BUILDING IDEAS TOWN+GOWN

Work in Progress

Legal Investigations into Designing the "Below-the-Roadway" Relationship of Public Owners/Utilities and Private Utilities?

Work Book

The following research work products focus on aspects of answering elements of a Town+Gown research question below from the 2012-2013 Research Agenda (link).

Investigations into Designing the "Below-the-Roadway" Relationship of Public Owners/Utilities and Private Utilities

BACKGROUND:

Beneath the asphalt on the roadways in many urban centers runs a transport network for private utilities—telecommunication, electricity, gas, steam—and public utilities—water and sewer. Public owners permit private utilities to occupy public space via several legal constructs, such as easements, rights of way or franchises.

Since public roadways and the networks below them are dynamic infrastructure, the ongoing relationship must provide for responsibilities during construction, reconstruction and maintenance of the infrastructure as well as the utility elements below.

SOME QUESTION(S):

How do the public works agencies in other cities manage the interaction with private utilities for construction, reconstruction and maintenance activities?

To what extent is the relationship governed by state law and/or public utility regulatory commission law and regulations and to what extent is the relationship governed by local law and/or agreement by the parties?

How do these laws work, what is their historical development, how do they relate to public and private capital issues and how do they complement each other and/or work at cross purposes?

PRACTITIONER PARTNER(S):

DDC, DOT, OMB

Overview of Law of Private Utility Regulation

The Law and Economics of Utility Regulation
Tierrance Charles/Brooklyn Law School

I. Introduction

Utilities provide goods and services that improve our quality of life, such as gas, electricity, steam, telecommunications (including cable and Internet), water and wastewater services. Infrastructure supplying an abundance of these goods and services is a defining characteristic of modern society and the goal of developing societies. Utility infrastructure could be aptly characterized as the lifeblood of society, carrying important goods and services to and from individuals, homes, and businesses in order to sustain material conditions for the modern way of life.

Almost 27 percent of the City's land area is covered by streets and sidewalks, which form the top layer of a complex set of systems, different components of which are owned and operated by various separately regulated private and public owners. Beneath the asphalt on the City's roadways run transport networks for all the utilities, those that are privately owned—telecommunication, electricity, gas, steam—and those that are publicly owned—water, sewer/wastewater treatment and subway transit.

If this dynamic infrastructure ensemble were to be designed and managed to reflect 21st century public policy concerns, using 21st century design innovations and new materials in used elsewhere, it is necessary to understand the laws and economics governing all relationships under the roadway. If the future of roadway design and management requires active collaboration among the public and private entities that share the street in a functional manner and realigning the various financing incentives to facilitate the use of modern design and materials, it is particularly necessary to understand the law and economics of publicly regulated private utilities.

In the United States, utility ownership can be private or public, both of which can be regulated by various levels of government. This paper provides a summary review of the legal and economic issues governing public regulation of private utilities, focusing on privately-owned firms that are subject to public regulation.

II. The Legal and Economic Rationale of Public Regulation in the United States

Economists view the goods and/or services that private utility companies provide as "natural monopolies" because a single firm can produce output to a given market at a lower per unit cost than multiple firms.1 Natural monopolies occur when the applicable production technology, typically with relatively high fixed costs, causes long run average total costs to decline as output expands.2 Under those conditions, a single producer will eventually be able to produce at a lower cost than multiple

1 Thomas J DiLorenzo, *The Myth of Natural Monopoly*, THE REVIEW OF AUSTRIAN ECONOMICS Vol 9, No. 2 (1996) 43-58.
1 id. at 44
1 id. at 45

producers and it is assumed that if multiple producers supply the market, the price will be higher than if there is only one producer. The economic assumptions that support, and flow from, the economic theory of natural monopolies produced, in the United States, parallel legal theory and case law. While these assumptions and theory have faced criticism, they remain linchpin rationales for protections granted by law to regulate private utilities in the United States today.[3]

The economic benefits from natural monopolies, lower prices to consumers in the absence of open and free competition, are considered public benefits, and state legislation insulates these natural monopolies from open and free competition from similar providers by restricting entry within a given market in exchange for submission to regulation by public service commissions on the prices they can charge and the rate of return on investment, which are related. Laws protecting private utilities from competition from multiple firms exist to prevent unnecessary and expensive duplication of capital equipment. While recent technological developments have changed the economic calculus that supported the theory of the natural monopoly and the federal government and state legislatures have begun to allow competition—or deregulation—in some industries, private utilities in the United States, by and large, continue to be regulated by state commissions empowered by legislation and case law to limit the prices they charge their customers as well as the rate of return that their shareholders can obtain on their investment.

Historically, regulation of private businesses by focusing on the prices they could charge customers did not find legal support until 1877, when the Supreme Court adopted, in *Munn v. Illinois*,[4] the idea of public interest inherent in the theory of natural monopolies. In *Munn*, the State of Illinois's passed a law that set the prices grain elevators were allowed to charge customers, and the grain operators brought a suit alleging the statute infringed upon Congress' constitutional power to regulate commerce under the Commerce Clause and also violated their private property rights under the due process clause of the Fourteenth amendment. The Supreme Court held that when a business enterprise places its property in a use "in which the public has an interest, [it], in effect, grants to the public an interest in that use, and must submit to be controlled by the public for the common good." [5] As a result of this decision, state legislatures could regulate private utilities, regulating the prices they charge their customers as well as other aspects related to price, such as rate of return on investment. There are a variety of methods to calculate the rate of return. One example is shown by the formula: R= B x r + E + d + T. R is revenue requirement, B is the rate base, which is the amount of capital or assets the utility dedicates to providing its regulated services, r is the allowed rate of return, which includes the cost of debt the utility incurs to finance its rate base (i.e., bonds and equity, including preferred and common stock holders), E is operating expenses, d is depreciation, and T is all taxes not counted as operated expenses during a given period of time, usually a year.[6]

Federal Power Commission v. Hope Natural Gas Pipeline Co. [7] clarified the corollary economic principle flowing from natural monopolies, the rate of return, or ROR. Once government had the power,

---

[4] Munn v. Illinois, 94 US 113

[5] id at 126

[6] Jamison, Mark, A.; Rate of Return: Regulation; Public Utility research center

[7] *Federal Power Commission v. Hope Natural Gas Pipeline Co.*, 64 S.Ct. 281 (1944)

via public service or public utility commissions, to control prices, it was assumed it had the related and corollary power to control their rate of return.8 Laws determining the level of the rate of return gave rise to contention and litigation. As would have been expected, shareholders wanted the highest rate of return on their investment as possible, which would have translated into high prices, which was at odds with the public interest underlying utility regulation. But if the rate of return was too low compared to other investments, investors would look elsewhere for higher returns, reducing the market for public utility equity to finance operations and debt to finance infrastructure, which would eventually translate into higher consumer prices. Laws and cases subsequent to *Munn* imposed a standard of fairness or reasonableness on the public service commissions that stood in the middle. *Hope* provided needed clarification holding that a "fair" return should be "commensurate with returns on investment in other enterprises having corresponding risk."9 Limiting the rate of return is an important tool of public services commissions. Today every state public service commission seek to establish a working balance between the competing needs of consumers who want utilities at reasonable prices and firms whose goal is to provide an adequate rate of return to its investors and bondholders.

Hope freed state public service commissions from a formulaic standard about what can be included in the rate base, which is directly related to the rate of return since it is a percentage of the rate base. Public service commissions have broad discretion to determinate the elements of cost that can be included in the rate base used to determine the rate of return.10 The rate making process involves a forum similar to court hearings with witness and testimony from experts, at which the firms make their cases to the regulators to adjust elements of the rate base.11 Elements of these rate cases include accountings of actual operating costs and costs of capital, how to value the base, whether and when to add investments to the rate base, and whether expenditures have been prudently made.12

IV. Regulatory Issues

One of the main goals of rate controls for regulated monopolistic enterprises is to serve as a surrogate for the functions of valuation, allocation, rationing and distribution performed by the price mechanism that are present in industries where competition is present.13 Public service commissions attempt to put the consumer in the same position with the captive utility company that they would be in with firms in a competitive industry. This objective is difficult, despite data, statistical models and expert testimony applied to rate determinations, because of informational asymmetries between the

---

8 Id at 286

9 Id. at 287

10 Kambiz Raffiee and Jeanne Wendel,*The Effects of Alternative Regulatory Policies on Utility Investment Strategies*, SOUTHERN ECONOMIC JOURNAL, Vol. 54, No. 4 (Apr., 1988), pp. 840-854

10 Paul L Joskow, *Incentive Regulation in Theory and Practice, Electricity Distribution and Transmission Networks,* Prepared for the National Bureau of Economic Research Conference on Economic Regulation, September 9-10, 2005 pg. 1-57

10 Sherry Lichtenberg, Ph.D, *The Year in Review: The Status of Telecommunications Deregulation in 2012,*written for the National Regulatory Research Institute (June 2012)

11 Paul L Joskow, *Incentive Regulation in Theory and Practice, Electricity Distribution and Transmission Networks,* Prepared for the National Bureau of Economic Research Conference on Economic Regulation, September 9-10, 2005 pg. 1-57

12 Kambiz Raffiee and Jeanne Wendel, *The Effects of Alternative Regulatory Policies on Utility Investment Strategies,* SOUTHERN ECONOMIC JOURNAL, Vol. 54, No. 4 (Apr., 1988), pp. 840-854

13 Sherry Lichtenberg, Ph.D, *The Year in Review: The Status of Telecommunications Deregulation in 2012,*written for the National Regulatory Research Institute (June 2012)

regulator and the regulated entities that disadvantages the regulators' proper determination of whether management is behaving efficiently.14 Regulatory *ex post* adjustments made after rate determinations, based on additional data or through the use of benchmarking against similar firms, provides institutional counterweight to information asymmetries.15

The rate of return methodology may distort firm behavior since the larger the expenses allowed in the rate base, the higher the absolute rate of return to the firm and its shareholders. This theoretical tendency of regulation to encourage a bias for the regulated firm, as compared to unregulated firms, towards more capital-intensive modes of production because capital costs are included in the rate base is referred to as the Averch-Johnson effect or the A-J-W distortion.16 To mitigate the risk of the Averch-Johnson effect in management's choice of the allocation of resources, some jurisdictions requires public utility commissions to determine whether some costs, typically capital costs, are prudent during rate cases, especially in the case of expansion of facilities and building new plants, which can be particularly expensive. For example, an expansion "must be prudent and used and useful to be included in a given period's rate base." 17 One view of evaluating whether an investment is prudent focuses on whether the investment "was prudent at the time the decision was made, . . . assessing what information management had available and used at the time the decision was made''.18 The other view focuses on whether management acted to minimize costs by "fully considering changing conditions that would affect the investment [and] requires assessing what management should have known and should have considered in making its decision."19 It is thought that the possibility that public utility commissions would disallow certain capital investment in the rate base creates a counter incentive to mitigate the Averch-Johnson effect, since a disallowed capital expense would have a negative business consequence which could even result in bankruptcy.20

Both methodologies for assessing "prudence" depend on approximating the demand for the services of the utility, which must be approximated because it cannot be known with certainty before the time the demand is actually manifest.21 Generally, public utility commissions will forecast the demand level based on previous years data and stipulate the prices the regulated firm is allowed to charge, based on the revenue requirement (return to investors) and the forecasted demand.22 Often, in this context, the utility will propose a rate structure and demonstrate that the price structure would yield the revenue requirement, based on information from a 'test year', typically the latest year for which the necessary data are available.23 In recent years, options available within the traditional

---

14 14 Philippe Gagnepain and Marc Ivaldi , Informational asymmetries Incentive Regulatory Policies: The Case of Public Transit Systems in France, THE RAND JOURNAL OF ECONOMICS, Vol. 33, No. 4 (Winter, 2002) pg. 605-629

15 id. at 608

16 see, Discussion of the Averch Johnson effect, *Principles of Public Utility Rates* pg. 356, see also Alfred E. Kahn, *The Economics of Regulation, Principles and Institutions* (Cambridge, Massachusetts Institute of Technology 1988), Volume II, pp. 49-59, 106-108..

17 Mark A. Jamison, *Rate of Return*: *Regulation*, written for the Public Utility Research Center pg. 1-20

18 id. at pg 13

19 id at 13

20 Janet Netz, *Price Regulation*: *A (non-technical) Overview*, *DEPARTMENT OF ECONOMICS, PURDUE UNIVERSITY* , 397-466

21 Mark A. Jamison, *Rate of Return*: *Regulation*, written for the Public Utility Research Center at 12

22 id.at 10

23 id. at 12

regulatory framework for encouraging efficient management of resources to counter the Averch-Johnson effect, such as "incentive regulation", have been used extensively outside the United States and will be discussed next.

V. Regulation Practices outside the United States

Since the 1980s, when Great Britain's largely publicly owned utilities were privatized, regulatory bodies have been employing the price cap, or RPI-X, methodology instead of rate regulation.[24] The model was first applied in the telecommunications sector then expanded to electricity, gas, water, and transport.[25] Independent regulatory agencies control monopoly power by promoting competition and applying price caps.[26] (discussion of the defining characteristics of price cap system). .[27]

The merits of Great Britain's price cap RPI-X system versus the rate of return regulation methods largely employed in the United States include less vulnerability to cost, inefficiency and over capitalization (Averch-Johnson effect),[28] greater flexibility for the company to adjust the structure of prices within the basket,[29] operational simplicity as compared to traditional rate of return regulation, [30] with close to half the operational costs[31], and less subject to the phenomenon of regulatory lag or delayed reactions to cost changes.[32]

In the electricity and gas industries, Italy and Spain utilize incentive regulation through revenue caps.[33] France and Germany use a form of rate of return schemes but both countries are expected to introduce incentive regulation in 2009.[34] In Germany the first regulatory period under the incentive method began in 2009 in the electricity sector.[35]

VI. Alternatives to Rate of Return Regulation

Economists have documented the inefficiencies inherent in rate control, as a substitute for the functions of valuation, allocation, rationing and distribution performed by the price mechanism in industries where competition is present. Among alternative methodologies thought to produce more

---

24 For a discussion of the history, development and future of UK utility regulation see…The UK Model of Utility Regulation; A 20th Anniversary collection to mark the "Littlechild report" retrospect and prospect; **http://www.bath.ac.uk/management/cri/pubpdf/Conference_seminar/31_Model_Utility_Regulation.pdf**

25 Alan Jones*, Ethics, Leadership and Accountability*, JOURNAL OF BUSINESS ETHICS, Vol. 34, No. 3/4, , The 13th Annual EBEN Conference (Dec., 2001), pp. 219-229

26 Michael Waterson, *A Comparative Analysis of Methods for Regulating Public Utilities*, METROECONOMICA, Vol. 43 (1992) N. 1-2 pp. 205-226

27 id. at 207 (The price cap have four properties. First, the regulator sets a price ceiling. Second, Price ceilings or indices are set for baskets of services. Third, the indices are periodically adjusted. Finally, over the long term index values are reviewed and altered. The price cap index is usually the retail price index (RPI) less a given fixed percentage each year.)

28 id at 217

29 id. at 213

30 id. at 215

31 id at 215

32 id. at 207

33 Carlo Cambini & Laura Rondi ; *Incentive Regulation and Investment: Evidence from European Energy Utilities,* prepated for Politecnico di Torino

34 id*. at 7*

35 Christoph Muller; **http://www.unecom.de/documents/presentations/Mueller_Current_Regulatory_Debates_in_Germany_and_Europe_090529.pdf** May 2009, (visited 8/15/12)

efficient results is the contestable market theory. The contestable market theory assumes that if the constraints against competition within a market were removed, a firm would be forced to charge prices no higher than their marginal cost, assuming normal profits were available to entrants and firm can exit the market without cost. 36 Application of this theory would render regulation as pure waste, since, without regulation, the monopoly would yield price efficiency.37 Contestability theory can provide a framework for analysis of the deregulation under the Telecommunications Act of 1996. However, because the telecommunications industry, which is characterized by investments representing an extremely high proportion of sunk costs, the opposite of costless entry and exit, a fundamental assumption in the contestability theory, this theory does not provide an alternative competitive model post deregulation of the industry.38

Another alternative to traditional rate of return regulation, a form of franchising accomplished through a process called Chadwick bidding, would retain regulation only in the bidding phase.39 Economists predict that regulating the open and competitive bidding phase alone would prohibit formerly the regulated monopolies from extracting excessive profits because there would be competition from other bidders and the winning bid(s) will result in zero-profits because the bidding firms would choose winning the bid and earning nominal or zero profits over not winning at all. 40

A final alternative to traditional rate of return regulation is public ownership of the utility. Publicly owned utilities exist throughout the United States today, and for almost every utility type that is privately owned across the United States, there are publicly-owned utility analogs. Historically, looking at the electricity industry as a model, public ownership was reserved to smaller cities and towns because private investors had been slow to invest in smaller markets as compared to major urban centers.41 Though several major cities, notably Los Angeles, Seattle, Detroit, and Cleveland, also employed the public ownership model to keep costs low?42 The period of the 1930s also saw the creation of rural electrical co-ops and federal power agencies, most famous of which was the Tennessee Valley Authority, located on the Tennessee River and devoted to power generation and sale to privately owned utilities, municipalities, and co-ops for retail distribution.43

One *potential* benefit of public ownership of a utility is that public owners are concerned with rate of return and profits because there are not investors.44 Under conditions of public ownership and the

36 Ben W. F. Depoorter, *Regulation of Natural Monopoly*, paper produced for the Center for Advanced Studies in Law and Economics (1999)

37 id. at 510

38 Jerry Hausman; *The Effect of Sunk Costs in Telecommunications Regulation*; Presented at a conference at Columbia University, October 2, 1998.pp. 1-20

39 Ben W. F. Depoorter, *Regulation of Natural Monopoly*, paper produced for the Center for Advanced Studies in Law and Economics (1999) at 512

40 id. at 512

41 John E. Kwoka, Jr.; The comparative advantage of public ownership: evidence from U.S electric utilities; THE CANADIAN JOURNAL OF ECONOMICS/ REVUE CANADIENNE D'ECONOMIQU, Vol. 38, No. 2 pp. 622-640

42 id. at 625

43 id. at 626

44 id. at 514

absence of the profit motive, the conflict between owners and consumers is eliminated,45 creating the potential for lower prices to consumers. Further, public owners ". . . may be better able to secure the necessary information to monitor enterprise behavior for consistency with social objectives," mitigating the problem of informational asymmetry that plagues traditionally regulated industries.46 Thus, publicly owned utilities are better able to provide services in areas not profitable to private utilities, their prices may be lower relative to privately owned utilities, and their management can better focus on the quality of service.47 Public ownership is, however, also subject to the inefficiencies, such as lack of incentive to innovate, that are found among regulated private utilities.48

VII. Next Steps for Future Research

In view of the ongoing project to identify financing incentives to facilitate the use of modern design and materials in and under the roadway, it will be necessary to conduct further research suggested by this foundational study. It will be necessary to research and analyze New York State's regulatory framework and case law, focusing in particular on the rate of return methodology, for the regulated utilities that operate under and near the City's roadways. This next level of research and analysis will most likely need to take account of the unique history of these utilities in New York City as well as the unique history of New York City. It will also be helpful to identify any data-based analyses of the Averch-Johnson effect in regulated industries.

45 John Bauer, *Public Ownership of Public Utilities in the United States*, ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE, Vol. 201 (jan 1939), pp 50-57

46 John E. Kwoka, Jr.; *The comparative advantage of public ownership: evidence from U.S electric utilities*; THE CANADIAN JOURNAL OF ECONOMICS/ REVUE CANADIENNE D'ECONOMIQU, Vol. 38, No. 2 pg. at 640

47 Ben W. F. Depoorter, *Regulation of Natural Monopoly*, CENTER FOR ADVANCED STUDIES IN LAW AND ECONOMICS, *Center for Advanced Studies in Law and Economics University of Ghent,* at 514

48 id. at 512

Overview of the History of New York State Private Regulation Law

Regulation of Gas, Electricity, and Telecommunications
Michael Brantl/Brooklyn Law School

Since the middle of the 19th Century, the regulation of utilities in New York has been primarily performed on the state level with some important legislation on the federal level to bolster the state's ability to regulate these utilities. The three utilities that are the focus of this paper are gas, electricity, and telecommunications. These utilities all provide a valuable public service, but since they are natural monopolies, regulation is crucial to protect the public from these self-supporting enterprises.

The first utility to undergo regulation was gas. On May 12, 1823, the first gas franchise was granted in the form of a contract to the New York Gas Light company with the primary responsibility of the company to light the streets, buildings, factories, and houses.[49] As more gas companies emerged within New York, the legislature enacted the first general law in 1848 to administer the incorporation, governance, and powers of gas light companies organized for the purpose of utilizing public rights of way to supply gas for the lighting of streets as well as public and private buildings.[50] These franchises gave utility companies the authority to dig up the streets and, in return for this right, these companies were obligated to adhere to established price ceilings and minimum service requirements for the life of the contract which was usually around thirty years.[51]

In 1879, an amendment to the 1848 Gas Corp. Law authorized operating companies organized under the Gas Corp law to use electricity for lighting instead of gas.[52] This amendment opened the doors for electricity to compete with gas. With the looming threat of electricity, six gas companies formed the operating company named Consolidated Gas Company of New York in 1884.[53] Thus, the gas companies themselves became providers of electricity, and by 1910 controlled, under the name of New York Edison, most of the electricity generated in Manhattan and the western portion of the Bronx.

The emergence of these powerful companies created the need for regulation of gas and electricity which began at the state level with the New York Public Service Commission in 1921. However, through a framework that was part statutory and part common law, the New York Public Service Commission was unable to effectively regulate these electric utilities as they gained a franchise monopoly and eminent domain powers.[54] This situation arose during the late 1920s and early 1930s, when one holding company would own many small utilities in various states. Therefore, regulation on the federal level became necessary to protect the public from these monopolies. The first important piece of federal legislation was enacted in 1935. The primary function of the Public Utilities Holding

---

49 Seabury, Samuel *Municipal Ownership and Operating of Public Utilities in New York*, Municipal Ownership Pub. Co., 1905
50 Id.
51 Id.
52 Seabury, Samuel *Municipal Ownership and Operating of Public Utilities in New York*, Municipal Ownership Pub. Co., 1905
53 Bemis, Edward Webster, *Municipal Monopolies*, T.Y. Crowell & Company, 1899
54 The Committee on Energy of The Association of The Bar of The City of New York, Electric Utility Restructuring in New York: A Status Report May 21, 1998

Company Act of 1935 was the federal regulation of any "holding company."55 The purpose of this legislation was to address the unacceptable monopolistic practices where the power of the states to regulate their activities was limited to those rare instances where a utility's activities were within a single state's borders. This act addressed this problem by reorganizing the holding companies, vesting greater power in the states, and allowing for increased regulation of rates and services by both state and federal agencies.56

The next effective piece of legislation on the federal level was the Federal Power Act in 1935. This act expanded the power of the Federal Power Commission, an independent commission organized in 1930, by broadening the jurisdiction of this commission to wholesale sales and transmission of electricity in interstate commerce.57 The uniformity of federal regulation of transmission facilities helped to facilitate the unrelated transmission facilities across the country to function as if they were parts of an integrated system.58 The Federal Power Commission eventually became the Federal Energy Regulatory Commission in the 1970's.

The Public Utilities Regulatory Policies Act of 1978 was another important piece of federal legislation that increased competition within the electric utility industry by creating a new class of electric generating facilities that could not be owned by traditional utilities, but by independent operators.59 The enactment of PURPA at the federal level was followed in New York with state legislation offering further encouragement to the development of independent operators. The new cogeneration facilities incorporated the latest technology, often enabling the new facilities to produce electricity at substantially lower cost than the older machines of the traditional utilities. This act was followed by the Energy Policy Act of 1992 and the Federal Energy Regulatory Commission's issuance of Order 888 in 1996.60 Under Order 888, FERC mandated that transmission facility owners operate their system on an "open access" basis which required these facilities to make the use of their transmission facilities available under non-discriminatory tariff rates and terms.61 The FERC open access policy set the stage for electric utility restructuring with the "functional unbundling" of wholesale generation and transmission services, which means that each utility must state separate rates for its wholesale generation, transmission, and ancillary services.62

The regulation of telecommunications in New York City follows a different trajectory than gas and electricity. The invention of the telephone by Alexander Graham Bell and the subsequent patents on the technology by Bell and Theodore Vail set the stage for the Bell company to control a majority of the telephone market in America from 1876-1980's. New York Telephone, the local operating company

---

55 (defined as the owner of 10% or more of the voting stock of an electric or gas utility company) Id.

56 The Committee on Energy of The Association of The Bar of The City of New York, Electric Utility Restructuring in New York: A Status Report May 21, 1998

57 Id.

58 Id.

59 Id.

60 The Committee on Energy of The Association of The Bar of The City of New York, Electric Utility Restructuring in New York: A Status Report May 21, 1998

61 NEW YORK V. FERC (00-568) *535 U.S. 1 (2002)* 225 F.3d 667

62 Id.

licensed by American Telephone and Telegraph (AT&T), was the dominant local exchange company in New York.

As early as 1884, the legislature of the State of New York passed a law requiring all telegraph, telephone, and electric light wires and cables in any city of the state having a population of 500,000 inhabitants or more to be placed underground before November 1, 1885.63 In the following year, another act created the Board of Electrical Control, who were responsible for overseeing the implementation of this new legislation.64 Under the authority of this act, the Board of Electrical Control devised a general plan of electrical subways and subsequently entered into an exclusive contract with the Consolidated Telegraph and Electrical Subway Company for the construction and operation of such subways. The first agreement was entered into on July 22, 1886. As a result of this agreement, the Consolidated Telegraph and Electrical Subway Company sought the separation of the control of the conduits used for low tension wires from the control of conduits used for high tension wires.65 The Empire City Subway Company Limited was incorporated for the purpose of taking over from the Consolidated Telegraph and Electrical Subway Company all conduits used for low tension wires of the Edison Electric Illuminating Company and for the purpose of constructing all additional conduits required for these uses.66 The Board of Electrical Control entered into a separate contract on May 15, 1891 with the Empire City Subway Company Limited. The Consolidated Telegraph and Electrical Subway Company went under the control of the New York Edison Company through stock ownership and the Empire City Subway Company fell under the control of the New York Telephone Company.67

Several independent phone companies attempted to break into the New York market, but none of them were successful because these companies required underground conduits to string their lines. These conduits were owned by Empire City Subway Company, the subway contractor which is a subsidiary of AT&T. In 1910, Congress passed the Mann-Elkins Act, which assigned regulation of the telephone industry to the Interstate Commerce Commission. An investigation of AT&T's activities was ineffective.68 In 1913, AT&T promised to interconnect with noncompeting independents and to halt acquisition of competing independents.69 In exchange, Bell would submit to regulation with guarantees of protection from competition. In fact, acquisition of independents would soon resume as AT&T consolidated its ownership of franchises in large populations and sold off its rural holdings to independents. By 1934, with independents' share dipping to 21 percent of the total market and with virtually 100 percent of the independents connected to AT&T's long distance service, Congress passed the Communications Act which formed the Federal Communications Commission who were responsible for the regulation of these monopolies through assured rate of return on investment/costs in return for

63 Bemis, Edward Webster, *Municipal Monopolies*, T.Y. Crowell & Company, 1899
64 Id.
65 Id.
66 Id.
67 Id.
68 Vogelsan, Ingo and Woroch, Glenn, *Local Telephone Service: A Complex Dance of Technology, Regulation and Competition*
69 Id.

universal service.70 The FCC was empowered to allocate rights to commercial use of the radio spectrum and to regulate interstate communications services by common carriers.71

On January 8, 1982, AT&T and the Department of Justice signed an agreement called the "Modification of Final Judgment" (MFJ), which altered the previous agreement that the parties signed in 1956 after the government found AT&T had violated Section 2 of the Sherman Antitrust Act by monopolizing local and long distance phone service, and then using that monopoly power to exclude entrants.72 However, regulatory reform was needed to support multiple providers where the incumbents had franchise monopolies. Local competition initiatives, such as the NYPSC interconnection decision in New York City, were initiated by the entrant phone company and facilitated by state regulators who eventually mediated an agreement among the companies.73 The MFJ's principal terms called for divestiture of the Bell Operating Companies on January 1, 1984, grouping them into seven regional holding companies.74 The Regional Holding Companies were permitted to provide local and short-haul toll service within the boundaries of 161 "local access and transport areas" that covered the entire country.75 They also could not manufacture equipment or provide information services like voice mail.

In 1990, the FCC adopted a new regulatory scheme of "price caps" with profit sharing for the Local Exchange Companies. A "price cap" scheme places a ceiling on the average revenue a firm can charge on all services, with appropriate adjustments over time for inflation and the rate of productivity improvement that comes from technical change.76 State incentive regulation schemes like the "price caps" started that gave regulated firms some pricing flexibility that were not enjoyed under the rate-of-return regulation. The Telecommunications Act of 1996 was passed to further the abolishment of all regulatory barriers to entry. An example of these barriers was a plan devised by companies to interconnect with competitors and offer to unbundle their network services, therefore selling services at nondiscriminatory cost-base rates. This plan and others like it have shaped the deregulation of local exchange markets at the state and federal levels.

---

70 Id.

71 Id.

72 Vogelsan, Ingo and Woroch, Glenn, Local Telephone Service: A Complex Dance of Technology, Regulation and Competition

73 Id.

74 Id.

75 Id.

76 Id.

Overview of Rate Setting Process in New York State

How New York Sets Rates

Alexander Goldman/Brooklyn Law School

1. How States Set Rates

Most states require 1) notice to change rates, 2) specific data supporting the rate change, and 3) an administrative process.

> The ratemaking approval process involves balancing the rights of utility customers to pay a reasonable charge and the rights of utility company investors to earn a fair return on the value of utility company property. Ordinarily, ratemaking begins with an assessment of the value of the utility's "rate base" or the property that is "used and useful" to the utility. Next, operating expenses are compared to gross income. Finally, a determination of a fair return on property must be made. Prior to approving a rate structure for a utility using this process, a public utility commission or public service commission must set forth evidence, findings of fact and conclusions of law that could be reviewed by a court. Classification of customers is an extremely complex aspect of ratemaking, as equality in the rates paid by various customer classes is not required, but at the same time there must be reasons for distinguishing among particular customer classes in setting rates. Ratemaking must not result in unjust, unreasonable or discriminatory rates.
>
> Typically, a utility company must provide both the commission and its customers with notice of its intent to set or change rates. Notice may be governed by rules specific to ratemaking or by general procedural rules covering utility company filings. Next, the utility company must submit an application containing detailed information and analysis supporting the proposed rate or rates. The specific requirements of the application are strictly governed by state regulations. In most states, data from a "test year" must be submitted to justify the proposed rates. This test year may be historical, projected or some combination of the two. In many states, utility deregulation has resulted in adjustments to test year data to reflect a utility company's expected costs and revenues. The various formal elements of a rate application, including underlying data, calculations, schedules and attachments may be described in a general rule covering various types of utilities, within rules for each type of utility, or most often, in various general and more specific rules. Rate approval rules like these will almost always cover electric, gas and some telecommunication utilities, and often water, sewer and various other utilities as well. The range of utilities covered by rate approval rules varies greatly from state to state, as does the extent to which such coverage and exceptions are indicated within the rules.[77]

2. New York Rules, Generally

In New York, the guidelines concerning rate making proceedings are set by N.Y. Comp. Codes R. & Regs. tit. 16, § 61. However, the statutes only provide general guidelines, "Proceedings involving the

---

77 REGSURVEYS, Ratemaking Approval Process, 0160 REGSURVEYS 10

reasonableness of existing or proposed rates vary so greatly in character and scope that it is impossible to prescribe rules of universal application that are suited to all rate proceedings." NY ADC T. 16, Ch. I, Subch. D, Pt. 61, Refs & Annos. The only rules that apply are that the utility has the burden of proof in showing the necessity of a rate change (N.Y. Comp. Codes R. & Regs. tit. 16, § 61.1) but the tariff that is already in place is presumed to be reasonable (N.Y. Comp. Codes R. & Regs. tit. 16, § 61.2).

The utility must supply the following data as required by N.Y. Comp. Codes R. & Regs. tit. 16, § 61.3:

1) annual revenues, number of "units of service" (subscribers, in telecom), and revenue per unit;

2) detailed cost of service and cost per unit of service -- and "other customary operating statistics";

3) data for three years before filing, and other periods "as the progress of the proceeding will permit," all stated "fully and exactly";

4) balance sheets for end of the past four fiscal years and for the current fiscal year through the most recent month, income statements for the past three years and the current year through the most recent month;

5) charges for amortization and depreciation listed in the balance sheets and income statements

6) "earned surplus statements" for the past three years and current year through the most recent month

7) "complete and detailed statements of the merchandising and jobbing business" (this means, I think, a set of separate income statements and balance sheets for the wholesale portion of the business, but I would like confirmation); and

8) gas costs and how the company "is insuring that gas costs for both the test period and rate year are prudent and from the least-cost reliable sources."

