

# **PUBLIC SERVICE COMMISSION OF MARYLAND**

## **Report on Consumer Education and Protections Relating to Corrugated Stainless Steel Tubing**

Pursuant to the 2022 Session Joint Chairmen's Report

September 1, 2022



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## **Background**

If lightning strikes on or near a structure, there is risk that it can travel through the structure's gas piping system and cause a leak, and in some cases a fire. Since 2006, all manufacturers' instructions have specified direct-bonding and grounding of yellow corrugated stainless steel tubing (CSST) in new installations. CSST is a flexible, stainless steel piping system used to supply natural gas and propane in residential, commercial, and industrial structures. Standard CSST is coated with a yellow exterior plastic coating.

A bonding connection installed on a gas piping system, as with any metallic system within a house, will reduce the likelihood of electrical arcing to, or from, other bonded metallic systems in the structure, thus reducing the likelihood of arc-induced damage. For existing installations, if yellow CSST is found, it is strongly recommended that a licensed electrician be contacted to ensure the system is properly bonded and grounded.

## **Flynn and Laird Act of 2022**

The Flynn and Laird Act of 2022 (House Bill 1052) will take effect on October 1, 2022. The Act expressly prohibits the use of non-arc-resistant jacketed CSST in:

- (1) the new construction of a customer-owned natural gas or liquefied propane piping system in a building;
- (2) a natural gas or liquefied propane piping system in a renovated property if the renovation affects more than 50% of the total square footage of the property; or
- (3) a natural gas or liquefied propane piping system that requires the addition of a new gas line to the gas piping system.

## **2022 Joint Chairmen's Report**

The 2022 Joint Chairmen's Report requires the following with respect to Consumer Education and Protections Relating to CSST:

- The committees are interested in the potential dangers of corrugated stainless steel, or "yellow CSST," a type of natural gas piping. The committees request that the Public Service Commission (PSC) submit a report on the potential creation of a consumer website to educate homeowners on the potential safety risks of improperly installed yellow CSST as well as consumer protections such as replacement, signage to alert first responders of its presence, and/or proper grounding or bonding of the piping.
- The report should include the potential costs associated with creating such a website, the potential content of such a website, and a review of whether any other state or local governments maintain such a website.
- PSC should consult with relevant stakeholders in preparing the report.
- The report is due September 1, 2022.

## **Analysis**

While Maryland fuel plumbing codes that apply to various governmental and quasi-governmental<sup>1</sup> entities contain information on CSST, PSC Technical Staff (Staff) did not consider these plumbing codes to be consumer educational materials and, thus, responsive to the CSST request in the 2022 Joint Chairmen's Report. Staff performed a website search of existing consumer-facing websites that educate homeowners on the potential safety risks of improperly installed yellow CSST, as well as consumer protections.

The online search of local resources yielded CSST information on the Greater Baltimore Board of Realtors website.<sup>2</sup> A search of online industry resources revealed that the American Gas Association (AGA) has a website<sup>3</sup> warning about the dangers associated with CSST and has also created a Safety Bill Stuffer<sup>4</sup> (see Appendix) for use by its members. The information on this bill stuffer is deemed by the PSC to be sufficient content for consumer awareness and protection regarding CSST. In addition, a summary of the Flynn and Laird Act of 2022 should be considered for potential content on relevant websites for Maryland consumers.

## **Signage to Alert First Responders of the Presence of Improperly Bonded CSST**

PSC Staff considered the idea of signage to alert first responders of the presence of improperly bonded CSST. However, if yellow CSST is found in a building, the proper response is to contact a licensed electrician to ensure the system is properly bonded, not to add signage. Staff's primary concern is that the absence of signage could provide first responders with a false assurance of safety. After all, signage can fall off or be removed. The best way to protect first responders is for them to always assume that CSST is improperly bonded, unless they are trained to identify properly bonded CSST.

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<sup>1</sup> The Washington Suburban Sanitary Commission is a bi-county quasi-governmental agency established in 1918 by an Act of the Maryland General Assembly. While it is charged with the responsibility of providing water and sanitary sewer service within the Washington Suburban Sanitary District, which includes most of Montgomery and Prince George's Counties, the WSSC also has gas plumbing responsibilities. To ensure that plumbing and gas installations meet minimum Code requirements, WSSC Plumbing and Gasfitting Regulations require that in Montgomery and Prince George's counties, most plumbing projects must be done by a WSSC Water-licensed plumber or gasfitter.

