Methods for Estimating Weekly Coal Production

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Introduction

In this paper, we present and review a new model developed by CNEAF to estimate coal production at the State level on a weekly basis. This is the first time this topic has been brought to the attention of the ASA Committee.

In the early 1980's, CNEAF developed a model to estimate State weekly coal production. That model, with some minor modifications, was used until 2002. As we discuss later in this paper, this model performed well up until the late 1990's. But starting from about 1998, estimates from the old model aggregated to the national level had larger forecast errors than in earlier years. Additionally, there were large swings in estimates of coal production for some States.

In the spring of 2001, CNEAF began a project to develop a new model. By the end of 2001, CNEAF finished the development and testing of the new model. Starting from 1st quarter 2002, CNEAF has been using the new model to make State estimates of coal production on a weekly basis. Each week, usually on Thursday, Coal Team staff assemble certain input or indicator data for the week ending the previous Saturday and use the data in a model to make estimates of coal production for that week. The process, as such, does not forecast produced coal; rather it deduces an estimate for the latest week of State-level coal production (table 1.)

Besides the weekly coal production estimates, the CNEAF Coal Team is tasked to conduct national-scope surveys of coal production and consumption. The Coal Team conducts two annual national surveys: coal mines and coal distributors; and two different quarterly national consumption surveys: coke plants and manufacturing facilities. In addition, the Coal Team shares with Mine Safety and Health Administration (MSHA) tasks to review and cleanup its quarterly mine-level survey of coal production.

This paper provides the Committee members with a description of the new model, its data, statistical methods, and process-model components. CNEAF regards the new model as a work in progress and solicits the Committee's input on suggestions for improving the new model. The last section of the paper has specific questions that CNEAF hopes the Committee can address.

Legacy Method

Several years ago, EIA data customers began pointing out that some of the weekly estimates seemed to be at wide variance with their experience. In particular, users observed a wide divergence in the estimates (plus and minus) from later, survey-based data for large western coal-producing states such as Wyoming, Colorado, Utah, and Montana. CNEAF reviewed the estimating model and noted several problems including the inability to keep some model parameters up to date because the data used to estimate model parameters had long release lags. Further, largely due to the lag in parameter data, CNEAF had come to rely on proportional scaling of model estimates, using the ratio of the most recent survey-based quarterly production data to CNEAF's estimates comprising that quarter. On occasion, CNEAF applied a scalar with a magnitude greater than one because model estimates were less than surveyed quarterly production.[1] The goal in making the adjustment was to bring the model estimates back in line with observed outcomes. Then the scalar was carried over in the model to estimate weekly production in the next quarter where sometimes, even without any scalar, the model would overestimate weekly coal production. Thus application of the scalar (larger in magnitude than one) to the base overestimates made the overestimates even larger. Continuation of this pattern, which ignored seasonal patterns, led to ever-widening errors. Similarly, in some other cases, adjustments of this kind led to compounding under estimates.

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[1] Quarterly survey data based on mine-level production are collected by the Mine Safety and Health Administration.

CNEAF's earlier model was not statistically based. Rather, it applied an engineering process model to transform rail cars loaded with coal into tons of coal produced.

In the earlier model, States producing coal were divided into two groups: those with a significant and consistent portion of new coal production loaded to rail (called "rail" States), and those with little rail loadings, which tended to be inconsistent (called "non-rail" States), representing about 90 and 10 percent of U.S. coal production, respectively

An aggregate national weekly coal production was calculated by

- converting rail car loadings of coal (these being actual data with a 5 day lag) by major rail carriers into tons of coal by multiplying by tons per rail car (specific to carrier) using averages developed from sample data,[2] and, then,
- dividing by a national fraction (a single number) of coal transported by rail to account for all coal produced, including coal transported by other modes.

State coal production shares then were applied to the national weekly coal production aggregate to determine weekly coal production at the State level. The State coal production shares were estimated from MSHA production data for the same quarter in the prior year.

[2] Originally derived from Interstate Commerce Commission waybill statistics that were available 2 to 3 quarters after the fact, these statistics are no longer available by quarter, or in a timely manner. By the time of the methodology changes, some tons-per-carload statistics were 4 years old.

