

an efficient capital market, assume away all of these social equity (and other) imperfections.

Over quite a range of policy making, governmental agencies have attempted to ameliorate market imperfections in housing, inner city, agricultural, fishing, utility, and other sectors in order to allow these sectors to get investment dollars from local and national capital markets.¹ Perhaps the most visible example of this type of public/private partnership is the federal government's Rural Utility Service (RUS), formerly known for nearly fifty years as the Rural Electrification Administration (REA) of the U.S. Department of Agriculture.

Rural Electrification Administration

The REA was established in 1935 in order to promote the social goal of bringing affordable electricity to farms and rural communities. This was clearly a social decision where the executive and legislative branches decided that it was a national goal to ensure that all Americans residing in rural areas would be able to take full advantage of the benefits of having electrical power available to them.

¹ A partial listing of some revolving loan programs that involve various kinds of public/private partnerships and that indicates the wide-spread use and the success of the approach includes 1. The Title IX Revolving Loan Fund authorized by *20 Illinois Compiled Statutes 3505*, a joint effort of Illinois and the federal government to provide supplemental financing to manufacturing companies in specific economic development districts; 2. The Alaska Division of Investments, Commercial Fishing Revolving Fund providing low-interest loans to fishing boat owners; 3. The Memphis Tennessee Revolving Loan Program, funded by local banks, the Office of Community Planning and Development, U.S. Department of Housing and Urban Development, and not-for-profit groups in order to increase the loan pool available for small businesses; 4. Detroit Industrial Stabilization Revolving Loan Fund with an interest rate of prime minus 4 percent assisting qualified businesses within the City of Detroit; 5. The Virginia Revolving Loan Fund, established in 1996 by the Virginia General Assembly to provide low-interest loans in order to help fix residential and small business sewage problems where connection to a public system was not feasible and; 6. A Business Revolving Fund established to help businesses within five Southern Colorado counties able to create new jobs and which have been turned down by conventional financing sources.

Market failure occurred because the utilities that might otherwise be expected to serve the rural areas lacked the economies of scale necessary to attract capital in a way that would result

Market failure occurred because the utilities lacked the economies of scale necessary to attract capital.

in affordable electric prices for their potential rural consumers. The REA made “below market rate” loans of various kinds available to municipal and cooperative electric utilities. The REA program was a great success in achieving the societal goal of rural electrification. Later, the REA began to make similar loans available to telephone utilities, including investor-owned utilities as eligible loan applicants.

Interestingly, the REA/RUS has a history of making tax-funded monies available to both investor and noninvestor-owned utilities. The underlying rationale, as with most

By using loan funds as leverage, the government can get the private sector to accomplish social goals at a lower net cost.

government-funded revolving loan programs, is that by using loan funds as leverage, the government can get the private sector to accomplish social goals at a fraction of what it might otherwise (on net) cost the government to do itself. This cost savings is not necessarily due to the relative efficiencies of the private versus the public sectors. Rather it is due to the ability of the government to lend, say, a million dollars that reduces the cost of capital to a utility, which then might make it economically feasible for the utility to go to the capital markets for a 50 million-dollar investment to provide utility services to rural areas. By virtue of its one million-dollar loan the government, in this example, has leveraged a 50 million-dollar investment. Absent the availability of an investor-owned utility, a local, state, or federal agency might have to come up with the 50 million dollars itself, if it needed the utility service to be provided.

With this type of revolving loan fund taxpayers benefit because the loan monies are repaid with interest, and by avoiding the direct cost (to the government) of having to

provide these services. The cost to the taxpayer is the cost of paying the difference between the capital rates demanded by financial markets and the rates the revolving fund administrator feels are affordable by, say, rural consumers. The benefit to society is the assurance that rural customers receive reliable utility service.

The Safe Drinking Water Act Revolving Loan Fund

Following in the well-established tradition of government-funded revolving funds, the 1996 Safe Drinking Water Act (SDWA) called for the creation of a Drinking Water

Participation in the drafting of the IUP is a key point for state commission participation.

State Revolving Fund (DWSRF) in each state that could be used to accomplish various social and environmental water quality goals.² Specifically, Section 1452 of the SDWA authorizes the U.S. Environmental

Protection Agency (USEPA) to award capitalization grants to states, which would be used by states to provide low-cost loans and other types of assistance to eligible systems.³ Each state primacy agency must submit an Intended Use Plan (IUP) to the USEPA describing how it will implement its DWSRF loan program. Participation in the drafting of the IUP is a key point for state commission participation. State commissions may wish to participate in the original IUP as well as in the annual updates required. State commissions may also need to participate in the crafting of inter-agency memoranda of understanding.

\$1.275 billion federal dollars will be apportioned to the states to address priority water infrastructure needs and capacity problems. Ultimately the capitalization of the

² Safe Drinking Water Act Amendments of 1996 (P.L. 104-182), see also *Drinking Water State Revolving Fund Program Guidelines*, USEPA, www.epa.gov/ogwdw/docs/guidetoc.html, 2/28/97.

³ John D. Borrows and Todd Simpson, *The Drinking Water State Revolving Loan Fund: A Guide For Regulatory Commissions* (Columbus, Oh: The National Regulatory Research Institute, 1997).

state-operated loan funds is expected to exceed \$9 billion. State commissions have long been concerned about how best to help under capitalized and inefficiently run small investor-owned water utilities. The 1996 SDWA offers funding and a clear mission: promote compliance through capacity development. This mission is one that most state commissions are very comfortable with, as it expresses a central concern of many state commissions--how to ensure the provisioning of affordable and safe drinking water.

