

BOARD OF SUPERVISORS
STAFFORD COUNTY, VIRGINIA
MINUTES
JOINT WORK SESSION WITH THE PLANNING COMMISSION
MARCH 29, 2023

CALL TO ORDER – A joint work session of the Stafford County Board of Supervisors and the Planning Commission was called to order by Dr. Pamela Yeung, Chairman, at 6:00 p.m. on Tuesday, March 29, 2023, at the Courthouse Community Center, 29 Stafford Avenue, Stafford, VA.

ROLL CALL – The following members were present: Dr. Pamela Yeung, Chairman; Thomas C. Coen, Vice Chairman; Crystal Vanuch; Meg Bohmke; and Darrell English.

The following members were absent: Tinesha O. Allen; Monica Gary.

Ms. Barnes called the Planning Commission to order and called roll.

The following commissioners were present: Kristen Barnes, Chairman; Albert Bain, Vice Chairman; Steven Apicella; Dexter Cummings; Laura Sellers; and Willie Shelton, Jr.

The following commissioner member was absent: Martin Martinez.

Also in attendance were Randal E. Vosburg, County Administrator; Rysheda McClendon, County Attorney; Michael Morris, Deputy County Administrator; Cheryl Giles, Deputy Clerk; various staff members; and other interested parties.

DATA CENTER WORK SESSION BACKGROUND INFORMATION

Dr. Yeung stated that the intention of the work session was to ensure the Board and Commission received the same information and briefing on data centers in the County. She said that there would be opportunities for supervisors and commissioners to ask questions throughout the presentation.

Mr. Cummings read the following disclosure statement: *“This evening and in the future, I am affiliated with a business associated with the development of data centers, which may receive an indirect benefit or detriment as result of transactions that may be before the Planning Commission, and I am able to participate in transactions involving data centers fairly, objectively, and in the public interest. Staff please record my disclosure in the record today and at any future meeting where the Stafford County Planning Commission discusses or considers this matter.”*

Mr. Jeff Harvey, Director of Planning and Community Development, said that staff's intention was to provide a broad overview of data centers, and they did not intend to discuss specific projects or

properties. He said that multiple County departments and representatives from Dominion Energy assisted in putting together the presentation and discussion.

A video entitled “What Are Data Centers?” created by the Communications Department was shown at the meeting.

Mr. Harvey stated that data centers could be a single, individual building, or they could be a campus. He said that there had been inquiries about multi-building campus which more of an industrial scale development compared to what had been built in the County. He said that there were some data centers in the County, two of which were at the Quantico Corporate Center and operated as a point-of-connection data center. He said that one of the data centers was the size of a shed, and the other was about the size of the meeting room. He said that they would be discussing data centers that were larger in size and scope.

Mr. Josh Summits, Business Development Officer, said that in 2012, the County amended its zoning ordinance to classify state data centers as a lawful use in several zoning districts. He said that in 2017, they began to review data centers proactively. He said that data centers were a high-impact, revenue generating industry, and they offered high-paying technology-based jobs. He said that they typically ran a 24/7 operation with about 30 employees spread out over three shifts in a day. He said that the average salary was about \$120K.

Mr. Summits said that when they looked at strategic areas to target for data centers, they worked with Dominion Energy to identify sites adjacent to or in close proximity to electricity distribution lines. He said that they were reviewing sites that were removed from high-density residences. He noted the economic impact of a potential data center. He said that in their estimates, they assumed a 25,000-square-foot building, a 125,000-square-foot footprint, and two to three stories. He said that cap tax was about \$1M for site work and vertical construction, and the upfront cost for data center equipment was about \$670M which would be refreshed every five to six years. He said that they anticipated \$2.6M to \$6.2M annually for one facility. He said that one building would average to \$3.7M.

Mr. Summits said that based on the current pipeline, the estimated full buildout was \$35M in cap tax, over 1,000 full-time employees. He said that they projected \$133M in annual tax revenue by 2031. He said that there were other, ancillary economic benefits to data centers. He said that the direct economic activity generated from construction would create construction jobs. He said that there would be indirect economic activity from employees using local businesses. He said that the estimates were based off of 1m square feet.

Ms. Sellers asked how many acres 1m square feet would require.

Mr. Summits responded that 500k square feet required about 50 acres with buffering. He said that based off of the average square footage, the gross revenue per square foot for a data center was about \$15 compared to \$1.7 for other uses.