For non-rail States, the State-level estimate at this point was assigned as the final estimate of weekly coal production. Indeed, at this point in the calculations, coal production was estimated for all States. However, the developers of the CNEAF process model recognized that there were State-level rail transport data for the rail States that could be used to fine-tune the calculation of the shares applied against the national estimate of weekly coal production. Therefore, a second set of State shares for rail States were developed and applied to the aggregate initial national estimate for rail States.

The estimated coal production for all non-rail States was subtracted from the national estimate to provide a single estimate for the rail States (representing about 90% of U.S. coal production). New State-level shares, to be applied against this aggregate, were estimated in a six-step process:

1. the number of rail cars loaded by major rail carriers with coal (these being actual data with a 5 day lag) were converted to tons of coal loaded by multiplying by tons per rail car using carrier-specific averages developed from sample data (gathered 4 years earlier);
2. national tons of coal loaded by major carriers were assigned to rail States by multiplying by a national-to-State share for each carrier developed from sample data (gathered 3 years earlier);
3. the tons of coal in rail cars were aggregated across major carriers within each State to estimate State-level tons of coal in rail cars;

4. these estimates were divided by the fraction of coal in the State transported by rail to account also for produced coal carried by other modes (using data gathered 2 years before);
5. the sum of these alternate estimates of State-level weekly coal production were divided into each rail State estimate to produce a new set of rail State production shares; and
6. these State-level shares were applied to the initial national aggregate for rail States to estimate weekly coal production in each rail State.

The various sets of factors were updated periodically but the data used for updating always lagged the current period of application by the stated numbers of years. The scalar adjustment described in a previous paragraph was used to try to keep the model on track during the long stretches of time in between the dates when parameter values were updated.

The new model, which attempts to overcome the major weaknesses in the old model, has these features:

- it uses time-series statistical methods to establish relationships between dependent and explanatory variables, allowing the statistics to capture any systematic relationships rather than imposing ad hoc adjustments as in the old model,
- because the data used to estimate model parameters is continuously updated and the model refitted, there is never more than a two-quarter lag between the period

for the latest data used in the model and the period being estimated by the model; and

- whenever real-time and real-place indicator data are available, the new model uses those data rather than a sharing algorithm to estimate weekly coal production.

The ultimate test of the new model is whether it improves forecast precision, compared to the old model. To test the new model, data from 1990 quarter 1 to 1998 quarter 3 were used to estimate model parameters. Then the model was used to estimate coal production for 12 quarters: 1999 quarter 1 through 2001 quarter 4. Because the old model was still being used in that time period and actual production was known from MSHA survey data, it was possible to compare weighted absolute forecast errors at the national and State levels between the models. On average, the new model reduced State-level absolute forecast error by 29 percent. The forecast error in national estimates of weekly coal production was cut in half. These results are discussed in greater detail in a later section.

New Methods and Statistical Parameter Results

In the new model, CNEAF uses statistical autoregressive methods to estimate the parameters in two equations:

1. National coal production as a function of railcar loadings of coal, heating degree days, and cooling degree days

2. Share of each State in national coal production as a function of lagged share, and a linear time trend

These equations are used to forecast weekly coal production in all States except Wyoming. More details about the data, estimation of parameters, and application are provided in what follows.

For Wyoming, real-time data on rail cars loaded with coal in Wyoming are used to estimate coal production in Wyoming. With a lag of only days, CNEAF obtains data on the numbers of rail cars loaded with coal in Wyoming by the Burlington Northern Sante Fe railroad. Data on rail cars loaded by the Union Pacific railroad are available to CNEAF for the latest month. CNEAF uses the lagged monthly data to model Union Pacific loadings for the current month. These 2 railroads are the only rail carriers hauling coal in Wyoming. These real-time coal loading data significantly improve the accuracy of the Wyoming estimate in the new model compared with the old model. Because Wyoming coal production represents about 32% of national coal production, this outcome represents a significant improvement in forecast precision. Details of the procedure used to estimate Wyoming coal production on a weekly basis are provided in what follows.

National and State Weekly Coal Production – Sharing Algorithm

Two regression models were considered for forecasting national weekly coal production. In both cases, the model was fit using quarterly data consisting of values starting in 1992 quarter 1 and extending through 2001 quarter 4 (40 quarters of data).

