



MACHINE TRANSCRIPT • CORAGGIO CONSULTING

Fairfax County Board of Supervisors Land Use Policy Committee, Tuesday, January 28, 2025

Date Tuesday, January 28, 2025
Place Fairfax County Board of Supervisors, Virginia
Length 1h 28m (video)

- Official meeting video (Fairfax County): <https://video.fairfaxcounty.gov/player/clip/3655>
- Official Board of Supervisors page (Fairfax County): <https://www.fairfaxcounty.gov/boardofsupervisors/>

Machine transcript (speech-to-text) produced by Coraggio Consulting. Not an official county record. Names and numbers may be misspelled; check the video at the timestamp before quoting.

Speech-to-text: whisper.cpp, model large-v3-turbo. Produced 2026-10-30. Each paragraph starts with its time [HH:MM:SS] in the meeting video.

[00:00:01] Okay, I am going to call the Land Use Policy Committee meeting to order. The first thing on the agenda is looking at our summary. Are there any corrections or additions to the summary? Okay, seeing none, we will move forward. We have three topics on the agenda today, and staff is looking for input.

[00:00:20] The first one is the policy plan amendment. And since this is new to have community health in here, staff is going to be looking for us. Are there five bucket correct? Are the five buckets they chose correct, and what guidance do they need from us? Corrine, I'm going to turn it to you.

[00:00:38] Good morning. Thank you, Supervisor Smith. You took my whole spiel. So without further ado, there was a Healthy Communities white paper released a few weeks ago, and this presentation is building off of that discussion. I'm joined by Tracy Strunk and William Nance from the Department of Planning and Development, and also by Anna Ricklin, who is the Health and All Policies Manager with the Health Department.

[00:00:57] So without further ado, I will turn it over to Anna for the presentation. Wonderful. Thank you, Corrine. Good morning. Again, my name is Anna Ricklin, and I am with the health department.

[00:01:16] I want to begin by giving a little bit of background about the connection between public health and urban planning. They really arose during the same period at the beginning of the 20th century, and

they kind of show that public health is what we're doing together as a society to ensure the conditions where everyone can be healthy. Some of you may be familiar with the Tenement Act of 1901. That was one of the first policies that came into being that really specifically connected health and quality of life with land use and building policies.

[00:01:52] Then we saw zoning develop shortly after that. And of course, zoning became very codified over the course of the 20th century, beginning to separate land uses, ultimately for public health reasons. We saw, of course, over the course of the last hundred and plus years that we have seen maybe an over-separation of those land uses. And we know public health literature has given us evidence that land use and community design really do shape a lot of our health, whether it be our healthy behaviors, whether we have the opportunity or the place to exercise and be

[00:02:29] physically active, very much connected to our previous conversation about access to rec centers and parks, what food choices might be available, where food is produced, where people can buy healthy foods, air and water quality, both through industrial uses, but also with our significant traffic problems that we have, especially in Northern Virginia, and community connections, how connected people are to one another and to other communities, whether you're isolated in your neighborhood, or you have the opportunity to go to parks, to connect with other neighborhoods

[00:03:03] via public institutions, and just simply on our roads and streets. We also wanted to look at community data. So these are just examples of some of the data that's included in the white paper. And the reason we're looking at community data is so that we can make more evidence-based decisions and use place-based data to guide how we're thinking about land use when it comes to healthy communities. So on the far left, we have a map simply showing where people are physically

[00:03:37] inactive. So the darker the blue is where we see higher percentages of the population. This is by census tract of people who are not taking the time to recreate or be physically active outside of work. This data comes from CDC. In the middle, we see a map of, it's actually by supervisor district, of pedestrian fatalities occurring between 2015 and 2022 and actually 2023, sorry, on our roads in Fairfax County. These are just pedestrian fatalities. There's 134.

[00:04:16] It's not showing a yearly average, which is about 16. It's just showing a pattern of where a lot of those fatalities are occurring. And on the right is a map of heart disease. So ultimately, if you're not exercising enough, if you're not eating enough healthy foods, we know that you have an increased risk of heart disease.

[00:04:38] And so these are the census tracts across the county where we see higher rates of heart disease. And so I'm not trying to tell a particular story today about these data or the patterns that we're seeing in these data. I'm simply showing examples of some of the data we're looking at to make informed decisions about the types of policies that we might include in a healthy community section for the policy plan.

[00:05:05] So we also know that the countywide strategic plan has given us pretty clear direction on how that we should be including health in our policymaking. In the healthy community section, the first goal is to integrate considerations of health, well-being, and equity into development, implementation, and evaluation of land use, et cetera.

[00:05:30] And then in the housing and neighborhood livability section of our countywide strategic plan, one of the last goals is to link the county's public health and equity agenda to a public space agenda by updating the comprehensive plan. So clearly with your authorization to open up the comp plan and to include health, that's one way to implement this action from our countywide strategic plan.

[00:05:53] And we also see connections between health and land use and the built environment in the Resilient Fairfax Plan, the Countywide Energy and Climate Action Plan, and the Community's Health Improvement Plan. So the first time that we included health-related content in our comprehensive policy plan was actually in the first iteration of the policy plan. Back in 1990, there was a human services element included in that plan. The element drew heavily from the

[00:06:28] Principles for Human Services, which were adopted by the Human Services Council in 1989 with the goal that all residents may sustain a secure and productive lifestyle. And the board supported this idea by including human services in the comprehensive plan. However, the text, if you look at it, really focuses on specific programs rather than land use or specific facilities managed by specific county agencies. We know that a lot of those county agencies that are mentioned in that plan no longer exist, and a lot of those programs have changed and the needs of our

[00:07:06] community has changed. A lot of the services that were provided then have evolved, and ultimately this element has not been applied by Health and Human Services staff or even by our land use staff for many years because it has been so outdated. So when we're thinking about what to include in the policy plan, we looked at several resources. We, of course, looked at the American Planning Association. They have a Healthy Communities Policy Guide. That policy guide sort of broadly defines healthy communities as places where all individuals have access to healthy, built,

[00:07:45] social, economic, and natural environments and opportunities regardless of who they are. So it really builds equity into that perspective on healthy communities and access to healthy communities. This is healthy communities for all, as guided by the American Planning Association.

[00:08:02] We also looked at the Reston Plan. I was personally involved in the Reston Plan, and while we didn't have comprehensive policy plan guidance at the time the Reston Plan was developed and adopted, it is the first instance that health, public health, was included in an area plan in Fairfax County.

[00:08:22] So they included a set of principles around health and with a kind of goal to say health and wellness for all are high priorities for the Reston community. Very broad, but nonetheless included. And ideally, with the creation of a healthy communities element in our policy plan, we'll be able to drill down into greater specifics when future plan amendments come through.

[00:08:47] We also looked in our neighbor city of Fairfax, right within our boundaries. We see that they have a policy framework, which includes health in an environment and sustainability section, and with the goal to support healthy lifestyles and regionally grown food, specifically including access to healthy, affordable regionally grown foods.