Mr. Harvey said that in 2012, the Board amended the ordinance to allow data centers as a by-right use in the B-2, M-1, M-2, and recreational business campus zoning districts. He said that the amendment recognized that data centers did not generate a lot of traffic, so the parking standards for data centers was 1.5 spaces for the largest shift. He said that data centers would have to comply with the regular zoning requirements for landscaping, buffering, and screening.

Mr. Harvey said that data center structures were industrial in nature. He said that they typically had tall ceiling heights like warehouse buildings. He said that buildings taller than two stories may exceed the County's height requirements in the zoning ordinance, but an exception was allowed through a conditional use permit. He said that there may be situations where data center uses may exceed the floor area ratio requirements, and a conditional use permit could provide an exception.

Mr. Harvey said that the power corridors in the County generally ran north to south. He said that of the four properties under the powerline corridor, one property would require a proffer amendment, one had significant environmental constraints, and two other properties were off Hollywood Farm Road, and that area of the County was outside of the Urban Services Area and did not have access to water and sewer.

Mr. Harvey said that the cost to construct the necessary electric utilities to serve data centers beyond a mile from the nearest electrical distribution line was cost-prohibitive. He said that an additional 14 properties were identified within the one-mile corridor that were greater than 10 acres and zoned commercial or industrial. He said that many of the 14 properties had environmental constraints which limited the buildability of parts of the properties.

Mr. Harvey said that the comprehensive plan did not specifically identify data centers, and they generally fell under the business and industry land use category. He said that the County had policies on data centers, and one encouraged technology zones and technology-based businesses. He said that there was a policy stating that if a data center were to be located outside of the Urban Services Area, the Board could consider extending water and sewer services to the site on a case-by-case basis.

Ms. Barnes asked what would happen if the County rezoned a parcel for a data center but the project was never completed. She asked how they could limit the by-right development on parcels that were rezoned.

Mr. Harvey said that in the case of rezonings, proffers could be proposed. He said that a proffer was a voluntary agreement by the landowner to the County. He said that the Board and Commission would have to determine if the potential uses were acceptable.

Mr. Bain noted that they could not require the applicant to pay for the expansion of the water and sewer lines. He asked if the County would be responsible for funding the extension.

Mr. Harvey said that there would be a section where they discussed public water and sewer.

Ms. Vanuch asked if they could remove data centers as by-right uses from the B-2, M-1, and M-2 zoning categories and create a separate zoning category.

Mr. Harvey said that the Board had the authority to create new zoning districts and dictate what uses were allowed in different zones and how they were allowed.

Ms. Vanuch clarified that they could create a data center zoning requirement and remove the by-right uses from B-2, M-1, and M-2. She noted that B-2, M-2, and M-1 zoning did not require conditional use permits.

Mr. Harvey said that through rezonings, they could negotiate with the developer to mitigate offsite impacts.

Ms. Sellers asked if there were ways to get around the requirement to be within the Urban Services Area or if there were engineering techniques to change the water requirements.

Mr. Harvey said that there were different types of systems that could be used. He said that some were closed systems that did not use that much water. He said that if a developer found a way to not need public water or sewer, it could be possible.

Ms. Sellers asked if they could pump water out of the river.

Mr. Harvey said that any major withdrawal would require state and possibly federal approval in addition to local approvals.

Mr. Cummings asked how many parcels fit the parameters for a data center in the County.

Mr. Harvey said that there were four parcels with immediate access to powerlines. He said that they used a 10-acre designation, but campuses would require more land. He said that rezonings would be required to develop large-scale data centers.

Mr. Cummings asked if Planning would be in favor of other data center uses.

Mr. Harvey said that it would be up to the decision of the Commission and the Board.

Mr. Cummings asked what other kind of data center uses existed.

Mr. Harvey said that they would cover it in another part of the presentation.

Ms. Sellers asked which powerlines were owned by Dominion Energy and which were owned by the co-op.

Mr. Harvey said that they were all Dominion Energy-owned lines.

Mr. Chris Edwards, Director of Utilities, noted that County utilities referred to water and sewer. He said that there were two types of data centers. He said that one type used forced air and a closed ethanol loop for cooling, but it used more electricity than a water-cooled data center. He said that evaporative cooling forced water through the server racks to cool the equipment. He said that the water was recirculated about six to seven times before being returned to the County sewer system.

Mr. Edwards said that the peak-day demand in the County was at the limit of the County's water capacity. He said that significant water usage would cause issues to the water system. He said that they were promoting reused water for data centers. He said that effluent or reused water could be used for industrial cooling. He said that they would require the construction of reuse facilities at the water treatment plants and permit modification to allow water to be sent via purple pipe to a data center or for irrigation.

