

INFRASTRUCTURE AND POWER

Innovation Park offers the most reliable, on-site infrastructure and backup systems in the region. Built by IBM, the park features The CUP: a Central Utility Plant that manages energy, chilled water storage and production, and a fully redundant substation operated by Duke Energy.

Our cutting edge infrastructure is scalable and intuitive, so you can remain fully operational and productive. Protecting your operations and allowing you to maintain productivity.

UTILITY CAPACITY

Located on site, **two (2) 100 KV Duke Energy Feeders** (N, Charlotte Black & N. Charlotte White) are sourced from two (2) separate substations (N. Charlotte Substation & Harrisburg Substation)

Two (2) MVA forced air substation transformers reduce the voltage from 100 KV to 12.5 KV & have redundant 12/16/20 MVA transformers

18 MW Redundant capacity

Duke Energy can accommodate **up to a 120 mw capacity on one of the 100 kv lines & an additional 40 MW** on the other line

Each feeder can provide approximately **40 mw on both 100 kv lines**. Providing **redundancy on the 100 KV side. A combined total of 80 mw**

The current total load metered from the site is **approximately 5.5 mw**

CAMPUS DISTRIBUTION

Innovation Park owns and operates redundant, **parallel 12.5 kv feeders** that travel from the Duke Energy Substation to the Central Utility Plant via underground concrete duct bank

Siemens Allis switchgear distributes power to the buildings, and provides automated load distribution protecting all transformers and subcircuits

The central utility plant has **four (4) 12.5 kv substations**

- » Two (2) Westinghouse 750 KVA 208/120Y volt substations and switchgear
- » Two (2) Westinghouse 2 MVA 480/277Y Volt substations and switchgear

IN ADDITION TO THE ABOVE EQUIPMENT, THE BUILDING HAS BEEN DESIGNED FOR FUTURE GROWTH AND COULD READILY ACCOMMODATE AN ADDITIONAL 2 MVA BUILDING SUBSTATION IN THE MAIN ELECTRICAL ROOM SHOULD MORE ELECTRICAL CAPACITY BE REQUIRED. THE CONDUIT FOR SUCH AN EXPANSION IS ALREADY IN PLACE ALONG WITH A ROOM DEDICATED TO HOUSE ANY NEW ELECTRICAL EQUIPMENT.

FIBER OPTIC TELECOMMUNICATIONS

With fiber in place and our proximity to major fiber carriers, Innovation Park has access to multiple communication networks and systems.

EXTRAORDINARY FIBER OPTIC COMMUNICATIONS

Innovation Park's availability and quality of existing network backbones and proximity to major fiber carriers provide advantages to those seeking excellent telecommunications. Fiber is already in place, 'lit,' and ready for service implementation, given additional 'dark' routes. Innovation Park provides access to multiple major communication networks and backbones, resulting in trustworthy and reliable connectivity.

CARRIER PRESENCE

Innovation Park is carrier-neutral and has over 10 carriers available—conveniently providing access from most major telecommunications providers in the country.

CARRIER TYPE

Innovation Park has multiple Tier 1 providers ensuring maximum efficiency. As a Tier 1 provider, carriers peer directly with other major backbones at private and public peering exchanges.

DIVERSE ROUTING

Multiple entrances and separate demarcation rooms like those at Innovation Park are the hallmarks of extraordinary telecommunications.

Fiber optic telecommunications are currently provided with two (2) points of entry for increased reliability by several service providers:

01 **EAST DEMARCATION ROOM ("EDR"):**

- » Six (6) 4" conduits from the underground telecom manhole system.
- » Providers: AT&T, Verizon, TW Telecom, Zayo Networks and Time Warner Cable have services available from the EDR.

02 **WEST DEMARCATION ROOM ("WDR"):**

- » Existing conduit infrastructure from the EDR and from diverse underground entry.
- » TW Telecom retains redundant fiber to WDR.
- » AT&T and TW serve the WDR.
- » There is a secure cable tray system between the EDR and the WDR, enabling easy routing and redundant pathways from the Demarcation Rooms to tenant spaces.

VERIZON WIRELESS HAS INSTALLED A DISTRIBUTED ANTENNA SYSTEM THROUGHOUT INNOVATION PARK. This investment greatly enhances the phone and data service available within the buildings.

INNOVATION

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