For estimating the future costs, the utility must use actual data, not speculation or conjecture. N.Y. Comp. Codes R. & Regs. tit. 16, § 61.4. Where the company is claiming for rate of return on property, it must "establish by competent evidence the original cost of the property used and useful in the service to which the rates, rules and regulations involved in the proceeding relate and the accrued depreciation thereon" and any property not used cannot be in the rate base (the statute says that depreciation has to be based on actual causes of loss of value in the equipment and actual causes of its eventual retirement, and cannot "be measured by inspection alone." N.Y. Comp. Codes R. & Regs. tit. 16, § 61.5. Where the utility buys property from an affiliate or another corporation, it must provide an account of the other corporation's accumulated depreciation (I think that this avoids a tax dodge where one company depreciates a property to lower its tax bill, and then another company depreciates the same property the same amount, so the two companies depreciate one property for double the total allowable depreciation deduction). N.Y. Comp. Codes R. & Regs. tit. 16, § 61.6. Reproduction cost is covered in N.Y. Comp. Codes R. & Regs. tit. 16, § 61.7, but the cost of replacement of utility property usually does not apply, because, instead, the utility has been depreciating the property. Procedural issues are covered in N.Y. Comp. Codes R. & Regs. tit. 16, § 61.10. Most of them do not apply, except that the following changes do not require a rate proceeding:

(1) changes made pursuant to or authorized by applicable orders of the commission, such as compliance filings following rate level or rate design investigations and expressly authorized second-stage rate increases;

(2) changes in formula rates, such as the fuel and gas adjustment clause, annual factor of adjustment, annual gas surcharge or refund, gross receipts tax surcharge, and two-tier telephone rate revisions;
(3) changes in special service charges, such as late payment, no access, meter recovery, connection, field collection, seasonal turn-on and turn-off, and undergrounding charges;
(4) changes designed to offer a new or expanded service or curtail an existing service, such as telephone base rate area expansions, locality zone changes, extended area service offerings and exchange area transfers; and
(5) changes in the terms and conditions of service, other than rates and charges, without substantial revenue or customer bill effects and changes made for the movement of text to other pages to accommodate other authorized changes.

3. Case Study: Con Edison

The tariffs are the output of the administrative proceedings. A detailed 308 page record of the rate setting procedure for Con Ed, issued on April 24, 2009 (*available at* **http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={60F4148E-77EE-4933-AF38-B4AB16700257}**) provides a useful case study of the administrative proceeding before the Department of Public Service of the State of New York.
The account shows that administrative law judges divide the rate base into components, and each component into further constituent parts. Con Ed requested that the rate based include staffing in the following areas:
a. Electric (Distribution) Operations—Various,
b. Electric (Distribution) Operations—Enhanced Project Planning,
c. Shared Services--Programmers,
d. Other Normalizations,
e. State Regulatory Affairs,
f. Emergency Management, and
g. Gold Program (for hiring college graduates).
The court examined each request, looking into the data submitted. For example, with regard to Emergency Management staff, the court said that Con Ed had not shown that staff moved to Emergency Management had been "backfilled" — that their former jobs had been filled. In the case of State Regulatory Affairs, Con Ed wanted the rate based to include its lobbyists, and the administrative law judge denied the request, holding, "We see no reason why lack of an SRAD would adversely affect the Company's ability to provide safe and reliable service. Thus, we disallow funding for it" (p.28).
The court gave Con Ed only 45 percent of the cost of its projected new hires, on the basis that hiring would be slow and would occur over the three year period covered by the tariff. Rules such as the 45 percent adjustment are derived from statutory authority, but are judge-made.
At its simplest, the rate = RATE BASE x (1 + COST OF CAPITAL). There is no profit allowance. There is a provision for paying dividends to equity owners and also for paying interest to creditors.

3.1. Cost of Capital

Con Ed's Cost of Capital is 7.79%, so its rates equal the RATE BASE x 1.0779. The cost of capital is comprised of several elements, as shown in the chart below:

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. RATE OF RETURN REQUIRED FOR THE RATE YEAR TWELVE MONTHS ENDING MARCH 31, 2010 PER COMMISSION (p. 145)			
	Average Capitalization %	Cost Rate %	Weighted Cost Rate %
	Percent of total capital		
Long Term Debt	49.60%	5.79%	2.87%
Preferred Stock	1.10%	5.34%	0.06%
Customer Deposits	1.30%	4.85%	0.06%
Common Equity	48.00%	10.00%	4.80%
Total	100.00%		7.79%

3.1.1. Common Equity at 10%

Con Ed initially requested 11% but changed that to 10% in its 2008 tariff filing (p. 116). The court found that a 10.47% rate of return on equity was appropriate (p. 127). Since the objective cost of capital (the "proxy group") was based on a weighted average of the S&P 500, and because Con Ed can borrow more cheaply than the average S&P 500 company, the court reduced the return on equity to account for Con Ed's cheaper borrowing costs. "This overall result is being adjusted downward by 41 basis points to reflect the credit quality difference between the Company and the median of the proxy group and increased by four basis points as recommended by the judges for issuance costs. The 10.04% result is rounded to 10.0%" (p.140-141). The judges also concluded that no **RDM Adjustment** was needed (n. 215, p. 141). An RDM Adjustment would allow a utility to avoid shrinking its rate base when it lowered demand through good deeds, by increasing the efficiency of its customers. I don't understand why the RDM Adjustment came up in the cost of capital rather than in the discussion of the rate base.

3.1.2. Debt at 5.79%

The court ruled, "[u]sing the latest debt yields including issuance costs, the updated Rate Year cost of long-term debt is 5.79% compared to the 5.96% reflected in the recommended decision. Appendix IV shows the derivation of the 5.79%" (p.144). Appendix IV is a list of Con Ed's bonds issued since 1998, with estimates as to the total debt that is forecast to be outstanding on March 31, 2010. It includes an "unauthorized premium" of $30.667 million which, added to the total capital, has the effect of slightly lowering the allowed return on the company's balance of $9,701,647,000 outstanding. The chart shows "debt outstanding" and "average balance".

The court admitted that the price of future debt was difficult to estimate, noting, "[i]n light of recent volatility, it is currently difficult to estimate accurately what auction rate debt costs and spreads to Treasuries will be in effect when the Company issues additional debt" (p. 144).

3.1.3. Could Not Find Preferred Stock and Customer Deposits

The court noted that the customer deposit rate of 4.85% was up from 3.75% (p.145). I assume that the court let the trial decisions stand on items that account for only 2.4% of Con Ed's capital.

3.2. Rate Base

For the rate base, Con Ed ("the company") forecasts its future spending, and the **New York State Department of Public Service** (DPS) and other entities dispute Con Ed's estimates. Other entities making

comments include the **New York Power Authority** (NYPA) (which owns the state's hydropower and some other power facilities), the Retail Energy Supply Association (RESA), the Small Customer Marketer Coalition (SCMC), the Consumer Protection Board (CPB), Westchester County ("Westchester" or "the County"), Consumer Power Advocates (CPA), the New York Energy Consumers Council (NYECC), and the Pace Energy and Climate Center (Pace). The City of New York, the Metropolitan Transportation Authority, and the Port Authority of New York and New Jersey are called "the NYC Government Customers."

Each line item that Con Ed requests is disputed. For example, Con Ed requested $10 million for transmission reliability spending, but DPS showed that no money had been spent on transmission reliability since 2004, so no money was allocated to the rate base for transmission reliability spending (p. 152).

There are numerous adjustments for programs for economic development, for programs for energy efficiency, and so on.

3.2.1. Sample Line Items

The court refused to allow the company to add to the rate base the costs of decommissioning its equipment because it found that Con Ed's costs were out of control. "Approximately 15% of total projected capital investment comprises removal costs. The latter costs are spiraling and the Company should have an incentive to keep them to the minimum necessary" (p. 177).

For power generation, "[t]he Company forecast capital expenditures of approximately $39 million per year and DPS Staff proposed a downward adjustment of approximately $5.5 million based on the Company’s investment levels over the prior five years" (p. 165). The court allowed the $39 million number to stand on the assumption that any parts of Con Ed's request that were not justified at the time, would eventually be justified, and that DPS had conceded that point (p. 167).

"[T]he Company proposed to transfer a property at West 125th Street for $15.3 million so that the building there can be torn down and a new charter school can be erected. There was broad public support for the property transfer and, as discussed below, the transfer was previously authorized subject to conditions. In the present case, the Company proposes that it be authorized to true-up (be made whole for) any additional costs it incurs for leases, renovation, and moving into a replacement facility" (p. 169). The court held that the public benefits of the project were dispositive. "In light of the positive net present value of the benefits of this sale of land estimated when the sale was authorized, and in light of the positive benefits of this transfer to the local community, the Company’s proposal is adopted" (p. 170).

The rate base is adjusted upward each year. "The record shows that the Company’s historic Test Year EB Cap adjustment was approximately $388 million, but that the Company adjusted this amount downward by $141.980 million. The latter figure was reduced to $200.846 million in the Company’s informal update in July 2008. It is that latter figure that DPS Staff supported, subject to a correction, bringing the figure to $192.957 million. In this context, arguments about $388 million are misplaced. In this case, the EB Cap adjustment primarily corrects for differences between the Company’s cash working capital requirements and those we forecast using the FERC formula (discussed next)" (p. 182). The court said that it likes the FERC formula because it is "easy to use" (p. 184). FERC is the Federal Energy Regulatory Commission.

Con Ed is allowed to retain a cash account to finance ongoing projects, and the court appears to assume that this money is borrowed. "A portion of the capital invested in the Company is necessary because there are time differences between (1) the provision of service by the Company and its receipt of payment and (2) the Company's receipt of materials and services and its payment for them. Capital used in this way is referred to as cash working capital and is included in rate base so that the Company earns a return on or recovers the costs of such capital. This Commission has long-employed the FERC formula which equates cash working capital requirements with 1/8 of certain O&M expense. In this case, that formula yields $185.6 million in rate base" (p. 183).

In her dissent, Commissioner Maureen F. Harris says that Con Ed should not be allowed to pass on 100 percent of its property tax increase to ratepayers, writing, "the Commission's approval of a rate increase, comprising principally $437 million of government imposed taxes and fees, is neither just nor reasonable during a time of unprecedented economic turmoil" (p. 350). She explains, "when the ratepayer has no option other than to pay these significant taxes and assessments levied upon them, that have nothing to do with the provision of safe and reliable service, and the utilities have no incentive to oppose these taxes since the Commission merely flows these costs on to the ratepayer, it is my obligation to object. I take little comfort that those ratepayer interests are adequately protected by the democratic process. Accordingly, and in order to draw attention to this issue, I choose to exercise my prerogative to respectfully dissent" (p. 350).

3.2.2. Revenue Allocation

Rather than tracking the source of every payment, Con Ed simply takes its total revenue and assumes that it has the same percentages of customer types as during its last survey, in 2005. "The Company's 2005 ECOS is the same study we relied on in the Company's last electric rate case, along with a +/-10% tolerance band, for purposes of allocating revenue requirement. NYPA and other parties emphasize significant increases in plant investment and expenses, and changes in load and sales since 2005, in support of their fundamental contention that the Company's 2005 ECOS is stale. We agree with DPS Staff, however, that the most reasonable way to reflect this information pending a new study is to increase the tolerance band from +/-10% to +/- 15%" (p. 204-205). "Given our decision above to rely on the 2005 ECOS, the Company is authorized to reallocate existing revenues among its full service and retail access classes in accordance with the study's results, subject to use of a +/-15% tolerance band" (p. 206).

3.3. Rates

Even after the components of the cost of capital and rate base are settled, the parties can dispute actual rates. For example, "CPB opposes the Company's proposal to increase the monthly residential customer charge from $12.42 to $14.90, an annual increase per customer of $29.76" (p. 224). Con Ed replies, "[t]he $14.90 cost was appropriately determined by subtracting the Billing Payment and Processing charge of $0.94 from the SC 1 customer cost per the Company's 2005 ECOS ($11.26), as increased to reflect the April 2008 overall revenue increase of 12.4% and the proposed April 2009 increase of 17.7%, yielding $14.90" (p. 226). The court sides with Con Ed (p. 226).

4. A Simple Tariff

Even a simple tariff[78] for a small company is not short. The tariff for the Fisher Island Electric Corporation is 81 pages long (Fisher Island is Northeast of Long Island, near the oceanic border between Connecticut, New York, and Rhode Island — between notorious Plum Island[79] and desirable Block Island). The tariff is at **https://www2.dps.ny.gov/ETS/jobs/display/download/4992382.pdf**.

[78] A simpler tariff, known as the generic tariff, exists, but I cannot find it. The generic tariff was created by the New York Municipal Power Agency (NYMPA) and approved by the PSC with one change on February 27, 1998 (see **http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=97-E-1575&submit=Search+by+Case+Number**). I e-mailed the DPS and they replied that it is "on the site" but did not say where.

[79] A former federal animal testing place, see **http://en.wikipedia.org/wiki/Plum_Island_%28New_York%29**.

The Multi-Purpose Utility Corridor Hypothetical

Memorandum No. 1

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

October 11, 2012

M E M O R A N D U M

To: Alexander Goldman, Regulatory Counsel, Legal Division (Telecomm Utility)
Lior Sapir, Regulatory Counsel, Legal Division (Gas/Electric Utilities)

Copy: Dino Ng, Executive Vice President, Engineering Division

From: Terri Matthews, General Counsel, Legal Division

Re: Regulatory Impact Analysis of Engineering Proposal

At the Board of Directors' meeting last week, the Engineering Division made a presentation on the economics and technology of dedicated utility tunnels. Engineering believes that integrating dedicated utility tunnel as part of our regular capital program will result in long-term savings to the company. The Board voted unanimously to initiate an in-house analysis of this proposal.

Please analyze, for each of your Division(s), how adding dedicated utility tunnels to the current long term capital plan will impact the next rate setting exercise, based on the existing tariff and last rate setting process. Assume the costs will be shared equally among the Utilities. The actual allocation of cost may depend on other technical issues. Right now, the most important thing is to spot and analyze the issues as they are likely to appear in the next set of rate setting exercises if we were to adopt this new design/technology solution.

I will forward more detailed technical information as I receive it from Engineering.

Thank you.

Memorandum No. 2

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

October 11, 2012

M E M O R A N D U M

To: Alexander Goldman, Regulatory Counsel, Legal Division (Telecomm Utility)
Lior Sapir, Regulatory Counsel, Legal Division (Gas/Electric Utilities)

Copy: Dino Ng, Executive Vice President, Engineering Division

From: Terri Matthews, General Counsel, Legal Division

Re: Regulatory Impact Analysis of Engineering Proposal

At the Board of Directors' meeting last week, the Engineering Division made a presentation on the economics and technology of dedicated utility tunnels. Engineering believes that integrating dedicated utility tunnel as part of our regular capital program will result in long-term savings to the company. The Board voted unanimously to initiate an in-house analysis of this proposal.

Please analyze, for each of your Division(s), how adding dedicated utility tunnels to the current long term capital plan will impact the next rate setting exercise, based on the existing tariff and last rate setting process. Assume the costs will be shared equally among the Utilities. The actual allocation of cost may depend on other technical issues. Right now, the most important thing is to spot and analyze the issues as they are likely to appear in the next set of rate setting exercises if we were to adopt this new design/technology solution.

I will forward more detailed technical information as I receive it from Engineering.

Thank you.

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

October 25, 2012

M E M O R A N D U M

To: Alexander Goldman, Regulatory Counsel, Legal Division (Telecomm Utility)
Lior Sapir, Regulatory Counsel, Legal Division (Gas/Electric Utilities)

Copy: Dino Ng, Executive Vice President, Engineering Division

From: Terri Matthews, General Counsel, Legal Division

Re: Regulatory Impact Analysis of Engineering Proposal

Per memo dated October 11, 2012, attached is the more detailed technical information I received from Engineering.

Thank you.

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

October 25, 2012

M E M O R A N D U M

To: Terri Matthews, General Counsel, Legal Division

From: Dino Ng, Executive Vice President, Engineering Division

Re: Engineering's Proposal for Dedicated Utility Tunnel

The idea of a dedicated and accessible utility corridor for subsurface utility facilities currently within the roadway has been circulating among the engineers here and elsewhere as a way of providing easy and cost-effective access to utility facilities for maintenance and emergency work, reducing the coordination efforts when the City has to reconstruct the roadway, extending, for the City, the lifecycle of the roadway elements such as the pavement, and reducing waste in the long-term from repeated excavation and disposal of sub-base materials.80 The number of utility customers increases as the U.S. populations grows generally, as more people move to the City, and as widely variable types of utilities are developed and deployed.81

There are two sources for solutions to reduce and/or control street cut activity within an urban areas—one is changes in public policy and practice and the other is changes in technology and design. This memo focuses on a specific design/technology solution technological, though implementing this solution will also require changes in public policy and practice.82 The design solution is called a multi-purpose tunnel, a specific subsurface structure dedicated to housing a collection of utility network facilities and providing access to utility staff to manage, monitor and maintain them. The dedicated

80 From DDC's *High Performance Infrastructure Guidelines*, p. 9.

81 W. James Wilde, Corresponding Author, "Controlling and Reducing the Frequency of Pavement Utility Cuts," Transportation Research Board, 2003 Annual Meeting, p. 2.

82 *Ibid*., pp. 2, 6. See pp. 8-9 for discussion of coordination of shared resources between utilities.

subsurface structure is a container, which provides spaces specifically designed for the co-location of separate utility facilities with different physical properties and needs.

Technical benefits accruing to the utility include:

- the near eliminate of roadway work to access facilities for repair, maintenance and improvement or expansion;
- the related easy access to facilities for repair, maintenance and improvement or expansion;
- the ability to observe/test facility operations at any time;
- easy access to facilities; and
- isolation and protection from subsurface, surface and external weather conditions.

Specific engineering benefits generating avoidable costs include:

- elimination of opening and closing trenches;
- elimination of collateral repairs to roads and sidewalks resulting from the opening and closing of trenches;
- elimination of the need for indemnification for private owner abuttors and the source of damages alleged by private owner abuttors;
- increased data collection ability leading to:

- reduced number of incidents and accidents due missing information and errors from exact knowledge of facility placement;
- improved ability to detect leaks for both safety and revenue purposes;
- improved ability to detect early deterioration of facility components; and
- improved coordination of, and possibly shared expenses by, separate utilities on common issues;

- placement of facilities based on quantitative imperatives aided by technology and design rather than accident of history; and
- easier elimination of facilities rendered useless by technological change[83]

Countervailing disadvantages from a technical point of view stem from the impact of the tunnel itself on its structural integrity over time under the roadway. The concept of "stability over time" reflects issues stemming from a large rigid built object that would be difficult to move once in place. Analogous structures consist of transportation subways, with their known advantages and disadvantages, most of which disadvantages are amenable to technology and design interventions.

[83] The following materials from Cle de Sol Research Group, Reference Guide to Utilidors (Editions Techni.Cites)

In the late 1990s, approximately 30 public and private partners in France conducted a national civil and urban engineering research project to spec the elements of an urban sub-surface multi-purpose utility tunnel. First the walk-through "utilidor", with a height of 2 meters and a width of .8 meters, would provide access to a gallery of compartments for rainwater drainage, wastewater, potable water, gas, urban steam heating (both inbound and outbound), low voltage electrical cables, HTA electrical cables, low voltage electric signaling networks, telecommunications networks and cable; access with sufficient room to allow people carrying gear to move freely in the utilidor to work on existing facilities and install new network facilities.[84] These dimensions could be occasionally reduced for isolated underground obstacles while maintaining a minimum height of 1.85 meters and width of .6 meters. Rainwater would be most voluminous and placed first on the bottom (600 mm) in an internal angle with wastewater next to it (300 mm) on the bottom. Potable water (250 mm) would be above the rainwater and wastewater networks, with the widest clearance over the outside generator of the rainwater network. Outbound conduit for urban steam heat (200 mm) would be next to be .4 m above the foundation, making it possible to position the steam heat on the left of the structure with inbound conduit for steam heat (60 mm) on the right. HTA would be above the low voltage. Gas networks would be to the side of the water networks so that it is possible to limit the height of the crew compartment, with .4 m needed between ducts and ceiling for welding. The telecommunications network would be located near the top.

[84] The following materials from Cle de Sol Research Group, Reference Guide to Utilidors (Editions Techni.Cites)

Telecomm Utility Hypothetical Analysis

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

November __, 2012

M E M O R A N D U M

To: Terri Matthews, General Counsel, Legal Division

Copy: Dino Ng, Executive Vice President, Engineering Division

From: Alexander Goldman, Regulatory Counsel, Legal Division, Telecomm Utility

Re: Regulatory Impact Analysis of Proposed Integration of Utility Tunnels

I. Introduction

In response to your request, in Memoranda dated October 11, 2012 (the "10/11/12 Memo"), and October 25, 2012 (the "10/25/12 Memo"), for a regulatory analysis of the Engineering Division's proposal for integrating the construction of dedicated utility tunnels as part of our regular capital program (the "Integration of Utility Tunnels"), the following memorandum presents the regulatory analysis of a dedicated utility tunnel for all utilities as described in Attachment 1 to the 10/25/12 Memo ("Attachment 1").

The regulatory analysis for the Telecomm Utility division (the "Utility"), identifying and analyzing the issues as they are likely to appear in the next set of rate setting exercises if the company were to adopt the Integration of Utility Tunnels as its new policy, is summarized below. First, this memorandum provides a contextual analysis of the Utility's infrastructure as it currently exists, with the necessary historical perspective to facilitate the requested regulatory analysis. The ensuing regulatory analysis begins by looking at the impact of the Integration of Utility Tunnels on the Utility's current long term capital plan. Then the regulatory analysis moves to identifying and, to the extent possible, estimating the magnitude of the impact of the Integration of Utility Tunnel's on the Utility's next rate setting exercise, based on the existing tariff and last rate setting process.

As you indicated in the 10/11/12 Memo, the following analysis assumes the costs will be shared equally among all Utilities and it also assumes that the nature of the infrastructure for the Integration of Utilities similar to the description in Attachment 1.

Utility's business is largely unregulated. Furthermore, Utility has its own tunnels under the streets, through its Empire City Subway subsidiary. The city cannot compel Utility to move its fiber into the Integration of Utility Tunnels project. However, as detailed in this memo, the city will be able to make a strong business case arguing that Utility can benefit. Although the business case will be persuasive in dollar terms, other considerations may delay Utility's adoption of the project.

Part II of this memo provides a description of Utility's business and its infrastructure, past and present, highlighting ongoing technological change. Part III describes the impact of the Integration of Utility Tunnels program on Utility's long term budget and stock price. Part IV describes the impact of the end of regulation on the Integration of Utility Tunnels program.

Schedule A provides technical definitions. Schedule B describes the impact of the AT&T divestiture and the creation of Utility. Schedule C describes the Telecommunications Act of 1996 and the background of the deregulation of fiber. Schedule D describes some political issues that may or may not be relevant to this memo, but are included for reference in case they prove to be useful.

Supplement B provides several useful images.

II. Historical Context for Utility's Infrastructure.

The Utility is no longer a telephone company. It is a modern advanced services company. The following section provides a historical context for the analysis of Utility's infrastructure, which has changed since the Telecommunications Act of 1996 due to rapid advances in technology and regulation.[85]

IIa. Description of the Utility's Businesses

The utility operates the following business lines: Cable Television, Telephone, Internet, and Cellular Telephone. Utility[86] historically provided telephone service.[87] It has been providing broadband internet since 1996 and entered the cellular business in 1999. In 2008, it obtained a cable franchise for the city of New York and entered the cable business there. Utility is a major employer.[88]

Although in the past, Utility was a phone company and Utility Two was a cable company,[89] today, both provide advanced internet services, over very different networks. Utility's new network is fiber-based, using copper at coax at the edges. Utility Two's network also uses fiber, but employs far more coax. Ironically, Utility sometimes uses the coaxial cable that Utility Two deployed throughout many apartment buildings. Utility Two will not be mentioned again in this document.

---

[85] *See, Presentation of Paul Brigner, Exec. Dir., Internet and Technology Policy at Verizon, to NARUC (the Nat'l Assoc. of Regulatory Utility Comm'ers)* in Winter 2009, (1.5 MB .pdf file) *available at* http://www.narucmeetings.org/Presentations/NARUC%20Winter%202009%20-%20Paul%20Brigner.pdf.

[86] Utility is based on Verizon Communications Inc., and the documents referred to in this memorandum are Verizon's documents identified in the text (NYSE: VZ), SEC filings at http://www.sec.gov/Archives/edgar/data/732712/000119312512077846/d257450dex21.htm) ("VZ"). Utility Two is based on Time Warner Cable (NYSE: TWC), SEC filings at http://www.sec.gov/cgi-bin/browse-edgar?company=&match=&CIK=TWC&owner=exclude&Find=Find+Companies&action=getcompany ("TWC"). Utility Two is discussed in Supplement A: Utility Two, in a separate document.

[87] The Bell System functioned as a legally sanctioned monopoly until the breakup of AT&T in 1984. A short (but detailed and useful) history of the monopoly and its breakup, written by AT&T's former head of regulatory affairs Joseph Weber, is *available at* http://law.indiana.edu/fclj/pubs/v61/no1/9-WEBER_FINAL_bl.pdf. For more on the breakup of AT&T, *see* Schedule B, *infra*.

[88] As of December 31, 2011, Verizon had nearly 140,000 employees in over 140 countries. Verizon Corporate History, page 5, *available at* http://www22.verizon.com/idc/groups/public/documents/adacct/verizon_corp_history_2012_v3.pdf.

[89] *See Supplement A, Utility Two*, for information about Utility Two.

The maintenance of each network element is financially dependent upon the number of customers[90] that network element supports. The network is like a tree. A network element supporting a single building may have 40 customers paying $100 per month in internet subscriptions, so maintenance must cost less than 40 * 24 * $100 = $96,000 per year including all inputs and overhead (labor, office expenses, tools, etc.). A network element supporting half of Manhattan might have 500,000 customers attached to it and is supported by $12M in annual income. The center of the internet network has more expensive network elements, and the edge has cheaper network elements.[91] Today Utility provides enhanced services for business customers.[92]

Ib. Utility's Contracts With the City

Under its contract with the city, Empire City Subway (ECS) has duties, which include providing service to the Consolidated Edison Company.[93] Paragraph VI requires ECS to pay any "excess profits" above 10 percent per year to the city, but allows ECS to first subtract the difference between actual earnings and the 10 percent allowed in any previous years in which ECS did not earn a profit of 10 percent.[94] It also has a perpetual right of way to certain city streets.[95]

---

[90] About customer numbers: for all telecommunications except cellular service, a customer is a household containing several people. When I updated annual subscriber numbers for public Internet Service Providers each quarter at ISP-Planet, I used data on the number of people per household supplied by Jupiter Research: roughly 2.1 people per household. *See, for example*, Alex Goldman *Top 23 U.S. ISPs by Subscriber: Q3 2008,* ISP-Planet.com, *available at* http://web.archive.org/web/20110702112258/http://www.isp-planet.com/research/rankings/usa.html. Also note that the telecommunications market does not have the following as potential customers: people in the military, in jail, in school, and any other person or corporate entity whose telecommunications service is supplied by government networks.

[91] This report is based on a conversation between the author and a Swedish industrialist at a Freedom To Connect Conference in 2009. No file copy is available.

[92] A detailed, 72 page presentation on Verizon's business services (with the network map greyed out) is *available at* http://www.verizonbusiness.com/resources/presentations/pr_private-ip-presentation_en_xg.pdf.

[93] ECS Contract, Paragraph I, p. 109, (on file and also in *Documents of the Senate of the State of New York, Volume 23* 1320 (1910), *available at* http://books.google.com/books?id=D_tKAAAAMAAJ&pg=PA1320&lpg=PA1320) (full name: *Agreement, made this 15th day of May, 1891, by and between Hugh J. Grant, Mayor of the City of New York, Jacob Hess and Theodore Moss, as and constituting the Board of Electrical Control in and for the City and County of New York, created under and by virtue of an Act of the Legislature of the State of New York, being chapter 716 of the laws of 1887, passed June 25, 1887, and the acts of which said act is amendatory, parties of the first part, and the Empire City Subway Company (Limited), a corporation duly organized and existing under and by virtue of the laws of the State of New York, party of the second part*). ("ECS Contract").

[94] *Id.* at paragraph VI, p. 112.

[95] *Id.* at paragraph I, p. 109. ("Franklin Street, West Broadway to Centre Street, Elm Street [likely now Lafayette Street], Franklin to Worth Street, 32nd Street, Fifth to Madison Avenue, 23rd Street, Second to Madison Avenue, 58th Street, Tenth Avenue to North River [North River is the name of that part of the Hudson River that runs adjacent to Manhattan, according to http://en.wikipedia.org/wiki/North_River_%28Hudson_River%29], Lexington Avenue, 79th to 129th Streets, 79 Street, Madison to Fifth Avenue, 124th Street, Lexington to St. Nicholas Avenue, Lexington Avenue, 124th Street to North Side 125th Street, Cortlandt Street, Broadway to 18 Cortlandt Street. . . "). For further research: a comprehensive map of ECS would be useful and the City may be allowed to request one from ECS. NY DDC or another city organization may have such a map on file, but none is publicly available.

Today, Empire City Subway has 12,000 miles of four-inch conduits, and 10,000 manholes to access the conduits. The ECS contract was a response to the Great Blizzard of 1888, which knocked out important electric, telegraph, and telephone lines. James Traeger, *The New York Chronology: The Ultimate Compendium of Events, People, and Anecdotes from the Dutch to the Present* 229 (page 229 covers the year 1891) (HarperCollins, Oct 26, 2004).

For more on the Great Blizzard of 1888 (which lasted three days in March and killed 200 people in New York City alone), *see* http://www.nypl.org/blog/2011/03/03/blizzard-snowstorm-1888 (collecting newspaper accounts, such as: "The storm

Empire City Subway pays the city one penny per mile for rights of way.[96] The City has litigated this price.[97]

In 2010, the Comptroller recommended[98] that DoITT more aggressively supervise Empire City Subway, that Empire City Subway be required to charge Verizon competitive rental rates, and that Empire City Subway's depreciation be revised. If implemented, these recommendations would cause Empire City Subway's income to exceed the allowed 10 percent, and would result in royalty payments to the city.

In modern times, the City and Utility have litigated Utility's other rights and obligations as well. Broadly, in 2008, Utility won the perpetual franchise right to the city, but not to outlying areas, and in 2010, Utility won the same rights for outlying areas that include Staten Island, parts of Queens, and a small part of Brooklyn.[99] The perpetual franchise was granted to Utility's predecessors.[100]

---

yesterday set Brooklyn back 50 years. Its great surface railroad system became useless, and its telephone service practically valueless. Its telegraph wires were torn down, and its main thoroughfares, where only electric lights are used, were left in darkness... At daybreak, or what should have been daybreak, the city resembled a huge country village, and Fulton-avenue, from City Hall up, looked more like a deserted cowpath than the main business street of a big city." New York Times, Mar. 13, 1888). Precipitation amounts were: on March 11: 0.65 inches of rain, followed by (on March 12): 1.45 inches of rain/snow mixture and 21 inches of snow. Christopher C. Burt, *The Great Blizzard of 1888; America's Greatest Snow Disaster, Weather Underground* (March 15, 2012, 9:50 PM) http://www.wunderground.com/blog/weatherhistorian/comment.html?entrynum=65.

[96] "Bd. of Aldermen of the City of N.Y. Res. on Dec. 13, 1881, reprinted in Senate Report, supra note 22, at 1207. The resolution read as follows:Resolved, That permission be, and hereby is granted to the Metropolitan Telephone and Telegraph Company to use the streets within the city of New York for the purpose of constructing and laying lines of electrical conductors underground, from time to time, in tubes or otherwise, and for constructing, maintaining, and using such streets, from time to time, upon, above or below the surface of the ground, boxes, vaults or other fixtures suitable for distributing and testing, from time to time, the wires and insulators of said lines, and for access thereto. All excavations in streets, removals and replacements of pavements or sidewalks, shall be done under and according to the direction of the Commissioner of Public Works. The said Company in acting under this permission, shall be subject to so much of the provisions of Article XLI of chapter eight of the Revised Ordinances of 1880 as requires that one wire in each route shall be reserved for the use of the police and one for the fire-alarm telegraph, without charge to the city and county of New York. For each street opened and used by the Company, under this permission, for the purpose of laying therein its lines of electrical conductors, it **shall pay to the city a sum equal to one cent for each lineal foot of such street occupied**." Michael T. Leigh, *City of New York v. Verizon New York, Inc.*, 54 N.Y.L. Sch. L. Rev. 1171, 1183 (2010) (emphasis added).

[97] See, e.g., "While the 1881 Resolution provided for compensation at the rate of one cent per lineal foot of opened roadway, plaintiff alleges that this compensation was not paid and may not be adequate and reasonable compensation for the use of the City's streets. Defendant has argued that the compensation was subsumed under the special franchise tax structure adopted in the late 1890's and that factoring in the monies paid under the state special franchise tax and other fees, the City is adequately and reasonably compensated for the use of its streets." *The City of New York v. Verizon New York, Inc.*, 2008 WL 8666618.

[98] Comptroller of the City of N.Y., *Audit On The Payment By Empire City Subway Of License Fees Due The City And Compliance With Certain Provisions Of Its License Agreement*, June 2, 2010, *available at* http://www.comptroller.nyc.gov/bureaus/audit/audits_2010/06-02-10_FP08-103A.shtm.

[99] *City of New York v. Verizon N.Y. Inc.*, 2008 N.Y. Misc. LEXIS 4572; 240 N.Y.L.J. 15 at Pg. p.26, col.1 (N.Y. Sup. Ct. 2008); *City of New York v. Verizon N.Y. Inc.*, Index No. 402961/03 (N.Y. Sup. Ct. 2010).

[100] "As the Court of Appeals noted in *New York Telephone Co. v. Town of North Hempstead*, 41 NY2d 691, 693 (1977), New York Telephone, Verizon's predecessor in interest 'when it was incorporated in 1896 received from the State of New York an unconditonal right to erect and maintain poles for its lines upon public roads, streets and highways.' So too did Metro, NYNJT, LIT and SIT" (referring to New York and New Jersey Telephone Company (NYNJT), the Long Island Telephone Company (LIT) and the Staten Island Telephone Company (SIT)). 240 N.Y.L.J. 15 at Pg. p.26, col.1.