<sup>2</sup> <https://gbbr.org/blog/2014/07/22/csst-flexible-gas-piping-hazards-in-homes/> (last visited Aug. 15, 2022).

<sup>3</sup> See <https://www.aga.org/safety/promoting-safety/national-association-of-state-fire-marshals-launches-national-safety-campaign/> (last visited Aug. 15, 2022).

<sup>4</sup> [https://www.aga.org/globalassets/safety--standards/safety\\_bill\\_stuffer\\_8\\_1\\_hi.pdf](https://www.aga.org/globalassets/safety--standards/safety_bill_stuffer_8_1_hi.pdf) (last visited Aug. 15, 2022).

## **Maryland State Agencies**

No Maryland state agencies were found to have dedicated consumer websites to educate homeowners on the potential safety risks of improperly installed yellow CSST, or consumer protections. Three agencies that should consider adding information about potential safety risks of improperly installed yellow CSST, as well as consumer protections, to their websites are:

- The Maryland Department of Labor, Building Codes Administration (BCA)
  - The BCA is responsible for enforcing COMAR 09.20.01—State Plumbing Code.
- The Maryland Department of State Police, Office of the State Fire Marshal (SFM)
  - The National Association of State Fire Marshals (NASFM) has launched a nationwide safety campaign and CSST primer<sup>5</sup> to bring awareness to homeowners regarding yellow CSST.
  - Although the SFM does not have a dedicated consumer website to educate homeowners on the potential safety risks of improperly installed yellow CSST, the SFM does have CSST safety information available on its [Facebook](#) page.
- The Maryland Public Service Commission
  - Although the Commission has no jurisdiction over gas piping inside buildings, the PSC provides Natural Gas Pipeline Safety information on its website. The PSC currently does not have information related to yellow CSST on its website.

In response to an inquiry from the PSC Engineering Division, the PSC IT Division indicates that the costs for adding a dedicated CSST website landing page to an existing website are primarily incremental labor costs and, therefore, minimal. Presumably, this will also be the case for non-PSC entities.

## **Local Governments**

No local governments were found to have dedicated consumer websites, webpages, or links to other sites to educate homeowners on the potential safety risks of improperly installed yellow CSST, or consumer protections.

## **Utilities**

A review of utility websites indicates that the large natural gas utilities in Maryland have warnings about the dangers associated with CSST on their websites. The PSC Pipeline Safety Manager conducted a Special Information Request (SIR) survey of existing natural gas and propane operators in Maryland to determine:

### **(1) Existing CSST Website**

Does the company have an existing CSST warning on their website?

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<sup>5</sup> See <http://csstsafety.com/CSST-primer.html> (last visited Aug. 15, 2022).

**(2) Updated CSST Website**

Is the company willing to place a warning on its website by October 1, 2022, which includes information from the AGA, as well as information on the Flynn and Laird Act of 2022?

**(3) AGA CSST Safety Bill Stuffer**

Has the company sent out the AGA CSST Safety Bill Stuffer to customers? Is the company willing to send out the AGA CSST Safety Bill Stuffer periodically?

The detailed results of this survey are listed in Table No. 1 below.

