

Taxing Simply

District of Columbia Tax Revision Commission

Taxing Fairly

Full Report

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Tax Policy Review for the Electric and Natural Gas Utility Industries in the District of Columbia

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Introduction and summary of tax issues¹

The District is considering methods to deregulate its electric utility industry and has already begun the process of deregulating its natural gas industry. Like most state and local governments, the District has taxed its utilities more heavily than other industries. Deregulation of the utility industries therefore presents significant tax revenue issues for the District, including highly political concerns about a possibly uneven playing field where utilities and their nonutility competitors would face different tax burdens.

As deregulation proceeds, several tax policy challenges in the electric and natural gas utility industries must be met. These include:

- maintaining an even playing field in taxation policy within and between industries affected by deregulation;
- offsetting possibly lower tax revenues resulting from lower energy prices, which restructuring is expected to facilitate;
- addressing increased tax collection administration costs that might emerge in the utility industries as many suppliers of natural gas and electricity are allowed to enter the local market; and
- counteracting or compensating for possible reductions in the energy industries' commitment to social programs due to competitive pressures.

Once this chapter assesses these challenges of competition, it will present several options for meeting these challenges while maintaining the District's revenue stream. Perhaps the most troublesome issue is the disposition of the gross receipts tax, which has the advantage of tapping the federal and nonprofit sectors for revenues, while nevertheless having several inefficient and otherwise undesirable characteristics and impacts.

Restructuring the electric power and natural gas industries

THE TRADITIONAL INDUSTRY STRUCTURE

U.S. business firms typically operate in relatively competitive markets in which they realize profits as the ex post excess of revenues over costs. Regulated utilities, on the other hand, have been able to consistently recover their full cost of providing services (including plant and equipment, labor, materials, overhead, and profit as well as state and local taxes), earning a government-approved rate of return on their investments. This arrangement is due to the regulatory compact between state governments (via public service commissions, or PSCs) and local regulated monopolies.²

This regulatory compact requires that the customer bear the economic burden of paying taxes levied on local utilities. However, utility customers generally have not noticed the extent of electric and natural gas taxes since such levies are not itemized on their monthly bills. Instead, these taxes typically have been incorporated into the general cost of service on customers' monthly bills.³ Utility taxes have therefore been invisible to customers. The District, like many other jurisdictions, has used this politically expedient method of "invisible taxation" to finance public expenditures, raising utility tax rates well above those facing other industries.

THE TRANSITION TO A MORE COMPETITIVE STRUCTURE

The traditional vertically integrated electric utility consists of three primary components: generation (the production of electricity at a generating plant), transmission (high-voltage interstate transmission lines), and distribution (low-voltage transmission lines that connect households and businesses to the electric grid). However, the electric utility industry is now in the process of functionally separating the generation component from its transmission and distribution components.⁴ This fundamental change to the industry's structure was made possible by the *Public Utility Regulatory Policy Act of 1978* and the *Energy Policy Act of 1992*. Under this new structure, the generation component of the industry, which currently accounts for 74 percent of the cost of electric power, will be completely open to competition, while the transmission component will remain federally regulated by the Federal Energy Regulatory Commission (FERC) and distribution will continue to be regulated by state PSCs.⁵ The restructuring of the industry makes possible lower electricity prices since consumers will be allowed to choose their power sources from competing electricity-generating firms.

The natural gas industry also is divided into three major components: the wellhead component (where gas merchants acquire natural gas to sell to final users and marketers), interstate transmission pipelines, and local distribution companies (LDCs). Costs are more evenly spread over the components of this industry than is the case in the electric utility industry. Natural gas production at the wellhead

Figure L-1

**Tax Rates for Utilities
by Jurisdiction**

	Gross Receipts Tax	Franchise Tax	Real and Personal Property Taxes*	Sales/Use Tax
D.C.	11.10%	9.975%	3.40%	5.75%
Maryland	2.00	2.00	2.43	5.00
Virginia	2.00	2.00	1.24	4.50

**Property tax rates are levied and vary by county and local jurisdiction. This tax rate is the combined effective real and personal property tax rates calculated by Washington Gas for its property. The rates are assumed to be identical for other utilities.*

Source: D.C. Office of Tax and Revenue, Maryland Comptroller of the Treasury, and Virginia Department of Taxation.

accounts for about 39 percent of the total cost facing final users, while citygate costs of acquisition via pipelines account for 31 percent and distribution for about 30 percent of total costs.⁶ Currently, there is unregulated competition for the merchant function at the wellhead, while FERC continues to regulate the interstate pipelines and the local PSC regulates LDCs. Some large retail customers are able to choose their gas supplier, which in the District includes the marketing arm of Washington Gas, Washington Gas Energy Services (WGES), as well as independent gas-marketing companies.

The desired outcome of a restructured, competitive industry is a more efficient market for the provision of electricity and natural gas, ultimately resulting in lower costs to customers and a socially improved allocation of resources. The transformation of these industries will require major changes in the regulatory compact, which will, in turn, have significant implications for the manner in which these utilities are taxed.