The 2010 decision noted that the right to place lines aerially or under city streets was "subject to the city's exercise of its police powers."[101] Cities have been allowed to use their police power to order the moving of utility lines. The key 1905 Supreme Court decision regarding police powers upheld the decision of the City of New Orleans to require a gas utility to move its lines after the city's new drainage system altered the location of several streets.[102] The court said, "The drainage of a city in the interest of the public health and welfare is one of the most important purposes for which the police power can be exercised."[103] The city did not have to pay the gas company.[104] The Court of Appeals of New York last cited *New Orleans Gaslight Co. v. Drainage Comm'n of New Orleans (1905)* in 1969 in *Consol. Edison Co. of New York v. Lindsay* (1969), and *Consol. Edison Co. of New York v. Lindsay* remains good law.[105] Empire City Subway provides service to Con Ed and the two systems' tunnels interconnect.[106] Commentators[107] who argue that Utility does not have a perpetual right to city streets argue policy (that as the city streets and the area under them gets more crowded, the cost to use them should increase) and the letter of the charter (that prior to 1873, all franchises were only for five years), but have to admit that New York courts have interpreted the grant as perpetual in a long line of cases starting with *Ghee v. Northern Union Gas Co.*[108] in 1898.

The 1920 case *Holmes Elec. Protective Co. v. Williams*[109] is important because it granted perpetual eminent domain rights (rights to use public streets) not to a public telecommunications company, but to a private alarm company, based on the fact that the private alarm company had acquired another company that had been incorporated before the enactment of the subway laws. The majority[110] said

---

[101] *City of New York v. Verizon N.Y. Inc.*, Index No. 402961/03, 2010 WL 8231159 (N.Y. Sup. Ct. 2010).

[102] *New Orleans Gaslight Co. v. Drainage Comm'n of New Orleans*, 197 U.S. 453 (1905).

[103] *Id.* at 460.

[104] "In complying with this requirement at its own expense, none of the property of the gas company has been taken, and the injury sustained is *damnum absque injuria*." Id. at 462. (*Damnum absque injuria* means a harm without an injury that the law would recognize.)

[105] "'It would be unreasonable to suppose that in the grant to the gas company of the right to use the streets in the laying of its pipes it was ever intended to surrender or impair the public right to discharge the duty of conserving the public health. The gas company did not acquire any specific location in the streets; it was content with the general right to use them; and when it located its pipes it was at the risk that they might be at some future time, disturbed, when the state might require for a necessary public use that changes in location be made.'" *Consol. Edison Co. of New York v. Lindsay*, 24 N.Y.2d 309, 318 (1969).

[106] Empire City Subway's Manhole Standards (http://www.empirecitysubway.com/pdf/mnhle_stndrds.pdf) Section 13.0 has rules governing the interconnection of Verizon's telephone tunnels and Con Ed's electric tunnels. A photo of an Empire City Subway manhole cover is *available at* http://www.flickr.com/photos/triborough/93974620/.

[107] *See* Michael T. Leigh, *City of New York v. Verizon New York, Inc.,* 54 N.Y.L. Sch. L. Rev. 1171 (2009/2010), *available at* http://www.nyls.edu/user_files/1/3/4/17/49/1001/Leigh%2054.4.pdf (arguing that New York courts are wrong in their interpretation of statutes, and that perpetual rights of way are contrary to public policy).

[108] *Ghee v. N. Union Gas Co.*, 158 N.Y. 510 (1898).

[109] 228 N.Y. 407 (1920).

[110] Most commentators ignore the fact that the two most famous justices on the court at the time, Andrews and Cardozo, did not fully agree with the decision, Andrews concurring and Cardozo dissenting. Judge Andrews said that the alarm company was a public use because, "[i]t assists in the preservation of law and order" and would have thereby limited the holding. *Id.* at 424 (Andrews, J., concurring). Judge Cardozo, in dissent, said that the alarm company was not a public use and therefore could not have the power of eminent domain. The alarm company "does not come under a duty to watch the property of persons not subscribers, to warn them of impending danger, or to respond with relief to their summons of distress. Protection is restricted to those who pay the price." Id. at 442 (Cardozo, J., dissenting). Whatever small precedential value Cardozo's dissenting opinion might have had in the past, it has none today, because the Supreme Court decision in *Kelo v. New London* expanded the

that a company incorporated before the subway laws of 1881 had a perpetual franchise "subject to legislative control."[111] The court held that the alarm company had as much power under the Telegraph Act of 1848 as a telephone company.[112]

Just as in the past the courts struggled with the technological changes brought by the industrial revolution (gas and telephone lines), today, the arrival of fiber broadband and cell phone networks is changing companies and the law.

IIc. Changing from Telephone Service to Internet and Cell Phone Service (From Wireline to Mobile and Converged)

In the past, the phone company delivered voice services over dedicated phone lines. Today, Utility's converged[113] network includes cell towers and internet servers, and it can deliver voice, video, and data, all on the same line. Utility's network can deliver to a handheld device, a mobile laptop, or a desktop telephone or PC. The internet, whether delivered to a handheld computer or to a desktop computer, can carry any of an infinite number of applications, including those not yet invented. While the telephone network was purpose built for one thing, voice calls, the network of the future is infinitely changing, delivering anything the customer wants and anything that software developers can deliver.

As a wider variety of traffic goes over the network, Utility is delivering more traffic. Broadband means that each residential and business user utilizes a higher volume of data and a greater variety of services. In the past, the user would make a telephone call and then stop using the network. Today, Utility's users can be connected to the internet during almost every waking moment of their lives.

The phone company used to deliver voice calls. Now Utility's users utilize real time data and video as well as voice to drive powerful applications made possible by new technologies. The machines within the network — the switches — used to be physical objects that were built to do one thing and could not do anything else. A voice switch would connect a specific number of voice calls between two lines. Today's virtual switches run on computer platforms and the computers can be repurposed or adapted as new applications are delivered over the network, or as usage patterns change. The machines used to be made of metal. Now, because they are software, they can into new machines with the flick of a virtual

---

definition of public use in eminent domain by permitting the use of eminent domain to take land for a Pfizer factory in New London that was part of an urban development plan. *Kelo v. City of New London, Conn.*, 545 U.S. 469 (2005).

[111] *Holmes Elec. Protective Co. v. Williams*, 228 N.Y. 407, 423 (1920).

[112] "Read strictly, the Telegraph Act of 1848 might seem to apply solely to telegraph companies as understood at the present time, but such has not been the interpretation given by the courts or the public officers and departments dealing with companies and associations incorporated under the act. It certainly could not have applied to telephone companies as such were not known or in existence in 1848. And yet when the telephone was perfected . . . the Telegraph Act was held to be the authority for such incorporation." *Id.* at 417.

[113] "Digital convergence is generally understood as the elimination of distinctions between analog communications systems such as broadcast television, cable television, and telephone networks. Once encoded in digital form, all information is ultimately interchangeable. This means that networks previously in distinct markets can become direct competitors. The transformation of local telephone and cable television companies into competing providers of 'triple-play' bundles of voice telephony, multi-channel video programming, and high-speed internet access is a canonical example." Kevin Werbach, *Only Connect*, 22 Berkeley Tech. L.J. 1233, 1261-62 (2007) (footnotes omitted).

switch (and the finger throwing the switch need not be human). The new network provides similar benefits to service providers such as eBay.[114]

IId. From Copper to Optical Fiber Infrastructure:

As Utility's network becomes more modern, the workforce will change, replacing the unionized workforce of the past with the skilled knowledge workers[115] of tomorrow. The long range plan is to replace copper with fiber in the cities, and with cellular service outside of the cities. This is the strategy of Utility's Chairman and CEO. The company will focus on serving big business companies with new services such as "cloud" and on building its cellular business: "Our philosophy all along was to build Wireless to be the best wireless company we possibly could and make it the best wireless company in the world. But then also to not be one dimensional."[116]

In New York City, it is possible that Utility will deploy Fiber to the Node (FTTN) in the future even though it deployed Fiber to the Home (FTTH) in the past. In the past, Utility would rewire apartment buildings and office buildings, but I am hearing a rumor that Utility is delivering fiber to the basement and running FiOS over copper or coax from the basement, the way Utility's former Verizon Avenue subsidiary used to do.[117]

There is no exact data on the cost savings of FTTN vs. FTTH buildouts. The only national fiber network in the world is in Australia. In Australia, where the liberal government has mandated an FTTH buildout to 93% of homes (with the remainder receiving fixed wireless[118] or satellite internet), conservative politicians are asking the government to save money by building fiber to the node (FTTN) and then using existing copper wires[119] to connect the homes.[120]

---

[114] "An internet application such as eBay's auction site, for example, need not consider whether it reaches its customers over the coaxial cable of a cable modem service or the wireless signals of a WiFi connection to a laptop. Nor does it need to consider the congestion algorithms that the routers along the way employ." *Id.* at 1263.

[115] The concept of the knowledge worker is not new. *See, for example*, Robert Reich, *The Work of Nations: Preparing ourselves for the 21st-century* (1991).

[116] Kill Copper Transcript, at 3 (*see* note 93, *infra*).

[117] *See* Alex Goldman, *Ethernet Avenue*, ISP-Planet.com (March 3, 2005) http://web.archive.org/web/20081122163318/http://www.isp-planet.com/cplanet/business/2005/vzavenue.html.

[118] Fixed wireless broadband technology uses familiar Wi-Fi technology and specialized high grade hardware to deliver megabit internet speeds at a fraction of the cost of other methods. It is particularly cheap in rural areas. When I wrote applications for fixed wireless projects during the broadband stimulus (obtaining $20M for clients of CTI), fixed wireless projects cost about $200 per home, while fiber cost $5,000 per home to $10,000 per home. The Wireless Internet Service Providers Association (WISPA) has several hundred fixed wireless broadband provider members across the United States, mostly in rural areas. I was WISPA's in house journalist from 2009 to 2011 (*see* http://www.wispa.org/blog/8).

[119] *See* Renai LeMay, *Worst of the worst: Photos of Australia's copper network*, Delimiter (May 1, 2012 11:06) http://delimiter.com.au/2012/05/01/worst-of-the-worst-photos-of-australias-copper-network/ (showing dirty, rusting, and exploded wiring, all still in use in Australia). *See also*, Karen Stewart, *Australian Mainframe Closed by Rats and Roaches*, ISP-Planet.com (July 13, 2000) http://web.archive.org/web/20081122131645/http://isp-planet.com/news/rats.html.

[120] Australia's copper network is owned by the incumbent telephone company, Telstra, and the new network is being built by government-funded NBN. NBN's chief executive said that leaving any copper in the network would give Telstra an unfortunate role in NBN. *See*, speech by Harrison Young, CEO of NBN, and response of the minority conservative leader at http://www.malcolmturnbull.com.au/blogs/malcolms-blog/a-response-to-mr-harrison-youngs-speech-today-on-the-nbn/ (Australia's conservative party is the Liberals and the liberal party is called Labor). Australia's national fiber plan was made politically possible by the obnoxious and extreme behavior of Sol Trujillo, former CEO of Qwest, who was CEO of Telstra for several years. *See* David Braue, *Why Trujillo was the best CEO for Telstra*, ZD Net (June 23, 2011 6:00 AM),

Our subject matter expert (SME)[121] has a business that helps office buildings in New York City save energy by converting from a copper infrastructure to a fiber infrastructure. A room full of equipment can often be replaced by a box on the wall. The energy savings are principally in reduced cooling needs. An internet-based architecture should provide additional long term cost savings by allowing Utility to use any equipment in the network and to avoid lock-in.[122] In the past, each individual piece of equipment was a machine designed for a specific purpose. In contrast, today's servers can be loaded with any software, and the software can be changed in real time according to the network's needs.[123]

IIe. The Challenge of Increased Demand

Utility is delivering higher speeds that enable rich applications which take advantage of those higher speeds, creating a virtuous feedback loop that enhances the internet as a whole. New uses for the network include telework, telemedicine, remote security, distance learning, and even entertainment such as networked gaming.

The result is rising demand, and even a rising rate of increase in demand.[124] Concurrency means that not only are users' applications requiring more bandwidth, but users are on the network for greater periods of time, so that there are more users on the network as a percentage of subscribers than ever before. In the days of dialup, one phone line could serve 20 users, because most users were on the internet for brief periods. Utility needed only one phone line per 20 users at its central office. Once those users upgraded to DSL, one line was able to serve only 5 users. Today, some networks have a 1:1 user to upstream capacity ratio. This will require significant and ongoing capital investment. As the upstream efficiencies disappear, the core of the network, which is the most expensive part of the network, must upgrade faster than the rest of the network.

The "last mile" of a broadband network consists of fiber into a residential home. Where the customer is located in a residential or office building, the Utility network will deliver to an ONT that connects to the building's coaxial (cable TV) infrastructure for phone and TV (sometimes, the installation will use the building's copper wires for telephone service). Alternatively, an in-home wireless broadband network can carry internet to VoIP home phones.[125] However, Wi-Fi signals can be blocked by walls that are too thick, contain metal, or contain chicken wire.[126]

---

http://www.zdnet.com/why-trujillo-was-the-best-ceo-for-telstra-1339317312/ ("after years in which the government was happy to delude itself that it had handled Telstra's privatisation [sic] correctly, Trujillo's brash style highlighted to everybody just what a monster had been created — and made very clear that it could not be trusted to serve tea to your mother-in-law without eating her"). Australia is the only country in the world with a national fiber broadband plan (although The Netherlands is doing well with gigabit deployment: for more on The Netherlands, see Om Malik, *The Dutch Lover Their Fiber (Broadband)*, GigaOm (Aug. 18, 2011 9:27AM) http://gigaom.com/2011/08/18/the-dutch-love-their-fiber-broadband/ — and South Korea has fast data speeds to most users, especially in the capital city, Seoul; also, two city states, Hong Kong and Singapore, have nationwide fiber, but deployment is easier in a dense city than across a nation that includes sparsely populated areas).

[121] Frank Coluccio of Cirrant. Documents on file with the author.

[122] Lock-in is where once we a customer buys from one vendor, they cannot buy any other vendor's equipment.

[123] This sentence borrows heavily for the theories of former Bell Labs employee David Isenberg. *See, e.g.*, David Isenberg, *The Rise of the Stupid Network*, May 1997, *available at* http://isen.com/stupid.html.

[124] *See* Image A in Supplement B: Images and Charts.

[125] *Id.*

[126] *See* Kevin Purdy, *Why Is Wi-Fi Coverage So Bad in My House, and How Can I Fix It?*, LifeHacker (Oct. 7, 2010, 4:00 AM), *available at* http://lifehacker.com/5657613/why-is-wi+fi-coverage-so-bad-in-my-house-and-how-can-i-fix-it.

Utility anticipates that some customers will still be using copper[127] even as their neighbors pay for fiber services, and that developers of new homes will embrace a "full build" with fiber or coax throughout the home.[128] Utility will work closely with real estate developers to mutual benefit.

IIf. The Core of the Network

At the very core of the internet, the networks of different internet service providers (ISPs) meet at internet exchanges.[129] The key address of the New York Internet Exchange is 60 Hudson Street.[130] 60 Hudson Street was once the headquarters of Western Union, and every telegraph line in the United States used to terminate there.[131] In the 1890s, when AT&T built its Long Lines, the long distance phone system, it used many of the telegraph routes.[132]

Another key address of the New York Internet Exchange is 7 Teleport Drive. Teleport is the company that Bob Atkinson[133] worked at from 1985 until it was acquired by AT&T in 1998, when Mr. Atkinson became AT&T's vice president of regulatory services.[134] Mr. Atkinson told me that Teleport had supplied Wall Street with data services via a satellite earth station on Staten Island, when the satellite system became obsolete almost overnight.[135] Teleport used its rights of way to Wall Street to run fiber optic cables.

---

[127] The union (CWA) says it's a bad idea to get rid of the copper telephone infrastructure (*see, for example*, Consumer Reports, *Surprise! Your high-tech home phone system could go dead in an emergency* (January 2012) http://www.consumerreports.org/cro/2012/01/surprise-your-high-tech-home-phone-system-could-go-dead-in-an-emergency/index.htm, quoting a CWA rep as saying that Verizon is forcing workers to patch cooper lines instead of replacing them, allowing the copper network to fall into disrepair, and warning that although copper corded phones will still work when the power goes out, cell phones and digital VoIP phones will not).

[128] Verizon New York, Inc., case 08-00624, *Petition for Confirmation of a Cable Franchise with the City of New York* at 1925 (New York Public Service Comm'n May 30, 2008) *available at* (50 MB .pdf file) http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F34993F5-1707-47F7-ADE1-745233B13858}.

[129] A good list of internet exchanges in the United States is *available at* TeleGeography, *Internet Exchange Directory* http://www.telegeography.com/products/internet-exchange-directory/profiles-by-country/united-states/index.html. For many years, the most important on the East Coast was MAE-East(*see* Wikipedia http://en.wikipedia.org/wiki/MAE-East). *See also* Nicholas Rapp, *Mapping the internet* (July 9, 2012) http://nicolasrapp.com/?p=1180 (containing a fiber map of Manhattan but unfortunately no source data for the map).

[130] Telegeography, *New York International Internet Exchange* http://www.telegeography.com/products/internet-exchange-directory/profiles-by-name/new-york-international-internet-exchange/index.html.

[131] *See, for example,* Rich Miller, *Perseus Telecom Expands at 60 Hudson Street*, Data Center Knowledge (Jan. 27, 2012) http://www.datacenterknowledge.com/archives/2012/01/17/perseus-telecom-expands-at-60-hudson-street/ ("The facility was built between 1928-30 at a cost of nearly $45 million – which, adjusted for inflation, is the equivalent of more than $400 million today. It initially housed 70 million feet of wire and 30 miles of conduit"). Hunter Newby, CEO of Allied Fiber, told me about 60 Hudson Street. Before he founded Allied Fiber, Newby was a salesman for Telx and 60 Hudson Street. His bio is *available at* http://www.alliedfiber.com/management.php. He said that people in the industry can list the addresses of buildings, without naming the city, and people know what they're talking about (60 Hudson Street, One Wilshire, etc.). *Also see* Sidera's fiber map http://www.sidera.net/network-map/ (for example, search for 60 Hudson Street, New York, NY).

[132] A partial map of the Long Lines c. 1898 is *available at* http://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~1430~190077?id=1-1-1430-190077&name=Lines+And+Metallic+Circuit+Connections, *cited in* http://long-lines.net/places-routes/index.html.

[133] Conversation with Bob Atkinson and his contact information are on file.

[134] Bio at http://www.citi.columbia.edu/atkinson.htm.

[135] *See* Andrew Lipman, Alan Sugarman, and Robert Cushman, *Teleports and the Intelligent City* (1983) (5MB file, 425 pages) http://sugarlaw.com/publications/teleport/teleports-all-dow-jones.pdf (describing the Teleport on Staten Island as a joint

Internet exchanges also connect with undersea fiber that arrives on U.S. shores at fiber landing points.[136]

Detailed street level fiber maps are available, but expensive.[137]

III. Impact of the Integration of Utility Tunnels on the Utility's Current Long Term Capital Plan.

Utility's goal is to constrain costs while continuing to add customers to its next generation network.[138] Wall Street expects Utility to keep construction costs at a predictable but declining amount. Although the Integration of Utility Tunnels is in Utility's long term interest, Utility's short term goal remains minimizing expenditures.[139] Therefore, although Utility will eventually adopt the project, it will do so only when the business case is clear and also when doing so will not create a significant change in Utility's national capital expenditure.

Questions for future research: what is the quality of Utility's current tunnels? Is Utility repairing or upgrading its tunnels or are the tunnels and the pipes and wires within them rusting away? Under what circumstances would it make sense for Utility to abandon the tunnels? What would be the tax implications if it did so? Might it require compensation from the city? Did the tunnels flood during the Sandy surge?

Utility is constraining costs in multiple dwelling units (MDUs, also known as apartment buildings) by utilizing the existing cable infrastructure in many areas. Utility can run fiber to the basement and then internet over coaxial cable lines to each apartment.[140] This part-fiber, part-coax system is cheaper than running fiber throughout the building. Bringing new wires into old buildings presents challenges, and

---

venture with Merrill Lynch and claiming that the site was 350 acres in size). *Also see* Robert Bell, *Teleports: Broadband's Intermodal Hubs*, Telecommunications International Edition (1999), *available at* http://www.alananthony.com/images2/Articles/TELECOMArticleJuly99.PDF (saying that the Staten Island Teleport was built in 1985 on land leased from the city for 99 years, and "the Port Authority invested $70 million on site preparation and a master development plan. The PA then convinced a developer to put up a speculative building on the site, and fostered a joint venture between Merrill Lynch and Western Union to create one of America's first competitive local exchange carriers, Teleport Communications Group. By 1985, when the park opened, TCG had developed a large satellite earth station complex, wired the park with fiber[,] and built a fiber link into downtown Manhattan").

[136] A map is available from TeleGeography at http://www.submarinecablemap.com/. Compare to *Transpacific Cable Landings, Western US* http://cryptome.org/eyeball/cablew/cablew-eyeball.htm and *Transatlantic Cable Landings, Eastern US* http://cryptome.org/eyeball/cable/cable-eyeball.htm. No street level map for Verizon fiber is available, but *see* http://www.verizonbusiness.com/about/network/maps/map.xml, showing the point locations of data centers and submarine fibers across the United States.

[137] For example, http://www.fiberlocator.com/products/shop/ charges $2,000 per month for access to street level fiber maps.

[138] The annual report admits that capital expenditures are declining and that Verizon can choose what to do: "Capital expenditures in 2011 were $16.2 billion, as compared to $16.5 billion in 2010. We believe that we have significant discretion over the amount and timing of our capital expenditures on a company-wide basis." http://www.sec.gov/Archives/edgar/data/732712/000119312512077846/d257450dex13.htm. *Accord*, *Stocks Exposed to Verizon's Weaker Spending*, Barron's (Oct. 22, 2012), *available at* http://online.barrons.com/article/SB50001424053111904034104578067032780818550.html (citing "Verizon's continued focus on capex discipline" in order to explain why Barron's expects Verizon to have a lower capital expenditure in 2013 even though it will spend more during the first quarter of 2013 than it spent in the first quarter of 2012).

[139] Perhaps in preparation for a c. $10 billion buyout of the minority interest in Verizon Wireless.

[140] No public documents describe the various alternative install processes, but user forums such DSL Reports offer insights. *See, for example*, http://www.dslreports.com/forum/r24663306-northeast-NYC-Apartment-Fios-installation-questions.-thanks, describing possible alternative installs within an apartment.

cable companies have usually been left with a choice between bad alternatives. Many choose to run exposed cables up stairwells in apartment buildings. A few might run fiber up the elevator shaft and then drill through a wall into a hallway.

The cost of internet bandwidth itself is not only falling — the rate of the decline is increasing, which is very good news for Utility as it will lower the utility's expenses.[141]

If the utility pipe project forces Utility to substantially increase capital spending on an annual basis, Utility will oppose it. If, on the other hand, Utility can adopt the new pipe gradually, so that it does not affect the straight line decline in annual capital expenditure, Utility will not object and neither will Wall Street.

The New York State Attorney General says that investment in fiber and wireless network should not be counted towards Utility's commitment to core customers.[142] If Utility were to participate in this infrastructure, Utility would want investment to count towards its Service Quality Improvement Plan (SQIP).

Our subject matter expert (SME) says that in ten years of running a fiber network, he had exactly two outages, both caused by steam, which melted the metal conduits and destroyed the fiber. Utility does not want steam to be in the shared pipe. [143] In the alternative, if steam must be in the shared pipe, Utility wants the fiber to be as far away from the steam as possible. In addition, electrical wires and fiber conduit must not be too close.[144]

Our SME says that water leaks down, and should be at the bottom of the pipe. Electricity should be kept away from water. Gas leaks upward, and should be at the top of the pipe. Our SME says that Fiber is inert, but should not be close to electrical cables.

A video and text description show how companies use the manholes and tunnels of Empire City Subway.[145] The tunnels can accommodate a human being, but it is not clear how far a human can travel down the tunnel.

It is not clear at this time whether micro-trenching is viewed as a viable alternative to tunnels.[146] If micro-trenching were a viable alternative, allowing Utility to place fiber in sidewalks or curbs, then

---

[141] Dave Burstein, *Internet Transit Costs Down 50% in Last Year*, Fast Net News (Aug. 2, 2012, 5:48 PM), http://fastnetnews.com/dslprime/42-d/4830-internet-transit-costs-down-50-in-last-year.

[142] Verizon New York, Inc., case 10-C-0202, *Reply of NYS Att'y Gen.to Verizon's Comments* (N.Y. Pub. Service Comm'n July 6, 2012) *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0E651477-2AFC-4984-909C-1EB30F708BBA}.

[143] Conversation with Bob Atkinson, on file with the author (Professor Atkinson's bio is *available at* http://www.citi.columbia.edu/atkinson.htm). NYC DDC's Subject Matter Expert (SME) says that problems with steam pipes will be solved when the old pipes, many of which are approximately 100 years old, are replaced with new pipes that use modern materials and designs that are flexible and heat tolerant. Also see, Fred Lawler, *The 10 Most Bizarre and Annoying Causes of Fiber Cuts*, Level 3 Communications Blog (Aug. 4, 2011) http://blog.level3.com/level-3-network/the-10-most-bizarre-and-annoying-causes-of-fiber-cuts/.

[144] A question for future research: what is the minimum distance between fiber and electric current at which the current does not create interference in the fiber network?

[145] Varick Schute, *Pulses of Light Beneath the Streets,* Urban Omnibus (June 20, 2012) http://urbanomnibus.net/2012/06/pulses-of-light-beneath-the-streets/ (with embedded video).

[146] *See, for example*, Dane Jasper, *Micro-trenching at Sonic.net*, Sonic CEO Blog (July 14, 2010, 9:58 PM) http://corp.sonic.net/ceo/2010/07/14/micro-trenching-at-sonic-net/ (mentioning that Google favors the technology too).

micro-trenching might achieve substantially the same objectives as the Integration of Utility Tunnels project.

Utility has to plan for a warmer New York City.[147]

In the long term, by 2080, the change in temperature[148] is like moving New York City to Charleston, South Carolina, with between 40 and 64 days per year of temperatures over 80 degrees (compared to less than 20 today) and 2 to 8 days of temperatures over 100 degrees (compared to less than one today). By 2020, the temperature in New York City will rise 1.5 to 3 degrees, and precipitation will rise zero to 5 percent. Today there is a drought every 100 years, perhaps every 50 years by 2050, and perhaps once every 8 years by 2080. The sea level will rise 2 to 5 inches by 2020, but 5 to 10 inches with an extreme melt event in a place such as Greenland.[149]

Vermin populations will grow,[150] disease will increase, and water quality[151] will decline.[152] While workers may be sick more often, the number of days available each year for street work could increase.[153]

Utility purchases energy efficient equipment.[154] Utility would be steadily more efficient even without any green initiatives as it replaces[155] copper with fiber.[156]

---

[147] Much of the information in this section comes from the City Bar Association panel, "After the Flood 2 - Climate Change Adaptation and the Region's Energy and Land Use Challenges," held on November 20, 2012. A writeup of the session is on file. The first City Bar Association panel on climate change was held in February, 2012.

[148] Utility will continue to sponsor rallies against climate change. *See, e.g.,* Josh Harkinson, *Can You Hear Me Now? Verizon Faces Calls for Boycott Over Anti-Climate Rally*, Mother Jones (Sep. 2, 2009 12:22 PM) http://www.motherjones.com/blue-marble/2009/09/can-you-hear-me-now-verizon-faces-calls-boycott-over-anti-climate-bill-rally. Verizon sets and meets energy efficiency goals and other sustainability goals as part of its corporate social responsibility program: http://responsibility.verizon.com/sustainability//.

[149] Presentation of Allen Frei, Deputy Dir.r & Assoc. Prof. of Geography, CUNY Hunger College, at the City Bar Assoc. panel, "After the Flood 2 - Climate Change Adaptation and the Region's Energy and Land Use Challenges."

[150] This year, in Queens, it there may have been two pigeon birthing seasons.

[151] Water quality is impacted by increased precipitation, by the flooding of industrial sites and subsequent dispersion of pollutants into the water and soil, and by other factors. Polluted water can be a powerful disease vector.

[152] The DEP is working to improve the water supply. The DEP's capital improvement plan is shown on page 17 of a 2009 bond offering at http://www.nycbonds.org/NYW/pdf/2009/NYW_2009_GG.pdf, *cited in NPCC Climate Change Adaptation Guidebook, Appendix B*, p. 261, *available at* http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2010.05324.x/abstract.

[153] By 2080, the ground will be frozen for a shorter period of time, if at all. But it is not clear how or whether 100 degree heat might affect work on or under the street. Power outages caused by heat waves would hinder street work, but construction workers and street workers do not necessarily stop work when the temperature hits 100 degrees.

[154] *See*, *We Pushed For Energy Efficiency and Pulled Our Industry Forward*, (undated) http://responsibility.verizon.com/sustainability/energy-standards.

[155] Gerry Smith, *Hurricane Sandy Delivers 'Another Catastrophe' To Verizon's Home, Complicating Network Repairs*, Huffington Post (Nov. 3, 2012 4:32 PM, updated Nov. 3, 2012, 5:51 PM) http://www.huffingtonpost.com/2012/11/03/verizon-sandy_n_2069033.html ("While the company has buried fiber optic lines beneath much of its territory, it still serves about a third of its footprint via century-old copper wire technology. Copper is not only slower than fiber; it's also more vulnerable to failing when wet. Instead of fixing damaged copper lines, Verizon plans to replace many of them with fiber, which will be better able to weather future floods").

[156] Cirrant reports that replacing copper with fiber in a single 39 story hotel resulted in savings in the following areas (source: Frank Coluccio, *New IT Energy Efficiency Incentives: Opportunities Hiding in Plain Sight: a Cirrant Green Paper*, undated and on file with the author):

Reduction of HVAC Requirements

- Power Consumption Reduction
- Power Demand Reduction

To prepare for future flooding, vulnerable equipment[157] must be moved from the basement to higher floors or the roof. Utility may require building code changes to move, for example, gas or oil powered generators to higher floors or the roof. It is not clear how such generators are refueled. Utility may wish to generate some of its own power,[158] and perhaps use more solar energy.[159] The basement switching center at the Verizon Building[160] at 140 West Street was flooded by Sandy, a clear indication of the costs of doing nothing.[161]

As for construction in flood zones, the choices are "retreat, elevate, or armor."[162] Where retreat is not an option, it seems logical to both elevate and armor.[163] The Sandy surge reached 14.06 feet, but the

---

- HVAC CAPEX and OPEX Savings
- Elimination of Ventilation Ducting and Air Changers

Reduction of Power Distribution Infrastructure Requirements

- Electrical Wiring and Cabling Reductions – CAPEX and OPEX savings
- Building Electrical Plant Reductions, (e.g. Power Distribution Units, Uninterruptible Power Supplies, etc.) – CAPEX and OPEX savings
- Grounding and Bonding Systems

Reduction of Space Requirements

- Reduction in Technology Room Requirements
- Reduction of Cabling Pathway Utilization (Conduits, Raceways, Risers, etc.)
- Capital Cost Reduction

Benefits

- Revenue Potential through Freed Up Usable Real Estate and Energy Market Opportunities
- Annual Utility Savings and Long Term Permanent Demand Reduction
- Total Cost of Ownership Reduction
- Grid Relief with Reduced Future Capacity Requirements
- Recycle Value

[157] The iconic Verizon flooding image from Hurricane Sandy is *available at* http://www.siliconinvestor.com/readmsg.aspx?msgid=28549728.

[158] A list of New York State renewable energy and energy efficiency policies is *available at* N.C. State University's *Database of State Incentives for Renewables and Efficiency (DSIRE)* http://www.dsireusa.org/incentives/index.cfm?re=0&ee=0&spv=0&st=0&srp=1&state=NY.

[159] *See*, Amory Lovins, *How to End Blackouts Forever*, Time Ideas (Nov. 15, 2012) http://ideas.time.com/2012/11/15/how-to-make-blackouts-history/ ("By my accounting, a resilient, microgrid-based, and 80%-renewable electricity system would cost about the same as business-as-usual, greatly strengthening national and family security as a free bonus"). *See also* the book by Amory Lovins and Hunter Lovins, *Brittle Power: Energy Strategy for National Security* (2d ed. 2001) *available* for free *at* http://files.unitedddiversity.com/Energy/BrittlePower.pdf (481 pages).

[160] *See* http://en.wikipedia.org/wiki/Verizon_Building.

[161] Dante D'Orazio, *Into the vault: the operation to rescue Manhattan's drowned internet —Hurricane Sandy's storm surge flooded Verizon's downtown office, rendering miles of copper wiring useless*, The Verge (Nov. 17, 2012 10:10 AM) http://www.theverge.com/2012/11/17/3655442/restoring-verizon-service-manhattan-hurricane-sandy (containing photos and video and noting, "While fiber optic cabling weathered the storm, the electronics that send light through them are vulnerable to water"). Verizon's own Sandy service updates are *available at* http://www.verizonbusiness.com/about/news/pr-26011-en-Hurricane+Sandy+Updates.xml.

[162] Presentation of Edna Sussman, NYC Panel on Climate Change; Distinguished Practitioner in Residence, Fordham Law School, formerly of White & Case, at the City Bar Association panel, "After the Flood 2 - Climate Change Adaptation and the Region's Energy and Land Use Challenges."

[163] For an example of armoring and elevation in Battery Park City (which did not lose power), *see* Max Gross, *Battery powered: Downtown area burns bright after Sandy*, N.Y. Post (Nov. 7, 2012 10:46 PM, updated Nov. 8, 2012 1:43 AM)

worst case scenario envisaged by the New York City Panel on Climate Change (NPCC) was 25 feet.[164] A 25 foot surge might require significant elevation of buildings.[165] According to The Economist magazine, if the Arctic melted, reaching the estimated temperature of 125,000 years ago, sea levels worldwide would rise 12 to 18 feet (4 to 6 meters).[166]

But Utility must not only prepare for flooding. Climate change will also bring extreme precipitation events, heat waves, and, potentially, drought. A heat wave combined with a dust storm could shut down major data centers much as the debris of 9/11 shut down Lower Manhattan data centers by clogging the cooling systems. But a dust storm seems unlikely in the New York area.

