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Affordability of Rural Telephone Service

NOTE TO READERS

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THE AFFORDABILITY OF RURAL TELEPHONE SERVICE CAN BE ASSESSED ON A PERCENTAGE OF INCOME BASIS.

States continue to struggle with the issue of how, if at all, to provide "high cost support" to promote the affordability of telephone service in rural areas. In testimony presented to the Pennsylvania Public Utilities Commission on behalf of the state Office of Consumer Advocate (OCA), FSC urged that the affordability of local telephone service in rural areas be determined on a percentage of income basis.

An empirical review of telephone rates in Pennsylvania led to the recommendation that an appropriate affordability benchmark for rural telephone service can be set at 0.75% of income.

THE IMPORTANCE OF CREATING AN AFFORDABILITY BENCHMARK FOR LOCAL TELEPHONE SERVICE.

The inability to obtain affordable, accessible telephone service can create life-threatening situations for the poor. Frequently, the most important problem arising from the lack of access to telephone service is the denial of access to agencies and institutions that can provide help. For example, a frequently cited danger that results from lack of telephone service involves access to timely medical attention.

The lack of telephone service can generate other life-threatening results as well. Consider, for example, the impact of the lack of telephone service on the deadly nature of home fires. Aside from low-income status being associated with an increased incidence of home fires generally, it is associated with *deadly* fires as well. According to the National Fire Prevention Association (NFPA), the lack of telephone service is one of the poverty-related causes of increased fire fatalities. A study by the NFPA found that "without a telephone, the chance of a delay in alarm when reporting a fire to the fire department increases."

Lack of access to a telephone jeopardizes access to public assistance programs as well. Work that has examined the causes of non-participation in LIHEAP has identified "inability to contact" the program as one leading reason why people do not apply for this federal energy assistance. Because of changes in the way that social service providers are doing business, these no-phone consumers are being denied equal access to critical social services, such as fuel assistance.

As budget cuts have eliminated staffs, and as technological developments have introduced new, less staff intensive methods of contact, social service providers across the country are depending more on the telephone in providing services. Outreach, consultation and, increasingly, intake and referral functions are being conducted over the phone for a host of essential services including energy assistance.

Finally, the lack of telephone service is a significant barrier to employment. The types of employment low-income households obtain often involve jobs offered and accepted via telephone. Moreover, hourly wage employees frequently receive information about when they might work on a daily or weekly basis. In such circumstances, having access to telephone service is critical to their ability to earn wages.

WHAT "AFFORDABILITY" MEANS IN THE CONTEXT OF TELEPHONE SERVICE

"Affordability" has a very specific meaning within the context of telecommunications service. FSC noted that the Federal Communications Commission (FCC) definition of "affordability" should be applied when considering high cost rural support as well.

A definition of affordability was adopted by the Federal Communications Commission ("FCC") in its implementation of Section 254(b)(1) of the Telecommunications Act of 1996. Under that federal statute, Congress articulated the national policy that telecommunications services be available and affordable to all households, including to low-income customers.

In implementing Section 254(b)(1), the FCC noted that the concept of "affordability" has two components to it, an absolute component and a relative component. The absolute component references whether a household has the ability to obtain the service at all. The relative component references whether a household has the ability to obtain the service without serious detriment to the household. Both aspects of affordability should be considered in considering whether rural telephone service is affordable in discussions of high cost rural support.

MEASURING "AFFORDABILITY" FOR HOUSEHOLD SERVICES GENERALLY

The generally-recognized mechanism for measuring the "affordability" of household expenses involves assessing the "burden" which those expenses impose on a household as a percentage of income. This is certainly true with respect to shelter costs. Shelter costs include costs for housing and utilities.

