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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

September 7, 2001

Ex Parte

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Order Designating Issues For Investigation, *Bell Atlantic Telephone Companies Revisions in Tariff FCC Nos. 1 and 11*, Transmittal Nos. 1373 & 1374; *Verizon Telephone Companies Revisions in Tariff FCC Nos. 1 and 11*, Transmittal Nos. 23 & 24, CC Docket No. 01-140, DA 01-1525 (rel. June 26, 2001) ("*Designation Order*").

Dear Ms. Salas:

In response to the Commission's request for additional information in the above captioned proceeding, AT&T Corp. submits the attached Supplemental Declaration of Steven E. Turner. The declaration provides the following information: (1) additional support for the fact that maintenance costs for DC power equipment are much lower than for switching equipment; (2) identification of annual cost factors that are similar to those that would exist for DC power equipment; (3) the "Amperage" for each of the two power facilities that AT&T installed in Pennsylvania; and (4) an explanation as to why the SWBT Texas DC power cost studies provided by AT&T are representative of cost studies in other jurisdictions.

Sincerely,

Christopher T. Shenk

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	**CC Docket No. 01-140**
	)	**Transmittal No. 1373 and 1374**
Bell Atlantic Telephone Companies Revisions in Tariff FCC Nos. 1 and 11	)	
Verizon Telephone Companies Tariff FCC Nos. 1 and 11	)	**Transmittal Nos. 23 and 24**

SUPPLEMENTAL DECLARATION OF STEVEN E. TURNER ON BEHALF OF AT&T CORP.

Based on my personal knowledge and on information learned in the course of my duties, I, Steven E. Turner, declare as follows:

1. My name is Steven E. Turner. I am the same Steven E. Turner that filed a declaration in the above captioned proceeding on July 31, 2001 on behalf of AT&T Corp. ("AT&T"). The purpose of this supplemental testimony is to respond to Federal Communications Commission ("FCC") staff members' requests for additional information. As detailed below, I provide the following additional information: (1) additional support for the fact that maintenance work costs for power equipment are much lower than for switching equipment; (2) identification of annual cost factors that are similar to those that would exist for DC power equipment; (3) the "Amperage" for each of the two power facilities that AT&T installed in Pennsylvania; and (4) an explanation as to why the SWBT Texas DC power cost studies provided by AT&T are representative of cost studies in other jurisdictions.

2. *Maintenance work costs for power equipment are much lower than for switching equipment.* I have had considerable experience working in central offices, both in engineering and in operations. From that experience, I have found that switching equipment has maintenance related activities that require daily involvement of personnel with the switches. For example, personnel must regularly deal with switch translations where customers are experiencing calling difficulties. The maintenance personnel that deal with those issues are located either within the central office or within centralized remote operations centers that remotely maintain the switches. Personnel are also routinely involved in trunking activities, *e.g.*, adding, removing, or rearranging the trunks that are used to connect switches to one another or to tandems that serve the end offices. These network or switching maintenance activities are either handled in remote operations centers or jointly with technicians within the central office. Further, when customers experience local switch-related service problems, *e.g.*, features that do not operate properly, customer lines that will not provide dial tone, customer lines that will not break dial tone when the customer dials, or other similar problems, remote operations personnel (who are dedicated to switching functions) and/or local personnel within the central office must perform maintenance activities on the switch to correct these problems. Moreover, the problems described above occur every day with respect to many different customers. Accordingly, a large number of incumbent personnel are required just to respond to such customer trouble reports. Finally, switching equipment requires additional maintenance to address issues associated with circuit packs and alarms that may not immediately affect end user customers, but which still require the attention of technicians both in remote operations centers and in the central office.

3. By contrast, the work activities associated with the power plant are significantly lower. Overall, the power plant requires a very low level of staffing – normally less than one equivalent person – to support the power plant for an entire central office.[1] Although routine maintenance is required for the power plant, mostly for the batteries and rectifiers, and periodic testing is required for the emergency engine system (which requires interrupting the AC power feed from the electrical utility and ensuring that the backup engine properly engages), these routines occur infrequently and do not take a significant amount of time to complete. Further, in my experience, there is little work associated with actual failures in the power plant, and there are no end-user customer related calls that prompt maintenance work on the power plant. In short, because of the relative simplicity of the power plant compared to switching equipment, there is significantly less maintenance required on the power plant.

4. In summary, while it is difficult to precisely quantify the difference in maintenance work between switching and power assets, based on the factors described above, I estimate that the ratio of switching maintenance labor hours compared to power equipment maintenance labor hours could be as high as 20 to one.

5. *Digital Circuit Equipment annual cost factors are the most reliable proxies for DC power annual cost factors.* The ideal annual cost factor ("ACF") for DC power would, of course, be one that is actually based on DC power equipment. Accordingly, Verizon (and other incumbent LECs) should be required to base their DC power rates on ACFs that were developed based on their DC power equipment costs. However, if LECs are permitted to compute DC

[1] In my experience, there will normally be more than one technician within the central office who will be trained in power maintenance, and these technicians will spend only a small portion of their time on the power plant, *i.e. power plant maintenance requires* less than one "equivalent" technician.

power rates based on a proxy ACF for DC power equipment, that proxy should, at least, be derived from an ACF for equipment with the most similar cost characteristics to that of transport equipment.

