**Bulk Insert**

Bulk Insert is a method that allows MarkeTrak users to create multiple issues at once through a web browser interface. Bulk Insert allows the user to upload a file that contains the data for a batch of issues to be created in MarkeTrak. This data will use the defined field ordering that **must** be used for the subtype that will be specified by the user.

We’ll begin our tutorial for the Bulk Insert subtype by reviewing the process for creating the data file.

The format required for Bulk Insert is a file containing a text-row list of data for issues of common subtype. A text-row will be a set of Comma Separated Value (CSV) data fields, with these fields in an expected order based on their subtype. MarkeTrak performs a validation on the file to ensure the fields are ordered correctly. Any text row that does not conform to the expected order will not be processed. Bulk Insert templates for every applicable subtype are available on the MarkeTrak Information page. Let’s review the template for the Usage/Billing Missing subtype: {insert screen shots showing where templates are located and opening the usage/billing missing file}.

The template illustrates for the user which fields are required, optional, or not applicable for the subtype they are submitting. Fields highlighted in red are required, {spotlight somehow a required field} fields highlighted in yellow are required or optional depending upon the data, {spotlight a R/O field with an explanation in a pop-up box of a scenario where a field may be R/O. Example is for usage/billing missing, when the Tran Type is 867\_03F, the Orig Tran ID field is required. If another Tran Type is entered, the Orig Tran ID field is not required} fields highlighted in gray are not applicable for that particular subtype {spotlight the N/A field} and fields with no highlight are optional. {spotlight the opt fields that are NOT validation fields}. Several of the optional fields are for data validation. Here is an overview of the validation fields:

* **ESIID Duplicate Check**
	+ ‘1’ indicates that a Duplicate ESIID Check will be performed. The issue will fail the submit process with this check enabled if a duplicate issue is located in MarkeTrak containing this ESIID to which the submitter has access. Potentially duplicated issues will be returned in result set.
	+ ‘0’ indicates that the Duplicate ESIID Check should be overridden. This option will submit the issue (given all criteria and validations met) regardless of potentially duplicated items in the MarkeTrak system.
	+ If this field is left blank, a ‘0’ will automatically default in and the Duplicate ESIID Check will NOT be performed.
* **Global ID Duplicate Check**
	+ ‘1’ indicates that a Duplicate Global ID Check be performed. The issue will fail the submit process with this check enabled if a duplicate issue is located in MarkeTrak containing this Global ID to which the submitter has access. Potentially duplicated issues will be returned in result set.
	+ ‘0’ indicates that the Duplicate Global ID Check should be overridden. This option will submit the issue (given all criteria and validations met) regardless of potentially duplicated items in the MarkeTrak system.
	+ If this field is left blank, a ‘0’ will automatically default in and the Duplicate Global ID Check will NOT be performed.
* **ESIID Validation**
	+ ‘1’ indicates the submitter wishes to submit the ESIID for validation against the ERCOT Registration System. If the ESIID is not returned as valid, the issue will not be created.
	+ ‘0’ indicates the submitter wishes to submit the item to the MarkeTrak system regardless of ESIID existence in the ERCOT Registration System.
	+ If this field is left blank, a ‘0’ will automatically default in and the ESIID Validation check will NOT be performed.
	+ ESIID Validation must be enabled for Premise Type to be returned.
* **Evaluation Window Validation**
	+ ‘1’ indicates the submitter wishes to enable the Tran Type/SMRD evaluation rules for Cancel With Approval Issues. If the evaluation rule is violated, the issue will not be created.
	+ ‘0’ indicates the submitter does NOT wish to enable the Tran Type/SMRD evaluation rules for Cancel With Approval Issues. If the evaluation rule is violated, the violation will be ignored and the issue will be created.
	+ If this field is left blank, a ‘0’ will automatically default and the Tran Type/SMRD evaluation rules for Cancel With Approval will NOT be performed.
	+ The Global ID Validation must be enabled for the Evaluation Window Validation flag to be evaluated.
* **Global ID Validation**
	+ ‘1’ indicates the submitter wishes to validate the Global ID involved with the submitted issue against the ERCOT Registration System. If the Global ID involved with the issue is not in the ERCOT Registration System, the issue will not be created.
	+ ‘0’ indicates the submitter does NOT wish to validate the Global ID involved with the submitted issue against the ERCOT Registration System.
	+ If this field is left blank, a ‘0’ will automatically default and the Global ID Validation will NOT be performed.

