



130 E Randolph St, Ste 2000
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312.670.2400
www.aisc.org

February 15, 2019

To: All AISC Full Member Fabricators

From: Luke A. Johnson, SE, PE

RE: Industry Average Environmental Product Declaration (EPD)

As we had reported with the preparation of the industry average Environmental Product Declaration (EPD) back in December 2014, the requirements for LEED and similar green rating systems and standards include the provision of an EPD for construction products being delivered to job sites. An EPD is a document that describes the environmental impacts of the production and manufacture of a product with respect to items such as greenhouse gas emissions, energy consumption and contributions to smog creation; EPDs are required to be updated on a five (5) year cycle, so new data collection is required.

In many cases the specifications on projects seeking LEED certification will require the submission of an EPD for fabricated structural steel. Without such documentation, the fabricated structural steel used on the project will not be able to contribute to the earning of LEED credits and the ultimate certification of the project as LEED certified.

In addition, one state has passed legislation in the past 18 months requiring EPDs on all public works projects. California passed "AB 262 – Buy Clean California Act" on October 15, 2017; in addition, other states such as Washington, have proposed similar legislation (Washington's "House Bill (HB) 2412 – Creating the Buy Clean Washington Act"). These Acts require the submission of an EPD for structural steel on all public works projects. We believe that additional states will continue to adopt similar legislation in the future, making EPDs a more vital component of the material procurement process.

If you wish, we would be happy to discuss any of these requirements with you; however, the bottom line is that to comply with these requirements, it is necessary that the structural steel industry produce an industry average EPD that accurately reports the impacts associated with fabricated structural steel. Impacts associated with surface preparation, painting, coating and erection are not included in the scope of this survey.

We are pleased to report that AISC member hot-rolled structural shape producers have committed significant funds and effort to quantify the impacts of the production of structural steel shapes and plate. However, as you well know, the product that you deliver to a construction site is not "structural steel" but rather "fabricated structural steel." The EPD, therefore, must capture both the impacts from the mill and the impacts from the fabricator.

AISC has retained a consultant, Thinkstep, to assist the industry in collecting data and conducting the analysis to calculate the environmental impacts of structural steel



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fabrication. The enclosed survey was developed by AISC and Thinkstep to obtain the raw data we need to be able to quantify those impacts.

This is not an arbitrary process as the resulting EPD must be reviewed and certified by a third party against an international standard for EPDs. While the EPD will reflect industry averages, it will only be available for use by firms that have participated in the development of the EPD. **Put bluntly, if you do not report the data required by the survey to AISC, AISC cannot guarantee that you will be able to use the industry average EPD to satisfy your reporting requirements on LEED projects or public works projects, such as those in California.** These are not AISC rules, but rather program requirements of LEED and other green standards and codes.

The survey can be completed via the attached spreadsheet or by written form; however, we would prefer to keep as much of the data electronic. Please email all data electronically to epd@aisc.org. Should you prefer the written survey, please mail all correspondence to:

Mr. Luke Johnson
American Institute of Steel Construction
130 East Randolph Street, Suite 2000
Chicago, Illinois 60601

Please fill out one survey **per fabrication facility**.

We are asking that all surveys be completed utilizing data from **April 1, 2019 to March 31, 2020** and that the data is provided on a monthly basis in lieu of annual reporting. In addition, to help us vet the data and assist you in providing the most accurate information possible, we are asking that all participants **submit their data for April 2019** as soon as possible, but no later than the end of May 2019. This will allow AISC and Thinkstep to review the data and provide any feedback to you about your data collection process.

So what are the requirements for the data you need to report? Probably the clearest way to explain the details is to walk through the survey form. In the case of purchased materials it may be helpful to reach out to your suppliers to obtain these quantities, rather than relying solely on your accounting records.

All data you submit will be treated confidentially by AISC and Thinkstep. All results will be published as industry averages. No data from any firm will be released or made available to any individuals other than the limited number of staff assigned to this project at AISC and Thinkstep.



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EPD – General Questions

Company Name: the name of your company as recorded in the membership records of AISC.

Zip Code of Fabrication Facility: The data must be representative of a single shop facility. If you have multiple facilities, each one should be reported separately. You will need to identify the zip code where the facility is located in order for our consultant to determine the grid mix (coal, nuclear, renewable, gas...) of the electricity you use at the facility.

Name and email address of person submitting data: This is so we can contact the proper individual at your firm in case there are any questions regarding the data you have submitted.

