EIS XML Generator Tool

Name

`EisXmlGenerator.exe` – A tool to generate CERS V2 XML submission files from CAIS inventory data.

Synopsis

`EisXmlGenerator.exe` generates EIS Facility Site and Point Emissions inventory submittals for annual reporting requirements. A full (Three year cycle) submittal or a type "A" major source only (annual cycle) submission can be generated.

Since the CERS V2 data architecture has a different structure from the CAIS architecture, the data mapping is simplified to a minimal compatibility level. Of particular note is that only an annual reporting period is supported, and the release point mapping is simplified.

Installation

`EisXmlGenerator.exe` is a 64 bit windows application which is installed to the user workstation using the one-click method. Administrative permissions are not required for installation, but the user should have at least reader access to the CAIS/CACTIS application.

Prerequisites

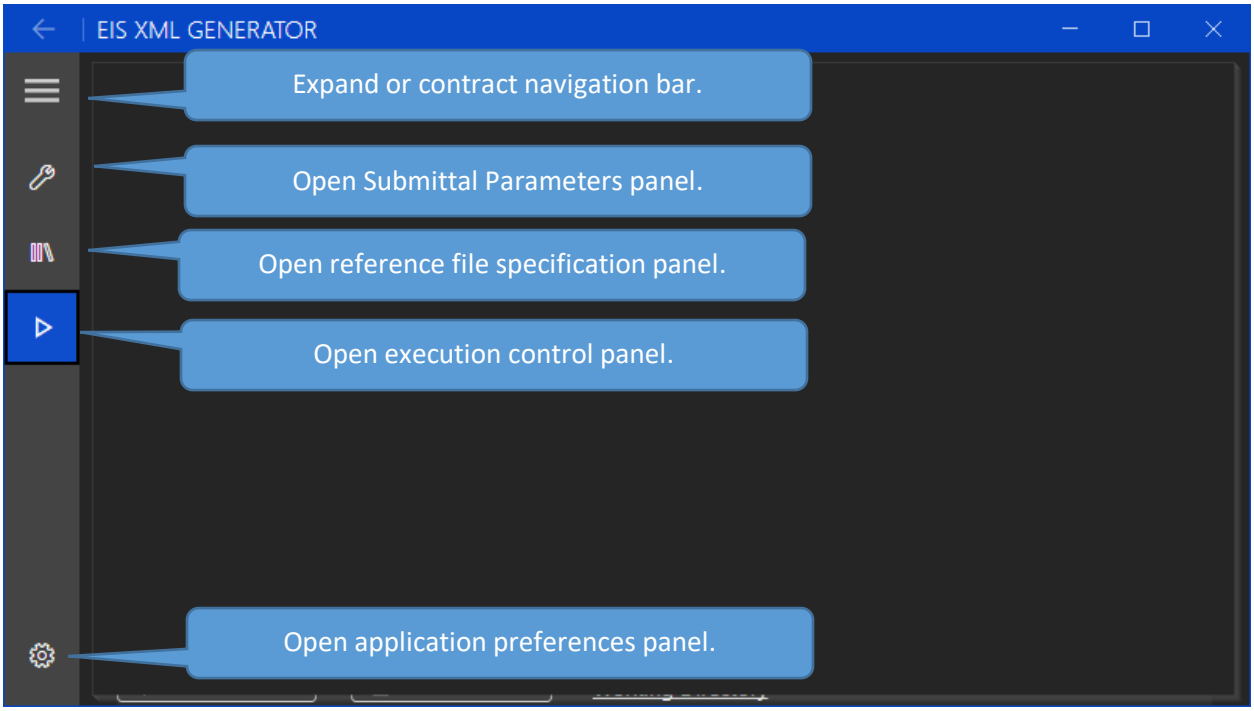
Prior to generating the submission files, the following data need to be downloaded from the EIS Gateway (https://eis.epa.gov/eis-system-web/welcome.html):

- A state-wide Facility Snapshot XML file from the "Request Reports" menu Item.
  This file is in a Zip archive, but it does not need to be extracted before processing.