Model 1 was an autoregressive model with dependent variable: produced tons of coal at the national level (Tons); with explanatory variables: U.S. rail cars loaded with coal (Rail Cars), population-weighted lower-48 U.S. heating degree days (HDD), and population-weighted lower-48 U.S. cooling days (CDD); and with lagged values of the dependent variable for the four previous quarters:

$$\text{Tons} = f(\text{Rail Cars, HDD, CDD}) \text{ autoregressive, no. of lags} = 4 \qquad (1)$$

The quarter 4 lagged value of tons passed a significance level test of 0.2 in order to remain in the model. However, its final t value of 1.65 was too small for retention. All of the explanatory variables had their expected signs and were retained in the final model:[3]

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[3] Committee members can access data and sample SAS program code for Model 1 and Model 2 at:

http://www.eia.doe.gov/smg/asa_meeting_2002/fall/

SAS code for estimating parameters in Model 1 and Model 2, equation (1) is in file,

quartcoal.dat.

Data for running the code are in file,

aardatadanq.prn.

The file with SAS code can be opened in the SAS editor window. Committee members should change file locations to correspond with file locations on their PCs before running the code.

Variable	Estimate	t value
Intercept	40562	1.94
Rail Cars	0.1313	10.84
HDD	0.7683	0.24
CDD	-2.3850	-0.27

Model 1 had an unadjusted R-square of 0.77.

In Model 2, tons of produced coal (Tons) were regressed on U.S. rail cars loaded with coal (Rail Cars), population weighted lower 48 U.S. heating degree days (HDD), year (where year = 1 for 1990), and dummy variables for quarter 2, quarter 3, and quarter 4. The estimated regression parameter for HDD had an unexpected negative value, probably reflecting multicollinearity with the quarterly dummies:

Variable	Estimate	t value
Intercept	163212	5.673
Rail Cars	0.0826	6.112
HDD	-22.85	-2.846
Year	1794.5	4.10
Quarter 2	-43756	-3.175
Quarter 3	-52551	-3.057
Quarter 4	-15565	-2.864

Model 2 has an adjusted R-square of 0.86.

The two models have different and distinct structures. Model 1 relies almost entirely upon rail car loadings to predict coal production. Model 2 has mixed reliance between rail car loadings and time: both year and quarter. At times there has been strong seasonality in coal production, but on-going changes in the economy, environmental regulations, and energy market conditions have added complexity. Real-time rail car loadings have proven to be a strong proxy for many complex interactions. For example, the old process model, which exclusively relied upon rail car loadings, was able to predict national quarterly production, worse case, to within 7.5% of actual national coal production. On the statistical side, there is not a lot of difference between the two models. But, the stronger structural basis of Model 1 makes it the model of choice for estimating national coal production.

State-level weekly coal production is determined as the product of national coal production and State shares. The State shares are estimated by a share Forecast model. In the Forecast model, State shares for each State for the past 40 quarters are regressed using a stepwise auto-regressive method (SAS proc Forecast). The model determines a linear time trend and any systematic correlation with past share values back to the previous four quarters using an autoregressive method:[4]

$$\text{State share} = \text{constant} + b{*}\text{time} + \sum a_i\,(\text{State share}_i - \text{trend State share}_i) \qquad (2)$$

where

constant is the constant from the Forecast model (table 2)

b is the estimated linear time trend parameter from the Forecast model (table 2)

a_i is the estimated autoregressive parameter from the Forecast model (table 2)

i is an index for lagged quarter (i=1 is for 1 quarter back, i=2 is for 2 quarters back, i=3 is for 3 quarters back and i=4 is for 4 quarters back)

Wyoming Model: Weekly Coal Production in Wyoming

[4] Committee members can access data and sample SAS program code for the Forecast model at:

http://www.eia.doe.gov/smg/asa_meeting_2002/fall/

SAS code for estimating parameters in the Forecast model is in file,

forecast.dat

Data for running the code are in file,

stateshares.prn

The file with SAS code can be opened in the SAS editor window. Committee members should change file locations to correspond with file locations on their PCs before running the code.

The Burlington Northern Sante Fe (BNSF) railroad reports weekly statistics on the number of unit trains loaded with coal (table 3). The Union Pacific (UP) railroad reports originating carloads of coal on a monthly basis (table 4). BNSF and UP account for all of the coal shipped by rail from coal mines in Wyoming.