Percentage of Income and Home Energy

The affordability of home energy costs is measured by examining the burden which those energy costs impose on a household as a percentage of income. The notion of measuring affordability by examining bills as a percentage of income is familiar in Pennsylvania. The Pennsylvania Public Utility Commission ("PUC") has adopted the Customer Assistance Program ("CAP") as a mechanism for energy utilities to deliver rate affordability assistance to low-income customers. In specifying the design of these natural gas and electric CAP programs, the PUC has directed that the programs should be directed toward reducing home energy bills to an affordable percentage of income (within a budget constraint). Different burdens have been prescribed by the PUC depending upon whether a customer has natural gas heating with electricity, all electric service, or electric service with an unregulated source of home heating fuels (*e.g.*, fuel oil, propane).

The notion of measuring home energy affordability by reference to home energy burdens (bills as a percentage of income) is not unique to Pennsylvania. Other states operating home energy affordability programs (*e.g.*, New Jersey, Maine, Ohio, Illinois, Colorado) explicitly tie their programs to the achievement of an affordable percentage of income. Even in those states that do not explicitly incorporate percentage of income objectives, programs have implicitly incorporated the goal of achieving an affordable home energy burden. The New Hampshire "tiered rate discount" program, for example, devised the level of its tiered discounts based on the percentage of income burden that the discount generates for customers.

Percentage of Income and Water/Sewer Bills.

The affordability of water and wastewater (sewer) service is determined based upon a consideration of water/wastewater burdens (*i.e.*, bills as a percentage of income). The issue of affordability arises in the water industry when considering the affordability implications of complying with safe drinking water directives. According to the National Drinking Water Advisory Council's ("NDWAC") Small Systems Working Group, "utility bills have a regressive effect with respect to the distribution of household incomes; households at lower income levels must devote a greater percentage of their income to utilities than households at higher income levels. It can be argued that at higher income levels, consumers can afford to pay not only a higher total water bill but a higher percentage of their income toward water utility payments."[1]

A two percent (2%) water/wastewater burden was used by the Environmental Protection Agency (EPA) in its 1993 assessment of the affordability of water/wastewater service.[2] More recently, NDWAC reports that different states have adopted different "affordability criteria" to use in determining whether a water system is eligible for grant and loan assistance to help with compliance with the federal Safe Drinking Water Act (SDWA). NDWAC reports that New York, Idaho, Washington state, Maine and Maryland all base their affordability criteria on a percentage of income between 1% and 2%.

Other states have set similar standards. New Hampshire uses an affordability index that is calculated by dividing the estimated user rate by one percent (1.0%) of the median household income for the community. Oregon sets the affordable drinking water rate at 1.75% of median household income for the area (city/county) in which the water system resides. South Carolina sets its definition of drinking water affordability as a target user rate of at or below 1.4% of the median household income for the community. In fact, the U.S. General Accounting Office (GAO) observed in 2002 that:

> Of the 31 states with a disadvantaged community program, 27 have adopted criteria that consider local water rates, often in conjunction with a community's median household income. For example, seven states have determined that a community qualifies as "disadvantaged" if its water rates are at least 1 percent of its median household income. Another 11 states have established thresholds for local water rates ranging from 1.25 to 2 percent of median household income. The remaining nine states use different thresholds depending on the communi-

[1] National Drinking Water Advisory Council (NDWAC), Small Systems Working Group (January 2003). *Information to States on Affordability Criteria*, US. Environmental Protection Agency: Washington D.C.

[2] Environmental Protection Agency (1993). *Affordability of the 1986 Amendments to Community Water Systems*, U.S. Environmental Protection Agency: Washington D.C.

ty's median household income or a formula that considers other factors.[3]

In 2002, the Environmental Economics Advisory Committee of the U.S. Environmental Protection Agency's (EPA) Science Advisory Board (SAB) was asked to review the current standard for affordability determinations made by the EPA for SDWA compliance. The EPA had determined that clean water compliance technologies were unaffordable if they resulted in rates that exceeded 2.5% of state household median income.[4]

Under the federal Safe Drinking Water Act amendments of 1996, Congress created the Drinking Water State Revolving Fund ("DWSRF") to help fund the construction and upgrade of safe drinking water treatment facilities by local governments. The federal law provides that each state may allow "disadvantaged communities" to borrow money from the Fund with longer payback terms and possible principal forgiveness. Under the provisions of the Safe Drinking Water Act, states have the discretion on how to define a "disadvantaged community."