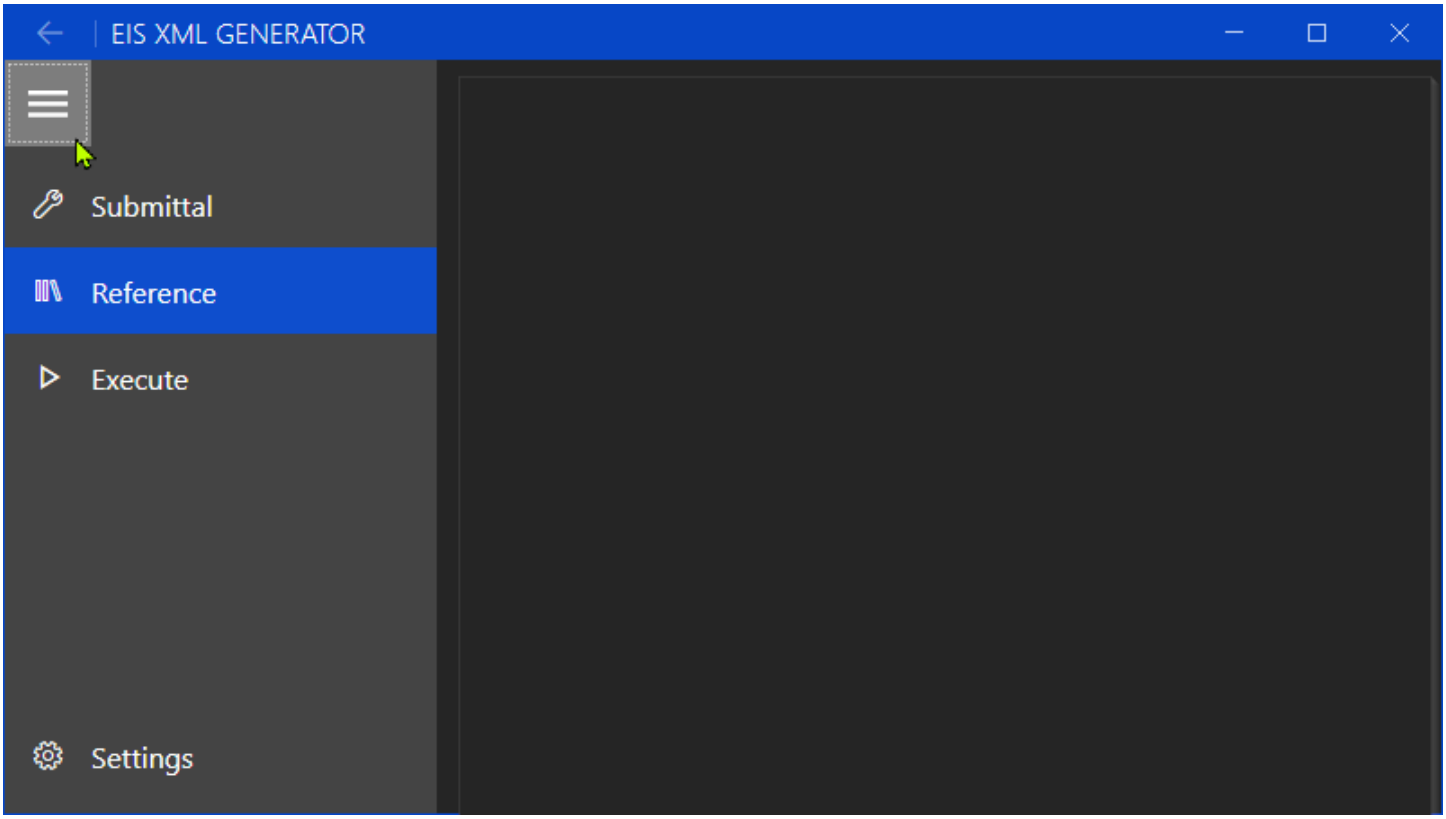
- Reporting Code CSV files from the "Reporting Code Tables" menu item. These files should be freshly downloaded for each annual submittal as their contents are subject to change. If the structure of a file changes it may be accommodated using advanced configuration CSV parsing options.
  - Control Measure Code
  - NAICS Code
  - Release Point Type Code
  - Source Classification Code - EIS
  - Unit Type Code
- Point Emissions Data Completeness Detail Report
  (Optional) For major source only submittals this can be used to ensure that sources expected by EPA are included regardless of their current status in CAIS.

Note that the downloaded files often have generic names, you would be advised to give them more meaningful names upon downloading.

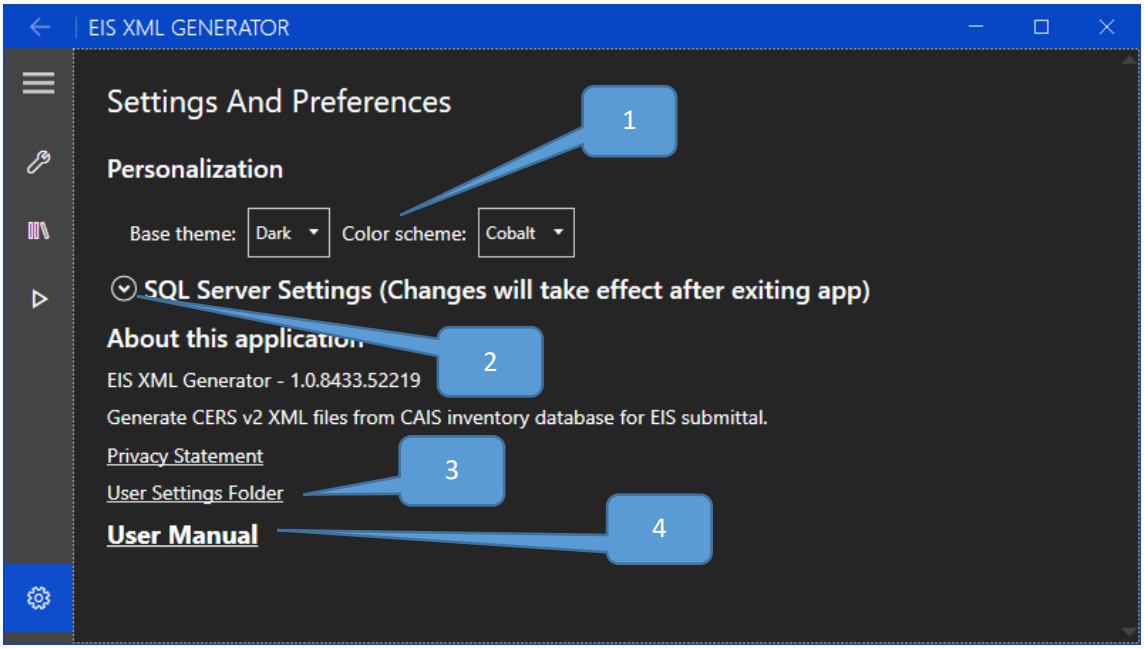
Navigation Bar



The navigation bar is used to select various application panels. It may be expanded to display labels for the icons by clicking the 'hamburger' icon:

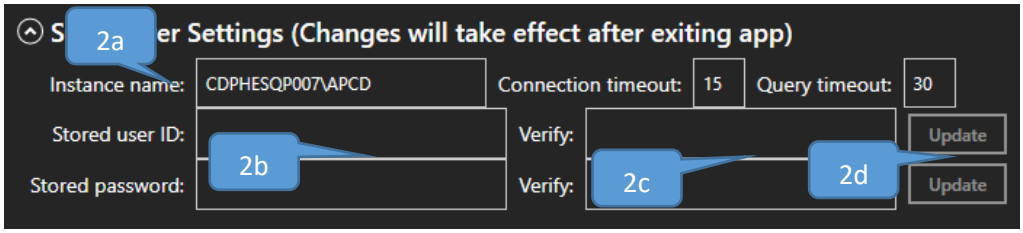


Application Preferences Panel



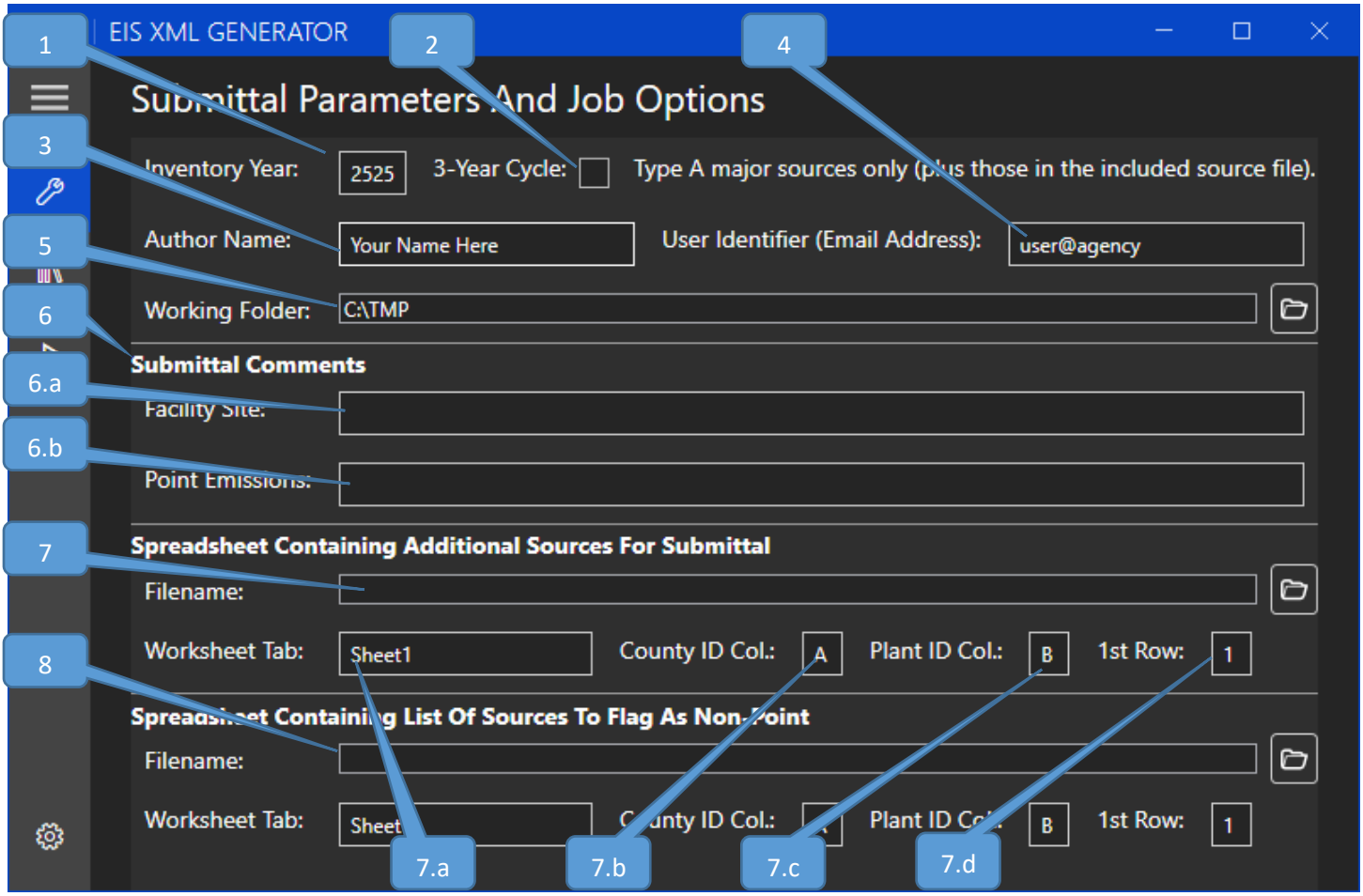
This panel controls user preferences and application settings, as well as informational links.

1. These boxes allow changing the application's appearance.
2. Exposes the SQL Server Settings. Any changes will only be applied when the application is restarted.



   a. SQL Server name and timeouts.
   b. User ID and password entry boxes.
   c. User ID and password verification boxes.
   d. User ID and password update buttons. These are only enabled if the corresponding entry and validation boxes have matching values. Note that updating these values only updates the locally stored encrypted credentials used to log into the SQL server, not the credentials on the SQL server itself. If the application is updated the internal decryption key might be changed, so any locally saved changes will not decrypt properly. In this case the credentials will need to be re-entered or, alternately, **`CaisToNode.json`** can to be edited or deleted to remove the saved credentials.
3. A link to the local user settings folder. Any settings changed from default are saved in a file named **`CaisToNode.json`**. This file can be safely deleted to restore the application to its defaults.
4. A link to this document.

Submittal Parameters Panel



This panel contains the parameters controlling the extraction.