[00:09:09] So they're looking at, this is an example specifically around the food system that I wanted to highlight for you all. Another neighbor of ours, Prince George's County, has a comprehensive plan that includes healthy communities element there's a lot to include to show here from it but we're just showing that they have the first policy is to integrate community health into the master plan and development review process and so I'm highlighting that because it isn't about necessarily a topic but more about the

process that we need to be thinking about health at every step of the way when we're considering development review and the last element I want to

[00:09:49] include is from the city of Charlotte they have a comprehensive plan framework that has a specific health goal for a healthy, safe, and active community. Again, with a statement about everyone in their community being able to live in safe and resilient neighborhoods with healthy and active lifestyles. And they have a series of other specific items around the environment, tree canopy cover, investing in walking and biking and recreation, and again, access to healthy food, but also health care. So these are just a handful of examples. We looked

[00:10:27] at many others across the country. So we really do have a unique opportunity to foster community health through the development of a standalone Healthy Communities chapter or element in our comprehensive policy plan. I'm proposing five interrelated categories, beginning with health care and human services. And one of the key here is to think about the distribution of health care and human services, as well as the types of human services that are provided.

[00:11:04] When we talk about active living and promoting active living, we're thinking about outdoor recreation, so that's parks, playgrounds, and trails, just as an example, but also safe transportation amenities, so active transportation, being able to bike and walk safely, especially to school.

[00:11:23] Growing the food system, food production, it's two sides of the coin, food production and food consumption. So where are we allowing food to be produced? Thinking about urban agriculture, small and large-scale farming, potentially indoor farming, things that aren't necessarily outlined in our code right now, we could allow and start to think about in our comprehensive plan.

[00:11:49] And then food selling and purchasing, where are people allowed to sell food? Thinking about farmer's markets, for example, direct sale from food production, so CSAs and that kind of thing, as well as how we can be more creative about getting healthier foods into neighborhoods that might not have grocery stores right in those neighborhoods.

[00:12:09] Increasing social connections. When we're thinking about social connections, thinking about placemaking. I know this is a topic that our planning commission has been thinking about a lot. What are we doing for placemaking in our urban centers, but also in our neighborhoods? Not necessarily giant-scale, large-scale plazas kinds of placemaking, but also smaller-scale placemaking. And urban design. What kinds of amenities? Small-scale amenities, culturally relevant, excuse me, culturally relevant features that we can include in neighborhoods to help people feel more connected to one another. And lastly, green infrastructure

[00:12:47] and climate health. And when I'm talking about green infrastructure here, we're thinking about everything from wildlife corridors to stormwater management, creative ways of stormwater management, to trees and how trees are connected and what type of canopy they're providing, both in urban forests but also along the roadside, which also connects to placemaking, and also how we're thinking about climate health when it comes to maybe heat island effect and reducing heat island effect in particular areas that significantly links to the Resilient

[00:13:21] Fairfax plan and our CCAP plan. And so what I'm really hoping, what we're hoping to hear back from you on this is, are we hitting the right mark with these five buckets? I just shared some examples with you. There's a little bit more in the white paper about these five buckets, but also are we leaving anything

out or just considerations for this that you would like us to think about moving forward. And so I also want to note that some features of healthy

[00:13:55] communities that I mentioned, for example, sidewalks or trees, are cross-referenced with other parts of our policy plan. So when we're thinking about trees, for example, we know that trees are covered and the tree canopy is covered along with green infrastructure in our environment section. Sidewalks are covered in our transportation section. So this isn't, while I'm proposing a standalone healthy communities chapter, it is not an isolated, disconnected part of our policy plan.

[00:14:24] It really, I'm envisioning something that's very strongly integrated into other sections of the plan and vice versa, where those other sections of the plan remain, retain control rather, of something like sidewalks. Healthy communities isn't necessarily going to be giving all of the parameters of what the best sidewalks are, but we'll be referencing the transportation element and thinking about how, what the type of sidewalk and the particular locations of sidewalks, etc.

[00:14:55] And then also within this is integrating key parts of our existing human services element into the healthy communities element under that health care and human services section, but also other parts of our human services element might be more well-suited in the public facility section of the plan.

[00:15:12] So that's part of what's also being proposed here. And then finally, equity. And that's when we come back to our health data and utilizing and applying health data and looking at the root causes of poor health and prioritizing objectives that really are addressing health inequities that we see in the county.

[00:15:32] And so maybe not having in this neighborhood do this and in this neighborhood do that because this is the policy plan, but allowing a process for doing that exact thing when we're looking at applying these policies at a more local level. And to conclude.

[00:15:51] Thank you. Just to conclude, I wanted to draw attention to our community survey that's still live. And we do have our webpage, which is up to date with the Healthy Communities white paper. We'll be releasing some more white papers in the near future. And we also have some upcoming community meetings in the first two weeks of February that we encourage people to check out.

[00:16:09] Thank you. Thank you so much. You know, I think sometimes we get frustrated it takes us so long to update something. But I think the timing is probably good to update the policy plan and add the community health because we have so many ways to get data. We know more about our community and what's working.

[00:16:26] I think the white paper was very informative. It had a lot of good background information in there. So, I am supportive of these five areas that you came up with, and I think it's good that you provided an explanation of where other pieces belong in other places, and I think all that's important, so we're focused on the community health piece.

[00:16:46] With that, Mr. Chairman. Thank you. I support the five areas as well. I guess the challenge that you're going to have is, I think, the one you acknowledged, which is a lot of these elements are found in other parts of the plan, and so trying not to be overly redundant and just adding to the plan just more language I mean I think looking at what we already have as a starting point and seeing if some of that needs to be moved or I don't know but I just the only fear I have is referencing one section and then trying to go

[00:17:22] back in and figure out where it is and the rest of the plan ironically I think we have not deliberately or maybe deliberately, but not being driven by a specific health policy plan. We have implemented a lot of the things that are in here in a lot of our developments. I mean, I think about Tyson's, I think about Merrifield, I think about the new plan we wrote for Richmond Highway, which has a very specific focus on all of the elements that are on this slide that has the five areas without necessarily policy plan guidance, and so that tells me that some

[00:18:01] of these elements are already very strong in our comprehensive plan as baselines. Adding a new section, I think, is the right thing to do. I just think we have to be careful about not contradicting or being overly redundant for what we already have in the plan and make it then harder for people to read and understand.

[00:18:19] I think that's our biggest challenge, and I think we can overcome that. My real question is timeline, because I know there's community outreach that's happening. Just give me a little better idea of how we are implementing the community outreach component besides the survey, and then also when would the board potentially see a first draft of this that incorporates some of that community feedback.

[00:18:47] Thank you. This is Kareem Bebek with DPD. So the February community meetings will be followed up by a community feedback report that staff is going to be developing and responding to questions, comments, all of the feedback that we've gotten since we started the community outreach for this process about this time last year.

[00:19:04] And after the community feedback report, we will also be coming to the board and the planning commission to discuss draft text, understanding that changes could still happen after that. It's just a basis for discussion. And over summer, staff intends to work on the staff report with targeting public hearings in the fall of 2025.

[00:19:20] Okay. I think that gives us a good idea of timeline. I mean, this is important hard work, but also we've got a lot of important hard work to do, and so I just wanted to make sure we knew the timeline that's relative to all the other work that both staff and the Planning Commission are working on.

[00:19:38] So thank you. Thank you. I have Supervisor Palchuk, Alcorn, and then Stark. Thank you so much, Madam Chair, and thank you so much, Anna, Karina, and the whole group. First of all, I really want to thank you for this work. I know it's finding the right place to make it fit, but I definitely think, and having seen the pilot of including this and the work you did in the Reston plan, and to me, one of the reasons I kept leaving Fairfax was because it felt like there was not all, you have to go find that community piece, right, that healthy community, the ability to walk and have a, other than school, central meeting locations, right, in each of our communities.

[00:20:17] And so I think that's one of those areas where there's opportunity here. And you really pointed out in page two of the white paper what I did research on this year, because you go back to 1990. And that's the year my family and I moved to Fairfax County.

