STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Tariff Filing by Verizon New York Inc. to Introduce Language under which Verizon Could Discontinue its Current Wireline Service Offerings in a Specified Area and Instead Offer a Wireless Service as its Sole Service Offering in the Area	**Case 13-C-0197** **Trade Secret Determination 13-05**

DECLARATION OF WILLIAM E. TAYLOR

I. QUALIFICATIONS

1. My name is William E. Taylor. I received a B.A. magna cum laude in Economics from Harvard College, and an M.A. in Statistics and a Ph.D. in Economics from the University of California at Berkeley. I have taught economics, statistics, and econometrics at Cornell University and the Massachusetts Institute of Technology and was a postdoctoral Research Fellow at the Center for Operations Research and Econometrics at the University of Louvain, Belgium.

2. I have worked for over 30 years in the field of telecommunications economics at Bell Telephone Laboratories, Bell Communications Research, Inc. and National Economic Research Associates, Inc. (NERA). I am presently a Special Consultant at NERA, where for many years I was Director of its Telecommunications Practice and Head of its Boston office. I specialize in telecommunications economics, focusing on state and federal regulatory reform, competition policy, economic issues concerning broadband network architectures, quantitative analyses of state and federal price cap and incentive regulation, mergers and antitrust issues, and contract litigation in telecommunications markets. I have testified previously before this

Commission as an economist on numerous issues of telecommunications economics and statistics. An abbreviated version of my curriculum vitae is attached as Exhibit 1.

II. SCOPE OF ASSIGNMENT AND CONCLUSIONS

3. I have been asked by counsel for Verizon New York Inc. ("Verizon") to explain, from the perspective of an economist, the competitive sensitivity of certain documents regarding the projected costs and expenses of building a wireline network (using Digital Loop Carrier or Fiber to the Premises architecture), or deploying Voice Link service, in western Fire Island, as listed in Appendix A to Verizon's "Statement of Necessity Pursuant to Public Officers Law §89(5)(b)(2)." I have reviewed the documents at issue. While the documents relate specifically to Fire Island, these network platforms and services are widely used, and the requested cost information is thus pertinent to Verizon's business throughout its footprint. Moreover, the competitive injury from the release of these documents is not limited to Verizon in its competition with other firms; all telecommunications customers are harmed when the competitive process imposes an asymmetric regulatory treatment that distorts customer choices of platforms, technologies and services.

4. I understand that Verizon seeks trade secret protection for this information and that the Records Access Officer ("RAO") has determined that Verizon did not meet its burden of showing that disclosure of this information would give rise to a likelihood of substantial competitive injury.[1] While the issues addressed by the RAO involve the application of New York law to economic circumstances, I address these issues as an economist, not a lawyer.

5. My conclusion as an economist with 30 years of experience in telecommunications markets is that substantial competitive injury would result from making

[1] Determination at 13.

any of this cost information public and available to Verizon's actual and potential competitors. This conclusion is consistent with my experience that these types of information have routinely been treated as confidential and competitively-sensitive in judicial and regulatory proceedings in which I have participated in New York State, before other state public utility commissions, before the Federal Communications Commission, and before federal and state courts in the United States.

III. THE COMPETITIVE SIGNIFICANCE OF KNOWING RIVALS' COSTS

6. There is no dispute that Verizon faces actual and potential competition throughout New York State for the services provided over the platforms at issue here.[2] Where competitors are currently providing service, knowledge of Verizon's costs gives them an advantage in pricing. Verizon's incremental cost of service is a floor below which it cannot lower its prices and sustain its business in the long run. If Verizon's costs were made public, competitors would know if such a price reduction were sustainable. On the other hand, competitors whose costs are not public can lower prices — or threaten to lower prices — below their incremental costs to meet competition for short periods of time or for specific promotions, and Verizon would not know if those prices could persist for longer periods. This information asymmetry thus disadvantages Verizon in the marketplace and also may inhibit price competition, resulting in higher prices for customers.

7. Where competitors are considering market entry, knowledge of Verizon's costs is an important or pivotal factor in their decisions.[3] When Verizon's cost information is

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[2] Determination at 12.

