

Vistra Comments to the FGD Task Force

Vistra and IL Coal

As the owner of 9 coal-fired power plants in Illinois and owner of 5 additional coal-fired power plants in Ohio and Texas, Luminant, a subsidiary of Vistra, is continuously evaluating fuel supply options with the goal of finding the best mix of coal that will allow it to operate its power plants as efficiently as possible while meeting our environmental obligations. This approach, combined with the competitive market, is the best option for providing low cost electricity to consumers.

Any energy policy for Illinois needs to factor in not only the importance of IL coal but also the importance of Luminant's 12 power plants (9 coal, 3 gas) to Illinois' economy, electric reliability, and energy affordability. Vistra provides over \$2 billion in annual economic activity in Illinois, produces enough electricity to power ~ 4.2 million homes, supports over 1,000 direct and 9,000 indirect jobs, serves over 700,000 retail customers, and supports the economy of over 80 Illinois counties via its Luminant generation and Homefield Energy and Dynegy Energy retail business.

Vistra's Luminant coal-fueled generation fleet in downstate Illinois is, except for Kincaid, in the Midwest ISO ("MISO") market, which is dominated by regulated utilities. These regulated competitors are allowed to receive in-state and out-of state subsidies (regulated rates) to cover their costs of operations while Vistra competes against those same companies in a common marketplace. Further, the MISO market design does not adequately compensate capacity for its reliability contribution. In the past 18 months, 20% of downstate Illinois' coal-fueled electricity capacity has shut down, due to this inequity and inability to recover its costs of operation. Thousands of additional downstate MW of capacity are at risk and moving closer to retirement each and every day. Vistra stands ready to work with policymakers to develop an energy policy that works for all of Illinois. In Illinois and every other state and market where we operate, we are committed to providing electricity to customers in a safe, efficient and cost-effective manner, which can involve both investing in our existing plants as well as in modern and fuel-diverse sources of generation.

Western Powder River Basin (PRB) Coal and IL Coal attributes and price

- Currently PRB coal, with significantly less sulfur content, costs ~\$12.50 per ton compared to ~\$40/ton for Illinois Basin coal.¹ On a Btu basis, PRB coal is ~\$0.71/MMBtu and Illinois Basin coal is \$1.79/MMBtu.
- Depending on market conditions, PRB coal prices can range from \$9 to \$15/ton. Illinois Basin coal prices can range from \$30 to \$50/ton.²
- In 2017, SNL Energy estimated the shipping cost of IL Basin coal at ~\$10/ton and PRB at ~\$22/ton, which is in line with current market conditions. Coupled with the prices above, the delivered prices would be \$50 for IL Basin coal and \$34.5 for PRB coal.
- Factoring the cost of transportation and the higher Btu content of Illinois Basin coals, PRB coal delivers for \$1.96/MMBtu and Illinois Basin coal delivers for \$2.23/MMBtu.
- In Ohio, there are advantages to using Illinois Basin Coal as PRB gets more expensive to transport and Ohio does not have as strict environmental regulations as Illinois. Many Ohio plants can take advantage of lower transportation costs since they receive coal by barge instead of rail.

¹ Quotes from Coaldesk LLC

² Quotes from Coaldesk LLC

- Illinois Basin coals tend to cause higher operational and maintenance expenses that need to be factored into any decisions.
- Illinois coal does have a higher heat content, which would require less coal to be used to produce the same amount of electricity. However, even taking the heat content into account, the cost of Illinois Basin coal is higher than PRB coal in Illinois.
- The higher heat content of Illinois coal may provide lower carbon emissions than PRB coal; however, the wet scrubbers required to capture SO₂ emissions from higher sulfur Illinois Basin coals use additional electricity (parasitic load) at the plant, impacting overall unit efficiency. That is, the parasitic load, along with the release of additional CO₂ caused by wet scrubber technologies may offset a portion of the reductions in CO₂.

Vistra's Commitment:

- Vistra will continue to evaluate opportunities to find competitively priced coal options and technologies that facilitate the ability to use the coal as a fuel source. Vistra and Dynegy have met with and continue to meet with coal suppliers and those offering new technologies.

