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**Base Case Coordination System**

**Data Submitter’s Guide**

BCCS

Version 9.0.0.8

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Table of Contents

[1 Introduction WECC’s Base Case Building Process with the Base Case Coordination System (BCCS) 1](#_Toc394390655)

[1.1 What is the BCCS 1](#_Toc394390656)

[1.2 Simplified Base Case Building Process Using the BCCS 1](#_Toc394390657)

[1.2.1 BCCS Base Case 3](#_Toc394390658)

[1.2.2 BCCS File Types 3](#_Toc394390659)

[1.3 Definitions 4](#_Toc394390660)

[1.3.1 File Types and Formats 4](#_Toc394390661)

[1.3.2 Project File Format (\*.prj) 4](#_Toc394390662)

[1.3.3 Standard Effective Dates for Series Models 6](#_Toc394390663)

[1.3.4 File Naming Conventions 7](#_Toc394390664)

[1.3.5 Updating Project Files 8](#_Toc394390665)

[1.3.6 Case Creation 8](#_Toc394390666)

[2 Data Submission – Simplified Process Description 10](#_Toc394390667)

[2.1 Creating Topology or Project files (.prj format) 10](#_Toc394390668)

[2.2 Creating Bus/Load/Gen Profile Files (\*epc or .raw format) 12](#_Toc394390669)

[2.3 Creating Device Control Profile Files (.epc or .raw format) 12](#_Toc394390670)

[2.4 Creating Rating Files (.csv format) 13](#_Toc394390671)

[2.5 Creating Net Scheduled Interchange Files (.csv format) 14](#_Toc394390672)

[2.6 Creating Dynamics Files (.dyd format) 15](#_Toc394390673)

[2.7 Uploading Applicable Files into the BCCS 15](#_Toc394390674)

[2.8 Modifying Files Uploaded into the BCCS 18](#_Toc394390675)

[2.9 Helpful Hints 18](#_Toc394390676)

[2.9.1 Removing/Replacing Project Files in the BCCS 18](#_Toc394390677)

[2.9.2 Considerations with Ratings 19](#_Toc394390678)

[2.9.3 Switching Line Reactor Status between Models 19](#_Toc394390679)

[2.9.4 Suggested Computer Set-Up 19](#_Toc394390680)

[Appendix A - Phased Project files in .prj format 19](#_Toc394390681)

[Appendix B - Bus/Load/Gen Profile files in \*.epc/raw format 24](#_Toc394390682)

[Appendix C - Device Control Profile files in .raw format 25](#_Toc394390683)

[Appendix D - Rating files in .csv format 27](#_Toc394390684)

[Appendix E - Transaction file in .csv format 29](#_Toc394390685)

# Introduction WECC’s Base Case Building Process with the Base Case Coordination System (BCCS)

## What is the BCCS

The BCCS is a Web-accessible, centralized database that automates the base case building processes and provides a central location for maintaining base case information. This will increase the accuracy and timeliness of WECC base case development. The BCCS will also provide a mechanism for supporting other functions for WECC and WECC members. A BCCS users guide and additional detailed information regarding hands-on use of the BCCS can be found in Western Electricity Coordinating Council’s (WECC) [BCCS folder](https://www.wecc.org/Planning/BCCS/default.aspx) on its website.

The BCCS application starts with a base case power flow meant to represent the existing system. The case is incrementally modified using topology adjustment files to create a base case with the desired configuration. This is complemented with files that apply the necessary loads, generation, and other adjustments to meet the requirements for load and interchange delivery for a target power flow. In other words, the application sequentially applies changes to the base case, moving the base system forward in time to the desired date of the target model by sequentially stacking all the applicable change files based on their in-service or referred to as an “effective date” in the BCCS.

A big advancement with this application is that it allows the data submitter to enter known effective dates for each future system expansion or improvement project such that a model could be built for any specific date into the future. This allows the data submitter to submit a project only once and if the project is approved (i.e., BCCS status of “Accepted”) it will be available for all case build timeframes on or after the project’s effective date.

Currently the application only handles power flow data.

