Proposal – Update *Architectural Committee* to *Data Center Technical Committee*

Co-chairs Council Member Renee Knapp and Karen Cannon and DCWG Members:

As highly technical organisms, hyperscale data centers push the boundaries of what is possible and what should be acceptable to the community where they will be locating.

They are not big box stores where the issues are just setback and location of native plants. Hyperscale data centers are huge consumers of power, water, and land. As such they have an outsized effect on the environment and our quality of life. Their demand for power alone is causing PJM to plan a multibillion dollar overhaul of major sections of the PJM system just to pull Gigawatts into Virginia and through Maryland. *(See appendices:* 20230808-item-07---reliability-analysis-update.ashx (pjm.com))

We propose that the name, purpose, and composition of the committee be changed to the <u>Data Center Technical Committee.</u> The members would be technical experts knowledgeable of all aspects of data centers and other matters as they may occur.

At the September Planning Commission hearing for Site Plan approval for First Energy's substation at the QL site, the Planning Commissioners bemoaned the fact that the "Architectural Committee" was not available to advise the PC.

In fact, recruiting for the Architectural Committee was a failure because any good architect knows the data center box is just a warehouse for servers, so few people applied. The name also implies that only architects are wanted.

At the PC meeting, Mr. Wilkens, from the County Planning Dept., concurred with the Commissioners and added that the way the Architectural Committee was constituted was inadequate to answer the Commissioners' questions about power or water.

The Data Center Technical Committee could be modeled after the Sustainability Committee's Article III, Section 2 language listing representatives that have a professional affiliation with, or expertise in sustainability areas but instead be composed of technical experts who can advise county officials. Faith Klareich, Chair of the Sustainability Commission and a member of the DCWG could lead the revision of by-laws.

Technical Committee Members should have expertise including Electric Power, Water Management, Computer Science, Environmental Law and Policy, and Physics, Chemistry, and Environmental Engineering.

The reasons for this are numerous:

- We are on the cusp of breakthroughs in storage battery capacity. Technical Committee power engineers could be keeping tabs on these developments. New data center applicants could be called on to incorporate these advancements.
- There are technical problems that need to solved to reduce the heat servers emit. The huge demand for power is principally for chillers and fans. Perhaps someday the heat from the servers could be captured to power steam generators. Data centers could be go-gen facilities.

- Technical Committee members who are Computer Scientists could advise and inform on new developments that would reduce the size of memory storage and therefore reduce the size needed for buildings of servers.
- Cooling systems that are chemically based are available now. We need Technical Committee members who understand the environmental issues these systems present to water treatment facilities. What are the costs and dangers?
- Advances in reducing greenhouse gasses (GHG) should be incorporated into the Data Center Ordinance on an ongoing basis in keeping with the County Council's approval of the recommendations of the Climate Change Working Group to reduce GHG emissions 50% from 2010 levels and requiring GHG offsets of at least 80% of all GHG emissions.

Please consider creating a Data Center Technical Committee that would attract Frederick's talented experts eager to contribute to the community.

Thank you,

Elizabeth (Betty) Law, Chair

William Steigelmann, Vice-chair

Fellowship of Scientists and Engineers

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