

**CAPITAL PLANNING ADVISORY BOARD**

**2024-2030  
Agency Capital Plan**

**Staff Analysis and Comments**

**BRANCH:** Executive Branch  
**CABINET/FUNCTION:** General Government  
**AGENCY:** Kentucky Communications Network Authority

**AGENCY MISSION AND PROGRAMS**

KRS 154.15-020 and 154.15-030, effective 6/29/17, created the Kentucky Communications Network Authority (KCNA) within the General Government Cabinet. KCNA is administratively attached to the Office of the Governor.

The mission of the KCNA is to complete construction and manage a Commonwealth-owned, communication infrastructure service to provide affordable broadband connectivity, foster collaboration, and promote the innovative use of digital technologies to connect the people and businesses of the Commonwealth to the world.

KCNA is responsible for the management of the Commonwealth's public-private partnership (P3) with Macquarie Capital (Macquarie). Macquarie and associated partners designed, built, and support the operation and maintenance of the KentuckyWired (KYW) network for 30 years. KYW is a Commonwealth-owned public infrastructure project that provides broadband service using a modern, high-capacity fiber infrastructure. Its primary purpose is to provide broadband services to the Commonwealth's agencies and its public postsecondary education institutions. As designed, the network has the capacity and ability to serve other public sector organizations. The network was designed and built with additional fiber capacity that presents wholesale opportunities to provide revenue to the state to help fund the project.

The network is comprised of more than 3,000 miles of high-speed Internet connectivity throughout Kentucky's 120 counties with completion anticipated in 2023. The network serves over 700 locations, including executive branch government agencies, more than 70 Kentucky Community and Technical College System (KCTCS) locations, 8 state public universities, and additional sites, such as the Center for Rural Development and the Administrative Office of the Courts.

The network will traverse approximately 83,000 poles, requires 30,000-40,000 easements, and partnerships with approximately 70 telecommunications, electric and municipal utilities across the state. Upon completion, it will have 13 co-location sites, 20 telecommunications shelters, and 20 signal regeneration (extender) sites.

The network allows the Commonwealth to redirect payments currently being made to private broadband providers to pay for the new and substantially faster state-owned network. Third party agreements bring benefit to the project and foster collaboration with the existing owners of fiber optic facilities in Kentucky.

All facility services are maintained by the Dept of Facilities and Support Services (DFSS) and all technology services are handled by the Commonwealth Office of Technology.

**PROPOSED PROJECTS – Financial Summary**

<b>By Fund Source</b>	<b><u>2024-2026</u></b>	<b><u>2026-2028</u></b>	<b><u>2028-2030</u></b>	<b><u>Total</u></b>
General Fund	\$25,359,000	\$16,700,000	\$14,373,000	\$56,432,000

**2024-2030 CAPITAL PLAN  
PLAN OVERVIEW  
FORM SYP-P1**

**BRANCH:**

Executive Branch

**CABINET/FUNCTION:**

General Government

**AGENCY:**

Kentucky Communications Network Authority

During the three upcoming biennia (FY 2024 through FY 2030), KCNA will need to replace: 1) the optical switching equipment that manages the light transport that creates the six core optical rings of the network, 2) the core network routing equipment that allows traffic to be dropped and added to the network across the state, and 3) the network switches installed at individual agency locations that allows them to connect to the network. This "System Refresh" was contemplated and is required by the KYW contracts.

Additional necessities includes a purchase of 20 telecommunications shelters. The projects were prioritized as 1 and 2 based on contractual obligations and overall impact to the sustainability of the network:

1. KentuckyWired Critical Infrastructure Upgrades
2. KentuckyWired Critical Infrastructure Purchases

Maintaining, sustaining, and improving this statewide network is critical to the Commonwealth. Three gubernatorial administrations, along with multiple sessions of the Kentucky General Assembly, have supported and funded the construction of the KYW network. While the construction phase was delayed, we anticipate completion by Summer 2023. The KYW network currently transports traffic for 385 Executive Branch agencies and 37 KCTCS campuses. Once the network is complete, approximately 300 additional sites will be added to the network, including 33 KCTCS campuses.