These data are used to estimate weekly coal production in Wyoming for the week ended the previous Saturday. The BNSF data are for the latest week ending the previous Sunday. CNEAF does not have data to support splitting the weekly BNSF rail car loads into daily loads. Therefore, the latest BNSF data, representing 7 days of activity ending on the previous Sunday, are used as an indicator for coal produced in Wyoming in the 7-day period ending on the previous Saturday. It is unlikely that the one-day difference in phasing significantly affects estimates from the model. Each week, BNSF routinely reports train loadings. These data provide a real time indicator of coal production.

The UP data, which are released monthly, provide a lagged indicator of coal production. CNEAF uses the latest UP monthly data to make an estimate for the current month of UP tons originating in Wyoming. Due to the different release frequencies, the Wyoming model has separate procedures for using the BNSF and UP data.

Method to Convert BNSF Car Loadings to Wyoming Coal Production. BNSF reports the number of unit trains loaded each week in the Powder River Basin. The number of cars per train varies between 110 and 135, depending on customer and rolling stock, but the persistent unit-train tonnage of 13,750 tons for the Powder River Basin applies to both the BNSF and UP train sets (per BNSF, who owns the shared tracks). The Powder River Basin extends over large parts of Wyoming and Montana, and for reporting by region, North Dakota's small average loadings are included in "Powder River Basin" by BNSF. CNEAF uses data provided by BNSF on State-level annual tons of coal loaded to determine the weekly proportion of coal loaded in Wyoming. An example follows:

# of trains loaded daily by BNSF in Powder River Basin, week ended 9/22 (table 3) :

44.43

tons of coal loaded weekly by BNSF in the Powder River Basin (44.43 * 13,750*7):

4,276,387.5 short tons

annual tons loaded by BNSF (data from BNSF to split out Wyoming):

Wyoming	180 million short tons
Montana	29 million short tons (UP does not load coal in Montana)
North Dakota	4.5 million short tons (UP does not load coal in North Dakota)

weekly tons of coal loaded by BNSF in Wyoming 4,276,387.5*180/213.5)

= 3,605,385 short tons

Method to Convert UP Car Loadings to Wyoming Coal Production. UP reports tons of coal loaded in Wyoming for the latest month. These monthly data are extrapolated ahead to represent the current month, and then adjusted to represent a 7-day period:

UP tons loaded in Wyoming in August 2002 (table 4): 14,708,857

Extrapolated using the factor, Sept. 2001/Aug. 2001 (table 4):

13946109/14377538 or 0.96999

and

the factor, (Aug. 2002 actual)/(estimated Aug. 2002):

14708857/14496393.64 or 1.01466

Estimated September loadings by UP (14,708,857 * 0.96999 * 1.01466):

14,476,605 short tons

Adjusted for 7 days to estimate weekly tons of coal loaded into rail cars by UP (14,476,605 *7/30):

3,377,874.5 short tons

Weekly Estimate for Wyoming. Tons of coal loaded into rail cars for the week are the sum of BNSF and UP loadings:

3,605,385 + 3,377,874.5 = 6,983,259.5 short tons

A final adjustment accounts for produced coal transported by modes other than rail. For 2000, EIA reported the following annual distribution of Wyoming coal by these modes:

Rail	324,378 thousand short tons
Truck	2,329 thousand short tons
Tramway, Conveyor, and Slurry Pipeline	11,423 thousand short tons
Other non-rail	1,000 thousand short tons

The ratio of rail to all modes was:

0.9565

To account for coal produced and transported by other modes, the estimate of coal loaded into rail cars is divided by this ratio. The final estimate of weekly coal production in Wyoming is:

$$6,983,295.5/0.9565 = 7,300,884 \text{ short tons}$$

Week-by-Week Estimation

The Association of American Railroads sends CNEAF its latest-week (ending previous Saturday) survey data on the number of rail cars loaded with coal by the major carriers, aggregated to the national level (table 5). The latest weekly data for HDD and CDD are obtained from the Climate Prediction Center. The weekly input values are scaled up to represent the equivalent of quarterly values, these are substituted into equation (1), and the quarterly estimate rescaled to represent a weekly estimate. As the equations below demonstrate, this is equivalent to scaling the constant term in equation (1) by the ratio of 7 week days over the number of days in the quarter, which for quarter 3 is 92. For the week ended Sept. 21, 2002, national rail car loadings, HDD, and CDD were reported to be 138,347; 6; and 45, respectively. These values are used in the demonstration:

Weekly Coal Production =

$$[40,562 + 0.1313(138,347*92/7) + 0.7683(6*92/7) – 2.3850(45*92/7)]*7/92$$

or

$$40,562*92/7 + 0.1313(138,347) + 0.7683(6) – 2.3850(45)$$

or

21,148 thousand short tons produced in the week ending Sept. 21, 2002

Every week, CNEAF uses the latest values for railcar loadings, HDD, and CDD, to estimate weekly national coal production.