**Table No. 1 – Commission-Regulated Natural Gas and Propane Operator CSST Survey Results**

<b>Operator</b>	<b>Existing CSST Website</b>	<b>Updated CSST Website</b>	<b>AGA CSST Safety Bill Stuffer</b>
<b>Baltimore Gas and Electric</b>	<a href="https://www.bge.com/MyAccount/Customersupport/Pages/EquipmentResponsibility.aspx">https://www.bge.com/MyAccount/Customersupport/Pages/EquipmentResponsibility.aspx</a>	Company prefers to send out their bill stuffer.	No; however, the Company has sent out bill stuffers with a message related to CSST.
<b>Chesapeake Utilities</b>	<a href="https://chpkgas.com/wp-content/uploads/2019/09/Chesapeake-6-26-2019.pdf">https://chpkgas.com/wp-content/uploads/2019/09/Chesapeake-6-26-2019.pdf</a>	No warning on their website. However, CSST is discussed in the Company’s Public Awareness brochure.	The Company has not sent out the AGA CSST stuffer, but is willing to send it out in the future.
<b>Columbia Gas</b>	<a href="https://www.columbiagasmd.com/safety/home-safety/find-a-contractor">https://www.columbiagasmd.com/safety/home-safety/find-a-contractor</a>	Yes	No; however, the Company is planning to send the AGA bill stuffer beginning with August 2022 billing cycle.
<b>Easton Utilities</b>	No	Yes	The Company is willing to send out the AGA bill stuffer.
<b>Elkton Gas</b>	<a href="https://elktongas.com/safety/appliance-and-equipment-safety/appliance-connectors/appliance-connector-faq/">https://elktongas.com/safety/appliance-and-equipment-safety/appliance-connectors/appliance-connector-faq/</a>	No warning on their website; however, CSST is discussed in the Company’s Public Awareness brochure.	The Company has not sent out the AGA CSST stuffer, but is willing to send it out in the future.
<b>Washington Gas</b>	<a href="https://www.washingtongas.com/media-center/have-a-licensed-electrician-inspect-your-corrugated-stainless-steel-tubing">https://www.washingtongas.com/media-center/have-a-licensed-electrician-inspect-your-corrugated-stainless-steel-tubing</a>	The Company is willing to add information regarding the Flynn and Laird Act of 2022.	No; the Company is willing to send the AGA bill stuffer if requested by the PSC.
<b>SandPiper Energy</b>	<a href="https://sandpiper-energy.com/wp-content/uploads/2019/09/SANDPIPER-6-26-2019.pdf">https://sandpiper-energy.com/wp-content/uploads/2019/09/SANDPIPER-6-26-2019.pdf</a>	No warning on their website. However, CSST is discussed in the Company’s Public Awareness brochure.	The Company has not sent out the AGA CSST stuffer, but is willing to send it out in the future.

<b>Operator</b>	<b>Existing CSST Website</b>	<b>Updated CSST Website</b>	<b>AGA CSST Safety Bill Stuffer</b>
<b>UGI Utilities, Inc.</b>	No	Yes	The Company has not sent out the AGA bill stuffer, but is willing.
<b>AC &amp; T Co., Inc.</b>	No	Yes	The Company has not sent out the AGA bill stuffer, but is willing.
<b>Aero Energy</b>	No	No	No/No
<b>Cato Gas &amp; Oil</b>	No	Company is willing to update its website to include information about CSST.	The Company has not sent out the AGA bill stuffer, but is willing.
<b>Oakland Oil &amp; Propane</b>	No	Company is willing to update its website to include information about CSST.	The Company has not sent out the AGA bill stuffer, but is willing.
<b>Poore's Propane</b>	No	No	No/No
<b>Schagrin Gas</b>	No	Company is willing to update its website to include information about CSST.	The Company has not sent out the AGA bill stuffer, but is willing.
<b>Sharp Energy</b>	No	Company is willing to update its website to include information about CSST.	The Company has not sent out the NPGA bill stuffer, but is willing.
<b>Superior Plus Energy Services</b>	No	No, the Company does not provide any installation work inside of a building in the state of MD, nor do they use CSST for outside installations. If required, they would post the warning on the Company's website.	No/No, the Company does not provide any installation work inside of a building in the state of MD, nor do they use CSST for outside installations. If required, they would post the warning on the Company's website.
<b>Taylor Gas</b>	No	Company is willing to update its website to include information about CSST.	No/Yes with financial assistance from the PSC.
<b>Thompson Gas, Inc.</b>	No	Company is willing to update its website to include information about CSST if requested by the PSC.	The Company has not sent out the AGA bill stuffer, but is willing if requested by the PSC.

## **Recommendations**

CSST is installed inside buildings and on the customer side of the gas meter outlet through gas piping that the Commission does not regulate. While the Commission regulates the companies listed in Table 1, it does not have the authority to regulate certain propane operators in Maryland.

Unregulated companies should be given a copy of this report and encouraged to consider enhancements to their website landing pages, including information about the potential safety risks of improperly installed yellow CSST. They should also be encouraged to include the AGA CSST bill stuffer in their bill mailings.

Furthermore, BCA, SFM, WSSC, county governments, and potentially other government and quasi-governmental agencies should be given a copy of this report and encouraged to consider enhancements to their website landing pages, including information about the potential safety risks of improperly installed yellow CSST.

If the BCA, SFM, a governmental/ quasi-governmental entity or any non-jurisdictional entity should elect to establish or update their websites with information about the potential safety risks of improperly installed yellow CSST, the minimum content should include the information available on the AGA CSST Safety Bill Stuffer or a link to the bill stuffer that is currently available on the AGA website. Optional content may include a Summary of the Flynn and Laird Act of 2022, as described at the beginning of this report.<sup>6</sup>

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<sup>6</sup> See *supra* p. 1.

