State of Florida

Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: October 9, 2025

TO: Adam J. Teitzman, Commission Clerk, Office of Commission Clerk

FROM: Sevini K. Guffey, Public Utility Analyst IV, Division of Economics SKG

RE: Docket No. 20250109-GU: Petition for approval of gas utility access and replacement directive cost recovery factors for January 2026 through December 2026, by Florida Public Utilities Company

Please place the attached documentation in the docket file. The documentation is the risk evaluation provided by FPUC in response to staff's data request No. 6.

Thank you.

Sevini Guffey

From: Keating, Beth <BKeating@gunster.com>
Sent: Monday, October 6, 2025 3:24 PM
To: Sevini Guffey
Cc: Daniel Dose
Subject: RE: Docket No. 20250109
Attachments: Pages from 2025 CUC DIMP_.pdf

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Attached are the referenced DIMP pages.

Best,
Beth

From: Sevini Guffey <sguffey@psc.state.fl.us>
Sent: Monday, October 6, 2025 3:05 PM
To: Keating, Beth <BKeating@gunster.com>
Cc: Napier, Michelle <michelle_napier@chpk.com>; 'Jowi Baugh' <jbaugh@chpk.com>; Williams, Diana <dwilliams@chpk.com>; Daniel Dose <ddose@psc.state.fl.us>
Subject: RE: Docket No. 20250109

This email originated from **outside** of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you all.

Sevini

From: Keating, Beth <BKeating@gunster.com>
Sent: Monday, October 6, 2025 2:56 PM
To: Daniel Dose <ddose@psc.state.fl.us>; Sevini Guffey <sguffey@psc.state.fl.us>
Cc: Napier, Michelle <michelle_napier@chpk.com>; 'Jowi Baugh' <jbaugh@chpk.com>; Williams, Diana <dwilliams@chpk.com>
Subject: Docket No. 20250109

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon. Attached, please find FPUC's responses to Staff's First Set of Data Requests, which have been filed in the referenced docket this afternoon.

All the best,
Beth

Gunster

Beth Keating | Tallahassee Office Managing Shareholder

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"It takes less time to do things right than to explain why you did it wrong." – Henry Wadsworth Longfellow

6) RISK EVALUATION

6.0 Overview

A multi-tiered approach to risk evaluation and threat ranking has been developed to evaluate the risks associated with the pipeline. This more sophisticated risk analysis approach has been created to better understand and react to threats occurring in the system.

CUC uses a relative risk model to evaluate the threats to the integrity of these lines and ranks in the following priority, beginning with the highest relative risk. RANK indicates the final relative risk rank after review and validation by CUC.

SHRIMP Rank is where SHRIMP's risk ranking model originally ranked the threat-segment. When the RANK of a threat segment differs from the SHRIMP rank, either CUC re-ranked that threat segment or the threat segment shifted in ranking due to re-ranking of other threat segments.

If CUC re-ranks a threat, an explanation is included in the discussion for that threat segment. CUC may also choose to provide an explanation for the other threats that are re-numbered due to the re-ranking, whether or not the RANK of the subsequent threats ultimately differs from the original SHRIMP Ranking.

Relative Risk score is a numeric score from 0-30 based on the four factors listed – Probability, Consequence, Leak Cause Factor and Incident Probability Factor.

The risk ranking is based on relative risk, not absolute risk. It should not be construed to suggest that the highest ranked segment is unsafe or that additional actions are required to maintain public safety. It is merely a tool to assist Consumers Gas Cooperative to prioritize its inspection and maintenance programs.

Any modifications to risk evaluation and ranking will be made in accordance with the risk ranking and evaluation procedure in SHRIMP.

6.1 Risk Analysis

6.1.1 Relative Risk Model

Risk is the product of the probability of a **failure times** the consequences of a failure. The SHRIMP relative risk model considers both the **probability and consequences** of a failure for each of the eight threats. The equation is as follows:

Relative Risk Score =	Probability Score (Normalized to 1 - 10)	X	**Consequence** Score (1.0 - 1.5)	X	Leak History Factor (1 + % of Lks)	X	Incident Probability Factor (1.0 or 1.25)

Each of the four components that go into the relative risk score are described in the following sections.