[3] Note that entry is always under consideration in the various geographic markets in New York. For example, wireless carriers are constantly judging whether to invest to expand their footprints or improve signal quality in marginal geographic areas.

confidential, entrants must develop or purchase estimates or learn about Verizon's costs by entering the market, lowering prices and observing whether Verizon matches their price decreases. Receiving accurate and low-cost information about Verizon's network costs through the regulatory process allows competitors to pinpoint profitable opportunities to take business from Verizon without having to learn about those costs by entering the market and reducing their prices. Again, both Verizon and its customers are harmed by the disclosure of such information.

A. Knowledge of Rivals' Costs in Economic Theory

8. That information about a rival's cost is valuable and a source of competitive advantage is well-known in the economic and marketing literatures. The telecommunications industry has a relatively small number of competitors with fully-formed alternative networks (although numerous other current and potential competitors rely in part on other providers' networks or on their own networks of narrower scope). In such markets, economic theory accounts for the interrelated nature of firms' decisions using two basic approaches: Cournot models, in which firms compete by choosing their levels of output, and Bertrand models, in which firms choose prices.[4] The equilibrium price in a Bertrand model where firms have different costs is equal to the incremental cost of the higher-cost firm. That is, competition bids prices down to the lowest level that the higher-cost competitor can sustain. Knowledge of Verizon's costs helps other firms distinguish between sustainable price reductions from an efficient Verizon and temporary price reductions below long-run costs from a less efficient Verizon. Thus, knowledge of Verizon's costs can help competitors identify where entry or

[4] See, *e.g.*, D.W. Carlton and J.M. Perloff, *Modern Industrial Organization*, Fourth Edition, Boston: Addison Wesley, 2005, Chapter 6.

expansion will be profitable and, additionally, can reduce the likelihood of temporary price reductions that benefit consumers. In Cournot models where firms have different costs, reducing the cost of obtaining Verizon's competitively-sensitive information generates competitive harm by reducing Verizon's equilibrium market share and profits while increasing the market shares and profits of its competitors.

9. The literature on strategic marketing emphasizes the importance of information about a competitor's costs for creating competitive advantage through improved decision-making.[5] It enables firms to assess their own methods and technologies, to undertake cost reduction initiatives, and to improve entry and production decisions. It helps firms identify a competitor's short-term price reduction that is not sustainable and thus enables them to avoid profit-reducing price reductions. In markets like telecommunications that are characterized by high fixed and sunk costs, knowledge of a competitor's cost structure is particularly valuable to rivals to avoid investment leading to market price reductions and the inability to recover the incremental costs of entry. Each of these benefits to competitors translates to competitive harm to the firm whose information is disclosed.

B. Knowledge of Rivals' Costs in Practice

10. In current New York telecommunications markets, there are several different causal mechanisms by which knowledge of Verizon's network costs leads to a likelihood of substantial competitive injury. Such asymmetrical information puts Verizon at a competitive disadvantage in price competition, in market entry decisions, and in obtaining discounted prices for inputs.

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[5] See the literature survey in C. Heinen and A. Hoffjan, "The Strategic Relevance of Competitor Cost Assessment – An Empirical Study of Competitor Accounting," *The Journal of Applied Management Accounting Research*, Vol. 3, No. 1, 2005, and the references cited therein.

11. First, information about the actual cost of deploying wireline services provides a floor for prices of potential competing services such as expanded wireless service and/or home wireless products. That information reveals to Verizon's competitors the minimum price Verizon must charge in the long run for the service in question to be sustainable for Verizon. Knowledge of Verizon's costs thus allows competitors to distinguish Verizon's short-run marketing efforts — *e.g.*, discounts, rebates, promotions — from long-run price reductions. In contrast, if a competitor offers a price reduction for a competing service, Verizon has no way of knowing if that proposal is sustainable at the competitor's current prices and must be met by reductions in the prices of Verizon's own offerings. Release of Verizon's cost information thus results in a comparative inability to price accurately in response to competitors' pricing initiatives, which in turn leads to lost market share and profits.

