

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Ex Parte No. 431 (Sub-No. 4)

**REVIEW OF THE SURFACE TRANSPORTATION BOARD'S
GENERAL COSTING SYSTEM**

Verified Statement

of

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June 20, 2013

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Introduction

My name is Tom O'Connor. I am President of the economic consulting firm of Tom O'Connor Group, LLC ("TOG"). My business address is 13222 Pt Pleasant Dr., Fairfax, VA 22033. The Tom O'Connor Group, LLC, was founded in 2012 to conduct research on a consulting basis into the rates, revenues, costs, and economic performance of firms and industries. Tom O'Connor Group, LLC is an economic and management consulting company focusing primarily on transportation and utilities. As my resume in Exhibit No. (TOC__1) indicates, I have been in the economic analysis business for more than 30 years, serving transportation clients including railroads, shippers and government agencies, in the United States, Canada and Europe. I have been assisted in preparing this Verified Statement by John Legieza, Manager of Financial Analysis for the Tom O'Connor Group, LLC. A statement of my qualifications and experience is included as Exhibit No. (TOC__1) to this Opening Verified Statement. A statement of John Legieza's qualifications and experience is included as Exhibit No. (JL__1) to this Opening Verified Statement.

Tom O'Connor Group, LLC draws on a professional staff of economists, accountants, engineers, and cost analysts. Much of our work involves the development, preparation, and presentation of expert testimony before federal and state regulatory agencies. Over the course of my career, I have participated in hundreds of projects and have testified in dozens of proceedings before state and local courts and agencies and Federal courts and commissions. I have been involved with the development and application of the Uniform Rail Costing System ("URCS") and its predecessor regulatory cost system, Rail Form A, throughout much of my career. I have previously testified on both URCS and Rail Form A on behalf of both shippers and railroads .

In addition to the regulatory economic analysis systems, I have also been responsible for development and application of other governmental and private sector economic analysis and costing systems. Much of my summary of related research centers on identification of the underlying cause and effect processes driving the economics of cost incurrence. This work focused on valid and reliable cost

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finding and cost allocation. Some of that research is summarized in the next Section. A more extensive summary of my qualifications and related experience is included in Exhibit No. (TOC__1).

In this proceeding we respond to the Board Decision excerpted below. We focus our

Opening Comments on one central aspect of URCS; the estimates of cost variability which drive results throughout URCS.

SURFACE TRANSPORTATION BOARD

DECISION

Docket No. EP 431 (Sub-No. 4)

REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM

Digest: In this decision, the Board grants the Association of American Railroads' petition for clarification and additional information, and makes available certain information to allow interested parties to conduct a thorough analysis of the Board's proposed changes to the Uniform Railroad Costing System. To provide commenters with sufficient time to evaluate this information and to prepare comments, the Board is extending the procedural schedule in this proceeding by 45 days.

Decided: April 24, 2013

On February 4, 2013, the Board issued a Notice of Proposed Rulemaking that proposed certain changes to its general purpose costing system, the Uniform Railroad Costing System (URCS). Specifically, the Board proposed to adjust how certain system-average unit costs are calculated in Phase II of URCS, thereby obviating the need for URCS to apply a separate make-whole adjustment in Phase III. The Board also proposed other related changes to URCS that would result in more accurate movement costs, as well as changes to two of its reporting requirements to support these proposals.

On March 4, 2013, the Association of American Railroads (AAR) filed a petition for clarification and additional information. In its petition, AAR requests that the Board "provide additional information as to the formula that it uses to calculate the make-whole adjustment and make available an electronic version of the work papers applying the formula to generate the 2011 make-whole adjustments for all Class I carriers." (Pet. at 3-4.) AAR also asks the Board to "release any materials underlying the proposed changes which provide details of the formulas proposed for the new calculations of the cost per switch event and the clerical cost per origination and termination event." (Pet. at 4.)

To allow commenters to conduct a thorough analysis of the Board's proposed changes to URCS, the Board will make the following items available to commenters. First, the Board will make the uncoded 2011 Waybill Sample available, under customary protective orders. See 49 C.F.R. § 1244.9(f). Second, the Board will provide to commenters the source code used to cost the Waybill Sample. Third, the Board will make available both the intermediate outputs that result from using the source code when costing the Waybill Sample, and the coded 2011 Waybill Sample, both under customary protective orders. Id. Fourth, to provide commenters with an additional method of evaluating the formula used to calculate the make-whole adjustment, we will also provide a spreadsheet of a small record set that serves as an example of how the make-whole adjustment is calculated, also under customary protective orders. Id. This small record set manually calculates the make-whole adjustments and shows that those calculations match the costs calculated using the Waybill costing process. Fifth, we will provide descriptions to changes in the calculations of certain Phase III line items to reflect the Board's new proposals.

We are providing the changes in calculations of certain Phase III line items (item five above) as appendices to this decision. For all other items that we are making available pursuant to this

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decision, parties should submit a written request to the Board's Office of Economics, and reference this proceeding. As stated, we will make the Waybill Sample disclosure and the small record set disclosure available subject to customary protective orders. We will also entertain requests that subsequent pleadings using this information be filed under seal so that confidential information is protected. If participants are permitted to file their pleadings under seal, they will also be required to file a public version with confidential information redacted. To provide commenters with sufficient time to evaluate the information we are providing here and to prepare comments, we will extend the procedural schedule in this proceeding by 45 days. Accordingly, comments are now due June 10, 2013, with reply comments due July 9, 2013.

This action will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

1. The Board grants AAR's petition for clarification and additional information, and will make available the information as described in the above decision.
2. Comments are due by June 20, 2013; replies are due by September 5, 2013. Pleadings containing confidential information must be filed under seal, along with public versions with confidential information redacted.
3. This decision is effective on its service date.

By the Board, Chairman Elliott, Vice Chairman Begeman, and Commissioner Mulvey.

Overview of Our Comments

As we will show, some of the proposed techniques, particularly the “Make Whole Adjustment”, are severely hampered by absence of supporting economic evidence. Other recommended measures are notable by their absence; particularly due diligence work on the cost variability estimates. These cost variability estimates drive and determine URCS results. We recommend remedying these defects. Simply put, the cost variability estimates should be updated, recalibrated and recomputed.

Summary of Selected Prior Economic Cost Research.

We previously carried out the related projects summarized in this section, most of which were submitted in testimony before the ICC or the STB and each of which involved rail transportation economic cost research. Many of these projects directly involved URCS or its predecessor regulatory rail cost system, Rail Form A, or both regulatory rail cost systems. Some, like Conrail's COSAC were developed for and applied in internal railroad management analyses. Similarly the analyses in most of these projects were developed for and applied in the United States. Some were developed for and applied in Canada and in other countries.

- **Prior Research on Canadian Rail Cost Systems**

- This project included participation in economic analysis and expert testimony centering on transportation operations and costs. The resultant report was submitted on behalf of the Canadian provinces of Alberta, Manitoba and Saskatchewan before a Canadian Crown Commission (The Snavely Commission) in a series of hearings held in Winnipeg, Manitoba and Regina, Saskatchewan in 1976. This proceeding led to historic changes in Canadian rail transportation regulation.

- **Prior Research on United States Rail Cost Systems**

- Development, installation and implementation of Conrail's internal management economic analysis system, Contribution Simulator and Calculator (COSAC). COSAC was used to guide many of Conrail's internal management economic decisions. The COSAC system uses specific management accounting data and other data to develop economic costs. COSAC replaced earlier management systems and was used to guide virtually all transportation management decisions, including competitive market initiatives, consolidations, line abandonments and service expansion and discontinuance.
- Expert testimony centering on commuter railroad operations and costs. This testimony involved design and development of computerized costing models of commuter rail operations. The evidence was central to arbitration to resolve subsidy disputes between New York and Connecticut. This evidence was developed and submitted on behalf of Metro North Commuter Railroad in August 1996 with oral testimony presented in February 1997. The case was decided successfully in favor of the client.

