

Prepared Testimony of
Robert F. Powelson
Commissioner
Pennsylvania Public Utility Commission

before the

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Pennsylvania Public Utility Commission
400 North Street
Harrisburg, Pennsylvania 17120
Telephone (717) 787-4301
<http://www.puc.state.pa.us>

Chairman Emery and members of the Committee, I appreciate the opportunity to speak with you today regarding the Distribution System Improvement Charge (DSIC) mechanism available to jurisdictional public utilities in the Commonwealth of Pennsylvania.

Background

Similar to roads and bridges, regular use of utility infrastructure also causes wear and tear on infrastructure systems, requiring replacement. Unlike the roads and bridges we see every day, we cannot see the deterioration of underground pipes and wires that have delivered services to our homes for generations. In Pennsylvania, much of our utility infrastructure – including gas pipelines, electric transmission and distribution systems, and wastewater collection systems – is over 70 years old. Replacing this infrastructure is extremely expensive. However, for both safety and reliability reasons, many of Pennsylvania’s aging pipes and wires are in need of repair or replacement. While many utilities are accelerating their infrastructure replacement schedules to address this challenge, replacing Pennsylvania’s aging utility infrastructure remains a massive and expensive undertaking.

Further complicating this picture is that many of today’s utilities are facing declining usage, which often results in a smaller revenue pool from which to draw on to make these much-needed system upgrades. As a result, state legislatures and public utility commissions across the nation are faced with a dilemma: How to encourage

utilities to invest in infrastructure improvements so that our utility systems continue to run in a safe and reliable manner.

Water DSIC

Pennsylvania first addressed the issue of aging infrastructure in 1997 in the water industry by establishing a DSIC, or an automatic adjustment charge that enables water companies to recover certain infrastructure improvement costs between base rate cases through a quarterly surcharge on customers' bills. The DSIC ensures the least possible rate impact on customers by evenly spreading out over time the cost of replacing and enhancing utility systems. Since implementing the DSIC in the water industry, Pennsylvania has seen a substantial increase in the replacement of aging water infrastructure. Pennsylvania was the first state in the nation to enact and use the DSIC, and since that time, it has become a national "best practice."

Act 11 of 2012

Given the success Pennsylvania has had with the water DSIC, the General Assembly decided to expand the DSIC to other sectors of the utility industry. On February 14, 2012, Governor Corbett signed into law Act 11 of 2012 (Act 11), which allows natural gas distribution companies, city natural gas distribution operations, electric distribution companies, and water and wastewater utilities to petition the Pennsylvania Public Utility Commission (Commission or PUC) for approval to implement a DSIC. Similar to the ratemaking tool already in use by the water industry, the Act 11 DSIC

enables utilities to recover certain infrastructure improvement costs between base rate cases through a surcharge on customers' bills.

In addition to expanding the DSIC, Act 11 also allows jurisdictional utilities to make rate case claims based on a fully-projected future test year. By using a fully-projected future test year in a base rate case, utilities now have the ability to ensure that rates and costs will match the first year that new rates take effect, thereby substantially reducing the risks associated with regulatory lag and encouraging fewer rate cases.

The third ratemaking tool permitted by Act 11 allows wastewater utilities to allocate a portion of their revenue requirement to the combined wastewater and water utility customer base. By spreading of the costs of necessary wastewater system upgrades across the combined water/wastewater customer base, utilities are able to mitigate the impact of what otherwise would be dramatic rate shock for many wastewater customers.

Taken together, the three ratemaking tools permitted by Act 11 offer utilities much needed options for conquering the problems they face. In an era of declining usage, strict environmental compliance measures, and aging infrastructure, utilities need some new tools to ensure they can continue to provide safe, reliable, and affordable service to customers. By way of example, the DSIC surcharge, often adopted in tandem with a fully projected future test year rate filing, facilitates a more expedited replacement of infrastructure while reducing the stress of regulatory lag on the recovery of prudent costs. By giving utilities the flexibility to perform much needed infrastructure upgrades without

the lengthy process of first filing a rate case, the DSIC mechanism encourages utilities to replace their aging infrastructure at an accelerated rate. The DSIC also ensures the least possible rate impact on customers by spreading out over time the cost of replacing and enhancing Pennsylvania's utility infrastructure.