PART TWO: PENNVEST

About PENNVEST

The Pennsylvania Infrastructure Investment Authority (PENNVEST) was established in 1988 by the Pennsylvania legislature as a way of providing focused funding for priority water infrastructure improvements. PENNVEST was preceded by a Water Fund Loan Board formed in 1984. PENNVEST is unique in that it came about mostly as a result of state action rather than as a response to a federal mandate and is funded by state bond revenues.⁴ While some of the structure and operations of PENNVEST directly reflect the water policy environment in Pennsylvania, the PENNVEST program is worth studying because it shows what one state's view is of a comprehensive infrastructure investment program. Since its inception, more than \$1.6 billion has been made available for improvements to Pennsylvania's drinking water, sewer, and stormwater systems.⁵

⁴ At least 33 state water funding programs exist and include the North Dakota Community Water Facility Revolving Loan Fund which makes supplemental loans to public entities when the project is above the maximum loan limits, and the Alaska Water Resources Revolving Loan Fund. See also Janice A. Beecher and Patrick C. Mann, *Meeting Water Utility Revenue Requirements: Financing and Rate-making Alternatives* (Columbus, OH: The National Regulatory Research Institute, 1993), 99-105; Bank of North Dakota, *Community Water Facility Revolving Loan Fund*, <http://www.banknd.com/special-loan-community-water.htm>, accessed 3/11/97; and Alaska Legal Resources Center, *Chapter 86 Water Resources Revolving Loan Fund*, <http://www.touchngo.com/Igicntr/akstats/Statutes/Title45/Chapter86.html>, accessed 3/11/97 [see also Alaska Statutes 46.03.032 for the Clean Water Fund, AS 46.03.036 for the Drinking Water Fund, and AS 46.03.034 and AS 46.03.038].

⁵ Governor Tom Ridge, *Water, Sewer and Stormwater: Utility's Guide To Financial and Technical Assistance Programs* (Harrisburg, PA: PENNVEST, 1995), 1.

In 1995-96 PENNVEST approved \$110 million in financial assistance, \$108 million was in the form of low-interest loans with 20-year terms. PENNVEST has a staff of approximately 20, with regional specialists.⁶ It is capitalized by over one billion dollars in Commonwealth bond and state funds, and over \$400 million in federal revolving loan funds. PENNVEST has awarded over \$1.6 billion in financial assistance.⁷ In 1996 the PENNVEST Board selected a private firm to be its financial advisor and converted its variable rate debt to long-term fixed-interest bonds. Currently PENNVEST bonds are rated AA+.

PENNVEST has three primary programs, but also makes loan applicants aware of other sources of federal and state financial and technical assistance.⁸ These programs are

- **Construction Loan Program⁹**

This program makes low-interest and supplemental grants for drinking water, stormwater, and wastewater projects, including industrial wastewater systems. Up to 100 percent of eligible project costs may be financed, with a general cap of \$11 million per project, unless multiple municipalities are served. Assistance is in the form of low-interest loans, with some supplemental grant funds being available to defray extremely high user costs. Interest rates vary due to capital market fluctuations. Generally loans are for 20 years with interest rates ranging from 1 percent to 5 percent. Loan applicants are eligible for an expedited rate

⁶ Pennsylvania Infrastructure Investment Authority, *Liquid Assets* (newsletter)(Harrisburg, PA: PENNVEST, Summer 1996), 5-6.

⁷ Pennsylvania Infrastructure Investment Authority, *1995-96 Annual Report* (Harrisburg, PA: PENNVEST, 1996), 4.

⁸ Inspection of PENNVEST's 1995 *Water, Sewer and Stormwater* report reveals in the Table of Contents 35 financial and technical assistance programs from at least ten different sources, in addition to the three programs run directly by PENNVEST.

⁹ *Water, Sewer and Stormwater*, 4.

review process by the Pennsylvania Public Utility Commission in order to facilitate debt service repayment. Municipalities, authorities, and some private entities are eligible. Financial assistance is available for construction, improvement, expansion, extension, acquisition, repair or rehabilitation. Small grants are also available.

- **Advanced Funding Program**

Low-interest loans and supplemental grants can be used for feasibility studies, design, and engineering of drinking water and stormwater systems. Design, engineering, and feasibility studies for wastewater systems may also be funded. Public and private entities are eligible for funding to help them finance the cost of the preliminary tasks required in order to apply for a PENNVEST construction loan. These are five-year loans whose approval does not guarantee the subsequent awarding of a construction funding loan. If construction funding is later approved, the advance funding loan can be made a part of the construction loan. Assistance is in the form of low-interest loans, with some limited grant assistance. Interest rates are calculated in the same way as for construction projects.¹⁰

- **On-Lot Sewage Disposal Systems Program**

Homeowners are able to get 1 percent interest loans for up to 15 years for amounts ranging from \$1,500 to \$15,000. This program is the result of a cooperative effort between PENNVEST, the Pennsylvania Housing Finance Agency, the Department of Environmental Protection, and local financial institutions to provide funding to meet public health and environmental needs arising from malfunctioning on-lot systems where public collection and treatment systems are not practical in the immediate future. Eligibility is means tested and

¹⁰ Water, Sewer and Stormwater, 5.

eligible costs include testing, design, permits, and construction. Eligible family income can not exceed 150 percent of the statewide median household income. The family income limit in 1997 was \$ 52,913.¹¹

How PENNVEST Is Organized

Unlike a state commission PENNVEST is set up to process loans and to refer requests for technical assistance. PENNVEST has developed three key flow charts that depict the application process for financial assistance for stormwater, drinking water, and wastewater projects. The processes are reasonably similar and feature a joint planning consultation meeting between the applicant and PENNVEST. The planning occurs after the applicant has had an initial meeting with the project manager. This step is an important one because it happens very early, but not before the applicant has had a chance to meet with the project manager and to digest the PENNVEST materials provided. The applicant subsequently fills out the required forms and supplies any necessary study reports.