Pennsylvania is one of roughly 30 states that has chosen to adopt such "disadvantaged community" provisions. In implementing the "disadvantaged community" provisions, The Pennsylvania Infrastructure Development Authority (PENNVEST) has determined that affordability is to be measured by assessing whether the "target service charge" exceeds an annual burden (bill divided by income) of between one percent (1%) and two percent (2%) depending on the socioeconomic condition of the community.

Percentage of Income and Housing Costs.

Households are considered to be over-extended if they pay more than 30% of their income toward their shelter costs. "Shelter costs" include not only rent and mortgage payments, but include home utilities as well (excepting telephone).[5]

Throughout HUD's affordable housing programs, the term "cost burden" is a term of art. It is defined as the percentage of household income spent for mortgage costs or gross rent. According to HUD programs, households spending more than 30 percent of income for these housing costs are considered to be "cost-burdened." Households spending more than 50 percent are considered to be "severely cost-burdened."[6]

This 30-percent standard is generally accepted. Consider, for example, the annual survey of housing affordability published by the National Low-Income Housing Coalition (NLIHC).[7] NLIHC describes the contents of its report as follows: "For each jurisdiction, the report calculates the amount of money a household must earn in order to afford a rental unit at a range of sizes (0, 1, 2, 3, and 4 bedrooms) at the area's Fair Market Rent (FMR), based on the generally accepted affordability standard of paying no more than 30% of income for housing costs." That "generally accepted standard" of 30% of income for total shelter costs is mandated by the Cranston Gonzalez National Affordable Housing Act.[8]

The Community Planning and Development ("CPD") bureau with the U.S. Department of Housing and Urban Development explains the rationale for the 30% threshold. HUD's CPD states that "The generally accepted definition of

[3] GAO (January 2002). *Drinking Water: Key Aspects of EPA's Revolving Fund Program Need to be Strengthened*, at 16, General Accounting Office: Washington D.C.

[4] Environmental Protection Agency (February 1998). *Information for States on Developing Affordability Criteria for Drinking Water*, U.S. Environmental Protection Agency: Washington D.C.

[5] See e.g., 24 CFR §5.100 (2008).

[6] See, e.g., 24 CFR Subtitle A, Section 91.5 (definition of "cost burden").

[7] National Low-Income Housing Coalition (annual). *Out of Reach: Why Everyday People Can't Afford Housing,* NLIHC: Washington D.C.

[8] See, 42 U.S.C. §12745.

affordability is for a household to pay no more than 30 percent of its annual income on housing. Families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care."[9]

The conclusion, FSC said, is not that any particular percentage of income level is appropriate by which to measure the affordability of home energy, water service, or housing costs. Rather, the finding is simply that in each instance, the affordability of the particular service at issue was measured by reference to household burdens, *i.e.*, bills as a percentage of income. Accordingly, in deciding upon the affordability of basic local telephone service, it would also be appropriate to establish that affordability threshold by reference to a percentage of income.

APPLYING THE PERCENTAGE OF INCOME APPROACH TO TELEPHONE SERVICE.

It is appropriate to apply a percentage of income approach to measuring the affordability of local telephone service, according to FSC. In its May 1997 Final Order regarding universal service (Docket FCC 97-157), the Federal Communications Commission specifically referenced the use of a percentage of income approach in assessing the "affordability" of local telephone service. The "relative component" of affordability, the FCC said, "takes into account whether consumers are spending a *disproportionate amount of their income* on telephone service." (emphasis added).[10] The FCC continued on to note that "subscribership levels do not reveal whether consumers are spending a *disproportionate amount of income* on telecommunications services." (emphasis added).

FSC'S TELEPHONE AFFORDABILITY FINDING.

