



Overcoming Architectural Complexities: CoxGomyL's Innovative Facade Access Solution for Duke Energy Headquarters

Facts & Figures

Commencement	May 2019
Completion	October 2022
Building Height	191.7m
Floor Count	40
No. of BMU's	1
BMU Type	5000 Series
Outreach	40.23m
Building Type	Commercial

The Duke Energy Headquarters, situated in the Charlotte Metro Tower in Charlotte, NC, stands as the city's third most prominent building, boasting an impressive 40 floors dedicated to commercial space for the esteemed energy company. Given the tower's stature and architectural complexity, the need for a dependable facade access solution to facilitate maintenance on the building's external facade was paramount. Thus, Duke Energy enlisted the expertise of CoxGomyL to devise a facade access solution that seamlessly accommodated the tower's architectural structure.

Two significant factors posed a challenge for the CoxGomyL team during this project. First, there was the scale of the building. The headquarters are 192m high, with an outreach of 40.23m and a 15-degree sloped parapet. The second challenge was to ensure that the facade access system remained inconspicuous, strategically positioned close to the central core, and hidden from view when not in use. Meeting these demands required innovative solutions and meticulous planning to achieve seamless functionality and aesthetic integration.

Upon evaluation, CoxGomyL's design engineers discerned that a building maintenance unit from the 5000 Series was the most suitable solution. The 5000 series, renowned for its capacity to effortlessly tackle extensive structures like the Charlotte Metro Tower, stood out as the obvious choice, particularly given the intricate architectural complexities involved. With a maximum reach of 45 meters and the ability to operate at 500 meters, the building maintenance unit effortlessly met the tower's elevation and outreach requirements. Its modular design, complemented by a multi-layered hoist mechanism and adaptability to various surface angles, further enhanced its compatibility with the project.

By harnessing the capabilities of CoxGomyL's state-of-the-art 3D design tools, a precise simulation of the proposed solution was accomplished, offering a comprehensive showcase of the BMU's reach and adaptability tailored to Duke Energy's specific needs. Following this milestone, the project's engineers developed the innovative and flexible BMU solution, starting in April 2020, based on the approved plans. The facade access solution was successfully implemented in October 2022.

