I. INTRODUCTION

We are Thomas D Crowley and Daniel L Fapp We are economists and, respectively, the President and a Vice President of L E Peabody & Associates, Inc , an economic consulting firm that specializes in solving economic, transportation, marketing, financial, accounting and fuel supply problems Mr Crowley has spent most of his consulting career of over thirty-seven (37) years evaluating fuel supply issues and railroad operations, including railroad costs, prices, financing, capacity and equipment planning issues His assignments in these matters were commissioned by railroads, producers, shippers of different commodities, and government departments and agencies A copy of his credentials is included as Exhibit No 1 to this verified statement ("VS")

Mr Fapp has been with L E Peabody & Associates, Inc since 1997 During this time, he has worked on numerous projects dealing with railroad revenue, operational, economic and financial issues Prior to joining L E Peabody & Associates, Inc , Mr Fapp was employed by BHP Copper Inc in the role of Transportation Manager - Finance and Administration, where he also served as an officer and Treasurer of the three BHP Copper Inc subsidiary railroads, The San Manual Arizona Railroad, the Magma Arizona Railroad and the BHP Nevada Railroad A copy of his credentials is included as Exhibit No 2 to this VS

Our consulting assignments regularly involve working with and determining various facets of railroad financial issues, including cost of capital determinations In these assignments, we have calculated railroad capital structures, market values, cost of railroad debt, cost of preferred railroad equity and common railroad equity We are also well acquainted with and have used the commonly accepted models for determining a firm's cost of equity, including the Discounted Cash Flow Model

("DCF"), Capital Asset Pricing Model ("CAPM"), Fama-French Three Factor Model and Arbitrage Pricing Model

We have developed railroad industry average cost of capital and company specific cost of capital for use in litigation and for use in general business management. For several clients, we have both individually and together determined the Going Concern Value ("GCV") of privately held railroads. Developing the GCV under the Income Based Methodology requires developing company specific costs of debt and equity for use in discounting future company cash flows, as well as creating forecasts of expected cash flows to the firm and to holders of common equity from company financial statements. We have also developed cost of capital in order to capture the costs associated with shipper investment in railroad equipment and road property. Our findings regarding railroad cost of capital have been presented to U.S. District and State courts, the Interstate Commerce Commission, the Surface Transportation Board ("STB") and the Federal Railroad Administration.

We have been asked by Counsel for the Western Coal Traffic League ("WCTL") to provide comments on the use of Multi-Stage Discounted Cash Flow ("MSDCF") models to estimate the railroad industry's cost of equity in response to the Advance Notice of Proposed Rulemaking issued by the STB in Ex Parte No. 664 (Sub-No. 1), *Use Of A Multi-Stage Discounted Cash Flow Model In Determining The Railroad Industry's Cost Of Capital*, Served February 11, 2009 ("Ex Parte 664 (Sub-No. 1)"). Specifically, WCTL requested that we address the following issues noted by the STB: (1) the expansion of a dividend based MSDCF model to include broader measures of cashflow to shareholders, including stock repurchases, (2) the use of a MSDCF model that relies

upon a definition of cashflow beyond aggregate dividends and stock repurchases, and (3) the comparison of the railroad industry cost of equity from such broader MSDCF models to the railroad industry cost of equity as produced under the STB's Capital Asset Pricing Model ("CAPM") approach

We summarize our testimony below under the following topical headings

II MSDCF With Dividends And Stock Repurchases

III MSDCF Using Free Cash Flow To Equity

IV Comparison of MSDCF to CAPM Costs Of Equity

II. MSDCF WITH DIVIDENDS AND STOCK REPURCHASES

In *STB* Ex Parte No 664, *Methodology to be Employed in Determining the Railroad Industry's Cost of Capital*, served January 17, 2008 ("*Ex Parte 664*"), the STB changed the methodology it uses to calculate the railroad industry's cost of equity, concluding that the Single-Stage Discounted Cashflow Model ("SSDCF") approach it had previously relied upon to estimate railroad cost of equity had been supplanted by more modern, accurate methods.[1] Instead of the SSDCF model previously replied upon by the STB, *Ex Parte 664* adopted the CAPM approach as the methodology to be used to estimate the railroad industry cost of equity. The STB also initiated *Ex Parte 664 (Sub-No. 1)* to address other cost of capital issues, including a determination of whether or not it is necessary to develop a MSDCF cost of equity to complement the CAPM in developing the railroad industry's cost of equity.

In *Ex Parte 664 (Sub-No. 1)*, the STB asked parties to propose forms of MSDCF models that would compliment the CAPM approach for developing the cost of equity for the railroad industry. The STB directed that proposed MSDCF models meet two specific requirements.[2] First, proposed models must be able to accommodate different growth rates in railroad expected cashflows by using a MSDCF format. Second, the DCF models should not focus solely on dividend payment only, but should also factor in other methods used by companies to return cash to their shareholders, including stock repurchase programs.