Current taxation of electricity and natural gas in the District

In the District, the gross receipts tax is the most substantial tax levied on the local energy utilities (Figure L-1). The official gross receipts tax rate is 10 percent of gross revenues, with an effective gross receipts tax rate of 11.1 percent (D.C. Code 47; ch. 25). Gross receipts taxes apply only to sales to electric power customers within the District; sales to out-of-state customers are exempt.

Figure L-2

**Category of Tax as Share of Total Tax Payment
1996**

Company	Gross Receipts and Franchise Taxes	Property and Real Estate Taxes	Other
BG&E (Md.)	0.275	0.675	0.050
PEPCO (D.C.)	0.930	0.024	0.045
VEPCO (Va.)	0.475	0.513	0.012

Source: Company data.

The franchise tax rate levied against energy utilities is 9.975 percent of net income (D.C. Code 47; ch. 18). All real property, unless expressly exempted, is subject to the real property tax and is assessed annually at 100 percent of estimated market value (D.C. Code 47; chs. 7–14). Energy utilities also collect the use tax of 5.75 percent (D.C. Code 47; chs. 20 and 22). The PSC fee and the filing fee are two other fees paid by the local electric utility. Both fees are based on revenue. In 1996, these fees amounted to \$3.8 million and \$8,440, respectively.

In 1996, taxes paid by Potomac Electric Power Company (PEPCO), the sole supplier of electricity in the District, accounted for 3.5 percent of all taxes collected by the District, while those paid by Washington Gas accounted for a little more than 1 percent. In the same year, PEPCO paid \$74.4 million in gross receipts taxes, which accounted for 85 percent of all taxes and fees paid by PEPCO to the District.⁷ Washington Gas paid \$22.4 million in gross receipts taxes, which accounted for over 87 percent of its payment of taxes and fees to the District. PEPCO's gross receipts tax payment accounted for 31.4 percent of all gross receipts taxes paid by public utilities, which in turn accounted for 60 percent of all gross receipts taxes paid to the city.⁸

PEPCO's franchise tax payment was relatively modest at \$6.2 million, accounting for 5 percent of all corporation franchise taxes paid by District businesses. Its property tax payment was trivial due to the District's personal property tax exemption for utilities.⁹ PEPCO's real estate tax payment was fairly modest at \$2.1 million (amounting to only 0.29 percent of all real estate property taxes collected in the District) due to the fact that the company's generation assets are located in Maryland, except for a relatively small peaking plant on Benning Road and an inactive facility at Buzzard Point, while it leases its headquarter offices from tax-exempt George Washington University.¹⁰ The allocation formula therefore weights these tax payments toward Maryland.

This review of current tax payments demonstrates that electric and natural gas utilities are among the most heavily taxed industries in the city. Competition will make this situation more problematic. Before turning to that issue, however, a comparison between the utility tax regimes of the District and its neighbors will help provide a context for the tax issues associated with deregulation.

A comparison of electricity and natural gas in the District, Maryland, and Virginia

The District is a relatively small jurisdiction nestled between Maryland to the north and east and Virginia to the south and west. PEPCO is presently the sole supplier of electricity to the District, while Washington Gas is both the local distributor of gas and one of the major suppliers (through WGES). To assess the effects of various possible District taxation scenarios on competition and economic development, it is important to compare the existing taxation regimes regarding utilities in the three jurisdictions.

PEPCO's electricity market in the District is relatively small when compared to those of the major suppliers in Maryland (Baltimore Gas and Electric) and Virginia (Virginia Electric Power Company). Both the gross receipts and the franchise tax rates are about five times greater in the District than in the bordering states (Figure L-1), balanced somewhat by higher property tax collections in the suburban jurisdictions due to the utility property tax exemption in the District (Figure L-2). Each jurisdiction's tax revenues from all forms of taxation were quite substantial (Figures L-3, L-4, and L-5).

Fifteen cents of every dollar of PEPCO's electricity sales go to taxes, which is slightly lower than the levy per dollar on Baltimore Gas and Electric (BG&E), Maryland's main supplier, and 50 percent higher than the levy per dollar on Virginia Electric Power Company (VEPCO), Virginia's main supplier (Figure L-6).

The majority of PEPCO's business is in the District and Maryland, with a low level of activity in Virginia and Pennsylvania that does not involve the sale of electricity to end users. VEPCO primarily operates in Virginia, but it also conducts business in West Virginia and North Carolina. BG&E primarily conducts business in Maryland, even though it has some business dealings in Pennsylvania, the District, Ohio, and West Virginia. Figure L-7 indicates that the District is over three times more fiscally dependent on its incumbent electric utility than are its neighboring states when only the relationship between the incumbent and its home state is considered.

Only 40.8 percent of PEPCO's electricity sales were attributed to the District in 1996, with the rest attributed to the company's Maryland customers. PEPCO's

Figure L-3

PEPCO's Taxes
by Category and Jurisdiction, 1996

Tax	District of Columbia	Amount
Gross receipts		\$74,456,319
Franchise		6,220,886
Real estate		2,111,336
Use		96,610
Filing fee		8,440
Personal property		1,440
PSC fee		3,799,709
D.C. Total		\$86,694,740
Maryland		
Gross receipts		\$21,669,325
Montgomery County fuel		15,447,679
Use		1,695,375
Filing fee		1,507,499
Environmental surcharge		2,581,445
Local, county, and state property		64,484,322
Maryland Total		\$107,385,645
Virginia		
Gross receipts		\$21,283
Local, county, and state property		2,618,052
Use		17,583
Registration		850
Valuation		301
Arlington County business privilege		1,308
Virginia Total		\$2,659,377
PEPCO's total nonfederal taxes paid		\$196,739,762

Source: Company data.