Probability Score: Is the sum of points assigned by answers to threat interview questions. Each segment receives a relative probability score for each threat based on the answers to a series of questions. The probability questions are based on the GPTC DIMP guidance, as modified and added to by the SIF SHRIMP Advisors. The weighting given to each possible answer are based on the knowledge and experience of the SHRIMP Development Team and the SHRIMP Advisors.

Threat	Sub-threat category	Maximum Score	Minimum Score	Incident Probability Factor
Natural Forces	No sub-threats	19	0	1
Other Outside Forces	No sub-threats	12	0	1.0
Excavation Damage	Grouping by concentration of damages or tickets	39	0	1.25
	Grouping by operator crew or operator contractor damage	34	0	1.25
	Grouping by Third Party Damage	31	0	1.25
	Blasting	15	0	1.25
Corrosion	External Corrosion	16	1	1
	Internal Corrosion	30	1	1
	Atmospheric Corrosion	25	1	1
Incorrect Operations	Failure to Follow Procedures	5	1	1.25
	Inadequate Procedures	5	1	1.25
	Operator Qualification	5	1	1.25
	Drug & Alcohol	5	1	1.25
Equipment Failure	No sub threats	5	1	1
Material, Welds or Joints	No sub threats	5	1	1

Threat	Sub-threat category	Maximum Score	Minimum Score	Incident Probability Factor
Other	No sub threats	None (User assigns rank)		1

Probability Scores

Because there are different numbers of questions for each threat and sub threat, the maximum possible score for each threat and sub threat are different, therefore the probability score for each threat-segment is normalized to a scale of 1 - 10 using this equation:

Normalized probability score = 1 + (9 x (sub threat score - sub threat minimum score) / (sub threat maximum score - sub threat minimum score))

For example, if a segment received a score of 9 for external corrosion the normalized probability score would be;
1 + (9 x (9-1) / (16-1) = 1 + 9 x 8/15 = 5.8

Incident Probability Factor: The normalized probability factor described above is useful to rank various sections by the probability of a failure occurring within each of the eight threats, but SHRIMP also must rank sections across the eight threats. Failures due to some threats are more likely to cause death, injury or significant property loss than other threats. DOT Distribution Annual and Incident Report data shown below provide an indication of how likely it is that a failure (e.g. leak) due to one of the 8 threats will result in death, injury or significant property loss.

Reported Cause of Incidents and Failures 2005-2007	# of Incidents	# of Failures	Incidents/1000 Failures	Normalized to Corrosion
Corrosion	6	293,933	0.02	1
Excavation Damage	73	338,666	0.22	11
Incorrect Operations	8	30,145	0.27	13
Material, Weld or Joint Failure	8	147,384	0.05	3
Equipment Failure	6	140,442	0.04	2
Natural Force Damage	22	77,229	0.28	14
Other Outside Force Damage	39	37,426	1.04	51
All Other Causes *	NA	NA	NA	
* Excluding Fire First Incidents				

Incident Probability Factor

The results of this analysis find that failures due to three threats (corrosion, material failure and equipment failure) are least likely to result in reportable incidents, that failures due to excavation damage, incorrect operations and natural force damage are moderately likely to result in reportable incidents and that other outside force damage failures are most likely to result in reportable incidents.

The advisors agreed to assign an Incident Probability Factor of 1.0 (no increase in relative risk score) for Corrosion, Materials/Welds, Equipment, and Other Outside Force Threats where it is relatively unlikely a failure will result in a reportable incident. For Excavation, Incorrect Operations, and Natural Force Threats where it is relatively more likely that a failure will result in a reportable incident the advisors agreed on an Incident Probability Factor of 1.25 (e.g. a 25% increase in relative risk score for these threats).

Further investigation of the "other outside force" category revealed that virtually all the incidents involved vehicles striking above ground facilities, usually meter sets. The SHRIMP advisors agreed with the PHMSA Phase 1 report conclusions that there was not enough information to conclude that vehicular damage could have been anticipated at the location of these incidents or whether meter protection existed, therefore no additional weighting is provided for this threat. SHRIMP does, however, include assessment of vehicle damage in the threat assessment and offer additional or accelerated actions if vehicular damage is found to be a significant threat.

