

State Insights on Renewing a Cross-Government for Water Affordability

October 22, 2020 Zoom Call

Introduction

The 2020 Aspen-Nicholas Water Forum virtual sessions are exploring what constitutes good water governance through the lenses of water affordability and equity. While this topic was chosen prior to the outbreak of COVID-19, the pandemic has further revealed and exacerbated health and financial disparities across racial, gender, and geographic lines. The [first virtual session](#) explored the financial impact of the COVID-19 pandemic on urban water utilities. The [second session](#) focused on the unique water affordability and equity challenges present in rural communities, colonias, and tribal nations. The [third session](#) explored federal assistance programs related to food and energy, and taxes that have been developed to support low-income Americans struggling with poverty. The last three sessions explore the roles and responsibilities of local ([September 28](#)), state (this session), and federal governments (November 16) in ensuring the equity and affordability of water services.

The last session explored some of the challenges and innovations local governments are experiencing when implementing customer assistance programs and rate structures to make water services more affordable for low-income households. State policies can either impose barriers to progress or enable and drive solutions to complex issues like financing, procedural requirements, and regulatory enforcement that have cascading impacts on water affordability and equity. States also play a pivotal role in how they interpret and implement federal laws and regulations for local utilities, such as how states administer and implement state revolving funds (SRFs). This session examined how four state governments – California, Michigan, New Mexico, and Texas – are approaching water affordability, and how those lessons might be translated elsewhere.

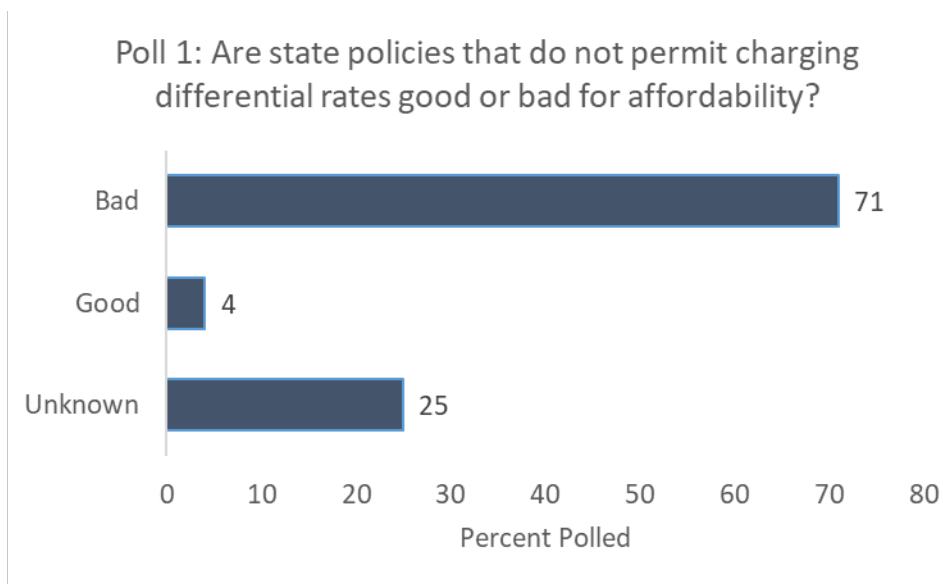
Do States Prioritize the Affordability of a Community or a Household?

States are concerned with two types of water affordability. The first is the affordability *within* a community, which refers to household affordability. The second is the affordability *of* a community, which refers to the communities' collective ability to finance their utility. The two types of water affordability are interconnected because the financial health of a local utility is tied to the number of customers (businesses and households) and their respective financial situations. Affordability solutions in one arena will thus likely provide benefits for both individual households and the whole community.