Figure L-4

**BC&E's Taxes
by Category, 1996**

Tax	Amount
Gross receipts/franchise	\$50,341,051
Property	3,065,942
PSC assessment	4,000,576
Environmental surcharge	4,812,298
Montgomery County fuel	328,972
Local/county property	46,006,479
Local/county capital stock	73,795,080
Local/county pole license	438,791
Local/county paving and sewer	36,233
BG&E's total nonfederal Maryland tax payments	\$182,825,422

Source: Company data.

District customers pay a slightly higher tax rate than its Maryland customers do (Figure L-8), and a much higher rate than VEPCO's customers (Figure L-6).

The effective tax rate paid by Washington Gas in the District is approximately double the rate paid in the other jurisdictions (Figure L-9). Some gas-intensive customers, such as Linens of the Week, already have limited their presence in the District because of such differentially high tax rates. Moreover, in an increasingly deregulated industry, it may turn out that gas marketers themselves will find net tax advantages by locating outside the District, unless the District changes its tax policies to guarantee that location will not affect tax payments to the District.

This significantly higher overall tax rate accounts for much of the differential in gas revenues (including tax collections) received by Washington Gas from differing jurisdictions (Figures L-10 and L-11).

Discussion of utility taxes and possible alternatives

Deregulation of the electric and natural gas industries is intended to create retail competition, which in turn is expected to allow consumers to choose among competing energy suppliers and obtain a lower energy price. However, retail competi-

Figure L-5

**VEPCO's Taxes
by Category, 1996**

Tax	Amount
Gross receipts	\$73,302,868
Valuation	3,972,706
Sales and use tax	2,104,776
Miscellaneous	214,064
Local/county property	91,995,254
Local/county gross receipts	15,508,163
Local/county poles and conduit	70,934
VEPCO's total nonfederal Virginia tax payments	\$187,168,765

Source: Company data.

Figure L-6

Aggregate Tax Burden on Electric Utilities

Company	Taxes Charged*	Sales of Electricity	Tax per Dollar of Sales
BG&E	\$361,822,365	\$2,209,027,253	\$0.164
PEPCO	263,523,342	1,702,592,052	0.150
VEPCO	459,043,022	4,365,434,580	0.105

**Total taxes charged includes all PSC fees, environmental fees, income, and unemployment taxes paid to all applicable state and local governments and the federal government.*

Source: Company data, D.C. Office of Tax and Revenue, Maryland Comptroller of the Treasury, and Virginia Department of Taxation.

Figure L-7

**Importance of Electric Utility Tax Payments
1996**

Company	Gross Receipts Tax as Percent of Total Gross Receipts Tax Revenues Collected	Total Taxes as Percent of Tax Revenues
BG&E (Md.)	37%	1.0%*
PEPCO (D.C.)	31	3.7
VEPCO (Va.)	61	1.1*

**Only state revenue is used. Tax revenue to Virginia's counties and localities is not included in this calculation.*

Source: Company data, D.C. Office of Tax and Revenue, Maryland Comptroller of the Treasury, and Virginia Department of Taxation.

Figure L-8

PEPCO's Taxes in the District and Maryland

	Taxes Charged	Sales of Electricity*	Effective Tax Rate per Dollar of Sales
D.C.	\$86,694,700	\$744,568,408	11.6%
Maryland	107,508,601	958,023,644	11.2

**PEPCO had \$744,568,408 in kilowatt-hour sales in the District. PEPCO's Maryland sales were calculated by subtracting D.C. sales from the total sales recorded in FERC Form 1, PEPCO, 1996.*

Source: D.C. Public Service Commission.

tion in the District (assuming no change in the present tax structure) would cause out-of-state electric suppliers to be subject to fewer taxes than PEPCO, the current sole supplier of electricity. This uneven playing field in favor of out-of-state suppliers would present the locality with two major problems. First, given their lighter tax requirement, new suppliers would be able, in all likelihood, to sell electricity at lower prices than the local utility, unfairly eroding the utility's customer base.

Figure L-9

**Washington Gas Taxes, Sales, and Tax Rate
by Jurisdiction**

	Taxes Charged*	Sales of Natural Gas	Effective Tax Rate per Dollar Sales
D.C.	\$25,340,749	\$243,766,024	10.4%
Maryland	21,709,521	398,579,717	5.5
Virginia	13,651,904	327,418,514	4.2
Total**	\$109,535,037	\$969,764,255	11.3

**Total taxes charged include all PSC fees, environmental fees, income, and unemployment taxes paid to all applicable state and local governments and the federal government.*

***This total amount includes property and franchise taxes paid to West Virginia and Pennsylvania. If limited to taxes paid to the three jurisdictions, the sum of taxes is \$60,702,174, for an overall rate of 6.26 percent.*

Source: Company data.

