



Water Distribution System Improvement Charges: A Review of Practices

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Overview

- DSIC Explained
- History of the DSIC
- Logistics of distribution and transmission
- Considering all sides
- Customer protections
- Overview of DSIC states and cap
- Current considerations
- Alternative options
- Further reading



What is DSIC

- Distribution System Improvement Charges allow for non-revenue producing improvements to be funded through interim rate increases which are separate from formal rate case decisions
- Enables investments to be funded and made on an ongoing basis with regulatory oversight, but without prolonged wait for contested rate proceedings
- 16 states allow for some form of DSIC, while others are considering DSIC, or have used DSIC in the past
- DSIC is limited to revenue neutral projects, DSIC does not increase revenue
- DSIC Differs from Construction Work in Progress (CWIP) because DSIC requires projects to be used and useful before companies may collect



Eligible for DSIC

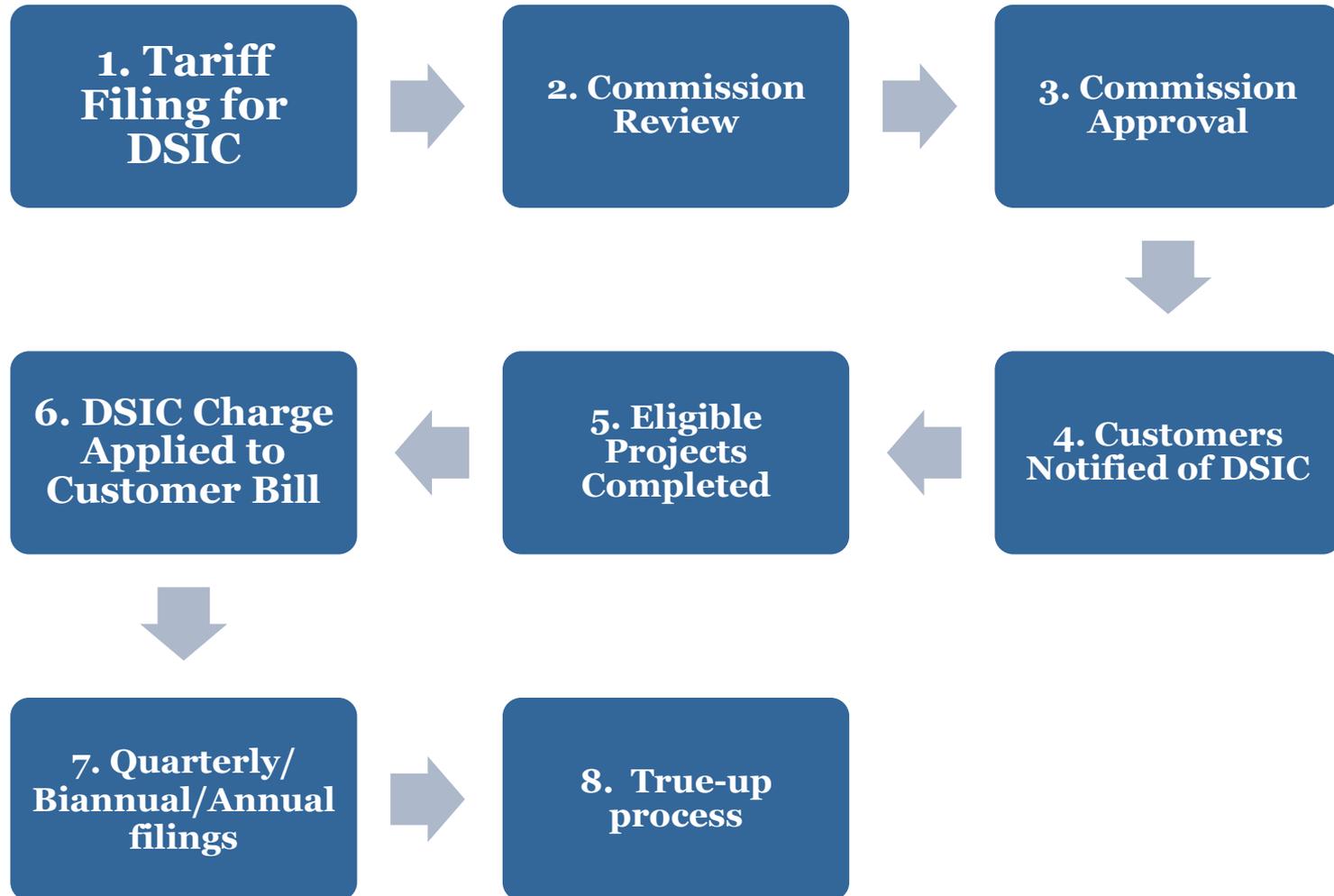
Replacement of existing plant including:

