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December 1st, 2014

# Comments of Black Hills Corporation on the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

**Docket No. EPA-HQ-OAR-2013-0602**

## A. Introduction and Company Description

Black Hills Corporation (Black Hills) is a diversified energy company based in Rapid City, South Dakota, with corporate offices in Denver, Colorado and Papillion, Nebraska. We operate regulated electric and gas utilities in seven states and have non-regulated energy operations in three states, which include power generation, oil and gas exploration/development and coal mining. Our electric utilities generate, transmit and distribute electricity to approximately 202,000 customers in South Dakota, Wyoming, Montana and Colorado.

Within the past three years, Black Hills retired 123 MW of older coal-fired generation across three states and we now operate a total of 1,126 MW of electrical generation, comprised of 385 MW of coal-fired generation, 712 MW of gas-fired generation, and 29 MW of wind. We also have an additional 60 MW of wind and 10 MW of distributed solar generation in our non-operating generation portfolio. Black Hills wind resources operate in Colorado, which serves

customers in our Colorado Electric service territory, and Wyoming, which serves our customers in Wyoming and South Dakota. Black Hills is working to comply with the Colorado Renewable Energy Standard of 30% by the year 2020. The Colorado and Wyoming gas-fired generation each have additional capacity permitted for future expansion and are designed to facilitate the integration of renewable resources.

Black Hills is in a somewhat unique position in that we retired 123 MW of older coal-fired generation in 2013 and 2014 (which in total produced over 1.3 million tons of CO2); at the same time, our four remaining coal plants are among the newest and technologically-advanced in the nation, with in-service dates ranging from 1995 to 2010. The recent age of our coal plants, together with low-sulfur coal from our Powder River Basin coal mine product, gave us the advantage of incorporating advanced emissions control technology into the construction process. As a result, these plants meet, with minimal upgrades, Best Available Control Technology requirements as well as new EPA regulations such as Mercury and Air Toxics Standards (MATS). Black Hills' coal plants are highly efficient, utilize water-conserving, air-cooled condensing technology and were built to continue operation well beyond the 2030 goal of EPA's proposed rule.

Of our 712 MW of current gas-fired generation, 380 MW came on-line in 2012 in Colorado and another 132 MW came on-line in Wyoming in October 2014. Each of these plants feature state-of-the-art efficient gas-fired generation that is designed to follow wind generation.

Considering our relatively new generation fleet and the long remaining useful lives of these units, Black Hills has significant interest in designing thoughtful regulations for existing sources of greenhouse gas (GHG) and the impacts a program could have on both the environment and our customers.

In light of this we offer the following comments.

## B. Input to Allow EPA to Fix the Proposed Rule's Data Errors

### Colorado Data Corrections

Pueblo Airport Generating Station (PAGS): The 2012 data year used by EPA results in inaccuracies due to 2012 being a partial 40CFR75 Acid Rain Program reporting year for CO2. The PAGS facility was initially commissioned in late 2011. The 40CFR75 reporting for CO2 emissions begins 180 days after "commercial operation." Thus, for the six PAGS combustion turbines the CO2 reporting began around the April 2012 timeframe. This partial year of CO2 data, along with the complete year of generation data, severely distorts the PAGS emission rate calculations. Black Hills suggests using the 2013 data as a replacement for the 2012 data. Utilizing any calendar year other than 2013 would necessitate reliance on estimates. Below is a table from EPA's eGRID data set. The highlighted cells, using the 2013 data, detail the required changes using accurate data.

| Category | State | Plant Name | ORIS code | Generator ID | Nameplate Capacity (MW) | Electric Generation (MWh) | Carbon Dioxide Emissions (Unadjusted) (tons) |
|---|---|---|---|---|---|---|---|
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 4 | 40.0 | 239,583.1 | 111,160.8 |
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 43 | 20.0 | 119,791.6 | 55,580.4 |
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 5 | 40.0 | 239,583.1 | 111,160.8 |
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 53 | 20.0 | 82,302.2 | 38,657.5 |
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 6 | 40.0 | 164,604.5 | 77,315.0 |
| NGCC | CO | Pueblo Airport Generating Station | 56998 | 7 | 40.0 | 164,604.5 | 77,315.0 |
| SSTLOGN | CO | Pueblo Airport Generating Station | 56998 | GT1 | 100.0 | 41,723.0 | 26,002.2 |
| SSTLOGN | CO | Pueblo Airport Generating Station | 56998 | GT2 | 100.0 | 41,723.0 | 26,002.2 |
| EXCLUDE | CO | Pueblo Airport Generating Station | 56998 | GT3 | 100.0 | 0.0 | 0.0 |