PlaNYC 2030 calls for more use of renewable energy and for replacing oil with natural gas.[167] It is not clear how PlaNYC will affect Utility (in contrast to, for example, Con Edison) because although energy is a key facet of the plan, telecommunications is not.

A study of the cost to Washington D.C. of a rising sea level estimates that the current rate of rise of the sea level would cost the city about $2 billion, but a rise of 5 meters (15 feet) would cost over $24 billion and harm key institutions including the FBI, FTC, and IRS.[168]

---

http://www.nypost.com/p/news/business/realestate/residential/battery_powered_ibl08KrHzBNz0VL6Kgg4XN/1 ("Much of BPC's housing stock was constructed in the last decade and — according to guidelines set out by the Battery Park City Authority, which mandates that new buildings be eco-friendly — the design of these buildings was much smarter than those in other parts of the city. 'All the mechanical equipment is on the top of the building,' says Michael Gubbins, a senior vice president at the Albanese Organization, of the three towers that his firm has built in BPC: the Solaire, the Verdesian and the Visionaire. (Compare that to buildings just across West Street in the Financial District, where low-lying mechanical systems were seriously damaged by flooding.)." At 30 West Street, "'The basement was designed as a bathtub,' says a representative for Millennium who declined to be named. 'Only three doors lead into the lobby and basement, so when those are blocked [or] sandbagged, the building is basically watertight. The first-floor walls and glass were designed to resist water pressure.'")

[164] Presentation of Edna Sussman, NYC Panel on Climate Change; Distinguished Practitioner in Residence, Fordham Law School, formerly of White & Case; and of Carlos Torres, Vice President for Emergency Management, Con Edison, at the City Bar Association panel, "After the Flood 2 - Climate Change Adaptation and the Region's Energy and Land Use Challenges."

[165] The megatsunami scenario, in which a large block of land from the island La Palma of the Canary Islands (several hundred cubic miles' worth) falls into the Atlantic Ocean, would, it was reported generate a tsunami 80 feet to 160 feet high (CNN, *Scientists warn of massive wave* (Aug. 29, 2001) http://articles.cnn.com/2001-08-29/tech/tidal.wave_1_tidal-wave-tsunami-cumbre-vieja), but a recent study suggests only a 15 foot wave hitting New York City (http://www.youtube.com/watch?v=zXLfsrbVrJY) and another source says that the volcanic event or landslide might not happen for thousands of years (Southampton Oceanography Centre, *Canary Islands Landslides And Mega-Tsunamis: Should We Really Be Frightened?* ScienceNow (Aug. 19, 2004) http://www.sciencedaily.com/releases/2004/08/040815234801.htm). So Utility will not plan for this scenario.

[166] The Economist, *Special Report: The Arctic* 7 (June 16, 2012), *available at* http://www.economist.com/node/21556802.

[167] http://www.nyc.gov/html/planyc2030/html/theplan/energy.shtml (listing key energy efficiency goals in the plan). *See also* C.J. Hughes, *A Critical Look at PlaNYC, Four Years After Its Launch*, Architectural Record (Sept. 29, 2011) http://archrecord.construction.com/news/2011/09/planyc.asp (noting that the recession has slowed down the plan).

[168] "[T]he current rate of sea level rise in Washington, D.C., is about 3.16 millimeters per year. At the low levels of increase expected in the near future, sea level rise would lead to a minimal loss of city area. However, if sea level rises 0.1 meters by the year 2043, flooding about 103 properties and other infrastructure, damages would cost the city about $2.1 billion. Bolling Air Force Base would have 23 buildings impacted.

If sea level rise were to reach 5.0 meters over the next 100 years, the authors warn of significant damages, in excess of $24.6 billion, to commercial buildings, military installations, museums and government agencies, including the Federal Bureau of Investigation, the Justice Department, the Internal Revenue Service, the Federal Trade Commission and the Department of Education.

IV. Identifying the impact of the Integration of Utility Tunnels on Utility's Regulation.

IVa. Traditional Regulation vs. Market-Based Regulation

Utility will take the position that regulators should stand back and let the markets dictate who the company serves, when, and where.[169]

One example of a recent change in regulation is the end of the requirement to deliver White Pages. [170] Utility estimates that a reduction of White Pages deliveries could save 5,000 tons of paper per year.[171] Utility is still required to provide quarterly status updates on compliance with the order.[172]

Utility only reports on service to the elderly, the poor, and those in poor areas that have no alternative service. Each quarter, Utility reports the number of lines that were repaired within 48 hours. Since the state only has an interest in those who do not have internet or cell service alternatives, Utility reports only on core copper customers: the poor, the elderly, the disabled, and those in "white spaces" areas that have no cell service.[173] Once Utility fails to repair a line in 48 hours, it has no incentive to repair it at all.

Market-based regulation is value neutral. As Utility embarks on a "three screen" vision, the converged services company will deliver to the television screen, the computer screen, and the handheld screen. The pace of technological change demands that rules be flexible and adapt to the future, not written in the past in order to preserve old paradigms.[174]

While a long-term rise of 5.0 meters is considered unlikely, it may represent storm surges and waves created by extreme storms such as Hurricane Sandy, Tropical Storm Isabel in 2003, and the high tides and rains in April 2011, which triggered waterfront flooding in the city and Northern Virginia." *Long-term sea level rise could cost Washington, D.C., billions*, CE News, Nov. 6, 2012, *available at* http://www.cenews.com/news-long_term_sea_level_rise_could_cost_washington__d.c.__billions-2110.html (with a link to the original paper).

[169] The Federal Communications Commission said that market-based regulation "will give carriers progressively greater flexibility in setting rates as competition develops, gradually replacing regulation with competition as the primary means of setting prices and facilitating investment decisions." *In the Matter of Access Charge Reform Price Cap Performance Review for Local Exch. Carriers Transp. Rate Structure & Pricing End User Common Line Charges*, 12 F.C.C.R. 15982 (1997).

In energy regulation, the Mobile-Sierra doctrine "bars the [Federal Energy Regulatory Commission (FERC)] from reforming or abrogating a fixed-rate contract absent a showing that contract reformation or abrogation is required to protect the public interest." David G. Tewksbury, Stephanie S. Lim, *Applying the Mobile-Sierra Doctrine to Market-Based Rate Contracts*, 26 Energy L.J. 437 (2005). For the cases that gave the doctrine its name, *see United Gas Pipe Line Co. v. Mobile Gas Serv. Corp.*, 350 U.S. 332 (1956) ("Mobile") and *Fed. Power Comm'n v. Sierra Pac. Power Co.*, 350 U.S. 348 (1956) ("Sierra"). The Federal Power Commission was the FERC's predecessor.

[170] Press Release, State of N.Y. Pub. Service Comm'n, *Verizon OK'd To Limit Distribution of White Pages — Cutting Residential White Pages Reduces Waste, Helps Environment* (Oct. 14, 2010), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F5C6DC64-EDB8-4D1B-A727-8542E76683C9}.

[171] *Id*.

[172] Verizon New York, Inc., case 10-C-0215, *Order Granting Waiver With Conditions* (New York Public Service Comm'n Oct. 15, 2010), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={92CCFF43-305D-4A71-9CA3-3277A4FEC467}.

[173] *See* Letter from Joseph Post, Ass't Gen. Counsel of Verizon, to Jaclyn Brilling, Sec'y of the State of N.Y. Pub. Service Comm'n at 5 (July 2, 2010), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={13086526-7605-4972-9DF7-0033E536BB64}.

[174] After the collapse of a railway bridge, railroad tycoon Isambard Kingdom Brunel famously told the UK commission investigating the disaster that he was, "opposed to the laying down of rules or conditions to be observed in the construction of bridges lest the progress of improvement tomorrow might be embarrassed or shackled by recording or registering as law the prejudices or errors of today." *Quoted in* Presentation of Andrew Vann, Charles Stuart University (Australia) (2012), *available at*

IVb. Telephone

At present, Utility has only minimal telephone reporting requirements, and those minimal requirements may disappear by the end of 2013.[175]

In its letter to the New York State Public Service Commission (NY PSC) dated July 2, 2010,[176] Utility acknowledged that the NY PSC had said that it only needed to report its performance (in terms of such metrics as outages and repair times) with regard to customers in three categories: "[1] those who do not have wireline alternatives, [2] customers subscribing to Lifeline service, or [3] customers who are characterized as having special needs" (brackets in original). Utility asked the NY PSC to allow it to leave out customers who had valid alternatives. Customers in these three categories are called the "core customers."

In addition, Utility requested that all reporting cease: "In view of the rapid changes that are occurring in communications technology, in the markets for communications services, and in consumer preferences, Utility proposes that all reporting requirements under this Plan sunset after three years unless the Commission, upon review of competition and service-quality issues, decides otherwise at that time." If the Public Service Commission accepts the argument, Utility will report no data after the end of 2013.

On July 30, 2012, the NYAG submitted to the PSC an excerpt from a June 21, 2012 conference call featuring a conversation between Utility chairman and CEO Lowell McAdam and Guggenheim Securities analyst Andrew Decker in which Utility's McAdam said that the company's strategy is to replace copper with fiber in urban areas, and with cellular in rural areas.[177] But Utility Wireless earns a greater profit

---

http://csusap.csu.edu.au/~areport/documents/pbe_summit_2012/VANN%202012%20Summit.pdf. Since 1847, the pace of technological change has increased. Concerns that regulation might prevent innovation are even more valid now.

[175] "VI. SUNSET PROVISION:

In view of the rapid changes that are occurring in communications technology, in the markets for communications services, and in consumer preferences, Verizon proposes that all reporting requirements under this Plan sunset after three years unless the Commission, upon review of competition and service-quality issues, decides otherwise at that time." Letter from Joseph Post, Ass't Gen. Counsel of Verizon, to Jaclyn Brilling, Sec'y of the State of N.Y. Pub. Service Comm'n at 5 (July 2, 2010), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b13086526-7605-4972-9DF7-0033E536BB64%7d.

[176] Letter from Joseph A. Post, Verizon ass't gen. counsel toJaclyn Brilling, Sec'y of the State of N.Y. Pub. Service Comm'n (July 2, 2010), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={13086526-7605-4972-9DF7-0033E536BB64}.

[177] *Thomson Reuters Edited Transcript, interview of Verizon Chairman and CEO Lowell McAdam by Guggenheim Securities analyst Andrew Decker* 8, June 21, 2012, available at http://www.media-alliance.org/downloads/Verizon_Kill_Copper.pdf ("Kill Copper Transcript").

On page 8, McAdam says, "So I do expect to see our margins improve on the wireline side. I see opportunities every day. We are going to need a little bit of help here. Some of the regulatory environment has got to loosen up a little bit, mostly in the states and so we are working that. We have gotten Florida and Virginia and Texas to pass sort of deregulation, which allows us to be a lot more flexible in the marketplace and allows us to invest where customers want us to invest and start to sunset some of the older technology.

We have got some work to do in New York and New Jersey there that are **frankly pretty backward** compared to the rest of these states, so we have got some work to do there. But the vision that I have is we are going into the copper plant areas and every place we have FiOS, we are going to **kill the copper**. We are going to just take it out of service and we are going to move those services onto FiOS. We have got parallel networks in way

too many places now, so that is a pot of gold in my view.

And then in other areas that are more rural and more sparsely populated, we have got LTE built that will handle all of those services and so we are going to cut the copper off there. We are going to do it over wireless. So I am going to be really shrinking the amount of copper we have out there and then I can focus the investment on that to improve the performance of it. So

than Utility's wireline operations, according to the July 6 NYAG letter, and Utility is spending almost one-third of its non-FiOS capital expenditure on providing "fiber-based transport for wireless carriers." Utility has a cable franchise from the city. The application, a 46 MB file, is 1,980 pages long.[178] The franchise was approved on July 18, 2008, in a short 10-page decision.[179] The portion of Utility's cable service that runs under city streets relies entirely on the company's fiber infrastructure, and the details of the cable franchise's use of fiber could be a subject of future research.

there is lots of opportunities there and FiOS is continuing to do very well so we can grow the top line through FiOS and we can leverage the cost efficiencies on the network side. So margins can improve" (emphasis added).

[178] Verizon New York, Inc., case 08-00624, *Petition for Confirmation of a Cable Franchise with the City of New York* at 1925 (New York Public Service Comm'n May 30, 2008) *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F34993F5-1707-47F7-ADE1-745233B13858} ("Cable Franchise Agreement").

[179] N.Y. Pub. Service Comm'n, *Order and Certificate of Confirmation (Issued and Effective July 18, 2008)*, *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={1BF3C448-6BDD-481C-B7D5-6A0C01D68F60}.

In the franchise agreement, Utility has committed to the following fiber deployment schedule, subject to extensions of up to three years:[180]

Cumulative Premises Passed (k) - % Complete								
Boro	Type	2008	2009	2010	2011	2012	2013	2014
Manhattan	SFU	98%	100%	100%	100%	100%	100%	100%
	MDU	57%	62%	66%	73%	82%	91%	100%
	Total	57%	62%	67%	73%	82%	91%	100%
Bronx	SFU	30%	46%	59%	69%	84%	96%	100%
	MDU	6%	23%	39%	58%	75%	92%	100%
	Total	13%	29%	45%	61%	77%	93%	100%
Queens	SFU	23%	39%	55%	69%	82%	95%	100%
	MDU	7%	21%	37%	54%	72%	93%	100%
	Total	15%	30%	46%	61%	77%	94%	100%
Staten Island	SFU	98%	100%	100%	100%	100%	100%	100%
	MDU	100%	100%	100%	100%	100%	100%	100%
	Total	98%	100%	100%	100%	100%	100%	100%
Brooklyn	SFU	17%	33%	47%	63%	77%	92%	100%
	MDU	8%	27%	42%	57%	76%	93%	100%
	Total	12%	30%	45%	60%	76%	93%	100%
NYC	SFU	32%	46%	59%	71%	83%	95%	100%
	MDU	27%	40%	51%	63%	78%	92%	100%
	Total	29%	42%	54%	66%	79%	93%	100%

(SFU: Single Family Unit. MDU: Multiple Dwelling Unit (Apartment).)

A question for further research: has the city granted one or more extensions to Utility under this franchise agreement?[181]

IVc. Fiber is Unregulated

In its triennial review order (TRO) of 2003, a regular review of the rules required under the 1996 Act, the FCC said, "An incumbent LEC is not required to provide unbundled access to the packet switched features, functions and capabilities of its hybrid loops."[182] The FCC defined a hybrid loop as "a local loop composed of both fiber optic cable, usually in the feeder plant, and copper wire or cable, usually in the

[180] *Cable Franchise Agreement*, *Supra* note 94, Attachment A Section 5 and Attachment A Appendix F.

[181] Section 5 also provides Utility with defenses against landlords who wish to charge unreasonable access rates.

[182] TRO, Appendix B, Page 12, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-36A1.doc.

distribution plant." *Id*. At the subsequent press conference, I remember DSL Prime reporter Dave Burstein asking whether sharing obligations were removed if the customer line contained even "a foot of fiber," and, after trying to dodge the question, the FCC's representative admitted that was true. When a federal executive agency has said that something should not be regulated, that decision pre-empts any decision by state regulators.[183]

Contrast the rule on residential fiber with the rule on "dark fiber,"[184] requiring sharing and providing a role for state PSCs: "An incumbent LEC shall provide a requesting telecommunications carrier with nondiscriminatory access to a dark fiber loop on an unbundled basis except where a state commission has found, through application of the self-provisioning trigger in paragraph (a)(6)(i) of this section or the potential deployment analysis in paragraph (a)(6)(ii) of this section, that requesting telecommunications carriers are not impaired without access to a dark fiber loop at a specific customer location. Dark fiber is fiber within an existing fiber optic cable that has not yet been activated through optronics to render it capable of carrying communications services."

This ruling gives Utility an incentive to deploy fiber if Utility sees deregulation as an incentive.

A large portion of the cost of fiber is the labor of trenching,[185] and the project could save Utility significant labor costs. Other governments are examining ways of reducing trenching costs.[186]

---

[183] The FCC has promulgated a clear rule exempting fiber from regulation. "Whether the Telecommunications Act or the FCC have preempted a state telecommunications regulation depends on a determination that a specific state requirement is inconsistent with federal law, that is, that the State directly has violated a clear statement in the Act or FCC rules or that the State's chosen means of regulation clearly interfere with a federal policy goal or a method of achieving that goal." 74 *Am. Jur. 2d* Telecommunications § 17, *citing Centennial Puerto Rico License Corp. v. Telecommunications Regulatory Bd. of Puerto Rico*, 634 F.3d 17 (1st Cir. 2011), *cert. denied*, 2011 WL 4530462 (U.S. 2011).

[184] Dark fiber is unused network capacity. Because the labor cost is a significant portion of the cost of running fiber, utilities usually install more fiber than they need when they run long haul fiber strands. The extra fiber strands can be leased, but are not connected to networking equipment, so there may be an up front cost to install the equipment (or "light the fiber").

[185] This can cost $32 per foot or $168,960 per mile. *Conversation with Lou Klepner*, Dec. 18, 2012, on file.

[186] "Typical fiber optic cable installation projects have a cost component for digging a trench that averages over 80% of the cost of a project. This fact has led to the suggestion that there may be substantial cost savings if conduit can be installed in conjunction with County highway and parks trail projects. Our experience indicates that there may be some projects where this is true, but this does not hold true for all projects. In some cases, if an area of highway is being worked on, and utilities are being relocated, there may be an opportunity to share trenching costs with other utility providers." Dakota County Dep't of Information Technology, *Guiding Principles for Dakota County Broadband Projects* 5 (March 1, 2011), *available at* http://www.co.dakota.mn.us/Government/IT/Documents/BroadbandPrinciples.doc.

IVd. Utility's Finances

Utility is now a nationwide company. It was a local company until 2004, when its national parent acquired it.[187] In 2003, when Utility was a local company, it earned $555M from its parent and paid $1.945B for services (including $1.780B to Verizon Services).[188]

As of December 31, 2011, Utility had net income of $4B on revenues of $110B (*see* n. 203, *supra*, for how Utility compares with its competitors). Utility took a charge of $7.9B to net income for "minority interest," which I believe is the revenue-based annual payment to Vodafone for its 45% stake in Verizon Wireless, Utility's cellular joint venture. Utility would like to buy out Vodafone, but the purchase price of an asset that generates $8B in annual income would try even the resources of Utility.

Whether it would make sense to acquire the minority stake in installments (paying perhaps $8B per year for 10 or 12 years) is a question that we should ask our financial expert, Terri Matthews. I suspect that it would not make sense.

Utility needs to have $90B or $100B to buy the minority stake in a single transaction. Data suggest that Utility is saving up cash. As of December 31, 2009, it had $2B in cash on hand and as of December 31, 2010, it had $6.6B in cash.[189] As of December 31, 2011, it had $13B of cash — even though it recorded net income of only $4B (depreciation has been about $16B for the past three years).[190] Another question for this analysis: if an asset generates $8B per year, what should its price be? What would be a reasonable down payment — and how much could Utility borrow? If Utility had a down payment of $20B and borrowed $100B, would it be able to pay the interest on the debt from the $8B net increase in income?

---

[187] The exact details may or may not be relevant and if so, they will be a question for further research. Verizon New York's last SEC filing was on May 4, 2004 (http://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0000071689&owner=exclude&count=40&hidefilings=0). Verizon New York was the successor company to New York Telephone (New York Telephone's final SEC filing occurred on August 29, 2000). Verizon Communications assumed Verizon New York's debt. Verizon Communications filed a Form 8-K stating, "On June 24, 2011, Verizon Communications Inc. (Verizon) guaranteed the payment of principal, interest and premium (if any) when due on all of the outstanding debentures and first mortgage bonds of its 10 domestic operating telephone company subsidiaries. These subsidiaries are: Verizon California Inc., Verizon Delaware LLC, Verizon Florida LLC, Verizon Maryland Inc., Verizon New England Inc., Verizon New Jersey Inc., Verizon New York Inc., Verizon Pennsylvania Inc., GTE Southwest Incorporated d/b/a Verizon Southwest and Verizon Virginia Inc. These subsidiaries have not issued long-term debt securities to the public since 2003. Verizon will no longer provide separate financial information about these subsidiaries on its investor relations website, commencing with financial statements for the first quarter of 2011. The guarantees cover 31 series of debt, with a total outstanding principal amount of more than $8 billion. . . ."

[188] *See* "Transactions with Affiliates" in Verizon New York's last annual report, *available at* http://www.sec.gov/Archives/edgar/data/71689/000119312504053556/d10k.htm. In addition to the payments cited above, Verizon New York apaid $27.5M in interest to Verizon Global Funding Corp. and Verizon Network Funding Corp., and paid $252M in dividends to NYNEX while receiving $66M in dividends from affiliates. For a lengthy report questioning the accounting of Verizon's transactions with its affiliates and arguing against Verizon Communications' nondisclosure of affiliate transactions with such subsidiaries as Verizon New York, *see* Bruce Kushnick, *Verizon's State-Based Financial Issues & Tax Losses: The Destruction of America's Telecommunications Utilities*, Mar. 2012, *available at* http://www.newnetworks.com/Verizonshellgame2012.pdf.

[189] http://www.google.com/finance?q=NYSE%3AVZ&fstype=ii&ei=9nueULiOA66x0QGhgwE.

[190] *Id.*

The options market is pessimistic about Verizon's stock price, with puts outnumbering calls on a weighted value of 2:1.[191] This pessimism might reflect the expectation that Verizon will buy out its minority stake, which could put long term negative pressure on the stock price. Other explanations are also possible. One is taxes.[192] Verizon pays a relatively high dividend rate,[193] and most commentators expect taxes on dividends to rise, although some expect that the tax rise will not harm the price of income stocks (income stocks are stocks that investors buy because the stock pays a dividend — investors may not necessarily expect the stock price itself to rise very much).[194]

IVe. Conclusion

In order to persuade Utility to participate in the Integration of Utility Tunnels project, the City will have to make a business case. Although the long term benefits are persuasive, Utility is thinking short term, focusing on limiting its costs. It is not clear when Utility might adopt the new tunnels, but a gradual adoption approach that allows Utility to minimize its annual expenditures would be particularly persuasive.

---

[191] Andrea Kramer, *Verizon Put Options Grow Increasingly Popular*, Schaeffer's Investment Research (Nov. 9, 2102 9:22 AM), http://www.schaeffersresearch.com/marketcenters/optionscenter/content/verizon+put+options+grow+increasingly+popular/default.aspx?ID=113633.

[192] Kathleen Hennessey and Lisa Mascaro, *Obama reiterates that rich must pay more in taxes*, LA Times, November 9, 2012, *available at* http://www.latimes.com/news/nationworld/nation/la-na-obama-budget-20121110,0,2776739.story ("Exit polls of voters released Tuesday showed that 47% of Americans supported President Obama's proposal to raise tax rates on income above $250,000 for couples. In addition, 13% said everyone should pay more in taxes, while 35% were against any tax increases").

[193] Verizon's dividend was 4.83% at market close on November 9, 2012 (http://www.google.com/finance?q=NYSE%3AVZ&ei=WXmeUIDzLYS4qgGYdA).

[194] Tom Lauricella, *Don't Fear The Dividend Tax Reaper*, WSJ Market Beat Blog (November 7, 2012, 12:10 PM) http://blogs.wsj.com/marketbeat/2012/11/07/dont-fear-the-dividend-tax-reaper (saying that higher taxes will not decrease ownership of income stocks because "people need yield and stocks are offering more than they can get elsewhere").

Schedule A. Technical Definitions

Broadband: Broadband means fast internet, but the definition of fast is always evolving. Internet speeds are measured in two numbers: the speed at which a user can download data, and the (usually smaller) speed at which a user can upload data. For many years, the FCC defined broadband as 256 Kbps in at least one direction. Today, the FCC defines broadband[195] as at least 3 Mbps download and at least 756 Kbps upload. Note that users tend to think of file sizes in bytes, but speeds are measured in bits, and a byte is 8 bits so divide your speed by 8 when figuring out how long it would take to download a file (a kilobyte is 1024 bytes, and a megabyte is 1024 kilobytes, so the math will not be exact).
CO: The Central Office used to be where the phone switches were. Central Offices were massive buildings located on the most expensive local real estate. These large windowless buildings often overlooked parks or neighborhoods in the center of the city. In a new network, a small collection of servers can do the work that once required a large number of dedicated mechanical switches.
Coaxial Cable: This is the wire used in cable deployments.
Copper: Telephone lines ran over copper wire.
Fiber: Glass strands in a network that carry fiber at gigabit speeds.
GWR: Gateway Router
NOC: Network Operations Center. The command center of a broadband network.
OLT: Optical Line Terminal. The OLT is the box that connects fiber traffic from multiple households to the upstream internet. OLTs are located in Utility's central switching office; this equipment serves as the point of origination for FTTP (Fiber-to-the-Premises) transmissions coming into and out of the national Utility network. An OLT is where the PON cards reside. The OLTs also contain the CPU and the GWR and VGW uplink cards. Each OLT can have a few or many dozens of PON cards.[196]
ONT: Optical Network Terminal. Located at the customer (CPE: Customer Premises Equipment). An ONT is a media converter that is installed by Utility either outside or inside your premises, during FiOS installation. The ONT converts fiber-optic light signals to copper/electric signals. Three wavelengths of light are used between the ONT and the Optical Line Terminal:
1310 nm voice/data transmit, 1490 nm voice/data receive, 1550 nm video receive
Each ONT is capable of delivering Multiple POTS (plain old telephone service) lines, Internet data, and Video [197] Wikipedia's FiOS page has photos of two different ONTs.[198]
PON: Passive Optical Network. Utility has two types of PON: the old **BPON** and the newer **GPON**. BPON conforms to the ITU-T G983.1 specification which is capable of 622 Mbps download and 155 Mbps upload. Each BPON fiber is split using an optical splitter to serve 16 or 32 users. GPON conforms to the ITU-T G984.1 specification. Utility's GPON implementation uses Gig-E instead of ATM that was used with BPON and delivers a 2.4 Gbps download speed coupled with a 1.2 Gbps upload speed. Each GPON fiber is split to serve 16 or 32 users. Utility's next phase of GPON will support 64 users per fiber. Utility is

[195] *See, for example*, http://www.fcc.gov/maps/broadband-availability.
[196] Verizon FiOS FAQ, *available at* http://www.dslreports.com/faq/12895.
[197] *Id.*, *available at* http://www.dslreports.com/faq/verizonfios/1.4_Terminology#12565.
[198] http://en.wikipedia.org/wiki/Verizon_FiOS.

building new networks with GPON technology, while existing BPON systems will only be upgraded when capacity limits are reached.[199]

PSTN: The Public Switched Telephone Network delivers POTS (Plain Old Telephone Service). Even the most advanced networks still have to connect to the PSTN to deliver phone calls.

VGW: Voice Gateway.

VoIP: Voice over IP. Delivering phone calls over the internet can allow users to avoid paying for distance or time. Because the calls are data, they can be integrated into rich applications, and it should be easier to create and store data concerning VoIP calls.

[199] Verizon FiOS FAQ, *available at* http://www.dslreports.com/faq/16202. Also see Cedric Lam, Google network architect, *FTTH Look Ahead - Technologies & Architectures*, undated, *available at* http://static.googleusercontent.com/external_content/untrusted_dlcp/research.google.com/en/us/pubs/archive/36936.pdf.

Schedule B: AT&T Divestiture

The AT&T divestiture case took a very long time. The U.S. government filed its antitrust case against AT&T in 1949 and won the case in 1982: "On January 14, 1949, the government filed an action in the District Court for the District of New Jersey against the Western Electric Company, Inc. and the American Telephone and Telegraph Company, Inc. (Civil Action No. 17-49)."[200] Western Electric was the equipment manufacturing arm of AT&T. The consent decree separated AT&T, which now would provide long distance service, from 22 companies that would provide local phone service.[201] The local phone companies came to be known as the Regional Bell Operating Companies (RBOCs) or, colloquially, the "Baby Bells."

Each RBOC was forbidden from competing in the others' territories and was forbidden from competing with AT&T's long distance service. However, the divestiture did not prevent the RBOCs from acquiring each other.[202] Today, there are three Bells. The two large companies are AT&T and Verizon, and there is also Qwest, which is smaller, and is now owned by CenturyLink.[203] Cincinnati Bell is not an RBOC because it was not a wholly owned subsidiary of AT&T.[204]

Judge Greene oversaw the numerous legal issues that divestiture raised from 1982 until 1996, when Congress passed the Telecommunications Act of 1996 (see Schedule C).[205]

---

[200] United States v. Am. Tel. & Tel. Co., 552 F. Supp. 131, 135 (D.D.C. 1982) aff'd sub nom. Maryland v. United States, 460 U.S. 1001, 103 S. Ct. 1240, 75 L. Ed. 2d 472 (1983) and modified sub nom. United States v. W. Elec. Co., Inc., 890 F. Supp. 1 (D.D.C. 1995) vacated, 84 F.3d 1452 (D.C. Cir. 1996) and amended sub nom. United States v. W. Elec. Co., Inc., 714 F. Supp. 1 (D.D.C. 1988) aff'd in part, rev'd in part sub nom. United States v. W. Elec. Co., 900 F.2d 283 (D.C. Cir. 1990) (footnotes omitted).

[201] *Id.* at 141.

[202] Ameritech, for example, consisted of the Illinois Bell Telephone Company, Indiana Bell Telephone Company, Michigan Bell Telephone Company, Ohio Bell Telephone Company, and Wisconsin Bell, Inc. (see http://en.wikipedia.org/wiki/Ameritech).

[203] For the twelve months ending on Dec. 31, 2011, Verizon (NYSE: VZ) had $110B in revenue and net profit of $2.4B. http://www.google.com/finance?q=NYSE%3AVZ&fstype=ii&ei=wHaeULCZHMrZ0QGvLQ November 10, 2012. AT&T (NYSE: T) had $115B in annual revenue and $4B in net income. http://www.google.com/finance?q=NYSE:T&fstype=ii&ei=jHeeUODNL8m50QGPNw. CenturyLink (NYSE:CTL) had annual revenue of $14B and net income of $0.5B. http://www.google.com/finance?q=NYSE%3ACTL&fstype=ii&ei=2XeeUNDqNYvG0AGX6AE. Time Warner Cable (NYSE: TWC) had revenue of $19.6B and $1.6B in net income. http://www.google.com/finance?q=NYSE%3ATWC&fstype=ii&ei=YnieUJCXPMm50QGPNw. The largest cable company is Comcast (NASDAQ: CMCSA), which had revenues of $56B and net income of $4B. http://www.google.com/finance?q=NASDAQ%3ACMCSA&fstype=ii&ei=vHieUKiKFKXB0AHAYQ. Cablevision (NYSE: CVC) is the area's other cable provider. It had revenue of $6.7B and net income of $0.3B. http://www.google.com/finance?q=NYSE%3ACVC&fstype=ii&ei=GHmeUOj-Asm50QGPNw. Some argue that the former CEOs of Qwest sold off the profitable pieces of the business to Comcast and Verizon in order to reap massive bonuses. *See* Andy Vuong, *U S West divestitures boosted bottom line at expense of Qwest's future*, The Denver Post (May 2, 2010), *available at* http://www.denverpost.com/nacchio/ci_14996460 (part of a series on the insider trading trial of former Qwest CEO Joe Nacchio).

[204] See http://en.wikipedia.org/wiki/Cincinnati_Bell.

[205] For a detailed discussion of policy issues raised, including my own comments, see *Has Divestiture Worked? A 25th Anniversary Assessment of the Breakup of AT&T* at NYU, May 6, 2009, available at http://isoc-ny.org/?p=618.

Schedule C: The Telecommunications Act of 1996

The Telecommunications Act of 1996[206] was passed on February 8, 1996, modifying the Telecommunications Act of 1934[207] in order to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."[208]

The Act required the RBOCs (see Schedule B) to allow competitive local exchange carriers (CLECs) to sell phone service over RBOC lines[209] and in exchange the RBOCs were allowed to provide long distance service (competing with AT&T, which only provided long distance service at the time). The Act failed to create competition. By 2004, the RBOCs had gained permission to provide long distance service in exchange for concessions that had failed to create competition.[210] In 2004, ILECs[211] provided 81.5% of

---

[206] Pub.L. 104–104, 110 Stat. 56.

[207] Pub. L. 98-549, § 6(a), 98 Stat. 2804.

[208] Telecommunications Act of 1996, PL 104–104, February 8, 1996, 110 Stat 56.

[209] The noted antitrust treatise *The Antitrust Enterprise*, by Herbert Hovenkamp, derides the Telecommunications Act of 1996 on p245-246: "Imagine that the local Kroger store is a town's only seller of bananas. Seeking to promote banana competition, the town passes a banana competition ordinance requiring Kroger to sell bananas at a steeply discounted wholesale price to individual entrepreneurs who push banana carts around the store, perhaps underselling Kroger itself by a few cents. Kroger supplies the store facility, storage, heat, light, and even the bananas themselves, with the small sellers supplying little more than their labor." The example fails to note that if the competitors can earn enough pennies to make a living under these circumstances, perhaps grocery shoppers are upset with Kroger's prices or service.

[210] Justice Scalia wrote, "Verizon, like other incumbent LECs, has taken two significant steps within the Act's framework in the direction of increased competition. First, Verizon has signed interconnection agreements with rivals such as AT & T, as it is obliged to do under § 252, detailing the terms on which it will make its network elements available. (Because Verizon and AT & T could not agree upon terms, the open issues were subjected to compulsory arbitration under §§ 252(b) and (c).) In 1997, the state regulator, New York's Public Service Commission (PSC), approved Verizon's interconnection agreement with AT&T. Second, Verizon has taken advantage of the opportunity provided by the 1996 Act for incumbent LECs to enter the long-distance market (from which they had long been excluded). That required Verizon to satisfy, among other things, a 14-item checklist of statutory requirements, which includes compliance with the Act's network-sharing duties. §§ 271(d)(3)(A) and (c)(2)(B). Checklist item two, for example, includes "[n]ondiscriminatory access to network elements in accordance with the requirements" of § 251(c)(3). § 271(c)(2)(B)(ii)." Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 402-03 (2004).