- Filters
- Pumps
- Meters,
- Service lines
- Hydrants
- Mains
- Valves
- Main extensions that eliminate dead, and
- Main cleaning or relining
- Inflow and infiltration elimination

- States have expanded DSIC eligible expenses to include :
 - Unreimbursed costs related to highway relocation projects
 - Purchase of leak detection equipment
 - Energy efficient equipment for operations
 - Reasonable and necessary system improvements required for water system acquisition approved by the authorities
 - New facilities, plant or equipment required to meet changes in state or federal water quality standards, rules, or regulation



DSIC Process (example)



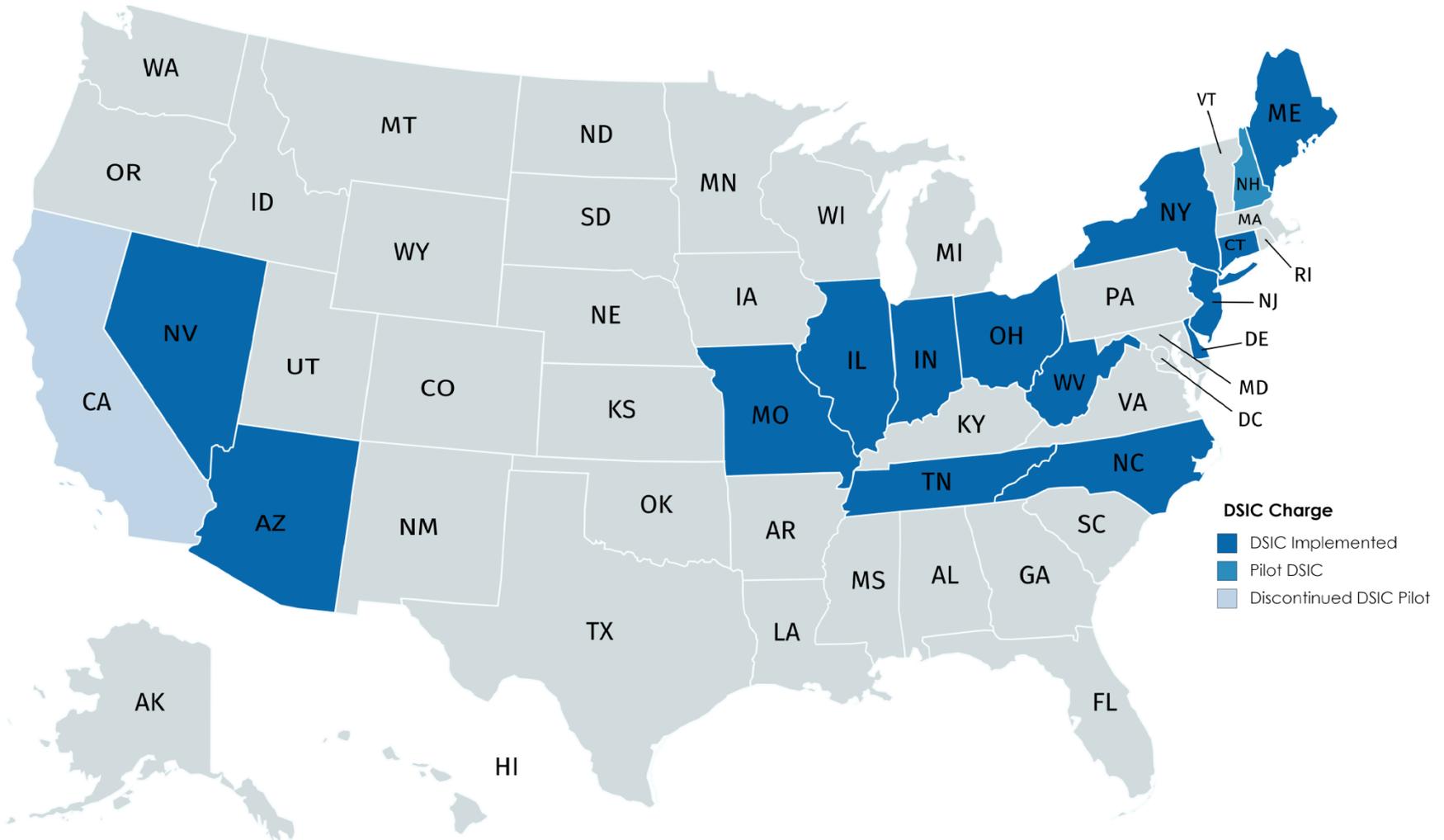


History of DSIC

- First implemented in Pennsylvania in 1996 as the result of multi-stakeholder collaboration
- Prior to the DSIC, one Pennsylvania water company estimated it would take over 250 years to make all of the necessary infrastructure replacements at its current rate
- First adopters included: Pennsylvania, Indiana, New York, Connecticut, Illinois
- States continue to adopt the practice, most recently: West Virginia, Arizona, and Tennessee