a. DSIC Formula

The DSIC surcharge is represented as a percentage of the total distribution bill and is calculated as follows:

$$DSIC = \frac{(DSI * PTRR) + Dep + e}{PQR}$$

Where:

- DSI** = The original cost of eligible distribution system improvement projects net of accrued depreciation.
- PTRR** = The pre-tax return rate applicable to DSIC-eligible property.
- Dep** = The depreciation expense related to DSIC-eligible property.
- e** = The amount calculated under the annual reconciliation feature or Commission audit.
- PQR** = The projected quarterly revenues for distribution service (including all applicable clauses and riders) from existing customers plus revenue from any customers which will be acquired by the beginning of the applicable service period.

b. DSIC Limitations and Consumer Protections

In an effort to balance the needs for new infrastructure with the concerns of imprudent ratemaking, Act 11 requires utilities to have: (1) a rate case determination by the Commission within the last five years; and (2) a Long Term Infrastructure

Improvement Plan (LTIP) approved by the Commission. An LTIP depicts how a utility plans to accelerate its replacement of aging infrastructure in a fashion sufficient for it to ensure and maintain adequate, safe, reliable, and reasonable service to customers. Specifically, utilities must include: (1) a schedule of planned replacement; (2) a description and location of the property; (3) projected annual expenditures; and (4) the manner of acceleration of improvements. Requiring utilities to file an LTIP with the Commission before implementing a DSIC encourages utilities to proactively plan for infrastructure replacement and investment in a way that utilities may not otherwise have contemplated. Upon Commission approval of an LTIP, a utility may amend its Tariff to include a DSIC mechanism. *See Attachment A – Sample Tariff Language (DSIC).*

In addition to the LTIP requirement, there are a number of customer safeguards and protections built into the process of implementing a DSIC. For example, a utility may not recover DSIC revenues if it is still in a rate year that corresponds to the fully projected future test year of its last base rate case. Further, natural gas and electric utility DSIC revenues may not exceed 5% of distribution revenues. For water utilities, this cap is 7.5%. Additionally, a utility may not recover DSIC revenues if the utility's last four quarters of earnings resulted in an adjusted return on equity that exceeds the cap set by the Commission in the utility's quarterly earnings report. In these reports, the Commission identifies each utility's annual actual and adjusted ROE for that quarter. In report for the first quarter of 2015, the Commission report set the ROE caps at 10.1% for electric utilities, and 10% for natural gas and water utilities. In addition to these

limitations, customers are given notice of DSIC implementation and the DSIC is capped at a percentage of the customer's bill. Moreover, a utility's DSIC is subject to audit and reconciliation and the DSIC is reset to zero upon the effective date of new base rates. These limitations on the DSIC provide important consumer protections and ensure that utilities do not use the DSIC mechanism as a way to over-earn.

