



**THE CORE COALITION**  
SUPPORTING COMPETITIVE AMERICAN MANUFACTURING

**Submission to  
United States Department of Commerce**

**Rebuttal Comments on behalf of  
The Core Coalition LLC**

**Regarding  
Notice of Request for Public Comments on Section 232 National Security Investigation of  
Imports of Laminations for Stacked Cores for Incorporation into Transformers, Wound cores  
for Incorporation into Transformers, Electrical Transformers and Transformer Regulators**

**Pursuant to the May 19, 2020 Federal Register Document 2020-10715**

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## 1.0 Introduction

The Core Coalition submits these Rebuttal Comments to address several issues raised by proponents of additional tariffs or other import restrictions under Section 232. In this document, we concentrate on the comments of AK Steel, the chief advocate for protection. These comments are timely. See 85 Fed. Reg. 35899 (June 12, 2020).

The Core Coalition is an alliance of companies active in the transformer industry and those industries that use transformer components in manufacturing, as well as producers of transformers. The Coalition was formed to provide information in support of its position that the circumstances and quantity of imports of transformers, cores, laminations, and other transformer inputs do not threaten the national security of the United States (US).

Having respect for the integrity and efficient review processes of the Department of Commerce, we have not responded to every issue in the comments of AK Steel. Instead, we have chosen to address four categories:

- The Real Problem Facing AK Steel (Section 2.0)
- The Real Impact of (Loss of) Employment (Section 3.0)
- The Real Consequences of Giving AK Steel the Trade Remedies They Request (Section 4.0)
- The Real Market Consequences of AK Steel Stopping Production of Electrical Steel (Section 5.0)

In each category, we have provided a quote from the comments of AK Steel, followed by our rebuttal comments. All of our rebuttal comments are based on the data and facts provided by The Core Coalition in our July 3 submission of Public Comments to the Department of Commerce (included, herein, by reference).

## 2.0 The Real Problem Facing AK Steel

### 2.1 Rebuttal to Alleged Threats to the Future of AK Steel

**Comments of AK Steel (pp 4-5):** *Imports of downstream products made from GOES are entering the U.S. market in such quantities as to threaten the future of AK Steel's production of electrical steel.*

*A few years ago, when the Department conducted its Section 232 investigation into steel, executives at AK Steel warned that tariffs on GOES alone would not be sufficient to preserve electrical steel production in the United States. They stated that to avoid such tariffs, overseas producers of GOES would ship their product to other countries, where it would be turned into laminations, stacked cores, and wound cores for shipment to the United States. If that happened, AK Steel would lose sales, and its future as a producer of electrical steel would be in peril.*

The July 3 submission by The Core Coalition documents that:

- AK Steel's prices for GOES products are abnormally high compared to competitors.
- AK Steel's abnormally high prices are driven by their abnormally high costs.

- AK's obsolete equipment with inefficient production process steps reflect a failure to invest over many years.

Thus, the high level of imports of converted GOES products is a direct consequence of the high price and cost structure at AK for GOES, stemming from inadequate investment by the company.

These pricing and cost issues for AK Steel did not happen suddenly. It is certainly not due to imports (i.e. cores and laminations) since 2018.

The Core Coalition agrees with AK Steel that profitability in the special steel arena is not and has not been robust—nor is it likely to be. The July 3 submission by The Core Coalition provides pricing data to document that other companies producing electrical steel with older equipment and high labor costs have been able to reduce costs (and prices) and remain competitive, albeit with difficulty, at a global level. This situation has developed over many years and is in large part a self-inflicted injury.

It is incorrect to pin blame on imports (i.e., cores and laminations). The real cause - and problem - is the high prices, high cost structure and lack of investment at AK Steel. Import restrictions cannot solve this problem. To verify, import values on GOES wide coil into the US ( before tariffs) are at similar price levels to those traded in Asia, Western Europe, South America and can be easily verified by checking publicly available import statistics of these steels supplied into other nations. AK is simply unable to sell competitively or profitably at the GOES world market price.

