Emissions Inventory System (EIS) Flow Implementation Guide

The Emissions Inventory System (EIS) flow quality assures data and supports annual and tri-annual submissions of emissions inventory data by State, local, and tribal air pollution control agencies.

BENEFITS

The Network provides a fully automated way to flow EIS data

EIS provides a quality assurance service that allows users to check and correct errors prior to making an official submission

Practical Implementation Advice

- The EIS flow is fully developed and ready to use. States that have not already done so are encouraged to automate submission of EIS data via the Exchange Network.

EIS Data Flow Options

The graphic below shows the current options for flowing data. Exchange Network (EN) flow options are shown in green. There are no non-EN options. (Terms are explained in Attachment 1).

Exchange Network Flows: Emissions Inventory System (EIS)
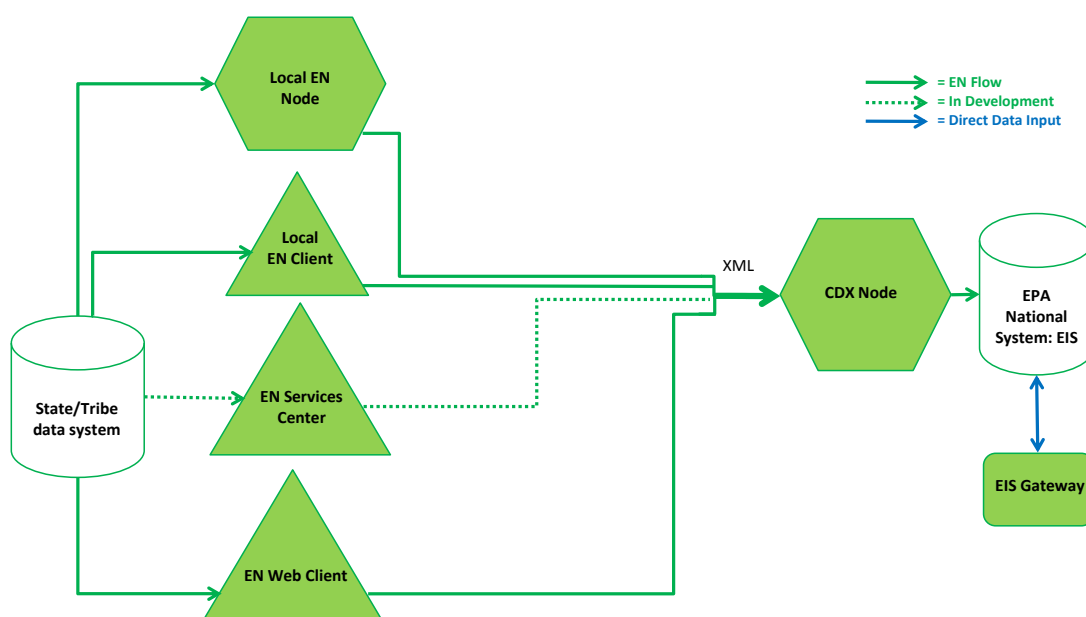
EXCHANGE NETWORK (EN) OPTIONS:

- Submit an XML file using an agency's local EN node, client, or the EN Services Center when available.
- Submit an XML file using the EN web client; partners who submit data in this way should transition to the EN Services Center when it is available.

NON-EXCHANGE NETWORK OPTIONS:

- Single record editing of data can be performed via the non-EN EIS Gateway (not shown in the graphic).

Summary of Current Practice

The EN is the only way for partners to flow EIS data. EIS flows are fully automated and documented. A few states use their agency nodes to flow EIS data. However, state agencies who have not implemented the EIS data flow and local/tribal agencies who do not have nodes should use the EN Services Center for submissions when it is available.

Partners can use the "EIS Gateway" to access and analyze data from the EPA National System. It provides access to the submitted data as well as other resources to assist users in developing their emissions inventories. It provides enhanced support for emissions estimates, including the capability to store and assess multiple emissions values for the same pollutant. Partners can use the Gateway to edit data records.

EIS Flow Status and Milestones

Exchange Network implementation of the EIS flow is largely complete. Thus far, the development of EIS has focused primarily on support of the EPA regulatory mission. EPA is now turning its attention to broader considerations of secondary users and integration with other internal EPA systems that have received less attention.