Mr. Edwards said that there were several jurisdictions in the state that permitted using reused water for data center cooling. He said that reused water would reduce the stress on the County's water system and allow water to be provided to data centers for cooling. He said that about 20% of the cooling water would return to the sewer system and would impact all components of the sewer system. He said that they would have to consider ways to remediate the sewer flows through onsite equalization tanks or facility expansions at the County facilities.

Mr. Bain asked who would pay for the construction of the purple pipe.

Mr. Edwards said that in the utility ordinance, it required for any developer to pay for the cost to run the utility connection from the County facilities to the development.

Mr. Bain asked if the wastewater from the data center would return to the water treatment plant or be discharged into a stream.

Mr. Edwards said that the water would likely be combined with the regular sewer flow and go to the wastewater treatment plant.

Mr. Bain asked how much water they anticipated would come from the data centers.

Mr. Edwards said that on warm days, it could be 10% of the flow. He said they hoped that most of the effluent would be sent back through the purple pipe.

Mr. Coen clarified that the developer would pay to upgrade the County facility to handle heated water.

Mr. Edwards said yes.

Mr. Apicella noted that some of the wastewater could be dumped into streams.

Mr. Edwards said yes. He said that if the facility was using low water usage, then the wastewater would be merged with the regular sewer flow and be discharged.

Ms. Vanuch asked if the County had a reuse rate to purchase the reused water.

Mr. Edwards said that they would have to add such a reuse rate to the ordinance.

Ms. Vanuch suggested that they begin to consider a reuse rate since they were planning the budget.

Mr. Edwards said that they had worked with a consultant to help develop a reuse rate.

Ms. Vanuch asked how long it would take to propose a rate because they were currently considering a data center application.

Mr. English asked what the daily water usage would be for a data center of 1m square feet.

Mr. Summits said that for a closed-loop system, it would use no more water than a Wal-mart. He said that a water-cooled system would depend on the peak usage.

Mr. Edwards said that for 500k square feet, the usage was about 300k gallons per day.

Mr. English asked how a drought would impact a data center use if water limitations were imposed.

Mr. Edwards said that the reuse system would provide advantages. He said that they were considering capping the maximum amount they could sell based on the flow, which was about 6m gallons per day. He said that they were working with DEQ to finalize the amount. He noted that residents would not be impacted because the reused water was not part of the potable system.

Mr. Cummings asked what issues were associated with data centers along with the planning and cost requirements.

Mr. Edwards said that they were trying to collect flow data and the expected return. He said that the reused water system would be a new system for the County, and there may be growing pains.

Mr. Cummings asked what type of modeling was used.

Mr. Edwards said that they had a water and sewer modeling employee who used software for water sewer modeling. He said that the modeling helped determine capacity.

Ms. Bohmke noted that Loudon County had begun using potable water to cool data centers, and they were now transitioning to using a reused system.

Mr. Edwards said that where there was additional demand, they used potable water before the water treatment plant was finished. He said that the County had enough capacity, so they just needed to build the facilities.

Ms. Bohmke asked if it was more favorable to use the reused water system. She asked whether a financial analysis would be done.

Mr. Bill Meinert said that effluent was available and more environmentally friendly and a way for data centers to address the impacts.

Mr. Apicella asked what would require a developer to use a reused water system if the County did not have performance standards for data centers.

Mr. Edwards said that it would likely need to be a proffered condition.

Mr. Apicella noted that data centers could be developed by-right.

Mr. Edwards said that a reused water rate would likely be less expensive than the regular water rate. He said that most newly constructed data centers were using reused water and were not using a closed-loop system.

Ms. Sellers asked if there was a requirement to be in the urban service area if the data center used the reused water system.

Mr. Edwards said that he was not sure if the development would have to be in the Urban Services Area to use the effluent water.

Mr. Harvey said that it would depend on the project which was proposed.

Ms. Sellers asked how the water reservoirs would impact the groundwater.

Mr. Edwards said that the purple pipes did not use the potable water, and the only time potable water would be used if there was a break in the purple pipe and emergency cooling water was needed. He said that the goal was to use all of the effluent water for cooling.

Mr. Bain asked if there were different levels of treatment required for water used for cooling.

Mr. Meinert said that the water could be used straight out of the plant.

Ms. Barnes clarified that data centers were mostly using evaporative systems.

Mr. Meinert said that for peak demand, evaporative systems cost less and used less electricity.

Ms. Barnes asked how much water was evaporated.

Mr. Edwards said that 20% of the water typically came back to the sewer system, and 80% was evaporated.