[00:20:34] And we've seen those numbers. And I looked up that, you know, not only have we grown, right, as a population from 800,000 to 1.2 million residents, But people today are surprised to know that back then we were an 81% white community, right? And only 13.9% were over the age of 55.

[00:20:54] So as we've seen kind of those trends and those changes and those demographic changes, understanding a lot of it is when we think about our older adults and what they need and the increasing

diversity, right, of our older adults. And with aging parents of my own whose first language is not English and whose culture is not English, you see as they age in place that that becomes even more and more important, right?

[00:21:20] So whether we're talking about really the isolation piece that is so huge, so the social interactions, looking at whether it's facilities or transportation or just places in our communities, if they're no longer, you know, attached to a school community, what does that mean for them?

[00:21:39] How do they get around? And so I do think there is definitely opportunity where this can really enhance the work and speak to that work. Last night we had participants looking at the proposed Prosperity Avenue improvements, looking at the dedicated separated bike lanes.

[00:21:59] And you hear from all people, right, businesses and residents, saying this is definitely something that we know we need here. We need to make it safer, not just for the avid cyclists to get around, right, but for all community members and the community to feel more connected.

[00:22:18] The only remaining piece I wonder about that I don't see here is I haven't done the research, and I don't know if it was in the paper, but I assume that the economic development and the economic impact of healthy communities and thinking about having access and safe transportation and access to food and community probably has an impact on our economic development.

[00:22:44] We call it placemaking sometimes, but that's the only sort of question I have to consider looking at in addition to the five elements you have there. But excellent work. I'm very excited about this, and I think it really speaks to what I hear a lot in my community, in my neighborhoods, of we love Fairfax, but these are the few things that we'd love to try to help move along and improve. So thank you. Supervisor Alcorn, then Stork.

[00:23:12] Thank you, Madam Chair. So great job. I support the five categories as well. And also the white paper is very well done. There's an interesting chart about life expectancies, and I'm looking at Burke. Burke looks pretty darn good, you know.

[00:23:30] Certainly might. Just a couple of thoughts. First of all, I think as going into the next step as you start to think about text, I think one of the things that could be helpful is to also look at the age distribution issues.

[00:23:54] So clearly these five topics as they apply, and Supervisor Palachuk mentioned seniors, absolutely is very different than, you know, with moms with young children, for example. So we're going to see, I think, some of the meat on the bones rise to the top, I think, when we start thinking about it in terms of how these could be implemented with different parts of our community, particularly as it relates to, I think, age.

[00:24:23] So that's one thing. The other thing is, you know, another use of our comprehensive plan, you know, it's not just to review rezoning applications, but also to help guide our public facility investments. And I think this can be really helpful with that, particularly as we're looking at, you know, our pedestrian bike improvement program.

[00:24:44] You know, we're moving quite along nicely with our \$100 million commitment, but, you know, at some point in the future, we might need to do another commitment on that. And I think, you know,

knowing what we will have learned by then, but also this could be very helpful, I think, in guiding that and maybe refining our priorities.

[00:25:06] So as it relates to at least one of those five category areas. So thank you very much for bringing this forward. Look forward to the next steps. Thank you. I have Supervisor Stork then here. Thank you, Madam Chair. Excellent report.

[00:25:22] This absolutely aligns with everything that I believe in and know what my role should be as a leader in the community about how do we get people out and about and engaged and tour to Mount Vernon and First Hike and the dog park work.

[00:25:41] I mean, all those things are really to get people engaged and involved and active, And it really hits all the buttons that the plan forward, I think, identifies. A couple things, though. On the slide three, I just want to point out that the Montebello, Huntington, 8%, and the Gum Springs, High Blue Valley, Fort Hunt, 6%, and even the Pohick-Lorton, those higher percentages for heart disease, I can almost assure you there it's a function of age.

[00:26:11] There's no doubt there's some poverty there, but that's not a core driver. So I think that basis is probably not a good sense of what, because we really need to bring together, obviously, age, because obviously the older you get, the more likely you are to have heart disease and heart attacks, et cetera.

[00:26:27] So I think that would be an important part of how you take a look at this and make sure that the data aligns with, because you have to really bring in all the different elements to really have a sense of what that true health issue is. And we have a tremendous number of them on Route 1 quarter. There's no doubt.

[00:26:43] We've worked with the Nova, Mount Vernon Nova and Nova Health Systems to try to get them more active, as well as the health department has been very involved. And a number of great things the health department is doing in that way. So I want to give them some credit for their outreach and work that they're doing. It's not enough.

[00:26:59] I know we have far more to do. The other thing I would identify is, and this language I think matters, which is why I guess I'm highlighting it. Under the city of Charlotte, regional examples, there's no page number on this. Um, the last bullet on there, it says access to healthy food options and healthcare services.

[00:27:19] I think that, that word is too passive. We cannot be passive about healthy food options and healthcare services. Um, I think it's far more than that. I think we should be talking about driving people. We should talk about championing that with respect to us. But I think it's also, and maybe the most important thing, because we all know how, how studies work, right?

[00:27:40] If you get something in your inbox and that if you don't respond to it, something happens, or if you do respond to it, something else happens, most of that stuff just sits there and doesn't get responded. So there's a default option. The default option here ought to be healthy food and health care services.

[00:27:58] So we need to make these our default options. So people don't have to opt in. They're already in. Now we need to maybe get increased utilization. But it is, I think, truly a default option that we need to create. And then the final point, and this is the one that I think gets to kind of the chairman's point and really all of us, is that where does this all fit in?

[00:28:16] I think it all fits in with the planning work we're doing. I think that's our role. That's the DPD's role. That's what we're trying to do on Richmond Highway. I know a lot of other areas. But it is about a hierarchy. It is about a triage. It is about where do we get, if you will, the most bang for our buck? How do we spend a dollar here?

[00:28:32] That will leverage far more positive health outcomes over here. I don't necessarily know what that is. I'm really looking for that kind of guidance and have some sense of how the county can best leverage a few dollars here with far greater increase in the future potential and people realizing their full potential.

[00:28:51] So excellent work. Thank you. Look forward to as we continue the process. Thank you. Supervisor Herrick? Yes. Yes, Supervisor Alcorn, thank you for pointing out, Burke. If you plan to move, go to the Braddock District side of Burke, the Springfield District side.

[00:29:08] But Burke is actually one of our older communities that was developed without this planned guidance, and it's resulted in being one of our healthiest communities. It has lots of trails and all that kind of stuff, and these are all great goals, but health is hard to legislate.

[00:29:26] My concern is that we have a huge affordable housing issue, and I want to understand have we reached out to our building community to find out some very simple answers. What is it going to cost applicants to address these issues when they file a plan, number one?

[00:29:46] And number two, what do they think the estimated cost to comply with these guidelines is going to be? Under various size projects, I know each project is different, but I go way back in my accounting career to activity-based costing, and every sheet of paper you put in there has a cost.

[00:30:07] It has a cost to prepare, it has a cost to review, it has a cost to review again, It has a cost to go back and correct and re-repair. So I just want to make sure that what we do here is worth what we're putting on our developers because, obviously, we've got some very healthy communities that were created without this, and we've got a very big affordable housing issue, and we've got to start to address it by taking a look at what these things that are great, but what are they costing us, and is there a better way that we can do them?