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[1] See *Ex Parte 664* at 1.

[2] See *Ex Parte 664 (Sub-No. 1)* at 3. The STB also listed two additional criteria in its *Ex Parte 664 (Sub-No. 1)* decision. First, that the proposed model only be used on firms that pass the STB's current screening criteria for inclusion in railroad cost of capital determinations, and second, that the use of the MSDCF in conjunction with the CAPM approach, reduces variability in cost of equity calculations.

We have developed two MSDCF models which meet the STB's modeling criteria One relies upon discounting expected cash payments to common equity holders based upon current dividend and common stock repurchases The second uses expected future cash flows available for common equity holders Each MSDCF model is discussed below

A. INCORPORATION OF DIVIDENDS AND STOCK REPURCHASES

Companies attempt to maintain stability in their payment of dividends, as stigma often attaches to a publicly traded company that reduces or eliminates its dividends This stability is useful when constructing a MSDCF model However, many financial researchers have noted the decline in dividends paid by publicly traded companies over the last 20 years Fama and French reported that only 20 8 percent of firms paid dividends in 1999, compared with 66 5 percent that paid dividends in 1978 [3] The decline in dividends has been attributed to many different factors, including an increasing number of investors who do not want dividends, an increase in idiosyncratic risks, and/or a larger number of smaller firms that are uninterested in paying dividends [4] Not only have dividends declined but the difference between dividends paid and potential dividends has widened This difference creates a challenge for estimating a company's cost of equity using a dividend discount approach

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[3] See Fama, E F and French, K R "Disappearing Dividends Changing Firm Characteristics or Lower Propensity to Pay?" *Journal of Financial Economics* 60, pp 2-44, 60, 2001

[4] See, Damodaran, A "Valuation Approaches and Metrics A Survey of the Theory and Evidence, Stern School of Business, 2001 ("Damodaran")

To address this issue, financial researchers have expanded straight dividend discount models to include other forms of payment to stockholders, including stock repurchases, while also considering the inflow of cash to the firm related to common equity The most straight forward adjustment to the standard dividend discount model is to incorporate stock repurchases to the dividends paid by a firm to develop aggregate cash distributed to shareholders, and to net against this the cash received from exercising of stock options and from shares issued The netting of cash received from the exercising of stock options is a logical extension of the dividend discount model because it makes little sense to consider cash flows to stockholders without also considering the inflow of cash flows from stockholders

Because a firm stock's price is equal to the discounted value of future cashflows, it is necessary to create a mechanism to forecast the future cashflow steam One way to develop a forecast of future dividends and stock repurchases is to link these cashflows to forecasts of net income Net income, or earnings forecasts, are produced continuously by financial and investment analysts and can be readily adopted to estimate cost of equity

To develop a stream of expected future dividends and stock repurchases, annual aggregate net cashflow can be divided by the firm's net income (earnings) for the year to develop a modified payout ratio [5] The modified payout ratio can then be applied to forecasts of expected company earnings to develop a forecast of aggregate disbursements to shareholders for using a cost of equity "SDCF" model

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[5] A firm's payout ratio is usually defined as the ratio of dividends to earnings per share See Richard A Brealey, Stewart C Myers and Franklin Allen *Principles of Corporate Finance*, 8th Edition 2006 ("Brealey, Myers & Allen") at 66 Also see Damodaran at 20

While this approach is relatively direct, the resulting modified payout ratio for any particular year may be skewed. This is because stock repurchases, unlike dividends, are not levelized over time, which can lead to dramatically uneven cash flows. For example, CSX repurchased $103 million in common stock in 1998 and $42 million in 2000, but did not repurchase stock again until 2006 when it bought back $465 million in common equity.[6] To mitigate against these uneven cash disbursements, a better estimate of the modified payout ratio can be obtained by using an average payout ratio based upon several years of payout data.[7]

B. MULTIPLE GROWTH RATES

The major failing of the SSDCF model is its reliance upon a single growth rate to estimate cashflows into perpetuity.[8] Application of a growth rate that is too high will ultimately lead to a high cost of equity, while an unreasonably low growth rate will understate equity capital costs. The STB proposes to address the SSDCF model's failings through the use of a MSDCF, which can incorporate multiple rates of growth.

An inherent issue with the MSDCF approach is choosing which are the appropriate growth rates to include in the model. As we indicated in our Reply VS in the *Ex Parte 664*, there is no single

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[6] See CSXT 1998, 2000 and 2006 SEC Form 10-K.