When creating the CSV file, not only is the field order and completion of required data important, the format of any required date fields is also an important element. All Date/Time fields must be formatted as ccyy-mm-dd-Thh:mm:ss (2016-05-01T13:20:57). Date only fields must be formatted as ccyy-mm-dd (2016-05-01). Files containing incorrect date/time formatting will not pass validation in MarkeTrak.

{for this section, narrate over a user entering data in the template}. Let’s finish creating the CSV file for Bulk Insert submission in MarkeTrak. Column A is a required field for the **ESI ID**. Column B is a required or optional field depending on the value to be entered in the Tran Type field. For this tutorial, we’ll use the 867\_03F as the Tran Type so the **Original Tran ID** is required. Column C **Tran Type** is 867\_03F. Column D **Transaction Date** is required {date only format should be entered}. Column E **GS Number** is not applicable because it is not a field in the Usage/Billing – Missing workflow. Column F **Comments** is an optional field. Columns G and H are optional validation fields. Column I is a required **Assignee** field. Column J is an optional **ESIID validation** field. Columns K and J are not applicable for the Usage/Billing – Missing subtype. Column M **IDR/Non-IDR** is required. Column N is an optional **TDSP validation** field. Columns O and P are not applicable for this subtype. Column Q, **StartTime**, is required {date/time format}. Column R, **StopTime**, is an optional field. Column S is not applicable for the Usage/Billing – Missing subtype. Column T is an optional validation field. {show multiple rows being created}

Now that all data has been entered into the template, the file is ready to be saved. The header rows will need to be deleted before saving the file. Once the header rows have been deleted, the file should be saved in a CSV format. {illustrate delete and save}.

Now that the file creation is complete, we are ready to submit our Bulk Insert. The submitting MARKET PARTICIPANT begins the process by selecting “Bulk Insert” from the submit tree. The MARKET PARTICIPANT selects the Issue Type and Sub-Type from the drop down fields. Next, the MARKET PARTICIPANT selects the desired Report Destination. Bulk Insert reports can be posted to MIS for retrieval or the report can post to the Bulk Insert issue. The MARKET PARTICIPANT now selects OK.

The next step is to attach the CSV file to the Bulk Insert issue by selecting Add File from the Actions drop down field. The user selects Browse to search for the CSV file and then selects Upload & Attach File. The next step is to select Attach and Validate. The resulting screen will display the attachment. Once the file has been attached, select OK to validate the format of the CSV file. If the upload does not pass validation, the comments section will display a failure message with information regarding the reason for the failure. The user will then have the option of correcting the CSV file. Once the file is corrected the file previously attached must be deleted before it can be re-attached. To delete the file, select the trash can icon (delete) next to the attached file and select “Delete File” from the resulting “pop up” window. {during this commentary, illustrate a file not passing validation and the user deleting the attachment}

To attach the corrected CSV file, select Add File from the Actions dropdown field. As before, select Browse to locate the file and select OK. Select Attach and Validate and, once file attachment is confirmed, select OK. If the corrected CSV file passes all validations, a message indicating “All rows passed validation” will appear. Select Submit Bulk File to complete the Bulk Insert submit process and create the individual issues.

After selecting Submit Bulk File, the issue will automatically close. When a Bulk Insert is submitted, the Bulk Insert MarkeTrak Number becomes the “parent” and will be populated on each individual MarkeTrak issue (which are the “children”) created by the Bulk Insert. {spotlight a Marketrak issue where Parent Issue Number is populated}

Adequate time should be allowed after submitting a bulk insert for the system to create each individual issue. This takes an average of a few seconds for each issue or row submitted, but can take longer depending on the number of rows in the CSV file. Once the bulk insert process has completed, the results will post to the Report Destination selected during the initial submit process.

