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ENVIRONMENTAL RESEARCH**

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Arjun Makhijani testimony on Ratepayer Protection Act, HB731

Before the House Economic Matters Committee, February 29, 2024

My name is Arjun Makhijani. I am president of the Institute for Energy and Environmental Research. I have a Ph.D. from the Department of Electrical Engineering and Computer Sciences of the University of California, Berkeley, where I specialized in controlled nuclear fusion. I have been doing scientific and technical work on energy and environmental issues for more than 50 years. I am testifying today in support of the Ratepayer Protection Act, HB731, on behalf of the Maryland Energy Advocates Coalition. I appreciate this opportunity to testify before you on this very important legislation.

My study, *The Trouble with STRIDE: Meeting climate goals and addressing natural gas system stranded costs*,¹ which was published in December 2023, is the basis of my testimony. I am submitting it as an Exhibit to provide with the extensive technical and economic detail that underlies my testimony.

The 2013 Strategic Infrastructure Development and Enhancement (“STRIDE”) Act intended to improve the safety of Maryland’s natural gas system by, among other things, incentivizing replacement of parts of the existing natural gas pipeline infrastructure.

However, the record since the law was passed shows that the \$2.1 billion in STRIDE-related investments (about \$1,750 per gas customer) already authorized did not materially improve natural gas distribution system safety in Maryland. The very small rate of material-, aging-, or corrosion-related serious accidents was the same in the period before STRIDE as in the period after it. Further, the rates of serious injuries and deaths due to all other causes were far greater in the nine-year post-STRIDE period (2014-2022, inclusive) due to compared to the nine-year period (2005-2013, inclusive) before it. Serious accident data for the two periods, categorized by broad causes, are shown in Figure 1 which is taken from my report.² Serious accidents are defined as those resulting in death or serious injury.

¹ Arjun Makhijani, *The Trouble with STRIDE: Meeting climate goals and addressing natural gas system stranded costs*, Abell Foundation, December 2023 on the Web at https://abell.org/wp-content/uploads/2023/12/2023_Abell-Foundation_Climate-Policy-report_1-7mm.pdf

² Makhijani 2023, op. cit., p. 11.