[7] See Damodaran at 20 discussing the use of averages to smooth cashflows to shareholders when developing modified payout ratios.

[8] See *Ex Parte 664* at 4.

correct MSDCF model formation [9] This same sentiment was expressed by Dr Stewart C Myers in his writings on the application of MSDCF models

> Anyone who has reviewed and tried to absorb [the DCF model results] will be frustrated at the inexplicable scatter of the DCF cost of equity estimates It is tempting to look for some simple rule or message in these results Unfortunately, the scatter is the rules and is the message DCF is not one method but many, it is difficult (probably impossible) to say which growth rate measure or variable growth method is correct [10]

Without a single preferred approach for applying the variable growth factors, the challenge is developing a method which is open and transparent, uses generally reliable data inputs and provides a mechanism for applying reasonable future growth patterns We believe the approach we advocated in our Reply VS in the Ex Parte 664 proceedings for applying different growth rates meets these objectives We discuss each component of our approach below

1 **Initial Growth Stage**

The initial stage should reflect growth over a relatively short initial term, i e , one to five years A relatively short initial term consistent with this approach is used by Myers/Borucki[11] and Brealey, Myers & Allen [12] A key aspect though is matching the length of the initial term to the length of the

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[9] See Reply Verified Statement of Thomas D Crowley and Daniel L Fapp submitted on behalf of the WCTL in *Ex Parte 664*, October 29, 2007 ("Crowley/Fapp Reply VS")

[10] See "*Discounted Cash Flow Estimates of the Cost of Equity Capital - A Case Study*," Myers, Stewart C and Borucki, Lynda S *Financial Markets, Institutions & Instruments*, Volume 3, Number 3, 1994, 9-45, 27 ("Myers/Borucki")

[11] See Myers/Borucki at 21

[12] See Brealey, Myers & Allen at 70-71

forecast Using a three year forecast of earnings growth with a five year initial stage could lead to an mistatement in the cost of equity

There are several methods for estimating earnings growth during the initial phase Some analysts have relied upon historical average growth in net earnings as a proxy for future growth However, empirical studies have shown historical averages to be poor forecasters of future growth rates [13] A better approach is to utilize earnings forecasts produced by financial analysts Analysts forecasts of future earnings growth have been more reliable than using historic averages [14] However, forecasts are apt to be based in large part on recent past performance, and there is no certainty that forecasts will prove accurate

We propose to utilize the truncated consensus I/B/E/S earnings forecasts previously used by the STB to estimate railroad earnings growth under the SSDCF procedures The use of truncated consensus forecasts provides an open and transparent means for forecasting future earnings growth, and are produced by at least somewhat independent third parities [15]

2 **Transition Growth Stage**

As indicated above, there is no one strict formulation for a MSDCF, nor limit on the number of transition growth rates that may be applied [16] Logic dictates though that, at some point, growth will diverge towards the average rate of growth in the overall economy A growth rate that is significantly above that of the overall economy will cause the firm(s) or sector to overtake the entire

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[13] See Patterson, C S , "The Cost of Capital Theory and Estimation," Quorum Books, 1995 at 87 to 90 ("Patterson")

[14] See Patterson at 94

[15] As we have noted previously, there is significant evidence that financial analysts are subject to some pressures that can result in overstated forecasts See Mr Crowley's April 28, 206 Reply VS at 6 to 7 in STB *Ex Parte No 558 (Sub-No 9) Railroad Cost of Capital – 2005*

[16] See Brealey Myers & Allen at 71

economy, and if the growth rate is substantially below the general growth rate, the firm(s) or sector will disappear altogether Neither outcome is at all plausible for the railroad industry

We propose that the transition stage of growth would begin in year 6 of the MSDCF model, with growth moving from its short-term levels in the initial stage towards the estimated growth in the GDP in straight-line manner In other words, the difference in each railroad's short-term earnings growth rate and the expected growth rate in the GDP would be calculated, and the difference divided by the 10 years in the transition growth range to develop an annual growth adjustment factor Application of the growth adjustment factor to the prior year's growth estimate will lead to a linear change in transition period growth rates until the long-term growth rate is reached in year 15

Others have advocated or used similar approaches for developing transition phase growth rates Brealey, Myers & Allen suggested using such an approach, and provide an example in their book [17] Fuller and Hsia proposed a similar approach where, after an initial growth phase, growth is assumed to change linearly over a user specified number of years before leveling at a steady mean rate of growth [18]

3 Terminal Growth Stage

The final, or terminal, stage should reflect the long-term expected growth rate in the GDP As indicated by Morningstar, " even in a rapidly growing industry there will come a time when growth slows to be more in line with the overall economy "[19] This approach has also received support from Brealey, Myers & Allen [20]

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[17] See Brealey, Myers & Allen at 71

[18] See Fuller, R J , and C C Hsia, " A Simplified Common Stock Valuation Model," Financial Analysts Journal, 40(5), 1984 at 49 to 56, and Damodaran at 12

[19] See SBBI at 68

[20] See Brealey, Myers & Allen at 71

As for an estimate of the expected long-term GDP growth rate, we propose using the consensus forecast of the long-term nominal growth in the GDP as calculated by Blue Chip Economic Indicators ("Blue Chip"). The March 10, 2008 issue of Blue Chip places long-term GDP growth at 5.0 percent.