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- ❑ A study of the comparative merits of the Interstate Commerce Commission's Uniform Rail Costing System (URCS) and Cost Center Accounting which was submitted to the ICC on behalf of the US Railroad industry in February 1980 in Docket No. 37203.
- ❑ A report on the economics and computer technology of the Light Density Line Methodology developed by Mr. O'Connor which was used by USRA to define Conrail. This oral testimony was presented to the United States Railway Association (USRA) before a special hearing in 1980.
- ❑ A report on computerized transportation database design and use. This Verified Statement was submitted to ICC on behalf of the US Railroad industry in Nov 1980 in Ex Parte No. 385.
- ❑ A report on the comparative merits of two regulatory rail-costing systems, the Uniform Rail Costing System (URCS) and the predecessor regulatory rail costing system, Rail Form A (RFA). This was submitted to the Interstate Commerce Commission (ICC) on behalf of the US Railroad industry in March 1981, in Ex Parte 399.
- ❑ Testimony on the Uniform Rail Costing System (URCS) Preliminary 1979 Rail Cost Study as released by the ICC, calling for adopting and improving URCS. This was submitted to the ICC on behalf of the US Railroad industry in Docket No. 37203 in February 1982.
- ❑ A report on Rail costing using Rail Form A costs applied to service units generated by a computerized rail network model. This verified statement was submitted to the ICC on behalf of a shipper located in Nevada in July 1985 in ICC Docket Nos. 37809 and 37815S.
- ❑ A report on Rail costing, also using Rail Form A costs applied to service units generated by computerized network model. This verified statement was submitted to ICC on behalf of a shipper located in Nevada in November, 1986 in Docket No. 37809, 37815S.
- ❑ A report on Stand Alone Rail Costing, for use in rate reasonableness determinations, using service units developed with a series of computerized network model. This verified statement was submitted to the ICC on behalf of the Association of American Railroads in September, 1988.
- ❑ Rail merger conditions, developed using rail costs and a computerized network model. This verified statement was submitted to the ICC in March 1994 in Finance Docket No. 21215 (Sub. No. 5)
- ❑ A report on the effects of computerized methods on rail operations and costs. This verified statement was submitted to the ICC on behalf of Coletto Creek Utility in July 1994 in Docket No. 41242.
- ❑ A report on the cost of rail coal transportation using URCS costs and a Stand Alone Network. This verified statement was submitted to the ICC on behalf of West Texas Utilities in April 1995 in Docket No. 41191.

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- ❑ Further testimony on the cost of rail coal transportation using URCS costs and a Stand Alone Network. This verified statement was submitted to the ICC on behalf of West Texas Utilities in July 1995 in Docket No. 41191.
- ❑ Oral Argument on the effects of the BN-SF merger on rail costs and service presented before the full Commission in August 1995 on behalf of Universal Forest Products in Finance Docket No. 32549.
- ❑ A report on the effects of the UP-SP merger on costs, infrastructure and operations. This verified statement was submitted to the ICC on behalf of Kansas City Southern Railroad in March 1996 in Finance Docket No. 32760.
- ❑ Analysis of the investment plans of UP-SP to remedy effects of the UP-SP merger. Verified statement was submitted to STB on behalf of Kansas City Southern Railroad in June, 1998 in Finance Docket No. 32760 UP-SP Merger Oversight Proceeding
- ❑ The Arkansas and Missouri Railroad Request for Discontinuance Waiver Filed on behalf of Kansas City Southern Railroad. Verified statement was submitted to Surface Transportation Board (STB) in November 1998 in Finance Docket No. 32670.
- ❑ Rail Merger Guidelines to develop new and improved merger analysis processes. Verified statements were submitted to Surface Transportation Board (STB) on behalf of OxyChem, Oxy Vinyls, BASF and Williams Energy Services in May 2000 in Ex Parte 582.
- ❑ Reply Testimony on Rail Merger Guidelines to develop new and improved merger analysis processes. Reply Verified statements were submitted to Surface Transportation Board (STB) on behalf of OxyChem, Oxy Vinyls, BASF and Williams Energy Services in June 2000 in Ex Parte 582.
- ❑ Testimony on STB Rate Guidelines in small Shipment Cases. Verified statement was submitted to Surface Transportation Board (STB) on behalf of SK clients in STB Ex Parte 646 in June 2004.
- ❑ Oral Testimony on STB Rate Guidelines in small Shipment Cases. Oral Testimony was presented to the full Surface Transportation Board to Surface Transportation Board (STB) on behalf of SK clients in STB Ex Parte 646 in July 2004.
- ❑ Testimony on STB Stand Alone Costs focusing on alternatives. Comments submitted to Surface Transportation Board (STB) on behalf of SK in STB Ex Parte 657 in April 2005.
- ❑ Oral Testimony on STB Stand Alone Costs focusing on alternatives. Presented to Surface Transportation Board (STB) on behalf of SK in STB Ex Parte 657 in April 2005.

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- ❑ Oral and Written Testimony on the first ever STB Small Shipment Rate Case. Comments submitted to Surface Transportation Board (STB) on behalf of BP Amoco in STB Docket NOR 42093 in May-June 2005. The case was resolved successfully through mediation.
- ❑ Oral and Written Testimony on Rail Fuel Surcharges. Comments were submitted to the Surface Transportation Board (STB) in April 2006 and oral testimony was presented the STB in May 2006 on behalf the American Chemistry Council. The testimony was submitted in STB Ex Parte 661. The issue is under adjudication.

This brief summary serves to establish my background and qualifications to support the comments on costing methodology offered in this proceeding.

Like much of the research noted above, the current proceeding, Ex Parte No. 431 (Sub-No. 4), is also directed at improving URCS. This was similarly the objective of Ex Parte No. 431 (Sub-No. 3) which was set in motion on April 6th, 2009 when the Surface Transportation Board (“STB” or “Board”) released a notice of public hearing in Ex Parte No. 431 (Sub-No. 3), *Review of the Surface Transportation Board’s General Costing System*, seeking comment on issues related to the Board’s Uniform Rail Costing System (“URCS”). In that proceeding I was asked by the American Chemistry Council, the Edison Electric Institute, the National Grain and Feed Association, and The National Industrial Transportation League to comment on the issues then identified by the STB for potential consideration to modify URCS. In preparing those comments I adopted the guiding principles identified by these four Associations, as summarized below:

1. URCS and its predecessor costing methodology, Rail Form A, have a long history, and the basis for the current URCS system, including the studies underlying the costing procedures, extends back for many years. This is a highly technical matter. A revision of URCS will therefore require significant resources to be expended by the Board, and the Board will need to obtain significant additional resources from the Congress in order to perform the studies that will be needed to revise URCS properly.

2. If the Board decides to initiate a revision of URCS, it must commit to a review and possible revision of all aspects of URCS. In other words, a partial revision is not appropriate, since there is no way to determine, before undertaking an analysis, what needs to be revised, and how. A partial revision runs the risk of skewing the results, to the detriment of parties appearing before the Board at any particular time. The Board's Notice appears to agree with this conclusion, as the Board discusses

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the need for a "comprehensive" review of the URCS costing system.

3. Finally, and most importantly, if the Board decides to initiate a revision of URCS, then the effort must be transparent. That is, the Board, or any contractor employed by the Board, must make its data, analyses and work papers available to the public before the Board adopts any new costing system, or major revisions to the existing URCS system. The objective is that the industry can determine what was done, what was accepted, what was rejected, and why. In addition to the element of fairness, a transparent process will be most efficient, since industry participants, and others, will not have to replicate what the Board has already done, but would simply be able to review the work to ensure the best possible product, and submit comments to the Board on that basis.

Those Guiding Principles are also appropriate for the current proceeding. It is a widely recognized fact that deficiencies have been encountered in URCS, some of which appear to have relatively simple remedies. In the next section I provide as general background my comments on URCS including specific comments on each of the 13 issues the Board previously identified.

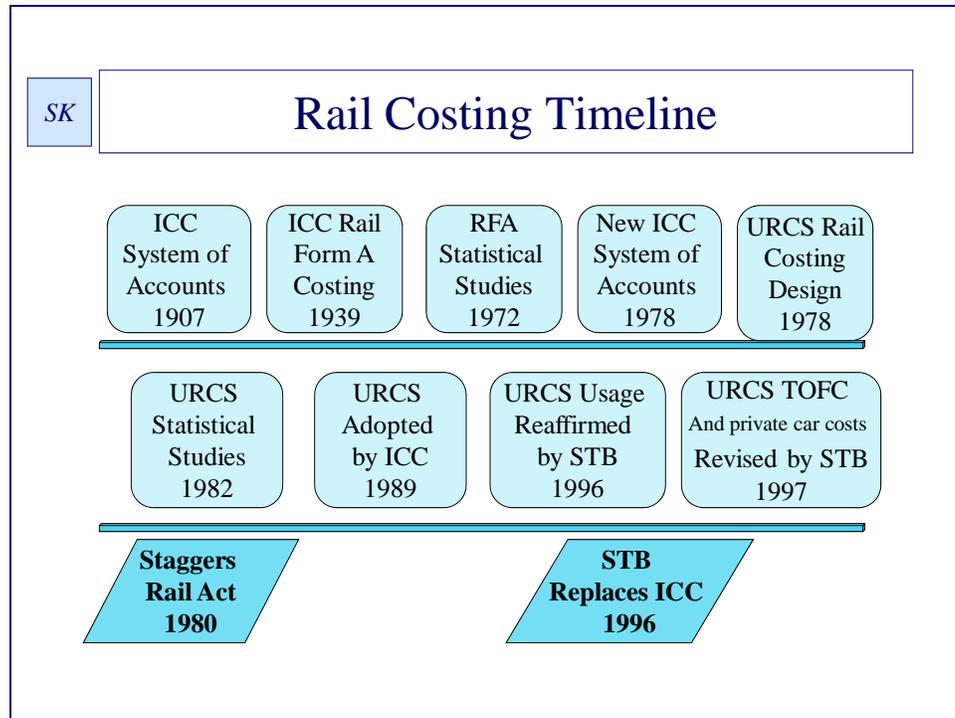
One of those 13 issues dominates and is the principal thrust of this testimony.