**South Dakota Data Corrections**

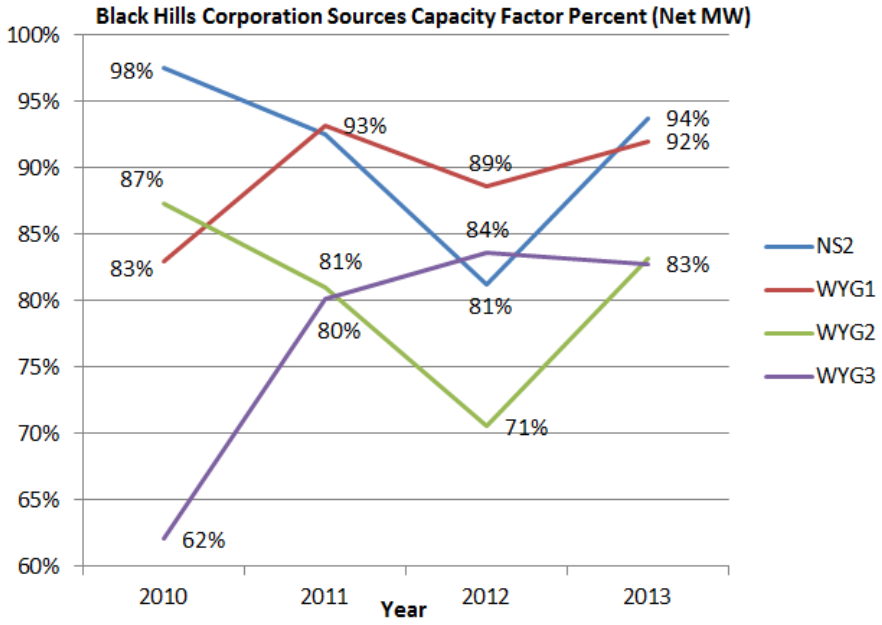
Ben French: There are two issues related to the Ben French data represented in the EPA's eGRID data. First, the 2012 year is not an accurate representation of Ben French's typical contribution to the state's coal generation because the unit began an economic outage on 8/31/2012 which lasted through the end of the year. Second, the CO2 emissions calculated by EPA's emission factor are not as accurate as the CO2 emissions calculated under 40CFR98 (EPA's Mandatory Reporting Rule for Green House Gas emissions). Therefore the 2012 source data should be adjusted to 2011 generation when the unit operated the entire year and the CO2 emissions have been adjusted to the 2011 40CFR98 reported CO2 emissions. Below is a table from EPA's eGRID data set. The highlighted cells, using the 2012 data, detail the required changes using accurate data.

| Category | State | Plant Name | Generator ID | Fuel type | Prime mover type | Nameplate Capacity (MW) | Electric Generation (MWh) | Net Energy Output (MWh) 2 | Carbon Dioxide Emissions (Unadjusted) (tons) | Source Category | Unit Status |
|---|---|---|---|---|---|---|---|---|---|---|---|
| COALST | SD | Ben French | ST1 | SUB | ST | 25.0 | 131,431.7 | 131,431.7 | 300,487.6 | Electric Utility | OP |

**Wyoming Data Corrections**:

1. Cheyenne Prairie Generating Station: The proposed rule incorrectly specifies Cheyenne Prairie Generating Station's (CPGS) combined cycle capacity as 220 MW name plate. The actual name plate capacity of the CPGS combined cycle units is 100 MW. EPA used this combined cycle capacity in the goal setting spreadsheet "20140602tsd-state-goal-data-computation_1.xlsx". The error lies in column "K" of the WYOMING row: "Under Construction NGCC Capacity (MW)." The EPA dataset is correct on a source-by-source basis; thus, no changes are required in that instance. Modification of this spreadsheet value yields new interim year goals and a final 2030 state goal of 1,727 lbs. CO2/MWh (in lieu of 1,714 lbs. CO2/MWh).

2. Neil Simpson Complex: 2012 Data Year is not a normal operating year for Neil Simpson II (NS2), Wygen I (WYG1) and Wygen II (WYG2). Wygen III (WYG 3) is included for an unaffected source reference. The graph below details four years of capacity factors for each coal fired source. See details on each source below:



a. Neil Simpson II – based upon routine operations over the past 4 years, 2012 represented an unusually low capacity factor for the facility. A more representative year is 2013, which is neither the highest nor the lowest year, but a good representation at 94% capacity as opposed to 81% capacity in 2012.
b. WYGEN 1 - based upon routine operations over the past 4 years, 2012 represented an unusually low capacity factor for the facility. A more representative year is 2013, which is neither the highest nor the lowest year, but a good representation at 92% capacity as opposed to 89% capacity in 2012.
c. WYGEN 2 - based upon routine operations over the past 4 years, 2012 represented an unusually low capacity factor for the facility. A more representative year is 2013, not the highest or the lowest year, but a good representation at 83% capacity as opposed to 71% capacity in 2012.

