EX PARTE OR LATE FILED

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February 14, 1995

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW - Room 222
Washington, DC 20554

Dear Mr. Caton:

RE: Ex-Parte Meeting
CC Docket No. 94-1

On February 13th, Lee Selwyn of Economics and Technology, Inc. and Colleen Boothby of Levine, Blaszak, Block & Boothby, representing the Ad Hoc Telecommunications Users Committee ("Ad Hoc") met with Jim Coltharp, Special Advisor to Commissioner Barrett; Michael Katz, Chief Economist, Office of Plans and Policy; Richard Metzger, Deputy Chief of the Common Carrier Bureau; Mark Uretsky of the Common Carrier Bureau's Tariff Division; and Richard Welch, Legal Advisor to Commissioner Chong. The attached documents were discussed. In addition, the meeting included a discussion of the February 1, 1995 letter from Frank McKennedy, Director of Policy Analysis, USTA, to William F. Caton, *ex parte* notice in CC Docket 94-1 (February 1, 1995) ("USTA February 1 Filing") and the February 3, 1995 letter from Mary McDermott, Vice President and General Counsel, USTA, to William F. Caton, *ex parte* notice in CC Docket 94-1 (February 3, 1995) ("USTA February 3 Filing").

The original and a copy of this *ex parte* notice are being filed in the Office of the Secretary. Please include it in the public record of this proceeding.

If you have any questions regarding this filing, please do not hesitate to call us.

Respectfully submitted,

Leah Moebius

cc: Jim Coltharp
Michael Katz
Richard Metzger
Mark Uretsky
Richard Welch
International Transcription Service

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Development of a Total Offset ("X") Factor for LEC Interstate Services

The LEC productivity minus input price calculations on the record to date have been developed on a total company basis; there is no differentiation between interstate and intrastate services. However, the Christensen 1994 Study provides information which allows one to make some approximate calculations regarding the TFP growth rate of the IXC component of LEC output. The results of such a calculation can be compared with the total company results that are already on the record:

Average Annual Growth Rates, 1984-1992

	Output Quantity	Input Quantity	TFP
TOTAL COMPANY	3.5%	0.9%	2.6%
Input Price Differential Relative to GDP-PI:			2.6%
Consumer Productivity Dividend			0.5%
Total Offset ("X") Factor			5.7%
INTERSTATE ONLY	6.2%	0.9%	5.3%
Input Price Differential Relative to GDP-PI:			2.6%
Consumer Productivity Dividend			0.5%
Total Offset ("X") Factor			8.4%

The total company input quantity growth rate of 0.9% calculated by Christensen was assumed to be applicable to interstate services; the 6.2% output quantity growth rate is calculated from Christensen's 1994 study data. The derivation of the 6.2% interstate output quantity growth rate is shown on the next page.

Data Sources: Christensen 1994 Study, May 3, 1994 at 11
and USTA Response, June 2, 1994 at Tables 3 and 4.

Calculation of LEC Interstate Output Price Growth

Output Quantity Indexes

Year	Interstate End User Access	Interstate Switched Access	Interstate Special Access
1984	1.000	1.000	1.000
1985	1.030	1.068	1.207
1986	1.056	1.145	1.377
1987	1.088	1.268	1.466
1988	1.109	1.420	1.465
1989	1.143	1.592	1.418
1990	1.173	1.705	1.410
1991	1.212	1.804	1.320
1992	1.213	1.914	1.401

Revenue Shares - Total Output

	Interstate End User Access	Interstate Switched Access	Interstate Special Access
1984	0.009	0.191	0.032
1985	0.024	0.181	0.030
1986	0.037	0.167	0.038
1987	0.047	0.153	0.039
1988	0.053	0.149	0.036
1989	0.064	0.139	0.032
1990	0.067	0.129	0.031
1991	0.068	0.126	0.029
1992	0.069	0.126	0.029

Growth Rates

	Interstate End User Access	Interstate Switched Access	Interstate Special Access
1984	N/A	N/A	N/A
1985	0.030	0.066	0.188
1986	0.025	0.070	0.132
1987	0.030	0.102	0.063
1988	0.019	0.113	-0.001
1989	0.030	0.114	-0.033
1990	0.026	0.069	-0.006
1991	0.033	0.056	-0.066
1992	0.001	0.059	0.060