Second, out-of-state competitors might be able to capture a substantial share of the market in the District without reducing their prices as much as full competition would otherwise require, since the higher tax would still remain in place in the District for the incumbent utility. Any price they charged within the range between their internal marginal cost and PEPCO's marginal cost (including all taxes) could induce substantial numbers of retail customers to change services.¹¹ Thus, the disproportion in tax rates between PEPCO and out-of-state suppliers would not only drain tax revenues from the District, but also deprive District customers of the full prospective benefits of deregulation and competition.

THE GROSS RECEIPTS TAX

Applying a gross receipts tax to a deregulated utility industry raises two issues. The first is legal, and the other involves economic efficiency. The first issue centers on the nexus (the contact or connection) of an out-of-state supplier or business with a taxing jurisdiction. Sufficient nexus is commonly understood to mean that the company has a physical presence (property or company agents) in the taxing jurisdiction. However, retail competition would allow out-of-state firms to export electricity and natural gas to end users in the District without having such a presence. Local customers would be the only nexus of the out-of-

Figure L-10

**Washington Gas Taxes
by Category and Jurisdiction, 1996**

Tax	District of Columbia	Amount
Gross receipts		\$22,399,987
Income		1,131,464
Real estate and personal property		660,230
Use		22,078
Public safety fee		16,800
Reimbursement fee		1,110,090
Annual report fee		100
Unemployment		83,687
D.C. Total		\$25,424,436
Maryland		
Gross receipts		\$7,069,851
Montgomery County fuel		4,341,644
Use		275,592
PSC fund		567,488
Real and personal property		522,839
Income		(49,126)
Unemployment		71,124
Miscellaneous		741
Franchise		70,295
Real and personal property		8,861,071
Maryland Total		\$21,731,519
Virginia		
Gross receipts		\$6,398,269
Miscellaneous		850
Use		320,123
Annual license		888,150
Valuation		263,125
Unemployment		14,829
Real and personal property		5,781,387
Virginia Total		\$13,666,733
Washington Gas total nonfederal taxes paid		\$60,822,688

Source: Company data.

Figure L-II

**Washington Gas Revenues per Therm
by Customer Category and Jurisdiction, 1996**

	Residential	Commercial	Total
D.C.	\$0.93	\$0.76	\$0.84
Maryland	0.77	0.59	0.69
Virginia	0.81	0.59	0.72
Total	\$0.81	\$0.64	\$0.73

Source: Company data.

state suppliers. State governments have argued that this type of nexus is sufficient for taxation. However, this claim has been challenged in the courts by those who argue that such taxation violates the due process and interstate commerce clauses of the U.S. Constitution. The former requires that a business have some minimal connection with the taxing jurisdiction to legitimate the jurisdiction's taxing authority over the business entity. The commerce clause demands *substantial physical presence* in a state to justify a state burden (especially taxation) on interstate commerce.

The Supreme Court's most recent nexus decision was *Quill Corp. v. North Dakota* (1992). This case challenged North Dakota's effort to require an out-of-state mail-order vendor to collect a use tax from its customers. The court ruled that the Quill Corporation did, indeed, establish a *minimum connection* but that it did not establish a *substantial physical presence*. Therefore, Quill Corporation was constitutionally not liable for state taxes imposed by the state of North Dakota because of the absence of *substantial physical presence*. This case is of great significance in the application of the gross receipts tax to an out-of-state energy supplier. If a state were to open its energy markets to retail competition and levy taxes (particularly the gross receipts tax) on out-of-state suppliers, this issue could be challenged in the courts again. Although out-of-state suppliers might initially agree to pay such levies to enter the local market, they might later file suit based on the Quill decision. If found in violation of the interstate commerce clause, states might have to refund an enormous amount of tax dollars to the out-of-state suppliers.

To avert such a predicament, Pennsylvania passed legislation stipulating that a vendor must be licensed by the Public Utility Commission (PUC) before it could sell generation services in Pennsylvania; to obtain a license, a vendor is required to

certify that it will collect and remit all state-specified taxes. Failure to remit the requested taxes is cause for the PUC to revoke the vendor's license. The legislation also stipulates that if a vendor fails to remit state taxes, the utility whose transmission and distribution lines are used to transmit and distribute the electricity to the end user is responsible for the tax.¹² It remains unclear whether such legislative devices will ultimately prove legally sufficient to justify the desired taxation of out-of-state energy providers.

There also are issues concerning economic efficiency related to the gross receipts tax. Taxes typically distort economic activity to some degree, but the incidence of a gross receipts tax is more arbitrary than that of sales or income taxes. The incidence of the gross receipts tax is heaviest on high-volume sales industries, such as wholesale and retail trade, without regard either to the magnitude of net income or to the ratio of net income to the value of goods sold. Energy suppliers generally fall into this category. The net income tax (or profit tax) would be, on its face, more equitable and less discouraging to prospective energy competitors. State authorities may be reluctant to rely on such a tax, however, because the accounting procedures used by many business owners in their tax returns lead to low tax revenues. In fact, only a minority of business owners in the District pay any net income tax at all. The size and stability of the stream of tax revenues from a net income tax on utilities would most likely be somewhat volatile and perhaps fail to provide adequate revenues for the District.