The table below shows institutional responsibilities and target completion dates for each activity. (EPA general criteria for assessing the "readiness" of National System Flows is included as Attachment 2).

Criteria:	Status	Actions	Primary Responsibility	Completion Period (CY)
Automation Ready	Complete			
Solutions for all partners	Complete			
Access to transaction status	Complete			
Accessible and stable flow documentation	Complete			
Specifications for Data Access Services	Attention required	EIS data are submitted once a year. As such, plans to develop data access services have been deferred until a business case is articulated.		
Clear path to eliminate alternatives	N/A			

Attachment 1: Terms

Node: A partner's point of presence on the EN consisting of a server (hardware and software) enabled with web services that allow partners to automatically provide and receive information via the EN and to publish data for use by other EN partners.

EN Client: A stand-alone application (i.e., software code) that lets partners submit data, request data, and receive results from an EN request. Clients differ from nodes in that they cannot respond to queries from other nodes and so cannot publish data. Clients also need more manual (vs. automated) steps, for example, to extract data and generate and review reports before submission.

EN Services Center: A website that allows EN users to easily send, get, and download information from other partners on the EN. The Services Center will serve as a replacement for manual submissions of information through CDX Web. It is an appropriate solution for those EN partners who do not require or are not yet ready for the automation and data publishing capabilities of an EN Node. The EN Services Center is available at https://enservices.epa.gov.

CDX: EPA's Central Data Exchange. It serves as EPA's centralized electronic report receiving system. It receives data from partners and directs the data to EPA's program-specific National Systems (e.g., AQS, WQX, etc.).

CDX Node: CDX Node is EPA's node on the EN, allowing EPA to receive, send, and provide information via the Network. CDX Node can also publish EPA data for use by other EN partners.

CDX Web (non-EN) Application: A legacy CDX application that receives data (flat file or XML format) via standard web browsers. CDX Web applications are not consistent with EN protocols (e.g., they have a separate authentication and authorization service from the EN) and typically involve more manual steps than a node-to-node exchange of data.

Data Access Services: Using web services to make data available to Network users by querying nodes and returning environmental data in the form of XML documents. Published data can be accessed using a node or clients. Published data can be used in a number of ways, such as populating Web pages, synchronizing data between sites, viewing data in a Web service client, or building new sources of data into an integrated application.

Direct User: A partner entering data directly into a National Data System through a system-specific interface (manual entry).

EPA National Data System: Program-specific data systems at EPA that can receive and publish data via CDX.

Local Data System: A partner's database or series of databases in which environmental data is stored, managed, and manipulated.

XML: e**X**tensible **M**arkup **L**anguage is a flexible language for creating common information formats and sharing both the format and content of data over the Internet and elsewhere. The electronic language that expresses and transports data standards and transaction sets. XML uses an extensible set of tags to describe the meaning of data.

Attachment 2: National System Flow "Ready to Use" Criteria

A focus of Exchange Network (EN) governance has been developing the National System Flows to help partners take advantage of the Network's business value. Governance has identified six criteria for each flow to meet to make these flows "ready to use" by partners:

- Automation-ready. Support fully automated node-to-node flows.

- Solutions for all partners. Provide appropriately scaled EN solutions for partners of all sizes, needs, and capabilities. Some partners such as tribes and local clean air authorities may not need a fully functional node. Other EN solutions should be available to these users.

- Access to transaction status. Support a fully automated process for reporting transaction status, processing results, and QA results from receipt by CDX through final processing in the National System.

- Accessible and stable flow documentation. Develop and make accessible stable documentation that describes all flow requirements. This includes a complete Flow Configuration Document (FCD) that is in compliance with EN procedures for version management.

- Specifications for Data Access Services. Provide a national standard set of query/solicit services defined in the FCD whether or not data are currently published. Implement a publishing interface where published data are critical to partner business processes (such as NPDES permit information for NetDMR).

- Clear path to eliminate alternatives. Have a clear path to eliminate legacy system alternatives to EN exchanges, including transition support for partners.

For more information on EIS:

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