Revenue Shares - Interstate Only

	Interstate End User Access	Interstate Switched Access	Interstate Special Access
1984	N/A	N/A	N/A
1985	0.102	0.770	0.128
1986	0.153	0.690	0.157
1987	0.197	0.640	0.163
1988	0.223	0.626	0.151
1989	0.272	0.591	0.136
1990	0.295	0.568	0.137
1991	0.305	0.565	0.130
1992	0.308	0.563	0.129

Revenue-Weighted Output Growth Rates

	Interstate End User Access	Interstate Switched Access	Interstate Special Access
1984	N/A	N/A	N/A
1985	0.003	0.051	0.024
1986	0.004	0.048	0.021
1987	0.006	0.065	0.010
1988	0.004	0.071	-0.000
1989	0.008	0.068	-0.004
1990	0.008	0.039	-0.001
1991	0.010	0.032	-0.009
1992	0.000	0.033	0.008

Average Output Growth Rate for LEC Interstate Services, 1984-1992: 6.23%

Productivity of the Local Operating Telephone Companies Subject to Price Cap Regulation

Laurits R. Christensen, Philip E. Schoech,

and Mark E. Meitzen

Christensen Associates

May 3, 1994

Table 1

Local Exchange Carrier Total Factor Productivity

	Total Output Index	Total Output Growth Rate	Total Input Index	Total Input Growth Rate	TFP Index	TFP Growth Rate
1984	1.000		1.000		1.000	
1985	1.031	3.0%	1.012	1.2%	1.019	1.9%
1986	1.062	3.0%	1.015	0.3%	1.047	2.7%
1987	1.103	3.8%	1.033	1.8%	1.068	2.0%
1988	1.160	5.0%	1.065	3.0%	1.089	1.9%
1989	1.219	5.0%	1.094	2.7%	1.114	2.3%
1990	1.266	3.8%	1.086	-0.7%	1.165	4.5%
1991	1.295	2.3%	1.099	1.2%	1.178	1.1%
1992	1.322	2.1%	1.078	-1.9%	1.227	4.0%
Average Growth 1984-92		3.5%		0.9%		2.6%

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of:	)	
	)	
Price Cap Performance Review	)	CC Docket No. 94-1
for Local Exchange Carriers	)	

RESPONSE
OF THE
UNITED STATES TELEPHONE ASSOCIATION
TO AD HOC's MOTION TO COMPEL AND
MOTION FOR EXTENSION OF TIME

USTA hereby responds to the "Motion to Compel Production of Supporting Data" and the Motion for Extension of Time filed by the Ad Hoc Telecommunications Users Committee ("Ad Hoc"). At the outset, USTA wants to make clear that it wishes to cooperate with the Commission and with other parties to this proceeding whenever possible. In that spirit, USTA is attaching the data that Ad Hoc lists at Footnote 3 to its Motion to Compel.[1] However, Ad Hoc's Motion to Compel is seriously flawed in several respects.

First, Ad Hoc attempts through its Motion to cast unjustified and unsupported aspersions on USTA's May 9 comments in this proceeding. The Commission should give short shrift to Ad Hoc's attempt in its Motion to discredit USTA. Contrary to Ad Hoc's assertions, USTA did not "omit" parts of the Christensen Study, there is no "missing data"

[1]Specifically, attached to this response are the following four tables: 1) Annual Price and Quantity Indexes of Inputs (1984-92); 2) Annual Input Cost Shares (1984-92); 3) Annual Price and Quantity Indexes of Outputs (1984-92); and 4) Annual Revenue Shares (1984-92).

Table 3
Annual Price and Quantity Indexes of Outputs

Output Quantity Indexes

	Local	Interstate End User Access	Interstate Switched Access	Interstate Special Access	Intrastate Access	Long Distance	Misc	Total Output
1984	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1985	1.009	1.030	1.068	1.027	1.095	0.988	1.062	1.031
1986	1.034	1.056	1.145	1.377	1.114	1.063	0.909	1.062
1987	1.043	1.088	1.268	1.466	1.185	1.144	0.890	1.103
1988	1.057	1.109	1.420	1.465	1.183	1.246	1.018	1.160
1989	1.096	1.143	1.592	1.418	1.235	1.343	1.037	1.219
1990	1.158	1.173	1.705	1.410	1.254	1.380	1.010	1.266
1991	1.196	1.212	1.804	1.320	1.289	1.369	1.015	1.295
1992	1.247	1.231	1.914	1.401	1.327	1.350	0.931	1.322