12. Second, knowledge of Verizon's costs creates a competitive advantage by reducing the risk to competitors of entering new markets or providing new services. For example, competitors can provide service to areas such as Fire Island if demand at a price that covers costs is sufficient to pay for the geographic expansion. Knowledge of Verizon's costs — and thus the floor under its price — is important information to those competitors in assessing the profitability of such an expansion. In particular, information regarding Verizon's costs allows competitors to determine expected profitability in advance of committing resources to the market. In contrast, Verizon is providing its own services, in Fire Island and elsewhere, without costless or accurate information regarding the competitors' costs of expanding their footprints and the consequent effect of that expansion on Verizon's expected take rate for its service. Release of Verizon's cost information allows competitors to make

more accurate assessments of profitability of their own market entry and introduction of new services, leading to lost market share and profitability by Verizon.

13. These considerations are not merely theoretical. Home wireless services are a rapidly growing alternative to wireline plain old telephone service for many customers throughout New York State. In competition with Verizon's Voice Link service, AT&T offers a Wireless Home Phone and Internet service with unlimited nationwide voice service at $20 per month with broadband internet service at higher prices, wherever its 4G LTE network is available.[6] Sprint offers a competing wireless home service at $20 per month,[7] as does U.S. Cellular.[8] Wal-Mart sells its comparable Straight Talk prepaid wireless home voice service for $15 a month together with additional optional prepaid broadband internet access service.[9] These offerings are similar to Verizon Wireless Home Phone Connect service,[10] and differ in some features from Verizon New York's Voice Link service but compete directly with both services. Thus, one immediate and real competitive effect of the public release of Verizon's wireline and Voice Link cost data would be to enable these four competitors (and others) to assess Verizon's price floor for wireline voice service as an element in pricing their wireless home network services and calculating the profitability of expanding their wireless networks to provide wireless home phone service on Fire Island and elsewhere.

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[6] See http://www.att.com/shop/wireless/devices/internethomephone.html#fbid=9csw6XjcvaN.

[7] See http://www.fiercewireless.com/story/sprint-unveils-new-home-phone-service-20month/2013-11-08.

[8] See www.uscellular.com/about/press-room/2013/USCellular-Launching-Home-Phone-Solution-June7.html.

[9] See http://www.walmart.com/ip/Email-Delivery-Straight-Talk-Unlimited-Text-Talk-and-Web-Access-30-Day-Service-Card/15443344.

[10] See http://www.verizonwireless.com/b2c/device/home-phone-connect.

14. Third, public revelation of Verizon's network cost structure provides information to competitors concerning the prices Verizon pays for its inputs, such as cable and electronics. Verizon is a large and sophisticated buyer of these materials, and they are purchased at negotiated prices in formal procurement processes. The prices that Verizon is able to negotiate from suppliers are lower when those suppliers are assured that the price discounts are confidential. If Verizon's discount prices were made public, suppliers would face the prospect of having to reduce prices to other purchasers, which would reduce the incentive to offer discounts to Verizon in the first place. Thus, another causal link between the public release of Verizon's cost data and a substantial competitive injury is the likelihood of obtaining fewer and smaller discounts in the prices Verizon pays for its network equipment. This alteration in the company's cost structure will necessarily impair Verizon's competitive position.

15. Central to these sources of competitive injury is the fact that only Verizon's costs would be made public, and not the costs of any of its competitors. As the Determination reminds us, it is the "*relative* costs and opportunities faced by members of the same industry" that determines success in a competitive market.[11] If Verizon were the only competitor whose costs were public knowledge, the competitive process in New York telecommunications markets would be severely distorted. Rather than a contest in which customers would be served by the lowest-price, highest-quality supplier, the resulting competition here would be like a game of poker in which Verizon's cards — and only Verizon's cards — were visible to all players around the table.

[11] Determination at 10 (quoting the *Encore* decision, which is discussed in the brief submitted with this Declaration).

IV. "SUBSTANTIAL" COMPETITIVE HARM

16. The Determination (at 13) observes that "almost all information possessed by a business would have some commercial value to its competitors" but that the party seeking exemption from disclosure must present evidence that such "disclosure will cause substantial competitive injury." From an economic perspective, what evidence is there that the competitive injuries discussed above constitute a "*substantial* injury to the competitive position of a commercial enterprise"[12]?