C. APPLICATION OF THE MODIFIED PAYOUT MODEL

Based upon the approaches and methodologies described above, we developed a MSDCF cost of equity for the railroad industry for the years 2002 to 2006 utilizing the modified payout method. Our approach utilized the following procedures.[21]

1. For each railroad company meeting the STB's cost of capital selection criteria[22], we extracted total cash outflows for dividends on common stock and stock repurchases, cash inflows from stock options exercised and issuance of new equity and annual net income from each company's consolidated statement of cashflows as reported in the company's SEC Form 10-K.

2. We calculated the modified payout ratio for each company by year by netting cash outflows from dividends and buybacks against cash inflows from the exercising of stock options and issuance of new equity and dividing the difference by the year's net income.

3. We normalized each company's modified payout ratios by calculating the simple average of the ratios over the three most recent years. For example, the normalized modified payout ratio applicable for 2006 was developed by averaging the ratios for 2004 to 2006.

4. We developed an estimate of next year's cash disbursements per share for each company by applying the normalized modified payout ratio to the most current year's reported net income. We then multiplied this product by one plus the truncated I/B/I/S forecast of

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[21] Consistent with the STB's request in its *Ex Parte 664 (Sub-No. 1)* decision, we have included with this VS the workpapers associated with our calculations.

[22] This includes the Burlington Northern Santa Fe Corporation ("BNSF"), CSX Corporation ("CSX"), Norfolk Southern Corporation ("NS") and Union Pacific Corporation ("UP").

earnings growth and divided the resultant product by the average number of common shares outstanding to develop an estimated cash to shareholder per share.

5 We developed a 15 year forecast of expected cash disbursements per share by utilizing the expected growth factors discussed above Specifically, for the initial 5 year growth stage, we applied truncated consensus I/B/L/S forecast applicable for each railroad For the 10 year transition phase, we adjusted the growth in a linear manner between the railroad's truncated I/B/E/S forecast and the long-term forecast of growth in the GDP The terminal growth stage was calculated using the long-term GDP forecast of 5 0 percent,

6 We developed the cost of equity for each railroad through an iterative process which equated discounted future cashflows to the railroad's average weekly closing stock price for the subject year, and

7 We developed a weighted cost of equity for the railroad industry by weighting each railroad's cost of equity based upon its equity market capitalization for the year

The results of our analysis are shown in Table 1 below

Table 1

Estimates of the Railroad Industry Cost of Equity
Using A Modified Payout Ratio MSDCF

	Year	Modified Payout MSDCF Railroad Industry Cost of Equity
	(1)	(2)
1	2002	10 41%
2	2003	7 84%
3	2004	7 22%
4	2005	8 81%
5	2006	9 52%

Sources Exhibit No 3

As Table 1 above indicates, the railroad industry cost of equity under the modified payout MSDCF approach ranges from 7 22 to 10 41 percent over the 2002 through 2006 time period

III. MSDCF USING FREE CASH FLOW TO EQUITY

Dividend discount models, and their progeny like the modified payout model we discussed above, rest on the premise that a stock's value is equal to the discounted value of future cash disbursements to shareholders Implicit in such models is the assumption that companies are paying out all cash available after taking into consideration cash required for current and future operations and repayment of debt In the long-run this maybe an accurate assumption However, in the short run, the amount of cash returned to shareholders maybe significantly different than the cash actually available after considering other cash requirements

Because of this difference between actual cash disbursements made to shareholders, and what are essentially potential cash disbursements to shareholders, analysts have developed valuation models using Free Cashflow To Equity ("FCFE") as a replacement for estimated cash distributed to shareholders in the form of dividends and stock repurchases We discuss the calculation of FCFE and our use of it in the calculation of railroad cost of equity below

A. CALCULATION OF FCFE

As described above, FCFE generally reflects the cash left over in the firm after reinvestment needs are meet and debt repaid This is specifically defined as

Net Income

+ Noncash charges (e g depreciation, amortization, deferred revenue and deferred taxes)

- Capital Expenditures

± Change in Working Capital

- Dividends on Preferred Stock (if any)