## 2.2 Rebuttal to the Alleged Threat to US National Security

**Comments of AK Steel (Page 6):** *Only strong, prompt, effective, and urgent trade relief can prevent imports from having a severe impact on U.S. national security. The facts facing the government in this investigation are clear: AK Steel's electrical steel operations -- the only such operations in North America -- are quickly being forced out of business by imports of downstream products made from low-priced GOES. If these imports are not stopped, and stopped quickly, AK Steel will have no choice but to soon end all production of electrical steel. If that happens, there is no reason to believe that any other company would take on the costs and technical challenges of making this critical product in the United States.*

The issues raised by AK Steel have several implications.

First is the implication that trade relief is required to protect production of Electrical Steel (GOES and NOES) at AK Steel. AK Steel does not want imports to decrease—AK Steel says it needs them to *stop*. However, the long-term consequences of such a stoppage would be disastrous for the US economy and likely for the integrity of the electric grid. The prohibition of imports to maintain electrical steel production is much like putting a critically ill patient on external life support but doing nothing about the underlying illness.

There is no logic to imposing tariffs or other trade restrictions to help one company while not dealing with the real causes, namely lack of investment, obsolete equipment and aberrational high prices. Perpetuating those high costs and prices cannot be sustained for the long term. Trade restrictions will not restore competitiveness to the electrical steel market in this country.

AK Steel clearly requires some assistance to restore its competitiveness in the electrical steel market. . However, Section 232 cannot provide that assistance. r.

Perpetuation of AK's high cost structure for GOES will do nothing to help the US economy. It will not make the US more efficient, productive or competitive. It will have the opposite effect. In short order, AK Steel will find itself in the same predicament as it faces now.

Nor will trade restrictions create jobs. Those same restrictions that save a few jobs will result in many more lost jobs throughout the US. For downstream users of GOES, trade restrictions will encourage outsourcing more advanced products. And, without incentives and measurable goals, import restrictions will result in the exit of companies in search of more competitive prices. Jobs will be lost, production efficiency will be lost and market efficiencies will be lost in the electricity and related markets. The answer to AK Steel's problems is not import restrictions which will make the problem worse.

Secondly, we reject AK Steel's conclusion that "there is no reason to believe that any other company would take on the costs and technical challenges of making this critical product in the United States." It is a matter of public record that Big River Steel (AR, USA) has intentions to manufacture both NOES and GOES products and appears to have the technical support to do so (refer to Page 12 for more details). History is unequivocal in that SMS Group, Germany, as the provider of equipment and technical support, has guided a steel company, with no prior experience in production of NOES or GOES, into the successful production of high grade NOES and high permeability GOES. There is every reason to believe that this would happen again in the case of Big River Steel (or others) and that there are strong financial incentives to make this happen. Import restrictions are not necessary.

Third, while AK Steel continues with the implication that domestic production of GOES is necessary for national security, there is no evidentiary support for their assertion. The Core Coalition agrees that the national electrical grid is essential for maintenance of national security. However, continued domestic production of GOES is not critical to maintaining a strong and technically advanced national electric grid. Indeed, as GOES becomes more expensive, innovation in the electric grid will be damaged, not helped. Domestic production of GOES is simply not a matter of national security. The Core Coalition's July 3 submission documents that GOES, for transformers and transformer components, is currently available from a variety of diverse and reliable sources, with strong national trading relationships. Domestic supply of GOES is not critical for national security for the foreseeable future.