Below is a table from EPA's eGRID data set. The highlighted cells, using the 2012 data, detail the required changes using this more accurate data.

| Category | State | Plant Name | Generator ID | Nameplate Capacity (MW) | Electric Generation (MWh) | Carbon Dioxide Emissions (Unadjusted) (tons) |
|---|---|---|---|---|---|---|
| COALST | WY | Neil Simpson II | 2 | 80.0 | 654,900.0 | 879,797.0 |
| COALST | WY | Wygen 1 | 0001 | 88.0 | 705,252.0 | 940,990.0 |
| COALST | WY | Wygen 2 | 0001 | 95.0 | 688,318.0 | 836,513.0 |

Black Hills requests that the agency change the data in its final rule as indicated above to accurately reflect Black Hills' newer generation fleet. The changes, as described above, call for changes in the EPA rule that alter 2012 Data year and also alter the state's 2020 interim goal and 2030 final goal. These goals will be modified, but as other numbers may also change, Black Hills will not suggest to the EPA what the state's goals should be in the final rule.

### C. Remaining Useful Life

Black Hills understands that in the proposed rule's analysis of the statutorily required remaining useful life analysis, EPA is proposing that "the flexibility provided in the state plan development process adequately allows for consideration of the remaining useful life of the affected facilities and other source-specific factors and, therefore, that separate application of the remaining useful life provision by states in the course of developing and implementing their CAA section 111(d) plans is unnecessary." Although such an approach made perfect sense in the 1975 implementing regulations for older units, Black Hills respectfully submits that more analysis of each affected existing source is required by statute where the existing source is a well-controlled, newer fossil EGU that has a state utility regulatory commission determination of remaining useful life. Without such required unit-specific analysis in the EPA rule, state plans could force Black Hills units into early closure or early curtailment, leading to state utility regulatory commission or Federal Energy Regulatory Commission (FERC) hearings on stranded assets. Additionally, EPA's recent Notice of Data Availability (NODA) described EPA's national modeling effort in Footnote 6 as relying on a "book life" of 40 years. A 40-year remaining useful life directly conflicts with Black Hills state regulatory determinations which are referenced and outlined below.

Black Hills BACT controlled and new generation fleet is summarized in Table 1:

| **Facility** | **Fuel** | **Permitted MW** | **BACT** | **Commence Operation** | **RUL(years)[1]** |
|---|---|---|---|---|---|
| Neil Simpson II | Coal | 80 | ESP, LNB, CDS | 1995 | 50 |
| WYGEN I | Coal | 80 | Baghouse, SCR, SDA | 2003 | 44 |
| WYGEN II | Coal | 100 | Baghouse, SCR, SDA | 2007 | 48 |
| WYGEN III | Coal | 100 | Baghouse, SCR, SDA | 2010 | 46 |
| PAGS* | Gas | 480 | SCR, Oxidation Catalyst | 2011 | 32 |
| CPGS* | Gas | 220 | SCR, Oxidation Catalyst | 2014 | 40 |

*PAGS; 480 MW permitted 7/22/2010; LM 6000 permitted 5/30/2014 to replace the not yet constructed LMS 100

*CPGS; 220 MW permitted 8/28/2012; 2 LM 6000 units not yet constructed

EPA has asked for comment specifically on this topic:

> "The agency is requesting comment on its analysis below of the implications of the EPA's existing regulations interpreting "useful life" and "other factors" for purposes of this rulemaking. [302]
>
> "The agency also requests comment on whether it would be desirable to include in regulatory text any aspects of this preamble discussion about how the provisions in the existing implementing regulations concerning source-specific factors relate to this emission guideline."

COMMENT:

First, Black Hills notes that Section 111(d) contains a title and specific language requiring the Administrator and states to analyze the remaining useful life of each existing source:

> "(d) Standards of performance for existing sources; remaining useful life of source
>
> (1)…. Regulations of the Administrator under this paragraph shall permit the State in applying a standard of performance to any particular source under a plan submitted under this paragraph to take into consideration, among other factors, the remaining useful life of the existing source to which such standard applies.
>
> In promulgating a standard of performance under a plan prescribed under this paragraph, the Administrator shall take into consideration, among other factors, remaining useful lives of the sources in the category of sources to which such standard applies."

Second, Black Hills is a regulated utility operating in three state jurisdictions. Three state utility regulatory commissions have analyzed and authorized the construction of its units described in Table 1. These state commissions have determined the useful life as described in the Table 1 in PUC/PSC Dockets.[1] Black Hills submits that these state utility regulatory commission determinations should be discussed in the regulatory text as required analysis and should be included as a supporting material requirement in the final rule Section 60.5740 (11).