## Simplified Base Case Building Process Using the BCCS

Figure 1 provides an overview of the data files and associated tools used in the WECC’s base case model building and data submission process using the BCCS Web application.

**PSS®E/PSLF**

Case “1”

Of member’s system

**Base Case (Case 1)**

Local MOD File Builder Program

**PSS®E/PSLF**

Case “2”

Of member’s system

**New Case (Case 2)**

Project File

(Changes Case 1 topology to Case 2)

BCCS

**PSS®E/PSLF**

Data File

Local MOD File Builder Program

Profile File

(bus/load/gen)

Device Control File

Rating File for

MOD base case only

Net Scheduled Interchange

1. Create a Topology Change File: Use MOD File Builder to compare case “1” and case “2”. The resulting file changes topology “1” to “2”.

2. Create Profile and Device Control Files: MOD File Builder extracts the desired files from a referenced case.

3. Create new or revised dynamics data and email to WECC to be included in the Master Dynamics File.

Figure 1: WECC model building process simplified diagram

### BCCS Base Case

The BCCS base case is a solved base power flow case that is entered into BCCS by the system administrator as a starting point for case development (a model of the existing system). This data provides the basic topology for all cases to be built from. For existing system cases this would be achieved with the use of profiles to model load/generation levels, branch ratings, voltage controls, etc. Planning cases would similarly use profiles but also include project files based on in-service dates. These dates are referred to as effective dates in the BCCS. It is important to maintain this base data to ensure the most accurate starting point for all case builds.

### BCCS File Types

This process requires data typically included in a power flow data file to be separated into several program-specific file types before it is uploaded into the BCCS. As shown in Figure 1, the six general types of files (and their new BCCS application names, where different) required to complete WECC power flow model data submission include:

1. Topology change files (Project files in BCCS) – Identifies planned changes in model topology moving forward in time from a base case or they can also incorporate case corrections and/or embedded ratings.
2. Bus/load/generation files (Load Generation Profile files in BCCS) – Provides bus solution parameters as well as load and generation dispatch profiles applicable to a specific target model.
3. Control Files (Device Control Profile files in BCCS) – Provides equipment control set points for transformers, switched shunts, HVDC, etc., applicable to a specific target model.
4. Rating Files – Applies equipment ratings to the base case, to modify ratings due to a project, or to add ratings for new facilities introduced with a project WECC uses an eight-rating system (summer, winter, spring, and fall normal and emergency) all eight ratings should be populated for all equipment.
5. Net Scheduled Interchange (NSI) – Documents all inter-area transactions modeled in a specific target model.
6. Dynamics Files – Revises or adds new dynamics data for incremental update of the master dynamics file. Work is underway to integrate dynamics directly into BCCS. However, at this point the application only handles power flow data.

## Definitions

### File Types and Formats

The following table shows the WECC process file types (other than Project Type discussed below), file format, string to be used in the file name, and the Appendix to refer for more detail. These formats are recommended for the WECC process.

|  |  |  |  |
| --- | --- | --- | --- |
| **File Type** | **Format** | **Name includes** | **Appendix** |
| Topology | \*.prj format Project file |  | A |
| Bus/Load/Gen | \*.epc/raw format Profile file | Profile | B |
| Device Control | \*.raw/epc format Device file | Device | C |
| Rating | \*.csv format | Rating | D |
| Scheduled Interchange | \*.epc/raw format | NSI | E |
| Dynamics | \*.dyd format | TBD | n/a |

Note: Format also indicates the extension to be used with the file name (e.g., .prj).

### Project File Format (\*.prj)

Project files are generated by the Model on Demand (*MOD) File Builder* tool to change the topology of the base case and are distinguished by the .prj extension, alleviating the need for project in the file name.

WECC data submitters are requested to provide full granularity with their project files. They must break down the files to contain individual transmission projects including any phasing over time of the projects (e.g., add line ‘x’ for March 30, 2014 and 230–115 kV transformer for June 30, 2014) rather than large composite project files. The .prj project format is the only format that allows for multiphase and multi-effective date submittals.

