



## **Logic behind Hallador/Sunrises' decision to build NS Railroad loadout in southern Indiana**

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In its Q-3 2017 report filed with the SEC, Hallador announced that its affiliate, Sunrise Coal will construct the "Princeton Loop," a truck-to-rail loading facility to be located 46 miles south of its Oaktown mine complex on the Norfolk Southern Railroad six miles west of Princeton, Indiana, on State Highway 64. This study analyzes the logic and pros and cons of the project.

### **The Facility**

According to Hallador, the facility will include "the ability to unload trucks, blend coals, load 135-car unit trains in four hours and store over 4 million tons of coal. The Princeton Loop will primarily serve Norfolk Southern-linked utilities once the rail facility is completed in the spring of 2018."

Hanou Energy understands that Sunrise is dismantling the Prosperity loadout which served the now closed Prosperity deep mine in southern Indiana. Hallador estimates that the entire cost of dismantling the old loadout, moving it to the new location and constructing the new loadout will cost \$10 million.

So what gives?

First of all it should be noted that Sunrise's current operations (Oaktown, Carlisle and Ace-in-the-Hole) are only CSXT railroad or truck served, hence, the interest in having access to the NS railroad, which presents new marketing opportunities.

Secondly, Oaktown's current access to the NS market is through limited trackage rights with INRD and an interline arrangement with Indiana Southern Railroad (ISRR owned by Genesee & Wyoming) for interchange to NS at Oakland City, IN.

### **The Pros and Cons:**

#### ***The PROS:***

##### **Finding value in a stranded asset:**

By dismantling the Prosperity rail loadout and moving it to the Princeton Loop, Sunrise effectively found value in a stranded asset. They also save money in building the new loadout - perhaps a savings of \$5 million?



**Sunrise's existing customers:**

Currently, Sunrise ships coal to the following customers: Vectren/ A.B. Brown and F.B. Culley (~1.6 million tons per year (mmtpy), the Alcoa-Vectren/ Warrick Unit 4 (~0.4 mmtpy), the IPL/Petersburg (~1.2 mmtpy), the Duke Florida/Crystal River (~0.5 mmtpy), the KU/E.W. Brown (~0.4 mmtpy), the Hoosier/Merom (~0.7 mmtpy) and the Orlando/Stanton (~1.2 mmtpy) plants. The company has also shipped some spot coal into NIPSCO's Bailly and SE's Seminole plants.

Of the plants mentioned above, only Alcoa-Vectren's Warrick Unit 4 and KU's E.W. Brown plants receive coal via the NS Railroad. Vectren owns 50% of the Warrick 4 generating unit with Alcoa owning the other 50%. The Bailly plant receives coal via the Chicago & South Southern (CSS) Railroad, which interchanges with the NS and CSXT railroads. All of the other plants receive coal via truck or the CSXT Railroad.

According to the EIA Form 923 shipment data, Sunrise ships about 0.4 mmtpy of coal into the Warrick 4 unit about 0.4 mmtpy into the E.W. Brown unit under contracts expiring at the end of 2017. So having direct access to the NS Railroad would save Sunrise the costly switch cost that the CSXT and NS railroads charge the utility.

**ILB coal markets served directly by the NS Railroad:**

Having access to the NS opens up 22 to 27 mmtpy of Illinois Basin (ILB) coal markets that Sunrise can't realistically compete in today. The largest markets would be Duke/Gibson (8-10 mmtpy), SOCO/Wansley-Gaston-Hammond (~7.2 mmtpy), Nipsco/ R.M. Schahfer (~2.0 mmtpy), Alcoa/Warrick Units 1-3 (~2.5 mmtpy), Alcoa/Warrick 50% ownership of Unit 4 (0.4 mmtpy), ADM/Decatur (~1.5 mmtpy), TVA/Kingston (~1.5 mmt), PowerSouth/Lowman ~1.0 mmtpy), KU/E.W. Brown (~0.9 mmtpy) and Duke Carolinas/Marshall (0.5 mmtpy) plants.