### 2.3 Rebuttal to the Alleged Impact of Artificially Low Prices of Imports

**Comments of AK Steel (pp 60-61):** *U.S. producers of GOES have long faced competition from low-priced, unfairly-traded imports. The same pattern of artificially low-priced imports has continued with downstream GOES products after Section 232 steel tariffs limited imports of GOES. [ ] as significant imported products made from GOES -- the laminations, stacked cores, and wound cores at issue here -- poured into the U.S. market.*

AK Steel has assumed a conclusion that clearly needs to be proven. Lower-priced imports are not necessarily unfairly traded. AK Steel has shown in the past (1994 and 2004) that GOES is dumped and/or subsidized. That relief did not help them attain competitive parity with foreign producers. Section 232 import restrictions will do no better. Of note, AK Steel did not use this relief to invest in production cost reductions.

The most recent case was brought in 2014. Antidumping and countervailing duty actions were brought against GOES imports from China, Czech Republic, Germany, Japan, Korea, Poland, and Russia. The International Trade Commission voted that there was no material injury or threat of injury to the domestic industry and the case was dismissed. The Court of International Trade sustained the Commission's determination.

Neither the unfair trade laws nor Section 232 guarantee profitability or perpetual success for any domestic producer. Import restrictions to subsidize one company's effort to continue producing GOES would be a gross abuse of Section 232

Similarly, regarding prices for GOES imported into Canada and Mexico, the Core Coalition provided information in Confidential Appendix 2 to its July 3 submission, which provides average annual prices for M4 and M3 regular grain oriented, and M3 HB grain oriented sold in Europe, Canada, Mexico, India, China and the USA. While prices globally have been in general decline over the last two years, it remains a fact that prices for equivalent GOES products are dramatically higher in the US (more than 25%) than other parts of the world (Appendix 2 of The Core Coalition's July 3 submission).

Thus, when GOES is converted into highly engineered products such as wound or stacked cores, prices from Canada and Mexico for these products are low compared to products made using GOES purchased in the US, but not artificially low or unfairly traded.

Again, the central issue for pricing of imported GOES products and wide coil is the comparison with high prices (and high costs of production) from the sole producer of GOES in the US.

The grade of steel commonly used for wound cores (noted as the highest volume import product in Table 1 of our submission at an estimated 53,708 MT of GOES in 2019) consists of regular GOES grade M3, which is towards the lower price categories for GOES. Regular GOES naturally contributes lower prices for imports. These prices are not artificially low or unfairly traded to the

injury of the domestic industry, as the ITC found only a few years ago. AK Steel has not explained how the circumstances have changed; their lack of factual support is noteworthy.

#### 2.4 Rebuttal to the Alleged Impact on AK Steel's Investment Strategy

**Comments of AK Steel (pp 64-65):** *Furthermore, AK Steel had previously invested \$11 million at its Butler Works to increase GOES capacity, but that additional capacity sits unused....*

This comment has sparked interest among GOES customers. This is the only specific reference to investment strategy in GOES by AK Steel in this Public proceeding (comments regarding capital expenditure for electrical steel are provided on page 72 but removed from Public scrutiny). However, as noted, AK's emphasis is on building production capacity customers are not interested in, not in reducing their costs, which is of great interest to customers.

The Core Coalition identified in its submission that AK Steel continues to use a high temperature slab reheat process, one of several reasons cited in the submission as being responsible for an extraordinarily high cost structure, compared to competitors. AK Steel remains the only company in the world producing GOES that still uses this now-outdated process step. Other companies with outdated capital equipment have successfully converted to the new technology which uses low temperature slab re-heating, accompanied by higher yields and associated lower costs.

AK Steel's submission failed entirely to mention capital investment for the purpose of cost reduction. AK Steel might have mentioned (as The Core Coalition did) that AK Steel has, in the last ten years, replaced three very old melting furnaces with one electric arc furnace. While this investment certainly will reduce costs over time through markedly better efficiency, it appears that AK Steel views it essentially as a step to increase production capacity rather than reduce costs. This increased capacity will not and should not find a market if the cost issues are not addressed. And, like many investments, this one benefited other product lines (such as stainless steel) as well as GOES, so it might not be included in the comments because AK Steel does not associate it exclusively with GOES production.