Output Price Indexes

	Local	Interstate End User Access	Interstate Switched Access	Interstate Special Access	Intrastate Access	Long Distance	Misc	Total Output
1984	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1985	1.050	2.658	0.941	0.973	1.028	1.011	1.035	1.034
1986	1.085	4.184	0.845	0.947	0.993	1.009	1.065	1.042
1987	1.088	5.253	0.710	0.922	0.951	0.993	1.098	1.020
1988	1.072	5.994	0.641	0.898	0.916	0.967	1.141	1.001
1989	1.058	7.127	0.541	0.829	0.891	0.928	1.192	0.974
1990	1.033	7.382	0.477	0.820	0.861	0.895	1.247	0.945
1991	1.042	7.376	0.446	0.842	0.823	0.868	1.297	0.938
1992	1.040	7.463	0.425	0.806	0.785	0.855	1.340	0.929

Christensen Study Data

Table 4
Annual Revenue Shares

	Local	Interstate End User Access	Interstate Switched Access	Interstate Special Access	Intrastate Access	Long Distance	Misc
1984	0.439	0.009	0.191	0.032	0.073	0.160	0.095
1985	0.438	0.024	0.181	0.030	0.073	0.153	0.101
1986	0.446	0.037	0.167	0.038	0.071	0.157	0.084
1987	0.444	0.047	0.153	0.039	0.072	0.163	0.083
1988	0.427	0.053	0.149	0.036	0.070	0.168	0.095
1989	0.430	0.064	0.139	0.032	0.069	0.167	0.099
1990	0.438	0.067	0.129	0.031	0.070	0.164	0.100
1991	0.449	0.068	0.126	0.029	0.070	0.154	0.103
1992	0.461	0.069	0.126	0.029	0.071	0.147	0.096

Summary of Changes
from USTA 1994 TFP Study to USTA 1995 TFP Study

Averages for 1984 - 1992

	1994 Study	1995 Study
capital		
input price	-1.9%	-0.6%
input quantity	3.5%	3.8%
avg share	47.0%	45.4%
labor		
input price	3.7%	3.6%
input quantity	-3.3%	-3.3%
avg share	28.7%	31.3%
materials		
input price	3.7%	3.7%
input quantity	1.1%	1.4%
avg share	24.3%	23.3%
aggregate input		
input price	1.1%	1.7%
input quantity	0.9%	1.0%
check shares	100.0%	100.0%
aggregate output		
output quantity	3.5%	3.4%
total factor productivity	2.6%	2.4%