Ms. Barnes said that if the evaporation was higher, than the demand on the system would increase.

Mr. Edwards explained that the water drawn from the reservoir was only to meet the demands of the County customers. He said they wanted to ensure that there was enough water at the end of the wastewater treatment process to serve the data center cooling needs.

Ms. Barnes asked how much water would be required at a maximum buildout and whether the County capacity could meet the buildout demand.

Mr. Edwards said that the facility could produce 3m to 4m gallons of effluent per day.

Ms. Barnes clarified that the data centers would use potable water until the County installed a system to service the effluent water.

Mr. Edwards said that the goal was to build the reuse facility to coincide with data center construction.

Mr. Coen clarified that the water for data centers would be reduced when the temperature was not as hot.

Mr. Edwards said that was correct, and water could be discharged back into the system. He said that the water used for cooling had to meet a cleanliness standard and be absent of minerals and salts. He said that they tested the effluent to make sure it would meet the data center needs.

Mr. Cummings asked how they would determine the impact to the water infrastructure and the lifecycle of the purple pipes. He asked who would bear the costs.

Mr. Edwards said that the data centers would pay a user fee for the purple pipe service. He said that the fee would be used to offset the cost of treatment and the facility. He said that the data centers would also pay a sewer user fee, about \$5 per 1k gallons.

Dr. Yeung said that data centers should have a different, higher rate than the public for water and electricity usage. She said that they should consider hybrid systems using water cooling and closed-loop cooling. She noted that data centers would increase the temperature.

Mr. Shelton asked if the sewer facilities could filter out glycol.

Mr. Edwards said no. He said that there were two different systems, and the second one that used glycol was [inaudible] and was exactly like the reuse system at Carr where it uses this for cooling, but it was phased in there and not expended, so they would go back to the wastewater plan.

Mr. Harvey said that in regard to transportation, data centers generally did not have many employees and therefore had low traffic volumes per building. He said that the normal development process would be followed for a data center, so if a site plan was received for a data center, all VDOT requirements must be met in order for them to get access to the public streets. He said that this would typically include constructing commercial entrances and a U-turn lane if traffic warranted it, but it was fairly limited.

Mr. Harvey said that with regard to traffic studies, large projects may or may not generate the need for a traffic study during the rezoning process. He said that staff would initially estimate that they would need probably nine or ten of these large, 250,000-square-foot buildings in order to hit the threshold of 1,000 trips per day that the County required for a traffic study. He said that VDOT's

threshold for a traffic study was 5,000 trips per day, so the County's regulations provided extra protection, but traffic would not be a significant factor of data centers.

Mr. Harvey said that a data center would typically generate about one trip per day or trip per thousand square feet, and a warehouse of a similar size would generate twice the vehicles, and a big box retail store would generate 24 to 50 times more vehicles. He said that this was one of the industrial uses that would have the least amount of potential traffic impact on the County.

Mr. Stan Blackwell, representing Dominion Energy, said that he had led Dominion's data center practice and had a long history in the industry. He said that in Virginia, Dominion Energy served the largest data center market in the world, which was located within 30 square miles of Loudoun County, along with other data centers throughout the state. He explained that if an area attracted data centers, they tended to cluster, so if the expectation were that they would be spread throughout the County, they did not tend to grow that way.

Mr. Blackwell said that they tended to cluster for all of the reasons previously discussed, including sewer, transmission lines, and fiber lines, because those made it much easier for data centers to move into that area. He said that as they planned for data center development, they should think about where they should be and try to attract them around that area. He explained that that was generally what was seen in most markets.

Mr. Blackwell said that in terms of electrical, about 20 other megawatts was their market, which was the largest market served in the world. He said that the consumption was more than the capacity in their North Anna Nuclear Facility, so it was a very large market in terms of usage. He said that it was about 21% of their sales made per hour and was a large component of what they served in the industry. He said that they grew about 450MW per year in the state, or the equivalent of 11,000 residents per year in growth. He said that it was the hottest market in the world and the hottest in Virginia. He said that if they were attracted there, they would grow like a weed and provide tax revenues in the future, if that was what they wanted.

Mr. Blackwell said if they had a good site, the odds were that it was a good site for any other large business, so he would encourage them to look at sites where they may want data centers, but if another industry was able to be there, they were all good sites. He reiterated that good sites could attract many industries, but data centers were the hottest industry going off. He said that every application accessed on a smartphone required data that was stored in data centers, which was communicated and received by the smartphone.