The singular focus by AK Steel on investment to increase capacity is almost guaranteed not to attract customers. Just the opposite. While The Core Coalition acknowledges that production costs are volume sensitive, we conclude that AK Steel's investment to increase capacity is yet another example of a self-inflicted injury that neglects the fundamental problem of abnormally high production costs.

#### 2.5 Rebuttal to Alleged Causes of Allegheny Ludlum's Exit from US GOES Market

**Comments of AK Steel (Page 65):** *Thus, without relief, AK Steel will follow the path of Allegheny Ludlum, which was forced out of the U.S. GOES market by large volumes of unfairly low-priced imports of GOES.*

The true reasons for the exit of Allegheny Ludlum from production of GOES need to be explained because there are lessons to be learned that will bear on the Department's determination in this case.

As already identified in The Core Coalition's July 3 submission, the principal reason for the exit of Allegheny Ludlum from GOES production was their high cost structure. One of the reasons was the continued use of ingot casting, an obsolete production process that results in enormous yield losses (waste exceeding 15%) compared with continuous casting with yield losses typically under 5%. Further, ingot casting does not permit the production of high permeability GOES grades, which are increasingly popular with customers. As a result, Allegheny Ludlum was basically restricted to selling basic regular GOES which commands the lowest prices (and profit margins) in the sector. Moreover, Allegheny Ludlum's rolling mills and process technology never had the ability to consistently produce lower thicknesses or higher grades. The market simply left Allegheny Ludlum behind.

The lesson to be learned is that Allegheny Ludlum did not invest in equipment or process technology to keep up with market trends. Hence, their production costs were high compared to competition and their quality was poor. In simple terms, they could not compete effectively. As a result, the company lost all of their export market and much of their domestic customer base.

Allegheny Ludlum's exit from production of GOES was therefore not the result of unfairly low-priced imports. Their exit was a direct result of a high cost structure, low grade coverage, and a lack of investment over many years. The example of Allegheny Ludlum is a warning: Propping up an inefficient, high cost company with import restrictions will not work, especially in a rapidly changing GOES market—it never has, and it never will.

## 2.6 Rebuttal to the Alleged Implications for the US Electrical Grid

**Comments of AK Steel (Page 2):** *Electrical steel, including GOES, is vital to U.S. national security. Two years ago, in a Section 232 investigation into imports of steel, the Department of Commerce ("Department") left no doubt that electrical steel is critical to our national security. The Department specifically found that maintaining a strong electrical grid is essential to both the U.S. economy and our national security. The Department further found that electrical steel is "necessary" for transformers of all types of energy across the country. It specifically stated that "{i}f domestic electrical steel production, as well as transformer and generator production, is not maintained in the U.S., the U.S. will become entirely dependent on foreign producers to supply these critical materials and products."*

Let's not mix the issues here. The Core Coalition agrees, and it is absolutely correct, that the national electrical grid is critical to our economy and national security. The Section 232 steel investigation in 2017 correctly identified that critical infrastructure.



However, **electrical steel is not the national electrical grid**. Electrical steel is a vital and necessary component for the production of transformers but can be sourced from a variety of reliable global suppliers with **no change in the security of supply**. The submission by The Core Coalition clearly documents at least 10 sources of supply of GOES into Canada and Mexico. The same supply situation exists for sourcing of GOES into the US but does not currently exist because of the Section 232 tariffs at 25% applicable to imported steel. Thus, while GOES is vital and necessary for manufacture of transformers, supply of domestic GOES from one source, especially with restricted grades and high prices, is not critical for the national economy and security. Skewing the market by imposing import restrictions on transformer components, or imported transformers, would be a major mistake that would make the national electrical grid less technically advanced and less efficient. That would have the perverse effect of damaging national security.

To summarize, the problem is not unfairly priced imports or the circumvention of 232 Tariffs for imported stacked and wound cores.