**Other potential markets:**

What may be a great market is the potential of the 2-unit, 2,600 MW AEP/ IMEC Rockport (IN) power plant adding wet scrubbers in the 2022-2028 timeframe. Located on the Ohio River, the plant is under an EPA/Federal court ordered consent decree to add wet scrubbers, switch to gas or be retired by 2025 or 2028 depending on the unit. Currently on Powder River (PRB) and Central Appalachian (CAPP) coal, the 34-year old plants were originally designed to consume ILB coal; however, AEP decided not to add scrubbers and consume 8,800 Btu PRB "compliance" coal instead. This may change in the next 4 to 9 years. At a 50% plant factor the two units would consume around 5.0 mmtpy of ILB coal. The plant has access to the NS Railroad, but there are no rail unloading facilities at the plant currently.

**Synergies with Gibson power plant:**

The new loadout is about 5 miles from the Duke Energy Gibson Power plant. The loadout area is large enough where it could serve as a railcar staging spot for Gibson power plant unit trains; however, this would require additional rail loops to be added.

**River market potential:**

Eventually, the loadout might provide Sunrise access to the Ohio River market. The company already controls the Summit Terminal located at Mile Point 743.8 on the Ohio River, but has no rail access. It is located about a mile upriver from the Rockport Power Plant, which has access to the NS Railroad.

**Market Timing:**

The construction of the Princeton Loop may be timely as a perfect storm is brewing in the market place.

- According to T. Parker Host January-October 2017 U.S. thermal exports total 22.85 million tonnes, up 115% year on year. Metallurgical exports are up by 40% and stand at 34.51 million tonnes. As a result, Pittsburgh Seam coal availability in northern Appalachia is scarce. Foresight Energy, the ILB's major coal exporter is also seeing strong



demand. This in turn is creating shortages in the domestic U.S. thermal market. ILB shipments into the eastern U.S. Pittsburgh Seam markets have already started.

- Natural gas prices, which were below \$2/mmBtu in mid-2016, have consistently hovered around \$3/mmBtu during 2017. While forward prices recently dropped below \$3/mmBtu, a coal, harsh winter could cause natural gas prices to easily increase beyond \$3.50/mmBtu.
- ILB coal prices have also increased as spot prices are up about \$5/ton since the summer. For an 11,800 Btu, 4.8 lb. SO<sub>2</sub>/mmBtu coal the current spot price is around \$38/ton in the railcar. Next year futures prices suggest a \$2/ton increase.
- U.S. bituminous coal stocks for electricity generation are also substantially down from 2016 levels. At the end of September bituminous stocks were at 58.4 mmt, 25 mmt lower than in May 2016. If stocks get below 50 mmt, watch out! (Historically, prices have surged when this happens.)

Hanou Energy would not be surprised if ILB coal prices spike to the mid-\$40/ton if stocks continue to drop, if Pittsburgh Seam availability remains short and natural gas prices increase and exports continue.

### ***The CONS:***

#### **Cost to place coal in a NS railcar:**

Sunrise's Oaktown mine complex is 46 truck miles north of the Princeton Loop. At \$1/ton for the first mile and \$0.10/mile for the next 45 truck miles this equates to:  $\$1.00 + \$4.50 = \$5.50/\text{ton}$ . Add another \$0.50/ton for loading this equates to \$6.00/ton in the railcar. Most of Sunrise's competitors with NS rail access have costs less than \$1/ton to place coal in the railcar.

#### **Paying off the cost of the rail loadout:**

In their Q3 2017 report to the SEC Hallador states that the cost of building the loadout is \$10 million. Interviews with other ILB coal and transportation companies suggest the cost could be as high as \$20 million, including the value of the Prosperity loadout. Assuming a \$10 million investment and assuming 2.0 mmtpy level of shipments with a payback over 5 years, it will cost \$1.00/ton to pay off the investment. If the shipments are only 1.0 mmtpy, then it's a \$2.00/ton cost per year for 5 years.

#### **Sunrise's Existing Customers:**

It should be noted that The Indiana Rail Road (INRD) currently has trackage rights into the NS-served Alcoa/Vectren Warrick plant and future potential rail shipments into Vectren's Cully plant. The INRD is currently railing all the Oaktown coal for Warrick #4 at a rate of 400-500K/year. This is important in that the INRD originates coal from Sunrise's biggest competitor, the Peabody Bear Run 8.0 mmtpy mine located a few miles north of the Oaktown complex. This places Peabody in a stronger position into these plants going forward. It is believed that the INRD contract with Vectren expires in the next 2 to 3 years. Whether this will be renewed is uncertain at this time.