Since the first impacts of the COVID-19 pandemic began, the consequences have been significant to many areas of Kentucky's economy and quality of life. Perhaps most significantly, the pandemic's impacts on K-12 education highlighted the critical need for reliable, affordable broadband service for Kentucky students. Governor Beshear has been very clear that expanding broadband service throughout the Commonwealth is a top priority. As evidenced in the 2021 Session of the Kentucky General Assembly, and based upon the Governor's initial recommendation, a \$300 million Broadband Deployment Fund was funded. With a 50% matching requirement, this fund will provide \$600 million toward last-mile expansion. The KYW network is critical to providing broadband services in Kentucky.

**KENTUCKY COMMUNICATIONS NETWORK AUTHORITY**  
**Proposed Projects Involving the General Fund (cash or bonds)**  
(amounts in **bold** are the total budget)

**2024-2030**

(Projects listed by agency priority; descriptions are from the agency submission)

**1 KentuckyWired Critical Infrastructure Upgrades** **\$12,927,000**

This project supports the continued operation of the KentuckyWired network. As with any telecommunications network, core equipment must be upgraded at appropriate intervals to continue to provide the flexibility, bandwidth, and performance needed to provide service to the agencies connected to the network. This "System Refresh" is included in the KentuckyWired contract as a Commonwealth obligation. KCNA will implement this project over 3 biennial periods, and it provides for the replacement of the core optical switching, core routing, and edge routing equipment utilized by the KentuckyWired network to provide services to agencies located in all 120 counties across the state of Kentucky. The nature of this project is such that its asset requirements are fluid. Periodic infrastructure upgrades are required due to technological innovation, demand changes, and performance requirements. As such, the required funding should also be viewed as dynamic. (IT)

CPAB Staff Notes

- *This is the first phase of three Critical Infrastructure Upgrades also planned for 2026-28 and 2028-30 in the amounts of \$16,700,000 and \$14,373,000, respectively, for a cumulative total of \$44.0 million.*
- *Similar "Equipment Refresh" projects for replacement of the core optical switching, core routing, and edge routing equipment were requested in the agency's prior 6-year capital plan for the same cumulative total of \$44.0 million.*
- *10-year and 20-year "System Refreshes" are a contractual obligation made in the P3 project agreement.*
- *The network consists of dozens of core network node locations, core equipment sites and end-user locations. The equipment at these locations must be refreshed approximately every ten years to maintain the levels of performance required across the network.*
- *This project will have an impact on operating budget in the amount of \$5,245,000 GF related to ongoing maintenance functions associated with the additional network elements to be added with the project.*

**2 KentuckyWired Critical Infrastructure Purchases** **\$12,432,000**

This project supports the continued operation of the KentuckyWired network. Twenty of the core network nodes are located in telecommunication shelters. Structural failures of the original shelters, such as water damage and mold, required the replacement of the original shelters and new shelters were purchased and financed by our vendor under a separate contract. This allowed the project to continue without further delays. The Commonwealth owned the original shelters, but the replacement shelters do not belong to the Commonwealth today. This project allows the Commonwealth to purchase the twenty shelters, which is critical for numerous reasons. (EQ)

CPAB Staff Notes

- *The Commonwealth will incur additional yearly costs associated with the current ownership arrangement of the telecommunication shelters if this project is not completed.*
- *This project has an impact on the operating budget in the amount of \$400,000 GF related to monitoring functions, upkeep, and repairs of the telecommunication shelters.*

**2026-2028**

KentuckyWired Critical Infrastructure Upgrades	\$16,700,000
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**2028-2030**

KentuckyWired Critical Infrastructure Upgrades	\$14,373,000
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