Water Distribution System Improvement Charges: A Review of Practices

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NRRI Colloquium
NARUC Annual Meeting
Baltimore, MD– November 14, 2017

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

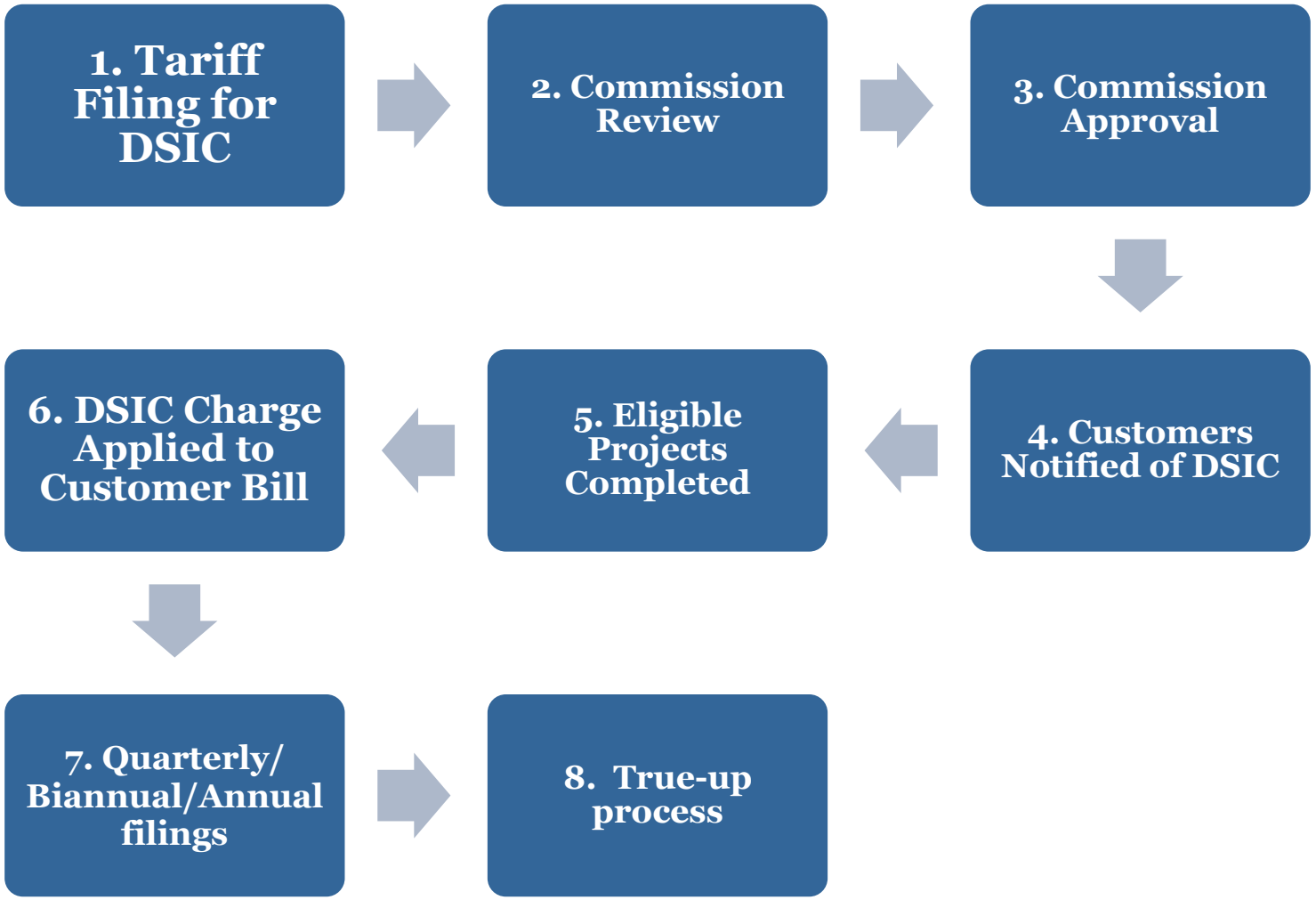
Eligible for DSIC

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

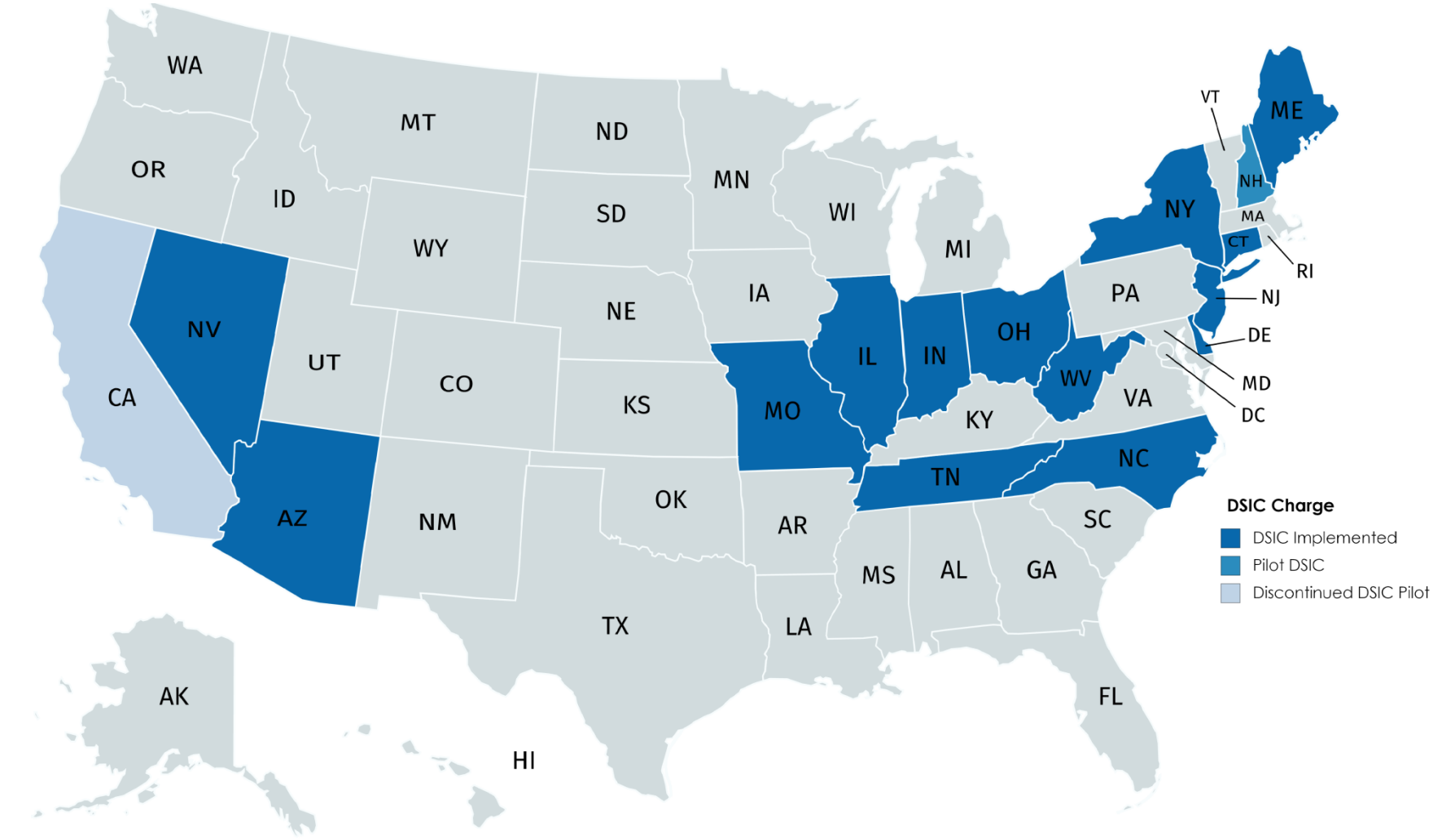
DSIC Process (example)