[00:30:39] So thank you. Mr. Chairman. I would also point out there's parts of the county that are on here that didn't have the benefit of the county resources That went into building the things that weren't in the plan that were in places like Burke Burke is a very large planned community Kingstown is we have these assets in Kingstown We have these assets in Reston, but a lot of places on this map Supervisor Herity were built without This guidance without a comprehensive plan that allowed for these assets and that's in fact why we have these islands of health challenges in the county because that

[00:31:18] foresight of a comprehensive plan and the county resources supporting the implementation of that plan weren't there they were there in Burke and people before us and the county made decisions over a long period of time to not do those same things in other parts of the county and what we're seeing here is the negative results of that and trying to make a course correction for that I could

[00:31:44] If I could briefly respond, I do plan and with our team to work very closely to understand the easiest and most efficient way to integrate some of these ideas into our current development review process so that it is all done at once rather than having another layer.

[00:32:04] I don't think any of us want another layer of review or another layer of strictures that are added to folks trying to, you know, make our community better. And certainly when it comes to affordable housing, affordable housing is probably one of the most important things to promote health across our community.

[00:32:23] But really looking at how our goals in health can integrate with existing goals, as the chairman mentioned, so that it is all of a piece when projects come in and they're moving through the review process.

[00:32:39] Thank you. I appreciate that. Thank you. Thank you for all the work you guys are doing. I look forward to the fall. Okay. I'm going to move us to our next topic. We have some dense things we're going to be talking about, and our next topic is going to be substations.

[00:32:56] And this is an issue that when the board was working on the ordinance for data centers, We ask staff to come back with any guidance on how we can strengthen that work.

[00:33:32] Okay, am I going right to Carmen? Okay, thank you, Carmen. Good morning, I'm Carmen Bishop in the Zoning Administration Division, and I'm joined by Leslie Johnson, Zoning Administrator, Tracy Strunk, Director of the Department of Planning and Development, and we have begun working on a proposed zoning ordinance amendment for substations.

[00:33:50] This topic was added to the Priority 2 list for the Zoning Ordinance Work Program in 2018 with the direction to consider provisions to protect adjacent residential uses. And then last year's part of a board matter related to data centers, it was included that it may be appropriate as a separate effort to include new permissions and standards for substations.

[00:34:17] And so it was added to the Priority 1 list in July. And since then, we have been researching and meeting with Dominion Energy and Novec and others. And following our meeting with you here this morning, we'll be meeting with the Planning Commission's Infrastructure Committee on Thursday.

[00:34:38] And then we hope to follow this up this spring with additional research and developing draft amendment text and outreach meetings. And then we hope to be able to bring it forward to you for authorization in May. And then if it's authorized, have public hearings follow in June and July.

[00:34:58] So as you know, substations are part of the interconnected energy network. They connect transmission lines. Some substations assist with moving bulk electricity over long distances, while others step the power down to the distribution level to get it to the end user.

[00:35:16] Both Dominion Energy and Novec have indicated that they ideally look for properties in the 15 to 16 acre size, but the size does vary considerably. Some substations are on properties less than five acres in size while Dominion has indicated that substations can be 30 to 40 acres in size. The height of the equipment also varies.

[00:35:40] For example, in the Lincoln Park application it was noted that the circuit breakers would be 15 feet high, the transformers would be 29 feet high, and the static poles and backbone structures would be 75 feet high. In the recent Pope's Head and Moore substation applications, those were to add 95-foot-high transmission poles. Substations also have security fencing, and this can range from a 10-foot-high chain-link fence with barbed wire

[00:36:11] to taller walls, even decorative walls, or even building-type enclosures. Dominion has indicated that they have about 76 substations in Fairfax. Novec has eight in the past five years. There have been seven to eight special exception and or 2232 applications. And the trend in those applications has been for either the upgrading of older facilities or in support of data center development.

[00:36:41] So based on a review of previous applications and other information, two main review topics have been identified. Visual impacts and potentially noise. The substations and the transmission lines to which they are connected have an industrial look, and the need for the mitigation of visual impacts is the primary concern. The transmission lines are approved by the state, but the substations are typically approved by the county, and based on the location

[00:37:16] and sometimes even the placement on the lot, different mitigation may be warranted. And this This can include tools such as setbacks, landscape buffering, and barriers. Regarding noise, we hope to be able to engage an acoustical consultant to provide additional information about potential noise impacts.

[00:37:36] In one application, for instance, it was noted that the transformers would be 75 decibels at the source. The noise ordinance, however, requires a maximum of 55 decibels at night in a residential area. So additional information about noise may be able to inform those questions of setbacks and barriers.

[00:38:01] Substations are light utility facilities under the zoning ordinance. So these are facilities for the distribution of utility services, and they typically need to be located in proximity to the customer. Substations are allowed by right in the I-3 through I-6 industrial districts, and they allowed by se in all other conventional districts except for the ra and ii they are allowed by special exception or if shown on the development plan in all of the planned districts again except for the planned continuing care district as public facilities uh substations also are required to

[00:38:40] undergo 2232 review in accordance with state code so this requires approval by the planning commission and where 2232 approval and se approval are both required those applications are typically processed concurrently for use standards lot size and bulk regulations and this includes setbacks do not apply to light utility facilities substations also are not subject to maximum fence height limits in the residential district so these are all se applications the board has

[00:39:16] to find that there's no alternative site in a commercial or an industrial district within 500 feet for a distribution station or one mile for a transmission station the zoning ordinance also requires a type 2 or 35 foot wide landscape buffer next to residential uses and also a six foot high solid fencer wall next to residential preliminary concepts for the amendment include minor edits to the use definition and revised permissions and standards.

[00:39:52] By-right substations could be limited to the I-5 and I-6 zoning districts and then allowed by SE and all other districts. This would change the permissions in the I-3 and the I-4 from by-right to SE and it would remove the development plan option in the planned districts and add PCC just for consistency with the other planned districts.

[00:40:19] For standards, setbacks could be added where adjacent to residential uses or adjacent to a public street. An SE standard could be added to provide guidance for screening based on those site-specific considerations.

[00:40:37] And consideration could be given to adding a standard for screening for buy-right substations as well. The review for the alternative sites, that could be made consistent for all types of substations. So

instead of just looking out 500 feet for a distribution station and a mile for a transmission station, it could be one distance, perhaps a half a mile for all.

[00:41:01] And consideration could also be given to increasing transitional screening next to residential uses and possibly other uses as well. And then lastly, this subsection of the ordinance may benefit from some minor organizational and other edits.

[00:41:20] The screening can be tailored to the site as part of an SE review. So on this slide, I just have a few images of barriers. On the top left, that's the Idlewood substation, and it has a 16 to 20-foot high masonry wall. It's precast masonry with brick facade.

[00:41:38] The image on the bottom left is of the 12-foot high decorative wall that will go in at the Tyson substation. And on the bottom right, that's an image of the Spring Hill substation that will have a building type enclosure.

[00:41:56] Landscaping can also provide effective screening. The image on the top left is the Burke substation that is located in a residential area. And there's about 66 feet between the substation fence and the street. On the right, that's the sideburn substation.

[00:42:13] And it has about 50 feet of landscaping. And it's actually difficult to see the substation from the road. And then the image on the bottom left is the Pope's Head substation, and it is well buffered by existing vegetation. And that's all we have.

[00:42:30] We are happy to answer questions. And my question was answered in your presentation, so I am going to turn to the chairman. If I look at page 7 and page 8 and compare them under the permissions section, We currently allow these in PCC -- or not allowed, not allowed -- in PCC districts.

[00:42:54] And we allow them by right in I-3 to I-6, but in the proposed permission, we allow them by right in I-5 to I-6. And so I'm wondering what happened to the PCC district? What happens with those?