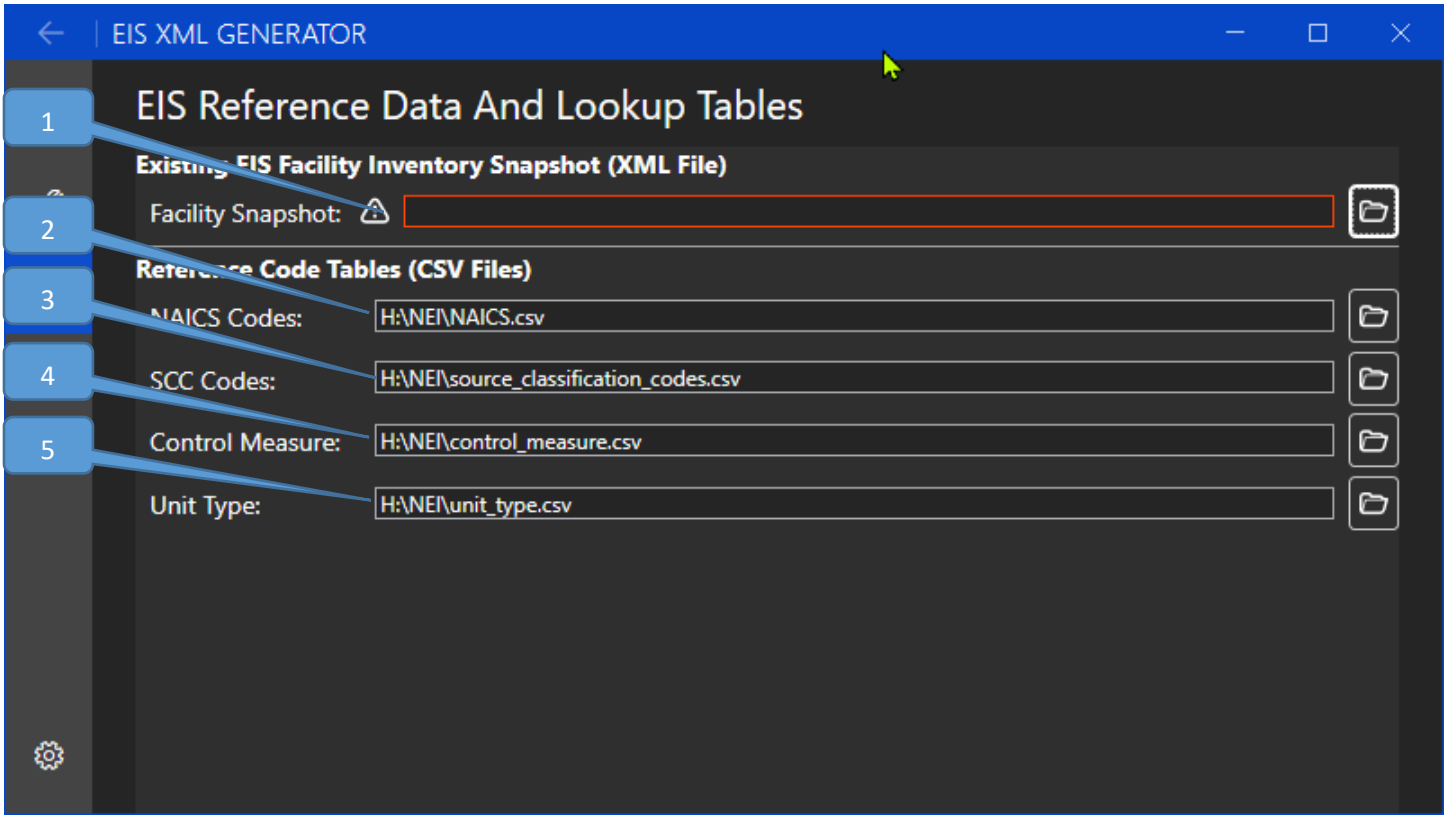
1. NEI inventory year.
2. Indicates whether this is a type A major source-only submittal (annual) or if all source categories are included (3-year cycle). Potential type A sources are determined automatically based upon emissions. If an extraction is desired for a specific plant or set of plants select the 3-year cycle and use a spreadsheet (Item 6 below) to specify plant IDs.
3. Author name included in EIS submittal.
4. User identifier included in EIS submittal, this is usually an email address.
5. Working directory for the extraction process. This is a good location for snapshot and reference files. Output files are saved to a time-stamped subdirectory to this folder.
6. Optional comments to be included in the submittal.
    a. Facility Site submittal comment.
    b. Point Emissions submittal comment.
7. An optional Excel workbook containing included source IDs. If the full 3-year cycle box is checked the extraction is limited to those specified in this file. Otherwise, these sources will be included in addition to potential type A sources. Typically this would be sources expected by EPA from the Point Emissions Data Completeness Detail Report and sources reported as potential type A sources in previous years.
    a. The worksheet tab containing the plant ID list.
    b. The worksheet column containing the sources' county FIPS codes.

c. The worksheet column containing the sources' plant IDs. If the list contains IDs consisting of both county and plant IDs such as APCD ID format (123-ABCD) or ICIS ID format (CO0000000081230ABCD) use the same column letter in the county and plant ID boxes and the application will parse out the county and plant IDs.
d. The first row number containing source IDs. This can be used to skip headers, etc.

8. An optional Excel workbook containing sources which are not to be included in a full 3-year submittal because they are being included in a non-point EIS submittal. This list is usually provided by the person who prepares the non-point submittal.

   Care should be taken with the Included and excluded source files that the Plant IDs make sense because Excel sometimes decides that the ID is in scientific notation or represents a date and 'helpfully' autocorrects the value.