In 1995-96 the sources of PENNVEST funding were revenue bonds and an assortment of general revenue funds and are shown in Table 1, expressed in terms of millions of dollars. Table 2 shows the 1995-96 funding categories and amounts in each category used by PENNVEST.

Lessons Learned From PENNVEST

¹¹ *Water, Sewer and Stormwater*, 6, supplemented by an April 1997 telephone conversation with PENNVEST Executive Director, Paul K. Marchetti. PENNVEST assists individuals by having developed a participating lenders list with 15 lenders. Pennsylvania Infrastructure Investment Authority, Pennsylvania Housing Finance Agency, and Department of Environmental Protection, *On-Lot Sewage Disposal System For The Individual Homeowner Funding Program*, (Harrisburg, PA: PENNVEST, n.d.).

The PENNVEST experience and features of its program are not necessarily identical to those components required under the SDWA. However, PENNVEST is an example of a successful and large-scale revolving loan fund that includes many aspects

| TABLE ONE | |
|---------------------------------------|------------------|
| SOURCES OF PENNVEST LOAN FUNDS | |
| Revenue Bonds | \$227.5 |
| Capital Budget | 150 |
| General Fund | 40.9 |
| 1981 Referendum | 225.4 |
| 1988 Referendum | 300 |
| 1992 Referendum | 350 |
| Federal Revenue Fund | 408 |
| TOTAL | \$1,701.8 |

Source: *PENNVEST 1995-96 Annual Report* (Harrisburg, PA: PENNVEST, 1996), 11.

| TABLE TWO | |
|--|------------------|
| 1995-1996 PENNVEST FUNDING CATEGORIES | |
| Sewer Loans | \$847.5 |
| Water Loans | 710.9 |
| Sewer Grants | 39.9 |
| Stormwater Loans | 21.7 |
| Water Grants | 15.6 |
| TOTAL (in million dollars) | \$1,635.6 |

Source: *PENNVEST 1995-96 Annual Report* (Harrisburg, PA: PENNVEST, 1996), 11.

LESSONS FROM PENNVEST

readily relevant to the SDWA state revolving fund that can be identified and used by other states. Two obvious benefits of the PENNVEST loan program are (1) lower water rates paid by consumers because of the use of PENNVEST low-interest loans rather than more expensive conventional financing, and (2) the simple ability of some utilities to obtain needed loans at all. Below, specific features have been identified and are discussed in relation to state implementation of the SDWA revolving loan program.

Expedited Rate Review

The PENNVEST program provides for an expedited rate review by the Pennsylvania Public Utility Commission (hereinafter the Pennsylvania Commission).¹² For state commissions this is an especially critical component in three ways. The first is the recognition by the state loan administrator that only a commission can authorize rates for investor-owned water utilities and must do so using established regulatory criteria that may or may not correspond to the criteria used by a loan agency. The second is the very strong comparative advantage state commissions have in financial analysis compared to other state agencies. Other state agencies in the water sector do have significant experience administering loans, but it would be difficult to believe all other state primacy agencies already had in place a fully functioning accounting, financial, revenue requirement, and rate analysis resource equivalent to that found in state public utility commissions. It would not be cost-effective for a primacy agency to unilaterally staff-up and duplicate these established commission resources. The key issue here is how state agencies can best share these technical resources in a way that benefits consumers.

The third is derived from the first two and is the need for an inter-agency agreement before the SDWA revolving loan application even begins. Just as a primacy agency will have standard operating procedures all applicants must go through, so too

¹² S. 751.14, *Title 35, Pennsylvania Consolidated Statutes*, 466.

does a state utility commission. Even an expedited review may seem slow and cumbersome to sister state agencies, but this is still likely as fast as a commission can act and meet its statutory duties. By negotiating an inter-agency agreement, a commission can educate other agencies as to the timing and procedural constraints that will be necessary at certain points in the loan approval process for investor-owned utilities.

The SDWA requirement that the applicant have a “dedicated revenue source” reinforces the important role of the state commission.¹³ The

Loan repayment expenditures are legitimate pass-through expenses that are calculated as a net add-on to customer bills.

Pennsylvania Commission can act to ensure that the PENNVEST loan principal and interest repayment expenditures are legitimate pass-through expenses that are calculated as a net add-on to customer bills. The surcharge disappears once the loan has been repaid. The advantage of a surcharge approach is that it allows expedited commission action as well as letting a commission (independently of the SDWA) review any and all parts of any subsequent utility application for rate relief without disrupting the flow of loan repayment funds.

Public and Private Community Water Systems Are Eligible

The benefit to the consumer is the loadstone against which PENNVEST programs are designed, not the form of ownership. Investor-owned water utilities are eligible to and have received low-interest loans.¹⁴ The large and medium-sized investor-owned water utilities in Pennsylvania are adequately financed and are not generally thought to be the candidates for loan funds. Instead, the focus has been on directing loan funds to financially troubled, capacity-challenged water utilities, some of

¹³ Borrows and Simpson, *State Revolving Loan Fund*, 20.

¹⁴ S. 751.3, *Title 35, Pennsylvania Consolidated Statutes*, 449.

which are very small investor-owned utilities. In many ways the problems of the rural and very small investor-owned water utilities are more severe than for any other category of water utility.