Justice Scalia held that Verizon had done nothing wrong by refusing to interconnect: "Verizon's reluctance to interconnect at the cost-based rate of compensation available under § 251(c)(3) tells us nothing about dreams of monopoly." *Id*. at 409. He added that there was no violation of antitrust laws because, "[w]e conclude that Verizon's alleged insufficient assistance in the provision of service to rivals is not a recognized antitrust claim under this Court's existing refusal-to-deal precedents." *Id*. at 411.

[211] ILECs are Incumbent Local Exchange Carriers, the dominant local phone company in their area. Most were RBOCs, but some, such as Cincinnati Bell, were not. The ILEC of Rochester, N.Y. became a fiber broadband company in 1995 (*see* http://en.wikipedia.org/wiki/Frontier_Telephone_of_Rochester), called Frontier, which has since gone through Chapter 11. Today, Frontier Communications owns some of Verizon's old copper network, offers FiOS in some markets, and has video, cellular, and even energy divisions. Frontier acquired Verizon lines in "Arizona, Idaho, Illinois, Indiana, Michigan, Nevada, North Carolina, Ohio, Oregon, South Carolina, Washington, West Virginia[,] and Wisconsin, as well as some assets in border areas of California" in 2009 (*see* http://usatoday30.usatoday.com/money/industries/telecom/2009-05-13-verizon-wireline-frontier_N.htm).

switched access lines, small ILECs had 8.1% of the market, CLECs had 1.8%, and cable companies had 6.5%.[212] The Act had effectively given competition only 1.8% of the market, a negligible change.
Section 271 lists the conditions that Verizon must fulfill in order to be allowed to provide long distance service.[213] Verizon New York was the first telecom carrier to obtain authorization to provide long distance service.[214]
Section 275 forbade the RBOCs from providing alarm monitoring service "before the date which is 5 years after February 8, 1996."[215]
The FCC was supposed to review regulations during every even numbered year in order to "repeal or modify any regulation it determines to be no longer necessary in the public interest."[216] Instead of biennial review orders, the FCC has produced one Triennial Review Order (TRO), adopted by the FCC on February 20, 2003 and released on August 21, 2003.[217] It clarified the TRO in its Order on Remand which was adopted on December 15, 2004 and released on February 4, 2005.[218]

C1. Conditions for Retiring Copper

Utility is not allowed to remove the copper, under the Telecommunications Act of 1996, unless is has fulfilled certain conditions:
(iii) Overbuilds. An incumbent LEC is not required to provide nondiscriminatory access to a fiber-to-the-home loop or a fiber-to-the-curb loop on an unbundled basis when the incumbent LEC has deployed such a loop parallel to, or in replacement of, an existing copper loop facility, except that:

> (A) The incumbent LEC must maintain the existing copper loop connected to the particular customer premises after deploying the fiber-to-the-home loop or the fiber-to-the-curb loop and provide nondiscriminatory access to that copper loop on an unbundled basis unless the incumbent LEC retires the copper loops pursuant to paragraph (a)(3)(iv) of this section.
> (B) An incumbent LEC that maintains the existing copper loops pursuant to paragraph (a)(3)(iii)(A) of this section need not incur any expenses to ensure that the existing copper loop remains capable of transmitting signals prior to receiving a request for access pursuant to that paragraph, in which case the incumbent LEC shall restore the copper loop to serviceable condition upon request.
> (C) An incumbent LEC that retires the copper loop pursuant to paragraph (a)(3)(iv) of this section shall provide nondiscriminatory access to a 64 kilobits per second transmission path capable of

---

[212] Eli Noam, *Media Concentration and Ownership in America* 233 (Oxford University Press, 2009), *available at* http://books.google.com/books?id=Kd_1STqyGFcC&pg=PA233&lpg=PA233.
[213] 47 U.S.C.A. § 271 (West).
[214] Press release, FCC, *Federal Communications Commission Authorizes FCC to Provide Long Distance Service in New York* (Dec. 22, 1999) http://transition.fcc.gov/Bureaus/Common_Carrier/News_Releases/1999/nrcc9101.html ("Today the Federal Communications Commission (FCC) for the first time approved, 5-0, a Regional Bell Operating Company's (BOC) application to provide long distance telephone service. The decision to authorize Bell Atlantic's operation in New York State fulfills one of the key pro-competitive goals of the 1996 Telecommunications Act, and promises substantial benefits for consumers in the form of new service providers, lower prices, tailored and bundled service packages, and better customer service.")
[215] 47 U.S.C.A. § 275 (West).
[216] 47 U.S.C.A. § 161 (West).
[217] FCC, *Triennial Review Order*, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-03-36A1.doc.
[218] FCC, *Order on Remand*, *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-290A1.pdf.

voice grade service over the fiber-to-the-home loop or fiber-to-the-curb loop on an unbundled basis.

(iv) Retirement of copper loops or copper subloops. Prior to retiring any copper loop or copper subloop that has been replaced with a fiber-to-the-home loop or a fiber-to-the-curb loop, an incumbent LEC must comply with:

(A) The network disclosure requirements set forth in section 251(c)(5) of the Act and in § 51.325 through § 51.335; and

(B) Any applicable state requirements.[219]

Sections 51.325 through 51.335 are:

§ 51.325 Notice of network changes: Public notice requirement.

§ 51.327 Notice of network changes: content of notice.

§ 51.329 Notice of network changes: Methods for providing notice.

§ 51.331 Notice of network changes: Timing of notice.

§ 51.333 Notice of network changes: Short term notice, objections thereto and objections to retirement of copper loops or copper subloops.

§ 51.335 Notice of network changes: Confidential or proprietary information.

Only companies whose services depend on the copper may file objections under § 51.333 — the law contains no provision for objection by customers.[220] Also, any FCC inaction means that the objection is denied: any "objection to a notice that an incumbent LEC intends to retire any copper loops or copper subloops and replace such loops or subloops with fiber-to-the-home loops or fiber-to-the-curb loops shall be deemed denied 90 days after the date on which the Commission releases public notice of the incumbent LEC filing, unless the Commission rules otherwise within that time."[221]

C2. FCC Regulation Under the Telecommunications Act of 1996

Telecommunications utilities can petition the FCC for forbearance under Section 401 for deregulation of any non-cellular services.[222] In evaluating such a petition, the FCC must "consider whether forbearance from enforcing the provision or regulation will promote competitive market conditions, including the extent to which such forbearance will enhance competition among providers of telecommunications services. If the Commission determines that such forbearance will promote competition among providers of telecommunications services, that determination may be the basis for a Commission finding that forbearance is in the public interest."[223]

The New York Public Service Commission lost a lawsuit against the FCC over the renumbering of New York City area codes. New York wanted to not require ten digit dialing within an area code, but the court found that the FCC had authority to require ten digit dialing under the Telecommunications Act of 1996.[224]

---

[219] 47 C.F.R. § 51.319.

[220] 47 C.F.R. § 51.333.

[221] *Id.*

[222] 47 U.S.C.A. § 160 (West).

[223] *Id.*

[224] New York & Pub. Serv. Comm'n of New York v. F.C.C., 267 F.3d 91 (2d Cir. 2001).

C3. New York City Under the Telecommunications Act of 1996

Several companies have sued the city, claiming that parts of their franchise agreement with the city were pre-empted under the Telecommunications Act of 1996, but since the plaintiffs were acquired after preliminary litigation, it is not clear whether the cases are pending, moot, or settled.

Qwest sued the city in 2005, claiming that "New York City Council Resolution No. 529 ('Resolution') and the Franchise Agreement between Qwest and the City ('Franchise Agreement') are preempted by section 253 of the Federal Telecommunications Act of 1996 ('FTA')." The court said that a portion of the agreement requiring Qwest to waive legal challenges to city decisions raised a due process claim. The court said that subjecting Qwest but not Verizon to a franchise process was discriminatory (Qwest was an ILEC elsewhere in the country but a competitor in New York).[225] The case appears to have no further history and Qwest was acquired by CenturyLink in 2011.[226]

NextG sued the city in 2004, seeking rights under the Telecommunications Act of 1996 to construct an innovative cellphone-like network. NextG extends cellphone networks to dead areas by using small radios, often installed on telephone poles. Without access to the poles, it could not provide services. The case was dismissed by the federal district court.[227] NextG won a partial reversal of the decision in the Court of Appeals under Judge Rakoff, who held that NextG was not entitled to damages under Section 1983[228] but remanded the case for a possible injunction to decide whether "the City's regulatory scheme is in material respects prohibited or preempted by the Telecommunications Act of 1996."[229] NextG was acquired by wireless tower builder Crown Castle in 2012 and there appears to have been no further activity in the case.[230]

Schedule D: Utility's Political Issues

D1. Dispute Between Utility and the New York State Attorney General

Utility's most recent letter in this proceeding (Case 10-C-0202) is dated July 16, 2012.[231] In the letter, Utility claims that the New York Attorney General (NYAG) has numerous data points wrong, notably that Utility is increasing investment in telephone service and that "only" 8.1 percent of lines needed repair (in footnote 5, it admits that the 8.1 percent represents 349,874 lines).

---

[225] Qwest Communications Corp. v. City of New York, 387 F. Supp. 2d 191 (E.D.N.Y. 2005).

[226] Peter Svensson, *CenturyLink Completes $12.2B Acquisition Of Qwest*, HuffingtonPost (April 1, 2011 10:30 AM) http://www.huffingtonpost.com/2011/04/01/centurylink-completes-122_n_843572.html.

[227] NextG Networks of New York, Inc. v. City of New York, 03 CIV 9672 RMB/JCF, 2006 WL 538189 (S.D.N.Y. Mar. 6, 2006).

[228] 42 U.S.C.A. § 1983 (West).

[229] NextG Networks of NY, Inc. v. City of New York, 513 F.3d 49, 55 (2d Cir. 2008).

[230] Phil Goldstein, *Crown Castle buys DAS provider NextG for $1B*, Fierce Wireless (Dec. 16, 2011) http://www.fiercewireless.com/story/crown-castle-buys-das-provider-nextg-1b/2011-12-16. The acquisition close in 2012: Press release, *Crown Castle Completes Acquisition of NextG Networks* (Apr. 10, 2012 11:50 AM) http://www.reuters.com/article/2012/04/10/idUS175320+10-Apr-2012+GNW20120410.

[231] Letter from Joseph Post, Verizon deputy gen. counsel to Jaclyn Brilling, Sec'y of the N.Y. State Pub. Service Comm'n (July 16, 2012), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={7EEFB8E5-AAA7-47BF-8AF5-D4D04BD8C022}.

Utility is complaining about the NYAG's letter of July 6, 2012[232] in which the NYAG says that Utility should not be allowed to claim that investment in its cellular network and fiber buildouts are improving service to "core customers" (those without cell service available to them, the elderly, and the poor).[233] The NYAG cites the experience of one elderly couple in Queens (Far Rockaway) who were without phone service for three weeks.[234] Their daughter switched them to Time Warner Cable phone service, and Utility's spokesperson said, "Utility cannot sustain a workforce sized for a customer base that no longer exists."

D2. Utility and Unionized Labor

Utility was recently able to negotiate a contract with the Communications Workers of America that many union members saw as a "sellout," according to a letter.[235] The letter says that when Utility gets rid of copper, "the company is abandoning the network that provides work for most of our members." The contract's most controversial provisions appear to be health care contributions from current members, and a switch to 401(k) pensions for new hires.

The letter asks members, "how long would you personally be willing to stay on the street to guarantee a defined benefit pension for workers who are not yet hired—and may never be?"

The threat of the end of the copper network has improved Utility's bargaining position with the unions. The actual elimination of copper would provide Utility much greater bargaining power.

Critics allege that Utility is moving away from copper because 97,000 of Utility's 97,350 unionized workers work on jobs supported by the copper infrastructure.[236]

D3. Court Cases Against the Public Service Commission

In the past, when New York Telephone was a regulated utility, its rates appear to have been set by the New Jersey Board of Public Utility Commissioners, as shown by a court case from 1926.[237] By 1978, the

---

[232] Letter from N. Y. Att'y Gen. Eric Schneiderman to Jane Azia and Keith Gordon of the Bureau of Consumer Frauds and Protection of the N.Y. Pub. Service Comm'n (July 6, 2012), *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={0E651477-2AFC-4984-909C-1EB30F708BBA}.

[233] The letter said: 1) That Verizon is counting investment in cellular backhaul and in FiOS fiber as investment in phone service, and that without those investments, Verizon's spending per line is declining faster than the total number of landlines in service. 2) That Verizon is using data about core customers whereas the NYAG is using data about all phone lines. The NYAG says that during the same five month period when 8.1 percent of core customers' lines needed repairs, 19.5 percent of Verizon's total 4.1 million lines needed repair (799,500 lines). The NYAG claims that Verizonc hose those particular five months as Utility's best performance. 3) That Verizon does not have enough staff to keep its lines repaired. The NYAG asked the PSC to "require the company to demonstrate that it has sufficient workers to meet customers' repair needs, in good weather and in bad, before making further staff reductions."

[234] Joe Stepansky, *Ailing Elderly Couple in Rockaway Without Phone Service for Three Weeks*, N.Y. Daily News, June 19, 2012, *available at* http://www.nydailynews.com/new-york/queens/ailing-elderly-couple-rockaway-phone-service-weeks-article-1.1097886.

[235] Letter from CWA District One vice president Chris Shelton to CWA membership (Oct. 1, 2012), *available at* http://www.local1101.org/v1/documents/Final_CWA_D1_Ltr_Shelton.pdf.

[236] *See, for example,* Erin Johansson, *American Rights At Work: Broken Promises* 2 (September 2007), *available at* http://www.americanrightsatwork.org/dmdocuments/ARAWReports/brokenpromises.pdf. (Utility has significantly reduced the unionized workforce by selling unprofitable businesses such as the state phone companies of Vermont, New Hampshire, and Maine. *See* Associated Press, *Verizon deal sends FairPoint spiraling into Ch. 11*, Oct. 26, 2009, *available at* http://www.crainsnewyork.com/article/20091026/free/910269988.)

[237] The rate of return was 7.53 percent, but New York Telephone sued, alleging that the public utility board had in effect actually granted it a "confiscatory" return of only 4.93 percent. The dispute hinged on the disallowance of (unspecified)

Public Service Commission of New York State set the rates for New York Telephone.[238] By 1984, the Public Service Commission of New York State set intrastate phone rates and the Federal Communications Commission (FCC) set interstate rates.[239] Although the state does not have any regulatory oversight over Utility, the FCC may retain some oversight. For the purposes of this memo, it is important to know the history, but the history has no immediate impact on the Integration of Utility Tunnels project.

depreciation. *New York Tel. Co. v. Bd. of Pub. Util. Com'rs*, 5 F.2d 245 (D.N.J. 1925) *aff'd*, 271 U.S. 23 (1926). The case was affirmed by the Supreme Court, which would suggest to a modern reader that the case was famous and important, but, at the time, it may have been easier to appeal a case to the Supreme Court. Note that during the trusts era, New Jersey was the first state to legalize holding companies and thus most trusts, such as Standard Oil and the Bell Telephone Company, incorporated in New Jersey.

[238] In *New York Tel. Co. v. Pub. Serv. Comm'n*, 64 A.D.2d 232 (1978), New York Telephone won most of its rate-related arguments but lost the argument that the Public Service Commission should not be its adversary during the rate-setting process before the administrative judge.

[239] In *New York Tel. Co. v. Pub. Serv. Comm'n*, 62 N.Y.2d 57 (1984), New York Telephone won a dispute about whether a five day business week work study was acceptable where New York Telephone did not have data covering a seven day week. The Court of Appeals of New York held that the denial of the five day week data was without rational basis. In *New York Tel. Co. v. Pub. Serv. Comm'n of State of N.Y.*, 95 N.Y.2d 40 (2000), New York Telephone lost an argument that it should not have to distribute to ratepayers its share of the proceeds from the sale of Bellcore (the post-divestiture Bell Labs).

Gas and Electric Utility Hypothetical Analysis

GAS/ELECTRIC/TELCOMM UTILITIES, INC.

Better Service for a Better Tomorrow

November __, 2012

M E M O R A N D U M

To: Terri Matthews, General Counsel, Legal Division

Copy: Dino Ng, Executive Vice President, Engineering Division

From: Lior Sapir, Regulatory Counsel, Legal Division (Gas/Electric Utilities)

Re: Regulatory Impact Analysis of Engineering Proposal

I. ***Introduction.*** In response to your request, in Memoranda dated October 11, 2012 (the "10/11/12 Memo"), and October 25, 2012 (the "10/25/12 Memo"), for a regulatory analysis of the Engineering Division's proposal for integrating the construction of dedicated utility tunnels as part of our regular capital program (the "Integration of Utility Tunnels"), the following memorandum presents the regulatory analysis of a dedicated utility tunnel for all utilities as described in Attachment 1 to the 10/25/12 Memo ("Attachment 1").

The regulatory analysis for the Gas and Electric Utilities [the "Gas Utility", the "Electric Utility" and, collectively, the "Utilities"), identifying and analyzing the issues as they are likely to appear in the next set of rate setting exercises if the Utility were to adopt the Integration of Utility Tunnels as its new policy, is summarized below. First, this memorandum provides a contextual analysis of each of the Utility's infrastructure as it currently exists, with the necessary historical perspective to facilitate the requested regulatory analysis. The ensuing regulatory analysis begins by looking at the impact of the Integration of Utility Tunnels on each of the Utility's current long term capital plan. Then the regulatory analysis moves to identifying and, to the extent possible, estimating the magnitude of the impact of the Integration of Utility Tunnel's on each of the Utility's next rate setting exercise, based on the existing tariff and last rate setting process.

As you indicated in the 10/11/12 Memo, the following analysis assumes the costs will be shared equally among all Utilities and it also assumes that the nature of the infrastructure for the Integration of Utilities similar to the description in Attachment 1.

II. ***Historical Context for Utility's Infrastructure.*** See Tab 2.

III. ***Impact of the Integration of Utility Tunnels on the Utility's Current Long Term Capital Plan.*** The following describes the aspects of the Utility's current Integrated Long-Range Plan (the "Plan"), broken into the Utility's other component commodities and then suggests the likely impact of the Integration of Utility Tunnels on the Plan as currently conceived.

General. The Integrated Long-Rang Plan for the Utility[240] lays out the Utility's objectives for the next twenty years with regard to the transmission of its electricity and gas commodities. Taking into account differences in the methods of transmission as well as the differences in demand between the two utilities, the Plan forecasts three possible scenarios for the Utility's expected expenditures for the next twenty years. Termed the High case, the Plan case, and the Low case, each scenario outlines the expected growth in customer demand, and details the Utility's methodology in meeting that demand.

For all three cases, the Utility's major goals are to meet consumer demand while maintaining the lowest price possible to the consumer, all the while reducing the Utility's capital investments over time. Its forecasts see demand for each of the commodities elevating at different speeds. The expectation is that electricity will maintain a steady rate of growth and gas demand, because it allows consumers to generate their own electricity, rising exponentially. Another key aspect of the Plan is focusing on demand-side management to meet the City's peak electricity needs (For more detail on aspects of the Plan summarized in this memo, please see Appendix A.) To meet these these changes in demand, the Utility plans to install new technologies under the street. The purpose of these new technologies is first to handle the higher capacity of electrical demand, and thus reduce the likelihood of electrical outages and second, to bring gas power, which is cheaper and more environmentally friendly, to more areas of the city.

Electric Utility Infrastructure. With regard to its electric infrastructure, the Utility plans on implementing third generation ("3G") technologies placed under the roads of New York City. These new technologies will distribute electricity in a "smarter" fashion than the technologies currently in use. Specifically, the new technologies will work on a time-based method, and thus be able to adjust their output relative to expected demand at any given time. Thus, the Utility will be able to supply more energy at peak-use hours, instead of the constant-flow method it currently uses. These 3G technologies are one way to implement demand-side distribution, which is a major aspect of the Utility's Plan.

Gas Utility Infrastructure. In terms of gas, the Plan first sets out for the Utility to expand its gas distribution systems, which coincides with its forecast that many steam heat users will switch to gas

[240] See, for example, the Long Range Plan for Con-Ed at: http://www.coned.com/publicissues/

heat in the next twenty years. A major aspect of this shift to natural gas resources, which also encompasses the electric utility aspect of the Utility, is the Plan's goal to have customers install on-site generators that will work on natural gas. This is also part of the demand-side distribution plan, and will allow users to generate both heat and electricity from gas distributed by the Utility.

Overall Implementation As it stands, the Plan lays out two methods of implementing the Utility's new systems of distribution. The first is a clustering strategy that would necessitate all utility-users in a designated area to upgrade their systems at a single time. The second aspect of the plan is to co-ordinate with the City's street development, so the Utility can decrease the cost of digging into the street by taking advantage of the City's planned work. The three scenarios outlined in the Plan, along with the Utility's strategies of implementation can be accommodated to include Utility Tunnels. The immediate cost reductions realized through the Plan's strategies can be diverted to the implementation of Utility Tunnels, providing a reduction in the future costs of both implementation and transmission.

IV. ***Financial Implications of the Integration of Utilities on the Plan.*** The Plan contemplates that a significant amount of capital expenditure will be necessary in order to implement these new systems and to repair the existing ones. In order to reduce the cost of these capital expenditures, the Plan expects that the improvement of the method of distribution discussed above will help to contain capital expenditures. By reducing the cost of distribution, the Utility expects to shift that savings into a larger budge for capital investments. This will be accomplished by employing a "clustering" strategy that encourages customers in different but closely situated buildings that all work off of the same main electric and gas lines ("close-area customers") to all convert their systems to 3G demand-side systems at the same time. This will permit the Utility to trench the street once and connect many customers at the same time. The Utility hopes to coordinate this clustering strategy focusing on close-area customers with City projects and other Utility projects that involve digging trenches into the street, so that all the work can be done efficiently, further containing capital expenditures. While the implementation of 3G electrical subsystems will not result in any up-front cost to the consumer, the Utility estimates that the implementation of the demand-side infrastructure having to do with Gas distribution, namely a gas electricity/heat generator, will cost a building of 150,000 square feet approximately $200,000 for gas or $150,000 for a new oil burner. For buildings over 150,000 square feet, that price increases to $270,000 for gas and $235,000 up front cost for a building that uses oil.

The Integration of Utilities is not inconsistent with the clustering strategy envisioned in the Plan, which suggests the Integration of Utilities need not increase capital expenditures beyond what has been forecasted in the Plan. Further, the Integration of Utilities may be more effective in containing capital costs than the current clustering strategy for several reasons. Though burners and boilers do need to be replaced roughly every 20-30 years, the current clustering strategy's reliance on finding close area customers in a sufficient number of areas in which every building needs to upgrade or change its burner/boiler at the exact same time, makes implementation less likely. The added cost is likely to make building owners wait until the last possible moment to replace their burners/boilers and will result in staggered, as opposed to clustered, upgrades in most areas, placing the Utility in a position of having its infrastructure planning respond to the private building owner's needs instead of driving its

infrastructure planning directly. The current clustering strategy, on its own, does little to minimize trenching and related costs, the current, while implementation of Integration of Utilities in concert with clustering would increase the chances of minimizing capital expenditures, allowing the Utility to dig once, build the tunnel, and then allow customers to connect to the newly instituted infrastructure in their own time.

The Integration of Utilities further increases the efficiency of the other aspect of the Utility's strategy, coordinating, in particular, with the City, but also with other Utility projects that need to trench into the street. Utility coordination of its Integration of Utilities projects with the City's roadway reconstruction projects, which includes the upgrading of the City's public water and sewer utility infrastructure, presents several opportunities for containing long-term capital costs detailed below:

- At the simplest level, simultaneous upgrades of both public and private utility capital infrastructure during a public roadway reconstruction is more efficient than what often happens, the minimally required coordination by any of the private utilities, including the Utility, to permit the City to accomplish its routine public road reconstruction and upgrade of the public utility system because the joint focus of attention on specific, one-time joint projects increases the efficiencies of both public and private entities in terms of project planning, scheduling and implementation.

- Were the Integration of Utilities, which would include the Telecommunications Utility (please see the related memo by Alexander Goldman, Regulatory Counsel, Legal Division, Telecommunications Utilities, analyzing the impact of the Integration of Utility Tunnels on the Utility's telecommunications commodity) be designed to include the City's public water and sewer infrastructure,[241] the ongoing dysfunction and related costs resulting from Diamond Asphalt[242] would be eliminated for the long-term due to the Integration of Utilities' predictable access by all to subsurface utility infrastructure for maintenance and upgrades and elimination of the need for separate work on subsequent routine road reconstruction.

These issues make it more likely that the Utility will spend most of its capital allowance digging and re-digging trenches rather than the strategy they have put forth. A dedicated utility tunnel will allow the Utility to dig once, in a project coordinated with the city, and then allow building owners to upgrade their systems in their own time, without the need for further street trenching, thus reducing the capital investment cost of the Utility.

V. ***Identifying the impact of the Integration of Utility Tunnel's on the Utility's Next Rate Setting.*** The Integration of Utilities, as discussed above, is consistent with the Utility's Plan. This means that adding it to the proposal in the next Rate Setting should be a simple process. The rate setting process (as

[241] Issues related to the financing of an infrastructure with combined public and private use, benefit and costs is beyond the scope of this memo.

[242] Diamond Asphalt v. Sander, 92 N.Y.S. 244 (1998), wherein public and private work were mandated to be contracted out separately, once by the Utility company and once by the City

described in Appendix B) proceeds as follows: the utility presents the Plan to the State Department of Public Services, as well as other entities, who then get to comment on each line-item of the Plan. A panel of administrative law judges, who make a final decision as to how the Utility may set its rates, then reviews the Plan and the comments. This panel's decision may then be appealed by either party. The final tariff outlines how much the Utility can spend in its operation and capital investments, which lead to an agreement on the rate that the Utility can charge its customers.

As concluded above, the decision for the Utility to incorporate the Integration of Utilities to its current long-term plan would have the effect of raising the capital expenditures of the Utility in the short term. The ability for the Integration of Utilities to fit within the Plan, which includes estimated costs makes this increase in capital expenditures minimal. Yet, the Utility would still have to access the increased capital necessary to go through with a change in its Plan. Funding can be achieved in one of two ways. One way is by lowering costs, thus freeing up the needed funds to undertake the project. The Utility's plans to implement 3G and demand-side technologies in both its Gas and Electric distributions fall in to line with this method of achieving funding. The second method would be to increase customer rates, thus increasing the total funds the Utility has to work with. This becomes necessary to the extent the first option reaches its limits. The Utility's Long Range plan attempts to completely eliminate this as a plausible option. The Plan includes strategies to minimize the need to increase costs of capital, costs of interest to go in rate, and thus rates to customers. Both of these options will be presented in the next tariff proposal, which will be examined by the State Department of Public Service (DPS) as well as many other entities (as outlined in Appendix B, Part II).

The Utility's revenue is tied to a rate base formula. Currently, its rate is computed as the rate base multiplied by one plus the cost of capital. In order to analyze the cost/benefit of dedicated utility tunnels, we must go through each aspect of this formula and see how it is affected by undertaking this kind of project. The first thing to consider is the cost of this project. Even though it has been concluded above that the increase of costs will be minimal, it is going to raise the cost of capital. This will mean that the Utility must take on more debt, which will also increase the total cost of capital. There is no way to circumvent this, but it is not the heart of the issue. In order to convince DPS to approve the Plan in the next rate setting, the real issue is in trying to balance out the rest of the figures in the formula so the rate can either stay the same or maybe even decrease. In order to achieve this, it is necessary to look at the Rate Base aspect of the formula.

The Rate Base is comprised of many individual elements, each having its own impact on the overall formula. Largely it is comprised of the expenses that the Utility undertakes in its operations. By lowering this variable significantly, we can offset the rise in the cost of capital. Below are a number of examples of line-items, taken from the previous rate setting, whose costs may be diminished by the Integration of Utilities.

First, dedicated utility tunnels will lower the cost of staffing. Those staff members previously employed (either by the Utility or through a contract with a construction Utility) to demolish and repave the streets will become obsolete, thus lowering the Utility's costs in these fields. Additionally, the use of

new technologies in the utility tunnels will allow the Utility to redirect some of that cost to training and hiring new employees who will carry higher earning potential and new skills that are more relevant to a progressively managed 3G Smart energy grid. This formulation will probably not increase the total expense that the Utility has in terms of staff, though I don't have the actual numbers, it seems more likely that less people being employed will lower the total staffing expense that the Utility carries. Hiring and training people for the new jobs the utility tunnels will create will prove a net positive to the Utility's earning potential and can be seen as a positive investment in the Utility as well as its employees.

Second, the Municipal Infrastructure Support Expense can be raised to help accommodate capital investments. Assuming it can be proven that the utility tunnels present advantages in terms of lower future costs with regards to repairs and maintenance, lower staffing costs, lower transmission costs, higher productivity, and better and more reliable service, then the case may be made to DPS that the city is justified in increasing the total expense level of infrastructure support. Additionally, since this project is going to be undertaken by many utility companies, the cost will be shared between all those companies as well as with the city, so the total cost may be relatively low.

The next expense to be considered is the T&D Non-Labor Program expense, which includes the Five-Year Underground Inspection Program, the Structural Integrity/Station Betterment expense, as well as Maintenance Associated with Capital Work. The capital project will, in the short term, most likely raise some of these expenses, but it can be seen that in the long run, these expenses will decrease significantly. With regards to all three programs, dedicated utility tunnels will solve many of the issues that currently lead to an increase in the price of these services. With dedicated utility tunnels, inspections will be easier to conduct, as there will be less guesswork when it comes to finding the necessary utilities underneath the road. Since the cost of maintenance and repairs will be reduced with utility tunnels, the inspection of these utilities will not be needed as often, and will be more easily done when the inspection is necessary. Additionally, structural integrity will be boosted as well as station betterment. The Utility will no longer need to spend as much on these projects. Instead of allocating a small amount of these projects over a length of time, utility tunnels will increase, for a brief period, the expenditure on these projects, but over the long term, will radically decrease the total expense that the Utility must set aside in making sure that its underground structures are safe. Finally, the cost of maintenance associated with capital work will significantly decrease as well. Dedicated utility tunnels will group all transmission materials into easily reachable areas and limit the amount of capital work that is needed in order to maintain the transmission materials in working order. By placing the transmission materials in one dedicated tunnel, much of the capital work having to do with regular maintenance and repair of the transmission materials will be eliminated. Monies previously spent in maintaining capital work will be limited to being spent on utility tunnels, specifically, that money will no longer go towards the constant cycle of demolishing and re-paving city streets.

The addition of dedicated utility tunnels will also reduce the Utility's cost of insurance. Currently, the Utility pays insurance for property, workers' compensation, business travel, crime and health insurance. Moving the Utility's transmission materials to dedicated utility tunnels will reduce the effort and risk previously necessary to reach those materials. It can be logically deduced that having less people

working with heavy machinery on busy city streets will greatly reduce the risk and thus the cost associated with insuring those risks. This will be a benefit to the health of the employees of the Utility and thus allow for a reduction in insurance costs associated with workers' compensation as well as health insurance. Additionally, having an employee base made largely of skilled technicians as opposed to manual laborers will also reduce insurance costs, as skill technicians have less risk inherent in their job description. Furthermore, the Utility stated in its last tariff hearing that it needed to raise its insurance coverage because of a fear of possible hurricanes. Dedicated utility tunnels will allow the Utility's technicians to reach their transmission materials more easily in the case of meteorological emergencies. When disastrous weather affects the Utility's ability to transmit its product, repair and maintenance can be done more effectively and less dangerously. Employees of the Utility will not have to start digging trenches in the streets during or in the aftermath of hurricanes or snow storms in order to secure the transmission capabilities of the Utility's wires, thus greatly reducing the need to insure that kind of event.

Appendix A

Background Detail from the Plan

The Company states, in its Electric System Long Range Plan, that is mission is “to deliver safe and reliable electric service to customers in a cost effective, environmentally responsible and innovate way.” Specifically, the plan sets out the Company’s plans for the next twenty years with regards to their transmission and distribution infrastructure, the way in which the Company procures energy for its customers, and other aspects of the Company’s responsibilities such as meter reading and billing. The plan lays out a holistic view of the electrical transmission and distribution system, focusing on the importance of their linkage as a way to benefit customers in the future. Focusing first on demand and supply, the plan then goes on to discuss the transmission and distribution infrastructure and finishes off by outlining the effect of the plan on the customer experience. The plan begins by analyzing the current and forecasted needs of its customers, then goes on to suggest strategies and technologies that will meet customer demand, while reducing or limiting the cost to the company.

The plan lays out the company’s predictions for electricity demands for the next twenty years. In order to create the most reliable prediction, the company outlines three possible outcomes, the High Case, the Plan Case and the Low Case. The Plan case provides the basis for the Long Range Plan and assumes moderate economic growth, with a continued increase in customers’ use of electricity, offset by the implementation of new energy efficiency measures, as well as improved codes and standards. The Plan case estimates a yearly increase in electricity demand of approximately 0.8% and increase of almost 20% over the next twenty years. The High case is based on similar estimations as the Plan case, but considers the possibly of a swift upturn in the region’s economy, along with an increased customer base, and a rise in the use of electronics in homes, business, and for transportation. This plan is closest in its approximations to the actual growth of electricity demand over the last thirty years, and predicts a rise in demand of 1.7% per year and a rise of more than 40% in the next twenty years. Finally, the Low Case is based on the assumption that the economy will grow at a moderate pace, but will experience a reduction in per-capita usage due to the implementation of energy efficiency and demand response initiatives, as well as new and updated codes and standards. This plan estimates an annual growth of approximately 0.3% per year and only a 6% increase in demand for electricity through the next twenty years.