Overview of States Using Water DSIC





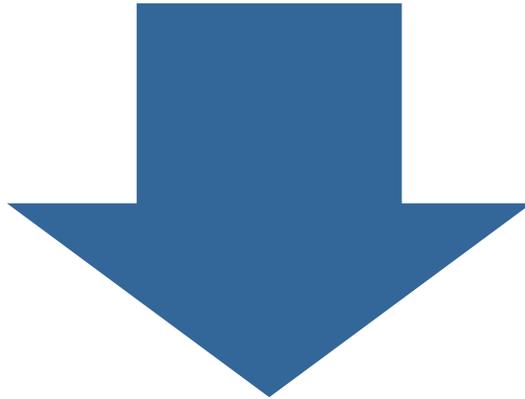
Distribution System Logistics

- Cast iron pipes from the 1890s can last 120 yrs, while newer pipes installed after WWII have an average life of 75 yrs
- Used and useful life of pipes can vary based on factors such as:
 - Soil condition,
 - Materials used,
 - Pipe installation practices, and
 - Character of the water flowing through pipes





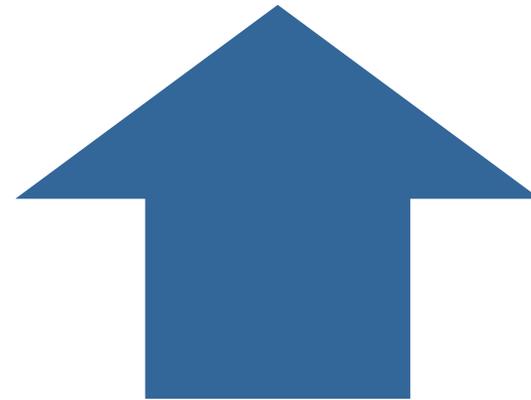
Affordability vs. Quality of service: two sides of the same coin



- EPA estimates **\$245.4 Billion** will be needed for distribution and transmission projects in the next 20 years
- American Society of Civil Engineers gave drinking water infrastructure a **D+** and wastewater a **D** in its 2017 report card



- The Federal reserve board reported in 2017 that **44% of adults surveyed could not cover an emergency expense costing \$400** or would cover it by selling something or borrowing money
- This survey also found that **just under a quarter** of adults are not able to pay all of their current months bills in full