# Appendix - American Gas Association CSST Bill Stuffer

## Front



**Yellow CSST**  
Safety Campaign

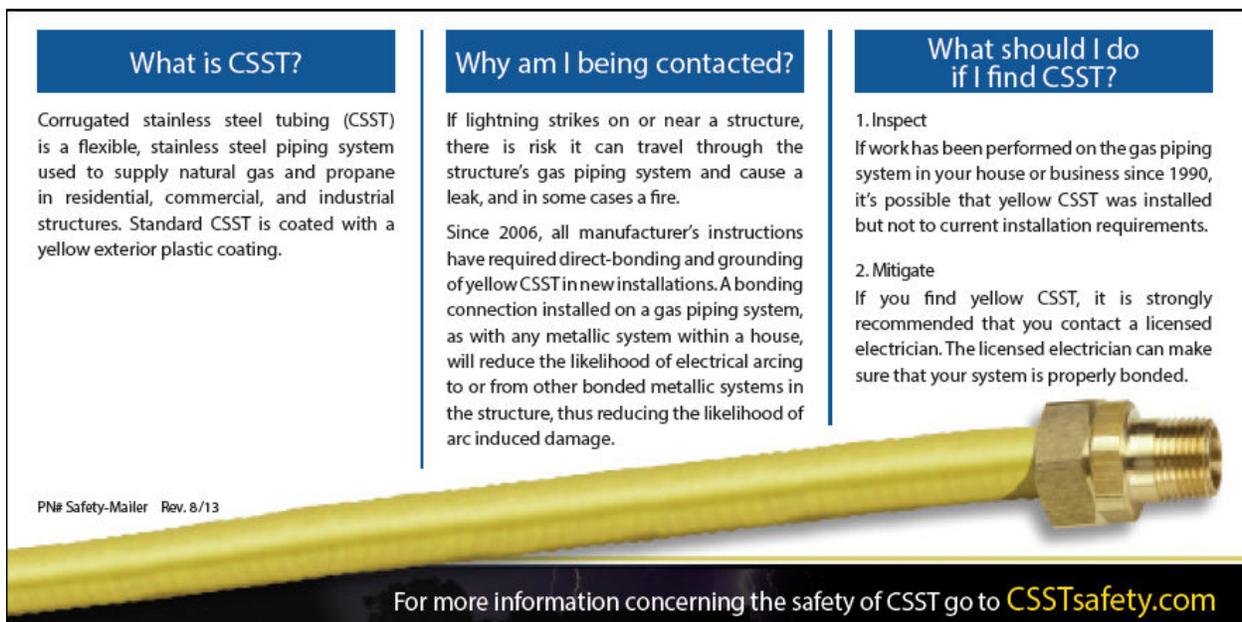
### An Important Safety Message

Do you have this fuel gas piping product installed in your home or business? This product, known as corrugated stainless steel tubing (CSST) should be properly bonded and grounded in order to reduce the risk to your house or business caused from lightning activity. The American Gas Association is partnering with National Association of State Fire Marshals on this campaign because we want you to be safe.

See back for details about what you should do if you have this product in your home or business

For more information concerning the safety of CSST go to [CSSTsafety.com](http://CSSTsafety.com)

## Back



**What is CSST?**

Corrugated stainless steel tubing (CSST) is a flexible, stainless steel piping system used to supply natural gas and propane in residential, commercial, and industrial structures. Standard CSST is coated with a yellow exterior plastic coating.

**Why am I being contacted?**

If lightning strikes on or near a structure, there is risk it can travel through the structure's gas piping system and cause a leak, and in some cases a fire.

Since 2006, all manufacturer's instructions have required direct-bonding and grounding of yellow CSST in new installations. A bonding connection installed on a gas piping system, as with any metallic system within a house, will reduce the likelihood of electrical arcing to or from other bonded metallic systems in the structure, thus reducing the likelihood of arc induced damage.

**What should I do if I find CSST?**

1. Inspect  
If work has been performed on the gas piping system in your house or business since 1990, it's possible that yellow CSST was installed but not to current installation requirements.
2. Mitigate  
If you find yellow CSST, it is strongly recommended that you contact a licensed electrician. The licensed electrician can make sure that your system is properly bonded.

PN# Safety-Mailer Rev. 8/13

For more information concerning the safety of CSST go to [CSSTsafety.com](http://CSSTsafety.com)