The state role in household affordability

Solutions for household affordability are predominately implemented by local utilities through inverted rate structures (i.e. increasing block rates) and customer assistance programs. These solutions can reduce rates or cover costs for the basic water usage of low-income households. State policies play a crucial role in enabling local governments to subsidize low rates for basic water usage. For example, some states have policy requirements that do not allow utilities to charge differential rates, such as Proposition 218 in California, or for high-income customers to subsidize low-income customers bills. These policies have the unintended consequence of making it challenging to set differential rates for

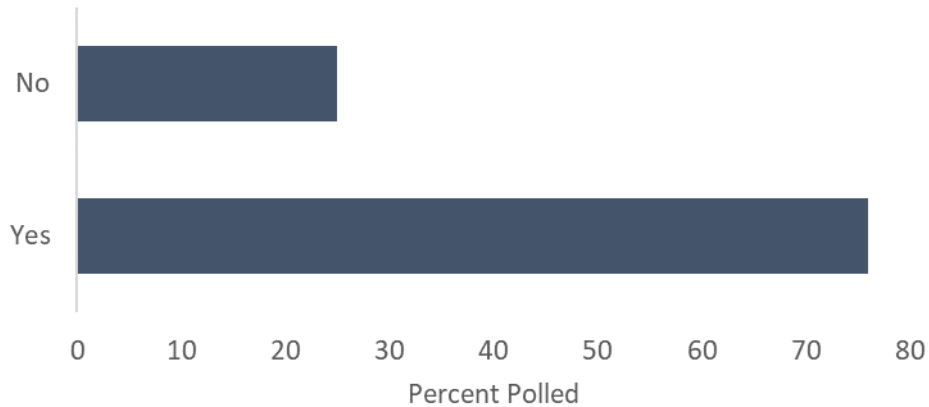
affordability (see Poll 1). State policies can also help local utilities address household affordability. For example, Michigan is in the process of launching a grant program for communities that are seeking to do water affordability planning or explore innovative rate structures. States also determine which communities will receive SRF funding, though, SRF funding primarily addresses community affordability. Participants were asked whether states should be allowed to use SRF funding to ensure household affordability, to which 76% of participants responded that SRFs should be used for household affordability in the absence of a federal affordability program (see Poll 2).



The [third session of the Aspen-Nicholas Water Forum](#) explored federally subsidized household affordability programs for energy and food, as well as the viability of a federal household water affordability program. It appears that local organizations, such as local utilities, are best equipped to implement a federal affordability program because they know their individual customers and their needs better than the state. Local utilities may partner with non-profits addressing poverty issues by collectively ensuring households have access to education, electricity, food, and water through federal programs. A unified approach is logical given a household struggling with poverty would benefit from assistance from all federally subsidized assistance programs.

A federal household water affordability program would also benefit community affordability. Utilities lose money when there are non-payments, which is of particular concern in the ongoing pandemic as widespread unemployment has led to an increase in non-payments; in such cases, utilities cannot afford to subsidize household bills.

Poll 2: Should State Revolving Fund's be used to ensure household affordability?