In addition to the file format validations performed on the CSV file during the Attach and Validate transition, business data validations are also performed on the required fields within the CSV file. The results of the business data validation will appear on the bulk insert results report. The results report will contain five additional fields which will be added at the end of each row on the report. These additional fields represent the following data:

* + **Success or Fail**: This field contains the word “success” or “fail”. Success will indicate the MarkeTrak issue was successfully submitted in MarkeTrak via bulk insert. Fail will indicate the MarkeTrak issue failed to be submitted in MarkeTrak via bulk insert.
	+ **Error Code**: This code contains the error code of a failed attempt to submit a MarkeTrak issue via bulk insert. This field will only be populated when an issue has failed.
	+ **Error Message**: This field contains the error message explaining why the MarkeTrak issued failed to be submitted via bulk insert. This field will only be populated when an issue has failed.
	+ **Date/Time Stamp**: This field contains the date and time of when the issue was attempted to be submitted via bulk insert in MarkeTrak.
	+ **Issue ID**: The field contains the MarkeTrak issue ID for successfully submitted issues.

The most challenging aspect of the Bulk Insert process is creating a valid CSV file. Here are some tips and tricks compiled by bulk insert experts in the Market.

**Tip 1** - **Deleting the header row**

Be sure to delete the header row of the bulk insert template from your spreadsheet before saving in the CSV (Comma Separated Value) file format.



**Tip 2** – **One template, one subtype**

You can only submit multiple issues via bulk insert for the same subtype.

**Tip 3 – Avoid commas in comments**

Avoid commas (,) in any comment you want to add to the MarkeTrak issue through Bulk Insert. Since the Excel Spreadsheet Bulk Insert Template is saved as a CSV (Comma Separated Value) file, any comma in a comment field will be recognized as a delimiter and throw off the column count causing the file to fail.

**Tip 4 – Caution when copying ESI IDs**

Be careful copying ESI IDs from your system and pasting into the Excel Spreadsheet Bulk Insert Template. A normal copy and paste can result in the 17 digit ESI ID being automatically formatted by Excel in Scientific Notation Format (example 1.04437E+16). Changing the format of the cell in the spreadsheet will result in the last two digits of the 17 digit ESI ID to change to 00. This will cause the MarkeTrak issue to be created using the wrong ESI ID. Solution:

* Open the Excel Spreadsheet Bulk Insert Template and Right Click in the ESI ID cells.
* Select Format Cells and choose Text from the list.
* Copy your ESI ID from your source document and Right Click in the ESI ID cell and choose Paste Special and then choose Text.

This will paste the 17 digit ESI ID into the spreadsheet in text format and avoid Excel changing the ESI ID format.

 **Tip 5 – Ensure all rows are accounted for**

Before submission of the bulk insert CSV file the user should ensure all rows are accounted for in the file template to successfully pass validation for submission of the file.

**Tip 6 – Checking validation errors**

If you receive a validation error, go to notepad and open your CSV file to determine where the error has occurred and correct it. Once the error is corrected save the file with a new name. If you do not save with a new name your corrections will not be saved to the corrected file.

**Tip 7 – Request all validations occur**

Select all the validations to ensure your data is valid and does not contain duplicates.

**Tip 8 – Correct format on dates and times**

Be sure your date time field has the correct format. If not formatted correctly your bulk insert file will not pass validation.



**CHECKPOINT QUESTIONS:**

True or False: Issues for different subtypes can be submitted in one bulk insert file as long as all of the subtypes are in the D2D issue type category.

Answer: False. You can only submit multiple issues through Bulk Insert for the same subtype. The issue type is not relevant.

What value in the CSV file represents that a validation is disabled and the check will NOT be performed on the data within that row?

1. 0
2. 1
3. Blank
4. N/A

Answer: Both A and C are correct.