Mr. Blackwell said that there were a lot of different buzzwords that applied to data centers, and he would provide definitions for five categories of data centers. He said that the first type were cloud

providers such as Amazon, Microsoft, and Google, were the biggest operating data centers in the world. He said that cloud providers allowed for software and operating systems to be stored at the data centers instead of being hosted locally on computer operating systems. He said that if they wanted to attract data centers, they had to get a cloud provider, because if they did not, none of the other types would come.

Mr. Blackwell said that the second largest segment of the data center market was a co-location data center, which was a large facility that sold space. He said that people could buy space for their single servers or buy 125,000-square-foot building space to put their own servers in the space. He said that these types of data centers typically followed the cloud providers, because those cloud providers often rented some of that space. He said that the third type they tried to attract was an enterprise data center, which was a data center solely dedicated to serve a company's infrastructure, such as a bank. He said that the enterprise data centers were falling out of use because more people were going to cloud providers.

Mr. Blackwell said that the fourth type of data center was called a fiber interconnect data center and served to connect fiber networks. He said that they were small and did not employ a lot of people, and served as a support type of data center. He said that the fifth type of data center they tracked were cryptocurrency, which was a very volatile industry. He said that they did not have any in Dominion's territory, but they had had them. He said that they tended to go bankrupt, but there was not a large cryptocurrency presence in Virginia.

Mr. Blackwell said that they were very actively connecting data centers, and because they tended to cluster, they had four or five large pockets in the state. He said that Stafford had a great setup to be another cluster if they wanted to be. He said that Dominion's forecast for the power served to this industry would grow by a factor of 10 in 15 years, so what was left to be determined was where these facilities would be located in Virginia. He said that they had developed 15-year plans and would be filing an integrative resource plan as required every other year, which would determine what configuration would be built to feed the industry. He said that the generation did not need to be built next to the data centers.

Mr. Blackwell said that data centers were very large buildings, as large as a Super-Walmart, and the average data center was two stories tall with very tall ceilings so that hot air could rise. He said that they had high-speed crash fences made of aircraft fiber cable, armed guards, retinal scanners, and fingerprints scanners to maintain high security. He said that the data center usage was so large on campus that every data center needed a substation to support transmission. He clarified that overhead transmission towers were typically places in rural areas because there was less community opposition. He said that they had to have community support for new infrastructure and if they did not, it tended to make the process very long.

Mr. Blackwell said that it was key to pick areas in their county where they felt it was acceptable to have overhead transmission, which usually was near an existing transmission line where it was easy to extend off of. He said that at the local government level, fast track zoning had to have sites identified and tax rates that the data centers would want.

Mr. Blackwell noted that they would continue to hear from data center developers that it was about time to market, because they wanted to build that facility as fast as possible and turn it on. He said that they could actually build it faster than they could build electrical structure, potentially within a year. He indicated on the slide the transmission line and substations for the high voltage, which was typically 230,000 volts. He said that substations were now typically part of the data center campus, because it was not beneficial for them to be located farther away for wire installation.

Mr. Blackwell said that the sites that were in demand for the data centers were getting bigger because larger acreage allowed for expansion of the facilities in the future, and cloud providers tended to build very large sites. He said that data centers actively called to ask about property and the power storage for the site, or economic development groups asked about the power storage for developable sites that had potential as data center sites.

Mr. Blackwell said that they worked closely with economic development and customers to give that power storage, and it could be summarized as being what they had to build to get there and how fast they had to do it. He said that electricity was the number one cost of a data center, so they were very interested in competitive rates, and Virginia was of interest because its rates were second lowest in the world for data centers.

Mr. Blackwell said that they were a regulated monopoly and had an obligation to serve. He said that if a data center bought that property across the street, while the County may not want it there, they had to serve it, which involved the zoning process of the County. He said that they did not have the right to say that they would not serve that, which was when County Boards could decide during the zoning process whether it should be there, but not whether or not it could be served. He said that zoning issues were the driver of how they developed.

Mr. Blackwell said that if a transmission line extension crossed a third party's property, a case must be filed with the State Corporation Commission and they had to hear and decide what the routing would be. He said that they were required to give the state options for four or five routes to consider, and the state picked the route and the construction.

Mr. Blackwell said that the exceptions noted were that if the transmission lines were on that property of the data center, the state did not need to be involved, because no one else was impacted by those lines. He said that in the end, the County had control of the substation rights, so they

could decide how the substation would be built and provide permits. He said that in Virginia, the longest lead time item to serve a data center was County permitting.

Mr. Cummings asked if and how renewable energy was supplied to the data centers, and how other localities had dealt with that.