17. If strategic competitive information about a competitor could cause substantial competitive harm, its market value must be substantial. In fact, numerous telecommunications consulting firms charge large sums to supply *estimates* of costs, demand volumes, input prices and market shares of competitors in telecommunications markets. Often these data are sold in the form of expensive reports — costing hundreds or thousands of dollars — comparing details of competitors' technologies, services, and performance and forecasting future demand and market shares. The same firms offer to provide targeted research on particular topics directed by the purchaser. Obviously, if these types of data were not a substantial source of competitive advantage, there would be no market for their supply. Moreover, these suppliers can provide only *estimates* of confidential information, which, by definition, cannot be as reliable and detailed as Verizon's actual cost data included in the documents at issue here.

18. Data I have purchased for competitive assessments in my consulting practice include prices and costs for particular undersea cable runs, negotiated prices for special access and private line contract services, and customer volumes and market shares for suppliers of various telecommunications services. Consulting firms that I have used in my 30 years in

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[12] Determination at 13 (emphasis supplied).

telecommunications economics include Frost & Sullivan,[13] Telegeography,[14] the Gartner Group,[15] Booz-Allen,[16] and the Yankee Group[17] among others.

19. Similar evidence of the competitive value of such information — and the substantial competitive harm that would result from its publication — is the reluctance of unregulated telecommunications firms to reveal such information. In my litigation experience, firms frequently stipulate to "protective orders" that restrict competitively-sensitive information in the case to outside counsel and consultants, preventing even administrative employees of the competing firms from seeing the data, let alone using it in any fashion. Standard consulting agreements between NERA and its client telecommunications firms always contain a section specifying the treatment of confidential information provided to NERA in the course of the engagement.

20. The competitive harm in question here is not limited to Verizon's competitive position in the market for local service on Fire Island. To an economist, the real competitive injury from revealing Verizon's competitively-sensitive information contains still another component in addition to Verizon's private costs. Revelation of Verizon's competitively-sensitive information through the regulatory process inevitably induces distortions in retail telecommunications markets because some network platforms, technologies and services are subject to this asymmetric treatment and others are not. Such disparities are not simple

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[13] See http://www.frost.com/prod/servlet/svcg.pag/IT00.

[14] See http://www.telegeography.com/.

[15] See http://www.gartner.com/technology/research.jsp.

[16] See http://www.boozallen.com/.

[17] See http://www.yankeegroup.com/home.do.

squabbles over rents; they do not "merely" transfer wealth among competing carriers. Rather, because telecommunications markets are characterized by rapid technological change and competing platforms and services that are subject to lock-in or path-dependence,[18] these regulatory disparities can have large and irreversible welfare effects on consumers.[19]

21. Platforms currently in play include fiber to the home, fiber to the node, hybrid copper-fiber, coaxial cable, various mobile and fixed wireless platforms and satellite alternatives. Competing residential voice services include (copper-based) wireline plain old telephone service, coax-based cable telephony, fiber or hybrid copper-fiber-based broadband telephony, mobile wireless, and home wireless services. Market distortions resulting from asymmetric revelation of competitively-sensitive information among these platforms, services and providers are inevitable, because information on costs and service rollouts is important and because the regulatory treatment of such information differs across the wireline, cable, wireless and broadband platforms. And distorting a competitive market outcome here could drive the market to adopt an inefficient platform, technology or service which could then persist for years.[20]

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[18] These terms refer to the idea that a small current competitive advantage for some technology, platform or service can lead to large and irreversible changes in the ultimate market allocation of those entities. *See, e.g.*, P.A. David, "Path Dependence – A Foundational Concept for Historical Social Science," *Cliometrica — The Journal of Historical Economics and Econometric History*, Vol. 1, No. 2, Summer 2007.

[19] The classic example of regulatory distortions is U.S. regulation of surface transportation in the 1950-1980 time period and the resulting inefficient mix of railroad, truck and barge infrastructure investment and, ultimately, traffic. Although the railroads were facing substantial intermodal competition from trucking by the mid-1950s, the railroads were saddled with outdated subsidy requirements and pricing restrictions. By the 1970s, every major Northeast railroad had gone bankrupt, and the number of operating track miles dropped dramatically. *See, e.g.*, R.D. Willig and W.J. Baumol, "Using Competition as a Guide," *Regulation*, Vol. 1 (1987) at 31.

[20] Note that this injury from distorted competition is even more substantial today than when *Encore* was decided in 1995 because facilities-based competition and entry in telecommunications are far more prevalent and the consequences of inefficient competition for consumers — locking the market into the wrong network platform — are far more serious.