[00:43:10] And then also in the I-3 to I-5, I guess then anything that falls in that category would fall in the all-other-districts-require-an-SE category? Yes. So with the proposed permissions, it would be by right in just the I-5 and the I-6, and then in all-other-districts, it could be by SE.

[00:43:31] So that would include the planned districts, and we can roll in the PCC just because it's the only planned district that was left out, and I didn't find in the history that there is any particular reason for that. I'm not sure that any are planned, so it probably doesn't make a lot of difference anyway.

[00:43:49] And then, so the only districts where it's currently not allowed to have a substation is the RA and II, and those are pretty unique districts, and we were just going to leave that. So I just want to be clear on the PCC one for a minute, because right now it's currently not allowed, and if the proposed permissions move forward, we're saying it would be allowed but only by SE? Correct. I hear that right? And so I guess what would be helpful for me to see

[00:44:20] is where these are now, you know, in terms of zoning category. And, you know, when I'm just trying to reconcile in my own mind, you know, the substance of the changes. It's on a chart, but I don't know how many of that would affect. If you're saying there aren't any in PCC districts, Is that a reason to start allowing them now just because we haven't allowed them there before?

[00:44:49] Mr. Chairman, Leslie Johnson, Sending Administrator, you may recall we created the PCC district in 2018 specifically to deal. It's a planned continuing care for elderly, and the Braddock Road

property was the first one.

[00:45:12] I think there may have been one other one. You know, we didn't really think about a substation, to be quite frank with you. I don't see the PCC district being a district that we'll see a lot of. It'll be very site-specific. So we can definitely look at that.

[00:45:29] I don't know that, you know, we were just trying to be consistent. Yeah, I appreciate that. I'm just trying to understand the variations between what we allow now and what we would allow in the future. And that one jumped out with the explanation that that's helpful to understand. I mean, a lot of your older substations are in residential districts.

[00:45:46] currently. So if they get upgraded or, you know, expanded, they're going to, you know, need an SE. And then we have, of course, the ones that are in, I think the biggest change would be the industrial districts. If we were to require an SE in the I-3 through I-4, those two districts, because they're by right. Yeah. And so you started to answer my second question, which is for existing facilities that need to be enhanced. They don't automatically have to go through an SE process. So how does that happen if you, because you're right, a lot of these are in

[00:46:24] residential. And I think if we're creating this standard moving forward, I don't know how many new substations we get on an annual basis, but, you know, I think we have to be concerned about the existing ones being expanded where they're already by right. And so what triggers an SE in those cases? Well, if I might, there have been some recent expansions and it really depends on what that original approval showed on their plan and what it said. So if the original approval captures, you know, the fact that they're going to add a transmission pole or something, then they

[00:47:02] may not need the SE approval. However, they may still need the 2232. So there's a lot of nuances in exactly when the 2232 full-blown public hearing is needed or not, and when do you need the SE or SEA or not.

[00:47:23] But as I said, when both are required, there is always an attempt to get those processed concurrently, so it's not, you know, one process and then another. And we're not changing anything here in what would trigger that. That's going to be consistent moving forward.

[00:47:40] So the flexibility you have right now of determining when an existing substation needs an SE or a 2232, you were retaining that consistency, not looking to change that at all. And so really what we're looking for here, what we're looking at here in the new current zoning ordinance or in the proposed preliminary amendment concepts, we're looking only at brand new, new construction substations that don't exist today.

[00:48:06] Well, it could also mean an expansion because if we, for example, if there's an existing substation in the I-4 district that was by right and they want to come in and double the size, that's an expansion of that use.

[00:48:21] And now under our zoning ordinance, it would require the SE. Already today, but what I'm saying is in the proposed amendments, we're not changing any of that. Correct. So, really, these amendments pertain to new construction that isn't already built because you already have that provision in place today for an expansion?

[00:48:39] Correct. I think it is just important to make that clear to folks because that flexibility that the staff has to make that determination is being maintained here, I think, is an important part of the conversation because a lot of folks would be concerned about existing ones are being expanded and do they come under these new amendment concepts or do they automatically go to an SE and that's how we're treating them today without these amended concepts.

[00:49:08] I'm sorry. So these amendment concepts are for new construction. But they would also be then, well, I guess it would depend because the existing part of that substation may not be able to meet if we were to put setbacks in there, right? So we're not going to make them redo that whole, the existing part, but that expansion part would have to comply with that new provision.

[00:49:32] And I would – and again, we haven't completely flushed out how this would work where we could have under the buy-write provisions, you could still have similar to what we did with data centers where you have standards. And then if they don't meet it, they can ask for the special exception if we keep that as a buy-write.

[00:49:51] Yeah, I think fleshing that out somehow in this conversation is important because I think most people, most of our constituents would be concerned about, just as concerned about the existing ones out there than how we would regulate new construction of new ones coming in.

[00:50:06] And I think the expansion of those existing ones, having people have a better understanding of how those are treated vis-a-vis what we're proposing here that principally is geared towards construction of new facilities. I think it's an important thing for the public to try to understand how that process works so that they can process these changes better.

[00:50:30] Okay, and I'm going to ask people to use words concisely. I have Alcorn, Harity, Walkinshaw, Palachuk, and then Stork. Thank you, Madam Chair. So first of all, just to build on the Chairman's discussion, yeah, I think it would be helpful to look at what the standards could be under a by-right I-5, I-6, including possible setback requirements that would require an SE if it were too close.

[00:50:56] That's consistent with the JLARC study that came out. So even though it's zoned I-5 or I-6, there may be some situations where, you know, the residential lot line or a residential use next door might, you know, suggest that an SE might be appropriate, but we should look at that.

[00:51:14] My other question is, on particularly the adjacent setbacks, we're talking about basically if there's a road in between, then it would be what the center line of the road that would count.

[00:51:31] Because I know typical, or is it the actual property line? Is that how we usually do that? Yeah, so this concept is just our basic setbacks as required in the zoning districts and for certain uses. So it's not, yeah, it's not envisioned to be like the data centers, which is kind of looking out, you know, in a whole radius.

[00:51:55] It's a setback from the lot line. So if the adjacent use is residential, there would be a setback. And the public street, there would be a setback. got it okay so it's sort of starting from the other uh direction okay that'd be helpful to make sure that's about it and the other thing that'd be really helpful when this comes back there's some good discussion about the 2232 process i i think that's relevant i know we're not looking to change that right now but since the 2232 process usually or often requires a public hearing i think for a lot of communities it's the interest i mean so how that fits together I think would be really helpful when it comes back to the board.

[00:52:35] So thank you. Thank you. Supervisor here. And I may be real brief. The Pope's head station, it wasn't higher transmission lines. It was a monopole. So I just think, and they're going to be putting those and trying to put those in a lot of the substations because they can better monitor energy.

[00:52:52] So just make sure as we're looking at this that a monopole doesn't create problems in the process. Are you going to change? I think we have determined that if you add a monopole, you're increasing, you're expanding the use, and we have required SCs in the past.

[00:53:08] Yeah, and that gets tough because then they're going to have to come into compliance with this, and if they can't add a monopole without coming into compliance with this, they're not going to have the ability to better manage our electricity.

[00:53:25] Yeah, and now that I'm thinking about that, I may be aging myself, but I may be thinking more of how we used to do it, but with the new wireless language that we adopted, we may not need an SE. We'll look at that. Take a look at it, because I think that's a simple add that is improving the grid and improving our ability to manage energy, and we ought to be able to it's not obtrusive, not as obtrusive as everything else that they do.