FSC found that a local rural telephone bill in Pennsylvania is affordable if it does not exceed 0.75% of Pennsylvania's rural median household income. FSC derived the affordable local telephone percentage of income through application of a "market basket" methodology. The market basket methodology is the accepted mechanism for assessing the affordability of household expenses in Pennsylvania.

Through this market basket approach, FSC assessed telephone expenditures in light of both total household income, and total household expenditures on other household necessities. Using data that is also used by other state agencies, the FSC analysis relied on two primary sources of data.

On the one hand, the analysis examined the Self-Sufficiency Standard in Pennsylvania.[11] The 2008 Self-Sufficiency Standard was published as a cooperative effort between PathwaysPA and the Pennsylvania Department of Labor and Industry. According to Sandi Vito, Acting Secretary for the Department of Labor and Industry, "the 2008 Self-Sufficiency Standard of Pennsylvania helps businesses and industry sectors. . .by showing how much families need to earn to cover their basic expenses."[12]

In addition, FSC used data from the American Chamber of Commerce Research Association

[9] http://www.hud.gov/offices/cpd/affordablehousing/ (accessed September 17, 2008).

[10] FCC 97-157, First Report and Order, para. 110 (May 8, 1997).

[11] Pearce, Diana M., Ph.D, The Self-Sufficiency Standard for Pennsylvania 2008, (Aug. 2008, 6th ed.), prepared for and with support from PathWaysPA, the Pennsylvania Dept. of Labor & Industry, the University of Washington, and United Way of Southeastern Pennsylvania. Available at: http://www.pathwayspa.org/Self-Sufficiency%20_Standard.pdf. The Self-Sufficiency Standard "measures how much income a family of a certain composition in a given place must earn to meet their basic needs." The standard is intended to be used by legislators and policy makers to establish programs which lead to self-sufficiency for working families. Id. at v.

[12] Forward, The Self-Sufficiency Standard for Pennsylvania: 2008, PathwaysPA/Pennsylvania Department of Labor and Industry: Harrisburg (PA).

(ACCRA).[13] Each quarter, ACCRA publishes data on the relative cost of living for more than 300 metropolitan areas throughout the United States. The Center for Rural Pennsylvania[14] uses the ACCRA data to periodically determine the relative cost of living in Pennsylvania's rural and urban areas. More specifically, the Center for Rural Pennsylvania reported that:

> Given the frequency and currency of the ACCRA database, it is surprising that more researchers have not made use of it. The fact that the ACCRA data is published by a private firm may make it less widely known in the research community, or it may be the case that the cost of the data deters some researchers from using it.

The Center continued, however, to observe further: "In any case, [the ACCRA data base] has proven itself to be a solid foundation upon which to build a [cost of living] study such as ours."[15] This legislative agency of the Pennsylvania General Assembly uses ACCRA data to help inform itself of the cost-of-living in Pennsylvania's rural areas.

After obtaining a local telephone bill (in dollars) for seven different metropolitan areas in Pennsylvania (Erie, Indiana County, Johnstown, Lancaster, Philadelphia, Pittsburgh, York) from the ACCRA data, combining these basic local telephone bills with self-sufficiency budgets for the counties in which the communities are located showed that a Pennsylvania household would spend between 0.75% and 1.0% of the county's self-sufficiency budget for basic local telephone service.[16]

CHECKING THE REASONABLENESS OF THE RURAL PENNSYLVANIA RESULTS.

FSC used two different "checks" on the conclusion that an affordable basic local telephone bill is 0.75% of income. First, FSC compared the results of an application of the 0.75% of income standard for each county to the application of this standard to the average of county median incomes reported for rural Pennsylvania counties. The average of the median incomes reported for 2008 was $50,261 for Pennsylvania's rural counties.[17] The 0.75% of income standard yielded a total local bill (including fees and taxes) of $31. This result was consistent with the applicability of the 0.75% of income standard using the self-sufficiency budget analysis described above. This consistency lends weight to the validity of the analysis.