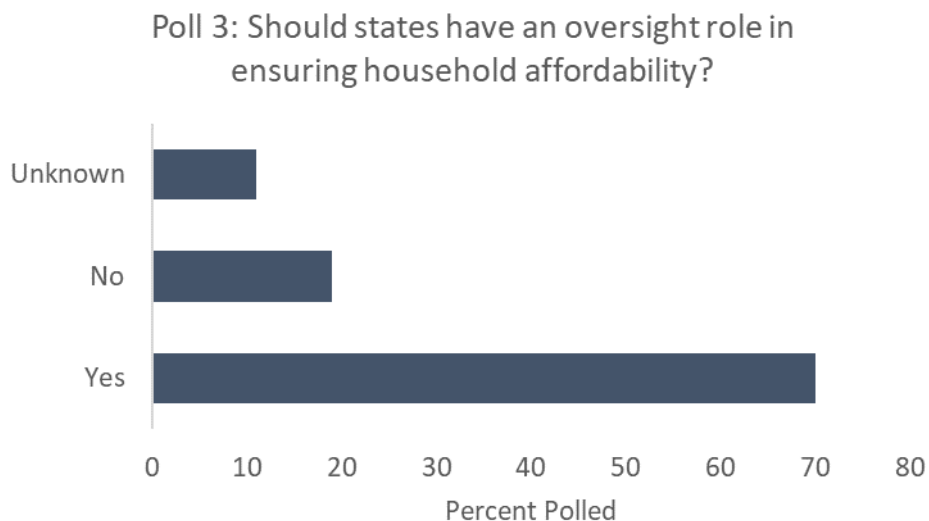


A nationwide household affordability program would need to address the different types of water use, geographies, and the limited data that local utilities and states have regarding their customers (see concerns raised in [session 4](#) and box: A Steep Learning Curve). In the absence of a federal household affordability program, some participants believed that SRF funding might be more readily adapted and used to provide financial incentives for communities to implement policies that would help ensure household affordability, such as increasing block rates or consolidating systems. In many states, SRF funding would need to be more flexible to be used to incentivize household affordability and to provide human capital to help low-income systems access financial and engineering services. In this way, states could help promote household affordability (see Poll 3).

A Steep Learning Curve

Many states are on a steep learning curve with regards to their utilities and customers as the COVID-19 pandemic has revealed the essential need for each individual to have water access for the collective public health. Michigan, like many states, issued executive orders to end shutoffs and reconnect residents to water services. The state required utilities to submit monthly reports documenting their progress on meeting this executive order. Other states have required similar data collection, such as arrearages in North Carolina. For many states, this is the first time these data have been collected and it has revealed how little the state knows about their utilities and how little most utilities know about their customers. For example, in Michigan state officials are learning about different strategies utilities implement to deal with nonpayment, such as shutoffs or adding nonpayment to property tax bills. Many states have been surprised by how many of their residents are living without access to water. The state of Michigan applied \$20 million of its Coronavirus Aid, Relief, and Economic Security (CARES) Act funds to arrearage forgiveness for customers served by utilities across the state, requiring immense effort to merge various state and local databases. Similar data challenges will need to be addressed to implement a federally subsidized household water affordability program.

However, other participants noted that routing funds for affordability through SRFs (or other similar grant programs) may not be as effective at reaching those most in need. Grant programs require the local government to apply, which in and of itself requires resources. Thus, those communities most in need of resources may be the most challenged to pursue funding through grants, leaving the poorest residents under continued water stress. A household-targeted program would potentially address this challenge but may still require some action at the individual level.



The state role in community affordability

States have traditionally had a more proactive role to play in developing and implementing solutions when an entire community has difficulties financing their water service, much of which has been initiated through SRF funding. States can create regulations and policies to support and incentivize low-income communities to become more sustainable. Some states integrate regional planning with financial incentives. For example, the Texas Water Development Board (TWDB) is responsible for securing the state's future water supply and manages the SRFs as a mechanism for integrating financing and planning. As a result, most of the money available for economically distressed systems is tailored to regionalization projects that consolidate the physical infrastructure of small, struggling systems into nearby larger systems. States may also decide to use SRF money to support low-income communities through human capital. For example, the TWDB used SRF money to seed a CFO-to-go program that contracts a Chief Financial Officer (CFO) to work with struggling systems on accounting and financial management strategies. They also have launched an asset management program to contract engineers to assess systems, set best management practices, and develop capital improvement plans. The state is subsidizing human capital to help local utilities plan and implement strategies that will ideally lower costs. Even with subsidized physical and human capital, some communities may remain unable to afford their utility and need to pursue some form of consolidation to reach economies of scale (for more information see our 2018 report on [Reaching Watershed Scale Through Cooperation and Integration](#)). The ability to provide or consolidate human capital can be very important to lower costs for rural systems that are remote and unable to physically consolidate.

Regionalization is an approach some states have taken when a community can no longer afford its water system. For example, California has placed a large emphasis on regionalization as a way to improve affordability and safety because the state manages over 3,000 systems. Over 300 of these systems lack the capacity to meet water quality standards, resulting in more than 1 million citizens without access to safe drinking water. California recently passed new legislation (see Box: State Legislation to Incentivize Affordability) aimed at incentivizing small systems to consolidate to reach affordable economies of scale. They modeled their legislation on Kentucky's legislation (SB 409, enacted in 2000), which used structural incentives and regional planning to successfully consolidated small systems throughout the state. Even though regionalization can help small systems become affordable, many do not want to be part of regionalization projects because of their distinctive cultures, politics, or other dynamics. It is important to recognize those dynamics and acknowledge incentives. For example, Texas provides financial incentives through low-cost financing that is available for regionalization projects through their State Water Implementation Fund ([SWIFT](#)). In California, incentives encourage larger systems to consolidate with a small, failing system by providing funding to address the inherited problems of the failing system. States may also mandate consolidation, and while an unpopular practice, the occasional use of mandatory consolidation has led to more voluntary consolidations.