V. CONCLUSION

22. In my opinion, the Determination that Verizon's confidential cost data should be made public will lead to substantial competitive injury to Verizon and will reduce consumer welfare wherever that cost information is relevant.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

William E. Taylor

WILLIAM E. TAYLOR

November 15, 2013

EXHIBIT 1

William E. Taylor

Special Consultant
National Economic Research Associates, Inc.
200 Clarendon Street, 11th Floor
Boston, MA 02116
617 927 4515
william.taylor@nera.com

Dr. Taylor received a B.A. *magna cum laude* in Economics from Harvard College, an M.A. in Statistics and a Ph.D. in Economics from the University of California at Berkeley. He has taught economics, statistics, and econometrics at Cornell and the Massachusetts Institute of Technology and was a post doctoral Research Fellow at the Center for Operations Research and Econometrics at the University of Louvain, Belgium.

At NERA, Dr. Taylor is a Special Consultant. Previously he headed the Boston office and was Director of the Telecommunications Practice. He has worked primarily in the field of telecommunications economics on problems of state and federal regulatory reform, competition policy, terms and conditions for competitive parity in local competition, quantitative analysis of state and federal price cap and incentive regulation proposals, and antitrust problems in telecommunications markets. He has testified on telecommunications economics in U.S. federal and state courts and the New Zealand High Court as an economic and statistical expert and has participated in telecommunications regulatory proceedings before state public service commissions, the Federal Communications Commission, the Canadian Radio-Television and Telecommunications Commission, the New Zealand Commerce Commission, the Indonesian antitrust authority, the Comisión Federal de Telecomunicaciones de México, and federal and state congressional committees. He has appeared as a telecommunications commentator on PBS Radio and on The News Hour with Jim Lehrer.

He has published extensively in the areas of telecommunications policy related to access and in theoretical and applied econometrics. His articles have appeared in numerous telecommunications industry publications as well as *Econometrica*, the *American Economic Review*, the *International Economic Review*, the *Journal of Econometrics, Econometric Reviews*, the *Antitrust Law Journal*, *The Review of Industrial Organization*, and *The Encyclopedia of Statistical Sciences*. He has served as a referee for these journals (and others) and the National Science Foundation and has served as an Associate Editor of the *Journal of Econometrics*.

Education

UNIVERSITY OF CALIFORNIA, BERKELEY
Ph.D., Economics, 1974

UNIVERSITY OF CALIFORNIA, BERKELEY
M.A., Statistics, 1970

HARVARD COLLEGE
B.A., Economics, 1968
(Magna Cum Laude)

Professional Experience

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. (NERA)
1988- Special Consultant, Senior Vice President, Office Head, Telecommunications Practice Director.

BELL COMMUNICATIONS RESEARCH, INC. (Bellcore)
1983-1988 Division Manager, Economic Analysis, formerly Central Services Organization, formerly American Telephone and Telegraph Company: theoretical and quantitative work on problems raised by the Bell System divestiture and the implementation of access charges, including design and implementation of demand response forecasting for interstate access demand, quantification of potential bypass liability, design of optimal nonlinear price schedules for access charges and theoretical and quantitative analysis of price cap regulation of access charges.

BELL TELEPHONE LABORATORIES
1975-1983 Member, Technical Staff, Economics Research Center: basic research on theoretical and applied econometrics, focusing on small sample theory, panel data and simultaneous equations systems.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Fall 1977 Visiting Associate Professor, Department of Economics: taught graduate courses in econometrics.

CENTER FOR OPERATIONS RESEARCH AND ECONOMETRICS
Université Catholique de Louvain, Belgium.
1974-1975 Post Doctoral Research Associate: basic research on finite sample econometric theory and on cost function estimation.

CORNELL UNIVERSITY
1972-1975 Assistant Professor, Department of Economics. (On leave 1974-1975.) taught graduate and undergraduate courses on econometrics, microeconomic theory and economic principles.

Miscellaneous

1985-1995 Associate Editor, *Journal of Econometrics*, North-Holland Publishing Company.
1990-2009 Board of Directors, National Economic Research Associates, Inc.
1995- 2006 Board of Trustees, Treasurer, Episcopal Divinity School, Cambridge, Massachusetts.

Publications

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