CC Docket 94-1
Price Cap Performance Review

CAPTURING LEC PRODUCTIVITY GROWTH AND RELEVANT INPUT PRICE EXPERIENCE IN THE PRICE ADJUSTMENT MECHANISM

Ad Hoc Telecommunications Users Committee

October 26, 1994

Attachment 3

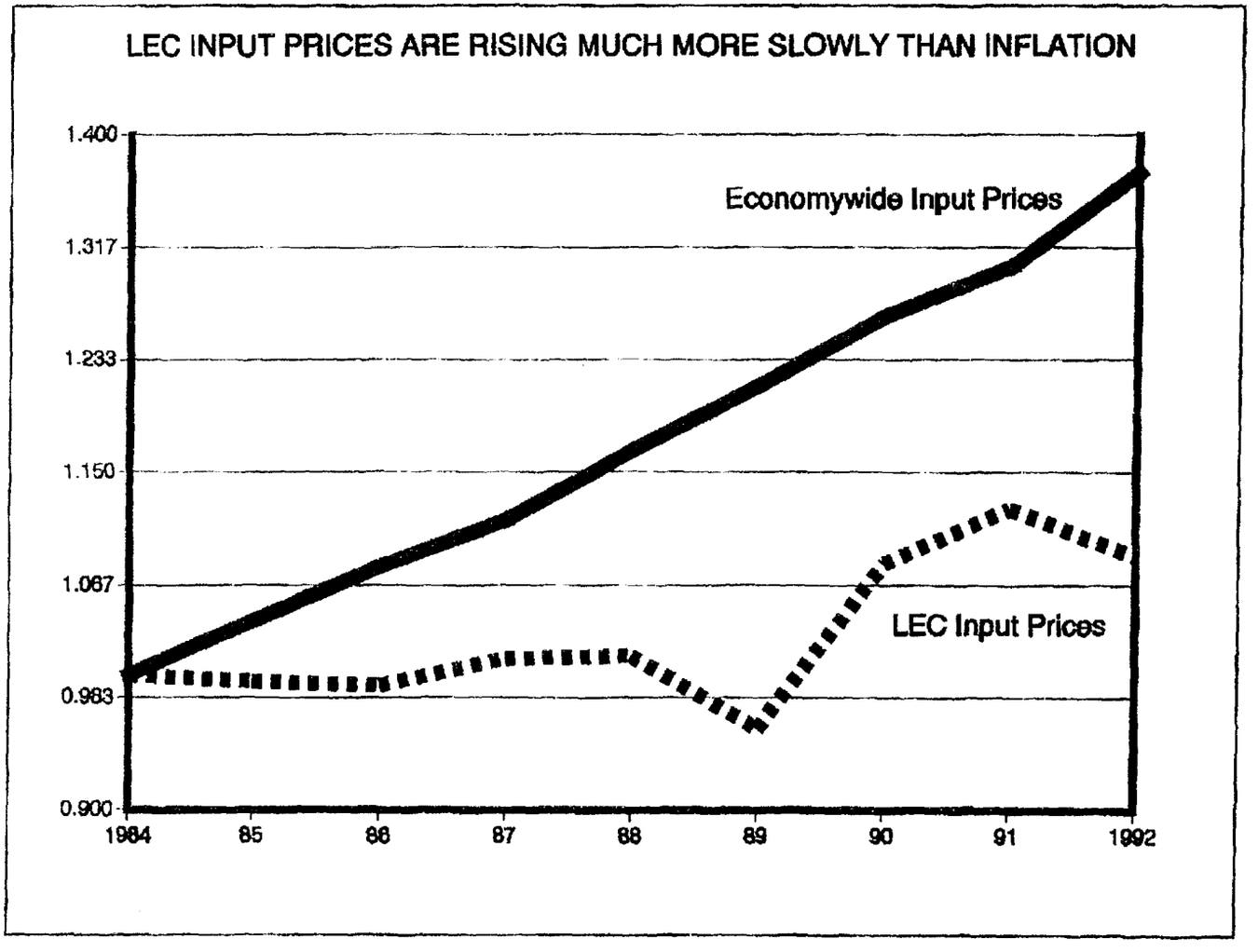
The basic function of a price cap plan is to reflect, to the greatest extent possible, competitive market conditions.

The basic function of the "X factor" in the price cap formula is to capture and reflect the "competitive result" of normal industry-wide cost conditions.

The principal drivers affecting LEC industry costs are

- **Economy-wide inflation rates, reflected in the GDP-PI;**
- **Productivity growth within the LEC sector;**
- **Productivity growth within principal LEC supplier sectors that are flowed through to LECs in the prices LECs pay for their inputs; and**
- **Salutary effects of incentive regulation on overall LEC efficiency**

LEC input prices have risen far more slowly than economy-wide inflation rates



The slow rate of LEC input price growth is the result of

- Substantial competition in the provision of LEC inputs, particularly capital equipment and other capital assets
- Accelerating rate of technological innovation in the telecommunications equipment sector, pushing prices down and capabilities/capacities up
- Capital-intensiveness of LECs
- Low interest rates
- Moderate growth in LEC wages due to rapidly declining LEC demand for labor

USTA claims that over the long term (i.e., since 1948), LEC input prices have grown at the same rate as economy-wide input prices.

- Pre-divestiture LEC input price experience cannot capture current market conditions
- Post-divestiture BOCs are not engaged in the same business as the pre-divestiture Bell System
  - CPE rentals, which represented in the range of 20% or more of pre-divestiture Bell revenues, are no longer offered
  - InterLATA long distance services which, exclusive of access charges, represented at least 10% of pre-divestiture Bell revenues, are no longer offered
- And, most importantly, the vertical integration of the pre-divestiture Bell System no longer exists

Pre-divestiture LEC input price experience cannot capture current market conditions

- Due to vertical integration of Western Electric with Bell Operating Companies, the nature and mix of pre-divestiture "inputs" was dramatically different than now, making pre-divestiture input price experience entirely irrelevant for present and future conditions.