The over arching issue is the estimation of “cause and effect” patterns of economic cost and estimates of the underlying cost variability which drive results throughout URCS.

Background on URCS

To provide consistent and comparable information on railroad costs, the ICC in 1939 developed a General Purpose Costing System (GPCS) known as Rail Form A (RFA). Rail Form A was adopted in 1939 and used for 50 years to estimate the variable cost of rail services. In September 1989, the ICC replaced RFA with the Uniform Railroad Costing System, a system widely acknowledged to produce more accurate costs than those developed by RFA. Chart 1 summarizes some of the key events in the process that developed URCS.

Chart 1: Key events in the process that developed URCS.



✚ Comments on URCS Issues Identified by the Board

As noted above, on April 6th, 2009 the Surface Transportation Board (“STB” or “Board”) released a notice of public hearing (NPH) in Ex Parte No. 431 (Sub-No. 3), *Review of the Surface Transportation Board’s General Costing System*, seeking comment on issues related to the Board’s Uniform Rail Costing System (“URCS”).

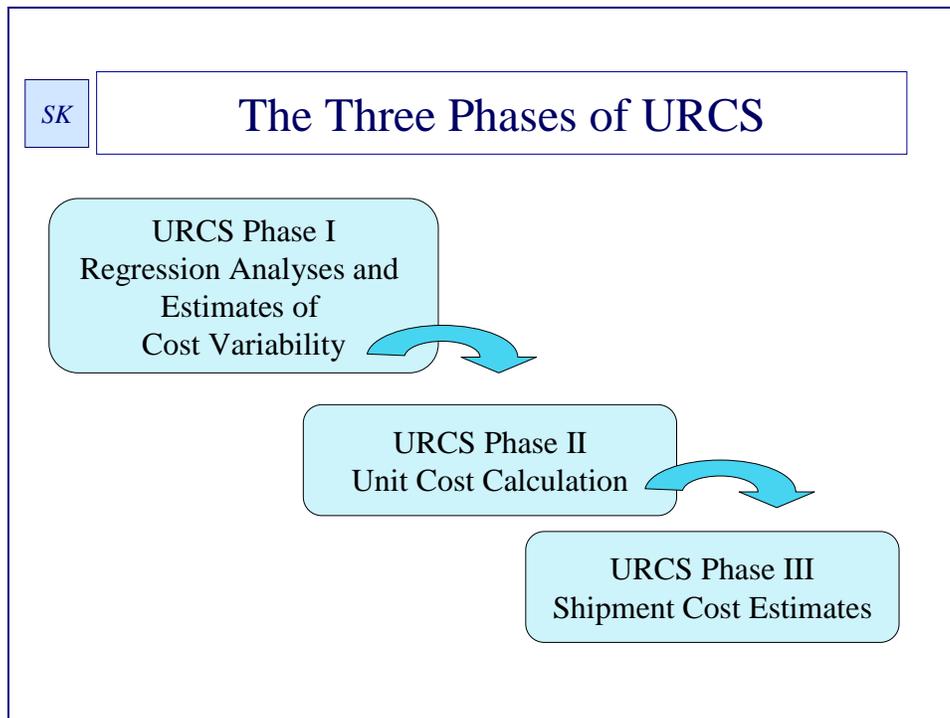
URCS develops average variable costs. Rail operations involve many instances of joint and common costs. A given set of assets produces service over many time periods and many different services within each time period. URCS is used to allocate costs in such situations.

Although rail regulation has changed significantly, standardized railroad cost information is still needed for effective economic regulation. URCS is the primary method used to meet this need in the U.S. Regulatory reform legislation was enacted in 1976, in the Railroad Revitalization and

Regulatory Reform Act of 1976 (4-R Act) and in 1980 when the Staggers Rail Act of 1980 (Staggers Act) was passed. This and similar legislation established current rail regulations. In the current situation the STB's General Purpose Costing System, URCS, is used for various regulatory purposes.

The structure of URCS is shown in Chart 2.

Chart 2: Structure of URCS



As Chart I indicates the URCS phase I analyses determine the variability of the costs and the regression results help shape cost levels as well as cost aggregation and allocations. The choice is often between allocations based on data analysis and those based on assumptions. The “Make Whole” factor is based primarily on assumptions and involves costs being shifted from one geographic area to another, from one commodity to another and from one category of train type or service to another.

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Little, if any, of that “Make Whole” process is based on economic analysis. As we discuss, the most pressing need is the basic estimates of cost variability. Since URCS is a variable cost estimate only those costs deemed to be variable with output are included in the cost estimates. Thus the estimates of cost variability, which are now out dated, drive and determine URCS results.

As the Board stated in its Ex Parte No. 431 (Sub No. 3) NPH¹ the STB "believes it is time for a second, and more comprehensive, review of URCS to determine whether and to what extent modifications are needed to account for recent changes in Board procedures and to improve the system outputs."

Accordingly, the Board instituted Ex Parte No. 431 (Sub No. 3) to receive public comment "on how best to revise the existing URCS model." Parties were specifically encouraged to address whether and how the Board could achieve the following objectives:

1. Improve the efficiency adjustments associated with unit-train and multi-car movements;
2. Update the historical studies used in URCS;
3. Improve the costing of trailer or container on flat car (TOFC/COFC) traffic;
4. Update the URCS national car tare weight calculation to account for the number of car miles that each car type operates;
5. Update the number of miles between non-intermodal intertrain/intratrain (I&I) switches by URCS car type;
6. Disaggregate loss and damage information by carrier and by two-digit Standard Transportation Commodity Code (STCC) groupings;
7. Revise the Train Switching Conversion factor used to place all road train crew wages on a common mileage basis;

¹ Source: STB Notice of Public Hearing, EX Parte No. 431 (Sub No. 3), served April 6, 2009

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8. Require carriers to report their average switch engine speeds in order to better reflect switching expenses;
9. Revise the ratio of urban and rural land values to allocate expenses between running and switching;
10. Revise the URCS car types to eliminate outdated car types and add new car types to reflect those currently used in the railroad industry;
11. Revise the spotted to pulled factor for each car type;
12. Revise the approach used in individual proceedings to index URCS in order to use the Rail Cost Adjustment Factor indexes published by the Board; and
- 13. Update the various statistical relationships used in URCS, including the variability estimates.**

The Board also welcomed suggestions on additional aspects or features of URCS the Board should revisit. In my previous Statement, submitted in Ex Parte No. 431 (Sub-No. 3), *Review of the Surface Transportation Board's General Costing System* I addressed each of the issues on which the Board was then seeking comment. **Here I have edited some points and bolded key points.**

1. Improve the efficiency adjustments associated with unit-train and multi-car movements;

Comment

The Board's statutory mandate of 49 U.S.C. Sec. 11161 requires that the Board "shall periodically review its cost accounting rules and shall make such changes in those rules as are required to achieve the regulatory purposes of this part." The estimated cost adjustments associated with Multiple Car

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and Unit Train or trainload shipments largely source to studies completed in 1974.² The use of multiple car and unit train and trainload shipment operations cuts costs and improves efficiency compared to single-car operations. Similarly, the introduction of "Double Stack" container trains in the 1980's also dramatically improved efficiency. **URCS largely relies on assumptions and broad adjustment factors to reflect such gains in efficiency over single-car operations. Reliance on readily observable facts would be preferable.** Despite the 1997 review of URCS, the efficiency adjustments in URCS for unit-train and multiple-car movements have not been adjusted since the original studies were done to reflect changes in the railroad industry such as the substantial growth in intermodal traffic, the introduction of Double Stack in the 1980's and increased use of longer unit trains for coal and distributive power. **In fact, some of the calculations that are still embodied in URCS were derived from studies dating back to the age of steam engines.³ However one remedy for much of this is readily available through direct observation.**

2. Update the historical studies used in URCS;

Comment

Outdated factors exist not only in the costing of unit train, multiple car and intermodal shipments but also in the costing of single carload shipments. **While URCS uses better defined data from the**

² See ICC Ex Parte No. 270 (Sub No. 4) Decided December 3, 1974.

³ URCS was adopted by the ICC in 1989 after about a decade of development work. Many of the URCS allocation factors still in use today source to Rail Form A, the predecessor of URCS, which was introduced in 1939. Some of those allocation procedures have not been reviewed or updated for decades. See for example the ICC Bureau of Accounts (BOA) Statement entered in ICC Docket No. 34013 in 1964, commenting on shippers opposing use of switch engine minute studies which did not recognize the change to full diesel –electric power. (ICC Docket no. 34013 Statement of S.N. Crewe, September 1964, page 11.) See also BOA discussion of Comments by the U.S. Secretary of Agriculture and other parties calling for an update to switching factors based on studies introduced prior to 1939. ICC Docket no. 34013 Statement of S.N. Crewe, September 1964. page 26, 46.