Project types fall under two categories: base case corrections and planned projects. A single project type must be assigned to a project. The data submitter should select the type that best describes the project.

| **Project Type Categories** | **Project Types** | **Project Type Description** |
| --- | --- | --- |
| Base Case Corrections | * Existing Case Errors
 | * Corrects topology errors existing in the BCCS base case
 |
| *Files that are flagged as Existing Case Errors will be incorporated into the BCCS base case by WECC on the last day of every month.* |
| Planned Project | * Generation < 20 MVA
 | * Generation projects with an aggregate below 20 MVA
 |
| * Generation >= 20 MVA
 | * Generation projects with an aggregate above 20 MVA
 |
| * Transmission/Load < 100 kV
 | * Transmission and load projects below 100kV
 |
| * Transmission/Load >= 100 kV
 | * Transmission and load projects above 100kV
 |
| *Planned Project files will be incorporated into base case on the last day of every month if the in service date passes.* |

Two unique sets of project statuses are available depending on the assigned project type above. The data submitter should assign a single status that best describes the project. Statuses for all submitted projects must be maintained by the data submitter when the project status changes.

|  |  |  |
| --- | --- | --- |
| **Project Type Categories** | **Project Types** | **Available Statuses** |
| Base Case Corrections | * Existing Case Errors
 | * Steady-State
* Dynamics (not used at this time in the BCCS)
* WECC
 |
| Planned Project | * Generation < 20 MVA
 | * Planned
 |
| * Generation ≥ 20 MVA
 | * Proposed
 |
| * Transmission/Load < 100 kV
 | * Exploratory
 |
| * Transmission/Load ≥ 100 kV
 |  |

* Description of Statuses for “Base Case Corrections” project type:
	+ Steady-State: Corrects base case steady-state errors.
	+ Dynamics: Corrects base case dynamics errors (not used at this time in the BCCS).
	+ WECC: Identifies any changes made by WECC staff.
* Description of Statuses for “Planned Project” types:
	+ Planned: Projects for which a system need has been identified and the planned project has been determined by the Transmission Owner to be the recommended project from among alternatives. Planned projects may be in various stages of corporate internal and external approval processes.
	+ Proposed: Projects for which a system condition need has been identified and the proposed project is the best-known alternative at this time. These projects have not yet been clearly defined and additional study is needed before the transmission owner recommends the proposed project as a new plan.

**Note:** the Transmission Owners should not be reluctant to include Planned or Proposed upgrades in the models out of concern that:

* these upgrades will be used inappropriately to sell transmission service; or
* the Transmission Owner will not have an opportunity to withdraw or modify a plan that can be demonstrated at a later date to be no longer effective or necessary.
	+ Exploratory: These projects should not be modeled in WECC base cases. Exploratory Projects are those that may provide an economic benefit, but do not necessarily address an identified system need.

### Standard Effective Dates for Series Models

Effective dates should reflect the expected in-service and out-of-service dates of the project. Projects with active in-service dates prior to the WECC seasonal case build dates below (for the requested study year) will be included in the case build.

WECC cases will include projects with effective/in-service dates prior to the seasonal case build dates below (for the requested study year):

* + Spring: March 1
	+ Summer: June 1
	+ Autumn: September 1
	+ Winter: December 1

**Note:** Project files are built using specific planned in-service dates for individual project phases and therefore any effective date can be used for a “custom” case create.

The effective date you enter for individual projects and/or project phases should reflect the actual anticipated in service date of the project. Projects with dates on or before the case build target date are included in the case.

### File Naming Conventions

Project Files:

The naming convention for project files includes the area number the project will be applied to, a company acronym that is assigned and maintained by WECC staff, and a project description defined by the data submitter. Refer to the Data Processing Manual (DPM) for a list of the assigned company acronyms. Project files should follow the format:

Area Number\_Company Name Acronym\_Project Description

Example Project Filename: “40\_BPA\_I-5 Reinforcement.prj”

**Note:** To aid file searches;

* Place Area Number first in the file name as it is most significant for projects.
* Limit the full name to 50 characters.
* Avoid all special characters in project names as some special characters are not supported in the BCCS.