Percentage of shop hours attributed to structural steel fabrication: The survey is attempting to capture the impacts only associated with structural steel fabrication. You may provide services other than just structural steel fabrication such as miscellaneous or ornamental steel fabrication or service center operations. To be able to allocate your energy and consumables just to the structural steel portion of your operation we would like you to **estimate** the percentage of your shop hours that can be attributed just to the fabrication of structural steel. The definition of “structural steel” can be found in section 2 of the *AISC Code of Standard Practice*.

Breakdown of structural tonnage by project type: Please estimate the percentage of the fabricated structural steel you shipped by weight to building projects, bridge projects and industrial projects.

Rotary or compressed air blasting (yes/no dropdown): Please indicate if in your shop you use a rotary or compressed air blasting machine and what percentage by weight of the structural steel material you fabricated is blasted. This is to be able separate out impacts associated with surface preparation and painting.

Distance to most frequently used service center: Transportation of materials between material supplier and fabricator contribute to the environmental impacts of the product. Please estimate the one-way travel distance between the service center you purchase from most often and your shop.

Distance to most frequently used mill: Transportation of materials between mill and fabricator contribute to the environmental impacts of the product. Please estimate the one-way travel distance between the mill you purchase from most often and your shop.



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EPD – Monthly Input-Output

Fabricated structural steel shipped: The tonnage of fabricated structural steel you shipped from this facility to job sites or holding yards during each of the month periods. The number of tons shipped will be treated confidentially. Only Luke Johnson at AISC and the staff of Thinkstep, who have signed confidentiality agreements, will have access to this value and will only use it for the purposes of this survey. If you do not wish to release actual tonnage values, please contact Luke Johnson at 312-670-5434 to discuss possible alternative approaches to reporting the data.

Steel scrap sold for recycling: The amount of steel scrap you sold to a steel recycler or scrap yard during the same 12 month period. The amount of fabricated structural steel shipped and the amount of steel scrap sold will determine the percentage of waste in the fabricating process.

Steel scrap from structural fabrication: Estimate the percentage of scrap that can be attributed to structural steel fabrication as opposed to miscellaneous fabricated steel products.

Welding electrodes: Enter the number of pounds of each type of electrodes that you purchased during the 12 month period for use in your shop operation.

Compressed Gasses: By type of compressed gas, indicate how much gas you purchased during the 12 month period for use in your shop operation. Also indicate whether you are reporting this number in cubic feet or pounds (*pull down for units*).

Liquid Gasses: By type of liquid gas, indicate how much gas you purchased during the 12 month period for use in your shop operation. Also indicate whether you are reporting this number in cubic feet, pounds or gallons (*pull down for units*).

Electricity: Please enter the total number of kw-hours that you were billed for by your electric utility during the 12 month period. If you have separate metering for your shop and office, please enter only your shop electricity and indicate that you do have separate metering. As electricity consumption will account for the majority of the environmental impacts attributable to your shop, please take particular care in reporting this number.

Propane, Gasoline and Diesel: Please enter the amount of fuel consumed for shop related activities. Do not include fuel used in transporting material off your shop's site.

Waste sent to landfills: Please enter the cubic yards or pounds (*pull down for units*) of waste sent to landfills. This would exclude any coating waste or materials for recycling.



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On behalf of AISC, we want to thank you for your efforts to complete the survey. We realize that in some cases you will have needed to estimate the values that you entered. That is ok – your estimate is certainly better than our guess.

When the survey information is compiled by Thinkstep at the end of the data collection cycle (April 2019 to March 2020), they will develop the values to be used as the industry average environmental impacts related to the fabrication process of structural steel. Those calculated impacts will be added to the industry average impacts of the mill production process and an EPD will be produced for “Fabricated Hot-Rolled Structural Steel”, “Fabricated HSS”, and “Fabricated Plate”. You will be provided with a copy of these EPDs for submission on projects pursuing LEED certification or projects where EPD submissions are required by the local jurisdiction.

According to the EPD requirements, only firms that have participated in the development of the EPD and are specifically identified in the EPD are allowed to use the EPD for project submissions. The industry average EPD will specifically identify the mills providing data and reference a website where your firm will be listed authorizing your use of the industry average EPD. Only AISC member firms will be authorized to use the EPD.

If you have any questions or concerns about this process, please do not hesitate to give me a call. I can be reached at 312-670-5434.

Regards,

A handwritten signature in black ink, appearing to read "Luke A. Johnson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Luke A. Johnson, SE, PE
Senior Steel Solutions Center Advisor