Impacts of DSIC in Pennsylvania

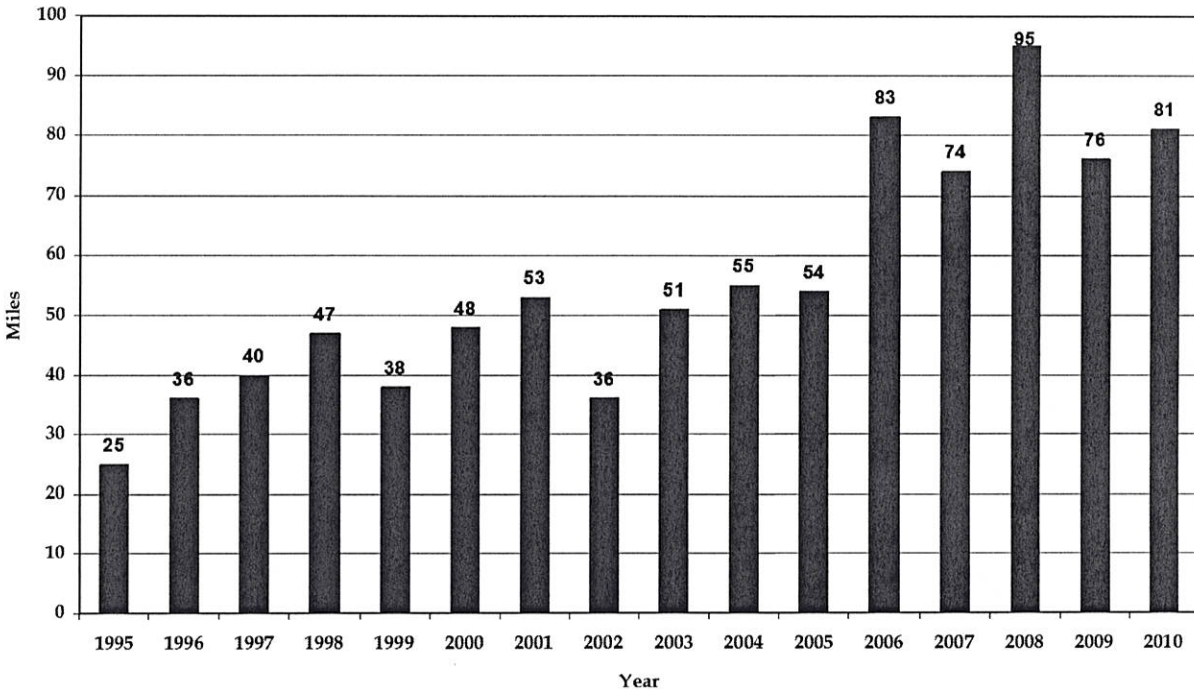
Public utilities are able to petition the PUC for approval to establish a DSIC. To date, 23 utilities (7 natural gas distribution companies, 1 city natural gas distribution operation, 6 electric distribution companies, 7 water companies, and 2 wastewater companies) have an approved DSIC on file with the Commission. The Commission remains confident that providing utilities with the option to use a DSIC continues to solve aging utility infrastructure issues in the Pennsylvania along with providing significant safety, service, rate, regulatory and employment benefits.

a. Safer Distribution Systems

The most important benefit of the DSIC is that it accelerates infrastructure replacement, which creates safer distribution systems. Prior to the implementation of the DSIC in the water industry, Pennsylvania American Water Company (PAWC) projected that it would take about 225 years to upgrade its entire system. With DSIC, the projected amount of time for upgrades to the PAWC distribution system is about 117 years – a timeframe that more closely matches the expected service life of the system. The

following chart illustrates how PAWC has increased its infrastructure replacement since the DSIC mechanism became available in Pennsylvania for water companies in 1997.

Pennsylvania American Water: Miles of Pipe Replaced



Accelerating infrastructure replacement is particularly important in the natural gas industry, where the consequences of failing to replace aging pipeline in a timely manner can be disastrous. In Pennsylvania, the risk of a natural gas explosion is reason enough to take every measure necessary to ensure the state’s natural gas distribution systems are up-to-date. Unfortunately, Pennsylvania has a significant amount of old cast iron and bare steel natural gas infrastructure that needs to be replaced. The chart below illustrates the amount of “at-risk” pipeline for each of the largest natural gas distribution companies

(NGDCs) in Pennsylvania. The U.S. Department of Transportation compiled these numbers from reports each utility filed with the agency.

2013 U.S. Department of Transportation Filing Statistics					
NGDC	System Miles	Risky Pipe		Total At-Risk	Percentage of System
		Unprotected Steel - Bare & Coated	Cast Iron		
Columbia Gas of Pennsylvania, Inc.	7,411	1,671	138	1,809	24%
Peoples Natural Gas Co - Equitable Division	3,523	830	96	926	26%
PECO Gas	6,761	411	734	1,145	17%
Peoples Natural Gas Company LLC	6,786	2,154	17	2,171	32%
Peoples TWP LLC	2,624	904	0	904	34%
Philadelphia Gas Works	3,024	493	1,501	1,994	66%
UGI Penn Natural Gas	2,522	269	109	378	15%
UGI Utilities Inc.	5,487	367	316	683	12%
UGI Central Penn Gas	3,716	596	11	607	16%
National Fuel	4,827	975	169	1,144	24%
Total	46,681	8,670	3,091	11,761	25%

As mentioned above, Pennsylvania natural gas utilities must submit a replacement plan (LTIP) for this “at-risk” pipeline before implementing a DSIC. The Commission has approved an LTIP for many NGDCs, as summarized in the chart below.