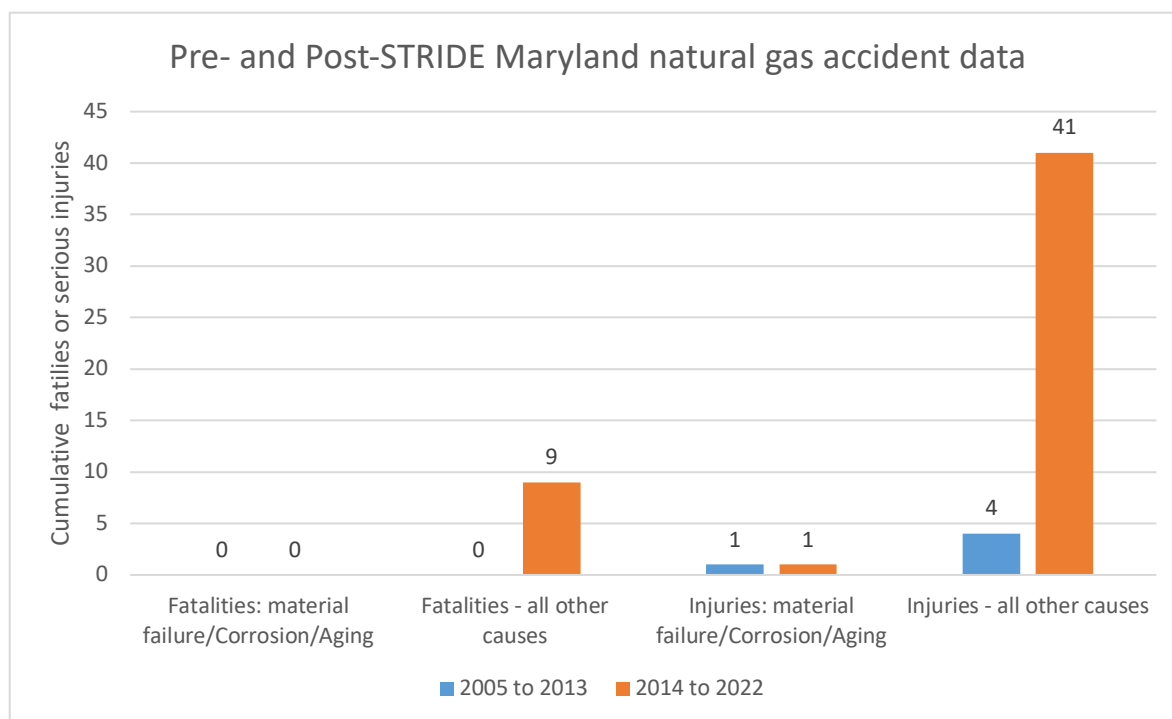


Figure 1: Fatalities and injuries due to natural gas distribution system accidents in Maryland before (2005-2013, inclusive) and after the STRIDE law (2014-2022 inclusive).

One critical reason for the lack of improvement in the safety outcomes so far as death and serious injury are concerned is that aging and material-related causes (including corrosion) are not the main causes of serious natural gas system accidents. It is not that reducing certain leaks or replacing specific equipment or repairing parts of the distribution system cannot improve safety. Rather, it is that the parts of the system that are unsafe due to these causes need to be identified and the expenditures directed to remedy those specific situations. The STRIDE Act did not require that. The result is that ratepayer burdens have increased due to the enlargement of the rate base but the desired safety result has not been achieved. That increase in the rate base also lays the foundation for larger stranded costs.

A principal reason I support the Ratepayer Protection Act is that it explicitly requires that priority be given to projects based on risk. Further, HB731 also specifically identifies leak detection and repairs as an alternative to pipeline replacement in the process of demonstrating that proposed replacements will be cost effective. This an important provision to ensure that expenditures that increase the size of the rate base are not prioritized with an eye to increasing profit but made primarily for the purpose of safety relative to expenditures that do not go into the rate base. It will, of course, be the responsibility of the Public Service Commission to ensure that.

The Ratepayer Protection Act would also remedy a large gap in the STRIDE law that was implicit in when it was passed in 2013 but became an explicit after the passage of the 2022 Climate Solutions Now Act, one of the most ambitious in the United States, and, to my knowledge, in the world. To fulfill its promise, Maryland must drastically reduce fossil-fuel-related emissions. Moreover, it must do so in a

manner that maintains energy affordability for most Marylanders and greatly improves it for the families whose energy cost burdens are already unaffordable today. This means four things for natural gas:

1. Natural gas-related emissions must be reduced by 90% (or more) by 2045;
2. New natural gas investments must be only made for safety and if no other alternative is available;
3. Natural gas infrastructure must be systematically retired so as to reduce the cost burdens on those that remain on the system; and
4. Low- and moderate-income households now using natural gas must be fully electrified with high priority to prevent their energy cost burdens from skyrocketing as natural gas rates increase.

An overall strategy is needed to harmonize safety, affordability, and climate goals. Proposals, such as that made by Baltimore Gas and Electric (in its 2023 rate case), to require household to maintain supplementary gas heating as a condition of heat pump rebates³ will result in high costs, economically inequitable outcomes, and an entrenchment of the natural gas system in a manner that will be in conflict with achieving the targets of the Climate Solutions Now Act in an affordable manner. Such an approach will not protect the economy of the state from high costs (including stranded costs) or the financial health of its most vulnerable households. Moreover, modern heat pump technology obviates the need for supplemental gas heating even in climates considerably colder than ours.

The Ratepayer Protection Act goes a long way to remedying the gap in the STRIDE law by requiring consideration of electrification and of retirement of parts of the gas infrastructure to be considered as alternatives to gas pipeline investments. If assiduously implemented by the Public Service Commission, these provisions of the Act will help harmonize safety, affordability, and the state's climate goals. It would also help greatly if the PSC implemented the recommendation of the Office of People's Council to begin an overall proceeding on natural gas that would address the state's climate goals, create a systematic framework for deciding when pipeline replacements are strictly needed compared to alternatives and chart a course of minimizing stranded costs.

Thank you again for giving me the opportunity to testify in support of this very crucial legislation.

³ Makhijani 2023, op cit., pages 21-23.