[00:53:54] I think security, the only other question, just make sure that as we look at this, that we make sure that we've got enough sites to manage the need for substations in the future. And I'm sure you've done that look, but that would be the only other request I have.

[00:54:11] Thanks. Thank you. Supervisor Walkinshaw, Palachuk, and then Store. Thank you, Madam Chair. Just on slide eight, can you just talk through again the bullet that reads, revise the review of alternative sites?

[00:54:28] I'm on slide eight. Okay, I'm sorry. Eyes are not good enough. Sure. Yeah, it says revise the review of alternative sites to be consistent for all types of substations within our district. Can you explain that process to me?

[00:54:45] Sure. So let me actually go back on this slide. Under the current zoning ordinance and under standards in the fourth bullet, there's a current special exception standard that requires an evaluation that there isn't a sufficient alternative site in a commercial or industrial district instead of the residential district.

[00:55:11] And it specifies how far out you're going to look for an alternative site. And so I'm not sure how well those radius, that look, has served us. Typically, you know, honestly, they need to go where they need to go.

[00:55:27] But if we simplify that was the idea, that we can simplify it instead of distinguishing between the types of substations, that it would just be one distance for all. Understood. You could imagine a scenario maybe where the alternative to building a new substation is not a new substation at an alternative site, but the alternative is expanding or upgrading an existing substation.

[00:55:58] So does this process account for that? In other words, an alternative site could be an existing substation that you could expand or even improve, as opposed to an alternative site has to be a new greenfield where you could build a brand new substation.

[00:56:16] Yes, and I've seen that in the analysis in the past where, you know, it might be stated that, you know, it's better to expand this substation than to have to build a new one in another place. Got it. And

then the other question, this is maybe outside of our purview, but presumably when dominion wants to build or expand or improve a substation they go to the state corporation commission to justify that the construction of that new infrastructure not typically so the

[00:56:48] the transmission lines go to the scc but the substations are under the purview in most cases there's always carve outs you know for everything but in most cases the substations are under the purview of the local government. So there's no other entity. And I guess, you know, one of the challenges would be, are we in a position to determine whether Dominion can meet their needs, could meet their needs by expanding an existing or upgrading an existing substation, perhaps even

[00:57:22] without a physical expansion, versus building a new substation in a residential area. It would require significant technical expertise I think to challenge or question Dominion's assertion with respect to that. Yeah that is information that Dominion or Novec you know provides as part of their application where they show that this is the the necessary and best place so they have provided that information in the past. Okay I guess if it if it were me in that conversation were taking place in the Braddock District, I wouldn't want for us to have a third-party expert

[00:58:00] capable of evaluating the assertions that Dominion is making. Thank you. Just for no other reason than to establish public confidence in that process and the assertion. Thank you. Supervisor Palchuk, then Stuart. Thank you, Madam Chair. And thank you so much, Permanentine, for this.

[00:58:26] I guess just following up a little bit on the questions that were brought up, and I appreciate your work on this. I think it's become clear how complex it is, right, and where it comes to us, where it goes to other places. Going back to the Idlewood substation, and that's the one I'm seeing your smile, I've been mostly dealing with since even before being in this office and working with that community.

[00:58:50] Clearly, you know, where there was ability, being able to get a better sense on both timing impact and the um much more beautiful screening that you see there today that was not there before um you know knowing that yes i don't know if we have a say on whether or not it's needed that's a helpful and then b understanding what we can do and it looks like you're wondering for standards i i do think screening um should be considered i think you had that question in there on substations because that was a huge nuisance and took much, much longer than was

[00:59:29] originally proposed long before my time by Dominion. So I don't know if you can tell us a little bit more about whether new or existing expansions and kind of your recommendation on where we do have that authority. And is there any negative impact on including the screening in the by-right substations?

[00:59:52] As I said, that's definitely something we want to look at and what can be required. When it's the special exception application, of course, that goes through a review process and things can be tailored to the site. For by-right standards, they need to be more specific.

[01:00:10] But we definitely want to take a look at that. Because we have a lot of substations in Fairfax, we have plenty of examples to draw upon. And is there a place where we could look at, you know, timing for construction, for communicating with the community?

[01:00:28] That was another big issue. Can those be looked at for both buy-right and special exception? I mean, we can look into that. You know, a lot of it is driven by what we get from the SEC or if there's a

developer that's coming in to maybe do a data center and they want to, you know, talk to us about a substation.

[01:00:54] You know, that's kind of how we get. So I don't, we'll have to look into that to see if there's an advanced way to, you know, provide that notification. Okay. Yeah. Anything we can look at? Because you're looking at maybe incorporating it in some type of a standard that we would put?

[01:01:11] Yeah, we can maybe review what we've had to deal with to try to mitigate some of the community impacts of the Idlewood substation and both having Beth Tears' office had to be involved, right, and we all learned a lot through that. So definitely looking at what we learned through that process, especially in our older existing areas, when they expand it, it can have a huge, huge impact on the community.

[01:01:35] So just appreciate a review of that. Thank you. Supervisor Stork. My quick question is, are there any EMF standards that were used as part of this? And specifically, we know from cell phone towers, high voltage lines, electromagnetic fields, some people have sensitivity to them.

[01:01:53] Is there any expectation that those impacts would be contained on site, or do we look at that as a measure of how much room a substation or any other kind of utility line would have? You know, I have looked into the question about EMF briefly as part of the research.

[01:02:16] There's information on Dominion Energy's website that's really helpful about it as well, and we can continue to review that if needed. Some of the information on Dominion's website indicates that EMF levels do drop off sharply with distance, so if there are setbacks that help to mitigate other concerns, you know, they would serve double duty, perhaps, in that.

[01:02:42] I just wanted to make sure that was awareness, since it wasn't in the standards that are here. I think it's at least an awareness or something we need to at least be mindful of, so I appreciate that. Thank you. Okay. Thank you very much. I appreciate all this work that you're doing, and we'll get to a good place.

[01:03:00] We are going to have the next conversation about the battery storage system, which isn't a dense topic at all. And I don't know if we'll have time for too many questions, but at least we'll get the information going.

[01:03:18] Good afternoon. Jackie Camp, Zoning Administration Division. I'm going to be presenting on the battery energy storage systems, sometimes shortened for BESS. So I might use that term to quicken things up a bit. As background for this topic, it was included on the Priority One work program back in July.

[01:03:39] This fall, we began researching the topic to learn more about it. It would be a new use for the county. So we're probably going to provide some additional information that you may not typically get for a zoning amendment because it's new. So we've been meeting with various county staff and external stakeholders like Dominion.

[01:03:55] After this presentation, we'll be presenting to the Planning Commission's Infrastructure Committee on Thursday night. And after that, our next steps is to continue our research, draft a white paper and text to conduct our community outreach, return to this committee and the Planning Commission committees in the spring and summer with the goal to have the amendments ready for public hearings in the fall.

[01:04:20] So that's our timeline goal. A battery energy storage system is a technology designed to store and manage energy for later use. It uses rechargeable batteries to store energy from various sources, such as the electrical grid and renewable sources like solar or wind power.

[01:04:40] This graphic shows the components of an energy system that includes the grid, a solar facility, as well the load and the battery energy storage systems and the components that are within one of those battery energy storage systems. Several types of batteries are currently used for these systems, and new battery chemistries are coming to market.

[01:05:02] The most used chemistry is the lithium-ion battery. These batteries are used in a variety of devices, as we all know, from cell phones to electric vehicles, as well as large-scale battery energy storage systems. However, important to note that not all lithium batteries use the same chemistries.

