THE CORECOALITION
SUPPORTING COMPETITIVE AMERICAN MANUFACTURING

For Immediate Release
November 1, 2022

Contact: Dr. Gwynne Johnston
GHJohnston@thecorecoalition.com

Steel Yourself: We Don't Have Enough

BUDA, TX---The USA has a stated goal of upgrading "The Grid" to make it more resilient, and it's a great objective. However, any actionable plan requires a review of the availability of the fundamental materials and components that make up the grid.

Transformers - small, medium and high power - together with Grain Oriented Electrical Steel (GOES), are the fundament components and critical materials required for any high voltage grid.

There is strong evidence that, at least in the USA, there are critical short- and long-term supply issues for power transformers and, more critically, for the supply of the fundamental material, grain oriented electrical steel (for which there is no substitute).

If the grid is critical to national security, as so deemed by the Department of Commerce (DoC), foundational to the launch of a major national initiative for upgrade and resilience of said grid is the assurance of supply of critical components and materials.

GOES is a high technology, niche steel product, with major barriers to entry.

There are possibly only 14 companies globally capable of making GOES suitable for power transformers.

There is only one GOES supplier in North America (Cleveland Cliffs/AK Steel), that is operating at capacity and not capable of meeting domestic demand or, for that matter, a full range of grades.

All North American transformer manufacturers are reporting difficulty in obtaining supply of GOES. The same applies globally. There is currently a shortage of GOES supply which will only get worse with expanded requirements for electricity supply and grid upgrades.

Globally, only one steel supplier – Nippon – has committed to expanding production of GOES, targeting an additional 120 thousand metric tonnes for the end of 2023.

Department of Commerce reports have identified that the current five USA manufacturers of power transformers have the capacity to support only 50% to 80% of USA demand.

There is no high power transformer manufacturing capacity in the USA.

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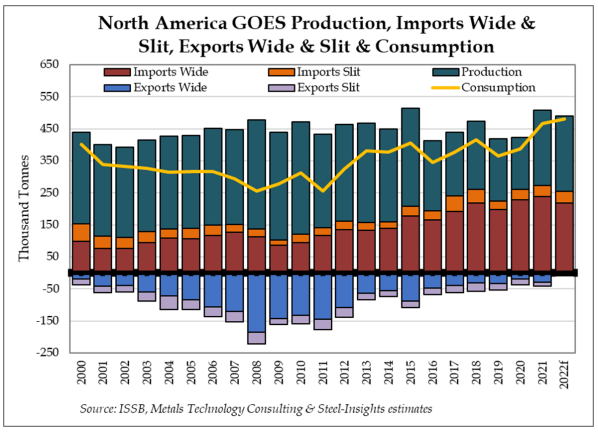

There are critical expansions anticipated for the Distribution Network which will have subsequent effects on expanded requirements for The Grid which have not, in aggregate, been quantified.

These result from:

Expanded distribution networks to support EV charging stations,

Expanded requirements for both step-up and step-down power, transformers to support new production of clean energy, primarily wind and solar,

and Expanded power and distribution networks to support new battery production for EV.

The USA <u>does not currently have the production capacity</u> for GOES to support demand for grid resilience, the requirement to produce new, clean energy or expansion to support the conversion to electric vehicles.

In addition to the supply vulnerability issue, it's a national security issue. The political implications of relying on China and/or Russia for additional supplies of GOES without expanding domestic manufacturing capacity are unacceptable.

Current production costs for electrical steel made in the USA are not competitive by international standards due to old equipment and a less efficient production process.

The USA will be sacrificing high paying manufacturing jobs in industries such as Transformers, Automotive, Power Generation, Steel Fabrication, etc., if financial and legislative support is not provided to increase domestic production and cost competitiveness of Grain Oriented Electrical Steel.

Learn more about The Core Coalition at https://thecorecoalition.com.

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