March 7, 2014

Federal Communications Commission (FCC) Staff
Expression of Interest – Rural Trials
Docket No. 10-90

Background

The Georgia EMC family of companies provides electric services to over four million Georgia citizens and maintains more than 185,000 miles of distribution lines, 3,000 miles of transmission, and 650 substations covering almost 75% of the state. With 41 EMCs along with power generation, transmission, and operation companies, our members own 90% of the poles in rural Georgia and have already deployed fiber in several rural parts of the state.

This letter is an umbrella expression of interest for the Georgia EMC family of companies. We have encouraged members to comment directly as well, given the importance of these first rural broadband experiments. Georgia EMCs solved the difficult challenge of getting electric services to rural, high-cost areas, and we see many parallels with broadband services today.

Rural broadband is often scarce and to ensure economic development we need to work to facilitate rural broadband deployment. In the limited locations where we have fiber available today, we have witnessed data centers and others choosing locations that leverage it. The economic development benefits of broadband are clear.

For many years, where we have had partners, we have built fiber facilities along side electrical transmission and distribution facilities. We use this infrastructure to monitor and control the electric grid, and we make excess fiber capacity available for lease. Over the last two years, our companies have discussed and planned for fiber deployment to substations, offices, and other key locations throughout the entire state. Such a project would not only greatly assist our own operations, but also provide a new backbone for economic development across rural Georgia.

Beyond our own internal uses of fiber for operations and dark fiber leases to schools and commercial entities, we have a history of successful partnerships for fiber to the home broadband delivery with operators such as those affiliated with the North Georgia Network. These operators now provide at minimum 50 mbps symmetric service to the home for $50 in rural Georgia and are beginning to offer gigabit service. These partnership models have been proven to work where we can share the capital investment, and we look forward to opportunities to serve a larger portion of the state. Fiber to the home allows us to explore smart grid technologies and plan for the role connectivity to each home can provide in electrical utility operations of the future.

We would like to point out that our vision represents a fundamentally different approach from past efforts to improve broadband availability in rural communities. We believe that these differences will result in a dramatically more successful and cost effective outcome.

The first key differentiator is that our sole motivation is the economic development of rural Georgia. The success of our business is completely entwined with the success of our community. As the providers of electric power to rural Georgia, we grow only when our communities grow and we support measures that drive that growth. As non-profit organizations we have no motivation to increase margins or restrict competition. Our goal is not to

profit from the telecommunication infrastructure we seek to build; only for our communities to profit from improved access to technologies that are currently only available in urban areas.

A second related differentiator is that we intend to build an open infrastructure that is available to other carriers. Because our goal is the economic development of the communities we serve, we intend to make the fiber available to others in the area at market rates and support structural separation between the fiber asset owner and the fiber operator. This is in contrast to the models of the past where subsidies have been used to build networks that are restricted to the use of the incumbent provider. We gain no advantage from restricting access to the infrastructure we build. We gain when multiple providers enter our communities and drive down costs and improve levels of service. We encourage the FCC, no matter how these rural experiments proceed, to require open networks when taxpayer investment occurs, so that the maximum possible community benefit can be realized. Specifically we ask the FCC to consider requiring that any fiber optic telecommunications facilities, including dark fiber subsidized by this program, be made available to alternate carriers at market rates.

A third differentiator is that we intend to seek only initial matching funds and not a recurring subsidy. We believe this is a far superior model that will provide a much more measureable cost benefit, and will reduce the long term cost of improving the availability of rural broadband. We believe that this is a more supportable and justifiable model. Instead of asking the taxpayers to pay part of someone else's phone bill indefinitely, we ask that the FCC consider investing in core infrastructure with an extended useful life that will be available to multiple service providers.

Geographic Territory –

Our vision is that, depending on the size of the award, several member EMCs will host pilot projects covering at least 5000 households total across Georgia's unserved areas. See the attached exhibit for a map that highlights the close alignment of high cost areas and EMC presence.