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Uniform System of Accounts adopted in 1978, URCS costs are still heavily driven by factors developed earlier for use in Rail Form A, the predecessor ICC-STB regulatory cost system.

Train related costs in URCS better reflect the average weights of train types such as Way train, Through train and Unit train. **Many costs such as switching costs are based on assumptions and studies from the mid-twentieth century rather than currently observable facts.**

Including railroad origin switch costs⁴ for cars switched by the shipper and trains assembled by the shipper is a prominent example of an unwarranted and unnecessary departure of URCS costs from observable facts. URCS costs the origin switch as if it was performed by the railroad when in many cases those costs are largely borne by the shipper.

The switching costs associated with multiple car shipments, unit train and trainload shipments are also areas in which data could readily be obtained. However URCS still uses factors developed in ICC regulatory cases dating back 40 years or more.⁵ These factors drive the results for freight car costs and clerical costs as well as origin and destination switch costs. With Station Clerical costs an adjustment persists in URCS to estimate a cost which has in fact largely disappeared as Electronic Data Interchange has replaced manual clerical processing. Such areas are well known and the remedies are well understood. **Readily available observation of the operation and its metrics can enable production of verifiable facts to replace assumptions.**

3. Improve the costing of trailer or container on flat car (TOFC/COFC) traffic;

Comment

The introduction of Double Stack intermodal operations in the early 1980's and its widespread adoption was driven by and clearly demonstrated the increased efficiency of Double Stack compared

⁴ Termed Road Train To Industry costs in Rail Form A and in URCS

⁵ Ex Parte 270 (Sub-No.4) was an ICC investigation of the railroad freight rate structure for coal. Switching and other cost adjustments developed in that proceeding were applied frequently in ICC studies using Rail Form A. Many of those Rail Form A cost adjustments were transferred to URCS with little if any systematic or operational review.

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to traditional single stack trailer or container on flat car (TOFC/COFC) loading and handling. The efficiencies were so clear that the rail infrastructure was modified to enable Double Stack Intermodal operations. This involved clearance adjustments to bridges, tunnels and overpasses that are still taking place today. **URCS intermodal costing still does not adequately reflect the cost savings achieved through Double Stack operations. Thus the costs are overstated and the Revenue to Variable Cost (R/VC) ratios are understated**

4. Update the URCS national car tare weight calculation to account for the number of car miles that each car type operates;

Comment

Freight car tare weight and the freight car empty return ratio are two important factors in rail costing. Seemingly minor differences in either factor can have significant impact on costs.

Imprecision in measurement of the tare or empty weight of the car is amplified by the fact that tare weight impacts both loaded and empty miles in the widely used gross ton mile calculations.

Improved specificity leads to improved accuracy. The long term impetus is to reduce both tare weight and empty miles. The Board could update URCS to reflect both trends.

5. Update the number of miles between non-intermodal intertrain/intratrain (I&I) switches by URCS car type;

Comment

The frequency of intertrain and intratrain switches is driven by studies conducted during the development of Rail Form A, the URCS predecessor system. The assumption is that such studies are still pertinent today. However, railroad practice has been moving consistently toward assembling blocks of cars and switching those blocks of cars rather than handling single carloads. The frequency of intertrain and intratrain switches used in costing non intermodal moves has largely remained unchanged since the inception of Rail Form A 70 years ago, a fact that does not

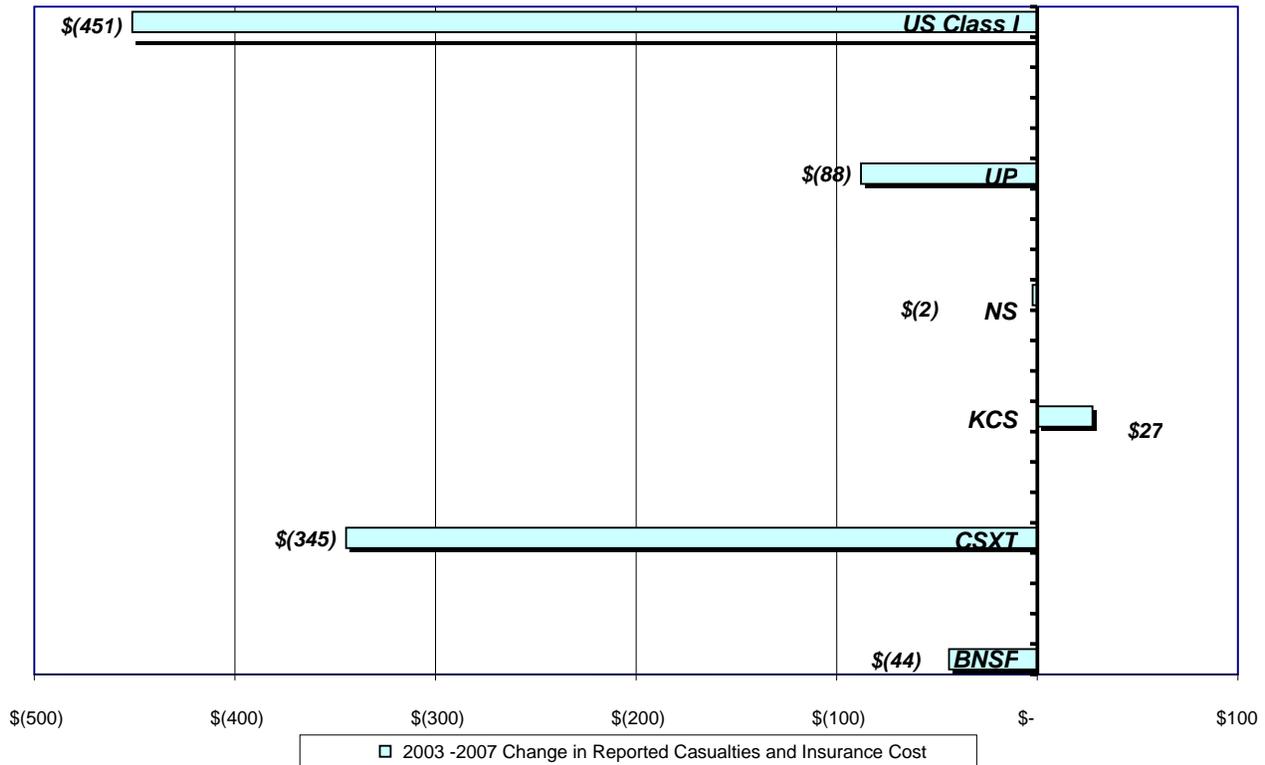
take into account the widespread uses of operational planning systems and ongoing crew cost reduction efforts.

6. Disaggregate loss and damage information by carrier and by two-digit Standard Transportation Commodity Code (STCC) groupings;

Comment

The source of loss and damage costs in URCS is Loss and Damage Expense by Commodity Classification. These national statistics sourced to AAR Circular No FCDP-95. While these are national statistics, the loss and damage experience can be expected to vary by carrier as well as by commodity. To the extent information is available by carrier it seems advisable to consider having that level of specificity included in the URCS calculations. As the following chart 3 shows, the overall experience with similar expenses including casualties, insurance and related costs, shows significant differences by carrier. Those costs are collected and reflected in URCS.

Chart 3: Change in Insurance and Related Costs 2003-2007
(Dollars in Millions)



As Chart 3 indicates, the five railroads taken as a group reported a significant decrease in casualties, insurance and related costs during the 2003 through 2007 period. Each of the individual railroads except for KCS also reported declines in these costs during this time period. However the individual railroad results varied significantly.

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7. Revise the Train Switching Conversion factor used to place all road train crew wages on a common mileage basis;

Comment

One of the key components in the current URCS treatment of this allocation sources to a study reported in an ICC document published in 1963.⁶ The related calculations are somewhat complicated. The Board could update the study and re-examine the allocation process.

This train switching area and several of the cost areas which follow draw on ICC source documents developed for use in Rail Form A during the 1960's and which were designed for the predecessor ICC costing system. They were not updated when URCS was adopted. This is shown in the Source column of the following table, which is part of the currently-used URCS Worktable A1.

One of the sources dating back to 1963 is shown in the bolded “STMT 7-63” in the source column in the following excerpt from URCS. This source was still being used for at least seven components of the calculation of operating statistics in recent years, almost 50 years after the data was initially developed.