Ku's Brown plant in Kentucky is receiving Oaktown coal through an interline arrangement that the INRD has with the ISRR under a contract that expires in the next year or two. It is uncertain whether this will be renewed when the contract expires.

#### **Is the Duke Energy Gibson Power plant an option?**

Duke's Gibson power plant is only 5 miles from the Princeton Loop. Historically, the plant likes to receive its coal via rail with the NS as the destination carrier; however, it can also receive coal by truck. Hanou Energy estimates the cost of shipping rail coal sourced on the Princeton Loop to the plant to be around \$1.50/ton. Why truck Oaktown coal 46 miles



then put it in a railcar to ship it another 5 miles to the plant. Wouldn't it be better to offer a truck delivered coal at a ~\$1.00/ton discount? If not, can Sunrise capture the Gibson business while absorbing a \$7.50/ton transportation cost?

### **How about the other NS-served power plants?**

As stated previously, Alcoa owns Warrick 1-3 units and 50% of unit 4 with Vectren owning the other 50%. White Stallion controlled mines in southern Indiana and southeastern Illinois supply 100% of the Alcoa-owned Warrick plant's coal needs. Alcoa owns the reserves on two of the White Stallion mines representing more than 5 mmt of annual production starting in 2018. It is highly unlikely that over the next 10 years Alcoa will ever take Sunrise coal into Warrick.

The SOCO Wansley, Hammond and Gaston plant's coal needs in the Gulf region are mainly served from Foresight Energy's southern Illinois mines. Foresight's costs are at least \$11/ton lower than Oaktown coal in a Princeton Loop railcar.

The TVA Kingston plant is mainly served by Armstrong's Kronos mine and Alliance's Cardinal mine in West Kentucky. Kronos and Cardinal are on the Paducah & Louisville (PAL) Railroad which interchanges with NS Railroad for final delivery into Kingston. As a privately-owned railroad, it is apparent the PAL is willing to work closely with the NS to keep costs down and to reduce the costly switch charge. It is also apparent to Hanou Energy that the CSXT is not working closely with the NS to keep switch charges at a minimum. Can Sunrise overcome the \$6/ton cost to get its coal into an NS railcar?

ADM's Decatur plant in Illinois is served by Foresight's Shay mine. Shay has roughly an \$8/ton transportation advantage over Sunrise coal loaded at Princeton Loop and delivered to Decatur. Shay is also one of the lower cost mines in the ILB and it also offers coal ash disposal for ADM. ADM is a bottom feeder and it is unlikely Sunrise coal will ever move into ADM in a big way.

The Nipsco R.M. Schahfer plant in northern Indiana is served by a Peabody contract expiring at the end of 2020. Peabody's Gateway North mine located southeast of St. Louis is on the UP Railroad. The coal is delivered to the plant through a switch to the NS Railroad. Oaktown coal from the Princeton Loop would eliminate the switch, but it would need to be first railed to St. Louis then to the plant. It's about 100 miles farther from the plant than the Gateway mine. Can Sunrise overcome the cost of getting Oaktown coal in an NS railcar plus the extra cost due to mileage difference over Peabody's Gateway mine?

PowerSouth's Lowman plant in Alabama consumes a blend of Alliance and Foresight coal to come up with a 2% sulfur average. Sunrise's Oaktown coal averages 3.3% sulfur. Both Alliance and Foresight have a \$6-\$10/ton transportation advantage over Oaktown.

Duke's Marshall coal plant in North Carolina has taken ILB coal during extreme shortages. The plant's fuel of choice is Northern Appalachian Pittsburgh Seam coal which has a higher Btu content and has a \$5 to \$10/ton transportation advantage over ILB coal.

### **Will the AEP/IMEC Rockport plant scrub?**

As mentioned earlier, AEP is under a consent decree to clean up the two units at the Rockport Generating Station. Getting into the details is beyond the scope of this study. In summary, AEP is required by the EPA and federal courts to either switch to gas close or fully scrub the two units over the next 4 to 9 years. While the units have added dry sorbent



injection to the units to reduce sulfur, the question is whether AEP will add wet scrubbers to the two units at a cost that exceeds \$2 billion.