Company	LTIP Period	LTIP Schedule
Columbia Gas of Pennsylvania, Inc.	2013-2017	Replace all Cast Iron and Bare Steel in 17 years
Peoples Natural Gas Co & Peoples Natural Gas Co - Equitable Division	2015-2019	Replace all "target" pipe within 20 years. Separately filed plan details a 15 year timeline to eliminate all cast iron in the system.
PECO	2013-2022	Replace all cast iron and bare steel mains and services in 22 years
Peoples TWP	2013-2017	Replace all "target" pipe within 20 years.
PGW	Fiscal Year 2013-2017	Plans to eliminate all cast iron pipeline in 87 years
UGI Utilities Inc., UGI Penn Natural Gas, & UGI Central Penn Gas	2014-2018	Replace all cast iron in 13 years, and all bare steel and wrought iron in 28 years

Ensuring that Pennsylvania's natural gas utilities remove this old pipeline is more than a service or reliability problem – it's a safety issue. The DSIC has enabled Pennsylvania to get a handle on this problem and ensure that the Commission is holding its natural gas utilities accountable every step of the way.

b. Improved Service Quality

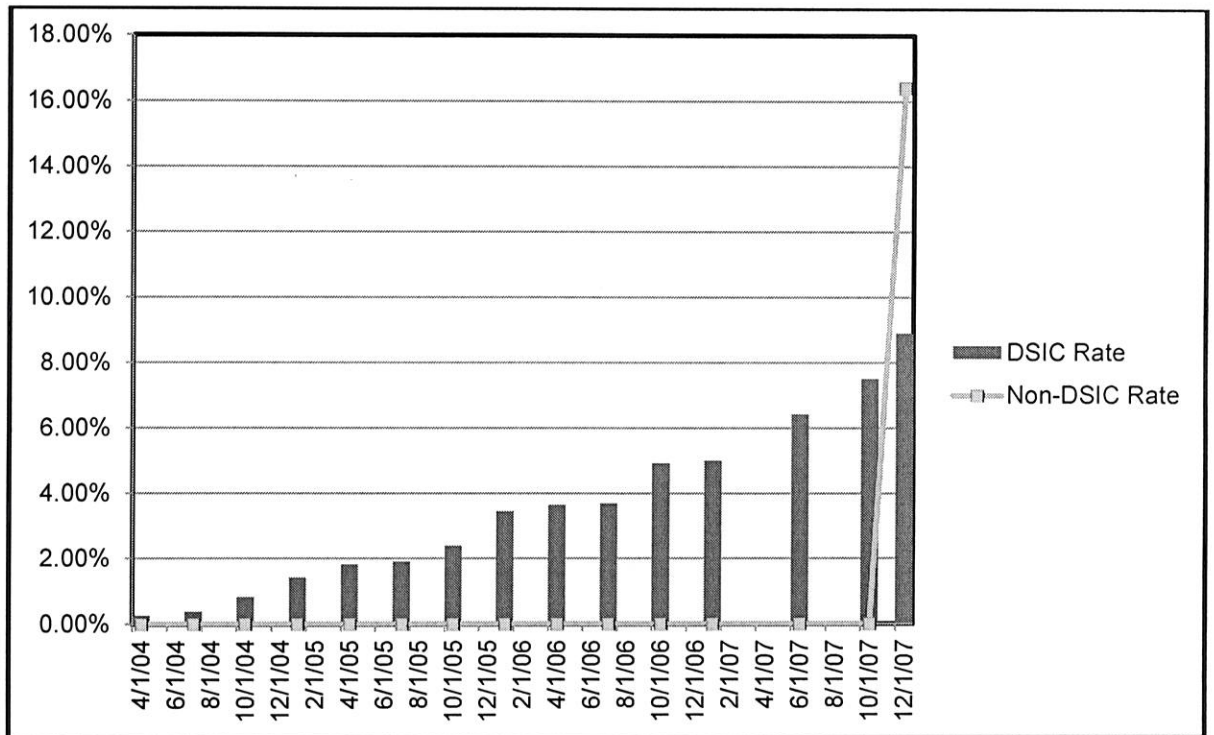
An important byproduct of safe and up-to-date distribution systems is improved service quality. By encouraging the replacement of aging infrastructure at an accelerated pace, the DSIC helps to ensure that there will be fewer main breaks, less frequent service interruptions, and lower levels of unaccounted for natural gas, water, and wastewater.