⁶ See ICC Statement 7-63 published by the ICC in 1963

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OWORKTABLE A1 PART 8

OPERATING STATISTICS

LINE	CODE	IDENTIFICATION	SOURCE	AMOUNT
-1				
580	A1801	RATIO - TOTAL/REVENUE TRAILER MILES (BY REGION)	STMT 1S4-69	1.48
581	A1802	AVERAGE NO. TRAILERS/CONTAINERS PER CAR (BY REGION)	STMT 1S4-69	5.49356
582	A1803	LINEHAUL MILES PER TRAILER DAY (BY REGION)	STMT 1S4-69	478
583	A1804	TRAILER DAYS PER O&T EVENT (BY REGION)	STMT 1S4-69	7.29
584	A1805	AVERAGE TARE WEIGHT TRAILER - REFRIG.	UMLER FILE	7.3
585	A1806	AVERAGE TARE WEIGHT TRAILER - NON REFER.	UMLER FILE	5
586	A1586	PORTION OF TIME S&T CO'S. SERVE LH CARRIERS	STMT 7-63	.75
587	A1587	WEIGHTING FACTOR SWITCHING VS LINE HAUL	STMT 7-63	2.6
588	A1588	URBAN PORTION OF TOTAL LAND VALUE	STMT 7-63	.75
589	A1589	RURAL PORTION OF TOTAL LAND VALUE	STMT 7-63	.25
590	A1590	RUNNING PORTION OF URBAN LAND VALUE	STMT 7-63	.16
591	A1591	SWITCHING PORTION OF URBAN LAND VALUE	STMT 7-63	.84
592	A1594	TRAILER DAYS - REFRIG. TRAILERS - 1969	STMT 1S4-69	2402
593	A1595	TRAILER DAYS - OTHER TRAILERS - 1969	STMT 1S4-69	9214
594	A1596	TOFC/COFC LOADED CAR MILES - 1969	STMT 1S4-69	803383
595	A1597	WEIGHTING FACTOR TRAIN SWITCHING (WAGES)	STMT 7-63	16.25

8. Require carriers to report their average switch engine speeds in order to better reflect switching expenses;

Comment

Better estimation of switching expenses is a basic need in URCS. The Equated Switch Factors study used in URCS to allocate switch costs among types of switches sources back to the 1960's, and earlier in the Rail Form A era.⁷ It is very likely that improvements have occurred in the intervening 46 years since that ICC study was published. In fact rail operations such as intra-terminal and inter-terminal shipments that were prominent enough to be included in the 1963 study have

⁷ See ICC Statement 7-63 published by the ICC in 1963.

largely disappeared. **Accordingly URCS is discarding measurable current facts in preference for reliance on assumptions. Those assumptions describe in part Operations which have largely disappeared.**

9. Revise the ratio of urban and rural land values to allocate expenses between running and switching;

Comment

The ratio of urban and rural land can and does vary markedly both among railroads, within a given railroad as well as varying over time as land is converted from rural to urban applications in an ongoing process. This assumed ratio of urban and rural land sources back to the 1960's, in the Rail Form A era.⁸ The number of railroads, the proportion of urbanized land and many other factors have changed since the 1960's. The STB could update this area and could review the applicability of the underlying cost allocation procedure.

10. Revise the URCS car types to eliminate outdated car types and add new car types to reflect those currently used in the railroad industry;

Comment

The designation of car types is a frequently encountered issue since the AAR and the STB use different methods for defining car types. In some instances the differences do not cause costing issues. In other instances, with changing fleets of specialized cars, it is advisable to ensure that the flow of the record keeping stays up to date with the flow of the transportation.

⁸ See ICC Statement 7-63 published by the ICC in 1963.

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11. Revise the spotted to pulled factor for each car type;

Comment

The spotted to pulled ratio estimates the incidence of reloading a freight car; it impacts both car costs and switch costs. The spotted to pulled ratio also sources to the 1960's, in the Rail Form A era.⁹ The support for this series of factors is basically a priori analysis and assumptions. We have shown in prior work that RFID techniques are widely available which would eliminate the need for unproven assumptions.

Assumptions drive these URCS factors although they are readily observable and documented events. Moreover, these assumptions have a significant effect on costs. As the following chart shows, the same "spotted to pulled" factor is used for all but two car types, 40 foot unequipped boxcars and 50 foot unequipped boxcars. During the period when the spotted to pulled ratios and factors were introduced only the general service box car was seen as likely to be reloaded. Currently, the unequipped boxcar is a minor and diminishing component of the fleet. However, currently some of the flat cars used in TOFC and COFC service are an increasing component of the fleet and could readily be reloaded. The STB could measure the probability of reloading such cars and reflect that as appropriate in the costing.

WORKTABLE A1 PART 5A (CONTINUED)

Car Type	Spotted to Pulled Ratio
501 BOX 40 FOOT	1.8
502 BOX 50 FOOT	1.8
503 BOX EQUIPPED	2
504 GONDOLA-PLAIN	2

⁹ See ICC Statement 7-63 published by the ICC in 1963.

WORKTABLE A1 PART 5A (CONTINUED)

Car Type	Spotted to Pulled Ratio
505 GONDOLA EQUIPPED	2
506 COVERED HOPPER	2
507 HOPPER OTG	2
508 HOPPER OTS	2
509 REFRIG-MECH	2
510 REFRIG-NON MECH	2
511 FLAT TOFC	2
512 FLAT-MULTILEVEL	2
513 FLAT-GENERAL	2
514 FLAT-OTHER	2
515 ALL OTHER CAR TYPES	2

12. Revise the approach used in individual proceedings to index URCS in order to use the Rail Cost Adjustment Factor indexes published by the Board;

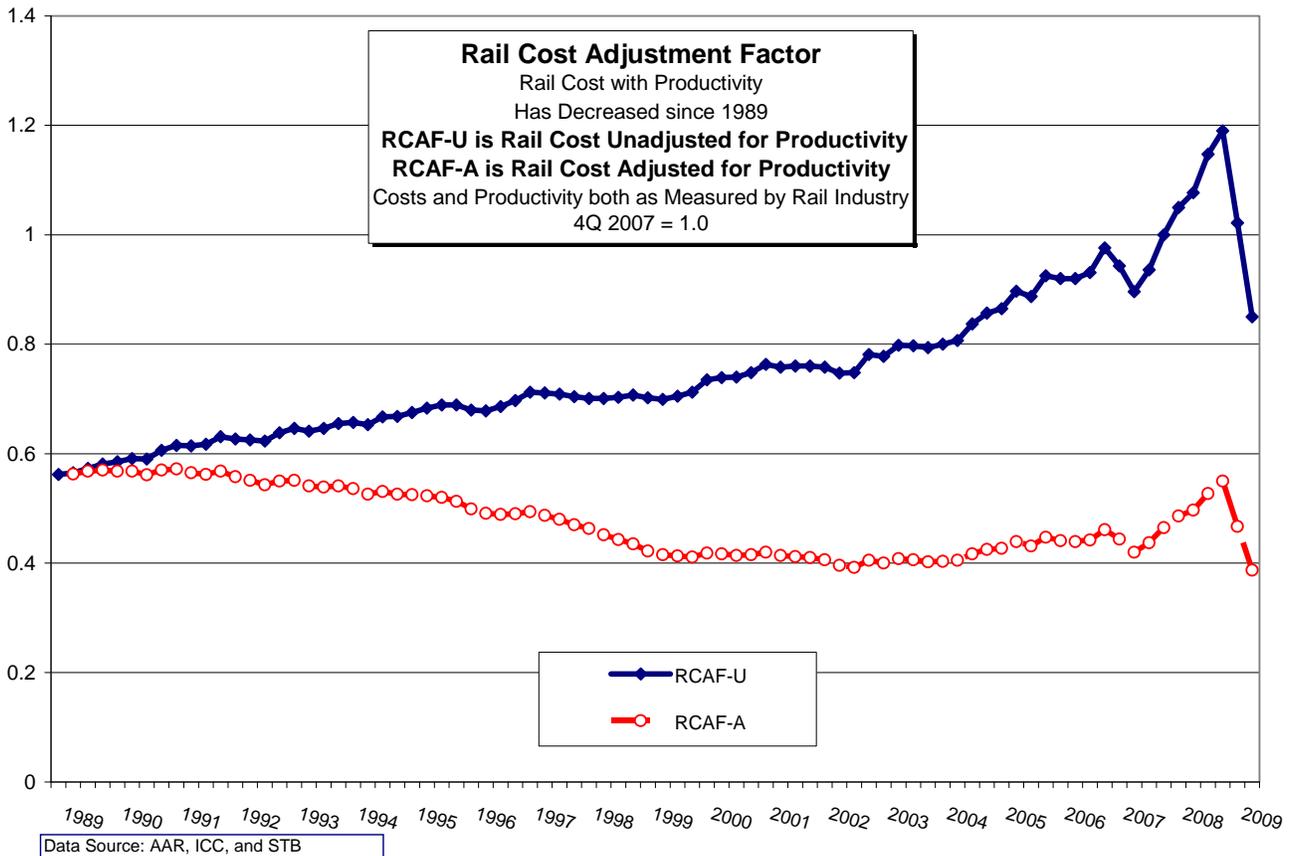
Comment

The Rail Cost Adjustment Factor (RCAF) is frequently used in negotiations and in other rate related matters. The RCAF is based on data assembled by the AAR and largely collected from the railroads. The RCAF is reviewed and adjusted as appropriate by the STB on a quarterly basis. As such, the RCAF is a logical candidate for use in updating URCS costs to the current

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quarter. The following graph shows the RCAF both unadjusted for productivity and adjusted for productivity during the 20 year period 1989 -2009.