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

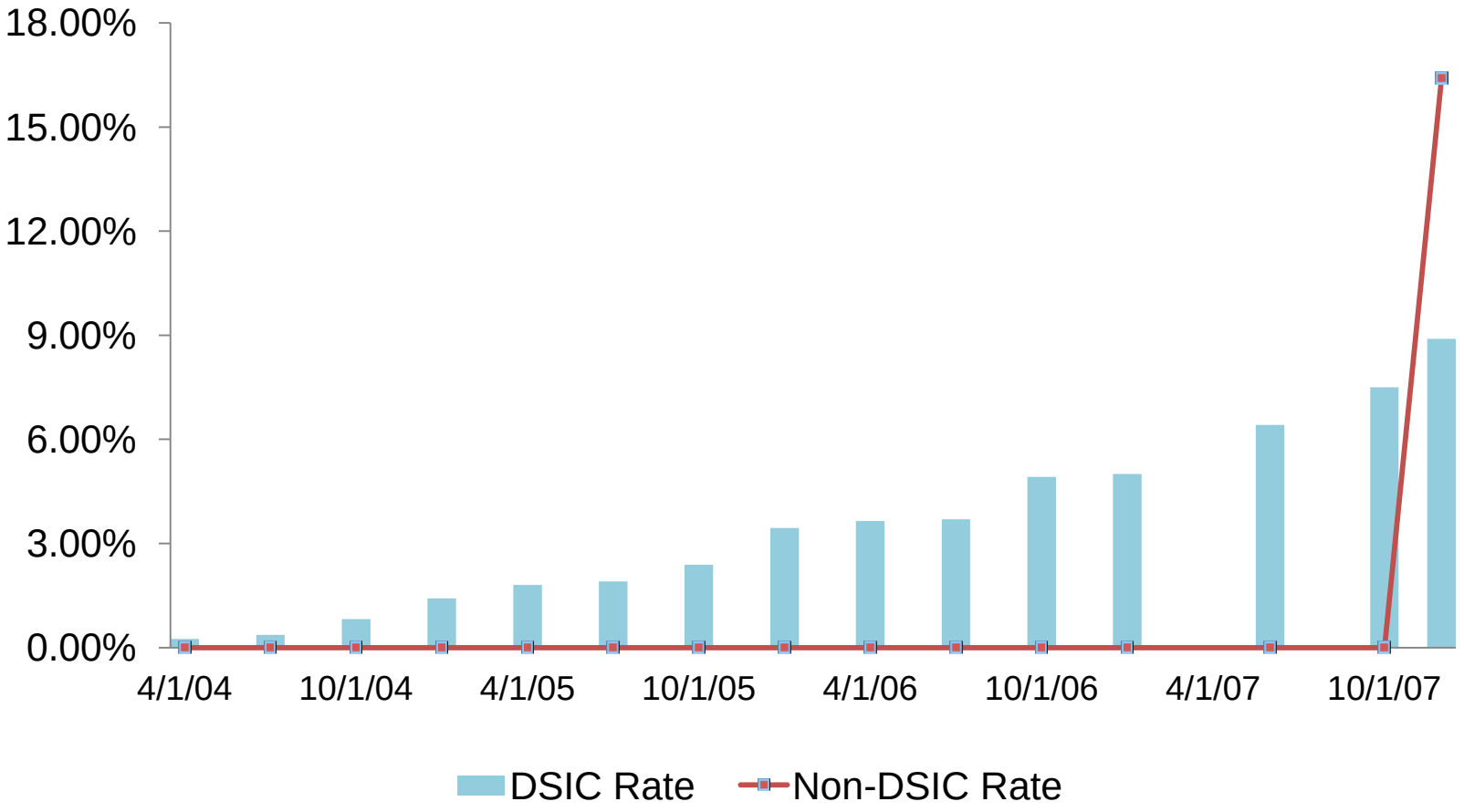
Original

- 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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