c. More Predictable Rates

In addition to the safety and service quality benefits, the DSIC mechanism results in greater rate stability. By recovering the cost of infrastructure improvements gradually through the DSIC surcharge, utilities file less frequent base rate case filings, saving millions of dollars in rate case expenses. These cost savings associated with rate cases directly result in savings for ratepayers. Accordingly, DSIC not only allows utilities to maintain safe and reliable service, but also encourages utilities to provide the most affordable service to ratepayers.

Additionally, the DSIC helps utilities recover the cost of prudent investments in more gradual phases, thereby mitigating rate shock to ratepayers. By incrementally increasing the DSIC rate over time, utilities ensure that customers experience more

gradual increases in their rates than they would if the utility had to wait to recover the costs of these infrastructure investments in a base rate case. The following chart depicts the hypothetical rates of a DSIC utility versus those of a traditional ratemaking utility. It is strictly intended to depict how the process of gradualism can work under a prudently implemented DSIC program.



d. More Positive Regulatory Environment

Another benefit of embracing alternative ratemaking tools, like the ones discussed in this testimony, is that it creates a more positive regulatory environment for utilities. The utility business is extremely capital intensive, and in today’s world where utilities’ distribution systems are aging and in need of large-scale repairs, it is important that they

can attract the capital to fund these projects. In 2013, after Pennsylvania passed Act 11, Robert W. Baird, Inc. described Pennsylvania in its January 2013 Regulatory Toolkit as “Constructive – Premier regulatory climate for water given favorable ROEs, single tariff rate structure, and DSIC mechanism.”

The National Association of Regulatory Utility Commissioners (NARUC) recognized the importance of a constructive regulatory environment in its efforts to promote innovative regulatory practices to facilitate water and wastewater utilities with addressing their significant infrastructure investment challenges. In November 2013, the NARUC Committee on Water passed a *Resolution Endorsing Consideration of Alternative Regulation that Supports Capital Investment in the 21st Century for Water and Wastewater Utilities* (Resolution). This Resolution highlights the constant challenges water and wastewater companies face in light of traditional cost of service ratemaking, decreasing revenues, and changing drinking water standards. This Resolution also recognizes that the United States water industry is the most capital intensive sector of regulated utilities and faces critical investment needs that are expected to total \$335 billion to \$1 trillion over the next quarter century.

In the Resolution, NARUC found that the efficiency and effectiveness of water and wastewater utility regulation can be enhanced through alternative regulation mechanisms, such as a DSIC mechanism, which can reduce regulatory costs, smooth rate change, and ensure the supply of necessary capital at reasonable cost, all for the benefit of utility customers. As such, NARUC stands ready to assist economic regulators with

implementation of alternative regulation approaches that support water companies' capital investment needs of the 21st century.

e. Job Creation

The infrastructure replacement encouraged by the DSIC has also undoubtedly created hundreds, if not thousands, of jobs — from utility positions to pipeline contractors — needed to support the infrastructure replacement program. Utility companies spend millions of dollars every year repairing, replacing and maintaining their infrastructure. By allowing utility companies to recoup the revenue needed to upgrade and improve their systems, utilities are repairing and replacing these systems on an expedited schedule, which directly translates into creating the jobs necessary to complete this work.

The impact of the DSIC on job creation has been particularly evident in the natural gas industry. Accelerated natural gas pipeline replacement has created the need for a wide array of jobs – from professional engineers to heavy equipment operators – to complete large-scale projects and work. By allowing natural gas utilities to recoup the revenue needed to engage in accelerated pipeline repair and replacement, the DSIC has not only resulted in a safer pipeline system, but it has created a significant number of jobs in the process.