The real problem is:

- High prices by AK Steel for GOES products
- A high cost structure for GOES at AK Steel which is responsible for the high prices
- Old equipment with inefficient production process steps that reflect a lack of investment over many years.

### 3.0 The Real Impact of (loss of) Employment

#### 3.1 Rebuttal to Alleged Impact of Imports on US Employment

**Comments of AK Steel (pp 66-67):** *Imports of the Articles under Investigation Have Caused U.S. Employment to Decline. U.S. imports of GOES and downstream products made from GOES have had significant negative effects and threaten additional adverse effects on the existing and anticipated availability of human resources necessary to make GOES for equipment used in the electrical grid....*

*To reiterate: Mr. Goncalves told the Congressional Steel Caucus in March 2020 that the two AK Steel plants that make GOES in Pennsylvania and Ohio will close without Section 232 relief, and more than 1,400 employees at these plants will lose their jobs.*

AK Steel's comments present only one side of the employment picture, and not even the one side completely.

There are significant imports of transformer components because the high price of GOES in the US, from the sole supplier of GOES (AK Steel), has caused a substantial exit of core manufacturing capacity and transformer production capacity. The transformer market is not like power tools, consumer appliances or other industries where there has been similar offshoring (to China and other East Asian countries) and associated loss of manufacturing in the US. Nor is this simply a labor cost issue. GOES is the single highest cost component of transformers. AK Steel is the single high price supplier of GOES in the US, a situation made worse by the current 25 % tariff on GOES from most countries.

Thus, the high prices charged by AK Steel are largely responsible for the exit of manufacturing capacity and associated employment in the transformer industry. Imports are the result of this pricing action, not the cause of AK's reduction in sales volume.

It is easy to estimate the effect on loss of employment in the US transformer industry. Current US employment in the transformer industry is estimated at 15,000 by the National Electrical Manufacturers Association (NEMA) but 28,000 by others. Using AK Steel's data for reduction in sales volume, supported by production estimates submitted by The Core Coalition, sales of GOES in the US have declined by approximately 25% since 2008. Thus, the pricing actions of AK Steel have been directly responsible for the loss of at least 3,750 jobs in transformer manufacturing in the US.

AK Steel's website and exhibits to their submission clearly identify that their plant in Butler, PA produces several types of steel in addition to GOES, including stainless steel and specialty carbon steel slabs. Information from AK Steel's 2019 annual report shows that the combined production volume of electrical and stainless steel at AK was 692,000 MT of which, an estimated 193,000 MT was GOES and 45,000 MT was NOES. The balance of Butler's production (454,000 MT) is not affected by this investigation.

Thus, while AK Steel's Zanesville, OH facility may close, with the reduction of approximately 100 jobs, it is unlikely that production of stainless steel and specialty carbon slabs will stop at Butler and that some but not all 1400 jobs could be lost.

The real victims are the hard-working production people at Butler and Zanesville who have labored long and hard with inadequate resources, not AK Steel, the company.

#### 4.0 The Real Danger of Giving AK Steel the Trade Remedies They Request

##### 4.1 Rebuttal to Alleged Need for Requested Trade Remedies

**Comments of AK Steel (Page 81):** *On an earnings call last month, Mr. Goncalves explained that Cleveland-Cliffs could obtain an immediate improvement of \$40 million in its EBITDA numbers by shutting down AK Steel's production of electrical steel. Furthermore, as shown throughout this submission, it is not enough for AK Steel to break even. To remain in the electrical steel business, AK Steel requires a rate of return over the business cycle that would be sufficient to fund necessary expenditures in maintenance and research and development. Otherwise, AK Steel should spend its capital on other activities.*

Let's translate this request for anti-competitive import restrictions into numbers that have meaning in the market.

First, an operating loss of \$40M, spread over an estimated 2019 production of 193,000 MT, equates to a loss of \$207 /MT. This means a price increase of \$207/MT just to reach break-even.