State Legislation to Incentivize Affordability

California has a unique governance system for water compared with most other states because the State Water Control Board has combined water rights, pollution control, and drinking water under the jurisdiction of a single agency. Most states have separate agencies managing water quantity, water quality, and public health. Combining multiple aspects of water governance under the management of a single institution has provided opportunities to pass legislation that comprehensively supports water systems and advances more affordable water services. In 2012, California passed AB 685, becoming the first state to establish a Human Right to Water. In 2019, California passed SB 200 to provide \$130 million per year to achieve its goal of providing safe drinking water for all communities, establishing a set of tools within the Safe and Affordable Funding for Equity and Resilience ([SAFER](#)) program. The SAFER program includes mandatory consolidation, heavily incentivizes regionalization, and appoints administrators to oversee failing systems.

Tradeoffs Between Affordability, Financing, and Safety

In the [previous session](#), participants discussed the three primary goals of utilities. Utilities seek to (1) ensure water is affordable for households (i.e. household affordability), (2) ensure their fiscal health to continue operating reliably (i.e. community affordability), and (3) invest in infrastructure to ensure that can they continue to meet regulatory requirements and so on. Systems that are strained financially must begin to make trade-offs between these three goals. The most expensive component of providing water services is treatment, but it is also essential for human and ecosystem health. Are there ways to rethink or prioritize how we treat water for consumption and sanitation?

The federal government established the Clean Water and Safe Drinking Water Acts in the 1970s to create regulatory standards for water quality because many local utilities were failing to provide safe water for drinking and sanitation. Initially, the federal government subsidized the cost of building treatment infrastructure so that utilities could meet these regulations. The simplest way to regulate

these systems was to mandate the use of certain types of treatment technologies; therefore, the federal government subsidized small, medium, and large utilities constructing a suite of specific treatment technologies reliant on centralized infrastructure. Small systems, however, simply do not have the number of customers, and consequently the economies of scale, necessary to sustainably finance traditional infrastructure for treating water without continued federal subsidies.

Lack of financial resources has cornered many utilities into making tradeoffs between those three goals as the cost of maintaining and updating mandated infrastructure exceeds their financial capacities. A pertinent example are the tradeoffs that utilities in Flint, MI made when they transitioned to a new water source because the current water source was no longer affordable. In an attempt to make the transition at the lowest cost possible, utilities made numerous tradeoffs that contributed to the Flint lead crisis. These tradeoffs, however, have a hidden cost that can further undermine affordability. For example, the broken trust between customers and the Flint utility has meant that many residents today pay both for their water service and bottled water. The cost to the Flint utility, and utilities across Michigan, have also risen as the State has implemented new monitoring and reporting requirements, perhaps in part as a means of regaining the trust of its citizens. The new testing has also revealed the extent of lead contamination in utilities across the state due to lead service lines and has driven a new state goal to replace all lead service lines over the next 20 years. Michigan is also taking a proactive stance on testing drinking water for emerging contaminants, particularly PFAS, though the additional testing for lead and PFAS is expensive. The state is attempting to create funding opportunities to help cover these additional costs and to help utilities meet new water quality requirements. When regulations exist without funding, however, tradeoffs necessarily are made that could result in negative public health impacts. If treatment infrastructure is the most expensive component for utilities to cover, then it may be time to rethink water infrastructure and create regulations that encourage more flexible, low-cost solutions.