Even though we are targeting unserved locations per the FCC's request, we encourage the FCC to think more broadly in the application process given the low standard of 3 mbps down / 768 kbps up that exists today for rural capacity and the inaccuracies inherent in a national map. Rural locations that can be upgraded to fiber for a lower cost than the sum of future annual FCC subsidy payments for legacy networks should be open for bidding by all.

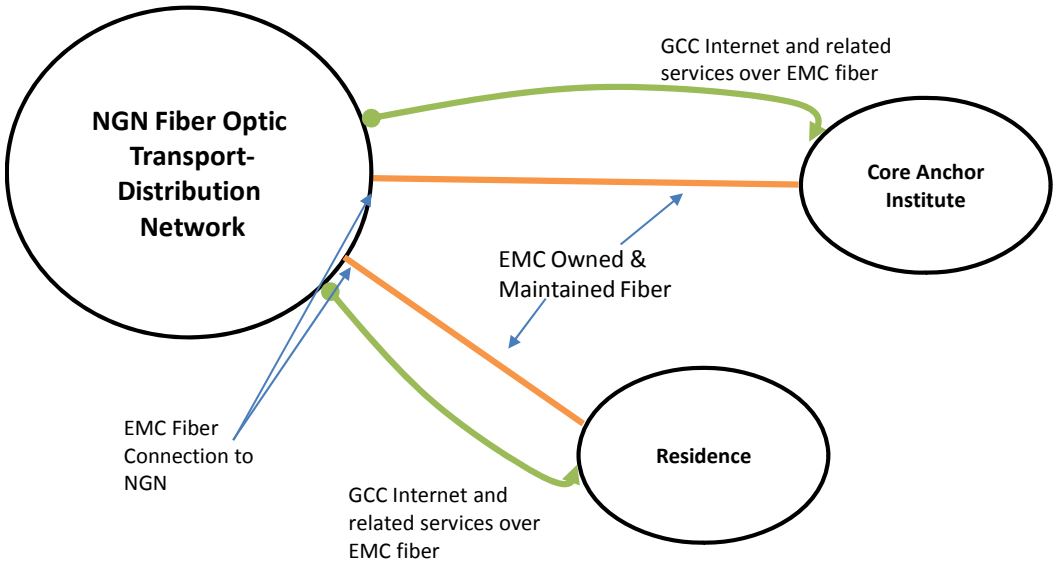
List of Anchor Institutions

As community anchors themselves, EMCs have a long-standing connection to community institutions. Many EMCs got their start in fiber optic construction to serve K-12 schools. Each EMC will serve at least two community anchor institutions with gigabit fiber as part of this experiment. Such institutions would include schools, hospitals, and libraries.