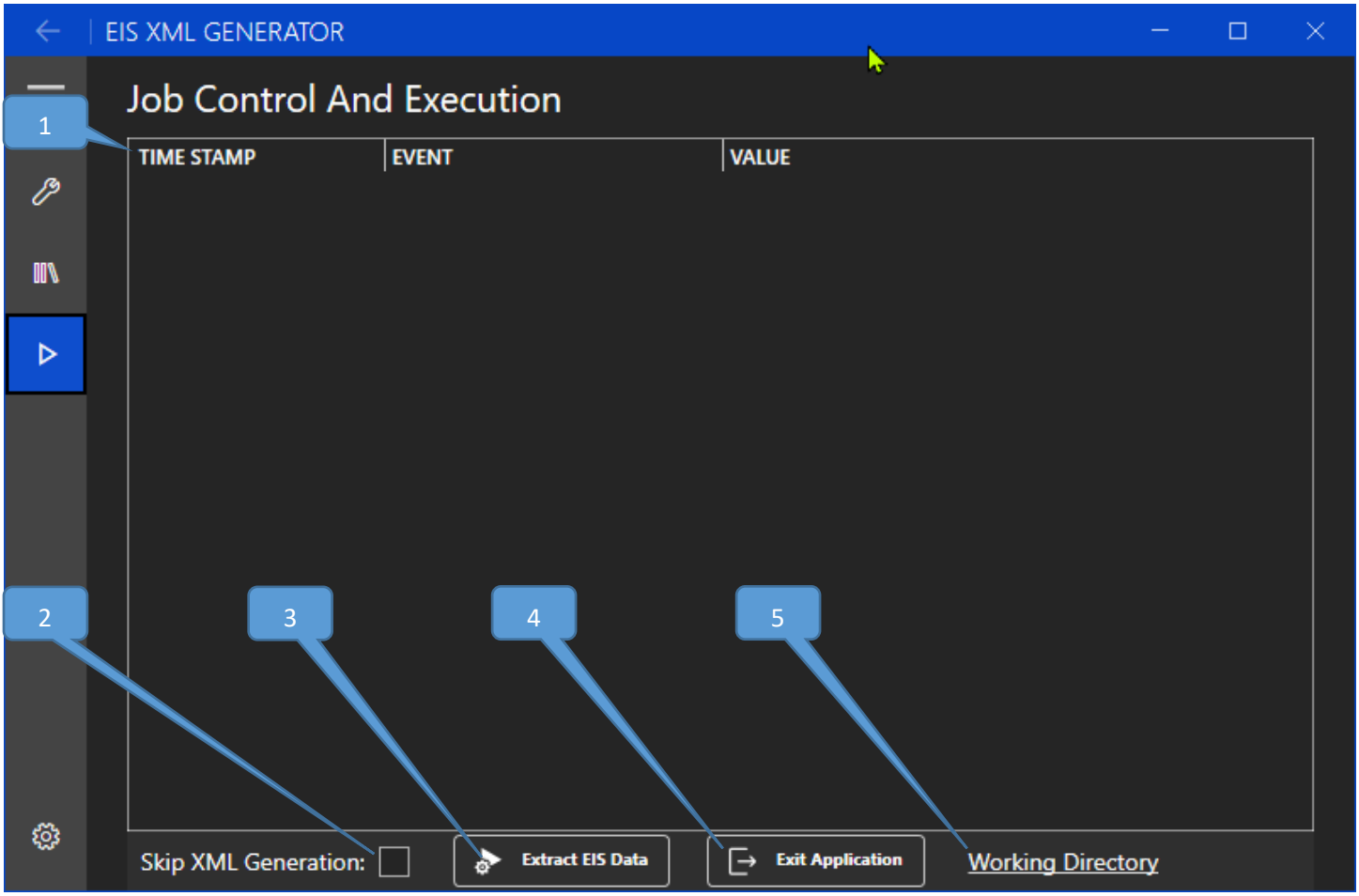
Reference File Specification Panel



This panel contains the paths to the required reference tables and facility snapshot downloaded from the EIS gateway. Required files which are not found or not entered have a red outline and warning icon.

1. The state-wide Facility Snapshot XML file downloaded from the EIS gateway. This may be left in a zip file as downloaded from the EIS Gateway. It may extracted to a raw XML file if disk space is not an issue, but there's no significant performance gain from doing so.
2. The NAICS Code CSV table downloaded from the EIS gateway.
3. The Source Classification Code - EIS CSV table downloaded from the EIS gateway.
4. The Control Measure Code CSV table downloaded from the EIS gateway.
5. The Unit Type Code CSV table downloaded from the EIS gateway.

Execution Control Panel



This panel is used to start the extraction and display its progress.

1. Log messages and status updates are displayed in this window.
2. The XML file generation step can be time consuming. For a QA “dry run” this step may be skipped by checking this box.
3. This button starts the extraction. If disabled it means that a required file cannot be found.
4. This button closes the application.
5. This link opens the working directory in the system file explorer. Output files will be found in a subdirectory containing a timestamp as part of its name.

Output Files

The following files are generated by

- **`EIS Snapshot.xlsx`** — An Excel workbook containing data from the Facility Snapshot XML file converted to Excel format.
- **`CaisFacadeBefore.xlsx`** — An Excel workbook containing the data downloaded from CAIS prior to any processing.
- **`CaisFacadeAfter.xlsx`** — An Excel workbook containing the data downloaded from CAIS after being processed to clean up data to EIS standards and remove unneeded records.
- **`NodeFacade.xlsx`** — An Excel workbook containing CAIS data transformed to CERS V2 format.
- **`<AGENCY CODE>_<YEAR>_FacilityInventory_QA.zip`** — An archive containing Facility Inventory data ready for uploading to EIS via the QA workflow.
- **`<AGENCY CODE>_<YEAR>_Point_QA.zip`** — An archive containing Facility Inventory data ready for uploading to EIS via the QA workflow.
- **`<AGENCY CODE>_<YEAR>_FacilityInventory_Production.zip`** — An archive containing Facility Inventory data ready for uploading to EIS via the QA workflow.
- **`<AGENCY CODE>_<YEAR>_Point_Production.zip`** — An archive containing Facility Inventory data ready for uploading to EIS via the QA workflow.
- **`LogAndExceptions.xlsx`** — An Excel workbook containing log messages and a summary of changes made to CAIS data.

Advanced Configuration

The bulk of the application configuration is contained in **`appsettings.json`** which is located in the program's deployment folder. Any of these settings will be overridden by including them in the individual user's **`CaisToNode.json`** file which is accessible via a link on the Application Preferences panel. If this file does not exist one will be created by making entries in any of the input fields of the application or re-starting the application. Entries in **`CaisToNode.json`** will continue to override **`appsettings.json`** even if the application is updated or reinstalled.

