

## **An “Up and Coming Co-op” Saves the Day** by: Thomas Black

On the morning of November 16, 2022, the 20,000 kVA power transformer, the “heart of the substation,” was set on its foundation at 825 Community Road in Blythewood, South Carolina, completing Fairfield Electric Cooperative’s twenty-fifth substation. Exactly one month later, Thomas Black, the Cooperative’s electrical engineer, attended a meeting with Project Connect at the Richland County Economic Development office in downtown Columbia. As soon as Thomas entered the meeting room he was hit with two questions from a Project Connect team member, “Can you remove your substation and relocate that transmission line?” while pointing towards a map on the wall which showed several buildings superimposed over the substation and transmission line. Thomas, now standing at the head of the table, placed his finger on the drawing, “I just built this substation . . . and that is not just one transmission line, that is a 230 kV line and two ‘double-circuited’ 69 kV transmission lines in a shared right-of-way.”

At that moment, the room became silent as everyone looked up, turned, and simply stared at Thomas. Then, the same person from the Project Connect team asked, “Can the substation be removed by June 2023 and the transmission lines moved by the end of the year (2023) . . . at no cost to the project?” Thomas, not wanting his answers to be a deal breaker for Richland County and the state of South Carolina securing this project, answered slowly with a hint of assurance, “Sure.”

And with that answer and a two-billion-dollar incentive package offered by the state of South Carolina, Project Connect (now known as Scout Motors) announced their plans in March of 2023 to build their all-electric Scout SUV and truck in Blythewood, South Carolina.

After that firm commitment from Volkswagen (the purchaser of the International Harvester’s Scout vehicle brand name and script logo), Thomas met with the personnel in his department to make plans to dismantle the recently completed Cobblestone Park substation. And on March 24, 2023, the power transformer, control house, and the first large pieces of steel were hauled back to Fairfield Electric’s Blythewood office to be stored around the perimeter of the pole yard until a new site could be found. Santee Cooper, owner of the three transmission

lines, began planning the rerouting of their lines around the proposed vehicle manufacturing buildings.

However, even with Fairfield Electric and Santee Cooper moving forward on their commitments, Project Connect still had not chosen their electric provider for the site. The electric service territorial assignment line practically divided the site in half, meaning the electricity provider was Scout Motors' choice. Thomas and Bruce Bacon, Fairfield Electric's CEO, and Dominion Energy gave multiple service presentations. Thomas was sure Fairfield Electric had a clear advantage over Dominion Energy given the fact Santee Cooper's 230 kV transmission line had adequate capacity and was already on-site, and he had committed to relocating the Cobblestone Park substation at no cost to Project Connect – provided Fairfield Electric was chosen to serve the entire site.

Finally, on June 12, 2023, Thomas and Bruce received a phone call from Scott Keogh, the CEO of Volkswagen Group of America, thanking them for their time and hard work put into their presentations. He went on to say it was a difficult decision to make but, in the end, Scout Motors wanted to do business with a larger, regulated utility who they felt they could negotiate their cost of power and that Fairfield Electric, while competitive, was just an “up and coming co-op.” Scout Motors chose Dominion Energy to be their electricity provider. And after hanging up the phone, Thomas set out to prove him wrong; that Fairfield Electric was more than “up and coming.” That Fairfield Electric Cooperative is here, now, competitive, and can outperform any larger, regulated utility.

After the final piece of Cobblestone Park substation steel was taken down, Thomas now focused his undivided attention on locating a new site for the Cooperative's distribution substation and the Scout Motors' Supplier Park substation. The Scout Motors' Supplier Park, with its three planned buildings, was drawn entirely within Fairfield Electric's assigned service territory, meaning these buildings would be served by Fairfield Electric.

Thomas spent the remainder of 2023 repeating the exhaustive process of discussing, marking up, and revising the one-line drawing of the Supplier Park substation with the Scout engineering team. Thomas convinced Scout's engineering team to utilize the Cobblestone Park substation's excess transformer capacity for their substation's emergency “spare” transformer, saving Scout

Motors \$1,000,000 on the front end. The four-transformer bay and eight circuit substation design was finalized and bill of material ordered in April of 2024.

Meanwhile, Thomas and Bruce continued monthly meetings with Scout's engineers in 2023 and through February of 2024 to find an agreeable location for their Supplier Park substation. After proposing three locations, a Scout engineer finally told Thomas and Bruce to find a location entirely off their site. This created an immediate hurdle for Thomas in fulfilling his commitment to provide a temporary 25 kV circuit from the "to be re-built" Cobblestone Park substation to Scout Motors' Paint Shop building.