Advantages of DSIC

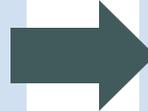
- Enables utilities to accelerate infrastructure remediation
- Enables utilities to recover infrastructure remediation costs on a quarterly basis rather than waiting until the next rate case
- Makes projects more affordable for both utilities and ratepayers
- Improves fire protection through flow & reliability improvements
- Reduction of water loss through leaks → Enhanced quality of service
- Helps to mitigate rate shock
- Early planning instead of putting out fires provides the potential for a multiplier effect: other utilities can coordinate other types of infrastructure replacement at the same time



Customer Protections

Original

- Limits on eligible plant
- Annual audits on projects
- Annual true-ups
- Surcharge reset to zero in next rate case,
- Implementation of DSIC subject to hearing
- DSIC cap

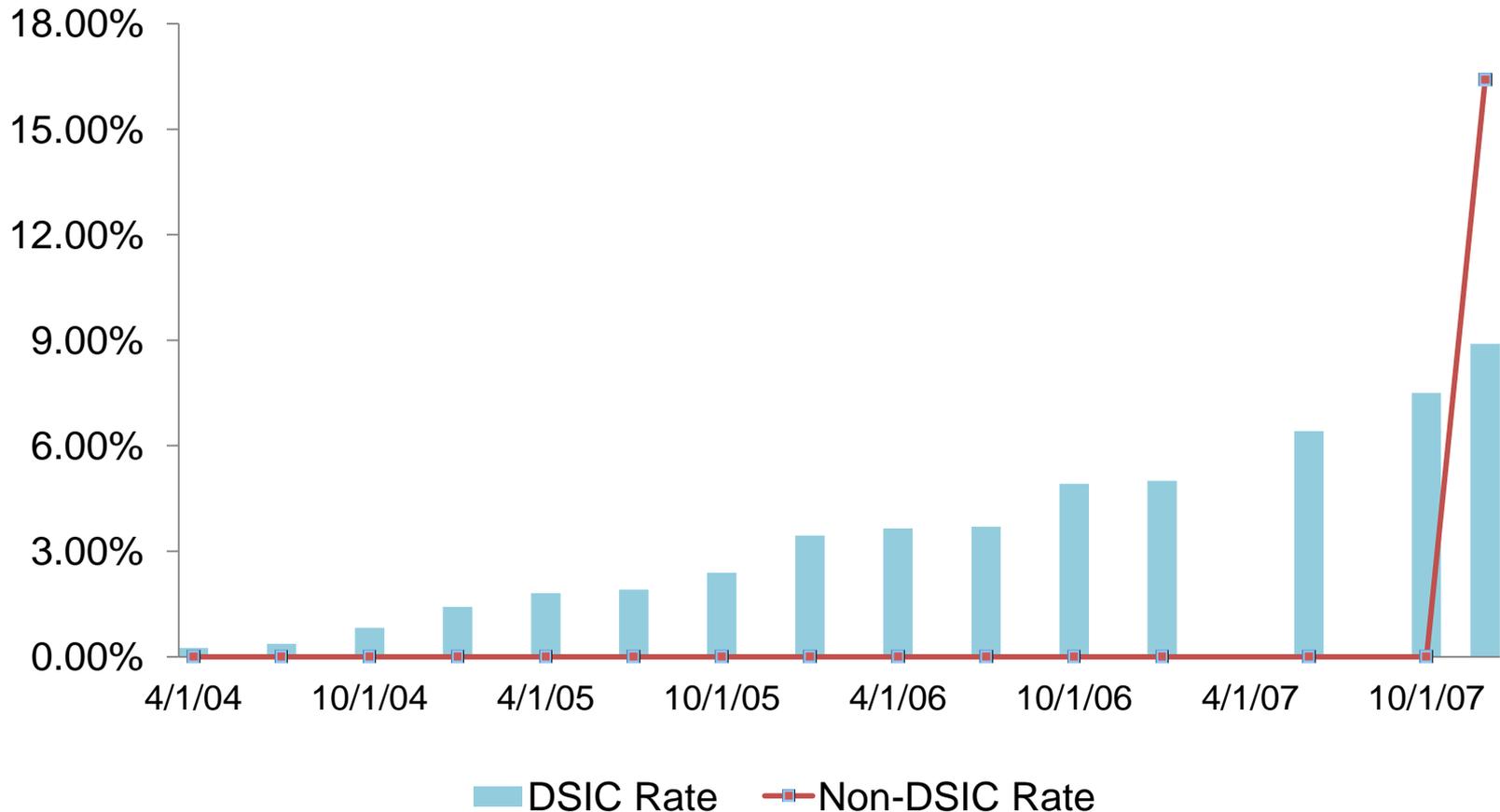


Newer Additions

- Surcharges reset if utility exceeds allowed RoR
- Long-term planning requirements for DSIC request
- Internal auditing requirement
- Shift of documentation burden from staff to utility



Mitigates Rate Shock



Data adapted from: Norton, Cheryl. (n.d.). Infrastructure Replacement Programs. [Presentation]. Slide 11, original source: Steve Klick, Executive Policy Manager, PA PUC



Critiques

- DSICs shift utility business risks away from investors and onto customers without a reduction in allowed rate of return,
- Customers face increased costs
- The DSIC mechanism circumvents the detailed review process that rate base receives during a full rate proceeding
- Reduces utility incentives to control costs
- A proliferation of rate proceedings on trackers can create a financial burden for non-utility stakeholders, creating potential barriers to fair access to regulatory process



Caps

- AZ** 5 % of the Revenue Requirement authorized by the Commission
- CT** the WICA shall not exceed **10%** of the water company's annual retail water revenues approved in its most recent rate filing
- DE** Shall be capped at **7.5%** of the amount billed to customers under otherwise applicable rates and charges, but the DSIC rate increase applied shall not exceed **5%** within any 12 month period