Second, a low end but reasonable rate-of-return, or EBITDA, would be 10% (of total revenues for GOES). Using an estimated gross revenue for GOES at AK Steel for 2019 of \$440 million, a simple calculation indicates that a price increase of \$230 /MT is required to generate an additional 10% EBITDA with no change in operating costs. AK Steel identifies that capital expenditure would be allocated to maintenance and R&D, not investments to reduce operating costs.

Thus, AK Steel is requesting a government-mandated price increase of approximately \$437 /MT , or approximately 19%, over and above their existing prices, which are already more than 25% higher than global average prices (as detailed in our July 3 submission, Appendix 2, Business Confidential Information, The Core Coalition).

The US transformer industry could not withstand or support this level of pricing, and along with the industry's supporting suppliers, would further contract, for a long time, with greater job losses (and more threatening to national security) than any jobs saved at AK Steel. Once these crucial companies leave, luring them back will be much harder than keeping them here.

## 5.0 The Real Consequences to the Market of AK Steel Stopping Production of Electrical Steel

### 5.1 Rebuttal to Alleged Implications of AK Steel Stopping Production of NOES for Electric Vehicles

**Comments of AK Steel (pp 11-12):** *If AK Steel is forced to stop production of electrical steel, its production of NOES will also come to an end. AK Steel is the nation's only producer of NOES, and it makes this product in the same facilities, and with the same employees, that it uses to make GOES....In other words, NOES is critical to the production of electric vehicles. While this investigation focuses on products made from GOES, the United States also benefits from having domestic production of NOES. Losing the ability to make NOES would certainly impair the economic and national security interests of the United States.*

We welcome the fact that AK Steel has chosen to include NOES in their submission. However, there are key omissions of fact which renders their starkly pessimistic conclusion invalid.

The facts are:

- AK produces approximately 45,000 MT/year of NOES
- AK prices for NOES are more than 25% above global prices for the same NOES grades
- Even with paying a combination of 25% 232 tariffs together with AD and CVD tariffs imposed on seven countries in 2014, a total of 22,367 MT of NOES was imported into the US in 2019.
- AK Steel is not competitive at a global level for NOES. As a result, their export sales are very small.
- Unlike the rest of the world, the market for electrical steel used in production of motors in the US is dominated by Cold Rolled Motor Lamination Steel (CRML) with a consumption of approximately 680,000 MT in 2019. AK does not make any low grade NOES, which is the highest volume (almost 70%) used in production of electric motors in the rest of the world.
- Thus, it is clear that NOES from AK suffers from the same problems as GOES: high prices, driven by a high cost structure, and a lack of investment.

Further:

- US sales of Tesla, Toyota Prius, Nissan Leaf and other popular electric (EV) and hybrid electric vehicles (HEV) **all** depend on non-AK based electrical steel for the electrical motors, either through imported cores, imported motors or imported vehicles. No AK based steel is used for current production of electrical motors for electric and light commercial vehicles, nor has it for more than 10 years.
- The reason for this is that Electrical grade steel from AK for EV/HEV applications is too expensive to be competitive in world markets. This situation will not be rectified by imposition of trade remedies or US import restrictions. Analysis of electrical steel

consumption by OEM manufacturers can be provided, if requested (but is not admissible under the rules of rebuttal submissions, being new information).

- Just imagine the difference and (positive) impact on the US economy if AK could be, and could have been (for the last 10 years), globally competitive.

## 5.2 Rebuttal to Alleged Negative Implications of US Dependence on Overseas Sources for Electrical Steel

**Comments of AK Steel (Page 1):** *Without strong, timely, and effective relief on imports of those products, AK Steel will have to stop making electrical steel. If that happens, Americans will be wholly dependent on overseas sources for both GOES and non-oriented electrical steel (“NOES”). Such an outcome will have catastrophic consequences for our economy, our electrical grid, and our national security.*

The Core Coalition rejects AK Steel’s assertion that there will be “catastrophic consequences” should AK Steel stop making electrical steel.