Within about 75 days of the close of the latest quarter, MSHA releases the latest survey data on quarterly coal production at the State level. CNEAF adds those data to its database, removes the data for the oldest quarter (to keep 40 quarters in the database), and re-estimates the parameters in the State shares equation (equation (2) above). The new equations are used to estimate State-shares for the current quarter. For example, MSHA data for 2002, quarter 2 were made available to EIA near the end of September 2002. State coal production shares, as forecast for quarter 4, 2002 (Oct. through Dec.) by CNEAF, rely upon that data. Because the State production data are released on a quarterly cycle, CNEAF is able to revise State production shares only on a quarterly cycle. Therefore, within the current quarter CNEAF is always using a fixed set of shares to estimate State-level weekly coal production.

On a week-by-week basis, CNEAF uses the latest weekly data from BNSF on rail cars loaded in the Powder River Basin to estimate weekly Wyoming coal production. In comparison, the latest UP data is for the previous month and the estimates of weekly UP loadings in Wyoming are fixed (for a four week period) by that data until new monthly data are released by UP.

Application Cycle

CNEAF's procedure to revise and apply the new model is:

1. add latest quarterly data for national coal production, rail cars loaded, HDD, and CDD to the model's database
2. remove production, rail car loading, HDD, and CDD data for oldest quarter from database, in order to keep the 40 most-current quarters in the database
3. add latest quarterly data for State-level coal production to the database and remove the oldest State-level coal production data from the model's database
4. refit equations (1) and (2) to estimate new parameters for estimating national weekly coal production and State shares in national coal production
5. for the latest quarter, use forecasts of State shares from equation (2)
6. for the current week, use the latest weekly values for rail cars loaded, HDD and CDD in equation (1) to estimate national coal production on a weekly basis
7. for the current week, multiply latest State shares and national production to estimate State coal production on a weekly basis
8. use latest weekly data from BNSF and latest monthly data from UP to estimate Wyoming coal production on a weekly basis.

Forecasts and Model Precision

Quarterly Aggregate National Coal Production

For the period 1990 quarter 1 through 2001 quarter 4, EIA original model estimates and actual quarterly national coal production from the MSHA survey are plotted in figure 1 (Forecasts.ppt). The average absolute error for that time period, comparing the original estimates with MSHA survey data, was 2.1%. In the period after 1999 quarter 1, national estimates from the EIA model were distinctly less accurate than in earlier quarters. For the period 1999 quarter 1 through 2001 quarter 4, the original EIA model estimates had an average absolute error of 3.0 percent compared to actual national aggregate production.

The new EIA model was successful in reducing forecast error. Starting from 1999 quarter 1 and extending through 2001 quarter 4, the average absolute error in national production from the new model was 1.4%, or less than half of the original model error.

Wyoming Coal Production

The new model appears to estimate Wyoming coal production more accurately than the old EIA model (figure 2 in Forecasts.ppt). The new Wyoming model has been used for the most recent five quarters: 2001 quarter 2 through 2002 quarter 2. In that period, compared to MSHA production data, the new model had an average quarterly forecast error of 1.9%. In comparison, in the period 1999 quarter 1 through 2001 quarter 2, the original EIA model had an average forecast error of 4.3 percent, more than double the error of the new model.

State Shares in Coal Production

Plots of the data and forecasts of State shares in national coal production are in figures 3 through 19, Forecasts.ppt. Plots for States with small coal production (Alaska, Arkansas, Kansas, Maryland, Missouri, Pennsylvania anthracite, Oklahoma, Tennessee, and Washington) are not included. The variation in the fit of the State share forecasts reflects the parameters and the R-square values reported in table 2.