An exemption under deregulation from the 11.1 percent gross receipts tax rate for out-of-state suppliers could lead to a significant drop in District tax revenue. The state of Maryland has already experienced this, albeit at more modest levels. It undertook a pilot retail wheeling program for electricity for up to one-third of the state's customers without implementing any tax reform. The program's out-of-state suppliers (and hence, their Maryland customers) have not been subject to Maryland's 2 percent gross receipts tax rate. This situation has led to a tax revenue shortfall that is not trivial. A similar outcome occurred in the natural gas industry. New Jersey authorities are considering a proposal that eliminates the state's gross receipts tax altogether because of its putative adverse effect on the state's manufacturing industry. This proposal does not call for new taxes to replace the lost tax revenue but has been advanced with the expectation that the tax revenue shortfall would be made up through increased tax revenues associated with faster economic growth.¹³

To avert the Maryland dilemma, and because District officials feel that a New Jersey-type proposal is unlikely to work in their locality, the District Council has followed the Pennsylvania model by extending the gross receipts tax to out-of-state suppliers of natural gas through new legislation effective April 30, 1998.¹⁴ A similar action is likely with regard to electricity as retail competition rolls out.

The gross receipts tax is a significant source of stable tax revenue for the city, and the federal government is the largest consumer of energy in the city. In 1996,

the gross revenue from all electricity customers in the District was \$744.6 million. The federal government accounted for \$161.1 million, or 22 percent, of that total. In 1997, the gross revenue from all natural gas customers in the District was \$232.7 million, and the federal government accounted for \$10.9 million, or 5 percent, of this value.¹⁵

This discussion demonstrates the importance of the gross receipts tax as a way of indirectly taxing the federal government for its electricity and natural gas purchases.¹⁶

ALTERNATIVES TO THE GROSS RECEIPTS TAX

Sales and/or consumption taxes

The District could follow the example of several states that are considering replacing the gross receipts tax with a consumption tax. A consumption tax could be set as a percentage of selling price (an ad valorem tax) or a fixed amount on kilowatt-hours or BTUs (a unit tax) at a rate that would recover all tax revenues lost due to changes in the gross receipts tax.¹⁷ A consumption tax could eliminate unbalanced taxation of providers, could be adjusted to be revenue neutral, and would replace the hidden tax.¹⁸

If the tax were designed as an ad valorem tax, revenue would vary in proportion to changes in the dollar amount spent on electricity. Those changes would be the net result of the higher unit price as increased by the tax and the lower quantity purchased in reaction to the higher price.¹⁹ An ad valorem tax might shift consumers modestly away from electricity and gas to other fuels. Further, a tax based on energy prices could make the stream of tax revenues to the local government somewhat volatile. Another disadvantage of an energy ad valorem tax is that it would require the disclosure of potentially sensitive pricing information by suppliers.

The unit tax on kilowatt-hours, therms, or BTUs, has the advantages of protecting proprietary pricing information, making estimated tax revenues less volatile, and promoting conservation. However, such a quantity-based consumption tax would slightly shift the tax burden to the users of less-expensive electricity and would not automatically adjust for general inflation or deflation of the overall price level. The former issue could be important to the emerging energy-marketing companies, which are “demand aggregators” and negotiate reduced prices based on consolidating large numbers of users.

The major disadvantage of an energy consumption tax for the District is the tax-exempt character of many energy customers, especially the federal government.²⁰

The net income tax

The District could turn to the net income tax to replace the gross receipts tax. But if merely extended to the energy industries, the net income tax would yield a much smaller amount of tax revenue. Increasing the overall net income tax rate, while

Figure L-12

**Cents per Kilowatt-Hour Sold
1995**

	Residential	Commercial	Industrial	Total
Oregon	5.49	5.06	3.47	4.67
Virginia	7.84	6.07	4.16	6.26
National average	8.40	7.69	4.66	6.89
Maryland	8.43	6.91	4.23	7.06
D.C.	7.62	7.15	4.36	7.12
Maine	12.51	10.28	6.65	9.49
California	11.61	10.49	7.37	9.91
New York	13.90	11.92	5.79	11.06

Source: Energy Information Administration.

necessary to maintain revenue neutrality, would have a discouraging impact on economic development and would, in essence, shift today's tax burden from the energy sector to other sectors.

Additionally, many District businesses report net operating losses. In fact, only about a third of District businesses pay any net income taxes at all. While PEPCO and Washington Gas are likely to continue to have net income in a deregulated environment, other energy providers may operate more marginally, and even PEPCO and Washington Gas would face incentives to reduce their tax exposure if a substantial net income tax were applied to them.

Electricity and natural gas prices under competition

What effect will deregulation have on energy prices and the related collections of energy tax revenue in the District? Industries in the District's economy are rather low in electricity intensity, and electricity prices by customer class in the District are already below the national average in each of three major categories (Figure L-12).²¹ Thus, the benefits from competition in electricity will in all likelihood be rather slight in the District, even for industrial and commercial customers.²² A similar point could be made for natural gas.