- IL** Annual average increase of **2.5%**, ultimate cap of an increase of no greater than **3.5%** in any year
- IN** Not to exceed **10%** of the utility's base revenue level approved by the commission in the utility's most recent generate rate case
- ME** No greater than an x% increase in revenue re'q greater than current RR **S:7.5% M:5% L: 3%**
- MO** not to exceed **10%** of the water corporation's base revenue level in the water corporation's most recent general rate proceeding
- NV** the authorized rate of return used to calculate the SIR revenue requirement for the utility shall be deemed to be **10.2%**



Caps (con't)

NY	2.5% of operating revenues
NJ	The cap is established by calculating 5% of the water utility's total revenues as established in the most recent base rate decision.
NH	WICA applied between general rate filings shall not exceed 7.5% of the Company's annual retail water revenues as approved in its most recent rate filing, and shall not exceed 5% of such revenues in any 12 month period
NC	Cumulative WSIC/SSIC revenue requirements may not exceed 5% of the total annual service revenues approved by the Commission in the utility's last general rate proceeding
OH	4.25% (w) or 3% (ww) , a company may have no more than 3 surcharges in effect at any time
PA	DSIC is capped at 5% of the amount billed to customers for distribution services
WV	DSIC shall be limited to 3.75% of the revenue requirement authorized in the most recent base rate case. When combined with % increases implemented through previous DSIC filings since the most recent rate case, does not exceed a cumulative Cap of 7.5% .

- Caps VARY by:
 - Annual vs. cumulative
 - Total revenue vs. Amount billed to customers
 - Company size designations



Lead service line (LSL) replacement with DSIC?

Indiana (approved)

- Commission must approve replacement of customer LSLs w/DSIC funds
- LSL replacement expenditures will not count towards DSIC cap of 10%
- Commission approval requires companies to provide a detailed replacement plan including information on:
 - Available grants and low interest loans
 - description of how replacement will be accomplished
 - Estimated savings from water company replacement versus customer
 - Estimated # of lead mains & service lines to be included in costs
 - Etc.