The contrast between the increase in RCAF-U and the decrease in RCAF-A basically describes the impact and effect of productivity. That impact is dramatic and this 20 year trend indicates that cost variability estimates which are based on data analysis now over 25 years old is virtually certain to now be out dated.

- **Recommendation:**
- **The cost variability estimates should be updated, recalibrated and recomputed.**

13. Update the various statistical relationships used in URCS, including the variability estimates.

Comment

This is the single most powerful issue identified by the STB. It could generate a significant change in the estimation of railroad costs. The impact of these factors permeates URCS and largely determines the bottom line results of a wide range of applications of URCS in both commercial and regulatory applications.

- **Recommendation:**
- **The cost variability estimates should be updated, recalibrated and recomputed.**

The Board should initiate a revision of URCS starting with cost variability.

If the Board initiates a revision of URCS, then the effort must be transparent. The Board, or any contractor employed by the Board, must make its data, analyses and work papers available to the public before the Board adopts any new costing system, or significant revisions to the existing URCS system. This will enable the shippers and others to determine what was done, what was accepted, what was rejected, and why.

In addition to the element of fairness, a transparent process will be most efficient, since industry and other participants will not have to replicate what the Board has already done, but would simply be able to review the work to ensure the best possible product, and submit comments to the Board on that basis.

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The importance and compelling need for review of this particular URCS issue is clear from consideration of the time line and the following facts:

- **The cost variability estimates should be recalibrated and recomputed.**
- **URCS was adopted by the ICC in 1989, based largely on work done well before that**
- **The Rail Cost Adjustment Factor Adjusted for Productivity (RCAF-A) was initially adopted by the ICC in 1989**
- **The rail costs in URCS are largely determined by the cost variability estimated in URCS Phase I. Those variabilities are based on analysis of five years or less of reported railroad cost and output data. That data was reported by the railroads during a time period beginning in the late 1970's and concluding long before 1989.**
- **The analyses of URCS cost variabilities pre-dated the RCAF-A by many years and thus those estimated cost variabilities were not illuminated by consideration of the preceding RCAF graph we have shown in this statement.**
- **The RCAF graph shows the dramatic and consistent impact of productivity on railroad costs which has persisted during the years 1989 through 2009. Even when we focus on the more recent years during which fuel cost increases were very significant we observe the moderating effect of productivity on RCAF-A.**
- **On initial inspection these RCAF-A data are consistent with a declining cost industry. That declining cost pattern is long term: it has persisted in RCAF-A over the past 20 years. One of the primary uses of URCS has been maximum rate regulation which depends heavily on reliable and accurate estimates of cost. Failure to reflect gains in productivity call those estimates into serious question.**

- **Cost Variability is the single most powerful issue identified by the STB. It could generate a significant change in the estimation of railroad costs. The impact of these factors permeates URCS and largely determines the bottom line results of a wide range of applications of URCS in both commercial and regulatory applications.**
- **The cost variability estimates should be updated, recalibrated and recomputed.**

We note that URCS is driven by the data underlying the RCAF-U, which shows long term increases in costs but the RCAF-U does not reflect productivity gains. The underlying data shown on the graph shown in our discussion of item 12 above was computed by the AAR and reviewed and approved by the STB. The Board could and should analyze this and similar issues and data as part of a due diligence review of the URCS issues previously identified by the STB. URCS impacts a wide range of issues coming before the Board and is involved in virtually all Board decisions related to cost and rates.

URCS cost variability is the single most powerful issue identified by the STB. As noted above, reexamination of these URCS cost variabilities could generate a significant change in railroad cost estimates. The impact of URCS cost variabilities permeates URCS and impacts bottom line results for both shippers and railroads.

- **Recommendation: The cost variability estimates should be updated, recalibrated and recomputed. The Board should initiate a revision of URCS including at a minimum this due diligence review of cost variability.**

Exhibit No. (TOC__1)

Resume of

Tom O'Connor

President

The Tom O'Connor Group, LLC

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Experience

The Tom O'Connor Group Inc., President (2012-Present)

Tom O'Connor assists clients by providing regulatory and litigation support and by offering management consulting services. The firm's regulatory and litigation support activities involve the development, preparation and presentation of expert witness testimony before courts and regulatory agencies. Tom O'Connor has participated in dozens of proceedings before state courts and commissions and Federal courts and commissions that regulate the transportation industries in both the U.S. and Canada. Tom O'Connor and the Members of the firm have provided litigation support in the form of expert witness or economic research services in antitrust, merger, divestiture, rate and other cases before Federal and state courts.

In the area of management consulting, we assist both government and private clients in developing management information systems, evaluating contract performance and conducting management audits.

Tom O'Connor specializes in the analysis of the operations, costs, revenues and services of enterprises, both public and private, involved in all modes of surface transportation. We have developed an array of transportation and logistics related negotiation planning and financial and management tools, including detailed models for negotiations, litigation, cost allocation, accounting, traffic flow, and carrier operations.

These tools have been successfully applied on behalf of clients in well over 500 projects, including merger proceedings, contract negotiations, strategic planning and operational analyses. Our transportation practice extends beyond the U.S. borders throughout North America and into Eastern Europe.

Contact Information:

Tom O'Connor

President

Tom@TomOConnorGroup.com

13222 Point Pleasant Drive

571.332.2349

Fairfax, VA 22033

www.TomOConnorGroup.com

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Economic and Management Consultants

Exhibit No. (TOC__1)

Capabilities and Experience of **Tom O'Connor**

President

Tom O'Connor Group

This section sketches some of the highlights of Tom O'Connor's background and strengths, focusing on experience in the following areas:

- Line Abandonment Analyses
- Litigation and settlement
- Logistics
- Mediation and arbitration
- Mergers and acquisition,
- Negotiations
- Network planning and design
- Operations analysis
- Overseas experience
- Transportation analyses
- Transportation Cost and Economics Methodologies
- URCS and other government cost systems.

This summary of Tom O'Connor's capabilities is developed in three principal parts:

Part I includes Tom O'Connor's resume and covers the broader range of assignments. This summarizes some of the projects he has led or participated in.

Part II sketches his litigation experience, including a brief summary of the courts and other agencies before which he has testified.

Part III lists some of the hundreds of clients he has served

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In each of these components, complex analysis is one of the prominent themes. Much of this experience centers on economics and cost methodologies, policy issues analysis and system design.

The Tom O'Connor Group Inc., Fairfax, VA

President (2012-Present)

- Tom O'Connor assists clients by providing expert regulatory and litigation support and by offering management consulting services. The firm's regulatory and litigation support activities involve the development, preparation and presentation of expert witness testimony before courts and regulatory agencies. Tom O'Connor has participated in dozens of proceedings before state courts and commissions and Federal courts and commissions that regulate the transportation industries in both the U.S. and Canada. Tom O'Connor and the Members of the firm have provided litigation support in the form of expert witness or economic research services in antitrust, merger, divestiture, rate and other cases before Federal and state courts.
- In the area of management consulting, we assist both government and private sector clients in developing management information systems, evaluating contract performance and conducting management audits.
- Tom O'Connor specializes in the analysis of the operations, costs, revenues and services of enterprises, both public and private, involved in all modes of surface transportation. We have developed an array of transportation and logistics related negotiation planning and financial and management tools, including detailed models for negotiations, litigation, cost allocation, accounting, traffic flow, and carrier operations.
- These tools have been successfully applied on behalf of clients in well over 500 projects, including merger proceedings, contract negotiations, strategic planning and operational analyses. Our transportation practice extends beyond the U.S. borders throughout North America and into Eastern Europe.

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Economic and Management Consultants

Snavelly King Majoros & O'Connor, Inc., Washington, DC

- **Vice President (1988-2012)**

Mr. O'Connor has more than thirty years experience in business and economic analysis. His experience includes key and increasingly responsible management and policy positions with government agencies and private industry.

Mr. O'Connor has authored a series of guidelines on transportation negotiations and contracting and has conducted transportation negotiations and contracting seminars for a wide range of clients. Mr. O'Connor has also designed and helped lead transportation contract negotiations resulting in tens of millions in cost savings.

Mr. O'Connor has also appeared as an expert witness on rail line merger and abandonment cases and in rail rate litigation, achieving millions of dollars in savings for the client. He has served many clients as an expert advisor on technical and policy issues including the Rail Cost Adjustment Factor (RCAF).

He has also created and managed numerous computerized management and regulatory systems to address complex problems and is a widely recognized expert on costing and economics. He has appeared as an expert on the ICC-STB rail rate, merger and abandonment regulations. He also developed the most widely used line economic analysis system in the US rail industry; the United States Railway Association Light Density Line Analysis system.