Any entries should specify a path including all containing objects. For example the list of non-attainment counties with the alias "`AerrSourceCategoryParameters.NonAttainment.Colorado.Counties`" could be overridden by entering:

```
"AerrSourceCategoryParameters": {
  "NonAttainment": {
    "Colorado": {
      "Counties": "001 005 013 014 031 035 059 069 123 XXX"
    }
  }
}
```

Note that **`CaisToNode.json`** must be edited using a plaintext editor such as **`notepad.exe`** or preferably a programmer's editor such as Notepad++ or Visual Studio Code. Do not use a word processor (Word or Wordpad) as it will attempt to reformat the file and destroy the JSON structure.

General Configuration Settings

Note that values that can be set in the user interface are not included here.

Alias	Description
CersSettings.EpaProgramCode	Represents the information management system for EPA entered items
CersSettings.ProgramSystemCode	Represents the information management system for agency entered items
CersSettings.OrganizationName	The name of the organization which you are representing
CersSettings.StateFipsCode	The state's FIPS identification code
CersSettings.PortableCountyCode	The code that represents the pseudo-county for portable sources
AppConfig.PrivacyStatement	Privacy statement URL

CAIS Value Lookup Constants, Range Limits, and Defaults

Note that values can be set in the user interface are not included here.

Alias	Description
CaisConstants.CaisPermanentClosed	CAIS plant status code for permanently closed
CaisConstants.CaisTemporaryClosed	CAIS plant status code for temporarily closed
CaisConstants .ControlMeasureCodeUncontrolled	CAIS control measure code indicating uncontrolled operation
CaisConstants.IcisIdPrefix	A constant prefix for ICIS style facility site IDs

Design Rate

Design Rate Unit Conversion Lookup Map

Contains a set of objects defining conversion factors from CAIS rate units to EIS rate units. Each entry must contain all three property aliases. Note that any entries made in the individual user's configuration file will override the entire default list. Unless this is desired the entire default list should be copied and then edited.

Alias	Description
DesignRateUnitsMap.CaisUnitCode	The units code as used in CAIS
DesignRateUnitsMap.EisUnitCode	The units abbreviation as used in EIS
DesignRateUnitsMap.ConversionMultiplier	The multiplier needed to convert from CAIS units to EIS units

Unit Type Codes Which Should Report Design Rate.

Unit type codes subject to EIS Warning #69 "The design capacity should be reported for unit type codes: 100, 120, 140, 160, and 180".

Alias	Description
EisConstants.UnitTypesExpectingDesignRate	Unit type codes which will cause Error #69 if no design rate reported

EIS Value Lookup Constants, Range Limits, and Defaults

NEI Operating Status Codes

Alias	Description
EisConstants.OperatingStatus.Operating	Operating and reportable point sources
EisConstants.OperatingStatus.OperatingNonPoint	Operating sources included in non-point inventory
EisConstants.OperatingStatus.ShutDownPermanent	Permanently shut down sources
EisConstants.OperatingStatus.ShutDownTemporary	Temporarily shut down sources
EisConstants.OperatingStatus.OperatingNotReporting	Operating sources not reporting
EisConstants.OperatingStatus.NotShutDown	Set of codes for non-shut down sources
EisConstants.OperatingStatus.NotShutDownPermanently	Set of codes for non-permanently shut down sources
EisConstants.OperatingStatus.ShutDown	Set of codes for shut down sources

Release Point Parameters

Alias	Description
EisConstants.FugitiveStackTypeCode	The code used by EIS to indicate a fugitive release point
LimitsAndDefaults.FugitiveHeightMax	The maximum allowable value for Fugitive height
LimitsAndDefaults.FugitiveHeightMin	The minimum allowable value for Fugitive height
LimitsAndDefaults.StackDiameterMax	The maximum allowable value for stack diameter
LimitsAndDefaults.StackDiameterMin	The minimum allowable value for stack diameter
LimitsAndDefaults.StackFlowRateMax	The maximum allowable value for stack flow rate
LimitsAndDefaults.StackFlowRateMin	The minimum allowable value for stack flow rate
LimitsAndDefaults.StackHeightMax	The maximum allowable value for stack height
LimitsAndDefaults.StackHeightMin	The minimum allowable value for stack height
LimitsAndDefaults.StackTemperatureMax	The maximum allowable value for stack temperature
LimitsAndDefaults.StackTemperatureMin	The minimum allowable value for stack temperature
LimitsAndDefaults.StackVelocityMax	The maximum allowable value for stack velocity
LimitsAndDefaults.StackVelocityMin	The minimum allowable value for stack velocity

Locational Data

Alias	Description
LimitsAndDefaults.LatitudeMax	The maximum allowable value for latitude
LimitsAndDefaults.LatitudeMin	The minimum allowable value for latitude
LimitsAndDefaults.LatitudeDefault	The default value for a missing or invalid latitude
LimitsAndDefaults.LongitudeMax	The maximum allowable value for longitude
LimitsAndDefaults.LongitudeMin	The minimum allowable value for longitude
LimitsAndDefaults.LongitudeDefault	The default value for a missing or invalid longitude
LimitsAndDefaults.LocalityNameDefault	The default value for a missing city name
LimitsAndDefaults.LocalityNameRegex	A regular expression matching a valid city name
LimitsAndDefaults.PostalCodeRegex	A regular expression matching a valid postal (zip) code
LimitsAndDefaults.PostalCodeDefault	The default value for a missing or invalid postal (zip) code
LimitsAndDefaults.StateCodeRegex	A regular expression matching a valid state code
LimitsAndDefaults.StateCodeDefault	The default value for a missing or invalid state code

Emissions Related Codes

Alias	Description
EisConstants.PollutantCodePM10	The pollutant code for particulate matter < 10 µm
EisConstants.PollutantCodePM25	The NEI pollutant code for particulate matter < 2.5 µm
EisConstants.ReportingPeriodTypeCodeAnnual	The reporting period code for the total emissions for a full year
LimitsAndDefaults.ControlEfficiencyMax	The maximum allowable value for control efficiency
LimitsAndDefaults.ControlEfficiencyMin	The minimum allowable value for control efficiency
EisConstants.EmissionOperatingTypeCodeRoutine	The emissions operating type code for the normal or typical emissions for a reporting period
EisConstants.EmissionsUnitofMeasureCodeTon	The emissions unit of measure code representing tons