Hanou Energy's research and interviews with some people in the know suggests Rockport Unit 2 will likely quit burning coal by 2028. It will either switch to natural gas or close permanently. Details on whether or not Unit 1 will scrub are less certain.

So, let's assume the plant scrubs.

- Why then is AEP not developing its 100+ million ton underground coal reserve in Posey County, Indiana? This reserve was originally picked up by AEP in the 1970s to supply Rockport with high sulfur coal; however, the reserve was never developed when AEP decided not to scrub Rockport and instead consume PRB 8,800 Btu coal.
- Rockport currently receives 100% of its coal via barge off of the Ohio River. While the plant has access to the NS Railroad bringing in 100+ car unit trains filled with coal is problematic. Currently, there are no unloading facilities at the plant. Also, about 35 miles of track from Huntingburg, Indiana would need to be upgraded to handle the unit trains and by the way, since the track goes through the town of Huntingburg, I don't think the residents would be too happy with the rail congestion that would occur as a result.
- The plant can already receive coal by barge. Logical suppliers would be companies that already have low cost mines on the river, namely Foresight, Alliance and Peabody and possibly Rhino, Armstrong and Paringa/Hartshorne.
- Finally, the plant can also receive coal by truck. Peabody and Steve Chancellor's White Stallion coal affiliates have substantial, relatively low cost reserves within a 25 mile truck haul to the plant.

Perhaps Steve Chancellor's strong political connections with the Republican Party will convince AEP to scrub one of the units at Rockport.

#### **Competition:**

If the Princeton Loop is built, Sunrise will be the only ILB coal producer trucking coal this many miles to place coal in a NS Railroad railcar. Sunrise's costs at Oaktown may be lower than some of their competition but not that much lower. Nearly all NS Railroad served markets are located to the south. There is substantial coal production already taking place at mines closer to the NS-served markets and there are a lot of mineable undeveloped coal reserves left in southern Indiana. Maybe AEP will finally get to mine the reserves they controlled for many years in southern Indiana if Rockport scrubs.

#### **In Summary**

Having access to the NS Railroad will provide Hallador/Sunrise with an additional 22 to 27 mmtpy of potential markets to compete in. The big question is whether or not they can overcome the \$6/ton extra cost to place coal in an NS railcar (not including recouping the cost of building the loadout).

Sunrise's mines are in northern part of the Indiana coalfield. Sunrise's Oaktown complex is relatively low cost but they are not substantially lower cost than their competition. Most of the NS Railroad-served markets Sunrise is targeting are south of the Sunrise's mines. Nearly all of these markets may be better served by competitors that have either transportation advantages and/or lower mine costs.



However, with a perfect storm brewing in the marketplace, Sunrise may benefit greatly by having access to new NS Railroad markets. Let's hope that happens.

### **Hallador's ultimate strategy?**

It is apparent to Hanou Energy that the CSXT Railroad has not done any favors for Sunrise in helping them find or secure new markets. Hallador appears to be under pressure to perform and this may be an act of desperation, thus its interest in expanding its market potential on the NS Railroad.

With the recent issues of Armstrong Coal filing Chapter 11, maybe this is an effort by Hallador/Sunrise to bolster investor confidence by showing investors that the company has growth potential. Armstrong and Hallador are both backed by Yorktown Energy Partners and no doubt Yorktown is very concerned about its image in the financial industry. Perhaps Hallador's stock price will increase as a result of this investment.

Hanou Energy wishes Hallador/Sunrise the best of luck in this difficult industry.

### **About Hanou Energy**

Hanou Energy Consulting, LLC is based in Severna Park, Maryland. The company recently published its **2017 ILB Coal Control Map** and the map is available for purchase now. The company also produces and sells a comprehensive and strategic study on the ILB. It's **Illinois Basin Coal Supply, Demand and Price Trends 2017-2036** study is regarded as one of the best analyses of the basin available. Hanou is owned and operated by John T. Hanou. Mr. Hanou can be reached by phone at 410-279-3818 or via email [jthanou@hanouenergy.com](mailto:jthanou@hanouenergy.com). His website is <http://hanouenergy.com>.