He has also conducted analyses of tug and barge operations, both inland and off shore, for governmental and private sector clients.

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Mr. O'Connor has conducted analyses for the Government of Canada used to shape policy for freight transportation and studies for the U.S. Government used to shape Freight and Passenger Transport Policy, including in depth analyses of Amtrak.

For the Government of Bulgaria, in the Balkans, he developed the Master Plan for Management Information Systems, including telecom and computer facilities designed to operate, measure, manage and monitor both rail freight and rail passenger operations of the Bulgarian State Railways, in Bulgaria and the Balkan Peninsula in Eastern Europe.

Mr. O'Connor has analyzed more than 45 rail merger scenarios and cases. He has provided expert testimony before state and federal courts and commissions in the U.S. and Canada on economic and policy issues. He has also testified as an expert on computerized transportation analytical systems, rail operations, antitrust issues and transportation economics and costing. Mr. O'Connor has served as an impartial and expert monitor of data and processes at issue in litigation on transportation.

Mr. O'Connor has also conducted management audits, focused on identifying the cause and effect relationships underlying claimed cost incidence. The management audits were directed toward testing the cost basis of claims asserted by major railroads.

Mr. O'Connor also has experience in telecoms spanning the period since 1995. During this period, on a succession of government and commercial projects, Mr. O'Connor directed and participated in the review, design and operation of telecoms systems.

He also designed and developed the business and operations plan for an Eastern European telecoms startup company, BDZCOM. Mr. O'Connor designed and presented the plan and conducted liaison with international commercial, banking and government interests in the United States and Europe.

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DNS Associates Inc., Washington, DC

- **Vice President (1982 - 1988)**

Mr. O'Connor directed and participated in numerous projects including merger analyses, transportation infrastructure analyses, plant and network rationalization and feasibility studies.

He designed and implemented mainframe and microcomputerized systems for analyzing rail, truck and barge logistics. The computerized cost systems Mr. O'Connor created are in widespread use throughout the United States and Canada.

Mr. O'Connor also advised the U.S. Rail Accounting Principles Board (RAPB) on the costing aspects of regulatory reform policies. The RAPB mission included advising the ICC as to the inclusion of productivity in the RCAF.

He provided expert testimony on coal rates, computerized data bases and cost systems and rail cost issues before the Interstate Commerce Commission.

Association of American Railroads, Washington, DC

- **Assistant Vice President, Economics (1979 - 1982)**

Managing a large staff of professionals, Mr. O'Connor designed and managed major economic analysis projects. He helped formulate industry economic policy positions culminating in the Staggers Rail Act of 1980. He submitted expert testimony on behalf of the railroad industry in numerous cases before the Interstate Commerce Commission and state regulatory commissions. He also appeared regularly in national forums on economic issues.

Mr. O'Connor directed the most significant computerized industry Costing System project in 40 years, URCS, the cost system now used by all major US railroads. Mr. O'Connor's staff was responsible for development of the Rail Cost Adjustment Factor (RCAF). He also conducted industry seminars on URCS and related economic issues.

Mr. O'Connor also testified before the Interstate Commerce Commission on the design and application of the path breaking URCS rail cost system since adopted by the Commission and the rail industry.

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He also directed development and installation of a commercial computerized economic and market analysis system now used by virtually all major US railroads.

Consolidated Rail Corporation, PA

- **Assistant Director, Cost & Economics (1977 - 1979)**

Managing a staff of about 30 professionals, Mr. O'Connor was responsible for all Conrail management and regulatory cost analyses in both freight and passenger areas, including line abandonments. He testified before the ICC on the development of line subsidy standards now widely used in the US railroad industry.

He also finalized the design, installed and managed Contribution Simulator and Calculator (COSAC), a computerized internal management economic analysis system at Conrail. The COSAC system uses specific management accounting data to develop economic costs. COSAC replaced earlier systems and was used to guide virtually all transportation management decisions, including competitive market initiatives, consolidations, line abandonments and service discontinuance.

Mr. O'Connor also participated in cost allocation negotiations between Amtrak and Conrail on cost sharing of joint facilities on the North East corridor. He initiated and directed profit maximization and plant rationalization programs. He also designed and implemented computerization and improvement of a wide range of economic and cost analysis systems used to manage and turn around this multi-billion dollar corporation.

R.L. Banks & Associates Inc., Washington, DC

- **Consultant (1976 - 1977)**

Mr. O'Connor conducted and directed numerous transportation- related projects in the U.S. and Canada ranging from national logistics analyses to site-specific studies. He specialized in costing systems and appeared as an expert witness on such systems in a precedent setting proceeding before a Canadian Crown Commission.

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Economic and Management Consultants

U.S. Railway Association, Washington, DC

- **Manager, Local Rail Service Planning (1974 - 1976)**

In a project of unprecedented scope and historic impact, Mr. O'Connor developed, computerized, and implemented the light density lines cost analysis system, which defined Conrail. This system was used to reach asset disposition and line service decisions including evaluation of abandonment for thousands of miles of railroad. He served as liaison with congressional staffs and shipper groups, as well as federal, state, and local governments, and planning agencies. The light density lines cost analysis system he created was a major element in the design and implementation of the streamlined Midwest-Northeast regional rail system. Mr. O'Connor subsequently appeared as an expert witness to present and defend the operation of the USRA light density lines cost analysis system.

Interstate Commerce Commission,

- **Economist, Washington, DC (1973-1974)**

Mr. O'Connor served as a staff economist and authored a report analyzing industry investment patterns and ICC regulatory policy, including ICC use of cost evidence.

- Education

- University of Massachusetts, Amherst, B.A. Economics
- University of Wisconsin, Graduate Course Work, Economics
- University of Delaware, Graduate Course Work, Business Management
- The American University, Graduate Course Work, Computer Science

- Professional Organizations

- Transportation Research Board
 - Past Chairman of the Transportation Regulation Committee
- Transportation Research Forum
 - Past President of the Cost Analysis Chapter
- National Defense Transportation Association
 - Past Member of Board of Directors, National Capital Chapter

- Academic honors

- Phi Kappa Phi academic honors society
- Phi Beta Kappa academic honors society

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- Military
- U.S. Army; Sergeant, Combat Engineers
- Security Clearance
- Secret

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Tom O'Connor is President of the Tom O'Connor Group (TOG), an economic and management consulting company. He has been engaged in the business of economic analysis for more than thirty years, beginning in 1973 as an economist with the Interstate Commerce Commission (now the Surface Transportation Board) and later in economic consulting and management positions of increasing responsibility with the United States Railway Association, Conrail, the Association of American Railroads and, from 1982 through 1988 with DNS, Associates and since 1988 with Snavelly King Majoros & O'Connor, (Snavelly King), an economic and management consulting company focusing on telecommunications and transportation. Mr. O'Connor was Vice President at DNS Associates and Vice President and principal of Snavelly King. He has been President of the Tom O'Connor Group since founding the firm.

He has provided testimony in a number of proceedings before courts and regulatory commissions in the United States and Canada including:

- Arbitration Panel in New York,
- Canadian Crown Commission,
- Fairfax County Board of Supervisors,
- Fairfax County Courts,
- Mediation Panel in Massachusetts
- Mediation Panels in Washington DC
- Regulatory Commission in Indiana,
- Regulatory Commission in New York,
- Regulatory Commission in Pennsylvania,
- State Court in Indiana
- State Court in Montana,
- State Court in Virginia,
- United States Railway Association,
- US District Court for Arizona
- US District Court for Eastern District of Virginia,
- US Interstate Commerce Commission,
- US Surface Transportation Board.

Tom O'Connor's practice centers on transportation with specific focus on negotiations, litigation and infrastructure issues including rationalization and redesign of the railroad infrastructure in the US as well as rebuilding of the railway infrastructure in Eastern Europe.

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Mr. O'Connor's work in Eastern Europe focused on both transportation and telecommunications.

Throughout more than three decades of providing consulting services in transportation, and telecommunications, Tom O'Connor has developed and defended practical operations, market and economic analyses. The projects he has directed include: developing economic analyses; analyzing mergers, acquisitions, and start-up companies, and providing strategic planning services to commercial, institutional and government clients. In hundreds of projects, these analyses have significantly influenced decision making in both the private and public sectors.

Tom O'Connor has conducted many studies for government and commercial clients involving developing, gathering and analyzing market and pricing data. Mr. O'Connor's assignments include:

- Abandonment analyses
- Analysis of rail freight and passenger costs and revenues
- Business planning for companies in emerging economies
- Comparative analyses of alternative product sourcing
- Cost analysis of transportation rates
- Design and management of a multi-million dollar nationwide rail and truck transportation procurement on behalf of a Fortune 500 company
- Evaluation and planning of telecoms installations in Eastern Europe
- Evaluation and planning of transportation operations in Eastern Europe
- Line abandonment cases and methodologies
- Merger analyses of manufacturing companies
- Merger analyses of railroads
- Pricing analyses for commercial telecoms technologies and services in emerging economies
- Rail Fuel Surcharges
- Rail, truck and barge transportation
- Transportation contract negotiations
- Trackage Rights
- Waterborne cost analyses

Mr. O'Connor has also conducted organizational and commercial studies relating to major European telecommunications projects.