Mr. Blackwell said that solar panels on a house may produce enough energy to power a house for a day, but a cloudy day would result in no electricity. He said that data centers were so electrically dense that there could not be enough solar panels put on the roof of a data center to power it for five minutes, and there was no roof space on a data center because of water chillers and other equipment. He said that solar farms were not usually in urban areas where data centers were located, so data center companies entered into contracts with renewable energies that were located elsewhere, typically in more rural parts of the state or other states.

Mr. Cummings said that the County had a new solar ordinance, so from a planning perspective they wanted to see how it could be attractive to all of those users.

Mr. Blackwell said that most data centers did not build their own solar facilities, and the solar facilities that would serve them did not have to be located anywhere near the data center.

Ms. Vanuch said that a concern raised by constituents had been about how the data centers would impact the power grids and if Stafford County had the infrastructure to support it. She said that it was also unclear if Dominion would be able to provide adequate response to the residents if there were an electrical outage.

Mr. Blackwell said that they had not curtailed energy to any customer, meaning there had been no rolling brownouts or blackouts. He said that he was unaware of any utility in Virginia doing that. He said that Duke Power recently had a blackout on Christmas Eve, but Dominion did not.

Ms. Vanuch clarified said that she was asking what the potential was for that to happen.

Mr. Blackwell said that in Loudoun County, there had been electrical constraints to their transmission system. He said that building transmission in an urban environment with a mix of uses and no green space was a difficult thing to do and no one would be happy. He said that it took a long time to get additional infrastructure in, but the demand was exploding. He said that to prevent the transmission grid from being strained, they would limit the amount of wattage that the energy company would supply to the data center.

Ms. Vanuch asked how the elected officials of Stafford could guarantee their constituents that it would not happen with them, because they could not guarantee Dominion would agree to what they had previously agreed to in Loudoun County in their contracts with data center companies.

Mr. Blackwell said that Stafford did not have a data center market today, so they would have to grow for eight to 10 years to get close to the level of Loudoun County's data center density, and without that level of demand, there was no pressure to be concerned about. He said that an organization called PJM, a power market running from Virginia to the mid-Atlantic and the Midwest operated with them as well. He said that PJM had a five-year planning process, and because of the Loudoun issue, they changed it to a 15-year planning perspective in order to build adequate infrastructure in advance.

Mr. Apicella asked if there was potential for foresights, and if there were 10 million square feet of space available for data centers, would Dominion have the capacity to support that along with the other growth happening in Stafford in the next five to 10 years.

Mr. Blackwell said that the average data center took five or six years to reach maturity, so the power and water consumption would not instantly be used at the maximum level but would come in over time. He said that they did not pre-build infrastructure but would limit the amount while the new infrastructure was being built to accommodate the rising use as it grew.

Mr. Blackwell said that the data centers wanted it to all be pre-built and in place so it was ready, but it was not always applicable. He said that all of the sites that Planning staff had identified were in fairly rural areas, and they had done the right thing by picking ones near transmission lines. He said that if rapid growth occurred, most of the transmission lines had one circuit and new circuits could be added to the towers to double the amount of power carried.

Ms. Bohmke said that the other concern raised about data centers was the noise. She said that many Board and Commission members visited the site in Prince William County that was still being constructed inside, and they could see the massive chillers on the roof. She said that there were issues with that particular site, because it had been built too close to residents and there was now a hum. She said that she knew people who had done their own frequency readings and definitely heard the hum. She asked if Mr. Blackwell could discuss the noise issues, and if there was going to be a closed-loop system, if there would still be chillers on the roof.

Mr. Blackwell said that he was unable to answer both of those questions. He said that he was not a data center operator, so he did not know.

Dr. Yeung said that they should look at a hybrid and not at one type or another. She said that the revenue generator of a data center was of note, but it appeared that co-location was necessary

because they followed each other. She said that she wanted rates to be higher for the data center. She said that she did not know how it would look for Stafford if three or four popped up at the same time, because she was unsure if Staffordians wanted a campus.

Dr. Yeung said that Mr. Blackwell said that it took five years to implement, and it was not the end of the world if they did not get other ones, but they should look at the first one to see how it worked before they moved on. She said that she was not competing with Loudoun or Prince William, but looking at Stafford and where the growth was going to go. She said that they were living with the decisions of the Board of 20 years ago, and she did not want to repeat that history.