- There was minimal or no competition in the provision of equipment and most materials to the pre-divestiture Bell System Operating Companies.

  - Pre-divestiture Bell System companies purchased virtually all CPE, central office switches and other equipment, wire and cable, transmission systems, and most materials and supplies, from their "manufacturing and supply" affiliate — Western Electric Company

  - WECO faced no competitive pressures to innovate or to improve its overall productivity; intense competition in today's telecom equipment market forces incumbents to pursue both technology and productivity, and to flow through gains directly to their customers.

USTA seeks to "cherry-pick" its way through fundamentally conflicting positions of its own experts

- Taylor asserts that LEC input price movements are not "statistically different" from economy-wide input price changes, which he contends are growing at the rate of GDP-PI + 0.3%, i.e., 4% annually since 1984.
  - Taylor bases his claim on the use of long-term, mostly pre-divestiture input price experience for the period 1948-1979
  - But he also contends that growth in post-divestiture (1984-92) input prices are not statistically different from economy-wide price movements
- Christensen, however, studied LEC Total Factor Productivity (TFP) for the post-divestiture period (1984-92) and in that study employs post-divestiture LEC input price data showing LEC input price growth for the period at an annual rate of 2.6% less than GDP-PI, the very same data that Taylor rejects as anomalous!

USTA relies on Christensen's TFP growth rate estimate (2.6%) but jumps over to Taylor's position when it comes to LEC input prices

Christensen:

LEC Productivity grew at least 2.6% per year for 1984-1992.

Productivity growth is best measured by Total Factor Productivity ("TFP").

TFP growth rate = output quantity growth rate – input quantity growth rate

Based on the Christensen May 1994 Study for 1984-1992 period

LEC output quantity grew at 3.5%

LEC input quantity grew at 0.9%

Therefore, LEC TFP annual growth rate = 2.6%.

Christensen's TFP using Taylor's input price theory:

The GDP-PI minus 2.6% input price component is integrally related to the 1.1% input price growth rate and the 0.9% input quantity growth rate used in the Christensen May, 1994 study.

The integral relationship between input price and input quantity is a known economic fact in the context of TFP studies. If one changes, the other must also change.

- **Thus if USTA wants now to discredit Christensen's input price measure, the result would be a direct and immediate change in the measure of TFP.**

- **Our analysis shows that changing the input price growth rate to USTA's claimed value, and then recalculating TFP using Christensen's process, leads to essentially the same X Factor as under the Ad Hoc formulation.**

Christensen's TFP using Taylor's input price theory:

While the lack of all input data used by Christensen precludes a complete replication of his process, a rough calculation illustrates this point.

Because USTA did not supply the input expenditure data that Christensen utilized, it was first necessary for us to extrapolate this value from the data that was supplied

- **Christensen had calculated that total LEC input quantity increased at a rate of 0.9% by, in effect, subtracting the rate of change in input prices from the rate of change in dollar expenditures on inputs.**

On that basis, and using his input price growth rate of 1.1%, total dollar expenditures on inputs must have increased at an annual rate of 2.0%.

Christensen's TFP using Taylor's input price theory:

Suppose USTA replaces Christensen's 1.1% input price growth rate with Taylor's claimed 4.0% input price growth rate. Since the growth in total dollar expenditure on inputs was 2.0%, input quantity must have decreased at a rate of 2.0% (i.e., 2.0% growth in expenditures minus 4.0% increase in input prices).

Christensen study:

Input quantity growth = 2.0% expenditure growth – 1.1% input price growth = 0.9%

Christensen study revised per Taylor input price growth:

Input quantity growth = 2.0% expenditure growth – 4.0% input price growth = –2.0%

TFP would then be calculated as output quantity growth of 3.5% minus the input quantity growth of –2.0%, resulting in a TFP growth rate of 5.5%.