If the user sections the system by geographic area, the Consequence Score is determined by points assigned based answers to threat interview questions as follows:

	Question	Possible Answers	Weighting
CSQ-1	Are the pressure and/or diameter of this section greater than or about the same as the system as a whole?	Substantially greater Somewhat greater About the same	0.2 0.1 0
CSQ-2	Is this section predominantly located in business districts or outside business districts (as those are defined for leak survey)?	Within Business Districts Outside Business District	0.15 0
CSQ-3	How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure?	Less than one (1) hour Between one (1) and two (2) hours More than two (2) hours	0 0.025 0.05
CSQ-4	What would be the impact on the utility and its customers if this section were to fail?	Low Moderate High	0 0.05 0.1

Consequence Score (Geographic Area Sections)

The base consequence factor is 1.0

1. Greater pressure and/or diameter can increase the consequence factor by up to 20% (1.0 to 1.2)
2. Sections predominantly within business districts get an additional 15% increase in the consequence factor
3. The time to respond to a failure results in an increase in consequence factor of up to 5% (1.0 to 1.05)
4. The significance of the facility can result in an increase in consequence factor of up to 10% (1.0 to 1.1)

These weightings are based on the knowledge of the SMEs. These increases are added together to calculate the consequence factor for the section. If all four questions were answered so that maximum scores were assigned, the consequences factor would be;
= 1.50 (1.2 + 1.15 + 1.05 + 1.1)
The overall relative risk score would be increased by 50%.

If all four questions are answered so the minimum scores are assigned, then the consequence factor will be 1.0 and the relative risk score would be unchanged by this factor.
If the user does not create subsections for a threat, then these consequence questions are not asked. For the threats shown below where the geography-based threat questions do not apply the following threat specific consequence questions are asked:

	Question	Possible Answers	Weighting
CSQ-EXC1	Have the (crews/contractors/excavators) identified for this section caused damage that resulted in a reportable incident?	Yes No	0.3 0
CSQ-EXC2	Considering disruption of service and cost to return the system to service, how serious are the damages caused by the (crews/contractors/excavators) identified for this section when compared to all other excavation caused damages?	More serious Less serious About the same	0.3 0 0.1
CSQ-GEN1	What would be the potential consequences (injuries and/or property loss) if a failure were to occur because of this problem?	High likelihood of serious injury and/or property loss Moderate likelihood of injury and/or property loss. Not likely to result in injury and/or property loss.	0.5 0 0.2
EQIPCSQ-1	Is the size/capacity of the equipment substantially greater or lesser than other equipment in the system as a whole?	Substantially greater Somewhat greater About the same	0.2 0.1 0
EQIPCSQ-2	Does the equipment primarily affect the system located in the business district?	Within Business Districts Outside Business Districts	0.15 0

	Question	Possible Answers	Weighting
EQIPCSQ-3	How long would it typically take utility crews to reach this part of the system after receiving notice of a possible failure?	Less than one (1) hour Between one (1) and two (2) hours More than two (2) hours	0 0.025 005
EQIPCSQ-4	What would be the impact on the utility and its customers if this equipment were to fail?	Low Moderate High	0 0.05 0.1

Consequence Score (Non-Geographic Area Sections)

While most leaks are repaired without incident, the SMEs felt that the user's integrity management plan should consider the relative percentage of leaks by cause.

Leak by cause factor = 1 + % of leak associated with threat to the total # of leaks for the system.

If the number of total leaks over a five-year period are less than 50, the national average is used rather than the user's leak history data because with fewer than 50 leak repairs the relative percentages of leaks by cause may be skewed by a handful of leak repairs that are not representative of the system. The national average is shown below, taken from leak repair data reported to PHMSA by all distribution operators on Annual Report Form 7100.1-1

Threat	Failures	Percent	Leak History Factor
Corrosion	399,378	26	1.26
Excavation Damage	161,079	11	1.11
Incorrect Operations	38,416	3	1.03
Material, Weld or Joint Failure	155,255	10	1.10
Equipment Malfunction	326,793	21	1.21
Natural Force Damage	82,565	5	1.05
Other Outside Force Damage	40,529	3	1.03
All Other Causes	329,401	21	NA *
Totals	1,533,416	100	

Reported Cause of Failures (2005-2009)

* Since the threat category "Other" is not assigned a relative risk score by SHRIMP the leak history factor is not used for that threat.