Illinois tax policies discriminate against coal used for electricity generation:

- Vistra pays ~ \$20 Million in sales tax per year on coal used in Illinois.
- Coal is the only electric generation fuel sourced taxed in Illinois as natural gas is exempt and nuclear fuel rods are leased.
- Electricity generators, regardless of fuel source, are also prohibited by IL statute from using the tax incentives commonly used by manufacturers for materials used in producing the final product.
- Prior to 2003, generators also received a sales tax break on the installation of pollution control equipment.
- The cost of coal and the shipment of that coal is a cost of doing business and is reflected in the prices that we charge for the electricity that we sell into the competitive electricity market.

Federal and State Environmental Policy and Vistra's obligations

- Federal Clean Air Act requirements, and other federal action, on SO₂ and NO_x emissions, and ICC disallowance of scrubber costs, pushed Illinois generators towards PRB coal decades ago.
- The Illinois Multi-pollutant Settlement (MPS) Rule imposes various restrictions on SO₂, NO_x, and mercury emissions that are stricter than federal requirements, limiting Vistra's ability to operate its fleet economically or consider the use of Illinois coal. The IPCB's proposed revisions to the MPS rule would allow for the economical operation of the fleet and help preserve as much of the fleet as possible but would not solve the underlying economic challenges caused by the MISO capacity market and low energy prices. Federal policies impose additional constraints at some units.
- Vistra's predecessor Dynegy invested over \$2 billion in scrubbers and other emissions controls for its Illinois fleet in the last 12 years to meet federal and state regulations, and has cut emissions by ~90% since 1998.
- Dynegy's prior investments in scrubbers/injection systems at 5 plants allows Vistra to average compliance over the fleet and meet its multiple fleet wide state and federal obligations without having to install scrubbers at 4 other plants.
- Installing additional scrubbers at 4 plants, where not needed for environmental compliance, would cost hundreds of millions without any current mechanism to realistically recover the costs. For example, installing scrubbers at Edwards Power Plant is approximately \$300 million alone.

Vistra's Comments on Peabody Energy's Submitted Comments to the FGD Task Force:

1. No Comment
2. Vistra largely agrees with this point.
3. Vistra largely agrees with this point and has used IL coal in Ohio units when competitive.
4. Vistra would point out that the fuel adjustment clause is no longer relevant since the utilities no longer own generation. I would add that coal, regardless of the sourced location, is the only fuel, used for electric generation that is taxed in Illinois, through sales and use taxes, placing coal-fueled EGU's at a competitive disadvantage with other generators using fuel rods or natural gas. Vistra pays approximately \$20 million per year in sales/use taxes on coal used in Illinois. EGU's are also prohibited by IL statute from using the tax incentives commonly used by manufacturers for materials used in producing the final product . Prior to 2003, EGUs also received a tax break on the installation of pollution control equipment.
5. Vistra generally agrees with this point. Duck Creek has also received the same award as Coffeen as the cleanest burning plant on SO2 basis.
6. Vistra generally agrees
7. No Comment
8. Regarding price, generators would typically have an incentive to use the cheapest fuel source. Vistra would encourage the use of independent price sources and the price of delivered price of coal.
9. Generally True
10. Generally True
11. No Comment
12. Would agree that the cost estimates seem low, perhaps more of per EGU, than plant number. When Dynegy evaluated its fleet in 2015-2016 timeframe, on a plant-by-plant basis, to determine the total cost of conversion (what it would take to burn ILB coal), in terms of CAPEX, upgrades, chemicals, increased maintenance, liquidated damages from existing contracts, etc., and determined a range of approximately \$100,000,000 to \$1,000,000,000, from least expensive to most expensive plant. Even then, you would need to find a competitive coal contract. Even on presently un-scrubbed plants the estimated equipment costs exceeded \$300,000,000 per plant. Dynegy and Ameren spent over \$2 Billion for scrubber and mercury control installations collectively, on 7 EGU's, at four plant sites for MPS compliance. The challenge of recovering those costs out of a competitive energy market, combined with the broken MISO capacity market, has led to systemic challenges that threaten much of the EGU fleet in downstate Illinois with retirement.

Vistra's Comments Regarding JET Technologies / Case study on Kincaid Power Station:

Luminant's operation group recently met with JET representatives to hear a presentation regarding their technology and business model. The Luminant development group will review the details of JET's proposal and make an independent assessment about the feasibility of their proposed options, technologies, and economics. Luminant was not involved in the "case study" reported by JET. We cannot comment on the accuracy of their estimates or the feasibility of the study at this time. Kincaid is currently in compliance with all environmental regulations and with all components of its Consent Decree and is prepared to do so indefinitely.