CSV File Parsing Parameters

Alias	Description
EisConstants.CodeTableParsing.EmptyValueRegex	A regular expression matching empty values in EIS code table reference CSV files
EisConstants.CodeTableParsing. ControlMeasureCodeColumn	The zero-based column index for control measure code in EIS control measure code table reference CSV files.
EisConstants.CodeTableParsing. ControlMeasureLastYearColumn	The zero-based column index for the last inventory year in EIS NAICS code table reference CSV files
EisConstants.CodeTableParsing. ControlMeasureCodeRegex	A regular expression matching control measure codes in EIS code table reference CSV files
LimitsAndDefaults.ControlMeasureCodeDefault	Default value to substitute for a bad or missing control measure code
EisConstants.CodeTableParsing.NaicsCodeColumn	The zero-based column index for NAICS code in EIS NAICS code table reference CSV files
EisConstants.CodeTableParsing. NaicsLastYearColumn	The zero-based column index for the last inventory year in EIS NAICS code table reference CSV files
EisConstants.CodeTableParsing.NaicsCodeRegex	A regular expression matching NAICS codes in EIS code table reference CSV files
LimitsAndDefaults.NAICSCodeRegex	A regular expression matching a valid NAICS code
LimitsAndDefaults.NAICSCodeDefault	The default value for a missing or invalid NAICS code
EisConstants.CodeTableParsing. SccCategoryColumn	The zero-based column index for SCC category in EIS SCC code table reference CSV files
EisConstants.CodeTableParsing. SccCodeColumn	The zero-based column index for SCC code in EIS SCC code table reference CSV files
EisConstants.CodeTableParsing. SccLastYearColumn	The zero-based column index for the last inventory year in EIS SCC code table reference CSV files
EisConstants.CodeTableParsing. SccPointCategoryRegex	A regular expression matching SCC point type category in EIS SCC code table reference CSV files
LimitsAndDefaults.SourceClassificationCodeRegex	A regular expression matching a valid source classification code
LimitsAndDefaults.SourceClassificationCodeDefault	Default value for a missing or invalid source classification code
EisConstants.CodeTableParsing.UnitTypeCodeColumn	The zero-based column index for unit type code in EIS unit type code table reference CSV files
LimitsAndDefaults.UnitTypeCodeDefault	A default value to substitute for a bad or missing unit type code
EisConstants.CodeTableParsing.UnitTypeCodeRegex	A regular expression matching unit type codes in EIS unit type code table reference CSV files

AERR Source Classification

AERR Class A Source Emission Thresholds [TPY}

Alias	Description
AerrSourceCategoryParameters.ClassAThresholds.CO	CO Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.VOC	VOC Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.SO2	SO_2 Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.NOx	NO_X Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.PM10	PM_{10} Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.PM25	$PM_{2.5}$ Class A Threshold
AerrSourceCategoryParameters.ClassAThresholds.NH3	NH_3 (Ammonia) Class A Threshold

AERR Class B Source Emission Thresholds [TPY}

Alias	Description
AerrSourceCategoryParameters.ClassBThresholds.CO	CO Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.VOC	VOC Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.SO2	SO_2 Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.NOx	NO_X Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.PM10	PM_{10} Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.PM25	$PM_{2.5}$ Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.NH3	NH_3 (Ammonia) Class B Threshold
AerrSourceCategoryParameters.ClassBThresholds.PB	Pb (Lead) Class B Threshold

Non-Attainment Area Emission Thresholds [TPY}

Alias	Description
AerrSourceCategoryParameters.NonAttainment.EmissionThresholds.CO	CO Threshold
AerrSourceCategoryParameters.NonAttainment.EmissionThresholds.VOC	VOC Threshold

Non-Attainment Area Definition

Alias	Description
AerrSourceCategoryParameters. NonAttainment.Colorado.Counties	County FIPS codes for the non-attainment area
AerrSourceCategoryParameters. NonAttainment.Colorado.PartialCounties	The county FIPS codes for the non-attainment counties which are split by latitude and longitude.
AerrSourceCategoryParameters. NonAttainment.Colorado.NorthEastLatitude	The latitude of the north boundary of the eastern section of the non-attainment area
AerrSourceCategoryParameters. NonAttainment.Colorado.NorthWestLatitude	The latitude of the north boundary of the western section of the non-attainment area
AerrSourceCategoryParameters. NonAttainment.Colorado.NorthSideShiftLongitude	The longitude at which the north boundary changes latitude