State Coal Production

The forecast equations for quarterly national coal production and State shares (equations (1) and (2)) were applied in simulation mode to estimate State-level coal production in the 8-quarter period, 1999 quarter 1 through 2000 quarter 1. Forecasts in each quarter used new parameter values for equations 1 and 2, obtained by fitting the equations to data for the most recent 40 quarter period.

State average absolute forecast error was calculated in each quarter, both for the new and old models (figure 20 in Forecasts.ppt). Except for 1999 quarter 3, forecasts with the new model were more accurate than forecasts with the old model. Over the 8-quarter period, the original EIA model had an average State-level absolute error of 9.4 %. The new model had an average State-level absolute error of 6.7%, representing a 29 percent improvement in forecast accuracy at the State-level (figure 21 in Forecasts.ppt).

Model Extensions

CNEAF has identified two areas where further changes to the system are likely to improve forecast accuracy. The first area is an extension to the methods for estimating weekly coal production in Wyoming.

The Union Pacific (UP) railroad has provided CNEAF with monthly estimates from January 1998 forward of the tons of coal loaded and tons per rail car by State. CNEAF proposes to use these data to fit a State-level share equation similar to equation (2) above. The fitted equation will be used to forecast the Wyoming share of UP national rail car loadings of coal. Each week, the American Association of Railroads (AAR) provides CNEAF with the latest national rail car loadings of coal by UP. Rail car loadings can be converted into tons of coal by multiplying by tons per car, using UP State-level data. The last step is to multiply the forecasted Wyoming share times the UP national weekly tons of coal loaded to estimate tons of coal loaded by UP in Wyoming for the week. This proposed procedure will bring more up-to-date data into the model and should improve forecast accuracy.

The second extension to the model is to disaggregate to three regions: large coal-producing States east of the Mississippi river, large coal-producing States west of the Mississippi river, and a catch-all for small States. Patterns of coal production appear to be different in the West compared to the East. By using regional data to estimate model parameters, CNEAF hopes to improve forecast accuracy.

National rail car loading data obtained weekly from AAR can be disaggregated, west and east of the Mississippi. This is possible because UP and BNSF primarily are western railroads and all the other railroads are eastern railroads. CNEAF would fit equations (1) and (2) above, using the regional data.

The Coal Team's approach has been to make the data used for fitting the weekly models as close as possible to real-time. Also, the Coal Team believes that disaggregating the data (i.e., using "real-place" data) would be a useful extension. Another important objective is to minimize forecast error by using statistically-robust models.

Things That Haven't Worked

The BNSF rail car loading data can be split apart to represent loadings in all the major coal-producing western States served by BNSF, which--in addition to Wyoming--include Montana, North Dakota, Colorado, Utah, and New Mexico. UP already provides CNEAF with monthly rail car loading data by State for Colorado, Utah, and Wyoming.

These data can be used to make direct estimates of coal production on a weekly basis in Montana, North Dakota, Colorado, Utah, and New Mexico. Indeed, CNEAF has done this. While a direct approach proved to be fruitful as a method to estimate Wyoming coal production more accurately, it has not been successful in application to other western States. Over a test period, the estimates from the direct method were found to have larger forecast error than the State-share method based upon equations (1) and (2).

CNEAF is puzzled by this outcome. CNEAF will continue to explore other methods of using the BNSF and UP western State data.

Questions to the Committee

1. Has CNEAF provided enough information about its process to enable the Committee to complete an assessment? If not, what additional information should CNEAF provide?

2. What other specifications of equations (1) and (2) might prove to be fruitful?

3. What problems does the Committee see with equations (1) and (2)?

4. Is the Committee aware of any other data that CNEAF could use to improve the model and the forecasts?

5. Through industry newsletters and industry contacts, CNEAF sometimes learns about unanticipated increases and decreases in coal production. For example, large mines are unexpectedly shut down or transportation bottlenecks caused by flooding shift production from State to State. The effect of these events on State coal production is not captured in the forecasts of the statistical model. Does the Committee have any recommendations on how this information can be incorporated into the weekly coal production estimates?

6. What recommendations does the Committee have for improving or changing the methods used to estimate weekly coal production in Wyoming and other western States?

7. CNEAF observes that industry uses EIA weekly coal production estimates to manage risk related to coal price and coal supply variations. Estimates of coal stocks probably are another important piece of information for managing risk. Given a focus on risk management, does the Committee have any recommendations on additional coal data that CNEAF should or could provide on a weekly or monthly basis?