Figure L-12 indicates the price of a kilowatt-hour by customer class. On the national level, electric power costs are not high in the District when compared to

those in states like Pennsylvania, Maine, New York, and California. Within each customer class, the District is well below the corresponding national average.²³

In contrast, natural gas prices in the District tend to be somewhat above the national average, so it would seem at first glance that there could be slightly greater improvements in gas prices for District consumers. However, much of today's higher price for natural gas can be traced to the relatively higher tax burden on natural gas in the District compared to that in surrounding jurisdictions. Competition would not, in and of itself, reduce this factor.

The overall implications of these statistics are that: 1) the District is a relatively low-cost energy market even with the present tax structure; 2) deregulation would not greatly reduce energy prices; and 3) tax revenues would not be greatly affected by energy price changes caused by deregulation.

PRICES AND TAXES UNDER DEREGULATION IN THE DISTRICT

PEPCO officials believe that there would be little reduction in electricity prices due solely to deregulation and competition because the District already has very low rates.²⁴ If rates tend toward uniformity across the nation because of competition and District rates are currently below or near the national mean, there may be very small changes in the District's electric prices compared to prices in states where there are currently relatively high prices. Prospective declines in natural gas prices also are not likely to be great.

What would be the tax revenue consequences of such relatively small declines? If prices were to decline and the quantity of electricity consumed remained absolutely constant, a hypothetical 10 percent decline in the price of electricity would lead to a 10 percent decline in the revenue from the gross receipts tax paid by PEPCO (or an out-of-state supplier) or a reduction of approximately \$7.4 million in tax receipts.²⁵ Price reductions usually induce increases in consumption of most products. PEPCO officials believe that there is very little price elasticity in the demand for electricity in the District, however, and the Energy Information Administration agrees that the short-run price elasticity of the demand for electric power tends to be quite low, on the order of -0.15.²⁶ Thus, for every 10 percent reduction in price, there would be an increase of only 1.5 percent in consumption, for a net reduction in tax revenues of approximately 8.5 percent or \$5.4 million.²⁷

Any decreases in energy prices in the District brought about through competition are not likely to be as great as those in such high-cost areas as California and the north-eastern states, however, reducing the importance of this challenge to tax revenue.

Administration and compliance

Moving from a single provider in each of the energy utility industries to multiple providers would create added administrative burdens for the Office of Tax and Revenue because all energy firms would have to file gross receipts tax returns. However, the revenues from this tax, in particular, have already been shown to be quite high, justifying the administrative cost. The District has an existing mechanism in place to collect sales tax, which could be extended to the gross receipts tax for additional energy suppliers.

Another option for policymakers is to make the local energy distributors (PEPCO and Washington Gas) legally responsible for collecting all energy taxes from all customers in the District through a consolidated billing system, for delivering all tax revenues from such collections to the District government, and for dispersing the remaining revenues to the appropriate providers. It would be burdensome to make the local regulated distributor legally responsible for paying all taxes. Pennsylvania, for example, makes the distribution company liable only when a supplier defaults in its payment and collections fail to recover the tax payment.

In addition, to the extent that existing energy companies create marketing subsidiaries, as Washington Gas has done with WGES, it also may be undesirable for the distribution company to be required to collect all gas taxes. Because of the close association between the name of the parent and subsidiary organizations, consumers might believe incorrectly that WGES taxes their purchases while other suppliers do not, and so might be less inclined to purchase gas from WGES. Thus, such a policy could devalue the corporate name and reduce company assets and subsidiary revenues accordingly.

Social programs

An important issue related to competition in the energy industry involves the funding of social programs such as low-income assistance, winter moratorium on bill collections, and promotion of local economic development. These programs essentially involve income transfers. Under regulated regimes, cross subsidies typically flow from commercial customers to residential customers, much as in the other network industries prior to deregulation.

As competition takes hold in the energy industries, there will be financial pressures on the traditional utilities to reduce their funding of these programs. Accordingly, targeted government social programs to offset any shortfall in this area will be needed to maintain the status quo. There is no reason in principle why the tax revenues should be raised via the energy sector, but policymakers should never-

theless take into account the need to fund such assistance programs if they are considered to be socially desirable.

Summary of policy options

Restructuring of the energy utilities creates challenges for tax revenue collection for the District. The current tax structure was designed to collect taxes from the local energy companies, which operated as regulated monopolies within city limits. Under this regime, tax officials did not need to concern themselves with the dynamics of taxing out-of-state electricity and natural gas suppliers.

Today, the rules of the industry are changing. The District is considering opening up to retail electricity competition and has already done so with regard to natural gas. Without structural changes to the tax code that would apply to the energy utilities, negative effects could occur, including:

- the District could see a shortfall in utility tax revenue because the gross receipts tax may not be applicable to out-of-state-suppliers; such suppliers would thus obtain a tax-related cost advantage and improve their market share at the expense of incumbent utilities; and
- PEPCO and Washington Gas could remain subject to a gross receipts tax, which would competitively disadvantage them relative to competing suppliers.