[1]CPGS; Wyoming Docket #20003-132-ER-13 (Record No. 13751)

PAGS; Colorado Proceeding #11AL-387E

Neil Simpson II & WYGEN III; South Dakota Docket EL 14-026; Wyoming Docket 20002-91-ER-14

WYGEN I and II; Wyoming Docket 20003-132-ER-13

Black Hills recommends adding to the proposed rule:

> Section 60.5740 (11) (v) "Materials demonstrating the state's analysis of the remaining useful life of the existing source to which such standard applies."

**D. Building Blocks**

The proposed rule defines the "Best System of Emissions Reduction" (BSER) as the combination of four "Building Blocks." These are 1) heat rate improvements at existing coal-based electric generating units (EGUs); 2) increased utilization of existing natural gas combined cycle (NGCC) units; 3) increased deployment of renewable generation and the preservation of "at risk" nuclear units; and 4) increased end-use efficiency. EPA made numerous assumptions in the proposed guidelines about the emission reductions achievable by each separate Building Block that are not supported by example or evidence. More information on each of the building blocks, as applied individually, can be found below.

As a preliminary matter, EPA determined the level of emission reductions achievable through application of each Building Block independently without adequately addressing the complex interrelationships among these Building Blocks. By taking this approach, EPA did not fully address the achievability of the Building Blocks and state emission rate goals in the context of the interconnected power system. For example, EPA does not appear to have considered that decreased utilization of existing coal-based units has a detrimental effect on their heat rate, thus increasing emissions despite possible investments in heat rate improvements. Similarly, EPA

assumed that high levels of NGCC unit utilization can be achieved and maintained concurrently with increased deployment of renewable generation, despite the fact that gas-based generation is often required to cycle to support integration of variable renewable resources into the grid. These types of fundamental programmatic issues raise questions about the adequate demonstration of EPA's selected BSER, and the states' ability to achieve the proposed emission rate goals. Accordingly, the proposed Colorado, South Dakota and Wyoming state goals should be adjusted based on numerous factors.

**a. Building Block #1**

As noted above, Black Hills operates coal-fired units in Wyoming. Black Hills placed each of the units into service between 1995 and 2010, and none are greater than 100 MW in capacity. These relatively new and small units are efficient. Black Hills retained Black & Veatch to analyze the suggested equipment and operational modification options suggested in the Sargent & Lundy study used by the EPA to support its proposed six percent efficiency improvement to existing coal generating units. The analysis estimated the heat rate improvements and associated capital costs of implementing EPA's suggestions to Black Hills' four coal-fired power plants at the Neil Simpson Complex in Gillette, Wyoming. The results from that study, coupled with our own internal analysis, show that the range of achievable operating efficiency improvements is well below the six percent target included in the proposed rule – and likely no greater than two percent. Our internal analysis included consideration of relevant risk factors, such as those associated with New Source Review (NSR) permitting and potential enforcement actions.

We also evaluated economic factors associated with the proposed efficiency improvements. Efficiency improvements are typically justified when the cost of improvements would be offset by fuel cost savings or greater capacity output for the same fuel input. For our 100 MW mine-mouth units, a one-percent efficiency savings equates to approximately $100,000 in fuel cost savings per year. The estimated capital costs of the upgrades suggested in the Sargent & Lundy study vary significantly. By way of example, on the high end, turbine steam path upgrade/turbine replacement (which would improve the aerodynamic design of the turbines) would yield up to a two-percent efficiency improvement for an estimated capital cost of $12.5 million. Such an investment would take over 62 years' worth of fuel savings in order to cover the cost of the upgrade. Further it should be noted that some of the projects would have overlapping performance benefits, meaning that the total expected improvements of all projects would not equal the sum of the individual project improvements. We also must consider that the improvements will degrade over time, resulting in reduced efficiency. While this is just one example, the State of Wyoming is submitting very detailed comments on Building Block 1, with which we would associate ourselves and concur with the state's recommendation.

In light of this assessment, Black Hills suggests EPA factor efficiency improvements of less than 2 percent, along with an expedited NSR permitting process.

**b. Building Block #2**

In its BSER analysis, EPA determined "achievable" levels of implementation for each individual Building Block in isolation. EPA has not considered the impact of each of the four Building Blocks on the electric system as a whole. Nor has it examined how the Building Blocks will

interact with or affect the achievability of the others. Instead, EPA concluded that reaching the prescribed levels of each of the Building Blocks is possible separately and, hence, also simultaneously. This is not likely.