[01:05:19] There's subcategories under that, and they can present different risks and benefits. For zoning purposes, battery energy storage systems can be either a principal use or an accessory use. So best that store power that is used solely by a home or business where the battery is located, such as the first two photos on the right, are accessory to the property's primary use.

[01:05:47] These can vary in size from as small as a residential circuit breaker to as large as an outdoor heating and cooling equipment. The systems may be mounted on the inside or outside walls of a building or housed in a ground-mounted cabinet-style enclosure, as you'll see on that second picture.

[01:06:07] Best that are considered a principal use are either standalone battery systems that serves to enhance performance and resilience of the local electric system by charging from and discharging directly into the electrical grid, or systems that are integrated with wholesale energy generation, such as solar or power facilities. This is similar to how our zoning ordinance currently treats solar collection systems, like solar panels on a roof as an accessory use, versus our solar power facility, which is a principal use that supports the

[01:06:42] electrical grid. BESS can connect to the grid either through distribution lines serving local utility customers, transmission lines linking electricity distribution systems with distant power plants, or co-located with solar and wind power systems. Although there is no strict rule about how close one of these must be to a power line or a substation, sites located closer are generally most cost effective as they eliminate the need to extend lines to the substation or

[01:07:18] construct new substations. Besides the cost benefits, closer proximity also helps reduce energy losses of traveling across distances. But overall, batteries are a unique class of energy system infrastructure. They are modular and can be configured in virtually any size.

[01:07:35] they also have limited infrastructure requirements oh I'm so sorry I'm on the wrong slide sorry here we go so that's the best located so um as I was saying overall they are unique because they are modular and all they need as a base is a concrete pad to sit on and a connection to the electrical grid so these two factors those modularity and infrastructure needs means that

[01:08:10] BESS can typically be built anywhere in our community adjacent to commercial and residential uses. So I want to talk about benefits, of course, to BESS as well. So energy storage technologies offer a significant potential to make the electric grid more clean, flexible, and reliable. It helps reduce greenhouse gas emissions by enabling the integration of more renewable energy into the grid, like solar and wind power. By storing and using clean energy, it decreases reliance on our fossil

[01:08:49] fuel-based power plants. However, because solar and wind can be inconsistent with high output during peak productions, hours in little or no energy generated during the night or no wind, by storing and using clean energy, it decreases reliance on the fossil fuels and makes renewable energy more viable. One of the most significant advantages of BESS is its ability to store excess energy during off-peak hours and release it when demand spikes. By storing electricity during periods of low demand, when rates are cheaper, and using it during peak demand when prices are

[01:09:28] higher, businesses and individuals can lower their overall electricity bills. For critical infrastructure such as hospitals, data centers, and emergency services best can provide essential backup power during outages. As shown in this graph from the Pacific Northwest National Laboratory, battery energy storage is in a period of rapid growth. At the end of 2020, there were about 1,500 megawatts of battery energy storage installed on the U.S. grid. That number more than tripled

[01:10:07] in 2021, nearly doubled in 2022, and is expected to continue to grow. Some of the market forces and trends include the rapid increase in solar wind development, which created a large market for energy storage systems. Dramatic drops in the cost of batteries combined with their improved performance have made batteries a much more useful tool for the electric grid and resilience.

[01:10:32] Government incentives include the 2021 Infrastructure Investment and Jobs Act, which provided \$200 million in federal funding for battery manufacturing facilities in the U.S. The 2022 Inflation Reduction Act included significant new tax credits for energy storage.

[01:10:53] And here in Virginia, we have the energy goals and targets outlined in the 2020 Virginia Clean Economy Act, which may impact the need for BESS and Fairfax County for grid reliability. The VCEA, or Virginia Clean Economy Act, sets a renewable portfolio standard of 100% carbon-free energy by 2050 for its two largest investor-owned utilities, Dominion Energy and Appalachian Power.

[01:11:22] The act contains energy storage targets to be achieved by the end of 2035. Dominion's target is to construct or acquire 2,700 megawatts. In addition to these energy storage targets, at least 35% of the energy storage facilities must be purchased by the public utility from a private entity or owned by a party other than a public utility that sells the capacity to the utility.

[01:11:51] The Act also notes that no single energy storage project is to exceed 500 megawatts in size, except that Dominion may procure a single energy project up to 800 megawatts. A proposed BESS in Fairfax today would typically require a 2232 with a public hearing, and in some districts require an SC, and it would be reviewed under the overall objectives and policies of the policy plan, as well as those specifically in the public facilities element

[01:12:26] for electrical facilities, and include environmental considerations, co-location with other electrical infrastructure, location, noise, screening and safety, and undergrounding distribution and lines whenever possible. This past summer, last summer in 2024, in June, an interpretation of the zoning ordinance was requested for a proposed facility here in Fairfax County in an R1 district near

[01:13:00] Dominion Energy's Occoquan battery energy storage substation. This was the first and so far only large-scale best proposed in the county. The developers were not Dominion but a private entity that would either maintain ownership with an agreement with Dominion or would sell the property to Dominion. As the proposed facility would be part of the electrical distribution system, it was determined that it would be most similar to a light utility facility and have those same permissions

[01:13:30] as we discussed earlier with substations. And as of now for that proposed best, it has gone through a pre-application process, but has not submitted any other applications so far to date.

[01:13:50] To better understand these systems and their impact on surrounding land uses, the following topics have been researched and collected through a review of a variety of Virginia and other states' jurisdictions who have zoning regulations for battery energy storage systems.

[01:14:08] We've also reviewed various resource documents from federal, state, and other sources. And been talking and gathering information meetings with both internal and external stakeholders. The following next slides will provide kind of our initial ideas for potential zoning amendment considerations for discussion.

[01:14:29] Regarding definitions, considerations should be given to revising the light utility facility definition to include large-scale battery energy storage systems. We want to also consider appropriate and necessary locations for those large-scale BESS.

[01:14:51] Should by-right facilities be limited to perhaps the I-5 and I-6 districts with an SE allowed in most other zoning districts? Some zoning ordinances differentiate smaller-scale BESS, such as accessory uses, versus their larger-scale BESS by a specific size of the system.

[01:15:13] So we'd like to consider that concept and perhaps specify that larger accessory, if they're maybe on the same property as a substation or a data center, would also be required to meet the standards of a principal use.

[01:15:29] From the jurisdictional research, some communities have applied additional screening or larger setbacks to limit visibility from residential and commercial zones.

[01:15:46] Fencing of at least six to eight feet is commonly required, as well as more layers of natural screening and setbacks, generally ranging from, we've seen, 25 to 100 feet from property lines, buildings, and roads. However, they can vary by the location, the size of the system, and the zone.

[01:16:04] In more heavily urbanized areas, where options for setbacks may be more limited, some utilities and local governments have opted for more creative approaches, like commissioning murals to be painted on the exterior of the energy storage projects to help them blend better in with the community. We would like to also give consideration to adding best specific standards for setbacks, fencing, noise, and this would probably be more of some jurisdictions have been using noise studies to determine what the impact would be on noise. And additionally, we would like

[01:16:39] to look at landscaping and screening requirements. Existing standards of the underlying zoning district for height, lighting, and signage most likely will suffice for the underlying zoning districts they're proposed in. Other standards to consider could include the treatment of power lines, not transmission because that's regulated by the state, placed underground, or co-location with other electrical facilities, if possible, as those reflect the objectives of the policy plan.

