



## Wireless Technology Risks & Safer Municipal Options: Basic infrastructure for Gigabit fiber to the home/premises

*Talking Points—2021-03-08*  
*La Plata County Commissioners*

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### Re-Inventing Wires: The Future of Landlines and Networks



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<https://tinyurl.com/y89sfng8>

# What is “broadband”?

- The term “broadband” is obsolete, misleading
  - From the age of radio and TV
- Now, “broadband” only means “faster”...
- Implies a false equivalence among broadband media
  - Always say “fiber broadband” or “wireless broadband”
  - Fiber is unmatched—in speed, performance, reliability, etc.
  - And wireless cell sites require fiber to connect
- Wireless is not a substitute for fiber
  - Wireless is really for things that move
- FCC definition of broadband is not good enough
  - FCC defines it as 25 Mbit (down) & 3 Mbit (up) – *obsolete*
  - But, fiber is 1 Gbit symmetrical (up & down) minimum

# What is fiber optic cable?

- A tiny glass “light pipe” that carries data by modulating a light beam
- A fiber is smaller than a single strand of hair
- Fibers are usually bundled in cables
  - 8 to 44, or more, per cable
- Data rates start at a gigabit per second, and go up
- Fiber-to-the-premises (FTTP) is a basic public utility
  - Like water, sewer, streets, etc.
  - A public necessity
  - Should be owned and controlled by the community or city

# Benefits of fiber broadband?

- **Basis for economic growth for the entire community**
  - School at home
  - Work at home
  - Business operations
  - Access to public services
- Chattanooga, TN (example)
  - \$2.7 billion benefit over 10 years
    - Univ of Tennessee study, August 2020
- Longmont, CO (example)—*NextLight™*
  - National award-winning example of world class muni fiber network
  - \$50 per month subscription for 1 Gigabit service to the premises
  - Higher speeds available for business
  - Lower cost service (down to \$15 per month) available for qualified customers

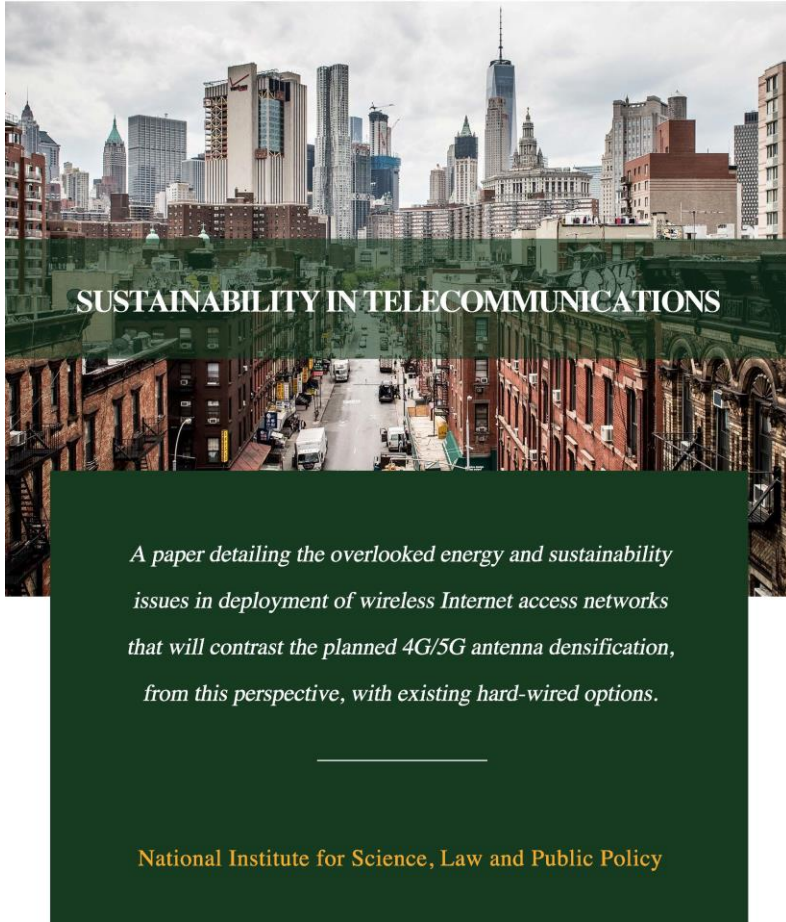
# Benefits of fiber broadband?

- Energy sustainability and resilience
  - Enables microgrids and sharing of renewable energy
- Telecom sustainability
  - Reduce Electrosmog – an environmental pollutant
    - A carcinogen
  - Reduce the wireless energy hog
    - Wireless uses 10x more energy than wired media
- ADA compliance with federal guidelines
  - A wired network provides ADA “accommodation”
  - A wired network allows equal access for all
    - Including the EMS-disabled (electro-magnetic sensitive)
- Fiber is simpler — and “future proof”
  - Non-proprietary technology
  - No forced obsolescence

# 13 Ways “fiber to the premises” is preferred — rather than 4G/5G cellular wireless

- **Fiber-to-the-premises improves:**

1. Speed of Internet access
2. Neutrality of Internet access
3. Quality of voice communication
4. Reliability
5. Energy usage and efficiency
6. Resiliency in extreme weather events
7. Value for the money for all users
8. Safety and cybersecurity
9. Personal privacy
10. Public health
11. The biological ecosystem
12. Landline phone access when the power goes out, and
13. Integrity of the communications system as a whole, which has been hijacked by commercial motivations and riddled with planned obsolescence and unnecessary future costs for us all.



## Coming Soon

A new report on sustainability in telecommunications

National Institute for Science, Law and Public Policy

- *Full life cycle energy consumption*
- *Embodied energy in manufacture*
- *Source material costing*
- *Business model & application considerations*
- *Systemic issues and relationships*
- *Political economic considerations*
- *Cultural factors*