± Change in Long Term Debt

= FCFE[23]

When FCFE replaces dividends in an equity valuation, it is implicitly assumed that the FCFE will be paid out to stockholders There are two consequences to this assumption First, there will be no cash building-up in the firm, since the cash available after debt repayments and reinvestment is paid to shareholders each year Second, the expected growth in FCFE will come from growth in operating assets and not growth in income from increases in marketable securities [24]

B. INCORPORATION OF FCFE INTO THE MSDCF

To develop the cost of railroad equity using I CI L and a MSDCF model, we used the following methodology

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[23] See Pratt, Shannon P , *Cost of Capital Estimation and Applications*," 2002 at 16 ('Pratt') Also see Damodaran at 21

[24] See Damodaran at 21

1 For each railroad in the study group, we identified annual net income, non-cash charges, capital expenditures, new debt issuances and debt repayments from each company's consolidated statement of cashflows contained in their SEC Form 10-K.

2 For each railroad in the study group, we calculated the annual net change in non-cash working capital, net of debt from current asset and current liability information contained each company's consolidated balance sheet.

3 Using the data from the railroad's statement of cashflows and our calculation of net changes in working capital, we developed each railroad's FCFE.

4 We calculated the annual ratio of FCFE to net income for each railroad, and averaged these ratios over a three year period to develop a normalized FCFE to net income ratio.

5 We developed an estimate of next year's FCFE per share for each company by applying the normalized FCFE to net income ratio to the most current year's reported net income, multiplying this product by one plus the truncated I/B/E/S forecast of earnings growth and dividing the resultant product by the average number of common shares outstanding.

6 We developed a 15 year forecast of FCFE per share by utilizing the expected growth factors discussed above. Specifically, for the initial 5-year growth stage, we applied truncated consensus I/B/E/S forecast applicable for each railroad. For the 10-year transition phase, we adjusted the growth in a linear manner between the railroad's truncated I/B/E/S forecast and the long-term forecast of growth in the GDP. The terminal growth stage was calculated using the long-term GDP forecast of 5.0 percent.

7 The cost of equity for each railroad was developed through an iterative process which equated discounted future FCFE to the railroad's average weekly closing stock price for the subject year, and

8 We developed a weighted cost of equity for the railroad industry by weighting each railroad's cost of equity based upon its equity market capitalization for the year.

Table 2 below displays the results of our analysis.

Table 2

Estimates of the Railroad Industry
Cost of Equity Using A FCFE MSDCF

	Year	FCFE MSDCF Railroad Industry Cost of Equity
	(1)	(2)
1	2002	11 64%
2	2003	10 10%
3	2004	8 87%
4	2005	9 92%
5	2006	9 84%

Source Exhibit No 3

The Table 2 results show that the railroad industry cost of equity ranged from 8 87 percent to 11 64 percent over the 2002 through 2006 time period

If the STB chooses to utilize a FCFE approach in developing its MSDCF model calculations, it should rely upon the model described above All of the inputs to the model are readily available form public sources Additionally, the model does not rely upon proprietary information regarding future growth rates or expected future cash requirements for capital expansions and uses reasonable assumptions about future growth in expected FCFE

Some may argue that the above model does not take into consideration future railroad capital needs This argument is a red hearing As the railroads have previously stated , changes in railroad capital spending closely track changes in revenues, net income, and returns [25] In other words, as

[25] See for example, the written testimony submitted by UP on November 27, 2007 preceeding the Oral Hearing in *Ex Parte 664* at 3 "As our earnings have improved, Union Pacific has responded to the challenges of providing adequate infrastructure and has been investing for long-term growth " See also slide 34 to BNSF's November 14, 2006 presentation at the Citigroup Annual Transportation Conference, and slide 30 to BNSF's February 14 2008

revenues and net income have increased, so have the railroads' willingness to expend funds on capital projects By calculating a FCFF to net income ratio, and using that ratio to calculate future FCFE based on increases in net income, the MSDCF model implicitly accounts for increases in capital investment

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presentation at the BB&T Capital Markets Annual Transportation Conference available on BNSF's website

IV. COMPARISON OF MSDCF TO CAPM COSTS OF EQUITY

The two models we discuss above are reasonable examples of methodologies used to develop cost of equity using MSDCF approaches. To compare the results of these two models to the results of the CAPM cost of equity, we developed the cost of equity as outlined under the STB's *Ex Parte 664* procedures for the years 2002 to 2006.[26] Table 3 below compares the results of our analyses.