[01:17:14] Regarding safety and environmental, while BESS do not emit gases or release pollutants in the air waterways during normal operation, there is the potential for a battery cell to rupture and vent flammable gases that can start a fire. The safety of lithium-ion BESS is a common concern, especially given reports of BESS fires that have drawn public attention in other parts of the country. However, these incidents have also driven the industry to improve its understanding of the

[01:17:47] issues and develop more robust mitigation measures, codes, and standards. Local jurisdictions have enhanced safety by requiring detailed safety plans and reports during project approval and involving local emergency response officials in fire and emergency response planning. Regular training for emergency responders is essential to prepare for any potential incidents. We should consider safety requirements such as hazard mitigation assessments and emergency response training and any other safety standards recommended by the fire marshal. Regarding decommissioning

[01:18:27] plans, most best ordinances we reviewed include standards for decommissioning and require financial sureties for the decommissioning process. Decommissioning is the process of removing the equipment and infrastructure associated with the project and restoring the land. We found that local governments often require a financial surety to guarantee the availability of funding to implement that plan. Another option to consider is to require liability insurance. Lastly, I will

[01:19:00] say that we're also looking into siting agreement options. The State Code of Virginia includes a section on siting agreements for solar projects and energy storage projects. They include terms and conditions, impact mitigation, financial compensation to local governments. We noticed Henrico County has that as part of their zoning ordinance for battery energy storage systems.

[01:19:26] We also are monitoring potential legislation changes that are in discussion right now at the state level, and we'll make sure that any official decisions that are made will take part in any future zoning amendment for these storage systems.

[01:19:42] I, of course, have the chief here with me as well if there's any questions on any of the safety information we provided. But other than that, I'm going to conclude my presentation and welcome any questions. Thank you, Jackie. I appreciate all your work on this.

[01:19:58] You keep getting these subjects that take a lot of research. I'm going to turn to the chairman and then Supervisor Wofford. I have a number of questions. I'm going to hold them, though, and just ask one that I think does need to be answered here today, and that is do any of these preliminary amendments run counter to the environmental goals that the county has, particularly with Level 3 EV charging stations?

[01:20:28] I think we'll have to do a little bit more research of that. I just want to make sure one of our goals isn't being offset by new requirements in another area. And so I'm in full support of all the provisions that are in here and appreciate we're looking at this and trying to get ahead of it, especially in areas like decommissioning, some of the other things we know have been a problem for renewable energy technology in other areas.

[01:20:52] I just want to make sure we're not putting in on, we're not thinking about any barriers that we could be creating here to the level 3 EV charging deployment goals that we have in the county. Thank you.

[01:21:08] Supervisor Walkinshaw, then Harity. Thank you. You know, it's like any additional barrier or requirement is in tension with the goal of deploying the technology.

[01:21:25] So, you know, I share the chairman's concern along those lines. It doesn't mean they aren't appropriate or necessary in this case. you know, I'll just say along those lines, to me, it seems like at a minimum, it should be a buy-right use in I-5 and I-6. You know, I have a hard time imagining impacts of a battery electric storage system coming anywhere near to the impacts of a data center. And I mean, we made the decision to retain data centers as a buy-right use in I-5 and I-6. And so I probably would go a little bit

[01:22:01] further than that in the by-right direction. And I guess, you know, my question, and we're up against time, so maybe this will come out as your work continues, but I'm just trying to understand the actual community impacts. There's some noise because there's the cooling systems and some fans, so some noise, I presume much less than a data center, but I don't know that.

[01:22:25] Obviously, in terms of height, we're not talking about tall, looming facilities, sight, visual issues, perhaps, but I just don't have a great feel for what are the negative impacts of one of these facilities.

[01:22:44] Well, so we had some pictures of those container styles, so it depends on your purview of what you like to look at, but that's what they do look like, and that's why a lot of jurisdictions have those setbacks and screening requirements to protect against that.

[01:23:00] You're right, there is some noise with those HVAC and the inverters and things that are the mechanisms within there. We're not entirely sure. We'd love to go visit one. The furthest one away is kind of in Chesterfield until one in Loudoun at Dulles gets developed.

[01:23:17] But we're looking at maybe, you know, a noise consultant to kind of understand exactly the noise concerns. But I would say probably the biggest community concern would be the safety. Yeah. Okay. And I think that would obviously be important for us to think through. I think it's the case that, you know, the fires are exceedingly rare and getting rarer. Obviously, a challenging incident to deal with when they occur. So we just got to make sure we're sharing whatever the facts are. And I think the facts are they are very, very rare. Obviously, I understand the concern

[01:23:50] people might have about that. But runoff issues, I mean, there aren't really other significant issues beyond potentially the noise and the safety concern. Correct. Yes. What we've learned is that the water runoff is, they've learned to contain that with firefighting techniques.

[01:24:11] Okay. All right. Thank you. Supervisor Herity, then Beer. Yeah, I think without a doubt, the number one concern is fire. They may be getting rare, but when they happen, they're pretty darn bad um how do we fight a battery fire mass storage battery fire water simple answer and john walser fire and rescue department but uh water is the answer to extinguishing these fires it didn't work very well in lost landing they just let it burn and obviously that may be different because it's california but in my commentary on that one that would not be able to be built under current

[01:24:50] standards. That was a very unique scenario that they put themselves in. And what kind of chemicals and toxins get released in a battery fire? So the main chemical that is released before the fire is hydrogen, and then that is what ultimately causes the fire. And we have to remember, every failure mode from a lithium ion battery could result in fire. And honestly, the fire is the best case scenario, because you don't have an explosion. And that is one of the main concerns that you have when these flammable and toxic gases do build up in these enclosures, and you have that potential

[01:25:29] for an explosion. So how that is mitigated and prevented is a big deal. But one of the comparisons, and there's not a lot of good information out there, and that's one of the challenges with new technology, that you don't have good information to make decisions on. But there are comparisons between internal combustion engine fires and electric vehicle fires and they're seeing the same chemicals in the runoff. It's largely the same types of things that are coming off in that water. So the change from the technology is not that great in what we see from

[01:26:03] the downstream, no pun intended, impacts of these fires. Obviously the one that was proposed is in my district and I haven't heard back from them. Doesn't sound like you heard back from them after their initial meeting. Clearly, fire risk will be the biggest thing that I think we need to make sure that we address. The decommissioning bond, I mean, that's something that I think is essential. I like what Henrico has done in both cases there, so I think we

[01:26:36] ought to look at that. You know, in the proposal that I got, access was a big issue. So I don't know how you write that in. Appreciate the comment on them being by right in I-5 and I-6.

[01:26:53] I think we've got to be very careful what they're next to so that we don't have a compounding problem if there is a fire issue. So I would give you that within I-5 and I-6. Supervisor Bierman. Thank you.

[01:27:11] Just one quick comment. The question I had written was sort of endorsed by your words, if not necessarily in the PowerPoint, which was that on page 12, when you had preliminary amendment considerations, you added with require large accessory best to meet principal use standards that might be worth doing something different or having different rules surrounding what's on page four, which is residential, midsize, commercial, large commercial utility.

[01:27:44] I think that those are definitely we need to figure out something necessary, probably different depending on the size and scope of the battery system. And I think those are lines that are what we would most likely want to be drawing with respect to these things. I think I just want to endorse that idea. Thanks.

[01:28:05] Thank you. I think Supervisor Stork. I just want to remind at least the audit committee colleagues that we have an audit committee meeting at 1.30 and we will start right at 1.30. Thank you. Thank you. I want to thank staff for all this work, their work on this. I know that you're going to be working all together and ensuring that anything about fire and safety goes in the right place. And so thank you very much. And this meeting is adjourned.



Coraggio Consulting · aguyonx.com