Profiles:

Profiles are used for branch ratings; load, generation, and voltage control profiles; and net-scheduled interchanges. The naming of profiles includes the area number, a company acronym that is assigned and maintained by WECC staff, the WECC year/season convention, and a profile description defined by the data submitter. They are uniquely created for each case and should follow the format:

Case Abbrev\_Area Number\_Company Abbrev\_Profile Type.epc/.raw

Valid substitutions for symbolic references are:

* + Case Abbrev

(XXHSZ, XXLSZ, XXHWZ, XXLWZ, XXHSPZ, XXLSPZ, XXHAZ, XXLAZ) where XX is the appropriate model year and Z is the case version

* + Area Number

(10, 11, 14, 18, 20, 21, 22, 24, 26, 30, 40, 40, 52, 54, 50, 62, 64, 65, 70, 73)

* + Company Abbrev

(See DPM)

* + Profile Type

(BLG, DEV)

Example Bus/Load/Gen Profile Name: “23HS1\_40\_BPA\_BLG.epc/raw”

**Notes:** For profile and device file search:

* Place the applicable case and then the series first in the file name as they are most significant.
* For subsequent changes to submitted profile files, add a revision number to the end of the file name to make it unique (for example, 23HS1\_40\_BPS\_BLG1.epc/raw).

Ratings:

|  |  |  |
| --- | --- | --- |
| Master Rating Filename: | Base\_Ratings.csv |  |
| Company base set Filename: | 14HS4\_40\_BPA\_ratings.csv |  |
| Project phase linked | 14HS4\_40\_PDCI1\_ratings.csv | (granular) |
|  |  |  |

Transactions:

|  |  |  |
| --- | --- | --- |
| Master Transaction Filename: | 14HS4\_NSI.csv |  |
| Company base set Filename: | 14HS4\_40\_Northwest\_NSI.csv |  |
|  |  |  |
|  |  |  |

### **Updating** **Project** Files

To replace an existing Project file with a revised project file having the same name, it is recommended that instead of deleting the original file:

1. Mark the file for editing by selecting “Edit,” which will place it in the “Preliminary” status;
2. Select “View” to view the original project; and
3. Select “Replace” to replace the original Project file with a new version of the project file, which you will upload.

Currently this functionality is not available in the BCCS.

### Case Creation

The order files are applied to the base case to create another case from the BCCS (configurable by the administrator) is as follows:

1. Projects
2. Profiles and Devices
3. Ratings

The Project Type and Project Status parameters (embedded on the second header line in your BCCS project files) will be used to identify all applicable files to be used in WECC case builds.

For example, the project name shown below is PDCI and the phase name is PDCI1:

*PROJECT>*

*40\_BPA\_PDCI, Transmission/Load >100kV, Planned, New representation of the PDCI*

*<PHASE>, 40\_BPA\_PDCI1, 10/29/2015,4/21/2014,345kv bus add BUS,ADD,9999,'NEWBUS1A',345.0000,,,,208,280,,,80 @! BRANCH,Delete, 25386,25387,1,,,,,,,,,,,,,,,,,,@!*

*Etc…*

BCCS files with a Review Status of “*Pending Approval*,” “*Pending Acceptance,*” or “*Accepted*” will be applied to the WECC seasonal models during the Case Create process. Project approval and acceptance is be done sequentially by the data submitter, local process manager at the data submitting company and finally by WECC staff. The following are standard status states in the BCCS. They are initiated by user input.

* Preliminary: The file has been imported. If changes are required before submittal, the data submitter must:
1. make the changes (name, date, type, etc.);
2. save the file;
3. verify the accuracy of the file; and
4. click on submit.

For example, the data submitter sends a file for import:

1. To change a viewable element like Project Type, change the Type and then click on the save key.
2. If the project has an “Accepted” status and the data submitter of the projects needs to make a change to the project. For example to change the Effective Date.

click edit

click veiw

click edit

make change and then click on the save key

* Pending Approval:After the data submitter approves a preliminary project. The data submitter cannot modify the file but the Area Coordinators can review and approve the project.
* Pending Acceptance: After the Area Coordinator approves the project.
* Accepted**:** The final state after WECC staff reviews and accepts the project in the BCCS.