Proposed technology

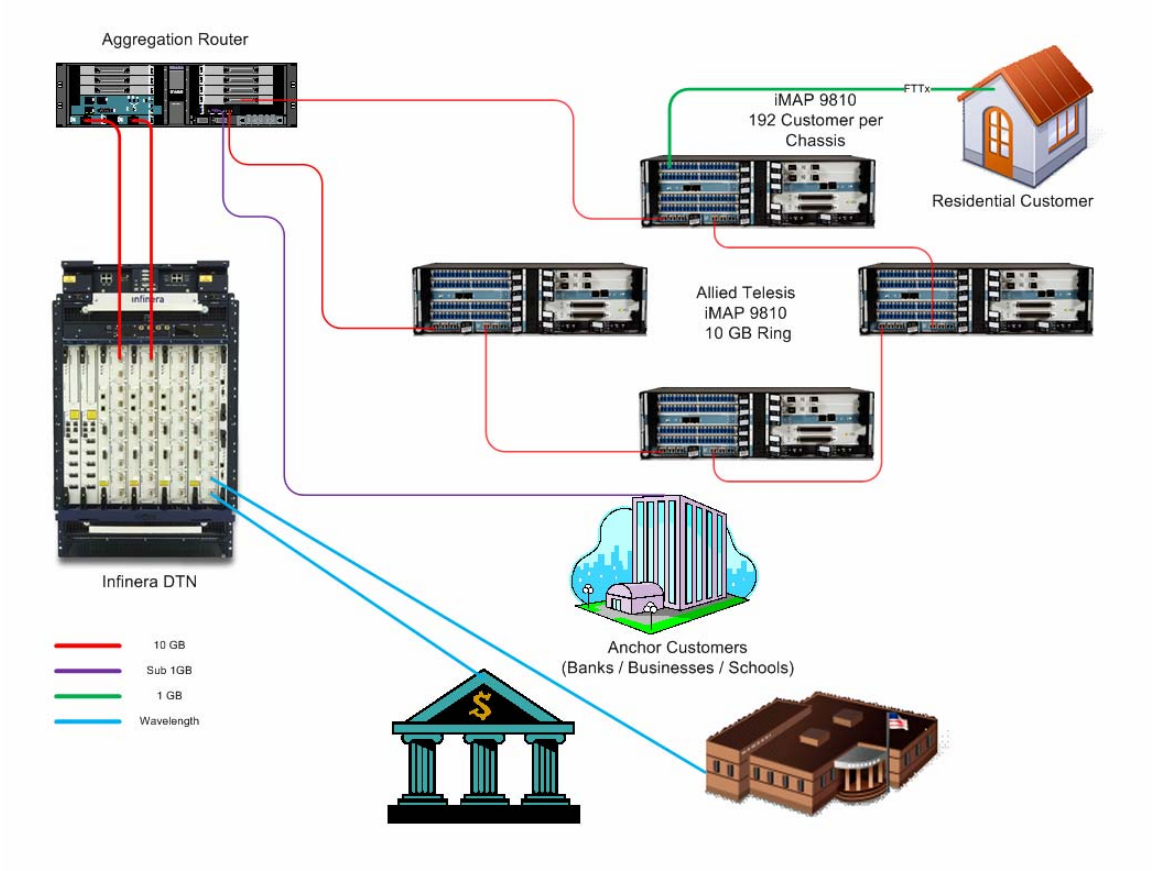
Our focus is the connectivity of the fiber rather than the applications that run through it. The EMCs would provide the infrastructure and partner with third parties to operate it. In fact, this model can also facilitate customers choosing a different ISP since it employs structural separation between the asset owner (the EMC) and the asset operator (the partner service provider). In a model such as this, offerings will include voice, television, and broadband services, and customers will have a choice of who provides these services. The following chart shows how one provider, Georgia Communications Cooperative, can provide Internet service to homes and anchor institutions over EMC-owned fiber.

GCC Service Offerings to EMC Members



Note: GCC provides EMC's with recurring revenue to support and maintain EMC owned fiber while using that fiber to provide exceptional bandwidth and related services to members.

With this model, we envision facilitating fiber to the home services with either Active Ethernet or Passive architectures with a fiber backbone. Partners to date have chosen Active Ethernet solutions and the following schematic shows the electronic infrastructure in place over some of our fiber networks.



In Georgia, EMCs have partnered with service providers who typically offer services at 50 mbps and above for residential service with a price of $50/month for the basic service. Our experience is that this offering will see very high demand and a backlog of customer requests. The networks are gigabit capable.

The solution offered above is not simply a last mile solution. It also involves a backbone system to provide Internet peering opportunities at telecommunication hubs in Atlanta, GA. This peering is critical to reducing operational costs for providers so that they can deliver cost effective services to their customers. We currently have EMCs that have built hundreds of miles of fiber for internal operations but struggle with limited backhaul availability in their territories, even for their own operations.

<u>State and/or Local or Tribal Government Participation in and/or Support for Project</u>

Our members are deeply integrated into their communities and enjoy strong support from state and local government. We regularly participate in K-12 fiber projects, government technology summits, broadband planning discussions, grant awards, and other activities.