The company’s main focus is in meeting the electricity demands present in New York City during peak times. Even though it is a rare and infrequent occurrence, usually happening during the hottest days of the summer, and for only several hours during those days, the Company’s plans regarding its infrastructure are based mainly on being able to supply electricity consistently and reliably through those times. The Company intends on meeting their peak demand loads through the implementation of demand side management as well as with the integration of renewable resources, electric vehicles, and storage devices located throughout their service area.
Demand side management is defined by the Company as the implementation of demand response, energy efficiency and distributed generation. Demand response includes methods through which the

Company will help customers manage their energy usage in the most effective ways. The company offers two kinds of demand response programs. The first is incentive-based programs that encourage curtailment at peak or critical times, and the second is time-based energy pricing, which will charge customers more for using electricity during peak and critical hours. The company also plans to implement a suite of energy efficiency programs, meant to help customers not just limit their energy use, but to use their energy in the most efficient ways. These programs are bifurcated into residential programs and commercial and industrial programs. Residential programs include HVAC rebates for upgrading and installation of high-efficiency HVAC units, rebates for appliance recycling and high-efficiency refrigerator replacements, as well as encouraging users to buy high-efficiency room air conditioners. The commercial and industrial programs are similar, only allowing for the rebates to be handled in larger quantities. Finally, distributed generation is a method through which the Company places generating apparatuses at the customer's premises. These apparatuses will meet or supplement customer's electricity demand through the use of natural gas, solar and wind power, with natural gas fueled technologies offering the added benefit of supplying heat as a byproduct of electricity generation.

Finally, the plan discusses the company's supply costs. Even though the Company no longer owns a significant amount of sources for electric supply, they must still procure electricity for their full service customers, and the costs of that procurement are reflected in the customer's bill. The Company predicts that, in real 2010 dollars, the cost of supply will increase at a rate of 2.2% per year of the next twenty years, which represents, on a per kilowatt-hour (kWh) basis, an increase to 14.6 cents per kWh by 2030 from 9.4 cents per kWh in 2010. In order to keep prices low for their customers, the company must not only look to their plans for demand and supply, but must also focus on their transmission and distribution infrastructure.

The company's electric system includes over 1,100 miles of underground transmission cables, and above ground lines supported by 1,200 towers. Additionally, the system supplies power to 38 transmission substations, which then supply 61 area substations. From these substations, there are approximately 1,340 primary distribution circuits that feed 26,000 underground distribution transformers, servicing 62 networks and 47,000 pole-mounted transformers. All of these assets make up a system representing billions of dollars in investments that must be maintained, repaired and replaced. In addition to what already exists, each of the plans mentioned above require a projection of the work and capital infrastructure necessary to meet customer demand and assure the viability of the system. The plan case, which estimates a 20% increase in demand would need six new substations built at the transmission or sub-transmission level in order to accommodate six new distribution networks across the company's service area. Along with this substation work, there would be a need to implement the associated equipment and cable transfers, along with expansions in local areas of the distribution system. The High case, which estimates an increase of 40% in demand, would need double the amount of infrastructure work predicted for the Plan case. The Low case would need no new infrastructure, but presents a significant cost associated with maintaining existing components.

The Company's plan hinges on the management and expansion of existing infrastructure in a cost-effective manner. This means that the company has had to switch its design criteria from a prescriptive and deterministic engineering approach to one that is based on a probabilistic approach. The methods through which the company accomplishes this goal include integrating demand and supply side management programs, as well as innovative designs, advanced technologies, and traditional designs, meant to create a "best fit" solution. Additionally, the company is shifting its asset management practices to optimizing its expenditures on maintenance, shifting from an approach based on time, to one based on present conditions.

The company intends to reach its reliability objectives in ways that are les asset intensive by implementing third generation designs. First generation designs, which were implemented at the primacy of the electric system, are characterized by aboveground, overhead, transmission systems. The second generation of implementation and design saw much of the above ground system moved underground, providing more reliable service and multiple supply paths. The third generation will be characterized by leveraged asset sharing approaches, which are enabled through enhanced system monitoring, and underground switching. The company sees third generation designs as critical to their strategy of deferring or minimizing their investment requirements in new substations, increasing asset utilization, reducing costs and improving the performance of their system.

Third generation present the potential for a significant savings in capital investment by providing the ability to incrementally increase system capacity. This will allow the company to defer large capacity investments by allowing for increased system capacity tailored to meet customer's specific needs as they occur. The third generation designs will also allow for more reliable service by reducing the probably of simultaneous system component failure. Additionally, the company plans to implement these new systems first in constrained parts of the system, thus reducing their infrastructure expansion and reinforcement expenditures. Yet, when expansion is called for, the company will go ward with their targeted demand and supply side management programs, including advanced technologies, innovative designs, and traditional infrastructure investments in specific load areas.

Strong and effective asset management is essential to maximizing utilization and performance of the company's existing assets. The asset management program will effect maintenance patterns as well as repair and replacement decisions, and the overall planning and design of the electric system. The company will increase their ability to precisely identify the right times to repair, replace or install new capital, operations and maintenance expenditures. The asset management programs and process will consider the cost and risk profiles and the performance of the components that make up its transmission and generation system. This information will allow the company to track the performance of its assets so that the company is able to target their programs to the right places, and thus optimize their maintenance expenditures and replacement decisions.

The addition of advanced monitoring to the components of the company's systems will allow them to move from a time-based to a condition-based maintenance system. The effectiveness of this system is based on the quality and accuracy of the data and information that the company is able to collect under

a variety of customer demand conditions. The company will implement Smart Grid technologies in order to provide enhanced control over the grid, more control to the customer in their energy usage, and better performance throughout the whole system. The benefits that accrue from the company's Smart Grid initiatives include wireless monitoring and control technologies, as well as new data collection opportunities. The company hopes that these new technologies will help to reduce the overall cost and improve the functionality of their electric system. Over the long term, the company expects that a smarter grid will help to capture the benefits of improved monitoring, modeling and control.

The company's plans are all based on the intention of proving customers with consistently reliable performance at a reasonable cost. Customer demand and large scale capital investments will be reduced and deferred by the use of energy efficiency and demand response initiatives, along with the interconnection of distributed generation investments. The company estimates that their demand and supply side initiatives can save $460 million in infrastructure investments. The improved asset management practices discussed above will also save the company approximately $1.9 billion. Additionally, the addition of third generation design techniques will reduce the company's overall costs by an additional $659 million. Their new work management system will optimize capital savings to a total of $392 million. Without these savings, the company estimates that their total expenditures would exceed $31.7 billion over the next twenty years. Their current expenditure forecast is about $28.6 billion over the planning horizon, totaling an average of $1.36 billion per year in 2010 dollars. Also, the company will be able to reduce their network investment cost by $1.9 billion due to their improved asset management and monitoring systems. Third generation substation designs and demand and supply management will defer the need for new substations, realizing a total savings of $1.1 billion. Finally, as a result of their work management savings, capital expenditures are predicted to decrease by $392 million. Future operations and maintenance expenditures will also be reduced. New equipment designs will reduce required maintenance costs by roughly $349 million over the next twenty years, totaling approximately 2.7% of transmission and distribution operation and maintenance costs.

The effect on the customer of the company's twenty-year plan will result in an annual increase in charges of approximately 1.4% per year from the end of their current rate settlement in 2013 until 2030. This prediction includes cost saving initiatives totaling $3.1 billion in capital savings as well as improvements in productivity that are meant to keep operations and management expenditures flat. While the company tried to keep its rate increases in line with inflation, to do so would mean require reductions in capital and operations and management programs as compared to the Plan Case. Capital expenditures would have to be slashed by 50%, and operations and management would have to be cut by 15% in the first year, and deeper still in later years, resulting in no operations and management expenditures after eight years. This would leave the company out of compliance with many local and federal regulations, and lead to operational deficiencies, safety concerns, security breaches, and an inability to accommodate future loads.

The company hopes to work closely with its customers in order to build its relationship with them further, yet also initiating a significant change in that relationship. The company hopes to collaborate with customers in order to monitor their consumption levels and patters, and to be able to

accommodate to those needs, especially as new end-use devices such as electric vehicles come into play. The company hopes to accommodate the implementation of new technologies by supporting such activities as remote charging, time-based pricing through “smart” appliances, and integrating customer-owned distribution generation into the grid.

Appendix B

Memorandum

August 15, 2012

To: The File

From: Alexander Goldman, Deputy Regulatory Counsel, Legal Division (Gas/Electric Utilities)

Re: The ConEd Ratemaking Process

This writeup is based on the Order Setting Electric Rates (Issued and Effective April 24, 2009) *available at* http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={60F4148E-77EE-4933-AF38-B4AB16700257}. The Order is 380 pages long. The Order is in the form of an appeal from the decisions of a panel of administrative law judges (whose decision functions somewhat like the decision of a trial court, except that the appellate judges can overturn findings of fact and of law).

It is found on this page:
http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=08-E-0539&submit=Search+by+Case+Number.

At its simplest, the rate = RATE BASE x (1 + COST OF CAPITAL). I thought that there was a profit allowance, too, but there is not. There is, however, a provision for paying dividends to equity owners and also for paying interest to creditors.

I. Cost of Capital

Con Ed's Cost of Capital is 7.79%, so its rates equal the RATE BASE x 1.0779. The cost of capital is comprised of several elements, as shown in the chart below:

CONSOLIDATED EDISON UTILITY OF NEW YORK, INC. RATE OF RETURN REQUIRED FOR THE RATE YEAR TWELVE MONTHS ENDING MARCH 31, 2010 PER COMMISSION (p. 145)			
	Average Capitalization %	Cost Rate %	Weighted Cost Rate %
	Percent of total capital		
Long Term Debt	49.60%	5.79%	2.87%
Preferred Stock	1.10%	5.34%	0.06%
Customer Deposits	1.30%	4.85%	0.06%
Common Equity	48.00%	10.00%	4.80%
Total	100.00%		7.79%

A. Common Equity at 10%

Con Ed initially requested 11% but changed that to 10% in its 2008 tariff filing (p. 116). The court found that a 10.47% rate of return on equity was appropriate (p. 127). Since the objective cost of capital (the "proxy group") was based on a weighted average of the S&P 500, and because Con Ed can borrow more cheaply than the average S&P 500 Utility, the court reduced the return on equity to account for Con Ed's cheaper borrowing costs. "This overall result is being adjusted downward by 41 basis points to reflect the credit quality difference between the Utility and the median of the proxy group and increased by four basis points as recommended by the judges for issuance costs. The 10.04% result is rounded to 10.0%" (p.140-141). The judges also concluded that no RDM Adjustment was needed (n. 215, p. 141). An RDM Adjustment would allow a utility to avoid shrinking its rate base when it lowered demand through good deeds, by increasing the efficiency of its customers. I don't understand why the RDM Adjustment came up in the cost of capital rather than in the discussion of the rate base.

B. Debt at 5.79%

The court ruled, "[u]sing the latest debt yields including issuance costs, the updated Rate Year cost of long-term debt is 5.79% compared to the 5.96% reflected in the recommended decision. Appendix IV shows the derivation of the 5.79%" (p.144). Appendix IV is a list of Con Ed's bonds issued since 1998, with estimates as to the total debt that is forecast to be outstanding on March 31, 2010. It includes an "unauthorized premium" of $30.667 million which, added to the total capital, has the effect of slightly lowering the allowed return on the Utility's balance of $9,701,647,000 outstanding. The chart shows "debt outstanding" and "average balance" — I don't understand why the two are not exactly the same (they are the same for many but not all bond issues).

The court admitted that the price of future debt was difficult to estimate, noting, "[i]n light of recent volatility, it is currently difficult to estimate accurately what auction rate debt costs and spreads to Treasuries will be in effect when the Utility issues additional debt" (p. 144).

C. Could Not Find Preferred Stock and Customer Deposits

I did not find the source of the rate of return on preferred stock and customer deposits. The court did note that the customer deposit rate of 4.85% was up from 3.75% (p.145). I assume that the court let the trial decisions stand on items that account for only 2.4% of Con Ed's capital.

II. Rate Base

For the rate base, Con Ed ("the Utility") forecasts its future spending, and the New York State Department of Public Service (DPS) and other entities dispute Con Ed's estimates. Other entities making comments include the New York Power Authority (NYPA) (which owns the state's hydropower and some other power facilities, according to Wikipedia), the Retail Energy Supply Association (RESA), the Small Customer Marketer Coalition (SCMC), the Consumer Protection Board (CPB), Westchester County ("Westchester" or "the County"), Consumer Power Advocates (CPA), the New York Energy Consumers Council (NYECC), and the Pace Energy and Climate Center (Pace). The City of New York, the Metropolitan Transportation Authority, and the Port Authority of New York and New Jersey are called "the NYC Government Customers."

Each line item that Con Ed requests is disputed. For example, Con Ed requested $10 million for transmission reliability spending, but DPS showed that no money had been spent on transmission reliability since 2004, so no money was allocated to the rate base for transmission reliability spending (p. 152).

There are numerous adjustments for programs for economic development, for programs for energy efficiency, and so on.

A. Sample Line Items

The court refused to allow the Utility to add to the rate base the costs of decommissioning its equipment because it found that Con Ed's costs were out of control. "Approximately 15% of total projected capital investment comprises removal costs. The latter costs are spiraling and the Utility should have an incentive to keep them to the minimum necessary" (p. 177).

For power generation, "[t]he Utility forecast capital expenditures of approximately $39 million per year and DPS Staff proposed a downward adjustment of approximately $5.5 million based on the Utility's investment levels over the prior five years" (p. 165). The court allowed the $39 million number to stand on the assumption that any parts of Con Ed's request that were not justified at the time, would eventually be justified, and that DPS had conceded that point (p. 167).

"[T]he Utility proposed to transfer a property at West 125th Street for $15.3 million so that the building there can be torn down and a new charter school can be erected. There was broad public support for the property transfer and, as discussed below, the transfer was previously authorized subject to conditions. In the present case, the Utility proposes that it be authorized to true-up (be made whole for) any additional costs it incurs for leases, renovation, and moving into a replacement facility" (p. 169). The court held that the public benefits of the project were dispositive. "In light of the positive net present value of the benefits of this sale of land estimated when the sale was authorized, and in light of the positive benefits of this transfer to the local community, the Utility's proposal is adopted" (p. 170).

The rate base is adjusted upward each year. "The record shows that the Utility's historic Test Year EB Cap adjustment was approximately $388 million, but that the Utility adjusted this amount downward by $141.980 million. The latter figure was reduced to $200.846 million in the Utility's informal update in July 2008. It is that latter figure that DPS Staff supported, subject to a correction, bringing the figure to $192.957 million. In this context arguments about $388 million are misplaced. In this case, the EB Cap adjustment primarily corrects for differences between the Utility's cash working capital requirements and those we forecast using the FERC formula (discussed next)" (p. 182). The court said that it like the FERC formula because it is "easy to use" (p. 184). FERC is the Federal Energy Regulatory Commission.

Con Ed is allowed to retain a cash account to finance ongoing projects, and the court appears to assume that this money is borrowed. "A portion of the capital invested in the Utility is necessary because there are time differences between (1) the provision of service by the Utility and its receipt of payment and (2) the Utility's receipt of materials and services and its payment for them. Capital used in this way is referred to as cash working capital and is included in rate base so that the Utility earns a return on or recovers the costs of such capital. This Commission has long-employed the FERC formula which equates cash working capital requirements with 1/8 of certain O&M expense. In this case, that formula yields $185.6 million in rate base" (p. 183).

In her dissent, Commissioner Maureen F. Harris says that Con Ed should not be allowed to pass on 100 percent of its property tax increase to ratepayers, writing, "the Commission's approval of a rate increase, comprising principally $437 million of government imposed taxes and fees, is neither just nor reasonable during a time of unprecedented economic turmoil" (p. 350). She explains, "when the ratepayer has no option other than to pay these significant taxes and assessments levied upon them, that have nothing to do with the provision of safe and reliable service, and the utilities have no incentive

to oppose these taxes since the Commission merely flows these costs on to the ratepayer, it is my obligation to object. I take little comfort that those ratepayer interests are adequately protected by the democratic process. Accordingly, and in order to draw attention to this issue, I choose to exercise my prerogative to respectfully dissent" (p. 350).

B. Revenue Allocation

I am not sure why revenue allocation is important. Rather than tracking the source of every payment, Con Ed simply takes its total revenue and assumes that it has the same percentages of customer types as during its last survey, in 2005. "the Utility's 2005 ECOS is the same study we relied on in the Utility's last electric rate case, along with a +/-10% tolerance band, for purposes of allocating revenue requirement. NYPA and other parties emphasize significant increases in plant investment and expenses, and changes in load and sales since 2005, in support of their fundamental contention that the Utility's 2005 ECOS is stale. We agree with DPS Staff, however, that the most reasonable way to reflect this information pending a new study is to increase the tolerance band from +/-10% to +/- 15%" (p. 204-205). "Given our decision above to rely on the 2005 ECOS, the Utility is authorized to reallocate existing revenues among its full service and retail access classes in accordance with the study's results, subject to use of a +/-15% tolerance band" (p. 206).

III. Rates

Even after the components of the cost of capital and rate base are settled, the parties can dispute actual rates.

For example, "CPB opposes the Utility's proposal to increase the monthly residential customer charge from $12.42 to $14.90, an annual increase per customer of $29.76" (p. 224). Con Ed replies, "[t]he $14.90 cost was appropriately determined by subtracting the Billing Payment and Processing charge of $0.94 from the SC 1 customer cost per the Utility's 2005 ECOS ($11.26), as increased to reflect the April 2008 overall revenue increase of 12.4% and the proposed April 2009 increase of 17.7%, yielding $14.90" (p. 226). The court sides with Con Ed (p. 226).

Cable Utility Supplement

Alexander Goldman/Brooklyn Law School

I. Introduction

Utility Two is relatively new in telecommunications.[243] Utility Two's main asset is its cable TV network (it is no longer associated with a large magazine empire). Utility Two is also a major employer.[244] Utility Two earns the vast majority of its revenues from residential services.[245] Utility Two has franchise agreements with the city.[246]

II. Historical Context for Utility Two's Infrastructure

Utility Two is expanding the portion of its fiber network that serves large office buildings.[247] According to an equipment maker's advertisement, Time Warner Cable's business services network in New York City has a single key site whose failure would cause the network to go down. The company recently purchased eight 30 kVA battery backup power units for its Manhattan site.[248]

---

[243] The cable television business started in the 1970s as a number of small local businesses. The magazine Time, Inc. was founded in 1923 by Henry Luce. HBO was founded in 1972. In 1975, HBO persuaded Time, Inc. to distribute the TV service nationwide by satellite. HBO operated at a loss through the end of 1977. In 1987, Time joined with TCI to bail out the Turner Broadcasting System and acquired shares of TBS and CNN. In 1989, Time and Warner merged. *See* http://money.cnn.com/2000/01/10/deals/aol_warner/timeline.htm. Time Warner Cable was spun off from Time Warner, Inc. on March 12, 2009. *See* http://ir.timewarner.com/phoenix.zhtml?c=70972&p=irol-twcseparation. Time Warner Cable is now a separate entity from the Time Warner, Inc. media empire (a list of Time Warner, Inc.'s major entities is *available at* http://www.timewarner.com/careers/international-privacy-policies/Time_Warner_Inc_Entity_List_v4_FINAL.pdf).

[244] As of December 31, 2011, TWC had approximately 48,500 employees, including approximately 1,200 part-time employees. Approximately 4.6% of TWC's employees are represented by labor unions. TWC Annual Report p.10.

[245] For the year ending December 31, 2011, TWC earned total revenues of $19.765B of which $17.093B came from residential services. In residential services, video (mostly cable TV) delivered $10.589B (almost 62 percent of the total), high speed data (broadband internet) delivered $4.475B (over 26 percent of the total), and voice (digital phone) delivered $1.979B (about 11.5 percent of the total). The remaining $49M (home monitoring and other services, mostly provided by NaviSite http://www.navisite.com/) comprised barely 0.03 percent of the total.

[246] There is a separate agreement with each borough, and two for Manhattan. For southern Manhattan, *see Cable Franchise Agreement by and between The City of New York and Time Warner Entertainment Company, L.P. (Southern Manhattan) available at* http://www.nyc.gov/html/doitt/downloads/pdf/time_warner_cable_franchise_agreement_manhattan_south.pdf. The agreement was effective on the date it was ratified by the Public Service Commission, which is not available on the PSC site (*see* http://documents.dps.ny.gov/public/Common/SearchResults.aspx?MC=1&CN=3477).

[247] Stacey Higginbotham, *Why Time Warner Cable's NYC fiber rollout is nothing like Google's*, GigaOm (Aug 29, 2012 10:07 AM) http://gigaom.com/2012/08/29/why-time-warner-cables-nyc-fiber-rollout-is-nothing-like-googles/ ("Time Warner Cable is spending $25 million to connect 'hundreds of buildings' in NYC, which means the cable company will extend its existing fiber to the building. At that point those tenants in the building will have to connect to the fiber in the building and bring it to their floor/offices. Analysts estimate Google is spending between $500 million and $800 million to connect parts of Kansas City. . . . Google's fiber to the home will give a household (the American average is 2.59 people) a gigabit to share. The TWC investment will deliver a gigabit to a building, where thousands may work and hundreds of customers might tap into the network. When it comes to deploying fiber, density lowers cost, and there are few places in the U.S. that are denser than New York City.")

[248] *Emerson Network Power advertisement*, undated, *available at* http://www.emersonnetworkpower.com/en-US/Brands/Liebert/Documents/Case%20Studies/Time%20Warner%20Cable%20of%20New%20York%20City.pdf.

Utility Two is not subject to local regulation of its cable service where the Federal Communications Commission has determined that there is effective competition.[249] The FCC declared that there is effective competition in Manhattan in 2008, after which finding, cable rates rose substantially.[250] More recently, the FCC declared that there is video competition in six communities in upstate New York on the basis that satellite providers have a 15 percent market share there.[251]

Utility Two is not subject to federal regulation of its cable internet service since the FCC decided in 2002 that cable broadband was an information service, not a telecommunications service.[252] This decision, widely criticized, exempted Utility Two from local telecommunications regulation.

How did this happen? In allowing the internet to be exempt from regulation under Title II instead of regulated under Title I, the FCC acted contrary to Congressional intent under the 1996 Act:

The 1996 Act's legislative history shows that Congress did not contemplate a radical change in the way in which the Commission distinguishes between services that are subject to Title II regulation and those that are not. To the contrary, the Conference Committee stated that new subsection (pp) of the 1996 Act "defines 'information service' similar to the ... Commission definition of 'enhanced services.' The Senate intends that the Commission would have the continued flexibility to modify its definition and rules pertaining to enhanced services as technology changes.[253]

The FCC has direct jurisdiction to regulate companies classified under Title II as telephone companies and only "ancillary" (implied) jurisdiction to regulate companies classified under Title I.[254]

The account of Professor Susan Crawford[255] is worth quoting in detail:

---

[249] Annual Report (*Supra*, note 8) at 10 (PDF page 18) ("Where there has been no finding by the FCC of effective competition, federal law authorizes franchising authorities to regulate the monthly rates charged by the operator for the minimum level of video programming service, referred to as basic service tier or BST, which generally includes broadcast television signals, satellite-delivered broadcast networks and superstations, local origination channels, a few specialty networks and public access, educational and government channels. This regulation also applies to the installation, sale and lease of equipment used by subscribers to receive basic service, such as set-top boxes and remote control units. As of December 31, 2011, the FCC has determined that approximately 75% of the communities TWC serves are subject to 'effective competition'"). *See* 47 U.S.C.A. § 543 (West) ("If the Commission finds that a cable system is subject to effective competition, the rates for the provision of cable service by such system shall not be subject to regulation by the Commission or by a State or franchising authority under this section.")

[250] Manhattan Neighborhood Network, *Cable Rates Skyrocketing in NYC* (Nov. 11, 2008) http://www.mnn.org/news/cable-rates-skyrocketing-nyc.

[251] FCC Media Bureau Finds That Time Warner Cable Subject To Effective Competition In Six Communities in New York State, Media Law Prof Blog (Nov. 15, 2010) http://lawprofessors.typepad.com/media_law_prof_blog/2010/11/fcc-media-bureau-finds-that-time-warner-cable-subject-to-effective-competition-in-six-communities-in.html (the six communities are Chili, Churchville, Clarkson, Gates, Hamlin, and Henrietta).

[252] Press release, *FCC Classifies Cable Modem Service As "Information Service": Initiates Proceeding to Promote Broadband Deployment and Examine Regulatory Implications of Classification*, March 14, 2002, available at http://transition.fcc.gov/Bureaus/Cable/News_Releases/2002/nrcb0201.html. The FCC claimed that had it found otherwise, local authorities might charge cable companies for a separate broadband franchise agreement.

[253] J. Steven Rich, *Brand X and the Wireline Broadband Report and Order: The Beginning of the End of the Distinction Between Title I and Title II Services*, 58 Fed. Comm. L.J. 221, 226 (2006)

[254] *Id*. at 222, *citing* Communications Act of 1934, ch. 652, 48 Stat. 1064 (codified as amended at scattered sections of 47 U.S.C.). Title I covers general communications regulation, and Title II provides special regulation for common carriers. In most of the ensuing history, communications companies have fought to avoid being regulated as Title II common carriers.

[255] Professor Crawford's blog is available at http://scrawford.net/blog/. She teaches at Cardozo http://www.cardozo.yu.edu/MemberContentDisplay.aspx?ccmd=ContentDisplay&ucmd=UserDisplay&userid=228 (containing

From 2000 to 2002, as [FCC Chief Commissioner] Powell considered how to classify cable-modem Internet access services — which seemed to have characteristics of both DSL services and traditional cable services — the courts went ahead without him. The Ninth Circuit Court of Appeals[256] decided that cable-modem services were indeed "telecommunications service" providers under the [1996] act and so were required to not discriminate and to interconnect; in other words, they were common carriers, similar to the old telephone companies.

The FCC then declared — after the court had already spoken — that cable-modem service was an information service. A data-processing service. This meant it would not be regulated. The FCC asked the Department of Justice to appeal the Ninth Circuit Court's decision, hoping to get the ruling reversed, which led to a Supreme Court decision during the summer of 2005, the *Brand X* case. As a legal matter, the FCC took the view that the Commission had been handed an ambiguous statute and had done its best to interpret it; the FCC should not be obligated to apply common-carriage principles to all possible carriers, even those the public viewed as providing general-purpose communications transport services. The Supreme Court deferred to the FCC's interpretations of "information service" and "telecommunications," as well as its deregulatory application of those interpretations to high-speed internet access, overruling the Ninth Circuit Court . . . . (frustrated Justice Scalia, who issued a stinging dissent, possibly informed by his service as staff to the White House Office of Telecommunications Policy during the Nixon era. He contended that transmission is transmission and that it can be seen as separate from everything else.) Shortly thereafter, the FCC declared DSL internet access service an information service, leaving DSL providers (like cable-modem providers) free to act as they pleased, even to discriminate in pricing and access.[257]

The new FCC under President Obama failed to make significant changes:

AT&T spent almost six million dollars in the first quarter of 2010 alone lobbying the [FCC], the Department of Commerce, the White Else, and anyone else its lawyers could think of . . . . The company marched on the Hill, getting signatures from 171 House Republicans and 74 House Democrats for letters excoriating [FCC Chief Commissioner] Genachowski for considering reclassification of the transport portion of Internet access services. The campaign was reminiscent of John D. Rockefeller's attack on Theodore Roosevelt in 1907, when he proclaimed that Roosevelt's antitrust policies would bring "disaster to the country, financial depression, and chaos."[258]

The Commissioner met with the phone and cable companies:

In the end, after months of wrangling, the FCC agreed with the carriers in late December 2010 that they would keep their Title I classification [and not be regulate as Title II telephone companies]. Within this framework, the Commission applied a very light hand to wired providers of internet access, embracing usage-based billing and the idea of "managed services" that would not be subject to neutrality

---

an excellent seven minute video interview). She writes regularly for Bloomberg http://www.bloomberg.com/view/bios/susan-crawford/.

[256] "*Brand X Internet Services v. F.C.C.*, 345 F.3d 1120, 1127 (9th Cir. 2003) rev'd and remanded sub nom, *Nat'l Cable & Telecommunication Ass'n v. Brand X Internet Services*, 454 U.S. 967 (2005)." Susan Crawford, *Captive Audience: The Telecom Industry and Monopoly Power in the New Gilded Age* 56, n. 62 (Yale, 2013) ("Crawford, Captive Audience").

[257] *Id.* at 55-56.

[258] *Id.* at 61.

requirements. Wireless providers were free of any objection to refrain from discriminating against online applications. . . . Verizon sued. Someone always sues.[259]

"Intentionally or not, the FCC has contributed to market concentration even as it abandoned lawful techniques and policies to monitor and remedy likely marketplace abuses."[260]

Professor Crawford argues that cable has an unbeatable advantage over DSL. This argument applies to any part of New York City where FiOS is not available:

Cable has won the race to sell services to Americans seeking high-speed internet access. People are dropping DSL service delivered over metal phone lines in droves, as those services prove increasingly unable to compete with cable for the kinds of speeds that households and businesses demand. And wireless internet access does not and cannot keep up . . . no one starting a business would depend on the wireless data speeds provided by Verizon and AT&T. . . . Verizon's FiOS fiber-optic internet access service is as good as cable (better . . .), but it is available to only 14 percent of U.S. residences; from Verizon's shareholders' perspective, it is too expensive to dig up traditional phone lines and replace them with fiber.[261]

Utility Two's federal tariffs are available on the company website.[262] Utility Two still files a voice services tariff with New York State, also available on the website.[263]

Due to an FCC revision of the pole attachment rules lowering telecommunications pole attachment rates to the rates of cable providers, Utility Two believes that its pole attachment payments may increase.[264]

The FCC permits competitors to use wiring in apartment buildings that Utility Two installed (the primary beneficiary may be Utility One).[265]

---

[259] *Id.* at 62; Karl Bode, *FCC Boss Julius Genachowski Has Been a Timid Failure: Engaged in Pro Consumer Theater, Folded When it Counted*, DSL Reports (Dec. 13, 2012) http://www.dslreports.com/shownews/FCC-Boss-Julius-Genachowski-Has-Been-a-Timid-Failure-122409 ("Genachowski's biggest failing however was his timid failure to reclassify broadband operators as telecommunications carriers (against the advice of his staff), putting the agency on unsound legal footing for a generation of broadband battles to come"); Craig Aaron, *What's So Funny About the FCC's Failures?*, Huffington Post (Dec. 13, 2012, 12:07 AM) http://www.huffingtonpost.com/craig-aaron/whats-so-funny-about-the_b_2289958.html ("Unlike his recent Republican predecessors, Genachowski has not attended a single public hearing where he took questions from an open microphone. His outside-the-Beltway activities have mainly consisted of CEO meet-and-greets and industry trade shows. He sees no problem with conducting agency business in secret because he believes his only job is to referee corporate disputes").

[260] Rob Frieden, *From Bad to Worse: Assessing the Long-Term Consequences of Four Controversial FCC Decisions*, 77 Brook. L. Rev. 959, 961 (2012)

[261] Crawford, Captive Audience, at 64-65 (*Supra* note 14).

[262] Time Warner Cable, *Federal Tariffs* http://www.timewarnercable.com/en/about-us/legal/regulatory-notices/federal-tariffs.html.

[263] Time Warner Cable, *State Tariffs* http://www.timewarnercable.com/en/about-us/legal/regulatory-notices/state-tariffs.html.

[264] Annual Report (*Infra*, note 32) at 12 (PDF page 20).

[265] Annual Report (*Infra*, note 32) at 13 (PDF page 21) ("In November 2007, the FCC adopted an order declaring null and void all exclusive access arrangements between cable operators and multiple dwelling units and other centrally managed real estate developments ('MDUs'). . . . This order, which was upheld by the U.S. Court of Appeals for the District of Columbia Circuit in October 2008, could have an adverse impact on TWC's business because it allows competitors to use wiring inside MDUs that TWC has already deployed.")

Utility Two says that satellite providers "benefit from federal preemption of locally imposed or administered taxes and fees on video services, including those borne by the Company and its customers. Several states have enacted or are considering parity tax measures. . . ."[266]

Utility Two prefers market-based regulation because it "will need flexibility to develop pricing and business models that will allow it to respond to . . . changing consumer uses and demands and, if necessary, to invest more capital than currently expected to increase the bandwidth capacity of its systems."[267] Although most of Utility Two's cable service is unregulated, it is possible "that the FCC or Congress will adopt more extensive rate regulation for . . . video services or regulate the rates of other services, such as high-speed data and voice services, which could impede [Utility Two's] ability to raise rates, or require rate reductions, and therefore could cause [its] business, financial results or financial condition to suffer.[268]

Utility Two's finances could suffer if the IRS or state or local authorities challenges the tax characterization of certain transactions.[269]

In contrast to Utility One, Utility Two has not fought many cases against the city.[270] Instead, Utility Two's court cases are mostly fights against those who modify cable boxes in order to receive channels they have not paid for.[271]

It is not clear whether outages at Utility Two were caused by the hurricane or by an unrelated event. On Monday, November 5, 2012, Utility Two suffered a nationwide internet outage.[272] Local journalist Joshua Marshall said that it was wrong of Utility Two to blame a national outage on local conditions.[273] As of this time, there has been no explanation.

---

[266] Annual Report (*Infra*, note 32) at 14 (PDF page 22).

[267] Annual Report (*Infra*, note 32) at 21 (PDF page 29).

[268] Annual Report (*Infra*, note 32) at 24 (PDF page 32).

[269] Annual Report (*Infra*, note 32) at 25-26 (PDF page 33-34).

[270] Time Warner Cable and other cable companies did sue the city to prevent Bloomberg TV financial programming from appearing on public access television. The cable companies won a preliminary injunction that was affirmed on appeal. *Time Warner Cable of New York City, a division of Time Warner Entm't Co., L.P. v. Bloomberg L.P.*, 118 F.3d 917, 919 (2d Cir. 1997).