In practice, these investor-owned water utilities “go where no one else will go.” Generally since developers and trailer park owners never intend to be water utility operators and owners, they have backed into ownership of a utility by default. A municipal utility or other central water provider typically has refused to provide service for cost, engineering, or environmental reasons. In essence, an adjacent utility has concluded that the costs outweigh the benefits, in addition to any intrinsic small-scale economies problems. The result is a nominal investor-owned water utility that does not have the capacity to fully serve its customers. Refusal to lend infrastructure or capacity improvement money to this class of water utilities punishes the customers of the erstwhile utility.

State commissions may have two important roles to play here in order to ensure that the objectives of the SDWA are optimally achieved. The first role is to educate and

State commissions already have in place rigorous procedures that ensure that investor-owned utilities do not benefit financially from the loan funds.

assure state primacy loan administrators that state regulatory commissions already have in place rigorous procedures that ensure that investor-owned utilities do not benefit financially from the loan funds. Accounting systems

used by state commissions can assure that customers receive the full benefit of the loan, not the owners. In ratebase/rate-of-return regulation a legitimate expense must be incurred and recognized before a state regulatory commission will authorize the recovery of that cost. In an SDWA low-interest loan situation, a state commission would recognize only the low-interest payments due as eligible expenses. With accounting safeguards, the owners of the utility would not get an opportunity to earn a return on state-administered loan funds. State commissions also possess additional

authority sufficient to conduct oversight investigations and to issue any necessary orders needed to prevent any unintended consequences or arbitraging opportunities that allow state loan funds to benefit the owners of an investor-owned utility.

The second role is a nontraditional role where the state commission “reaches out” and actively participates in the preparation of and implementation of the SDWA required IUP.¹⁵ In order to receive federal funds and to be in compliance with the SDWA a state primacy agency must prepare, among other things, an IUP that specifies how the state loan program will be administered. If a commission does not participate in the drafting of the IUP, or in the required annual updating of the IUP, customers of the troubled-capacity investor-owned water utilities may not have fair access to the loan funds.¹⁶ State commissions can be invited by the primacy agency to be coauthors of the IUP, or state commissions can participate in the SDWA required public review and comment.¹⁷

A critical step in the preparation of the state IUP is the need to show the USEPA that the state has the authority to administer the program. State commissions may need to work with the state legislature to confirm the eligibility of small investor-owned water utilities.

Revolving Loan Funds Have to Be Repaid

Unlike grant programs, loans have to be repaid. Nonpayment violates the terms of the loan agreement between the utility and the primacy agency. It also denies funds to applicants in the “next” round. Just as a bank or other investor examines the net

¹⁵ Borrows and Simpson, *State Revolving Loan Fund*, 2.

¹⁶ Absent specific language in an IUP identifying investor-owned water utilities as being eligible, many small investor-owned utilities may not feel they can apply for loans and the loan administrator may *de facto* exclude or place investor-owned water utilities in a low-priority eligibility category. Either outcome would be counter to the intent and the specific provisions of the SDWA.

¹⁷ Borrows and Simpson, *State Revolving Loan Fund*, 2.

future revenue stream of the applicant, so too will the primacy agency. Because to an outsider it may look like a state regulatory commission can by administrative fiat simply authorize rates and virtually ensure the utility's net future revenue stream, there may be pressure on the commission to automatically approve higher rates. It will be important for the commission to educate its partner water sector state agencies about the legitimate complexities of the rate setting process.¹⁸

PENNVEST has a financial assistance form, with explanatory notes available for each applicant. The forms require that the applicant provide historical information (including other funding sources contacted) as well as looking forward in terms of future revenues. It is not a complicated form, but does force applicants to organize their information when they present their case for a loan.¹⁹

PENNVEST can receive revenues from a number of sources, including appropriated state funds, federal funds or grants, and proceeds from the sale of bonds. To date, the largest portion has come from bond revenues. Non-repayment of a loan by a utility not only hurts other utilities, but PENNVEST's own repayment to bondholders.

State Loan Programs Should Be LARGER Than Mandated

Good intentions notwithstanding, the USEPA will be spending a considerable amount of its effort ensuring either regional or national uniformity. This is both natural and proper. State agencies have a tendency in many public programs to become so preoccupied with compliance activities regarding matching requirements that they often

¹⁸ The NARUC Water Committee offers an excellent introduction to water utility rate setting twice a year in a week-long school that state commissions may wish to encourage key technical staff in their partner water sector agencies to take in order to better understand the rate setting process. Registration or additional information may be acquired from the Center for Professional Development, Florida State University, Tallahassee, Florida, 32306-2027, or by calling (904) 644-2653, or by e-mail to cjones@mail.fsu.edu.

¹⁹ Pennsylvania Infrastructure Investment Authority, *Financial Assistance Application* (Harrisburg, PA: PENNVEST, n.d.).

do not recognize the opportunity a federal program presents to develop a statewide program that clearly meets the unique needs in their state. Consider this simple example. Two states implement a funded federal mandate to do A, B, and C. One state funds only the minimum match, while the other has a match larger than required. Both states independently decide that “D” is vital to their state and authorize loans also for D. Because D is an ineligible loan item, one state may eventually have the USEPA disallow (in some form) the loan, while the other state can go ahead because its “nonrequired” match allows it to leverage loan monies independently of the federal money.²⁰ The “minimum match” state will then spend time justifying exceptions and special cases and have its loans to its client utilities be of unknown stability. The “match-plus” state can simply say “No problem, we funded D out of state extra match monies” and go about the business of meeting the specific needs of consumers in their state.

