

Thank you for the opportunity to comments on High-demand energy growth impacts in PA

High-demand energy growth grid development in Pennsylvania brings with it, as shown in several efforts to block large scale warehouse size developments in Chester County and counties of north central and northeast PA have occurred because of the environmental destruction that will come with those facilities. They bring massive new impervious surfaces to an area. All townships whose topographic gradients that include streams and their headwaters, such as my own town, experience stream morphology and ecosystem degradation. Many so called protected streams, under PA Code, no longer can support trout, and the PA recreational fishing industry in PA must stock streams, because trout can no longer reproduce.

Along with the strong discharges during precipitation events come thermal pollution; impervious surfaces such as roads, buildings, and parking lots also bring high levels of chlorides into those streams. The strong discharge forces, thermal pollution, and chloride pollution have damaged the capacity of amphibians, aquatic herps, fish, and small and larger macroinvertebrates to spawn, and damaged aquatic plants that are needed within the ecosystem. Just as big a concern is that these damaging impacts from human development prevent the larval and juvenal stages of aquatic species to survive into adulthood. I myself spend every week, if not every day, working as a volunteer with government and non-government nonprofit environmental organizations to restore these watersheds, collect data regarding the impacts, to write reports and outreach materials, and to reach audiences of children and adults about the changes and damages to our streams and aquatic ecosystems. I previously was an academic health care provider, scientist, and teacher with a very successful career, who now works in a volunteer capacity for the protection of fresh water quality and the ecological restoration of our watersheds. Watersheds have a very small capacity, compared to historical capacity, to deal with the force and speed of stormwater, flashy changes, and stream heating that results in fish and other species living in environments that stimulate their physiological stress responses and reduce reproduction during a greater and greater part of each year – in my region, typically between April and October, the stream temperatures are too warm. The U.S. E.P.A. reported that this climate heating will cause extirpation of species in the cold water areas of the country, that includes PA. As a result, the ecological impacts are well known in terms of disrupting the normal phenology of aquatic ecosystems.

These problems are very relevant to the subject of the PUC hearings on high-energy growth grid development and the governor's interest in maximizing this in PA. There must be 'at the table' ecologists and environmental engineers who will work with all applications to reduce the impacts on our vital wealth of streams in PA. Some possibilities are to place all new high energy grid and data processing facilities and parking underground, in order to not introduce their impervious surfaces. No new data centers should be built in any pristine or environmental area where streams will receive runoff. Site selection should include environmental protection at the highest tier. This would result in data centers being built only in urban environments. Site selections should be limited to redevelopment of existing urban buildings, if above ground. The greater cost of these facilities (underground or redevelopment of already urban areas) should be expected to be absorbed by those who will profit from the development, but the added costs would also be appropriate to be shared by the people of Pennsylvania, if we wish to conserve our natural resources. Our Pennsylvania constitutional Environmental Rights amendment should be invoked for these reasons to prevent the disruption of the environment that the people of Pennsylvania know will come with the developments used for high-demand energy growth.

Traditional mitigation that the PA DEP permits is not appropriate, as it will still allow the introduction of massive new impervious surface facilities, and still allow the use of massive amounts of salts in the winter to keep parking lots and road clear.

Thank you.

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