6. AT&T, in its Collocation Cost Model, uses the annual cost factors for USOA Account 2232 – Digital Circuit Equipment, *i.e.*, transport equipment, to develop the recurring rates for DC Power. In my opinion, those are the best proxy cost factors available for DC power equipment. The type of equipment that collocators use, and accordingly the type of equipment they plug into incumbents' power plants is transport or digital circuit equipment.[2] Therefore, Verizon's own logic of connecting the power plant assets (for cost factor application) to the assets they are providing power to[3] would lead to using USOA Account 2232 – Digital Circuit Equipment factors in the development of the DC power recurring rate. Furthermore, in my experience, the maintenance associated with transport equipment is a more accurate proxy of the maintenance level for DC power equipment than is that for switching equipment.

7. *The "amperage" for each of the two power facilities that AT&T installed in Pennsylvania.* There are several different elements in a DC power plant that can be used to determine the amperage of the plant. The maximum size of a DC power plant is limited by the smaller of the amperages of the shunt[4] and the bus bar.[5] With respect to Order No. 8PB996,

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[2] Collocators predominantly place SONET transport equipment, Digital Loop Concentrators (DLCs), and multiplexing equipment in their collocation space, all of which fall into the category of transport or digital circuit equipment.

[3] *Verizon Direct Case*, CC Docket No. 01-140, Transmittal Nos. 1373 and 1374 and Transmittal Nos. 23 and 24, July 17, 2001, Exhibit G, p. 1.

[4] In layman's terms, the "shunt" is like a fuse for the entire power plant that limits the amperage that can enter the power plant within the central office. If a significant spike in the current that is entering the office occurred, the shunt would physically disintegrate, opening the circuit into the

AT&T installed a 5,200 amp bus bar and a 6,000 amp shunt. The maximum size of this AT&T power plant is therefore 5,200 amps. With respect to Order No. 8PA3GV, AT&T installed a 5,200 amp bus bar and a 4,000 amp shunt. The maximum size of this AT&T power plant is therefore 4,000 amps.

8. The other factor that must be considered in determining the size of a DC power plant is the size and capacity of the rectifiers that are installed for use in the power plant. While the bus bar and/or shunt determine the maximum size of the power plant, the rectifier capacity determines the amount of power that the power plant can presently provide. In Order No. 8PB996, the project installed 12 200-amp rectifiers with a capacity of 2,400 amps.[6] In Order No. 8PA3GV, the project installed eight 400-amp rectifiers with a capacity of 3,200 amps.[7]

9. These two AT&T power plants are comparable in size, design, configuration, and quality to the plants used by Verizon in its cost submission.[8] Verizon reported a 5,000 amp bus bar size for its Metro offices.[9] As noted above, AT&T used 5,200 amp bus bars in its two

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central office, and thereby protecting the equipment within the central office from the surge in current.

[5] The "bus bar" is similar to the shunt described above in that it functions like a fuse for the entire power plant. The primary difference between the shunt and the bus bar is that the bus bar is placed on the power plant ground whereas the shunt is placed on the power plant feed.

[6] There are thirteen 200-Amp rectifiers on the order, but one is a spare that should not be used in calculating the capacity of the plant.

[7] There are nine 400-Amp rectifiers on the order, but one is a spare that should not be used in calculating the capacity of the plant.

[8] Both Verizon and AT&T submitted data for Lucent-provided DC power plants, and a comparison of the detailed equipment listings reveals that many major components such as rectifiers and batteries are identical.

[9] *See,* VA-WP 6.0, pg. 3, Line No. 1.

installations. Further, Verizon reported the use of 2,400 amps of rectifier capacity in its Metro offices. AT&T used 2,400 amps and 3,200 amps of rectifier capacity in its two installations.

10. The reason that the in-place factors supported by AT&T's power plants are different from those proposed by Verizon is that Verizon has not provided the in-place factors for installing its 5,200 amp bus bar, 2,400 amps of rectifier capacity and all of the related equipment at the same time. Instead, Verizon has provided the in-place factors for very small augment projects to *existing* power plants. These projects and the inflated in-place factor they produce in no way represents a fair and reasonable estimate of the efficiencies Verizon enjoys in its own power plants overall. Verizon generally *does* install the bulk of its power plant investment and capacity at one time, and not in the small augments that it has used in its tariff filing. Misuse of the in-place factor from small, disparate augments produces an inflated cost factor that leads to over-recovery of total power costs.

11. *Texas Data Is Representative.* As I explained in my initial declaration, I have personally reviewed the DC Power Consumption cost studies for incumbents in California, Delaware, Hawaii, Kansas, Massachusetts, Michigan, Missouri, Nevada, Oklahoma, Pennsylvania, Texas, Washington, and Wisconsin and I have found that the Verizon methodology for computing DC power rates is unique.[10] Unfortunately, my review of all of the cost studies for each of these states was subject to strict non-disclosure agreements. The only state commission, of which I am aware, that has made the cost studies publicly available is the

[10] There are other states for which I have reviewed the cost recovery structures but have not reviewed the cost studies. In these other states the same structure is used as is found in the 13 states for which I have reviewed the cost studies.

Texas Public Utility Commission, and I provided the Commission with that information in my initial declaration.

VERIFICATION PAGE

I, Steven E. Turner, declare under penalty of perjury that the foregoing is true and correct.

Steven E. Turner

Executed on September 7, 2001.

CERTIFICATE OF SERVICE

I hereby certify that on this 7th day of September, 2001, I caused true and correct copies of the forgoing Supplemental Declaration of Steven E. Turner. to be served on all parties by mailing, postage prepaid to their addresses listed on the attached service list.

Dated: Septempber 7, 2001
Washington, D.C.

Patricia Bunyasi

Patricia A. Bunyasi

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