The SDWA implicitly recognizes the ability to have a larger match by specifying that the 20 percent state match is a minimum.

The SDWA implicitly recognizes the ability to have a larger match by specifying that the 20 percent state match is a minimum.

The PENNVEST program is mostly state-funded, so it generally has the freedom to fund whatever it finds to be good public policy, without having to seek federal approval. Also, in the case of nonpayment by a utility, having additional state matching funds means that the total amount of federally provided SDWA revolving loan funds awarded the state can be leveraged without necessarily having to go back and seek additional matching funds from the state legislature.

²⁰ Of course, specific accounting procedures will be needed to demonstrate this excess match. Prudence may even dictate informing the USEPA in advance of the separate nature of the excess match and how it will be used.

Importance of “Advance “ Loans

The PENNVEST program has an advance funding program that is intended to help systems that otherwise would not even be able to apply for a standard construction loan. This type of assistance makes a lot of sense as the overall loan

A state needs to provide technical and financial assistance to some utilities just so they can even apply for loans.

program is intended for water utilities that can not otherwise obtain capital through conventional means.

Independently of applicable SDWA provisions, a state may need to provide technical and financial assistance to

some utilities just so they can even apply for loans. A small percentage of these assisted utilities may even be able to obtain capital through conventional channels. A state plan can be written so that the “excess state match” can be used to leverage other loan funds for “advance” loans.

Innovative Design

The individual on-lot sewage program is an innovative approach to solve the problem of sewage disposal for low-to-moderate income families in situations where centralized provisioning is unlikely and where health or environmental problems exist. The thrust is on how to solve a problem, rather than on the process. The innovative response was multi-agency and involved local financial institutions. In designing loan programs, the key thought is how, where, and when to leverage loan funds, not the application process itself. As USEPA Drinking Water State Revolving Fund Program Project Manager James Bourne points out, “States have the primary responsibility to design, implement, and operate the DWSRFs.”²¹ Unlike the Clean Water Act loan

²¹ James Bourne, *Update on DWSRF Implementation*, presentation (handout) at the National Association of Regulatory Utility Commissioners Winter Meeting, Washington, D.C., February 23, 1997, 2.

program and some other federal programs, the USEPA is at least initially inclined to let the states design revolving loan programs as long as they fit within the broad parameters of the 1996 SDWA.

A Multi-Agency “Tool Bag” Approach

The PENNVEST program does not seek to solve all water utility financial problems by itself. Instead it uses a multi-agency tool bag approach. As can be seen in Table 3 below, there are at least 38 programs that can be used to provide financial and technical assistance to eligible water utilities and households in Pennsylvania.²² The tools include loans, grants, and technical assistance. Every state has a similar inventory of tools available to it, although not necessarily of the same scope or magnitude. The trick is to identify and integrate this information in a form that all state agencies and potential applicants can

understand and use. In Pennsylvania the consolidated information is available in various forms, including *Water, Sewer and Stormwater: Utility’s Guide To*

The statutes authorizing PENNVEST recognizes the water problem to be multidimensional.

*Financial and Technical Assistance Programs.*²³ The statutes authorizing PENNVEST²⁴ recognize the water problem to be multidimensional. They find that public health, affordability, economic development, and environmental issues are relevant. This

²² Under the SDWA a state may administer its loan fund in conjunction with other state loan funds such as the Clean Water State Revolving Fund (CWSRF). Borrows and Simpson, *State Revolving Loan Fund*, 9.

²³ Published by Pennsylvania Infrastructure Investment Authority, 1995.

²⁴ Section 751 of the *Pennsylvania Consolidated Statutes*, 1992.

holistic mind set was, in part, responsible for the multi-agency tool bag approach.²⁵
PENNVEST was just the most visible and

²⁵ For example, in a brochure to applicants, PENNVEST notes that “...every PENNVEST dollar invested in clean water projects spurs \$2.50 in private investment.” Pennsylvania Infrastructure Investment Authority, *PENNVEST Pennsylvania’s Doorway To The Future* (Harrisburg, PA: PENNVEST, n.d.).

| TABLE 3 WATER FINANCIAL AND TECHNICAL ASSISTANCE PROGRAMS | |
|--|---|
| <p>PENNVEST Infrastructure Investment Authority</p> <ul style="list-style-type: none"> • PENNVEST Construction Loan Program • PENNVEST Advance Funding Program • PENNVEST On-Lot Sewage Disposal Program <p>Pennsylvania Department of Environmental Protection</p> <ul style="list-style-type: none"> • Small Water Systems Outreach Program • Small Water Systems Regionalization Grant • County Water Supply Planning/Wellhead Protection • Formation of Water Authorities Grant • Wastewater Operator Outreach • Act 537 Sewage Facilities Planning Grants • Act 537 Sewage Enforcement • Reimbursement Grants • Act 339 Sewage Treatment Plant Operations Grant • Act 167 Stormwater Management Planning Grants <p>Pennsylvania Department of Commerce</p> <ul style="list-style-type: none"> • Community Facilities Grant • Site Development Grant • Business Infrastructure Development • Appalachia Regional Development Supplemental Grant • Pennsylvania Economic Development • Financing Authority <p>Pennsylvania Department of Community Affairs</p> <ul style="list-style-type: none"> • Community Development Block Grants/Small Communities Entitlement and Competitive Grants • Circuit Rider • Council of Governments/Intermunicipal Projects • Local Government Capital Projects Loans • Municipal Training • State Planning Assistance Grant • Small Communities Planning Assistance | <p>Rural Economic and Community Development</p> <ul style="list-style-type: none"> • Homeownership Loans • Water and Waste Disposal Grants and Loans • Rural Business Enterprise Grants • Housing Preservation Grants • Rural Rental Housing Loans <p>Economic Development Administration</p> <ul style="list-style-type: none"> • Public Works and Development Facilities (Title I) • Economic Adjustment (Title IX) <p>Pennsylvania Rural Water Association</p> <ul style="list-style-type: none"> • Training and Technical Assistance <p>Rural Housing Improvements, Inc.</p> <ul style="list-style-type: none"> • Rural Community Assistance <p>Pennsylvania Public Utility Commission</p> <ul style="list-style-type: none"> • Public Utility Technical Assistance <p>American Water Works Association</p> <ul style="list-style-type: none"> • Small Water Systems Volunteer Network <p>Pennsylvania Department of General Services</p> <ul style="list-style-type: none"> • Federal Surplus Property Donation <p>Private Foundations</p> <ul style="list-style-type: none"> • Private Foundations |