Table 3

Estimates of the Railroad Industry Cost of Equity

	Year (1)	STB CAPM Railroad Industry Cost of Equity (2)	Modified Payout MSDCF Railroad Industry Cost of Equity (3)	FCFF MSDCF Railroad Industry Cost of Equity (4)
1	2002	10.05%	10.41%	11.64%
2	2003	9.93%	7.84%	10.10%
3	2004	10.38%	7.22%	8.87%
4	2005	10.61%	8.81%	9.92%
5	2006	11.08%	9.52%	9.84%

Sources: Exhibit No. 3

As shown in Table 3 above, the two MSDCF models produce similar but not identical results to that of the CAPM cost of equity.

[26] The calculations for our 2002 to 2006 CAPM costs of equity are included in our workpapers accompanying this VS. In developing the CAPM cost of equity, we used the approach specified in our February 15, 2008 Reply VS in Ex Parte No. 558 (Sub-No. 10), *Railroad Cost of Capital – 2006*.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

I, THOMAS D CROWLEY, verify under penalty of perjury that I have read the foregoing Verified Statement of Thomas D Crowley, that I know the contents thereof, and that the same are true and correct Further, I certify that I am qualified and authorized to file this statement

Thomas D Crowley

Sworn to and subscribed
before me this 14th day of April, 2008

Diane R Kavounis
Notary Public for the State of Virginia

My Commission expires November 30, 2012

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

I, DANIEL L. FAPP, verify under penalty of perjury that I have read the foregoing Verified Statement of Daniel L Fapp, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Daniel L. Fapp

Sworn to and subscribed
before me this day of April 14, 2008.

Notary Public for the State of Virginia

My Commission expires. November 30, 2012

LIST OF EXHIBITS

Exhibit No.	Description
(1)	(2)
1	Thomas D Crowley Statement Of Qualifications
2	Daniel L. Fapp Statement of Qualifications
3	Comparison of Railroad Costs of Equity

STATEMENT OF QUALIFICATIONS

My name is Thomas D Crowley I am an economist and President of the economic consulting firm of L E Peabody & Associates, Inc The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, Virginia 22314,, and 10445 N Oracle Road, Suite 151, Tucson, Arizona 85737

I am a graduate of the University of Maine from which I obtained a Bachelor of Science degree in Economics I have also taken graduate courses in transportation at George Washington University in Washington. D C I spent three years in the United States Army and since February 1971 have been employed by L E Peabody & Associates, Inc

I am a member of the American Economic Association, the Transportation Research Forum, and the American Railway Engineering and Maintenance-of-Way Association

The firm of L E Peabody & Associates, Inc specializes in analyzing matters related to the rail transportation of coal As a result of my extensive economic consulting practice since 1971 and my participating in maximum-rate, rail merger, service disputes and rule-making proceedings before various government and private governing bodies, I have become thoroughly familiar with the rail carriers that move coal over the major coal routes in the United States This familiarity extends to subjects of railroad service, costs and profitability, railroad capacity, railroad traffic prioritization and the structure and operation of the various contracts and tariffs that historically have governed the movement of coal by rail

STATEMENT OF QUALIFICATIONS

As an economic consultant, I have organized and directed economic studies and prepared reports for railroads, freight forwarders and other carriers, for shippers, for associations and for state governments and other public bodies dealing with transportation and related economic problems Examples of studies I have participated in include organizing and directing traffic, operational and cost analyses in connection with multiple car movements, unit train operations for coal and other commodities, freight forwarder facilities, TOFC/COFC rail facilities, divisions of through rail rates, operating commuter passenger service, and other studies dealing with markets and the transportation by different modes of various commodities from both eastern and western origins to various destinations in the United States The nature of these studies enabled me to become familiar with the operating practices and accounting procedures utilized by railroads in the normal course of business

Additionally, I have inspected and studied both railroad terminal and line-haul facilities used in handling various commodities, and in particular unit train coal movements from coal mine origins in the Powder River Basin and in Colorado to various utility destinations in the eastern, mid-western and western portions of the United States and from the Eastern coal fields to various destinations in the Mid-Atlantic, northeastern, southeastern and mid-western portions of the United States These operational reviews and studies were used as a basis for the determination of the traffic and operating characteristics for specific movements of coal and numerous other commodities handled by rail

STATEMENT OF QUALIFICATIONS

I have frequently been called upon to develop and coordinate economic and operational studies relative to the acquisition of coal and the rail transportation of coal on behalf of electric utility companies My responsibilities in these undertakings included the analyses of rail routes, rail operations and an assessment of the relative efficiency and costs of railroad operations over those routes I have also analyzed and made recommendations regarding the acquisition of railcars according to the specific needs of various coal shippers The results of these analyses have been employed in order to assist shippers in the development and negotiation of rail transportation contracts which optimize operational efficiency and cost effectiveness