Rethinking Water Services

States oversee a mixture of urban and rural systems, but most of the legislature and discussion around affordability has centered on helping low-income households in urban settings. The bigger picture, however, is that water infrastructure needs to be rebuilt and modernized across all communities in the U.S. and ratepayers do not have enough money to fund the replacement costs. The federal government is the obvious source of funding to subsidize those costs, especially as some of the costs are imposed by federal legislation that require and incentivize rural communities to build centralized tertiary water systems that are not affordable for smaller communities. The water sector should look to the energy sector and its revolutionary shift in energy distribution across the grid using real-time supply and demand data. Energy, like water, traditionally relied on centralized power plants. Now, the energy system includes decentralized sources such as solar panels from households, wind farms, and so on. The water grid may also need to explore significant changes, like these, to modernize, particularly as climate change is radically altering supply and demand patterns.

One approach to rethinking water treatment could be to lower infrastructure costs by introducing decentralized treatment technology that is deployed throughout the developing world. These small-scale, low-tech systems would be far more affordable for more remote, smaller areas. This would require a change in regulations to allow utilities to implement technologically appropriate, sustainable, and affordable treatment systems. Some systems may explore adopting point of use and point of entry

technologies as more tenable solutions. A decentralized treatment approach presents some challenges. First, there is not a robust market for water treatment technology to drive down the costs, regardless of whether the treatment is centralized or decentralized. This is because there are too few systems willing to try new technologies at the risk of jeopardizing public health, resulting in a small market. Second, it is difficult to maintain and ensure point of use products are working correctly without continual testing and assurance (e.g., difficulty in ensuring residents change their air filters in their homes or water filters in their refrigerators). It is a significant challenge to adopt a new technology, ensure it is working, and reach scale. Third, many states will struggle with how to permit these systems to meet regulatory requirements. It is much easier to permit a small set of technologies that are known to work than it is to allow a market to develop that may result in hundreds of treatment options.

States may also rethink how they approach regulatory compliance. For example, the state of New Mexico is working with communities to help diagnose their water quality problem and design a solution that is affordable and meets their needs. This approach is different from the traditional tactic, which has been to refer communities to engineering firms that profit from designing complicated and expensive solutions that are beyond the communities' capacity to afford. The new approach that New Mexico is taking will ideally create long-term sustainable and affordable solutions for its communities.

Moving Forward

The water sector has a unique opportunity to rethink how we build our water infrastructure grid. Communities are still living on subsidized investments made by the federal government for water infrastructure from the 1950s to the 1980s. Ratepayers cannot finance that scale of investment to rebuild currently failing infrastructure. Going forward, the federal government will need to subsidize replacement costs and/or rethink current water infrastructure, particularly treatment technologies. This is especially true in the midst of the ongoing pandemic and economic recession. The economy cannot recover in communities that do not have clean water or sanitation.

The costs of a modern water infrastructure grid could be less expensive if rebuilt differently. Envisioning a new water grid requires identifying what works and does not work with the current system. This includes revisiting plumbing codes, fire suppression systems, or centralized treatment technologies. The water sector must take this opportunity to shift its water paradigm before spending trillions to rebuild a water grid that struggles to meet the needs of the 21st century.

A modern water grid must be equitable, sustainable, and affordable. A utility that is affordable for the community will be more affordable for their customers, including individual households. It remains a red herring that federal assistance programs exist to subsidize electricity, housing, food, and even cell phones for low-income households, and yet there is no such program for water. If the essential purpose of government is to provide for the collective welfare and well-being of communities, then there has been a substantial and systemic failure in political will around water, despite how essential this resource is to life and economic development.

Key Takeaways from the Chat Box

- I would be interested in hearing more about how states are thinking about incentivizing regionalization projects that are not consolidation. There are numerous examples of incentives for consolidation, but not as many for the other regional approaches.

- The WI Department of Natural Resources offers additional points in its eligibility scoring for principle forgiveness funds for applicants "with a newly executed agreement between two or more public water systems to improve technical, managerial or financial (TMF) capacity." <https://dnr.wisconsin.gov/aid/documents/EIF/Guide/PF.html#other>
- Kentucky regionalization legislation is SB 409, enacted in 2000. You can read more about it here <http://uswateralliance.org/sites/uswateralliance.org/files/State%20Policymakers%27%20Toolkit.pdf>