Source: PENNVEST, *Water, Sewer, and Stormwater: Utility's Guide to Financial and Technical Assistance Programs* (Harrisburg, PA: PENNVEST, 1995), 2-3.

clearest manifestation of this policy in Pennsylvania. While PENNVEST is housed in an agency, it has not been captured by that agency's mission and client. One important reason is the composition of the PENNVEST Board. The 13-member Board is chaired by the Governor and has the following members: The Secretary of Environmental Protection, Secretary of Commerce, Secretary of Community Affairs, Secretary of General Services, Secretary of the Budget, two Senators and two Representatives (one from each party), three appointments by the Governor (one engineer, one representative of the water systems, and one local government association representative). While this list reflects the specific situation in Pennsylvania and need not be copied exactly, it does reinforce the notion that the loan authority should have wide representation in order to encourage all affected agencies to participate in an optimal manner. One omission in the PENNVEST Board membership is the Pennsylvania Commission. It is not clear why the commission is not included. One reason, however, may be because state commissions typically do not have loan or outreach programs. Another may be a need to let a commission avoid an implied "preapproval" of a rate surcharge by virtue of commission membership on the revolving fund board.

Each state commission would have to make its own judgement about whether it wants to be included on an equivalent board in its state. The core argument for a commission being on a board is that it is the only entity having the authority over investor-owned water utilities that can authorize rates that allow repayment of revolving loan funds. A second argument is that state commission staff have a strong core of accounting, financial, and engineering skills that should prove to be an invaluable component in promoting and remediating capacity development problems. If an affirmative decision is made, a Commission would need to participate in the drafting of a state IUP. If legislation is required, the Commission may also need to participate in this process also.

Another component of a multi-agency tool bag approach is its compatibility with

Capacity development is a process to identify stakeholders and bring them together.

the “capacity development” thrust of the SDWA. As Scott Rubin points out “Capacity development is a process..[to] identify stakeholders [and] bring them together.”²⁶ This means that the Pennsylvania multi-agency approach,

which was intended to be holistic, but which was not designed in response to any particular federal mandate, may be the right direction to go. Capacity development requires more than one

Capacity development requires more than one quick fix from one agency, using only one approach.

quick fix from one agency, using only one approach. Throwing money in the form of low-interest loans at troubled water utilities will not be effective if the utility lacks the managerial, engineering, and operational competence to spend the loan funds effectively.

It is also interesting that the PENNVEST approach and the SDWA use a number of the same funding tools: loans, refinancing of existing debt, guarantee for purchase of insurance for local debt obligations, and the ability to earn interest on fund accounts. This similarity makes aspects of the PENNVEST even more suitable for imitation.

Continuing Education of Operators

The PENNVEST statute has a requirement that

No agreement with individuals or entities shall be valid in the absence of an agreement by the individuals or entities seeking assistance under this

²⁶ Scott J. Rubin, *Capacity Development - More Than Viability Under A New Name*, presentation (handout), the National Association of Utility Regulatory Commissioners Winter Meeting, Washington, D.C., February 23, 1997, 1-2.

act to assure that system operators are participating or will participate in continuing education programs developed by the Department of Environmental Resources. If the board determines that the system operator of a system receiving assistance is not participating in continuing education programs, the board shall take all steps necessary to cease all financial assistance and recover prior payments...²⁷

This strong declaration by the Pennsylvania Legislature is a pre-SDWA recognition that capacity development requires technical and managerial competence on the part of system operators in addition to the loaned funds. Other state loan fund administrators may wish to consider a similarly strong policy. Provisions in the SDWA would support an effort by state loan administrators to implement certification and training programs. Two keys to its successful implementation are monitoring and having legitimate certificate-type courses available. State commission accounting and engineering staffs should be very helpful in designing courses or serving as instructors.

By participating in the drafting of the state IUP a commission may be able to use some of the 2 percent technical assistance set-aside funds to provide technical assistance to small, weak-capacity, investor-owned water utilities. Because state commissions already have engineers, accountants, financial, and management practices experts, they may be the least-cost alternative available to the primacy agency.

Coordination With Other Funding Sources

While the coordination process never works perfectly, the PENNVEST staff does know that there are dozens of possible sources of assistance that can be used. Some effort is needed to

There are dozens of possible sources of financial and technical assistance.

²⁷ Section 751.10 (j), Title 35, *Pennsylvania Consolidated Statutes*.

ensure that the different agency perspectives are brought together in an optimal manner. The PENNVEST experience looks promising and provides a convenient forum for cooperation and coordination.