[271] See, e.g., *Time Warner Cable of New York City, a Div. of Time Warner Entm't Co., L.P. v. Cable Box Wholesalers*, Inc., 920 F. Supp. 1048 (D. Ariz. 1996) (pirate cable boxes), *Time Warner Cable of New York City, a Div. of Time Warner Entm't Co., L.P. v. Barnes*, 13 F. Supp. 2d 543 (S.D.N.Y. 1998) (suing people who obtained pay per view programming for free).

[272] Steve Donohue, *Time Warner Cable grapples with nationwide Internet outage*, Fierce Wireless (Nov. 7, 2011) http://www.fiercecable.com/story/time-warner-cable-grapples-nationwide-internet-outage/2011-11-07.

[273] Josh Marshall, *Survived Sandy? Yes. Time Warner Cable, Not Clear.*, TalkingPointsMemo (Nov. 9, 2012, 10:38 AM) http://talkingpointsmemo.com/archives/2012/11/survived_sandy_yes_time_warner_cable_not_clear.php ("Time Warner Cable, our primary local internet provider, seems to have a new policy of blaming Hurricane Sandy for local Internet outages that seem totally unrelated to Sandy"); Jeff Simmermon, Post-Sandy: Updated List of Known Outages with Approximate Repair ETAs, Time Warner Cable Unplugged blog (Nov. 8, 2012, 1:11 PM) http://www.twcableuntangled.com/2012/11/post-sandy-updated-list-of-known-outages-with-approximate-repair-etas/ ("Power outages throughout the NYC/NJ area are still the cause of many service outages").

III. Impact of the Integration of Utility Tunnels of Utility Two's Long Term Goals

Like Utility One, Utility Two has a multi screen product vision. Utility Two calls this vision "any content, any device, any time, anywhere."[274] For example, Digital Video Recorder (DVR) subscribers increased from 4.583M in Q3, 2010 to 5.083M in Q3, 2012.[275]

Utility Two derives more revenue from residential services than business services. Its largest segment is video services, followed by broadband and then voice. But it has the most growth potential in voice services — and business customers are increasing faster than residential, as shown in the following chart:[276]

Revenues ($ Millions)	Q3 2010	Q3 2012	Subscribers (Thousands)	Q3 2010	Q3 2012
Residential Customers					
Video	2,638	2,722		12,386	12,159
Data	1,038	1,279		9,386	10,860
Voice	479	530		4,324	4,990
Business Customers					
Video	67	83		165	185
Data	159	235		324	446
Voice	34	83		591	843

Customer penetration as of Q3 2012 (as a percentage of customers passed) is: video, 41.9%; data, 38.5%; and voice, 18.0%. The company is hiring, but mostly in business services.[277]

Time Warner VoiceZone is a website through which customers can listen to voice messages and change phone settings.[278] Utility Two has broadcasting rights for the Los Angeles Lakers (basketball) and Los Angeles Galaxy (soccer) sports teams, and is planning to launch a regional sports network, perhaps for Southern California. Utility Two owns 18 local news channels including NY1.[279]

Utility Two is preserving network capacity in order to minimize the need to upgrade its networks, even as an increased number of channels as well as High Definition television place greater demands on the network.[280]

---

[274] Time Warner Cable, *2011 Annual Report* (Jan. 26, 2012) 2-3 http://ir.timewarnercable.com/files/doc_financials/Annual%20Reports/TWC_2011_Annual_Report.pdf ("Annual Report"). Time Warner is unusual among telecommunications companies in providing extremely detailed financial and non-financial data in its unique trending schedules http://ir.timewarnercable.com/investor-relations/financial-reports-and-filings/trending-schedules/default.aspx ("Trending Schedules").

[275] Trending Schedules (*Supra*, note 32) at 6 (PDF page 7).

[276] Trending Schedules (*Supra*, note 32) at 5-6 (PDF page 6-7).

[277] Annual Report (*Supra*, note 32) at 39 (PDF page 47) ("Employee costs, which increased 34.3% for business services employees and 3.5% for residential and other employees in 2011, are also expected to continue to increase as a result of many factors, including higher compensation expenses and headcount, reflecting the Company's investment in business services and other areas of growth, as well as the impact of recent acquisitions).

[278] Annual Report (*Supra*, note 32) at 4 (PDF page 12).

[279] Annual Report (*Supra*, note 32) at 6 (PDF page 14).

[280] Annual Report (*Supra*, note 32) at 7 (PDF page 15) ("To accommodate increasing demands for greater capacity in its network, TWC has deployed, in all of its service areas, a technology known as switched digital video ('SDV'). SDV technology

Utility Two competes with phone companies and satellite providers.[281]
Utility Two made small acquisitions in 2011 (NaviSite, an internet business services provider, for $230 million and NewWave Communications, a cable network, for $230 million)[282] and has just completed a $3 billion acquisition of a cable company in Ohio.[283] Computing is not yet a utility, but pundits have said that in the future, it could be.[284]
Utility Two is even able to compete with phone services that are free in the United States (such as Google Talk) by offering cheap (penny per minute) international calling.[285] This can make Utility Two's telephone service cheaper for customers who use a large number of international minutes each month.
Like Utility One, Utility Two aims to please Wall Street by maintaining predictable profits. Utility Two is largely unregulated in New York City (aside from the cable franchises). Therefore, the City will have to make a business case to Utility Two in order to persuade it to put its fiber in the new tunnels.
Unlike Utility One, Utility Two does not own its own tunnels. It may therefore be easier to persuade Utility Two to utilize the new tunnels.
Unlike Utility One, Utility Two's coaxial cables utilize electrical power throughout their length and require regular, powered repeaters. Utility One will want to not be adjacent to Utility Two's coaxial cables, if any still exist under the street. A good question for future research: how much of Utility Two's cable network under the street consists of powered coaxial cable, and how much is fiber?
Utility Two is the second largest cable network in the nation, behind behemoth Comcast. If Utility Two follows Comcast's strategy, Utility Two will focus on acquiring content providers, in imitation of Comcast's acquisition of NBC-Universal. Acquiring control over local sports content was key to the deal, and Comcast's power is most evident in its hometown, Philadelphia:
Comcast's withholding of sports content has been an enormous problem for satellite video-distribution companies because they have nothing to offer subscribers who want regional sports shows in the Philadelphia area. The harm is significant: according to the FCC, Comcast's refusal to provide sports to the satellite companies has reduced satellite adoption by 40 percent in that region.[286]
Of course, Comcast acquired other content as well:

---

expands network capacity by transmitting on a given node certain digital and HD video channels only when they are being watched by one or more customers served by that node.")

[281] Annual Report (*Supra*, note 32) at 8 (PDF page 16).

[282] Lydia Leong, *Time Warner Cable acquires NaviSite*, Gartner (Feb. 1, 2011) http://blogs.gartner.com/lydia_leong/2011/02/01/time-warner-cable-acquires-navisite/; Associated Press, *Time Warner Cable closes NewWave deal* (Nov. 2, 2011, 4:16 PM) http://www.businessweek.com/ap/financialnews/D9QOQA2G0.htm.

[283] Rick Rouan, *Time Warner completes acquisition of Insight*, Business First (March 1, 2012, 2:01 PM updated March 1, 2012, 2:19 PM) http://www.bizjournals.com/columbus/news/2012/03/01/time-warner-completes-acquisition-of.html.

[284] "a new kind of power plant — a computing plant that would come to power our information age the way great electric plants powered the industrial age. Connected to the Net, this modern dynamo would deliver into our businesses and homes vast quantities of digitized information and data processing might." Carr was visiting a company called Vericenter near Harvard. Nicholas Carr, *The Big Switch: Rewiring the World, from Edison to Google* 5 (2008). Vericenter was acquired by SunGard, which now specializes in processing trades for the financial industry. Rich Miller, *Sungard to Acquire Vericenter*, Data Center Knowledge (July 16, 2007) http://www.datacenterknowledge.com/archives/2007/07/16/sungard-to-acquire-vericenter/; SunGard website, http://sungard.com/.

[285] Jeff Lindsay, *Now Launching The Global Penny Phone Plan*, Time Warner Cable Untangled Blog (Nov. 20, 2012, 6:35 PM) http://www.twcableuntangled.com/2012/11/now-launching-the-global-penny-phone-plan/.

[286] Crawford, Captive Audience at 145 (*Supra*, note 14).

Comcast could now wield USA, Syfy and Bravo, cable news outlets CNBC and MSNBC, Universal Studios, a library of films and television shows, Telemundo, and the NBC sports empire in support of its plans to dominate its markets. Oh, and NBC.[287]

NBC was the least important because "USA (the number one-rated cable channel), Bravo, Syfy, CNBC, and MSNBC . . . collectively . . . represent 80 percent of NBC Universal's value."[288] NBC is too expensive to run. "Although the NBC TV Network generates 67 percent of NBC Universal's broadcast segment revenues, it generates only 8 percent of the division's profits."[289]

Utility Two does own some programming. As noted above, it owns the Los Angeles Lakers and related programming. It also owns the Desportes and Sportsnet channels. Utility Two may make investing in content a higher priority than building out the network.[290] It is unclear how Utility Two will respond, if at all, to Utility's Redbox Netflix-killer service announcement "offering streaming for $6 a month or streaming and four physical disk rentals for $8 a month."[291]

A recent announcement that Time Warner Cable plans to offer usage-based billing to all customers did not explain whether the intent is to reduce internet usage or to offer customers a means of paying less if they use less service.[292] Consumer advocates warn that usage-based billing is always a method of increasing prices, and is never a method for reducing network congestion or allowing customers to pay less money.[293]

It is unclear whether laser repeaters will be embedded in high speed fiber optic network cables and if so, how that would change network buildouts — a question for further research.[294]

---

[287] *Id.* at 139.

[288] *Id.* at 132.

[289] *Id.* at 133.

[290] Hibah Hussain, Danielle Kehl, Benjamin Lennett, and Patrick Lucey, *Capping the Nation's Broadband Future?* New America Foundation (Dec. 17, 2012) http://www.newamerica.net/publications/policy/capping_the_nation_s_broadband_future ("Many ISPs are spending less money on capital expenditures now, both as a ratio to revenue but also even in raw dollars, than they have in years past. While some cost decreases can be explained by declines in hardware and equipment costs, these trends suggest that broadband providers are content to maintain the status quo and reap . . . efficiencies as a bonus rather than an opportunity to increase investment").

[291] Karl Bode, *More Verizon/RedBox Details Emerge: No TV Shows or Games, Only 'Must Watch' Films*, DSL Reports (Dec. 12, 2012) http://www.dslreports.com/shownews/More-VerizonRedBox-Details-Emerge-122392.

[292] Steve Donahue, *Time Warner Cable to Expand Usage-Based Broadband Billing Option Nationwide*, Fierce Cable (Dec. 3, 2012) http://www.fiercecable.com/story/time-warner-cable-expand-usage-based-broadband-billing-option-nationwide/. Subscribe: http://www.fiercecable.com/signup?sourceform=Viral-Tynt-FierceCable-FierceCable

[293] Karl Bode, *Time Warner Cable Returns to (Optional, For Now) Metered Billing*, DSL Reports (Feb. 28, 2012) http://www.dslreports.com/shownews/Time-Warner-Cable-Returns-to-Optional-For-Now-Metered-Billing-118574; Iain Thomson, Report: US Telcos Cashing in on Data Caps and Poor Competition: Internet Development Hurt by Artificial Scarcity, The Register (Dec. 18, 2012, 8:58 PM) http://www.theregister.co.uk/2012/12/18/us_telcos_data_caps/ ("Cable firms want customers who will use them as an ISP, and also pay for TV channels – and that means capping their ability to access streaming sites such as Netflix, "*citing* Hibah Hussain, Danielle Kehl, Benjamin Lennett, and Patrick Lucey, *Capping the Nation's Broadband Future?* New America Foundation (Dec. 17, 2012) http://www.newamerica.net/publications/policy/capping_the_nation_s_broadband_future ("Despite the substantial decrease in the cost of operating a network and transporting data, consumers have not seen a resulting decline in the cost of service, nor have many providers increased the usage caps to reflect the decline in costs for Internet connectivity")).

[294] Mark Anderson, *Optical Lasers in a $100 Cable. Really,* IEEE Spectrum (Jan. 2010) http://spectrum.ieee.org/semiconductors/optoelectronics/optical-lasers-in-a-100-cable-really.

Another question for future research: did the ConnectNYC initiative, providing free fiber to 240 New York businesses, change the city's broadband marketplace?[295] Also for future research: will the initiative force Utility Two to change prices and speeds in New York City just as the Google Fiber initiative has changed prices and speeds in Kansas City?[296]

IV. The Impact of the Project on Future Cable Rates and Regulatory Activities

Cable rates are set by the market because New York City has been deemed a competitive cable market. Cable broadband is also not regulated both because it runs over fiber and because cable broadband is deemed an information service, not a telecommunications service, by the FCC.

Therefore, the City will have to make a business case for the use of the tunnels. Whether its network under the streets is a fiber network or a coaxial network, Utility Two will want to place some equipment in the tunnels. It will be running more than just conduit. Therefore, it may be worth considering placing underground or above ground cabinets or bunkers in order to contain network equipment. If the network is all fiber, the equipment will need no power (it will be "passive"), but if there are any coaxial lines under the street, power would be a big benefit.

Although there is no comprehensive evaluation of Time Warner Cable's network, an electrical fire in 2011 was revealing. Time Warner Cable might be eager to adopt the Integrated Utility Tunnels project. Jeff Simmermon, Time Warner Cable director of digital communication (twitter: @jeffTWC) posted several ugly photographs and ruefully noted, "[i]t's a mess of communications cables belonging not only to us but a variety of other tenants including Verizon, RCN, etc. As you may notice, these do not appear to be neatly labelled [sic]."[297] Yes, the outage was caused by a steam pipe that exploded.

Repairs were not easy. "It took the better part of the day to identify the problem, dig in, seperate [sic] the cable out and splice in a new piece of fiber-optic cable. Each of those hair-width fibers has to be reconnected to precisely the correct wire, or else the whole thing doesn't work. Imagine re-connecting a severed ponytail and you've got the basic idea."[298]

---

[295] Press Release, *Mayor Bloomberg Launches Competition To Install Free Fiber Cable Wiring In Growing Businesses Across The Five Boroughs*, Oct. 19, 2012, available at http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2012b%2Fpr364-12.html&cc=unused1978&rc=1194&ndi=1 (touting the ConnectNYC initiative and containing supportive statements from local broadband providers including Time Warner Cable and Cablevision).

[296] Karl Bode, *Time Warner Cable 'Really Comfortable' With Kansas City Speeds: Basic Tier Increases Come to Kansas City*, DSL Reports (Dec. 17, 2012) http://www.dslreports.com/shownews/Time-Warner-Cable-Really-Comfortable-With-Kansas-City-Speeds-122438; Karl Bode, *Time Warner Makes Feeble Attempt to Counter Google Fiber Buzz: How Long Will Company Resist Actually Competing Through Price Cuts?*, DSL Reports (Nov. 29, 2012) http://www.dslreports.com/shownews/Time-Warner-Makes-Feeble-Attempt-to-Counter-Google-Fiber-Buzz-122228 (reporting on Time Warner Cable's wireless hotspot buildout in Kansas City and offering new, cheap, and undesirable low speed broadband tiers of service); Alyson Raletz, *In Google's Shadow, Time Warner Cable Touts its Economic Benefit to KC, Kansas City Business Journal* (Nov. 29, 2012) http://www.bizjournals.com/kansascity/blog/2012/11/time-warner-cable-touts-its-economic.html?page=all (saying that Time Warner Cable invested $150 million in Kansas City in the past three years, which makes the highly touted $25 million investment in New York City seem less impressive).

[297] Jeff Simmermon, *Subterranean Fires and Melted Fiber-Optics: What A Large Outage Looks Like*, Time Warner Cable Unplugged blog (Oct. 18, 2011, 4:43 PM) http://www.twcableuntangled.com/2011/10/subterranean-fires-and-melted-fiber-optics-what-a-large-outage-looks-like/.

[298] *Id.*

Compendium Index to Law of the Roadway

Lior Sapir/Brooklyn Law School

Dates: Major changes to the Vehicle & Traffic statutes seem have occurred in 1909, 1929, 1959, 1973, and 1986

Highways – 4 types – highway, public highway, through highway, and access highway

Definitions:

Highway: "The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel." (Veh. & Traf. Law § 118) (1959)

Public Highway: "any highway, road, street, avenue, alley, public place, public driveway or any other public way." (Veh. & Traf. Law § 134) (1959)

Through Highway: "a highway or portion of it, on which vehicular traffic is given preferential right of way." (Veh. & Traf. Law § 149) (1959)

Access Highway: "includes any highway providing access between a qualifying highway… and terminals and facilities for food, fuel, repairs and rest. An access highway may also provide access for points of loading and unloading for household goods carriers as designated by the commissioner of transportation." (Veh. & Traf. Law § 100-a) (1983)

Additionally: "Highway" includes certain sluices, drains, ditches, waterways, embankments, retaining walls and culverts, and also the approaches to any bridge or culvert beginning at the back of the abutments. The pavement over any bridge or culvert may also be included as a part of the highway, provided the pavement is separated from the structure by an earth fill. (High. Law § 2(4)) (1936, 1941, 1971, 1974)

Five classes: state, controlled access, state thruways, county roads, and town highways

State Highways: Highways constructed or improved at the sole expense of the state. (High. Law § 3(1)) (1936, 1937, 1942, 1945)

Controlled Access: State highways which are entirely or partly constructed, reconstructed or improved at a location where no public highway previously existed, and to and from which the owners or occupants of abutting property or of any other persons have no right of access as pedestrians, operators of vehicles or in any other capacity. (High. Law § 3(2)) (1936, 1937, 1942, 1945)

State Thruways: Those highways specified and described in section 349-a of the highway laws, constructed, improved or reconstructed as provided in such section. (High. Law § 3(3)) (1936, 1937, 1942, 1945) Example: "South Westchester connection. Beginning a the northerly terminus of the Major Deegan expressway in the vicinity of Jerome avenue at the New York city corporate line, thence extending in a general

northerly direction through the city of Yonkers to connect with the southerly end of the Hudson section at a point in the vicinity of Tuckahoe road to be determined by the commissioner. No fees or other charges may be imposed for vehicular use of this connection." Also includes the Hudson section, the Catskill section, the Mohawk section, the Ontario section, the Erie section, the New England section, the Niagara section, and the Berkshire section. (High. Law § 349-a) (1961, 1971, 1993)

County Roads: Those roads constructed, improved, maintained and repaired under Highway law article 6 and roads constructed or improved under a general or special law, which are maintained by the county. (High. Law § 3(4)) (1936, 1937, 1942, 1945)

Town Highways: Those constructed, improved or maintained by the town with the aid of the state or county, under the provisions of this chapter, including all highways in towns, outside of incorporated villages constituting separate road districts, which do not belong to either of the two preceding classes. (High. Law § 3(5)) (1936, 1937, 1942, 1945)

Additionally- If a state aquires a pot of land in order to build a controlled access expressway and part of the street has to be relocated onto the property acquired, then that property becomes part of the street right-of-way and is considered part of the street. (Warren's Weed New York Real Property §125.02[1])(Regan v. State, 40 N.Y.2d 475, 387 N.Y.S.2d 79, 354 N.E.2d 818 (1976))

Streets – defined under the Vehicle and Traffic Law and the Village law, and further defined through case law.

Vehicle and Traffic Law: Street and highway are identically defined. (Veh. & Traf. Law § 148) (1959)

Village law: Street is defined to include a highway, road, avenue, lane or alley, which the public has a right to use. (Village Law §6-600) Not restricted to vehicular traffic, can also include sidewalks, street lights alongside the street and cubs. (Warren's Weed on NY Real Property § 125.02)

Areas comprised within a "street"

1) The surface
2) So much beneath the surface as is necessary for a foundation for the surface and for water mans, gas pipes, sewer pipes and conduits of various sorts; and
3) Enough above the surface to afford clearance for traffic. (McQuillin, §30.06)

Sidewalks – defined by statute, generally that part of the street, along the side of it, intended for pedestrians. Includes everything between curbing and lot lines including unpaved portions. Distinguished from driveway, crosswalk, pedestrian lane, bike path, elevated divider in parking lot, steps of city hall. (McQ, §30.11)

Cases:

-Greenman v. City of Courtland, 141 AD2d 910, 529 NYS2d 227 (1988) (sidewalks, defining)

-Schell v. German Flats, 123 App Div 197, 108 NYS 219 (sidewalks, bicycle paths)

-People v. Lieberman, 32 Misc 2d 741, 228 NYS2d 878, Nikiel v. Buffalo, 7 Misc 2d 667, 165 NYS2d 592 (Sidewak, as part of Street)

Private Roads: Every way or place in private ownership and used for vehicular travel by the owner and those having express or implied permission from the owner, but not other persons. (Veh. & Traf. Law § 133) (1959)

-Not determined by the volume of traffic over them.

-Those roads on which all of the world does *not* have the right of travel, while public roads are those on which all of the world has a right of travel. (Warren's Weed on NY Real Property § 125.03)

Authorities – There are several authorities that have been given powers and responsibilities for maintaining streets and highways.

-Dept. of Transportation

-headed by the state Commissioner of Transportation.

-empowered to conduct surveys, maps, and plans for construction and improvement of state highways, as well as other specific powers. (High. Law § 10) (1936, 1937, 1938, 1942, 1944, 1945, 1946, 1947, …1986, 1988, 2000) (§10 outlines generally the Commissioner of Transportation's duties, and was amended frequently)

-Counties can appoint a superintendent whose powers include the supervision of all roads, bridge and state and interstate highways for which responsibility is imposed upon the county. (High. Law § 10)

-Counties can also appoint a deputy county superintendent or engineer. (High. Law § 10)

-Highway Law also provides for a town superintendent of highways, deputy town superintendent, and a clerk to the superintendent. (High. Law § 10)

Ownership of streets – The established rule of the common law followed in a majority of the states is that the abutting landowner will be held to own the fee in the public way in front of his or her property to the center of it, subject to public easement, unless the owner has been divested of title, as by an accepted dedication, condemnation, or by other means. In some instances, municipalities, rather than the adjacent property owners, own the fee to the streets. In New York, title to some streets, especially the ancient streets of New York City, is in the municipality, although outside of New York City it is held that the fee of the land in he street is presumed to belong to the abutting owner, burdened with a public easement. The center line of a street is ordinarily a geographical line, which remains constant and equidistant from the side lines although, in some circumstances, it may be determined by considering the location of the road as used and the duration of public use. (McQ, §30.32)

Cases –

-Cattaraugus v. Johnson, 139 Misc 368, 249 NYS 327; Sorosis Bld. Corp. v. Prolay Realty Corp., 136 Misc 890, 241 NYS 288, affd 230 App Div 683, 245 NYS 507. (ownership, abutting landowner)

-Borducci v. City of Yonkers, 144 AD2d 321, 534 NYS2d 383 (1988) (ownership, center line)

-Gottfried v. State, 23 Misc 2d 733, 201 NYS2d 649; Perkins v. Village of Mexico, 200 Misc 294, 102 NYS2d 60; Sorosis Bldg. Corp. v. Prolay Realty Corp., 136 Misc 890, 241 NYS 288 (ownership, public easements)

-Dewitt v. Elmira Transfer Ry. Co., 134 NY 495, 32 NE 42; Kane v. New York El. R. Co., 125 NY 164, 26 NE 278, New York v. Law, 125 NY 380, 26 NE 471; Duyckinck v. New York El. R. Co., 125 NY 710, 26 NE 755; Merritt Manor Estates, Inc. v. Village of Elmsford, 30 Misc 2d 935, 218 NYS2d 371.

Fee of particular streets in City of New York. Lincoln Safety Deposit Co. v. New York, 210 NY 34, 103 NE 768; Appleton v. New York, 219 NY 150, 114 NE 73.

Where streets appearing on official city map was not in existence at the time the city conveyed bordering properties, a trust relationship running to the public was never established, upon condemnation of properties by the state, city was not entitled to damages on ground that it had retained title in the street. Albany v. State, 35 AD2d 881, 315 NYS2d 727.

McCutcheon v. Buffalo Terminal Station Commission, 168 App. Div. 301, 154 NYS 711.

Title to street was formerly in the crown. Willcox v. Richmond Light & Railroad co. 142 App Div 44, 128 NYS 266, affd 202 NY 515, 95 NE 1141.

Pooler v. Sammet, 130 App. Div. 650, 115 NYS 578.

Title acquired by city to street previously dedicated by common grantor to his grantees is or their successors, which easement is compensable upon closing of street. In re East 5th Street, Borough of Manhattan, New York, 1 Misc 2d 977, 146 NYS2d 794.

The New York City board of standards and appeals may not divest an owner of perperty of his title or rights in the bed of a street. Nemet v. Edgemere Garage & Sales Co., 73 NYS2d 921 (Misc). (ownership, title in municipality).

-Ward v. Kropf, 207 NY 467, 101 NE 469 (village had no title to sewer in street, fee of which was in abutter); Dunn v. New York Tel. Co., 175 NYS 115 (Misc); New Rochelle v. New Rochelle Coal & Lumber Co., 83 Misc 194, 144 NYS 852, affd 173 App Div 952, 158 NYS 1111.

The only interest of the municipality in the streets is that of the public in the highway; it has no control of whatever rights the owners of the fee may have in them. Northern Westchester Lighting Co. v. Ossining, 154 App Div 789, 139 NYS 373. (Ownership, outside of NYC, fee of land in the street is presumed to belong to abutting owner.)

-Appleton v. New York, 82 Misc 258, 144 NYS 138.

City holds easement not fee-simple title. Silver Beach Realty Corp. v. Geelan, 122 Misc 644, 204 NYS 701. (ownership, outside NYC, public easements)

Title of municipality is that of trustee.

Title to streets and public ways, whether in the people or a municipality, or in fee or easement, is held in rust for the public use, both for the purpose of public travel and as a means of access to and egress from abutting property. Accordingly, the municipality cannot divert a street from this public use by alienating or conveying it, or by converting it to another use, or by otherwise destroying or suffering its destruction as a thoroughfare for the public, except where the municipality is permitted or required so to do by express provisions of the statutes, or by the laws of the land. (McQ, §30.36)

Cases –

-People v. Grant, 306 NY 258, 117 NE2d 542; Green v. Miller, 249 NY 88, 162 NE 593; People v. New York Rys. Co., 217 NY 310, 112 NE 49; Town of Huntington v. Foster, 219 NYS2d 220 (Misc); Nikiel v. Buffalo, 7 Misc 2d 667, 165 NYS2d 592. (street in trust for public use).

-People v. Grant, 306 NY 258, 117 NE2d 542 (residents cannot be granted proprietary rights in streets different fro rights of general public); New York v. Aviation Distributors, Inc., 84 NYS2d 84 (Misc) (municipal permit to occupy space in street for private use, invalid). (conversion for other uses)

Holding Property in Public Trust – As the representative of the state, the legislature has the absolute and unrestricted control and authority over the public highways and streets, except as qualified by the constitution. (Bradley v. Degnon Contracting Co., 224 NY 60, 120 NE 89 (1918) Constitutional limitations include not only express prohibitions directly referring to streets and highways, but also the general constitutional limitations on the legislature against depriving the individual of his property without just compensation or authorizing the private appropriation of property held in trust for the public in a manner which would unreasonably interfere with its use by the public. (In re McCoy v. Apgar, 241 NY 71, 148 NE 793 (1925), Kane v. New York Elevated RR Co., 125 NY 164, 26 NE 278 (1891), Town of Huntington v. Foster, 219 NYS2d 220 (Sup. Ct. Suffolk County 1961). (WW §125.06)

Soil and mineral rights under the street.

If the abutting owner has title to the center of the street, he or she of course has title to the subsurface, and may make any reasonable use of it, subject to these exceptions: 10 the owner cannot dig up and remove the soil from the bed of the street for his or her own use, and 2) title is subject to certain rights of the municipality to use the soil for improving the streets. There is authority that a city has the right to use the subsurface of a dedicated street for proper street purposes, and this right is paramount to the rights of abutting owners regardless of whether they own the fee to the center of the street or not.

A street is entitled to such support as will keep it in place, both lateral and vertical. If the removal of coal at the side or underneath will destroy the street, it may not be done. (McQ 30.38)

Paramount state powers.

In this country the control of highways has generally been regarded as primarily a state duty, which, however, is ordinarily is delegated at least to some extent to municipal corporations or other public agencies, within the limits of constitutional requirements. The use of the street is designed for the public at large, as distinguished from the legal entity known as the city, or municipal corporation, and its residents. The management of highways maybe characterized as a municipal duty relating to governmental affairs. During the early periods of English history the highways were laid out and constructed directly by the government, which assumed the immediate and sole management of them, and this was recognized a an essential governmental function. Thus, it commonly is said that “the highways belong to the state,” or to the public, and are subject to its control and regulation. The power of the state through its legislature, relating to the control of highways and streets, is a sovereign governmental power, and is plenary, and it may be said to rest either upon the constitutional power of the legislature to create and control municipal corporations, and similar agencies, or upon the legislative power constitutionally to establish and maintain highways, roads and streets.

Municipal home-rule provisions of state constitutions do not ordinarily withdraw legislative power to enact general laws or laws relating to municipal streets and affecting their public use. This

control has been held to be exclusive, and any surrender of it must come from the legislature; nor may such surrender or relinquishment be otherwise than by affirmative action. Furthermore, subject to constitutional restrictions, and the rights of abutting owners, the legislature, by virtue of its general control over streets and highways, has the power to authorize structures in the streets for the convenience of the public which, without such authority, and under the principles of the common law, would be held to be encroachments and obstructions, to eliminate grade crossings, to regulate motor vehicle traffic, and to close streets, and the like. The state power of control over the streets extends to sidewalks.

The public highways and streets are acquired and held by the state in trust for the use of all the people. (McQ 30.39)

Cases: -People v. Grant, 306 NY 258, 117 NE2d 542; People v. Westchester County, 282 NY 224, 26 NE2d 275; Green v. Miller, 249 NY 88, 162 NE 593. It has generally been determined that streets and highways are held in a governmental capacity. Town of Peru v. State, 59 Misc 2d 49, 297 NYS2d 779.

- Markey v. Queens County, 154 NY 675, 49 NE 71
- Browne v. New York, 213 App Div 206, 211 NYS 306
- People v. Westchester County, 257 App Div 769, 15 NYS2d 365. Construction, maintenance and operation of certain bridges and their approaches in and connecting with New York city, to form part of state express highway system, was matter of statewide concern on which legislature could act without reference to home rule provisions of state constitution. Whalen v. Wagner, 2 Misc 2d 89, 152 NYS2d 386, affd 4 NY2d 575, 176 NYS2d 616, 152 NE2d 54
- Wormser v. Brown, 149 NY 163, 171, 43 NE 524; Hoey v. Gilroy, 129 NY 132, 136, 29 NE 85; Turl v. New York Contracting Co., 46 Misc 164, 93 NYS 1103. Legislature or minucipality may grant right to use street if not detrimental to abutter. In re Langley, 140 Misc 203, 250 NYS 124.
- "While such uses may restrict somewhat the free and unembarrassed use of the streets for pedestrians, the general interests are subserved by making available to the greatest extent valuable property, increasing business facilities, giving encouragement to improvements and adding to taxable values." Jorgensen v. Squires, 144 NY 280, 284, 39 NE 373.

Municipal Powers – Aside from constitutional restriction, since the highways of the state, including streets and public ways in cities, towns and villages are under the primary and paramount control of the legislature, all municipal powers over them must depend upon the proper construction of the grant of authority contained in the charter of the municipal corporation and in the applicable statutes. Accordingly, a municipality has no inherent power of control over streets, but as mentioned, the state may surrender to any municipality part or full control of the streets and thoroughfares within its limits, thereby making the municipal corporation, with respect to the matters delegated to it, the state's agent. In some cases the constitution, in others, home-rule, constitutional or freeholders' charters, and in other general statutes, confer power in whole or in part over streets upon municipalities. Such control is usually exercised by ordinance.

Since quite generally the power to 'regulate' streets is conferred on the municipality, usually limited to maintaining them for the purposes for which established, municipal regulations in the exercise of this delegated power may take the form either of prohibiting certain uses of or encroachments on the street, or of granting a right to use the streets in a particular way or for a particular purpose.

The municipal corporation, generally speaking, may exercise supervision and control, and may enact ordinances affecting streets although the title may not be in the municipality. It's authority, in this respect, is not dependent upon ownership of the soil in the street. The right to possession, use and control of the street by the municipal corporation is regarded as a legal, and not a mere equitable right, even where the adjoining proprietor retains the fee.

Whatever the nature of the title of the municipality in streets and alleys, whether a fee simple or only a qualified or conditional fee or a perpetual easement, it is such as to enable the public authorities to devote them to public purposes. The power to maintain and regulate the use of the streets is a trust for the benefit of the general public, of which the city cannot divest itself, nor can it so exercise its power over streets as to defeat or seriously interfere with the enjoyment of the streets by the public. In other words, in supervising the uses of its streets, a municipal corporation is engaged in a function essentially public and governmental. (McQ 30.40)

Cases – Cohen v. Board of Trustees of Incorporated Village of Flower Hill, 198 AD2d 468, 604 NYS2d 961 (1993); People v. Grant, 306 NY 258, 117 Ne2d 542; Robia Holding Corp. v. Walker, 136 Misc 358, 239 NYS 659, affd 230 App Div 666, 246 NYS 210, affd 257 NY 431, 178 NE 747.