On February 21, 2024, a Scout Motors consultant had emailed Thomas asking if Fairfield Electric could supply a temporary 25 kV service to Scout Motors' Paint Shop for one year – from May 2025 until the expected completion of Dominion Energy's substation in May of 2026. This service would require an estimated 15 Megawatts and be needed in July 2025. Thomas knew it could be done but would require the use of Fairfield Electric's dual voltage mobile transformer, and constructing a temporary substation with one dedicated 25 kV circuit routed to the Paint Shop, since the new Scout Supplier Park substation would operate at 12.47 kV.

However, as of July 23, 2024, Thomas did not have a recorded deed or plat for the new 4.90-acre substation parcel being considered. Thankfully, Central Electric Cooperative, Fairfield Electric's Generation and Transmission (G&T) company, expedited this project at Thomas' request to meet the tight schedule for service to the Paint Shop given by Scout Motors. Jimmy Tindal, director of transmission design and construction at Central Electric, proceeded with the transmission line routing design and field staking of its centerline to the proposed substation parcel.

Then on August 2, 2024, Richland County closed on the substation parcel and emailed Thomas a recorded deed and plat. Thomas immediately forwarded these to Jimmy, so that his team could complete the transmission line design inside the substation, itemize materials and poles, perform soil borings for all of the proposed pole locations, and could begin working on the transmission line and substation's Environmental Report (ER) – required by the Rural Utility Service (RUS).

On November 5, 2024, Thomas provided a final substation layout and orientation on the new parcel to Jimmy so the ER data collection could be completed. Jimmy submitted the ER to RUS on November 27, the same day he ordered the materials needed for the 1.80 mile transmission line tap. He also sent out right of way and line construction contracts. With only 7 months until the expected July 1, 2025, in-service-date (ISD), Thomas prepared and solicited bids for the substation parcel's clearing and grading, the fence, and the foundations, steel erection, and construction. A Land Disturbance Permit (LDP) was filed with Richland County, a Stormwater Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit submitted to DHEC, and an encroachment permit submitted to the SCDOT for widening the existing residential driveway.

When Thomas asked Jimmy if the transmission line energization by July 2025 was possible, Jimmy simply stated, "It is possible . . . if the stars align." Jimmy reminded Thomas that no tree clearing or construction of the transmission line or substation could begin until the Environmental Report is approved, which could take up to 3 months. Jimmy also mentioned there was a limited time availability to clear the right of way before July (Spring bat window February 15 – May 1) so this could be another concern that effected the schedule. Jimmy told Thomas that the clearing of the transmission line right of way could begin as early as February 24.

Jimmy received approval of the ER from RUS on February 25, 2025. Transmission poles were scheduled to be delivered in mid-March, and Jimmy was somewhat confident, not accounting for delays due to adverse weather conditions, the line construction could be completed within 3.5 months . . . after the contractor started. Thomas had previously told Jimmy he needed a July 1 energization date for the 69 kV transmission line tap. So, this schedule seemed promising.

On February 28, Thomas received the approved SWPPP and NPDES from DHEC and approved LDP from Richland County. A pre-construction meeting was held at the site with the clearing and grading contractor, civil engineer, and Richland County SWPPP inspectors. The clearing and grading contractor was given a hard deadline of having a pad ready site by April 1 – so substation foundations and grounding grid work could begin – which would put completing the substation back on schedule.

Jimmy provided Thomas with another update. Transmission line right of way clearing began mid-March. Transmission line construction was scheduled to begin April 14. The July 1, 2025, energization date was still the expectation.

Construction activities at the new substation site were moving along, despite the abundance of rain on several days. The site was cleared and graded. The fence and gates were installed. The construction contractor had begun pouring foundations. But one problem was evident: the Scout Motors construction site's earth moving contractor was behind schedule. This meant there was no way the planned underground circuit could be constructed from the substation down to the Paint Shop before July 2025.

A couple of proposed solutions were aired out, but none were viable . . . except for one. Construct an overhead 25 kV circuit from the substation along Blythewood Road and down to the site, then around all the future buildings, and finally to the Paint Shop. Over 40 poles. Material was ordered. However, it would not take long for this overhead power line idea to begin having its own set of challenges. But when it is the only way for the Paint Shop to receive power by July 1, it forces people to strive together for solutions.

There were now three distinct construction activities proceeding toward one common goal. The new 25 kV overhead line to the Paint Shop was completed the week of June 16. The substation contractor had the first transformer bay and its one circuit completed on June 16. The mobile transformer was taken to the substation on June 18 and connected to the high voltage and low voltage bus.

The 69 kV transmission line was energized on June 25. The Cobblestone Park substation was energized on June 26. Not bad for an "up and coming co-op."

Note: Circuit 1 was ready to be energized, but the Paint Shop was a little behind schedule, so the line was not energized until July 25. Scout Motors' electrical contractor closed the breaker inside the Paint Shop on August 9.



Cobblestone Park Sub. with Mobile Transformer energized at 25 kV feeding Circuit 1