In the WECC base case building process, only files with a status of “Accepted” will be applied unless otherwise noted.

# Data Submission – Simplified Process Description

A full understanding of the Web-based Model Building tool “Base Case Coordination System” (BCCS) and associated “*MOD File Builder*” program is required before a data submitter can use this abbreviated quick reference for developing and submitting WECC model data.

A condensed overview of the BCCS is provided in Section 1.0 and supported by separate [training recordings](https://www.wecc.org/Planning/BCCS/1082013/default.aspx?InstanceID=1), also prepared by WECC. File naming conventions and program input parameters are also provided in the Section 1.0.

To start working with the BCCS, first the ‘MODConfig.xml’ file must be downloaded from the BCCS site under the File Builder header and place this file on the following directory: C:\Program Files (x86)\PTI\MODFileBuilder.

## Creating Topology or Project files (.prj format)

It is required that a project file contain changes for true ‘system projects’ rather than a group of projects to model all changes from season to season. The requirement includes the distinction of project phases, each with their respective in-service dates, for multi-phase projects. This can be achieved using the Phased Project “.prj” file format.

By applying the changes for a specific project to a base case or “case 1” to form a “case 2” and then running MOD File Builder on the two cases to generate a single phase Project file, the requirement is met. Manual editing will be needed to create a multi-phase project file. As shown in the ***Appendix A*** example, you will have to merge separately created phases into one project file and then number them sequentially, or you will need to edit the original project file to split it into separate phases with their respective in-service dates.

If the topology of the BCCS base case where you wish to apply a project is scheduled to change prior to the effective date of that project, it will be necessary to create a starting case or “case 1” including all those scheduled changes. You would then apply the scheduled changes for the single project for which you require a project file to form the new case 2.

Topology file cleanup can be done at the user’s discretion to remove redundant data in this file and the profile.

***STEP 1*** - Download the BCCS Base Case (\*.epc/raw) file or obtain a copy of the solved BCCS Base Case (both are solved cases). For creation of the initial project file, this is “case 1.” Solve and resave this file.

***STEP 1a*** – (PSLF/Powerworld Users) when you download the \*.epc file from the BCCS you will need to import this into the Positive Sequence Load Flow (PSLF) software and then re-export the case and save it before you make any changes to the BCCS case “case 1.” This is due to formatting issues between the BCCS case and the new case that you will get out of PSLF “case 2.”

***STEP 2*** - Apply topology changes reflecting your company’s earliest scheduled project to the base case to form a “case 2.” You can now solve your newly created case. Note: A solved case may have some unanticipated changes such as like transformer tap adjustments or shunt adjustments. If your project file is deleting and then adding all of the buses in your case, then you did not do step 1a. Be aware of this if you do a case compare later.

***STEP 3*** - With MOD File Builder, create your company’s project file from case 1 and case 2 \*.epc/raw files.

Tool: “MOD File Builder” program

Input: Two epc or raw files, the second with the member’s updated facilities

Output: Project formatted file (.prj) to update the 1st case to match the 2nd case (topology changes)

***STEP 4*** - If the project is multi-phase, manually edit it to insert additional phases or to break it into multiple phases (as discussed previously).

***STEP 5*** - Add **embedded ratings** if applicable to any project phase. This is preferred to separate project dependent rating files. For more detail, refer to discussion of embedded ratings in Section 2.4 and the example in ***Appendix A***.

Create additional projects for each successive pair of cases moving forward in time through the model series. Use case 2 from one file creation as case 1 for the next project file creation.

## Creating Bus/Load/Gen Profile Files (\*epc or .raw format)

The BCCS Base Case is available for download by all BCCS users via the BCCS website.

BCCS Bus-Load-Gen (BLG) Profiles include the load and generation profile for a target case (e.g., 2014 HS1).