- Barhite v. Home Tel. Co., 50 App Div 25, 63 NYS 659.
- Decker v. Goddard, 233 App Div 139, 251 NYS 440; Bradley v. Degnon Conracting co., 80 Misc 90, 140 NYS 825, affd 157 App Div 237, 141 NYS 852. Liability for maintenance of obstructions on state highway can arise only from violation of a duty imposed on town by statute; but state highway can revert to town which then becomes liable for negligence in maintaining obstruction in street. Isaac v. Town of Queensbury, 277 NY 37, 12 NE 2d 785.
- New York Home rule Law and New York city charter, see Good Humor Corp. v. New York, 290 NY 312, 49 NE2d 153. City home rule provisions in constitution of New York and statutes passed thereunder give to every city right to enact local laws concerning management and use of streets, but in exercise of such power city may not recapture franchise rights earlier granted to and used by a public utility corporation. In re International Ry. Co., 242 App Div 300, 275 NYS 5.
- Buffalo v. Stevenson, 207 NY 258, 100 NE 798; Henry v. Saratoga Springs, 171 App Div 827, 115 NYS 942. Scope of grant of power to municipalities by the New York Home Rule Act. Schenectady Knights of Columbus Bldg. Ass'n v. Golden, 134 Misc 412, 253 NYS 226.
- Metropolitan Exhibition Co. Newton, 51 Hun 639, 4 NYS 593; Brooklyn v. New York Ferry Co., 23 Hun 277, affd 87 NY 204. Although city ah control of streets, it may not use them for a purpose other than customary, as for example, the operation thereon of a bus system, without special authority. Browne v. New York, 241 NY 96, 149 NE 211. City's transportation

department, the authority of which was limited to maintaining streets for the purpose for which they were established, could not convert a street into a shopping mall. Fifth Ave. Ass'n, Inc. v. Lindsay, 73 Misc 2d 111, 341 NYS2d 473.

Imposing Municipal Liability – A municipality has a non-delegable duty to construct and maintain its streets and highways in a reasonably safe condition. (Friedman v. State of New York, 67 NY2d 271, 502 NYS2d 669, 493 NE2d 893 (1986); Highways Law §102, 139)

History:

-First major legislation dealing with streets and highways: "An Act to Regulate Highways" (1797)

-Owners of property performed all work and maintained the state highways outside of the cities, villages and towns.

-Each property owner assessed a certain number of work days in proportion to value of property owned.

-Chapter 395 – enacted 1873 – gave towns the option of a tax system.

-implemented annual tax assessment, the money from which was used to hire contract highway workers.

-1890, 1897, 1898 and 1902 – various laws passed giving power of highway supervision to the counties.

-1898 – Legislation provided for state aid in highway improvments.

-1908 – Legislature replaced the original Highway Law.

-1909 – Consolidated Highway Law enacted by Board of Statutory Consolidation

-1936 – New legislation, new Highway law enacted

-Present – current Highway law is based on the Highway Law of 1936, as amended. (WW §125.05)

Establishment of Highways and Streets

-Dedicating Property

-Using Land as Street or Highway

Dedication, in simple terms, means that a plot of land was gifted (that is, donated) to be used as a street or highway. Dedication does not necessarily mean that the land will be used as a highway or a street; rather, dedication requires conformity with the statutory provisions and bon fide acceptance of the offer of dedication. (WW §125.08[1])

Cases – In re Martin, 140 Misc. 327, 249 NYS 549 (Sup. Ct. Onondaga County 1931); Pansmith v. Incorporated Village of Island Park, 72 NYS2d 575 (Sup. Ct. Nassau Co.) appeal dismissed, 73 NYS2d 636 (2d Dep't 1947)

- Koff v. Frank, 22 Misc 2d 551, 194 NYS2d 753 (Sup. Ct. Nassau County 1959)

Effecting Prescription

-Creating Highways

Highway law section 189 provides that all lands used by the public as a highway for ten years or more, become a highway, with the same force and effect as if it had been duly laid out and

recorded as a highway, and the town superintended shall open all such highways to the width of at least three rods. Because it invades private property rights, this statute must be strictly construed.

As with streets, mere public use is inefficient to establish a highway by prescription. The roadway must have also been repaired or taken in charge by the public authorities. For example, a dead-end road was considered a town highway, despite the owner's contention otherwise, where the town had plowed the road for the past fifty years and maintained the road for more than ten years. (WW §125.09[1])

Cases – Usher v. Mobbs, 129 Misc 2d 529, 493 NYS2d 531 (Sup. Ct. Tompkins County 1985)

-Gardner v. Suddaby, 70 AD2d 990, 417 NYS2d 803 (3d Dep't), appeal dismissed, 48 NY2d 706, 422 NYS2d 68, 397 NE2d 758 (1979); Hillelson v. Grover, 105 AD2d 484, 480 NYS2d 779 (3d Dep't 1984)

-Jemzura v. Mussision, 161 AD2d 851, 555 NYS2d 491 (3d Dep't), appeal dismissed, 76 NY2d 714, 564 NYS2d 717, 565 NE2d 1268 (1990), reargument denied, 77 NY2d 874, 568 NYS2d 916, 571 NE2d 86 (1991)

Dedicating Streets – The Village Law provides that "all lands within the village which have been used by the public as a street for ten years or more continuously, shall be a street with the same force and effect as if it had been duly laid out and recorded as such." The mere use of a street or private road by the public without a municipality having made repairs or taking other measures is insufficient to establish that the municipality acquired the street through prescription. The municipality must establish that it maintained and repaired the street continuously for the required number of years, and thereby assumed control over the street. On the other hand, continued use of a dead-end road by the public for a period of twenty-five years was sufficient to declare the street a public road. Specifically, where the village maintained the street regularly and continuously on a fixed schedule and also invested in extensive repairs and reconstruction, the adjacent landowners were able to obtain a declaratory judgment requiring the village to maintain the street.

Although mere naked use of a street is insufficient by itself to rise to a level of prescription, indicia of public use other than maintenance can satisfy the requirements for prescription. In one case, for example, a private roadway over which abutting property owners enjoyed an easement was never barred for use by the public. The village installed water lines and fire hydrants, collected garbage and provided emergency services such as snow removal and lighting. Given these circumstances, the court ruled that the street had become a public street by prescription, even though no repairs had ever been made to the street.

A portion of a street can be acquired by prescription while another portion of the same street may not be acquired by prescription. This situation rose in a case where part of an alley was used by the general public for twenty years, during which time the village made repairs, oiled the surface of the street and provided general supervision of the street. However, at the end of the alley, a barrier had been placed across the alley for about three years, and signs posted to sheds that lay in the alley read "Private Property, No Trespassing. The landowners placed another barrier across the alley eighteen years later. In addition, use by the public of the blocked-off end of the alley occurred rather infrequently. In this case, the portion of the alley that was used frequently by the public became a public street, while the end of that alley that was infrequently used remained private property.

Cases

Jakobson v. Chestnut Hill Properties, Inc., 106 Misc. 2d 918, 436 N.Y.S.2d 806 (Sup. Ct. Nassau County 1981)

Village of Catskill v. de Cicco, 2 Misc. 2d 942, 147 N.Y.S.2d 756 (Sup. Ct. Greene County 1955).

General City Law
Chapter 21. Of the Consolidated Laws

Article 2. General Provisions

§ 13-f – Moneys for maintaining the municipal electric utilities association of the state of New York and any of its activities - Any common council of any city or the board in control of any electric utility owned and operated by the city is authorized to appropriate and expend annually from moneys derived from the operation of the said utility a sum to meet its proportionate share of the actual and necessary expenses of maintaining and continuing the municipal electric utilities association of the state of New York and any of its activities, in this state, for the purpose of devising practical ways and means for obtaining greater economy and efficiency in the operation of the utility.

Article 2-A. Powers of Cities (Refs & Annos)
§20 – Grant of specific powers. Effective Oct. 3, 2011.
Subject to the constitution and general laws of this state, every city is empowered:
2. c. The acquisition of franchises, five years.

Notwithstanding any general, special or local law to the contrary, the city of New York is hereby required to acquire by condemnation, and to maintain and operate, all or part of the plants, properties, mains, pipes, facilities, easements, franchises and other real or personal property of the Jamaica Water Supply Company constituting or related to the water distribution system located in the city of New York, notwithstanding the fact that such property or part thereof was or is devoted to a public use. The rest of the statute goes on state how the city shall compensate for and condemn any lands taken.

7. To lay out, establish, construct, maintain, operate, alter and discontinue streets, sewers and drainage systems, water supply systems, and lighting systems, for lighting streets, public buildings and public places, and to lay out, establish, construct, maintain and operate markets, parks, playgrounds and public places, and upon the discontinuance thereof to sell and convey the same … and to cause the necessary explorations, investigations, examinations, surveys, maps, plans, specifications and reports for its proposed water supply systems or extensions thereof to be made for such purposes by its officers, agents, servants or employees may enter at all times upon any lands or waters, subject to liability for all damages done.

10. To grant franchises or rights to use the streets, waters, water front, public ways and public places of the city.

31. May permit the use of any city-owned street or highway machinery, tools or equipment by a county in which such city is wholly or partly located or by a municipal subdivision, district, district corporation or school district, wholly or partly within such a county, upon such terms as may be agreed upon but with the payment to the city of not less than the hourly rate as fixed by the state commissioner of transportation for the rental or hiring of such machinery, tools or equipment by the city. Moneys received by a city pursuant to the provisions of this subdivision may be applied to the payment of any existing obligations of the city or transferred to the general fund.

Article 3. [Official Maps and Planning Boards] (Refs & Annos)

§26. Official Map, establishment – Every city by ordinance, local law or resolution of the legislative body which has the authority to lay out, adopt and establish streets, highways and parks ay establish an official map of the city showing the streets, highways and parks theretofore laid out, adopted and established by law. …Such map is to be deemed to be final and conclusive with respect to the location and width of streets, highways, drainage systems and the location of parks shown thereon. Such official map is hereby declared to be established to conserve and promote the public health, safety and general welfare.

§29 Official map, changes – Such legislative body is authorized and empowered, whenever and as often as it may deem it for the public interest, to change or add to the official map of the city so as to lay out new streets, highways or parks, or to widen or close existing streets, highways or parks. The details of how this is done are laid out in the rest of the statute.

§32. Subdivision review; approval of plats; development of filed plats.

1. Purpose. For the purpose of providing for the future growth and development of the city and affording adequate facilities for the housing, transportation, distribution, comfort, convenience, safety, health and welfare of its population, the legislative body of the city may by resolution, authorize and empower the planning board to approve preliminary and final plats of subdivision showing lots, blocks or sites, with or without streets or highways.

   The rest of the statute goes on to detail the bureaucratic necessities for undertaking the changing or implementation of a plat.

§33 – Subdivision review; approval of plats; additional requisites

1. Purpose. Before the approval by the planning board of a plat showing lots, blocks or sites, with or without streets or highways, or the approval of a plat already filed in the office of the clerk of the county wherein such plat is situated if the plat is entirely or partially undeveloped, the planning board shall require that the land shown on the plat be of such character that it can be used safely for building

purposes without danger to health or peril from fire, flood, drainage or other menace to neighboring properties or the public health, safety and welfare.

2. Additional requirments. The planning board shall also require that:
    a. The streets and highways be of sufficient width and suitable grade and shall be suitably located to accommodate the prospective traffic, to afford adequate light and air, to facilitate fire protection, and to provide access of firefighting equipment to buildings. If there be an official map or city comprehensive plan, such streets and highways shall be coordinated so as to compose a convenient system conforming to the official map and properly related to the proposals shown in the comprehensive plan of the city; …
    c. all streets and other public places shown on such plats be suitably graded and paved; street signs, sidewalks, street lighting standards, curbs, gutters, street trees, water mains, fire alarm signal devices (including necessary ducts and cables or other connecting facilities), sanitary sewers and storm drains be installed all in accordance with standards, specifications and procedures acceptable to the appropriate city departments except as hereinafter provided, or alternatively that a performance bond or other security be furnished to the city as hereinafter provided.

5. Character of the development. In making such determination regarding streets, highways, parks and required improvements, the planning board shall take into consideration the prospective character of the development, whether dense residence, open residence, business or industrial.

§34. Subdivision review; record of plats.

3. Cession or dedication of street, highways or parks. (a) All streets, highways or parks shown on a filed or recorded plat are offered for dedication to the public unless the owner of the affected land, or the owner's agent, makes a notation on the plat to the contrary prior to the final plat approval. Any street, highway or park shown on a filed or recorded plat shall be deemed to be private until such time as it has been formally accepted by a resolution of the local legislative body, or until it has been condemned by the city for use as a public street, highway or park.

§35. Permits for building in bed of mapped streets. For the purpose of preserving the integrity of such official map or plan no permit shall hereafter be issued for any building in the bed of any street or highway shown or laid out on such map or plan, provided, however, that if the land within such mapped street or highway is not yielding a fair return on its value to the owner, the board of appeals or other similar board in any city which has established such a board having power to make variances or exception in zoning regulations shall have power in a specific case by the vote of a majority of its members to grant a permit for a building in such street or highway which will as little as practicable increase the cost of opening such street or highway, or tend to cause a change of such official map or plan, and such board may be imposed reasonable requirements as a condition of granting such permit, which requirements shall inure to the benefit of the city. Before taking any action authorized in this section, the board of appeals or similar board shall give a hearing at which parties in interest and others shall have an opportunity to be heard. At least fifteen days notice of the time and place of such hearing

shall be published in an official publication of said city or in a newspaper of general circulation therein. Any such decision shall be subject to review by certiorari order issued out of a court of record in the same manner pursuant to the same provisions as in appeals from the decisions of such board upon zoning regulations.

Where a proposed street widening or extension has been shown on such official map or plan for ten years or more and the city has not acquired title thereto, the city may, after a hearing on notice as hereinabove provided, grant a permit for a building and/or structure in such street or highway and shall impose such reasonable requirements as are necessary to protect the public interest as a condition of granting such permit, which requirements shall inure to the benefit of the city.

§36. Municipal improvements in streets, buildings not on mapped streets.

2. A city having a population of one million or more. No public municipal street utility or improvement shall be constructed by any city having a population of one million or more in any street or highway until it has become a public street or highway and is duly placed on the official map or plan, with the exception that a city may construct improvements and provide services to any public way (mapped or unmapped) if the public way has been open and in use to the public for a minimum of ten years… the statute goes on to detail specific actions to be taken regarding funding and changes to improvements.

§38-a. Removal of walls encroaching on streets. Effective November 21, 2001. This statute simply dictates the procedure for removing walls encroaching on streets. Not necessarily relevant, but it might come up.

New York City Charter

Currency up to Local Law 29 of 2011 and Chapters 1-97 of the Laws of the State of New York for 2011.

Chapter 4. Borough Presidents.

§ 86 Opening and closing streets.

Except in the case of an emergency, no person, agency, business, association, or corporation shall remove the pavement, disturb the surface or otherwise open or close a street, road or highway until a written notice is filed at least ten days in advance of the intended action with the construction coordinator and consulting engineer for the borough in the office of the borough president and the office of district manager for the community district in which the street, road or highway is located.

Chapter 6. Expense Budget

§106 Expense budget administration.

f. 1. Within thirty days of the adoption of the executive expense budget, the head of each agency responsible for one or more of the services listed in paragraph four of this subdivision shall

submit to each borough president, a plan for the allocation within the borough of the personnel and resources appropriated for each such service in the borough….

4. The services covered by this subdivision shall include the following services and any additional services identified for this purpose by the mayor: local parks services, street cleaning and refuse collection, housing code enforcement, highway and street maintenance and repair, sewer maintenance and repair, and the maintenance of public buildings by the department of citywide administrative services.

Chapter 8. City Planning

§197-c Uniform land use review procedure.

a. Except as otherwise provided in this charter, applications by an person or agency for changes, approvals, contracts, consents, permits or authorization thereof, respecting the use, development or improvement of real property subject to city regulation shall be reviewed pursuant to a uniform review procedure in the following categories:
(5) Site selection for capital projects pursuant to section two hundred eighteen;
(7) Improvements in real property the costs of which are payable other than by the city pursuant to section two hundred twenty;
(12) Such other matters involving the use, development or improvement of property as are proposed by the city planning commission and enacted by the council pursuant to local law.

CASE NOTES:

1. The provisions of this section found not applicable to the awarding of cable TV franchises wherein no land use impact was found to be present, but only economic impact. Therefore the City could award the contracts without submitting the issue to the community boards. Starburst v. City of NY, 125 A.D. 2d 148 [1987].
2. In one case, the court had to decide whether the City was required to apply the Uniform Land Use Review Procedure (ULURP) to an agreement to demolish an elevated railway. The court held that the surrender of easements from the New York Central to the city was not an "acquisition" of property by the City, so that it did not trigger ULURP review. Since the City already owned the property subject to the easement, it was not acquiring anything new. Where the title in fee to both the dominant and servient tenements become vested in one person, an easement is extinguished by merger. Since the process of merger represent the extinction, not the conveyance, of an interest in real estate, no acquisition of property was contemplated by the agreement. New York City Council v. City of New York, 4 A.D.3d 85, 770 N.Y.S.2d 346 (1st Dept. 2004).

§198 City map. Statute stating the city map is continued, and that the director of city planning is the custodian of the city map, and is her/her duty to maintain and register all changes resulting from action authorized by law. Also states where the map is filed and how to get copies.

§199 Projects and changes in city map.

a. No improvement or project affecting the city map and no addition to or change in the city map shall be authorized otherwise than as provided in this charter.

§202 Platting of land and dedication of streets and public places.

b. No street, avenue, highway or public place, the layout of which has not been approved as provided in this section, shall be deemed to have been accepted by the city as a street, avenue, highway or public place, unless such street, avenue, highway or public place shall lie within the lines of a street, avenue, highway or public place upon the city map.

CASE NOTES

The City of New York has had its own statutory scheme of map establishment since the original charter of 1898 which provided for the approval and acceptance of private subdivision maps. DiBiasi v. City of New York, 19 App. Div. 2d 323, 242 N. Y. S. 2d 942 [1963], aff'd 14 N.Y. 2d 711, 199 N.E. 2d 160, 250 N.Y.S. 2d 60 [1964]

§204 Citywide statement of needs.

a. Each year not later than the fifteenth day of November, the mayor shall submit to the council, borough presidents, borough boards and community boards a citywide statement of needs concerning city facilities prepared in accordance with the criteria established pursuant to section two hundred three. Copies of the statement shall also be made available to the public in the main branch of the public library in each borough. The statement shall identify by agency and program: (1) all new city facilities and all significant expansions of city facilities for which the mayor or an agency intends to make or propose an expenditure or to select or propose a site during the ensuing two fiscal years….
b. With respect to the city facilities referred to in clause on of subdivision oa of this section, the statement of needs shall describe for each proposed new city facility or significant expansion: (1) the public purpose to be served thereby, (2) the size and nature of the facility, (3) the proposed location by borough and, if practicable, by community district or group of community districts, and (4) the specific criteria to be used in locating the new facility or expansion.

d.The statement of needs shall be accompanied by a map together with explanatory text, indicating (1) the location and current use of all city-owned real property, (2) all final commitments relating to the disposition or future use of city-owned real property, including assignments by the department of citywide administrative services pursuant to clause b of subdivision three of section sixteen hundred two, and (3) to the extent such information is available to the city, (i) the location of health and social service facilities operated by the state of New York or the federal government or pursuant to written agreement on behalf of the state or the federal government; and (ii) the location of transportation or waste management facilities operated by public entities or by private entities pursuant to written agreements with public entities, or by other private entities that provide comparable services.

Chapter 9. Capital Projects and Budget.

§210 Definitions

1. The term “capital project” shall mean:

(a) A project which provides for the construction, reconstruction, acquisition or installation of a physical public betterment or improvement which would be classified as a capital asset under generally accepted accounting principles for municipalities or any preliminary studies and surveys relative thereto or any underwriting or other costs incurred in connection with the financing thereof….

(d) Any public betterment involving either a physical improvement or the acquisition of real property for a physical improvement consisting in, including or affecting:

(1) Streets and parks;

(2) Bridges and tunnels;…

4. The term “scope of project” or “proposed scope of project” shall mean a description of a capital project included in the capital budget that contains specific guidelines for the design and implementation of such project consistent with the standards for the appropriate category of capital projects and includes each of the following items of information which are relevant to the capital project involved:

(a) Purposes and public to be served;

(b) Programs to be conducted in the facility;

(c) Gross and net amounts of space and bulk for any building or structure and for areas for different functions and activities;

(d) Identification of required architectural, engineering or other consultants and estimated fees for such consultants;

(e) Estimated completion dates for scope, design and construction;

(f) Total estimated project costs, including costs for site acquisition, preparation and tenant relocation, design, construction and equipment;

(g) Estimated expenditures for the project for each fiscal year until its completion;

(h) Estimated annual costs to operate programs within the facility when fully staffed and to maintain the facility; and,

(i) Such other information as shall be required by the mayor or by resolution of the council.

5. The term “cost” shall include the contract liabilities and expenditure incurred for work in carrying out the physical improvement and interest thereon, and the compensation to be made to the owner of any real property acquired for the improvement as determined by a court or by agreement, and interest thereon.

7. The term “street,” as used in this chapter, shall include street, avenue, road, alley, lane, highway, boulevard, concourse, parkway, driveway, culvert, sidewalk, crosswalk, boardwalk, and viaduct, and every class of public road, square and place, except marginal streets.

§218 Site Selection.

a. The selection of sites for capital projects shall be pursuant to the uniform procedures provided pursuant to sections one hundred ninety-seven-c and one hundred ninety-seven-d, except for acquisition of office space pursuant to section one hundred ninety-five.

CASE NOTES

¶ 1. Where the city had title to the bed of street, project to construct underground electrical substation was excepted from jurisdiction of the Site Selection Board.--Matter of 78 St. Asso. v. City of N. Y., 25 N. Y. 2d 662, 254 N. E. 2d 772, 306 N. Y. S. 2d 472 [1969], aff'g, 33 App. Div. 2d 545, 304 N. Y. S. 2d 429 [1969].

Chapter 13. Procurement.

§313 Competitive sealed bidding. Nothing in this section directly pertains to our project, but I thought it would be useful to know where it is, should it need be referenced.

Chapter 14. Franchises, Revocable Consents and concessions.

§363 Franchises. This section is a little too broad for specific citation, but again, good to know where it is.

CASE NOTES

¶ 11. Although a proposed grant of a cable television franchise must be approved by the City Council, the role of the City Council ends after the Council's approval of the resolution. The City Council does not participate in the selection of a franchisee. Thus, a franchise can be renewed by action of the Public Service Commission and the Franchise City's Franchise and Concession Review Committee, without the approval of the City Council. Council of the City of New York v. Public Service Commission, 99 N.Y.2d 64, 751 N.Y.S.2d 822 (2002).

§ 364 Revocable consents.

a. A revocable consent shall not be granted for a use that would interfere with the use of inalienable property of the city for public purposes, nor shall a revocable consent be granted for a purpose for which a franchise may be granted.

b. All revocable consents shall be revocable at any time by the responsible agency, shall be granted for a fixed term, and shall provide for adequate compensation to be annually provided to the city during the continuance of the consent.

c. Revocable consents, other than for telecommunications purposes, may be granted by the department of transportation with respect to property under its jurisdiction or by such other agency as may be authorized by law to grant revocable consents. Revocable consents for telecommunications purposes may be granted by the department of information technology and telecommunications. All revocable consents shall require the approval of the department of transportation.

§ 376 Central file.

Copies of all franchise and revocable consent agreements shall be filed with the department of transportation. The department of transportation shall compile and keep up to date a listing of all current franchises and revocable consents which shall be available to the public and shall include the date, terms, names of the parties, description of the permitted use and location of each franchise and revocable consent. Such listing shall be arranged and indexed so as to enable a member of the public to determine what current franchises and revocable consents involving use or occupancy of streets and sidewalks have been granted for any location in the city and the identity of the holder of each such franchise or revocable consent.

Chapter 15. Property of the City

§ 383 Inalienable property.

The rights of the city in and to its water front, ferries, wharf property, bridges, land under water, public landings, wharves, docks, streets, avenues, highways, parks, waters, waterways and all other public places are hereby declared to be inalienable; but upon the closing or discontinuance of any street, avenue, park or other public place, the property may be sold or otherwise disposed of as may be provided by law, and leases of land under water, wharf property, wharves, docks and piers may be made as may be provided by law. Nothing herein contained shall prevent the granting of franchises, permits and licenses in respect to inalienable property.

CASE NOTES

¶ 4. The New York City Transit Authority cannot be held liable for injuries caused by the defective condition of a city sidewalk, since the TA does not own, maintain, operate or control the public streets. Thus, the TA did not have a duty to exercise reasonable care with respect to an area five feet from the subway entrance where plaintiff fell. Patanzis v. City of New York, 211 A.D.2d 427, 621 N.Y.S.2d 57 (1st Dept. 1995).

Chapter 17. Law Department.

§ 394 Powers and duties.

a. Except as otherwise provided in this chapter or other law, the corporation counsel shall be attorney and counsel for the city and every agency thereof and shall have charge and conduct of all the law business of the city and its agencies and in which the city is interested.

b. Except as otherwise provided in this chapter or other law, the corporation counsel shall have charge and conduct of the legal proceedings necessary in opening, widening, altering and closing streets and in acquiring real estate or interests therein for the city by condemnation proceedings, and the preparation of all leases, deeds, contracts, bonds, and other legal papers of the city, or of or connected with any agency or officer thereof, and the corporation counsel shall approve as to form all such deeds and bonds and, individually or by standard type of class, all contracts, leases and other legal papers.

c. Except as otherwise provided in this chapter or other law, the corporation counsel shall have the right to institute actions in law or equity and any proceedings provided by law in any court, local, state or national, to maintain, defend and establish the rights, interests, revenues, property, privileges, franchises or demands of the city or of any part or portion thereof, or of the people thereof, or to collect any money, debts, fines or penalties or to enforce the laws.

Chapter 21. Department of Parks and Recreation.

§533 Powers and duties of the commissioner.

Except with respect to the functions of the board of education and except as otherwise provided by law, the commissioner shall have the power and it shall be his or her duty:

a. Parks

1. to manage and care for all parks, squares and public places, the sidewalks immediately adjoining the same and all playgrounds, playground fixtures and other recreation properties, except those within the

jurisdiction of the board of education or other agencies, but such jurisdiction shall not extend to or include the buildings which are not or hereafter may be erected in parks, squares or public places for governmental purposes other than those of the department;

5. to authorize and regulate the use of and the projections on and determine the line or curb and the surface construction of all streets and avenues lying within any park, square or public place or within a distance of three hundred fifty feet from the outer boundaries thereof;

10. to plan, conduct, supervise, coordinate and promote conservation, environmental, and nature education programs and research and demonstration projects relating thereto and to plan, acquire, design, construct, improve, alter, maintain and manage areas and facilities for conservation and the preservation of natural beauty; and subject to the approval of the mayor, undertake to enter into arrangements with other city, state or federal agencies and recommend to the mayor such arrangements with private, voluntary or commercial agencies, to be entered into subject to the provisions of law, for the performance of functions relating to conservation and the preservation of natural beauty;

Chapter 31. Department of Sanitation

§ 753 Powers and duties of the commissioner.

d. The commissioner may adopt regulations controlling the use of sidewalks and gutters by abutting owners and occupants for the disposition of sweepings, garbage, refuse or rubbish, and may provide that the violation thereof shall be punishable by civil penalty, fine or imprisonment. Such regulations shall be submitted to the council and when approved by it shall be published and enforced in like manner as local laws.

Chapter 45-A Office of Administrative Trials and Hearings

§1049-a Environmental control board – generally establishes ECB to regulate emissions into the air and water.

c. (1) The environmental control board shall enforce the provisions of the charter and administrative code, and any rules and regulations made thereunder, which relate to:

(k) the construction, maintenance and repair and obstruction or closure of public roads, streets, highways, parkways, bridges and tunnels which are within the jurisdiction of the department of transportation and the department of information technology and telecommunications;

Chapter 48. Department of Information Technology and Telecommunications

§1072 Powers and duties of the department.

Except as otherwise provided by law, the department shall have the following powers and duties:

c. to administer all franchises and revocable consents relating to telecommunications pursuant to the provisions of chapter fourteen, including, without limitation, proposing authorizing resolutions for telecommunications franchises, developing and issuing requests for proposals or other solicitations of proposals for telecommunications franchises, selecting telecommunications franchisees, reviewing and approving petitions for revocable consents relating to telecommunications, negotiating the terms of contracts or other agreements relating to telecommunications franchises and revocable consents

relating to telecommunications, negotiating the terms of contracts or other agreements relating to telecommunications franchises and revocable consents, and enforcing the terms and conditions of such agreements;

d. to develop municipal uses of cable television and coordinate interagency uses of cable television and other telecommunications;

f. to provide to city agencies such land-based and wireless voice, data, video or other communications facilities, and technical assistance or other assistance with respect to such facilities, as they may require for the effective discharge of their responsibilities.

Chapter 55. Department of Design and Construction.

§1202 Powers and duties of the commissioner.

a. Except as otherwise required by state or federal law or by direction of the mayor pursuant to subdivision b of this section, and notwithstanding any inconsistent provision of this charter or the administrative code, the commissioner shall have charge and control of and be responsible for functions and operations and shall exercise powers of the city relating to city construction projects. Such projects shall include but not be limited to the design, construction and alteration of streets and highways, bridges and tunnels, parks and recreational facilities, sewers and sewage disposal plants, water supply and distribution structures, waste management facilities, correctional facilities and all other public buildings, structures and facilities.

Chapter 57. Department of Environmental Protection.

§1403 Powers and duties of the commissioner. – Except as otherwise provided by law, the commissioner shall have charge and control of and be responsible for all those functions and operations of the city relating to the provision of a pure, wholesome and adequate supply of water, the disposal of sewage and the prevention of air, water and noise pollution, and shall be authorized to respond to emergencies caused by releases or threatened releases of hazardous substances and to collect and manage information concerning the amount, location and nature of hazardous substances. The powers and duties of the commissioner shall include, without limitation, the following:

e. Review of environmental consequences of certain activities. The commissioner shall review and comment upon the environmental consequences of any activity requiring the approval of any agency of the city where such activity may have a significant impact on the physical aspects of the environment of the city, and shall be responsible for investigating, evaluating and reporting upon activities related to fuel supply and demand, alternative sources of energy, and resource recovery.

f. Energy conservation and alternative fuels. The commissioner shall participate in formulating an energy policy for the city, including assessing the environmental costs and factors associated with all kinds of energy use and programs developed to meet energy needs. The commissioner shall study, establish, organize, promote, coordinate and carry out policies, activities, projects and programs designed to encourage fuel and energy conservation,

alternate sources of fuel and energy and encourage, stimulate and foster others to participate in such projects, programs and activities.

Chapter 71. Department of Transportation.

§2903 Powers and duties of the commissioner.

Except as otherwise provided by law, the commissioner shall have control over and be responsible for all those functions and operations of the city relating to transportation including, without limitation, the following:

a. Parking and traffic operations. The commissioner shall:

(7) make recommendations to the mayor in regard to methods of ameliorating traffic conditions which adversely affect the welfare of the city and which cannot be remedied by traffic rules and regulations;

(8) submit to the mayor from time to time for consideration and forwarding to appropriate city agencies, specific proposals for amendment of any resolutions, rules, or regulations of any city agency which affect traffic conditions in the city, and proposed legislation which may be necessary to implement and effectuate such proposals;

(9) prepare and submit to the mayor, for consideration and forwarding to the council, the city planning commission and to other agencies of the city, recommendations and proposals for the improvement of existing streets, street widening and location of new streets, avenues, highways and parkways; the location and design of parking garages and parking areas; the establishment of public parking garages and parking areas; the location, type and design of off-street loading and unloading and parking facilities; and other matters relating to traffic control;

b. Highway operations. The commissioner shall have charge and control of the following functions relating to the construction, maintenance and repair of public roads, streets, highways, parkways, bridges and tunnels:

(2) designing, constructing and repairing of public roads, streets, highways and parkways;

(3) paving, repaving, resurfacing and repairing of all public roads, streets, including marginal streets and places, highways and parkways and the relaying of all pavement removed for any cause including cleaning, sweeping, landscaping and maintenance functions for arterial highways as defined by regulation;

(5) regulation of the use and transmission of gas, electricity, pneumatic power and steam for all purposes in, upon, across, over and under all streets, roads, avenues, parks, public places and public buildings; regulation of the construction of electric mains, conduits, conductors and subways in any streets, roads, avenues, parks and public places and the issuance of permits to builders and others to use or open a street; and to open the same for the purpose of carrying on the business of transmitting, conducting, using and selling gas, electricity or steam or for the service of pneumatic tubes, provided, however, that this subdivision shall not be construed to grant permission to open or use the streets except by persons or corporations otherwise duly authorized to carry on business of the character above specified;

d. Mass transportation facilities. The commissioner shall:

(1) prepare or review plans and recommendations with respect to the nature, location, construction, operation and financing of roads, highways, bridges, tunnels, subways or other facilities for mass

transportation other than aviation facilities for use in whole or in part within the city whether or not the funds provided for such facilities are derived from the city treasury;

CASE NOTES

¶ 2. Plaintiff allegedly injured her leg on a stump of a pole that was protruding from the sidewalk. The court held that even if the stump was the remnant of a bus stop sign, the responsibility to maintain bus stops, including the attendant sidewalks, rests either with the City of New York or the owner or lessee of the abutting property. The New York City Transit Authority was not liable under a “special use” theory; the NYCTA was not the owner of the abutting property, nor did it derive a special benefit from the alleged bus stop sign. Gall v. City of New York, 636 N.Y.S.2d 837 (App.Div. 2d Dept. 1996).

¶ 9. Section 2903 vests the Department of Transportation with jurisdiction over the use and transmission of gas, electricity, power and steam for all purposes, over and across all thoroughfares and public places. Thus, the New York State Public Service Commission properly dismissed, for lack of jurisdiction, an action by petitioner seeking to prohibit City Cinemas Corp. from installing electrical equipment on petitioner's side of the street beneath a sidewalk abutting petitioners' building. 212 E. 85th St. LLC v. Dept. of Public Service of the State of NY, 60 A.D.3d 1259, 874 N.Y.S.2d 827 (App. Div. 3d Dept.).