Understated Role of Commission

The listing in Table 3 shows the Pennsylvania Public Utility Commission only as offering a technical assistance program for water utilities. This listing understates the role of the Pennsylvania Commission, particularly in regards to investor-owned utilities. The expedited rate review, for example, is an important component of the PENNVEST loan program. Independent of any loan program, the Pennsylvania Commission has the ability to authorize rates that can pay for infrastructure improvements. This rate approval role may become even more important as investor-owned water utilities seek loan monies.

The SDWA requires a dedicated repayment source for all loans.²⁸ For investor-owned water utilities likely to be selected for the loan fund program, this means the state commission will play a definitive role. Since these candidates typically have exhausted all other conventional financing avenues, they may lack sufficient collateral to secure the DWSRF loan. As in the PENNVEST case, a commission can develop procedures to expedite rate increase approvals, and establish rates sufficient to ensure repayment: effectively creating a dedicated repayment source.

The SDWA has three main criteria the state drinking fund administrator must use to set its lending priorities. Affordability is one of the three criteria and is a clear area where state commissions have an established expertise. State regulatory commissions regularly analyze the impact of costs on customer bills and the avoidance of “rate shock.” While other state agencies have enduring concerns in this area, state commissions are staffed in a way that allows financial and accounting experts to

²⁸ Bourne, *Update on DWSRF Implementation*, 5.

analyze what combination of equity, loans, and expense-recovery best minimizes the net impact on customer bills. While a commission's role may be understated, it would be efficient for the primacy agency to leverage the customer service, financial and accounting expertise of state commission staff in their assessment of affordability.

Priority Given Compliance and Public Health-Related Projects

Both the SDWA and PENNVEST give priority to those utilities requesting a loan so they can be in compliance with existing rules and public health regulations. This useful policy perspective is helpful to

fund administrators. This helps move the loan selection process away from an "entitlement perspective" to one where the highest priority water utilities receive assistance first. This approach does not

Does not focus on the form of ownership, rather the level of need for a loan for compliance and public health reasons.

focus on the form of ownership, rather the level of need for a loan for compliance and public health reasons. This perspective should help the small, weak-capacity, investor-owned and municipal water utilities in the loan application process, as they would likely be in the highest priority loan category. A well-written state IUP that clearly stated the priority to be given for compliance and public health projects would let the healthy water system operators know in advance what their chances are for a low-interest loan.

Joint Action Model

PENNVEST uses two very important joint meetings early on in the application process. After the applicant has met with the loan project manager, an initial joint planning consultation meeting is held between PENNVEST and the applicant. The joint conference approach followed by PENNVEST is especially useful at this stage because it allows potential applicants and the state loan administrators to meet and discuss

where the applicant may fit in terms of established priorities. It allows for the applicant's questions to be answered and to work out logistical details before it expends significant resources on its loan application effort. A second joint meeting occurs after initial materials have been prepared. These face-to-face meetings allow problems to be resolved and to let parties share expectations in an informal setting.

A Mix of Loans and Grants

The PENNVEST program primarily uses low-interest loans for approximately 96 percent of its projects, with other monies being disbursed in the form of water and sewer grants. This suggests that a state IUP may need to be designed with the

Some applicants may need grants and may not be eligible for loans.

expectation that some applicants may need grants and may not be eligible for loans. The intent of the SDWA, however, is not to pump money into nonviable, weak-capacity systems, or to

design financial incentives supporting the spread of such systems. A revolving loan program may need to use a multi-agency "tool bag" approach to assist the weakest systems. It may also need a clear policy statement about its use of grants versus loans.

Public Referendums

The PENNVEST statute²⁹ required a referendum at the next election. The voters affirmed the use of the revolving loan approach to raise water infrastructure funds. PENNVEST and its predecessor went before the voters of Pennsylvania a total of three times asking for increased funding. Each time, the voters approved significant funding amounts. This suggests that a state might wish to consider a referendum as an approach to raise additional loan or matching funds.

²⁹ S. 751.16, *Title 35, Pennsylvania Consolidated Statutes*, 467.

Operating Funds

The Pennsylvania Legislature authorized funds for the operation of PENNVEST. Although the SDWA does allow in various ways for administrative expenses to be covered, a state could also follow the Pennsylvania approach. In order to achieve state water goals it is nearly always better to have state funds be used for operating purposes. This frees up more SDWA federal funds to be used directly for loans to water utilities. In 1995-96 PENNVEST was able to finance its ongoing administrative needs through revenues from loan repayments.³⁰

³⁰ Pennsylvania Infrastructure Investment Authority, *1995-96 Annual Report*, Harrisburg, PA: PENNVEST, 1996, 1.

PART THREE: THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Role of The Pennsylvania Public Utility Commission

As noted above the Pennsylvania Public Utility Commission plays three roles in the PENNVEST process.³¹ The Pennsylvania Commission's first role lay in negotiating inter-agency agreements between the several state agencies

State commissions have a wide range of other activities that they employ in order to ensure that utilities provide safe and affordable water.

involved in water provisioning in Pennsylvania. Inter-agency agreements or memorandums of understanding are nearly always time-consuming to negotiate, but are widely recognized as being beneficial. Memorandum of Understanding (MOU) or inter-agency agreements take time to negotiate because of the different underlying missions of the agencies involved, rather than from any "turf protection." A state health agency may, for example, feel frustrated by a commission's unwillingness to agree in an MOU to automatically approve the cost recovery of all health department mandated health-related water utility improvements. Equally, a commission could not surrender its cost-recognition and rate-approval powers when doing so may not be in the best interest of consumers. Commissions in such instances have a better appreciation than other agencies of whether loan costs should be

- Expensed, annualized, or capitalized,

³¹ While this analysis views the actions of the Pennsylvania Commission in terms of the PENNVEST loan process, it is important to recognize that state commissions have a wide range of other activities that they employ in order to ensure that utilities provide safe and affordable water.