While we cannot speak for government during an expression of interest, the State of Georgia has a strong history of supporting public-private partnerships for broadband deployment including projects with EMCs. We anticipate seeking such support during an application process as well as that of local authorities.

Existing Providers

The areas we have targeted are marked as unserved by wireline broadband service. As entities that commonly lease excess dark fiber to cellular providers, schools, transport providers, municipal broadband providers, and telephone companies, we welcome the opportunity to make fiber available to all, including existing incumbents should they wish to expand their operations.

Project Timeline

Since several of the Georgia EMCs have already deployed fiber networks in their communities, we stand ready to expand and accelerate this work. As such we would intend to begin work almost immediately upon award of the grant.

Scalability

As noted, all EMCs across the state are evaluating the role fiber can play in their operations and for their members. We anticipate that, with additional funding, the project could be scaled across many EMCs and unserved wireline areas throughout the state.

Total Utility Investment

We anticipate an 80/20 split on costs between federal investment and EMC and partner investment. EMC investment will include existing fiber assets, pole attachments, labor and miscellaneous items valued at a total of $7,500,000.

One Time Capital Infrastructure Investment Needed

$30,000,000 with no on-going support required. Cost per home in requested support is $6000.

Total Project Cost

$37,500,000 assuming $7,500 per home capital cost all-inclusive and 5000 homes to serve in total. This is a budgetary number and we expect to conduct detailed planning and preliminary engineering to support the application process.

Attachment A: list of EMC Organizations in Georgia

Altamaha EMC

Amicalola EMC

Blue Ridge Mountain EMC

Canoochee EMC

Carroll EMC

Central Georgia EMC

Coastal Electric Cooperative

Cobb EMC

Colquitt EMC

Coweta-Fayette EMC

Diverse Power

Excelsior EMC

Flint Energies

Georgia Electric Membership Corporation

Georgia System Operations Corporation

Georgia Transmission Corporation

Grady EMC

GreyStone Power Corp.