Moreover, I have developed numerous variable cost calculations utilizing the various formulas employed by the Interstate Commerce Commission ("ICC") and the Surface Transportation Board ("STB") for the development of variable costs for common carriers, with particular emphasis on the basis and use of the Uniform Railroad Costing System ("URCS") and its predecessor, Rail Form A I have utilized URCS/Rail form A costing principles since the beginning of my career with L E Peabody & Associates Inc in 1971

I have frequently presented both oral and written testimony before the ICC, STB, Federal Energy Regulatory Commission, Railroad Accounting Principles Board, Postal Rate Commission and numerous state regulatory commissions, federal courts and state courts This testimony was generally related to the development of variable cost of service calculations, rail traffic and operating patterns, fuel supply economics, contract interpretations, economic principles

STATEMENT OF QUALIFICATIONS

concerning the maximum level of rates, implementation of maximum rate principles, and calculation of reparations or damages, including interest I presented testimony before the Congress of the United States, Committee on Transportation and Infrastructure on the status of rail competition in the western United States I have also presented expert testimony in a number of court and arbitration proceedings concerning the level of rates, rate adjustment procedures, service, capacity, costing, rail operating procedures and other economic components of specific contracts

Since the implementation of the *Staggers Rail Act of 1980*, which clarified that rail carriers could enter into transportation contracts with shippers, I have been actively involved in negotiating transportation contracts on behalf of coal shippers Specifically, I have advised utilities concerning coal transportation rates based on market conditions and carrier competition, movement specific service commitments, specific cost-based rate adjustment provisions, contract reopeners that recognize changes in productivity and cost-based ancillary charges I have also reviewed, analyzed and evaluated both UP's Circular 111 and BNSF 90068 rate levels and other terms and conditions on behalf of coal shippers

I have been actively engaged in negotiating coal supply contracts for various users throughout the United States In addition, I have analyzed the economic impact of buying out, brokering, and modifying existing coal supply agreements My coal supply assignments have encompassed

STATEMENT OF QUALIFICATIONS

analyzing alternative coals to determine the impact on the delivered price of operating and maintenance costs, unloading costs, shrinkage factor and by-product savings

I have developed different economic analyses regarding rail transportation matters for over sixty (60) electric utility companies located in all parts of the United States, and for major associations, including American Paper Institute, American Petroleum Institute, Chemical Manufacturers Association, Coal Exporters Association, Edison Electric Institute, Mail Order Association of America, National Coal Association, National Industrial Transportation League, North America Freight Car Association, the Fertilizer Institute and Western Coal Traffic League In addition, I have assisted numerous government agencies, major industries and major railroad companies in solving various transportation-related problems

In the two Western rail mergers that resulted in the creation of the present BNSF Railway Company and Union Pacific Railroad Company and in the acquisition of Conrail by Norfolk Southern Railway Company and CSX Transportation, Inc., I reviewed the railroads' applications including their supporting traffic, cost and operating data and provided detailed evidence supporting requests for conditions designed to maintain the competitive rail environment that existed before the proposed mergers and acquisition In these proceedings, I represented shipper interests, including plastic, chemical, coal, paper and steel shippers

STATEMENT OF QUALIFICATIONS

I have participated in various proceedings involved with the division of through rail rates For example, I participated in ICC Docket No 35585, *Akron, Canton & Youngstown Railroad Company, et al v Aberdeen and Rockfish Railroad Company, et al* which was a complaint filed by the northern and mid-western rail lines to change the primary north-south divisions I was personally involved in all traffic, operating and cost aspects of this proceeding on behalf of the northern and mid-western rail lines I was the lead witness on behalf of the Long Island Rail Road in ICC Docket No 36874, *Notice of Intent to File Division Complaint by the Long Island Rail Road Company*

STATEMENT OF QUALIFICATIONS

My name is Daniel L Fapp I am Vice President of the economic consulting firm of L E Peabody & Associates, Inc The firm's offices are located at 1501 Duke Street, Suite 200, Alexandria, VA 22314, and 10445 N Oracle Road, Suite 151, Tucson, AZ 85737

I received a Bachelor of Science degree in Business Administration with an option in Marketing (cum laude) from the California State University, Northridge in 1987, and a Master of Business Administration degree from the University of Arizona's Eller College of Management in 1993, specializing in finance and operations management I am also a member of Beta Gamma Sigma, the national honor society for collegiate schools of business

I have been employed by L E Peabody & Associates, Inc since December 1997 Prior to joining L E Peabody & Associates, Inc . I was employed by BHP Copper Inc in the role of Transportation Manager - Finance and Administration, and where I also served as an officer of the three BHP Copper Inc subsidiary railroads. The San Manual Arizona Railroad, the Magma Arizona Railroad (also known as the BHP Arizona Railroad) and the BHP Nevada Railroad I have also held operations management positions with Arizona Lithographers in Tucson, AZ and MCA-Universal Studios in Universal City, CA