***STEP 1*** - Download the BCCS Base Case (\*.epc/raw) file or obtain a copy of the solved BCCS Base Case (both are solved cases).

***STEP 2*** - If your target case is scheduled to have projects that include new buses or loads, then apply your company projects to the BCCS Base Case in BCCS using the Case Create process or locally in PSLF/PSS®E using traditional methods.

***STEP 3*** - Modify your load, generation, phase shifter setpoints, DC setpoints and voltage control devices for the target case, ensuring that you balance requirements for coordinated levels of interchange and estimated net losses. Ensure you coordinate a shared generator output value. You can now solve your newly created case.

***STEP 4*** - With MOD File Builder, create your company’s profile file from the case you have just created.

Tool: MOD File Builder program

Input: One solved epc or raw file with member’s updated facilities and load/generation profile

Output: Profile formatted file (\*.epc or \*.raw) for Bus-load-generation

Repeat for each series case.

The MOD File Builder program will format the file for you; however, you will need to edit the name at the beginning of the file.

An example of a profile is shown in ***Appendix B.***

## Creating Device Control Profile Files (.epc or .raw format)

***STEP 1*** - Download the BCCS Base Case (\*.epc/raw) file or obtain a copy of the solved BCCS Base Case (both are solved cases).

***STEP 2*** - If your target case is scheduled to have projects that include new buses or loads, then apply your company projects to the BCCS Base Case in BCCS using the Case Create process or locally in PSLF/PSS®E using traditional methods.

***STEP 3*** - Modify your load, generation, phase shifter setpoints, DC setpoints and voltage control devices for the target case, ensuring that you balance requirements for coordinated levels of interchange and estimated net losses. Ensure you coordinate a shared generator output value. You can now solve your newly created case.

***STEP 4*** - With MOD File Builder, create your company’s device file from the case you created.

Tool: “MOD File Builder” program

Input: One solved \*.epc or \*.raw file with member’s updated facilities

Output: Profile formatted file (\*epc or\*.raw) for device control

Repeat for each series case.

The MOD File Builder program will format the file for you; however, you will need to edit in a name at the beginning of the file.

An example of a device control file in .raw format is shown in ***Appendix C***.

## Creating Rating Files (.csv format)

MOD File Builder can be used to generate a file including a full set of branch and transformer ratings for a user-defined area as described below:

***STEP 1 -*** Develop Rating File for each case.

Tool: “MOD File Builder” program

Input: One \*.epc or \*.raw file with member’s updated facilities

Output: One .csv formatted file for ratings

***STEP 2 -*** Rating file cleanup.

This step can be done in Excel.

Leave the file name extension as .csv

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| RATING\_NAME | To Bus (I) | From Bus (K) | K | CKT | IFNO | NORM1 | LTE1 |
| 'Summer' | 10004 | 999997 |   | '1 ' |   | 135 | 135 |
| 'Fall' | 10004 | 999997 |   | '1 ' |   | 0 | 0 |
| 'Winter' | 10004 | 999997 |   | '1 ' |   | 135 | 135 |
| 'Spring' | 10004 | 999997 |   | '1 ' |   | 0 | 0 |

 ~NORM = WECC seasonal normal rate

 ~LTE = WECC emergency rate

This file can then be used:

* as a base rating file;
* as a project dependent rating file; or
* to embed rating changes/additions associated with a project directly into the bottom of a project file.

Use rating files to link ratings between PTI and GE PSLF models. A base master rating file based on the initial base case will be stored in the BCCS. It is the data owners’ responsibility to maintain the required eight branch and transformer ratings for WECC cases stored in this file.

Subsequent rating files should only include records where ratings have changed due to a project file and should be done via project dependent or embedded rating files. These files are used for rating changes due to facility upgrades or new ratings for facilities added in a project. They are:

* Added as “**embedded ratings”** at the end of the associated phase directly in a project file. This method is recommended because of streamlined file handling. See the example in ***Appendix A***.
* Created and submitted as “**project dependent**” rating files or, during the BCCS file upload process, the user designates the specific project file to which the ratings apply. The BCCS allows the user to select the dependent or associated project from a drop-down menu during file import. See the example in ***Appendix D***.