For example, there is a direct interdependency between variable renewable generation and natural gas units. Because the output of renewable resources is variable, use of these resources requires balancing and backup services from the grid. Natural gas-based units are more flexible than other fossil-fuel-based dispatchable resources and usually provide these services. Units needed to back up variable resources operate at lower capacity factors so they can respond with increased output to a relatively sudden or unplanned decrease in electric generation at any time. Increasing the utilization rate of the existing NGCC fleet to 70 percent reduces their availability to backup renewables and complicates the ability to comply with NERC reliability standards while integrating renewables. Moreover, increasing renewable generation could force existing NGCC units to *reduce* their capacity factor in order to ensure responsiveness to the variability of renewable output. Alternatively, increased utilization of NGCC unit generation could limit the ability to integrate additional renewables into the grid unless other resources are added. These interrelationships undermine EPA's assertion that the desired level of re-dispatch will occur within the existing NGCC fleet and that no new power plants would be needed.

We request EPA to consider the economic impacts of NERC reliability standards as they relate to backing up wind and other intermittent resources. Colorado and Wyoming state goals should be adjusted to acknowledge such realities of managing the bulk electric system.

Black Hills supports clarifying the compliance option of co-firing coal plants with natural gas as discussed in EPA's NODA, Section III. B. 1. "Stringency of Building Block 2". This option is currently a consideration of many coal fired units in Wyoming (a state with little NGCC resources as described in the NODA). EPA suggests restricting the co-firing option to states with NGCC generation of 12 percent to 55 percent of existing steam generation. Black Hills does not support such narrow criteria to be met in order to use the co-firing option. Black Hills suggests EPA avoid specific mandates of technology to achieve the goals, but allow states "potential BSER options" in the final rule from which they can implement confidently in a State Plan, or from which a state may base an alternative approach to reducing CO2 emissions.

**c. Building Block #3**

Below you will find a table with the renewable energy (RE) targets in the proposed rule for the states of Colorado, South Dakota, and Wyoming, along with the current state RE policy, the compliance status for each of our utilities.

| State | 111(d) RE Target | Current State RE Policy | Black Hills Compliance Status |
|---|---|---|---|
| CO | 21% by 2030 | Mandatory:<br>12% in 2014<br>20% 2015-2019<br>30% by 2020 | 12% (as of 2013)<br><br>27% by 2020 using current modeling (Scenario 2 of Colorado Proceeding 14A-0535E) |
| SD | 15% by 2030 | Voluntary:<br>10% by 2015 | 5.04% (as of 2013) |
| WY | 21% by 2030 | No requirement | 5.8 (as of 2013) |

**Colorado**

Colorado's statutes include a Renewable Energy Standard (RES). The RES, and associated commission rules, require the Black Hills to meet specific percentages of its retail sales with renewable energy. The RES in 2014 is 12 percent of retail sales; 20 percent for 2015-2019; and 30 percent for 2020 and beyond. The statutes also provide that the retail rate impact on customers not exceed 2 percent annually. Utilities comply with the RES in Colorado using Renewable Energy Certificates (RECs). One REC is created when one MW of eligible energy resource generates energy for one hour. Black Hills Colorado Electric is complying with the RES using a combination of RECs generated from an expired purchased power agreement, small distributed generation projects, and small wholesale renewable (wind) generation.

Currently, the largest wind energy project attached to Black Hills Colorado's system is the Busch Ranch Project. Black Hills co-owns with a third party this 29 MW generation project. Black Hills is currently evaluating proposals in response to a competitive solicitation for up to 60 MW of eligible energy resources in accordance with Colorado's Electric Resource Planning rules. As a result of this solicitation, the Company may acquire the energy and associated RECs from an additional 60 MW of eligible energy resources beginning as early as 2015.

The Colorado Commission's Electric Resource Planning and Renewable Energy Standard Rules authorize the Colorado Public Utilities Commission to approve the recovery of the cost of all renewable resources while ensuring the annual cost impact on customers does not exceed 2 percent annually. The most recent modeling of Black Hills' renewable portfolio indicates that

through 2020 the Company will spend approximately $59 million more for renewables than for equivalent energy generated with conventional resources.

**South Dakota and Wyoming**

Black Hills Power has purchase power agreements for hydropower and wind energy. The Happy Jack and Silver Sage purchase power agreements provide Black Hills Power (South Dakota) with 35 MW of wind power. In 2013, renewable resources served approximately 5.04% of the total retail sales for Black Hills Power. Cheyenne Light Fuel and Power (Wyoming) has purchase power agreements for 25 MW of wind energy from the Happy Jack and Silver Sage wind facilities. In 2013, these renewable resources served approximately 5.8% of the total retail sales for Cheyenne Light.

Black Hills Power and Cheyenne Light will continue to pursue prudent renewable energy generation and purchase opportunities that will achieve environmental improvements at the lowest reasonable cost to customers. The major barrier of renewable energy generation at a reasonable cost to customers, for both Black Hills Power and Cheyenne Light, is the ability to dispatch the energy. Because renewable energy is intermittent, the cost of regulating this energy becomes a significant barrier. Some of Black Hills Power's additional challenges are due to the physical location of our system and quality of renewable opportunities. In addition, if renewable energy generation is not connected to our transmission system, the price to deliver energy becomes difficult to overcome.