Second, FSC compared the results of the 0.75% of income standard to the Standard Utility Allowance (SUA) offered for local telephone service by the Pennsylvania Food Stamp program.[18] The SUA is promulgated by states for Food Stamp recipients to use in determining whether they qualify for an "excess shelter deduction" under the Food Stamp program.[19] In comparing

[13] The ACCRA database is available on a licensed basis through the ACCRA Historical Cost of Living Index.

[14] The Center for Rural Pennsylvania is a "bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly." See Mission Statement at http://www.ruralpa.org/mission.html.

[15] Center for Rural Pennsylvania (July 2000). *Differences in the Cost of Living Across Pennsylvania's 67 Counties*, at 14, Center for Rural Pennsylvania: Harrisburg (PA), updating *Differences in the Cost of Living Across Pennsylvania's 67 Counties: 1992*, Center for Rural Pennsylvania: Harrisburg (PA) (also using ACCRA data).

[16] County-specific self-sufficiency budgets are published by Pathways USA and the Pennsylvania Department of Labor and Industry. Diana Pearce, *The Self-Sufficiency Standard for Pennsylvania: 2008*, County Data Tables, at 9 – 50 (June 2008).

[17] The U.S. Department of Housing and Urban Development publishes annual median incomes for virtually all counties in the nation. Because of their rural nature, twelve Pennsylvania counties do not have such income published and were excluded from this calculation (Blair, Butler, Cambria, Carbon, Centre, Fayette, Lycoming, Mercer, Perry, Pike, Washington, Wyoming).

[18] The Food Stamp program is now referred to as the Supplemental Nutrition Assistance Program (SNAP).

[19] Under the Food Stamp program, households do not use their gross household income for purposes of qualification. They instead use what is called "countable income." Countable income is gross household income minus specific deductions. One such deduction is the "excess shelter

the results of the income-based analysis to the SUA, FSC could assess whether there is consistency with an affordability standard for limited income households. Food Stamp eligibility is, with some exceptions not relevant here, set at 130% of the Federal Poverty Level. The SUA for telephone service was $31, thus further strengthening the conclusion that the percentage-of-income based affordability threshold was valid.

SUMMARY AND RECOMMENDATIONS

Based on the data and analysis presented above, FSC reached the following conclusions regarding high cost support for basic local rural telephone service in Pennsylvania:

- The touchstone of high cost support involves the comparability of rural and non-rural rates. This comparability standard, however, must be implemented subject to an affordability constraint. If reasonably comparable rates yield unaffordable rural bills, the affordability standard serves as a limitation on those rates.

- "Affordability" should be defined using the same two elements as adopted by the FCC in its implementation of the affordability provisions of the Telecommunications Act of 1996. Affordability has both an absolute component (can households retain service?) and a relative component (can households retain service without undue detriment to the household?) to it.

- The proper test for demarcating "affordable" local telephone service should be based on the "burden" imposed on households as a result of local telephone bills (including all taxes and fees). The local telephone burden is the bill for basic local service as a percentage of income.

deduction," the extent to which shelter costs (shelter costs include all utilities, including telephone) exceed 50% of household income.

- Local rural telephone service should be deemed affordable so long as the bill for such service (including the subscriber line charge and all other mandatory taxes and fees) does not exceed 0.75% (three-quarters of one percent) of household income.

- The appropriate "income" to use in applying the 0.75% standard is the non-metropolitan median income published annually for the Commonwealth of Pennsylvania.

For a complete copy of the FSC analysis of the affordability of rural local telephone service in Pennsylvania, please write:

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Fisher, Sheehan and Colton, Public Finance and General Economics (FSC) provides economic, financial and regulatory consulting. The areas in which *FSC* has worked include energy law and economics, fair housing, affordable housing development, local planning and zoning, energy efficiency planning, community economic development, poverty and telecommunications policy, regulatory economics, and public welfare policy.