Assuming deregulation continues, there are several policy options to be considered.

- The District could keep the present tax structure as it relates to electricity. This option would mean that the District would accept the losses in tax revenues and tax the local suppliers in a manner that could impede both fair competition and the full realization of the likely benefits of competition.
- The District could do for the local electric power market what it did for the local natural gas market and extend the gross receipts tax, through a change in legislation, to out-of-state suppliers. While this approach seems relatively simple, there are significant legal obstacles to be overcome.
- The District could establish an ad valorem or unit tax on *imported* electricity and gas and set such a tax at a level to make up for the loss of gross receipts taxes on out-of-state firms. In this option, legal challenges based on the interstate commerce clause might be made. Also, the federal government and other tax-exempt organizations could avoid the tax if they decide to purchase from out-of-state suppliers, limiting the revenues from such a tax.

- The District could implement its recently enacted tax on the use of public right of way by companies that market energy since electricity and gas both use such rights of way to reach customers through distribution companies. Such a tax would in all likelihood be best collected by the LDCs.
- The District could institute a BTU sales and use tax and/or a tax on public right of way, as well as *reduce but not eliminate* the gross receipts tax to take a middle position and maintain revenue neutrality. The BTU sales and use tax (or other consumption tax on energy) could be levied on power purchased from any provider, inside or outside of the District, since it is levied on the consumer, even if it is collected by one or more companies. As in the case of the sales tax, however, the federal government and nonprofit organizations in the District may be able to avoid payment as a result of their tax exemption. They would have more difficulty obtaining such an exemption if the tax were placed on companies' use of the public right of way. Such firms would then pass on the bulk of the tax to consumers, including those exempt from sales taxes. By maintaining the gross receipts tax at a lower level, some indirect tax collection from the federal government and nonprofits also could be maintained.

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Endnotes

¹ In preparing this report, many sources have been consulted, including senior officials of the regulated gas and electric industries in the District. All recommendations and analysis remain the responsibility of the authors and should not be construed to represent the position of any other party.

² This compact has been in effect across the nation since the early 1900s, when state governments began to regulate utilities. Regulation was imposed on the industry because of the industry's desire for protection from competition and municipalization as well as the public's desire for protection against monopoly abuses. Pechman (1996), p. 22.

³ There is a perennial regulatory debate over whether the rate of return approved by the regulatory body is guaranteed to the company or is merely a ceiling on its earnings. As a practical matter, the companies generally obtain the approved rate of return. As part of the transition to competition, many utilities are calling for incentive regulation to replace existing rate of return regulation.

⁴ All three components have been part of the traditional vertically integrated firms, but technical change and recent policy decisions have unleashed market forces that are separating the generation component from the transmission and distribution components. For example, smaller-scale power-generating technologies, such as combined-cycle gas turbines, have lower operating and capital costs than coal-fired plants. Also, FERC Order 888 in 1996 compelled utilities with transmission networks to deliver power to third parties at nondiscriminatory cost-based rates. With open access to the power transportation network, new sources of electric power can more effectively compete with incumbent utilities.

⁵ Energy Information Administration, *Electricity Prices in a Competitive Environment: Marginal Cost Pricing of Generation Services and Financial Status of Electric Utilities — A Preliminary Analysis through 2015*, DOE/EIA-0614 (Washington, D.C.: 1997).

⁶ Energy Information Administration, *Natural Gas 1996: Issues and Trends*, DOE/EIA-0560 (Washington, D.C.: 1996).

⁷ The total includes unemployment and PSC fees as well as other taxes.

⁸ Washington Gas pays much less of its tax bill to Maryland and Virginia in the form of the gross receipts tax, which accounts for approximately 33 percent of the

taxes it pays to the state of Maryland and 47 percent of the taxes it pays to the state of Virginia. PEPCO similarly pays much less to Maryland. This differential is accounted for, in part, by the differences in the tax rates charged in the District and in the two neighboring states. An important implication of such tax policy differentials between jurisdictions is that, with increasingly competitive industries, new energy firms seeking to enter the local market (especially marketers and brokers) may locate their facilities where the net tax advantages are the greatest.

⁹ This exemption is the formal rationale for the gross receipts tax.

¹⁰ The lease expires in 2002 and will not be renewed. PEPCO purchased land near the MCI Center and planned to build a new \$80 million office building on it, which would have been taxable. Since the merger failed, PEPCO sold the land to a developer and now plans to lease a substantial amount of office space from the developer for its new headquarters. PEPCO officials say that this arrangement is a better use of its resources as it prepares for competition.

¹¹ Whether PEPCO would use average cost pricing for rate setting or marginal cost pricing in a new competitive environment would depend greatly on the restructured regulatory environment. In any case, for present discussion, the higher taxes would still keep PEPCO's prices higher than its lesser-taxed competitors.

¹² In this case, the utility whose transmission lines have been used by a tax-evading supplier has two options to collect this amount. First, the utility may seek to collect from the vendor. The act further provides that the utility's tariff shall provide that the vendor indemnify the utility in such case. Whether the vendor will indemnify the utility when it has refused to pay that tax in the first instance, though, is certainly questionable. The utility also may pursue collection from the retail consumer. If these collection efforts fail, the utility should notify the state's Department of Revenue, which then may proceed against the vendor and/or consumer. If this fails and the utility is strapped with the tax obligation, the utility may request a rate increase.