Habersham EMC

Hart EMC

Irwin EMC

Jackson EMC

Jefferson Energy Cooperative

Little Ocmulgee EMC

Middle Georgia EMC

Mitchell EMC

North Georgia EMC

Ocmulgee EMC

Oconee EMC

Oglethorpe Power Corporation

Okefenoke REMC

Planters EMC

Rayle EMC

Satilla REMC

Sawnee EMC

Slash Pine EMC

Snapping Shoals EMC

Southern Rivers Energy

Sumter EMC

Three Notch EMC

Tri-County EMC

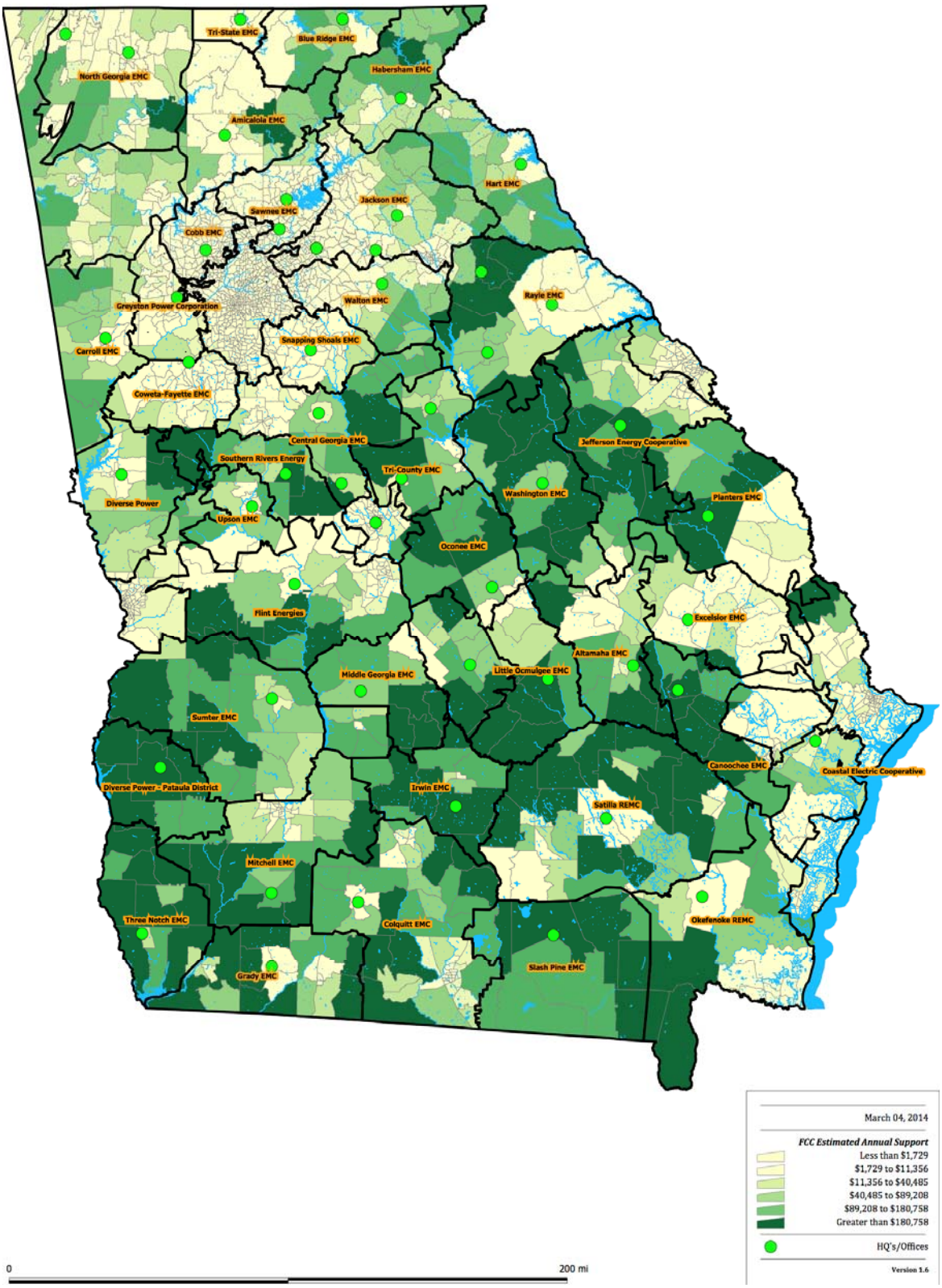
Tri-State EMC

Upson EMC

Walton EMC

Washington EMC

Attachment B: Eligible Census Tracts and EMC Boundaries


Tri-State EMC
Blue Ridge EMC
North Georgia EMC
Habersham EMC
Amicalola EMC
Hart EMC
Jackson EMC
Sawnee EMC
Cobb EMC
Rayle EMC
Walton EMC
Greyston Power Corporation
Snapping Shoals EMC
Carroll EMC
Coweta-Fayette EMC
Central Georgia EMC
Jefferson Energy Cooperative
Southern Rivers Energy
Tri-County EMC
Washington EMC
Planters EMC
Diverse Power
Upson EMC
Oconee EMC
Flint Energies
Excelsior EMC
Altamaha EMC
Little Ocmulgee EMC
Middle Georgia EMC
Sumter EMC
Canoochee EMC
Coastal Electric Cooperative
Diverse Power - Pataula District
Irwin EMC
Satilla REMC
Mitchell EMC
Three Notch EMC
Colquitt EMC
Okefenoke REMC
Slash Pine EMC
Grady EMC
0
200 mi
March 04, 2014
FCC Estimated Annual Support
Less than $1,729
$1,729 to $11,356
$11,356 to $40,485
$40,485 to $89,208
$89,208 to $180,758
Greater than $180,758
HQ's/Offices
Version 1.6