Tom O'Connor completed a project for the Bulgarian State Railways (BDZ). The project involved an in-depth study of current rail operations in Eastern Europe and long range planning for the transition

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Economic and Management Consultants

from a controlled economy to a market economy. The project included identifying the specifications for upgrading the rail-related telecommunications and management information systems. BDZ was the client in this project.

In a related multi-year project Mr. O'Connor designed an international telecoms company to provide service in Europe. He developed the blue print for this telecoms company, BDZCOM, and presented the business plan to banking, and commercial interests and government agencies in the United States and Europe.

Tom O'Connor has held key management positions in government, private industry and trade association. He has direct experience planning deregulation and assisting companies adjust to decreased regulation, proliferation of competition and rapid changes in technology for producing and delivering services.

Tom O'Connor works closely with the client to develop economic analyses and supporting studies designed to meet the project and longer range objectives. The results of the analyses and studies are often presented as expert testimony in proceedings before state and federal regulatory agencies and courts in the US and Canada.

Many of these projects involve expert analysis and supporting studies that address:

- Cost of service,
- Pricing,
- Revenue requirements and return on investment,
- Market definition, impact, and potential for growth, and
- Competitive characteristics of markets;
- Analysis of relevant organizational policies and procedures;

In a long series of assignments in the US, Canada and overseas, Tom O'Connor has established a consistent record of success.

Selected Clients

The Tom O'Connor Group, LLC

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Industry

ALCOA	Chicago and Illinois Midland RR
Allegheny Ludlum	Chicago Milwaukee Corporation
American Hoechst	Chicago Central Pacific
American Chemistry Council	Chlorine Institute
Amtrak	Church and Dwight
Applied Arts Software	City of San Antonio
Association of American Railroads	Continental Grain
AT&T	CP Forest Products
Atchison, Topeka & Santa Fe Railway Systems	CSX Corporation
Arcadian	Davison Chemical
Armco Steel	Del Monte
Ashland Chemical	Degussa
ATLA	Denver & Rio Grande Western Railroad
BASF	Detroit and Mackinac Railway
BDZ	DuPont
BDZCOM	Econorail
Bethlehem Steel	Edison Electric Institute
Blue Circle Cement	Elf Atochem
BOC	El Paso Field Services
Boston & Maine Corporation	Ernst & Young
BP Amoco	Erco Worldwide
Brick Industry Association	Farmland Foods
Burlington Northern Railroad	Fertilizer Institute
Cabot Corporation	Florida East Cost Railway
Cargill	Ford Motor Company
C-I-L	Formosa Plastics
Canadian National Railway	Gaylord Container
Canadian Pacific Railroad	Glacial Lakes Energy

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Genstar Stone Products	Norfolk Southern Corporation
Henson Associates	Occidental Chemical Corporation
Houston Light & Power	Operation Respond
Houston Port Bureau	Oxy Vinyls
I-C-I	Peabody Coal
Illinois Central Gulf Railroad	Procter & Gamble
Intermountain Power	Redden Group
Kansas City Southern Railway	Sandwell, Inc.
Koppers	Shintech
Kraft Foods	Shell
Kemira Pigments	Southern Pacific Transportation Company
Kobe Steel	Southern Railway Company
Linde	Star Recycling
Louis Dreyfus	Sun Marketing and Refining Co.
Lubrizol	System Fuels, Inc.
Lufkin Foundry	Tejas
Maersk	Tennessee Eastman Chemical
Marsulex	The Fertilizer Institute
Mead	Timken
MeadWestvaco	T.J. Maxx
Metro North Commuter Railroad	Transportation Marketing Services, Inc.
Mississippi Chemical Corporation	Tropicana
Natchez, Inc	U.S. F & G Insurance Co.
National Coal Association	US Magnesium
National Mining Association	Union Pacific-Missouri Pacific Railroad
National Data Corporation	Universal Forest Products
National Industrial Transportation League	Williams Brothers
National Paint & Coatings Association	Williams Olefins
National Retail Merchants Association	Weirton Steel

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West Texas Utilities

W.R. Grace

Westvaco

WMI

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Government and Public Agencies

Bulgarian Ministry of Transport
Canadian Ministry of Transport
Canadian Transport Commission
Houston Port Bureau
Metro North Commuter Railroad
Mississippi Transportation Commission
Montana Department of Commerce
Montana Department of Transportation
New York City Transit Authority
Ontario Ministry of Transport
Port Authority of New York and New Jersey
San Antonio's Natural Gas & Electric Utility
Transport Canada
U.S. Department of Defense
U.S. Department of Transportation
U.S. General Accounting Office
U.S. General Services Administration
U.S. Military Traffic Management Command
U.S. Trade Development Agency
U.S. Railway Association
World Bank

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Counsel

Caffrey & Smith

Cleveland Thornton

Cooley

Covington & Burling

Garlington, Lohn & Robinson

GKG Law

Gust Rosenfeld

Hogan & Hartson

Kronish, Lieb, Wiener & Hellman

Laroe, Winn, Moorman and Donovan

LeBoeuf, Lamb, Greene & MacRae

Lewes & Kappes, P.C.

McNamar & Associates

Pepper, Hamilton & Scheetz

Reid & Priest

Ropes and Gray

Rubenstein & Thornton

Sidley & Austin

Slover & Loftus

Steptoe & Johnson

Sugarman & Rogers

Thompson Hine

Troutman Sanders

Van Ness Feldman

Verner, Lipfert, Bernhard, McPherson & Hand

Walter Brown Law firm

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Exhibit No. (JL__1)

John Legieza

Experience

Consultant (2009-Present)

Mr. Legieza provides clients with economic and policy analyses of commercial operations supporting negotiation, settlement and strategic planning. His preparations include assumptions based analysis and a rigorous due diligence on all data inputs.

Major projects Mr. Legieza participated in have included: extensive cost and revenue analyses of rail freight logistics, along with preparation and validation of models used for rate negotiations with railroads.

Mr. Legieza has assisted in the preparation of client presentations and prepared testimony for submission to the Surface Transportation Board. His telecommunications and public utility experience includes preparation of complex regulatory reports for submission to regulatory agencies.

Mr. Legieza has expertise in logic, statistics, economics, financial analysis, econometrics, markets and computer modeling. With over 25 years commercial and consulting experience Mr. Legieza has in-depth knowledge of commercial and industrial operations in the transportation, telecommunications and utilities industries and is familiar with a wide range of financial and economic tools and current technology.

CFO Power LLC., Managing Partner (2001-2009)

Management of a small consulting firm; responsible for providing quality financial support to start-up, small and medium size companies. Provided expert advice on economic and financial analyses and audits of commercial operations, used by management in formulating and implementing commercial best practices strategy.

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ICO Communications

Global Brand Manager (1997-2001)

Responsible for financial, economic and market analysis in assignments in corporate strategic planning including researching rate structures, cost of service studies, market identification, and economic projections.

Mobile Telesystems, Inc Gaithersburg, MD

Director, European Operations (1989-1997)

Responsible for daily operations of the European market

- Developed and implemented appropriate market, product, pricing strategies and field service practices to meet customer requirements and profitably achieve business objectives.
- Directed project teams, including proposal preparation and technical analysis resulting in the award of two sole-source profitable contracts totaling \$15 million dollars with the US Government
- Developed and managed a solid European distribution network, which contributed annual regional revenues exceeding \$10 million for two consecutive years.

Ford Aerospace Washington DC (1983-1989)

Manager, Financial Planning and Analysis

The Tom O'Connor Group, LLC

Economic and Management Consultants

Responsibilities included corporate financial analysis and planning.

- Managed development of financial models, which evaluated business projects and opportunities.
- Prepared the financial and strategic plans. Conducted annual and semi-annual audits

RCA Americom Princeton NJ

Administrator (1979-1983)

Responsibilities included Capital Budget analysis and Appropriations review.

- Responsible for preparation of all capital expenditure requests.
- Interfaced with Business Unit managers—for purposes of monitoring program/project performance.
- Prepared tariff filings for rate making proceeding submitted to the FCC for approval

Education

Pace University 1979—MBA in Finance

Kings College 1975 – BA Economics and Sociology

Mr. Legieza is an active member of the Mobile Satellite Users Association and sits on their Board of Directors

Verification

I declare that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on June 20, 2013

Tom O'Connor

Tom O'Connor *signed electronically*

Verification

I declare that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on June 20, 2013

John Legieza

John Legieza *signed electronically*

The Tom O'Connor Group, LLC

Economic and Management Consultants

I have provided copies of this testimony to all parties to this proceeding by US mail or a more expeditious means of delivery.

June 20, 2013

John Legieza

John Legieza *signed electronically*