- Shared with the consumer or shareholder, and
- Regarded as normal operating costs that are already included conceptually in the revenue requirement, or whether they represent costs requiring an adjustment to the revenue requirement: and whether a surcharge is appropriate.

The long time inter-agency agreements typically take may need to be shortened considerably as state primacy agencies seek to prepare a plan and secure state funding. Given the not very widely understood nature of commission work, a prudent commission may wish to educate its sister state agencies as soon as possible in order to facilitate the process. While not provable, few would disagree with the proposition that a signed and well-crafted state inter-agency agreement would save time, effort, and money in the SDWA implementation phase. The primary benefit of a signed inter-agency agreement is that each agency knows what to expect. This minimizes conflict and maximizes the ability of optimally configured multi-agency responses to the needs of investor-owned and municipal water utilities.

In its second role the Pennsylvania Commission fashioned a technical assistance program designed to provide information and to expedite the rate case process. Any regulated water utility is eligible, but generally assistance is given to utilities having \$200,000 or less in annual revenues. The technical assistance is positive and seeks to assist the utility in complying with service quality standards and to provide assistance with rate structure issues.

The expedited rate process can be used for either of two special circumstances:

1. Short-form filings, requiring significantly less information than standard filing forms, are available for small utilities with less than \$200,000 in annual revenues.

2. Pass-through filings for rate increase requests intended solely for the purpose of defraying expenses associated with the repayment of a PENNVEST loan, the purchase of water from another provider, or the purchase of electricity.³²

In its third role the Commission established a PENNVEST repayment policy through a policy statement and an order.³³ The key points in the policy statement were

- The Commission is required to establish expedited practices to accomplish the repayment of PENNVEST loans.
- Utilities with PENNVEST loans are encouraged to apply for an automatic adjustment clause limited solely to the recovery of the utility's net after-tax PENNVEST principal and interest obligations, rather than requesting relief under a base rate filing.
- Utilities are encouraged to file advance notice to the Commission, but rate recovery is dependent upon Commission approval and a PENNVEST amortization schedule.
- When rate recovery is approved by the Commission the utility must list the PENNVEST obligation on the customers' bills as a separate item. The utility must pay PENNVEST directly from these funds.
- Monies collected under the PENNVEST automatic adjustment clause are subject to reconciliation and refund.
- PENNVEST dedicated revenues should be listed in a separate account. Comingling is discouraged.³⁴

³² *Water, Sewer and Stormwater*, 38. If a complaint is filed, however, the Pennsylvania Commission is obliged to hold at least one hearing before an Administrative Law Judge and to undertake further hearings or other actions as may be needed.

³³ *Pennsylvania Bulletin*, Vol. 23, No. 30, July 24, 1993, 3466-3478.

³⁴ *Pennsylvania Bulletin*, Vol. 23, No. 30, July 24, 1993, 3478.

By this policy statement the Commission made clear its intention to expedite its part of the loan approval process and to ensure that the rate increases were limited strictly to interest and principal repayments to PENNVEST.

Lessons Learned from the Commission's PENNVEST Experience

New Regulatory Procedures May Not Be Necessary

Standard commission operating procedures were able to deal with PENNVEST. The Commission has an automatic adjustment clause (Section 308) that Pennsylvania courts have held can be used for changes in one component of a utility's cost of providing public service without requiring a comprehensive base rate case.³⁵ Having this tool at its disposal made it easy for the Commission to specifically target one kind of expedited rate relief: a PENNVEST automatic adjustment loan repayment charge.

Customer Notification

Through its PENNVEST loan repayment policy, the Commission encourages the applicant utility to notify its customers in advance of its PENNVEST filing (as with all other rate increase requests) and to list the PENNVEST repayment as a separate item on customer bills. This notification process is simple and sufficient and should be considered either by the primacy agency or by the commission. One commission goal is to avoid rate shock, while another is to ensure compliance. The notification alerts customers and lets them know that the increase was not part of a traditional rate case. A commission may wish to consider having the bill insert inform customers that this is a pass-through cost and does not add to the earnings of the utility.

³⁵ *National Fuel Gas Distribution Corp. V. Pennsylvania Public Utility Commission*, 473 A. 2nd 1109 1121 (Commonwealth of Pennsylvania, 1984).

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It may also be the case that a commission might encourage the utility to write a proactive bill statement that says that the cost to consumers would have been higher without the loan from the state revolving fund.

Retention of Auditing and Refunding Authority

The PENNVEST expedited process may produce rate levels that will be in effect for twenty years, given the long payback periods for the loans. As operational, engineering, supply, demand, health, and environmental issues are likely to change over the period of the loan, a state regulatory commission needs to retain its ability to monitor in order to protect both consumers and the utilities. Additionally, whenever significant sums of monies are involved, there are almost always unintended arbitrage opportunities. Exercise of its oversight responsibilities will require a commission to maintain its authority in order to ensure that the repayment revenues do not benefit shareholders and that the loan fund in fact gets repaid. Retention of its auditing authority and refunding mechanisms can help ensure that taxpayer-provided loans are used as intended. Commissions have a long and well-established expertise in this area that should be welcomed by the primacy agency.

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