analysis
- Partnership opportunities with private sector to reduce public network deployment costs

# **Boston**

- Cost estimation and engineering analysis for fiber deployment to K-12 and public safety
- Strategy for public-private partnerships; financial and business planning for shared cost scenario with private entities; preparation of RFI and RFP to identify and select potential private partners
- Montgomery County, Maryland
  - Fiber network: Master plan for multi-year capital and operational investments; network design, business planning, and organizational governance analysis
  - Wireless facility siting: Designated coordinator for the county's Telecommunications Facilities Coordinating Group from its inception in 1996
- Washington, D.C./National Capital Region Interoperability Program
  - Multi-year Homeland Security funded effort to interconnect 21 jurisdictions in and around Washington, D.C. with fiber optics for public safety and emergency communications purposes
  - Business case development; design and cost estimation; infrastructure security assessment; outside plant engineering and QA/QC; grant applications and funding support
- Delaware Department of Transportation
  - Statewide fiber networking plan

- Public-private partnership strategic plan, including technical and business parameters, leasing structure, and pricing recommendations
- New Mexico Department of Information Technology
  - Broadband strategic plan
  - U.S. EDA grant application
- State of Texas Department of Transportation (TxDOT)
  - Statewide strategy, processes, and technical standards for use of TxDOT property in wireless facility deployment along the department's 79,000 miles of roadways
  - Expansion of a pilot project to multi-county districts across the state; wireless siting application and program cost analysis to determine sustainable rental fees
  - Policies to enable efficient private use of TxDOT's assets while protecting state interests by preparing TxDOT to avoid risks, control its property, and safeguard its mission
- State of North Carolina
  - Emergency communications engineering advisory services to state agencies following 2024 Hurricane Helene damage
  - High-level cost modeling to guide preliminary efforts on repair and replacement of stormdamaged fiber network infrastructure
- State of Georgia
  - Communications network resilience and disaster recovery planning guide following tornado and hurricane destruction in 15 counties

Corporate Status: Small Business, Woman-Owned

**UEI Number: GVJXGATFVKF1** 10-386-3650 **DUNS Number:** Cage Code: 1LU36 EIN: 52-1442373 **SAM Registration:** Active

# **REGISTERED NAICS CODES**

**541330** Engineering Services

**541618** Other Management Consulting Services

**541512** Computer Systems Design Services

541490 Other Specialized Design Services

541340 Drafting Services

**541370** Surveying & Mapping (Except Geophysical)

Services

**541511** Custom Computer Programming Services

**541519** Other Computer Related Services

**541611** Administrative Management & General Management Consulting Services

541690 Other Scientific & Technical Consulting Services

**541910** Marketing Research and Public Opinion Polling 541990 All Other Professional, Scientific & Technical Services