Mr. Cummings said that the Planning Commission understood their roles to be administrative in nature and not political, but they were charged with supporting the Planning department and making good planning use decisions. He said that one of the challenges was that they were looking at a high intensity use, a technological advancement coming down the pipe, and they were in the middle of the corridor. He said that it did not have as much to do with commerce as it did with security and national security issues. He said that it would happen to Stafford whether they liked it or not, so how it proliferated and how they planned for it was up to them.

Mr. Cummings said that if they had the technology to help them do the analytics and modeling necessary to understand the types of uses and data center options that were possible as services to the community and to the County, they could do so and had the opportunity, but how they paid for it was another matter. He said that it could provide benefits related to water resources, climate, and the materials of the buildings. He said that there was a lot of opportunity to create what they wanted, and they needed to talk about the vision of Stafford as the first smart city in Virginia and how that would be leveraged to get the necessary tools to do this the right way.

Ms. Bohmke asked Mr. Cummings if he could give an example of what he was describing and where it had been used so they could see the application that he was referring to.

Mr. Cummings said that one of the tools was a GIS-based modeling tool that provided visualizations of data, and all of the items they were discussing dealt with infrastructure, energy, environmental, and traffic data, which all together created a digital environment. He said that they were not using data available.

Ms. Bohmke said that she understood. She asked if there was an example of that system being used so that she could see if it was applicable.

Dr. Yeung asked if this subject was related to data centers.

Mr. Cummings said that the concept of data centers was about how they were going to make the decision to make the Stafford that they wanted. He said that he would provide examples of cities that had used this system for planning.

Mr. Harvey said that Mr. Blackwell discussed previously that sites should be located near electricity transmission lines. He said that they had seen from other jurisdictions that some of the areas where they were planning to have data centers and industrial type uses were not along the transmission lines, so that required Dominion to build additional lines and substations to those areas, which could create community conflicts, which should be avoided in their planning.

Mr. Harvey said that it was important that they focus on where they wanted to put data centers where those transmission lines were located. He said that another important factor was having multi-departmental collaboration, as they had heard from other localities that if they could do the process again, they would have evaluated the sewer, water, land use, electricity, and economic development needs were, because without that collaboration, it would not function successfully.

Mr. Harvey said that ensuring the buildings and the industrial use was not located near residences was important, and buffering and distance could mitigate those concerns. He said that with a multi-story building, creating more distance from the top of the building to the nearest residence could help mitigate sound measures, or putting up [inaudible] and other condominium buildings. He said that they would then look at additional details, and during the rezoning they would look at the [inaudible] being proposed by the developer.

Mr. Harvey said that Mr. Blackwell had mentioned the County local government approval process. He said that their comprehensive plan required that any new transmission line for electricity or any new substation must go through a comprehensive plan compliance review, which was a public hearing decision made by the Planning Commission.

Mr. Harvey said that the zoning ordinance required that any electrical substation ask for a conditional use permit, so if substations were a necessity for data centers, it was likely that they would see that project come before them in some form or fashion. He said that for future uses, they must consider the potential reuse of the buildings if technology changed and were no longer required for data centers.

Dr. Yeung said that there must be a way for the community to ask these questions and for the answers to be given before bringing any items to public hearings. She said that Board direction was requested on if the policies 1.1-2 and 2.4-2 needed to be amended.

Ms. Bohmke requested that the subject be brought up as an agenda item at the next Tuesday meeting in order to establish a subcommittee with the Planning Commission.

Ms. Vanuch said that she did not disagree, but she had grave concerns that there were three zoning categories that allowed data centers to be built by-right and could potentially place a data center near a residential area. She said that it was a huge risk to the community, so the focus should be on removing the data center by-right use from B-2 and M-3, which were zoning category changes.

Ms. Vanuch said that those changes would likely necessitate a joint public hearing with the Planning Commission if they wanted to do that quickly. She said that whenever they removed a use from a zoning category and it was not listed anywhere, they could bring it forward as a conditional use permit under other uses. She said that this was why they needed a separate zoning category for data centers.

Dr. Yeung asked if Ms. Vanuch had mentioned B-3.

Ms. Vanuch said that she was referring to B-1, M-1, M-2, and the RBC. She said that it should be removed from all of those and a separate zoning category should be created just for data centers so that all requirements necessary could be specifically applied.

Dr. Yeung asked why that could not be done during the joint committee.

Ms. Vanuch said that the Board had to initiate the process of removing data centers and the initiation of a new zoning category.

Mr. Apicella said that it was certainly a possibility. He said that staff had indicated that there were only four viable sites, and they had to be significantly large in order to accommodate the future data centers or co-mingling several buildings onto a site. He said that this would likely require a rezoning in the first place, because there were not many B-2 and M-1 sites that were large enough to accommodate large-scale data centers. He said that it behooved staff and the Board to see what sites they were talking about and whether those sites would already require a rezoning. He said that changing zoning categories may not be necessary.