We question the approach in establishing Building Block 3 state RE goals that do not consider the reality of the current generation portfolio or the economics of selecting additional generation. We support state flexibility in meeting the state goals with the most economic generation considering other reliability constraints.

### d. Building Block #4

Building Block 4 of EPA's proposed rule sets a 1.5 percent annual energy savings goal in each state. Such a one-size-fits-all approach does not consider unique regional characteristics of customers (including industrial, commercial and residential) and economies in setting such aggressive targets.

Specific considerations related to our utilities in Colorado, South Dakota and Wyoming are discussed below, including estimated cost impacts of meeting the 1.5 percent annual savings. These cost impacts do not factor in additional resources required for the informing and reaching customers in order to drive the participation needed to achieve energy savings. Marketing/promotional budgets and personnel assigned to design, market and administer programs would likely need to be increased to provide the mere opportunity to achieve the EPA's savings goal. The resulting additional marketing and administrative costs, when considered in the overall calculation of program cost effectiveness, could render the overall EE portfolio cost uneconomic, meaning the overall cost of the programs to customers exceeds energy savings that customers could hope to realize. Other considerations in determining whether the EPA's goal of 1.5% savings is realistic include the following.

- As more and more customers participate in EE programs, it becomes more challenging, both in terms of simply finding new participants as well as incurring significantly increased costs to market programs, to achieve savings.
- As building codes and mechanical standards continue to advance and become more stringent, energy savings from EE programs are more difficult to achieve.
- Existing state laws and regulatory rules (Colorado) likely need to be reviewed and revamped to enable utilities a better opportunity to offer programs that are deemed to be cost effective, while at present other states (South Dakota and Wyoming) lack specific EE mandates and rules.

The following state-by-state assessment provides additional perspective.

**Colorado**

Black Hills Colorado Electric oversees a mature energy efficiency/demand side management ("EE") program for our customers in Colorado. This also happens to be Black Hills' largest energy efficiency program among its three electric utilities. In 2013, the energy savings from the Colorado program were 1.17%. In order to meet the EPA's 1.5 percent-of-retail-sales goal annually, Black Hills would need to offer programs aimed at achieving additional energy savings of 5,982,493 kWh; based on the historical cost-per-kWh-saved that would amount to an estimated additional $1.3 million in annual expenditures devoted to EE programs. The $1.3 million figure is theoretical in the sense that it primarily encompasses increased incentives/rebates paid to customers.

**South Dakota**

Achieving 1.5% in annual incremental energy savings is not realistically achievable in Black Hills Power's South Dakota service territory when using the same criteria that were used in developing BHP's Energy Efficiency Solutions Plan (EESP) filed with the South Dakota Public Utilities Commission on June 30, 2014. This recently approved EESP estimates annual energy efficiency reductions of 0.28% in SD, or 4,087,000 kWh in estimated annual energy savings. In order to meet the 1.5 percent annual savings, BHP customers would have to achieve 22,256,969 kWh in savings annually for the next 15 years.

The additional cost burden to attain 1.5% in annual incremental energy savings would be significant and could add as much as $0.03/kWh in customer electrical costs each year. .

Black Hills Power's Energy Efficiency Solutions Program (EESP) offers customers an opportunity to reduce electric consumption and an alternative to the construction of infrastructure. Black Hills Power will be requesting to extend the EESP through August 2017 in an effort to cost effectively meet this objective. Over 3 years, the new energy efficiency program is expected to save approximate 14,261 MWh. BHP's overall sales in all three jurisdictions (South Dakota, Montana and Wyoming) from October 2012 – September 2013 were 2,040,494 MWh. The overall percent savings over the three years is about 0.7% (14,261 / 2,040,494) of existing sales. We believe achieving the EPA's stated 1.5 percent annual incremental energy savings by 2030 is not achievable in South Dakota.

**Wyoming**

Achieving EPA's proposed annual energy savings target of 1.5 percent would require Cheyenne Light Fuel & Power (CLFP) to increase significantly the amounts spent on EE/DSM programs over existing levels. In CLFP's approved EE/DSM program, the utility anticipates annual electric energy savings of 3,952,000 kWh or 0.3 percent. Achieving EPA's suggested 1.5 percent annual savings target would cost approximately $3.5 million annually. This would result in increasing the approximate annual cost per customer for EE/DSM programs from $8.00 to $40.00.

COMMENT:

We recommend EPA change the proposed rule to give states the authority and flexibility to consider regional customer and energy demand profiles and accordingly adjust energy efficiency goals included in Building Block 4 to reflect what is realistically achievable.