- **This calculation can be readily confirmed by the Commission were it to obtain from USTA all data necessary to replicate Christensen's analysis**

Ad Hoc vs. USTA on the development of the X factor

	Ad Hoc	USTA
Productivity	2.6%	2.6%
Input Price Differential	GDP-PI – 2.6%	GDP-PI + 0.3%
Consumer Productivity Dividend	0.5%	0.0%
Final Price Cap Index Formula	GDP-PI – 5.7%	GDP-PI – 2.3%

Adoption of the USTA position would result in an inappropriate transfer of at least $8-billion of wealth from telecommunications users to LECs over the next four years, chilling competitive activity and creating a significant drag on the US economy.

The parties' positions on the X Factor / Price Cap Formula issue

Ad Hoc analysis yields 5.7% .

AT&T analysis yields 5.47% .

MCI analysis yields 5.9% .

USTA method, but using Taylor's input price theory, yields 5.7%

These results explain why LEC rates of return have increased under the 3.3% price cap program.

Clearly, the X Factor should be increased to at least 5.7%.

In a competitive market, firms do not retain indefinitely the fruits of their efficiency and productivity gains

- **Benefits will be retained only for a short period of time, and will disappear once improvements and innovations are mimicked by competitors**

By contrast, in resisting consumer dividend and sharing, USTA seeks to capture permanently all LEC productivity and efficiency gains, a result that is simply not possible under competitive market conditions.

Ad Hoc Telecommunications Users Group

Response to USTA's latest TFP Study and "Rolling Average" Proposal

A. USTA's eleventh hour filing is procedurally defective

The Commission should reject USTA's last-ditch attempt to de-rail the price caps rule changes that have been justified by the record in this docket:

> USTA's earlier study has been battered by commenters who identified major flaws.
>
> USTA buried substantial revisions in its last minute *ex parte* filing, including changes to the *historical* data upon which its earlier productivity study was supposedly based.
>
> Thus, USTA has conceded that its earlier submission was unreliable.

Eleventh hour data dumps deprive the Commission and interested parties of any meaningful opportunity to comment:

> Critical scrutiny of USTA's previous version of its TFP study disclosed fundamental defects.
>
> By inserting significant data changes into the record at the last minute, USTA can effectively insulate its "evidence" from critical review

Therefore, the Commission should give little or no weight to this filing when it considers the countervailing evidence in the record.

B. USTA's new plan and new data cannot withstand even cursory review

1. USTA failed to correct defects in its calculation of the X factor

Ad Hoc pointed out in earlier pleadings that the annual change in the prices of inputs utilized by LECs is growing at a consistently *slower* rate than the economy-wide input price changes USTA used in its TFP study. What USTA used produces an artificially low X factor.

Rather than correct that error, USTA's new study continues to use a much higher inflation rate as the basis for the annual change in LEC input prices.

2. The USTA proposal itself refutes USTA's claim that its new proposal relies on a mere mechanical process.

- The new January 1995 Christensen study appears to constitute a major revision of the earlier work, including pervasive and significant modifications to the underlying historical data for the same 1984-1992 time period included in the original study.

If the calculation of the TFP or of a differential TFP is as mechanical as USTA claims, so extensive a revision as it now offers should not have been possible or even imaginable.

3. USTA's Proposed TFP Calculations Won't Be Based on Publicly Available Information

USTA claims that the ongoing recalculation of LEC productivity that it proposes uses publicly-available data on LEC prices and costs.

That data will not be publicly available as the LEC's ARMIS reporting and tariff filing support requirements change or if LEC services are de-tariffed or offered at prices that are not directly reflected in LEC tariffs and other "public record" documents.

USTA is also asking for precisely those regulatory changes that will reduce available information regarding LEC costs and demand.

4. The USTA Plan would re-establish the link between rates and costs

The TFP USTA would use is limited to the price cap LECs themselves. By using that TFP in a five-year moving average, USTA's proposal gives price caps LECs both the ability and the incentive to keep productivity measures low:

> The annually-recalculated X factor would be driven by current changes in LEC TFP, trended by means of a moving average.
>
> Any activities that result in a lower TFP for a particular year will reward the LEC with a lower X factor two years forward.
>
> Therefore, when LECs pursue speculative and/or non-productive capital spending programs, whose costs are not expressly allocated away from interstate services subject to price cap regulation, the LECs can produce