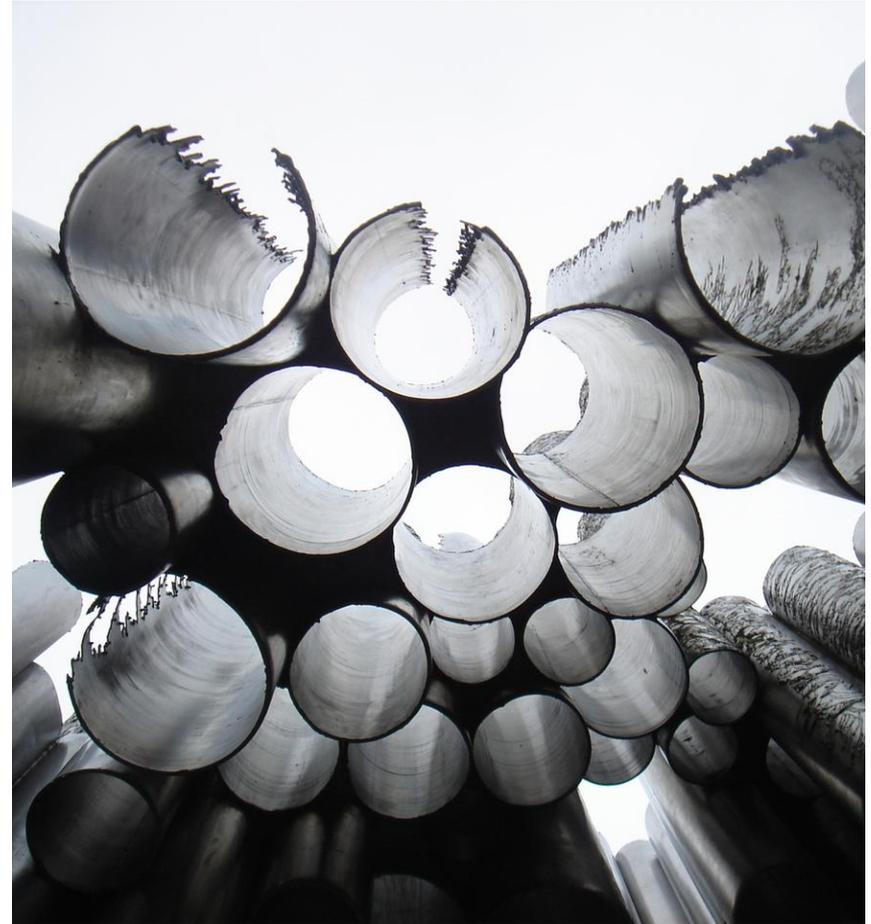
Pennsylvania (active docket)

- PA American Water is seeking permission from the PUC to replace customer's lead service lines, using DSIC funding
- Company estimates it would cost customers 11 cents each month
- Would allow PAWC to allocate \$6 million annually to replace both the company and customer portion of the service line
- The company estimates that private service line replacement would cost \$3,500/house
- Plans to replace 1,800 annually based on customer request



Other current DSIC considerations

- Considerations around fair value determination
- Efficiency credits
- Addressing greater resource demands upon commission staff
- Long-term planning in conjunction with DSIC mechanisms





Wrap-up

- State adopting of DSICs has seen steady growth over the past 20 years
- DSIC structures vary from state to state based on consumer concerns and current events shaping the narrative of infrastructure improvements
- As long as states face the issue of mounting infrastructure replacement needs, DSIC will remain a relevant tool in the regulatory toolbox
- While DSICs help to mitigate rate shock, Decision Makers must continue to consider the cost to customers



Going forward, other options?

- Other riders and trackers
- Construction Work in Progress
- Decoupling or revenue stabilization
 - 5 states allow use for water,
 - at least 24 allow for electricity and gas (Bishop, 55)
- Formula Rates
- Earnings sharing
- Performance based rate making
- Future test years
- Multi-year rates



Further Reading

- AARP. (2012). Increasing Use of Surcharges on Consumer Utility Bills. Retrieved from http://www.aarp.org/content/dam/aarp/aarp_foundation/2012-06/increasing-use-of-surcharges-on-consumer-utility-bills-aarp.pdf
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