Contents of appsettings.json


```
{
  "Bootstrap": {
    "UserSettingsFolderName": "CaisToNode",
    "UserSettingsFileName": "CaisToNode.json"
  },
  "AppConfig": {
    "PrivacyStatement": "https://cdphe.colorado.gov/department-policy-217-open-
records"
  },
  "CersSettings": {
    "ProgramSystemCode": "CODPHE",
    "StateFipsCode": "08",
    "EpaProgramCode": "EIS",
    "PortableCountyCode": "777",
    "OrganizationName": "Colorado Department of Public Health and Environment"
  },
  "CaisSettings": {
    "ServerName": "CDPHESQP007\\APCD",
    "SqlUserCrypt": "EHCx/ab6UQgElGYtvycYk2umzIYLjiguXKqmkUJ0Fr68",
    "SqlPassWordCrypt": "EILAp62ACjllwZzJ2wYv1MMcCLMslxLFEtEXMSo1hDvo",
    "ConnectionTimeout": 15,
    "QueryTimeout": 360
  },
  "CaisConstants": {
    "CaisPermanentClosed": "X",
    "CaisTemporaryClosed": "T",
    "ControlMeasureCodeUncontrolled": "000",
    "IcisIdPrefix": "CO00000008",
    "UnitTypeCodeGenerator": "GEN"
  },
  "LimitsAndDefaults": {
    "LocalityNameDefault": "CITY NAME NOT PROVIDED",
    "LocalityNameRegex": "^\\S.{1,59}$",
    "PostalCodeDefault": "99999-9999",
    "PostalCodeRegex": "^\\d{5}(-\\d{4})?$",
    "StateCodeDefault": "CO",
    "StateCodeRegex": "^[A-Za-z]{2}$",
    "LatitudeMin": 36.5,
    "LatitudeMax": 41.5,
    "LatitudeDefault": 39.0,
    "LongitudeMin": -109.5,
    "LongitudeMax": -101.5,
    "LongitudeDefault": -105.5,
    "StackFlowRateMin": 0.1,
    "StackFlowRateMax": 12000000,
    "StackTemperatureMin": 30,
    "StackTemperatureMax": 3500,
    "StackVelocityMin": 0.1,
    "StackVelocityMax": 600,
    "StackDiameterMin": 0.1,
    "StackDiameterMax": 100,
    "StackHeightMin": 1.0,
    "StackHeightMax": 1300.0,
    "FugitiveHeightMin": 0.0,
    "FugitiveHeightMax": 500.0,
    "SourceClassificationCodeDefault": "39999999",
    "SourceClassificationCodeRegex": "^\\d{8}$",
    "NAICSCodeDefault": "339999",
```

```
  "NAICSCodeRegex": "^\\d{6}$",
  "ControlMeasureCodeDefault": "99",
  "UnitTypeCodeDefault": "999",
  "ControlEfficiencyMin": 5.0,
  "ControlEfficiencyMax": 99.999
},
"AerrSourceCategoryParameters": {
  "NonAttainment": {
    "Colorado": {
      "Counties": "001 005 013 014 031 035 059 069 123",
      "PartialCounties": "069",
      "NorthWestLatitude": 40.5548,
      "NorthEastLatitude": 40.7130,
      "NorthSideShiftLongitude": -105.4944
    },
    "EmissionThresholds": {
      "VOC": 25,
      "CO": 100
    }
  },
  "ClassAThresholds": {
    "SO2": 2500,
    "VOC": 250,
    "NOx": 2500,
    "CO": 2500,
    "PM10": 250,
    "PM25": 250,
    "NH3": 250
  },
  "ClassBThresholds": {
    "SO2": 100,
    "VOC": 100,
    "NOx": 100,
    "CO": 1000,
    "PM10": 100,
    "PM25": 100,
    "NH3": 100,
    "PB": 5
  }
},
"EisConstants": {
  "ValidStackTypeCodes": "1 2 3 4 5 6 7 8 9",
  "FugitiveStackTypeCode": "1",
  "DefaultStackTypeCode": "2",
  "UnitTypesExpectingDesignRate": "100 120 140 160 180",
  "OperatingStatus": {
    "ShutDownTemporary": "TS",
    "ShutDownPermanent": "PS",
    "ShutDown": "TS PS",
    "NotShutDownPermanently": "TS OP ONRE ONP",
    "NotShutDown": "OP ONRE ONP",
    "OperatingNonPoint": "ONP",
    "OperatingNotReporting": "ONRE",
    "Operating": "OP"
  },
  "CodeTableParsing": {
    "EmptyValueRegex": "^\\s*$",
    "SccPointCategoryRegex": "^Point$",
    "SccCodeColumn": 1,
    "SccCategoryColumn": 0,
```

```
    "SccLastYearColumn": 7,
    "UnitTypeCodeRegex": "^\\d+$",
    "UnitTypeCodeColumn": 0,
    "UnitTypeCodeDefault": "",
    "NaicsCodeRegex": "^\\d{6}$",
    "NaicsCodeColumn": 0,
    "NaicsLastYearColumn": 3,
    "ControlMeasureCodeRegex": "^\\d+$",
    "ControlMeasureCodeColumn": 0,
    "ControlMeasureLastYearColumn": 4
  },
  "PollutantCodePM10": "PM10-PRI",
  "PollutantCodePM25": "PM25-PRI",
  "ReportingPeriodTypeCodeAnnual": "A",
  "EmissionOperatingTypeCodeRoutine": "R",
  "EmissionsUnitofMeasureCodeTon": "TON"
},
"DesignRateUnitsMap": [
  {
    "CaisUnitCode": "A",
    "EisUnitCode": "GAL",
    "ConversionMultiplier": 1000
  },
  {
    "CaisUnitCode": "B",
    "EisUnitCode": "BBL",
    "ConversionMultiplier": 1
  },
  {
    "CaisUnitCode": "C",
    "EisUnitCode": "BBL",
    "ConversionMultiplier": 1000
  },
  {
    "CaisUnitCode": "M",
    "EisUnitCode": "E3LB/HR",
    "ConversionMultiplier": 2000
  },
  {
    "CaisUnitCode": "N",
    "EisUnitCode": "E3LB/HR",
    "ConversionMultiplier": 83.3333333333333
  },
  {
    "CaisUnitCode": "P",
    "EisUnitCode": "E3LB/HR",
    "ConversionMultiplier": 0.001
  },
  {
    "CaisUnitCode": "1",
    "EisUnitCode": "E6BTU/HR",
    "ConversionMultiplier": 1
  },
  {
    "CaisUnitCode": "2",
    "EisUnitCode": "MW",
    "ConversionMultiplier": 1
  },
  {
    "CaisUnitCode": "3",
```

```
      "EisUnitCode": "KW",
      "ConversionMultiplier": 1
    },
    {
      "CaisUnitCode": "4",
      "EisUnitCode": "E3LB/HR",
      "ConversionMultiplier": 1
    },
    {
      "CaisUnitCode": "5",
      "EisUnitCode": "BLRHP",
      "ConversionMultiplier": 1
    },
    {
      "CaisUnitCode": "6",
      "EisUnitCode": "HP",
      "ConversionMultiplier": 1
    }
  ]
}
```