¹³ This New Jersey proposal calls for a five-year special transitional tax, which gradually would be reduced to zero by the end of the transition period as the state prepares for a fully deregulated utility industry. In March 1997, two bills based on this proposal were introduced into both the New Jersey Senate and Assembly. Hearings have been held, but neither bill has been reported out of committee as of mid-1998.

¹⁴ When retail competition for selected natural gas customers was allowed in the District, emergency legislation was passed on March 31, 1997, to extend the gross receipts tax on a temporary basis to out-of-state suppliers. This legislation was extended on December 10, 1997, and again on March 20, 1998, on a temporary basis. Permanent legislation was authorized on April 30, 1998 (D.C. Code 12-99).

¹⁵ The District government accounted for \$16.5 million of natural gas sales in 1997. When the local government is combined with the federal government, they account for 12 percent of natural gas revenues in the city.

¹⁶ The public sector and other tax-exempt entities pay their share of the gross receipts tax indirectly since the levy is considered part of the “cost of service” of the utilities and is embodied in the rate base paid by all customers, including the federal government, foreign embassies, and nonprofit organizations.

¹⁷ Tax revenue losses could occur as a result either of an outright repeal of the gross receipts tax or a decision not to extend the gross receipts tax to out-of-state suppliers. In the latter case, the unregulated entities would gain a significant cost advantage over regulated utilities, leading to a loss of market share by the regulated entity and hence a fall in revenues collected from the gross receipts tax. A leveling approach might be to impose a tax on sales of electricity to District residents from outside the District, but significant legal difficulties would confront efforts to impose any such tax due to the interstate commerce clause, even though such an “import tax” would create an economically level playing field by offsetting the tax advantage held by nonregulated firms not subject to the gross receipts tax.

¹⁸ However, the very visibility of this tax might make it politically undesirable.

¹⁹ The short-run elasticity, or responsiveness, to such price changes is very small, so the net effect of a higher tax would in all likelihood be substantial increases in tax revenues.

²⁰ The disadvantage to such a change in the District is the fact that, unlike the situation in other jurisdictions, the federal government and nonprofit organizations make up a considerable share of the electricity market and are exempt from consumption taxes. Since the gross receipts tax is levied on the supplier, not the consumer, utilities pass on these tax costs to the federal government and nonprofit entities, thus circumventing this exemption.

²¹ Office of the People’s Counsel, *Initial Comments, Formal Case No. 945, Public Service Commission of the District of Columbia, in the Matter of the Investigation into Electric Services, Market Competition, and Regulatory Policies* (Washington, D.C.: 1997).

²² In fact, the District may lose in terms of economic development as a result of competition nationally, as the price of electricity in other areas will fall relative to that in the District, tending to reduce even further the District’s relative attractiveness to energy-intensive economic activities such as manufacturing. Office of the People’s Counsel, *op. cit.*

²³ This apparently counterintuitive fact is due to the large ratio of residential and commercial customers to industrial customers in the District compared to that ratio in other parts of the country. These variations weight the sectoral values differently in computing an aggregated average price.

²⁴ Convinced that great savings would result from a restructured electric power market, the California State Assembly mandated a 10 percent rate reduction for all electric consumers in the state effective January 1, 1998, to ensure that customers receive some immediate benefit from utility restructuring. The legislation froze

electric rates in 1996. They will be unfrozen in 2002, at which time electricity prices are expected to drop dramatically. It is unlikely, however, that such substantial price reductions would occur in the District, so there is less danger of a major fall in tax revenues from this source alone.

²⁵ Assuming that deregulation is permitted and that the gross receipts tax is extended to the new suppliers.

²⁶ Energy Information Administration, *Electricity Prices in a Competitive Environment: Marginal Cost Pricing of Generation Services and Financial Status of Electric Utilities — A Preliminary Analysis through 2015*, DOE/EIA-0614 (Washington, D.C.: 1997), p. 24. This report uses this value for its “Moderate Consumer Response Case” forecast. Studies on this issue over the years support a generally low value. New Jersey Board of Public Utilities, *Joint Task Force Report on Energy Tax Policy*, Attachment C (1996) and Rodney D. Green et al., “The Demand for Heating Fuels: A Disaggregated Modeling Approach,” *Atlantic Economic Journal*, Vol. 14, No. 4 (1986), pp. 1–14.

²⁷ These findings are consistent with the U.S. Department of Energy’s (DOE) forecast for electricity prices in a competitive environment. DOE’s projections were made using the National Energy Modeling System and a prototype version of the Value of Capacity model, given certain assumptions. The findings under various different scenarios (all of which exclude recovery of stranded cost through prices) suggested that electricity prices in all cases would be lowered. The price reductions described in the competitive cases are in addition to the price reductions that are already occurring due to the level of limited competition in the wholesale market for electric power and the expectation of a higher level of competition in the future. Energy Information Administration, *Electricity Prices in a Competitive Environment*, pp. 101–103.