**E. Baseline Year & Credit for Early Action**

States should be given discretion in meeting the technically and economically achievable CO2 emissions reduction goals based upon 2005 emissions levels, in lieu of the proposed 2012 baseline year. Establishing 2012 as the baseline year fails to recognize factors that may have impacted generation and resulting emissions as a result of anomalous conditions. 2012 as the baseline year would not provide a representative picture of a typical year for Black Hills operations. State compliance plans should tie reductions to goals based upon 2005 as the baseline year.

EPA should consider efforts to move to lower emitting resources in years prior to 2012 when setting goals. By way of example, South Dakota would experience a goal change from an unrealistic 741 lbs. CO2/MWhr (2012) to 1,627 lbs CO2/MWhr (2005), by adjusting the baseline year. Though less dramatic, other states would realize material goal shifts should EPA consider early actions that result in reduced emissions rates.

We recommend EPA pursue evaluation of using a different data year as proposed in the notice of data availability (NODA) released on October 30, 2014. Generally, EPA will likely find that less renewable energy and less NGCC resources existed in the early years, thus, increasing each state's goal and reducing overall CO2 emission reductions. This approach will alleviate a small portion of the impacts this proposed rule may have on large, complex generation asset states, but will most likely have a profound effect on small generation asset states, like South Dakota. EPA close review of data year could eliminate "problematic" micro-situation states without significant impacts to the overall proposed rule. We encourage this analysis on a national basis, but emphatically encourage EPA to allow this data year shift on a state by state basis where dramatic goal changes occur.

### F. Pace & Compliance Timeline

The glide path approach is too confining and should be eliminated. States should have flexibility to establish appropriate interim reduction schedules aligned with state characteristics.

The interim compliance period may be well intended, but its design—particularly the interim 10-year average goal—actually serves to limit state flexibility. In order to satisfy the 10-year average goal, a significant number of states need to achieve reductions before the start of the

interim compliance period in 2020. Moreover, many states must achieve over 50 percent or more of their 2030 emission goals by 2020. As stated in the goal, Colorado must achieve 78 percent of its final goal by 2020. South Dakota would be 82 percent and Wyoming 51 percent. Thus, contrary to EPA's stated intent of providing states flexibility in setting 2030 emission goals, the interim compliance average goal creates more compliance challenges than it solves.

Eliminating the interim compliance goal and allowing states to determine their own reduction glide paths and milestones to achieve the 2030 goals—subject to EPA approval and annual compliance reporting—would provide states with real flexibility in designing state plans while reducing emission rates. This approach would allow states to determine not only which actions and measures to pursue to reduce emission rates, but also to choose a reasonable schedule for implementing those measures consistent with providing safe, reliable, affordable and environmentally responsible power to customers. Importantly, this would provide states and utilities sufficient time to complete needed infrastructure development (including expansions and upgrades of both electric and natural gas transmission systems) to accomplish changes in dispatch between coal-based and natural gas-based units and increase deployment of renewable generation. It also would provide states, electric utilities and other regulators time to assess the significant changes to the interconnected power system that will be required to achieve the 2030 goals, while respecting system requirements necessary to maintain reliability. States would also be able to better manage the impact of the program on customer rates. Real flexibility helps states achieve reductions while ensuring the continued provision of affordable and reliable electric power.

Consistent with the state plans requirements that EPA has proposed, states would be required to demonstrate reasonable and verifiable progress toward the 2030 goal and could not delay taking action to reduce emissions. EPA's proposed guidelines already would require that states submit—and that EPA approve—plans that clearly set forth how states would achieve the 2030 goal. Once approved by EPA, a state's plan, including the emission reduction glide path, would become federally enforceable. States would demonstrate progress towards the 2030 goal consistent with their projected emission reduction glide path through the annual reporting of emission performance to EPA, taking corrective measures if needed. Ultimately, if states could not show reasonable progress toward the 2030 goal, EPA would have the authority to call for a state to correct its plan or issue a federal plan of its own. Using the proposed approach to state plans, EPA can ensure that the 2030 goals are achieved while allowing states sufficient flexibility to design their own compliance glide path.

To promote maximum state flexibility in the design of compliance plans that would be approved by the EPA and to enable states to take into account changed circumstances, such as improvements in clean energy and other technologies, the final guidelines should clarify that states can modify plans, subject to EPA approval, to address changing circumstances. The final guidelines also should affirm that EPA will approve compliance plans that satisfy the requirements for such plans. Finally, the guidelines should recognize a range of potentially approvable options for defining state emission glide paths that reflect "reasonable progress" that would be unique to the specific circumstances within a state or multi-state program and, in particular, should support the use of existing programs and market mechanisms.