Dr. Yeung asked if there should be a subcommittee and if there should be a change to the zoning ordinance.

Ms. Bohmke said that they needed a subcommittee and staff should do what Mr. Apicella just mentioned.

Mr. Coen said that he agreed. He said that the Planning Commission should form the committee and begin working on it, but staff could certainly get that information.

Mr. English said that he approved of that as well. He asked if there was some way for the public to send questions to the subcommittee.

Dr. Yeung said that the community should have a way to ask questions and give them that information.

Ms. Vanuch said that Commissioner Sellers had noted that there was an M-1 parcel under contract right now. She asked if they should allow a data center by-right. She asked what the risk was if it were removed from the zoning categories when a conditional use permit could still be sought.

Mr. Apicella asked if they had submitted an application.

Ms. Vanuch said that they had not submitted an application but had a contract on the property.

Ms. Sellers said that it was by-right.

Ms. Vanuch said exactly.

Dr. Yeung asked if blue was M-2.

Mr. Harvey said that the blue and gray colored properties were industrially zoned. He said that gray was light industrial and the darker blue color was heavy industrial.

Dr. Yeung asked if any of these were under contract for data centers.

Mr. Harvey said that staff had no knowledge about people's private contracts and buying property.

Ms. Sellers said that it was on a transmission line.

Ms. Vanuch said that she understood. She said that they were not being fair in explaining to the public or to the Supervisors what the process was. She said that they could form a committee, but they should still bring forward plans to remove data centers as by-right uses for those zoning categories.

Dr. Yeung asked if it could be a new business.

Ms. Vanuch said that it did not have to be new business because the Board had already discussed data centers. She said that if they had a consensus, it could be put on the consent agenda.

Dr. Yeung said that there was not a consensus.

Ms. Vanuch said that discussion was necessary to reach a consensus.

Mr. English said that he agreed.

Ms. Barnes said that there was an appetite for both.

Ms. Vanuch said that she was not opposed to the committee. She said that on Tuesday, there should be a proposal to remove data centers under those four zoning categories and to initiate a new one.

Mr. Cummings said that he was not sure of the process on the joint nature of this, but he agreed with Mr. Apicella that there should be a measured approach. He said that the signal that they sent with the actions may not be the right one, and they had time for the Planning Commission to work with staff to come up with an approach.

Dr. Yeung said that there was consensus to have a committee and to have this as new business.

Ms. Barnes said that it would be a two-front approach.

Dr. Yeung said yes.

Ms. Vanuch asked if the proposal would be brought in under new business and it would be voted on to be time sensitive to be sent to the Planning Commission.

Dr. Yeung said that they would have a discussion.

Ms. Vanuch said that they were wasting two weeks.

Mr. Harvey said that any additional information that staff could help the Board and Commission understand the data centers and any directions they may want to discuss.

Dr. Yeung said that all of the questions and answers related to this subject should be available for constituents, and there should be a way for constituents to contact the subcommittee.

Mr. English asked if more information could be relayed about the noise issues about the data centers, which had not been discussed today and were of major concern.

Mr. Apicella said that it would be helpful to get a more robust list of Loudoun and Prince William Counties what they did right and what they did not do right.

Dr. Yeung said that they wanted to know what other areas were doing with data centers so that Stafford could move ahead with efficiency. She said that the hybrid approach was preferable, but there was work to be done before coming to any decision. She asked if there were any other questions.

Mr. Bain asked if there was an application that had been submitted, and if so, if there was any sort of deadline associated with it.

Mr. Harvey said that yes, the County had received one rezoning application for a data center project. He said that per state law, the Board of Supervisors had one year to take action on a rezoning application once filed with the County, and the applicant could request an extension if they needed more time, which was granted at the Board's discretion.

Mr. Bain said that they had a little less than a year to deal with that.

Ms. Bohmke said that the application that was in was for 5.5 million square feet of a data center campus. She said that the application was available to view on the Planning and Zoning website. She said that just like any other application for a project that came before the Board of Supervisors and Planning Commission, it would be amended and revised as it went through the entire zoning process, so the application's current state may not be how it appears in its final format.

ADJOURNMENT

At 7:59 p.m., Chairman Yeung adjourned the March 29, 2023 joint Stafford County Board of Supervisors and Planning Commission meeting.


Randall E. Vosburg
County Administrator


Dr. R. Pamela Yeung
Chairman