Conclusion

Based on the safety, service, rate, regulatory and employment benefits discussed in this testimony, it is clear that alternative ratemaking methodologies, like DSIC, are exactly the type of innovative regulatory policy needed to create lasting impacts on utility infrastructure replacement. The DSIC mechanism provides utilities with a meaningful way to reasonably invest in infrastructure despite difficult financial markets, increasing energy efficiency measures, and decreasing utility revenues.

Thank you again for inviting me here to speak today. I welcome the opportunity to meet with you to answer any questions you may have or to further discuss my testimony.

Sample Tariff Language

DISTRIBUTION SYSTEM IMPROVEMENT CHARGE (DSIC)

I. General Description

Purpose: To recover the fixed costs (depreciation and pre-tax return) of certain non-revenue producing, non-expense reducing distribution system improvement projects completed and placed in service and to be recorded in the individual accounts, as noted below, between base rate cases and to provide the Company with the resources to accelerate the replacement of aging water distribution infrastructure, to comply with evolving regulatory requirements imposed by the Safe Drinking Water Act and to develop and implement solutions to regional water supply problems. The costs of extending facilities to serve new customers are not recoverable through the DSIC. Also, Company projects receiving PENNVEST funding are not DSIC-eligible property.

Eligible Property: The DSIC-eligible property will consist of the following:

- services (account 323), meters (account 324) and hydrants (account 325) installed as in-kind replacements for customers;
- mains and valves (account 322) installed as replacements for existing facilities that have worn out, are in deteriorated condition, or upgraded to meet Chapter 65 regulations of Title 52;
- main extensions (account 322) installed to eliminate dead ends and to implement solutions to regional water supply problems that have been documented as presenting a significant health and safety concern for customers currently receiving service from the Company or the acquired Company;
- main cleaning and relining (account 322) projects; and
- unreimbursed funds related to capital projects to relocate Company facilities due to highway relocations.

II. Computation of the DSIC

Calculation: The initial charge, effective January 1, 1997, shall be calculated to recover the fixed costs of eligible plant additions that have not previously been reflected in the Company's rate base and will have been placed in service between September 1, 1996, and November 30, 1996. Thereafter, the DSIC will be updated on a quarterly basis to reflect eligible plant additions placed in service during the three-month periods ending one month prior to the effective date of each DSIC update. Thus, changes in the DSIC rate will occur as follows:

<u>Effective Date of Change</u>	<u>Date To Which DSIC-Eligible Plant Addition Reflected</u>
April 1	February 28
July 1	May 30
October 1	August 31
January 1	November 30

III. Safeguards

Cap: The DSIC will be capped at 5% of the amount billed to customers under otherwise applicable rates and charges.

Audit/Reconciliation: The DSIC will be subject to audit at intervals determined by the Commission. It will also be subject to annual reconciliation based on a reconciliation period consisting of the 12 months ending December 31 of each year. The revenue received under the DSIC for the reconciliation period will be compared to the Company's eligible costs for that period. The difference between revenue and costs will be recouped or refunded, as appropriate, in accordance with Section 1307(e), over a one year period commencing on April 1 of each year. If DSIC revenues exceed DSIC-eligible costs, such overcollections will be refunded with interest. Interest on the overcollections will be calculated at the residential mortgage lending specified by the Secretary of Banking in accordance with the Loan Interest and Protection Law (41 P. S. sec. 101, et seq.) and will be refunded in the same manner as an overcollection.

New Base Rates: The charge will be reset at zero as of the effective date of new base rates that provide for prospective recovery of the annual costs that had theretofore been recovered under the DSIC. Thereafter, only the fixed costs of new eligible plant additions, that have not previously been reflected in the Company's rate base, would be reflected in the quarterly updates of the DSIC.

Earning Reports: The charge will also be reset at zero if, in any quarter, data filed with the Commission in the Company's then most recent Annual or Quarterly Earnings reports show that the Company will earn a rate of return that would exceed the allowable rate of return used to calculate its fixed costs under the DSIC as described in the Pre-tax return section.

Customer Notice: Customers shall be notified of changes in the DSIC by including appropriate information on the first bill they receive following any change. An explanatory bill insert shall also be included with the first billing.