Instead, we suggest that the following specific situations would develop with overwhelmingly positive consequences:

- It is a matter of public record that **Big River Steel (BRS) has announced its intention to start manufacturing electrical steel, both Non-Oriented Electrical Steel (NOES) and Grain Oriented Electrical Steel (GOES).**<sup>1</sup> BRS is a qualified producer of electrical steel: it

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<sup>1</sup> “Electrical Steel.” Big River Steel. Accessed July 22, 2020. <https://bigriversteel.com/products/electrical>; Triplett, Tim “Big River Sees Expansion, Electrical Steel in its Future,” *Steel Market Update*, March 25, 2018.;

Big River Steel. “Big River Steel Attracts \$700M Investment from U. S. Steel Joint venture partnership agreement aligns the two companies for future acquisition” (“This investment will facilitate the company’s ability to produce even higher grades of electrical steel, demand for which is expected to increase with continued focus on energy efficiency and the increase in hybrid and electric vehicle sales.”) News release, October 1, 2019. Big River Steel. Accessed July 22, 2020.

<https://www.prnewswire.com/news-releases/big-river-steel-attracts-700m-investment-from-u-s-steel-300928601.html>;

Big River Steel. “Big River Steel Welcomes Completion of U. S. Steel Partnership Investment Agreement gives U. S. Steel 49.9% stake in Big River Steel’s Flex Mill®” (“The efforts underway will facilitate Big River Steel’s ability to produce even higher grades of electrical steel, demand for which is expected to increase with continued focus on energy efficiency and the increase in hybrid and electric vehicle sales.”) News release, October 31, 2019. Big River Steel. Accessed July 22, 2020.

<https://www.prnewswire.com/news-releases/big-river-steel-welcomes-completion-of-u-s-steel-partnership-investment-300949487.html>;

Big River Steel. “Big River Steel Expanding Arkansas Flex Mill™ \$1.2 billion investment will double capacity of technology-based steel mill and recycling facility” (“With its entrepreneurial mindset, Big River Steel is also exploring opportunities to supply the market with

already produces and sells Cold Rolled Motor Lamination (CRML) steel and has actively promoted its production of samples of NOES (as evidenced by their advertising at the Berlin CWIEME Coil Winding Exhibition, 2019). BRS's major supplier of production equipment is SMS Group, Germany. It is quite possible that SMS Group, an active participant in the market for electrical steel production equipment, would provide both equipment and technology for the production of both NOES and GOES. It is a matter of public record that SMS provided equipment and technology to another steel company (**with no previous experience in NOES or GOES production**) in a period of two years (2012 and 2013) which resulted in the successful start-up and production of 850,000 MT/yr of NOES, including high grades for Electric Vehicle application, and 180,000 MT/yr of GOES, including high permeability grades. Thus, a new potentially low-cost, internationally competitive new producer of both NOES and GOES could be operating in the United States within a two-year period. While the technology for production of high-grade electrical steel is challenging, it is not the exclusive purview of AK Steel and is available through other sources, of which SMS is but one of several. This is not opinion or speculation. It is marketplace fact.