Additionally, Black Hills supports the approach described in the NODA Section III. A. "The 2020 to 2029 Glide Path". We support both ideas listed which could modify the state's existing goal glide path. The first idea being related to glide path modification on the basis of needed infrastructure improvements and the second being related to the pace at which existing generation assets are shifted to new generation resources, thus avoiding customer excessive costs and stranded assets. Providing each state this flexibility to modify the overall 2020-2029 glide path, based upon source specifics, is a necessary consideration in the final rule.

### G. Federal & State Authority

Black Hills associates itself with the comments of the Edison Electric Institute, of which Black Hills is a member, regarding jurisdictional and other legal questions the proposed rule prompts. EPA asserts that states will have flexibility in determining which Building Blocks—and at what level—to include in compliance plans. However, as a practical matter, it will not be possible to achieve the proposed emission reduction goals without implementing more than simply Building Block 1. To some extent, therefore, the guidelines dictate that states take certain actions based on requirements derived from Building Blocks 2, 3 and 4 or risk enforcement for failure to achieve the proposed emissions rate goals, contrary to the intent of Congress. The final guidelines should recognize that Congress has reserved to the states the authority to regulate several important aspects of the power sector.

Many of the reduction measures and activities that states must include in the compliance plans in order to achieve the proposed emission rate goals are within the traditional purview of state regulators or other federal agencies, and not ordinarily subject to the requirements of the Clean

Air Act (CAA). This structure, as proposed, raises significant concerns about the encroachment of the proposed guidelines upon the regulatory authority reserved to the states.

The many elements of the electric system are subject to regulation by various federal agencies and arms of state government. These include economic, siting and environmental regulations, among others. The Federal Power Act (FPA) vests FERC with jurisdiction over wholesale transactions and transmission of electric energy in interstate commerce. In contrast, the FPA specifically excludes from FERC jurisdiction the distribution of electricity and transactions of electric energy that are solely intrastate in nature. These activities, including the siting and permitting of related facilities, are left within the jurisdiction of the individual states. *See id*. States regulate the terms and conditions of distribution service and the siting of generation and delivery systems. State public utility commissions (PUCs) regulate the rates, terms and conditions of retail sales of electricity. In addition, programs designed to increase renewable generation and promote demand side and end use efficiency are regulated at the state level. Congress did not intend for FERC, the expert agency that addresses matters related to electricity transmissions and sales, to regulate intrastate electricity transactions or mandate that states undertake specific programs designed to foster increased renewable generation or end-use efficiency measures. If FERC has limited authority in these areas, EPA must also.

As a policy matter and consistent with the requirements of the FPA, EPA should not intrude into areas that are appropriately left to the state to regulate.

## H. BSER Definition

For the first time, EPA has claimed that BSER need not be based on implementation of a technological, fuel-input or operational system at regulated sources, but instead can include actions taken outside of regulated sources that may have an indirect impact on the utilization of some regulated facilities. Specifically, in the proposed guidelines, EPA claims it can meet its regulatory obligation to determine BSER by looking at measures throughout the electric system and even on the customer side of the meter that could reduce utilization of existing EGUs, and not simply by looking at emission reduction measures taken at the individual affected EGUs.

The state goals, as drafted, are determined largely by actions that occur outside the fence of affected EGUs. Indeed, in Colorado, South Dakota and Wyoming, it would not be possible to achieve the resulting proposed interim and final goals without the use of these "outside-the-fence" measures in part. We believe EPA's interpretation of the CAA is not consistent with Congress's intended delegation of authority to EPA under the CAA.

As Black Hills noted in previous comments to EPA, we believe emission guidelines, based on the CAA, should reflect the best system of emission reduction for GHGs based only on the application of adequately demonstrated GHG-specific controls at covered sources (i.e. analysis should not go beyond the emission source fence-line) taking into account the cost of achieving emission reductions and any non-air quality health and environmental impact and energy requirements. Therefore it is our belief that EPA should rework the determination of emissions guidelines for the states. The guidelines should only consider improvements at GHG-specific

controls at covered sources, as specified according to the CAA, while maintaining state flexibility for implementation of the guidelines.

While we understand that the Agency differs in its interpretation of legal authority under the CAA, we wanted to make our views known here, as we have done so previously, and still hope to work with the Agency on implementing the rule in the best manner possible, if finalized. Additional comments offered above by Black Hills aimed at improving EPA's proposed approach to the guidelines should not be viewed as an endorsement of that approach.

**Closing Comments**

We appreciate the consideration of our comments on these proposed rules. This is an important issue for Black Hills because of the dramatic changes the rule could make in the selection of electric resources, and the resulting impacts on delivering reliable, affordable electricity to our customers. Please feel free to contact me if there should be any questions.

Sincerely,

Mark Lux

Vice President & General Manager of Power Delivery