While at BHP Copper Inc . I was responsible for all financial and administrative functions of the company's transportation group I also directed the BHP Copper Inc subsidiary railroads' cost and revenue accounting staff, and managed the San Manuel Arizona Railroad's and BHP Arizona Railroad's dispatchers and the railroad dispatching functions I served on the company's Commercial and Transportation Management Team and the company's Railroad Acquisition Team where I was responsible for evaluating the acquisition of new railroads, including developing financial and economic assessment models While with MCA-Universal Studios, I

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held several operations management positions, including Tour Operations Manager, where my duties included vehicle routing and scheduling, personnel scheduling, forecasting facilities utilization, and designing and performing queuing analyses

As part of my work for L E Peabody & Associates, Inc , I have performed and directed numerous projects and analyses undertaken on behalf of utility companies, short line railroads, bulk shippers, and industry and trade associations Examples of studies which I have participated in organizing and directing include, traffic, operational and cost analyses in connection with the rail movement of coal, metallic ores, pulp and paper products, and other commodities I have also analyzed multiple car movements, unit train operations, divisions of through rail rates and switching operations throughout the United States The nature of these studies enabled me to become familiar with the operating procedures utilized by railroads in the normal course of business

Since 1997, I have participated in the development of cost of service analyses for the movement of coal over the major eastern and western coal-hauling railroads I have conducted on-site studies of switching, detention and line-haul activities relating to the handling of coal I have also participated in and managed several projects assisting short-line railroads In these engagements, I assisted short-line railroads in their negotiations with connecting Class I carriers, performed railroad property and business evaluations, and worked on rail line abandonment projects

I have been frequently called upon to perform financial analyses and assessments of Class I, Class II and Class III railroad companies In addition, I have developed various financial models exploring alternative methods of transportation contracting and cost assessment.

STATEMENT OF QUALIFICATIONS

developed corporate profitability and cost studies, and evaluated capital expenditure requirements I have determined the Going Concern Value of privately held freight and passenger railroads, including developing company specific costs of debt and equity for use in discounting future company cash flows My consulting assignments regularly involve working with and determining various facets of railroad financial issues, including cost of capital determinations In these assignments, I have calculated railroad capital structures, market values, cost of railroad debt, cost of preferred railroad equity and common railroad equity I am also well acquainted with and have used the commonly accepted models for determining a firm's cost of equity, including the Discounted Cash Flow Model ("DCF"), Capital Asset Pricing Model ("CAPM"), Farma-French Three Factor Model and Arbitrage Pricing Model

In my tenure with L E Peabody & Associates, Inc , I have assisted in the development and presentation of traffic and revenue forecasts, operating expense forecasts, and discounted cash-flow models which were presented in numerous proceedings before the STB I presented evidence applying the STB's stand-alone cost procedures in Docket Number 42057, *Public Service Company of Colorado d/b/a Xcel Energy v The Burlington Northern and Santa Fe Railway Company*, and in Docket Number 42071, *Otter Tail Power Company v BNSF Railway Company* I have also presented evidence before the STB in Ex Parte No 661, *Rail Fuel Surcharges*, in Ex Parte No 558 (Sub-No 10), *Railroad Cost of Capital – 2006*, and Ex Parte No 664, *Methodology To Be Employed In Determining The Railroad Industry Cost Of Capital* In addition, my reports have been used as evidence before the Nevada State Tax Commission

Comparison of Railroad Costs of Equity - 2002 to 2006

	Year	STB Single-Stage DCF Cost of Equity 1/	STB CAPM Cost of Equity 2/	Modified Payout Method Cost of Equity 3/	Free Cash Flow To Equity Method Cost of Equity 4/
	(1)	(2)	(3)	(4)	(5)
1	2002	12 60%	10 05%	10 41%	11 64%
2	2003	12 70%	9 93%	7 84%	10 10%
3	2004	13 16%	10 38%	7 22%	8 87%
4	2005	15 18%	10 61%	8 81%	9 92%
5	2006	16 10%	11 08%	9 52%	9 84%

1/ 2002 to 2005 from STB Ex Parte No 558 decisions 2006 from the AAR's evidence in STB Ex Parte No 558 (Sub-No 10)

2/ Using the STB's CAPM method as outlined in our February 15, 2008 testimony in Ex Parte No 558 (Sub-No 10)

3/ Based on multi-stage DCF approach using dividends and stock repurchases net of cash received from options excersed

4/ Based on multi-stage DCF approach using free cash flow to equity