- The logical question is why BRS, or another steel company would commit approximately \$600 million to invest in the manufacture of electrical steel. With no domestic competition (if AK Steel exits electrical steel), some of the lowest manufacturing costs in the world (with new equipment), a GOES market that has grown at 4.2% CAGR (compound average growth rate) over the last 10 years (prior to COVID-19), an electric vehicle market currently growing at 14% CAGR, higher profitability and market security for electrical steel than cold rolled or automotive sheet steel, maybe the better question is - why would they not?
- In the two year period between cessation of production of electrical steel by AK Steel and commencement of production by BRS, or another company, it is likely that **international producers of electrical steel would fill the supply gap by establishing partial or full warehouse operations within the US to provide timely deliveries**. POSCO already operates a warehouse in Alabama. Baowu (the combination of Baosteel and Wuhan) operates in a warehouse in Brownsville, TX. The Japanese trading houses (Sumitomo, Mitsui, Marubeni) would likely resume importation of electrical steel, with already established infrastructure, as they have done so in previous years. Other independent importers of GOES exist who are very familiar with US customers (Sujani, Tak Loon, Metallia). Stocking and operation of a steel warehouse takes less than three months. With these likely changes, the current move of core and laminate production out of the United

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grain-oriented steel products, either within this expansion phase or as a future endeavor.") News release, June 29, 2018. Big River Steel. Accessed July 22, 2020. <https://www.prnewswire.com/news-releases/big-river-steel-expanding-arkansas-flex-mill-300674802.html>

States would likely be reversed without the need for import restrictions on transformer components.

- AK Steel would not stop production of GOES immediately, due to contract order commitments and inventories of raw materials (including WIP {work in process}). It is likely that AK would take approximately three months to cease production of GOES completely.
- Section 232 tariffs for electrical steel would be challenged and removed since there would be no domestic production of electrical steel (thus justifying an exclusion). Thus, as demonstrated in Appendix 2 of the submission by The Core Coalition to the Department of Commerce, **a healthy, competitive market would be re-established for electrical steel within the US, with price reductions for both GOES and NOES close to 25%**. Commencement of foreign warehouse operations should be encouraged since it will provide major competitive restraints in terms of pricing.
- Even if the government decided that domestic production of GOES was a necessity, support for a new, competitive and modern producer would be a vastly superior and prudent investment compared to an outdated and inefficient AK Steel facility.
- **Supply of NOES and GOES from international sources is not likely to be an issue since current capacity utilization rates are < 80% globally for both products.** Current AK Steel capacity for GOES of 265,000 MT/yr is part of a global GOES capacity of 3,500,000 MT/yr (which translates to > 700,000 MT/yr unused global capacity for GOES). Current AK capacity for NOES of 72,000 MT/yr is part of a global NOES capacity of 16,000,000 MT/yr (which translates to > 3,200,000 MT/yr unused global capacity for NOES).
- **The grid would not shut down or be at risk.** US manufacturers of transformers would continue to purchase GOES from domestic warehouse sources, similar to current purchases of GOES from AK Steel (but with more variety and at lower costs). Lead times for construction of domestic transformers would not change and would not be threatened by steel supply lead-times, quality or volume of supply. Importers of transformer components, especially on the Distribution side, would continue to import with the same lead times, supply chain, and competitive commercial structures. It is a marketplace fact that current lead times for wound cores from Canada and Mexico are two to three weeks, and would not change. Emergency replacements would be achieved with the same lead times currently. The Federally-supported program to establish critical transformer inventories would accelerate (with benefits to both domestic Distribution and Power manufacturers). There would be natural barriers and no benefits for imported

transformers (except, of course, in the cases where such transformer products are not manufactured domestically, as is the current situation).

- With lower, globally competitive GOES prices, transformer manufacturers would question the merits of having duplicate operations in Mexico or Canada and would be justified in considering expansion of US operations, or even export opportunities, resulting in **new investments and new jobs in the US.**

- Overall, the likely scenario sounds much like a healthy, globally competitive market in which higher wages are off-set by better productivity, better technology and more efficient supply chain economics. This should be the objective of the Department of Commerce (to restore the lost US manufacturing base).
- Thus, the potential for what AK Steel calls “catastrophic” consequences resulting from AK Steel shutting down production of electrical steel are decidedly unlikely. More likely is a revival of a healthy, competitive transformer industry, new investment, new jobs; national benefits without tariffs or artificial protections. **A true free market, without passing the buck to the taxpayers.**