## Creating Net Scheduled Interchange Files (.csv format)

***STEP 1*** - Download the BCCS Base Case (\*.epc/raw) file or obtain a copy of the solved BCCS Base Case (both are solved cases).

***STEP 2*** - If your target case is scheduled to have projects that include new buses or loads, then apply your company projects to the BCCS Base Case in the BCCS using the Case Create process or locally in PSLF/PSS®E using traditional methods.

***STEP 3*** - Modify your load, generation, phase shifter setpoints, DC setpoints and voltage control devices for the target case ensuring that you balance requirements for coordinated levels of interchange and estimated net losses. Ensure you coordinate a shared generator Pgen value. You may solve your newly created case.

***STEP 4*** - With MOD File Builder, create your company’s profile file from the case you have just created.

Tool: “MOD File Builder” program

Input: One solved \*.epc or \*.raw file with member’s updated facilities and load/generation profile

Output: Profile formatted file (\*.epc or \*.raw) for Net Scheduled Interchange file

## Creating Dynamics Files (.dyd format)

These are standard PSLF formatted dynamics input files (.DYD format). They are emailed to WECC staff with instructions on whether each of the submitted models update, replace, or are in addition to the base snapshot.

## Uploading Applicable Files into the BCCS

With your internet browser, go to the following URL:

<https://bccs.wecc.biz/MODWeb/default.aspx>

Enter your User Name and password. If you do not have a user Name and password, click [here](https://www.wecc.org/Planning/BCCS/Pages/Login.aspx) to fill out a request form to get one.

BCCS Notes:

* 1. The BCCS will perform and report based on limited data checking of the imported files.
	2. The BCCS will include many files in each folder (Projects, Profiles, Ratings, Transaction).

Use the filter to reduce file listings in the BCCS to only the files you want to see. Examples are shown below for company BPA.

Opt 1: Use “Submitted by”

Opt 2: Use Project “\*BPA\*” where \* is a wild card to get your company’s files

Opt 3: Use Project “BPA\*” where \* is a wild card to get your company’s files

**Project files** (.prj format)

Immediately after importing the project file, the BCCS will validate both the project and imbedded ratings files. If validation fails, review the violations in the report the BCCS produces to assess whether file corrections are required. The data submitter then selects “Approve/Submit” at bottom right of the display to raise the status to the “*Pending Approval”* state. After reviewing the project, the Area Coordinator selects “Approve/Submit” at bottom right of the display to advance the project to the “*Pending Acceptance”* state and to advise WECC staff they can raise the state to the “*Accepted”* state.

**Bus/Load/Gen Profile files** (\*.epc or \*.raw format)

1. Click on + left of the “Profiles” folder on the left side to expand the list
2. Click on “Load Generation”
3. Click “\*Import\*” on the bottom of right view pane
4. Use browser to find desired file to import to BCCS Import with the following selections:
5. Select Type ‘Series Profile.’
6. Apply to appropriate base profile (e.g., “2014HS1-BLG-Profile.epc/raw”).

**Note:** that the differences in the Master Profile and company profile naming are intentional.

1. Select Load Generation Type ‘Seasonal.’
2. Click ok
3. After the profile is imported, select the file from the file list on the right side of the Profile display (you may need to exit the folder and return to Load Generation Profile folder to refresh the listing).
4. The data submitter then selects “Approve/Submit” at bottom right of the display to raise the status to the “P*ending Approval”* state. The BCCS will then send an email to the Area Coordinator.
5. The Area Coordinator selects “Approve/Submit” at bottom right of display to raise to the *“Pending Acceptance”* state to advise WECC staff they can raise the state to the “*Accepted”* state.

**Device Control files** (\*.epc or \*.raw format)

1. Click on + left of “Profiles” folder on the left side to expand list
2. Click on “Device Control”
3. Click “\*Import\*” on the bottom of right view pane
4. Use browser to find desired file to import to BCCS Import with the following selections:
5. Select Type ‘Series Profile.’
6. Apply to appropriate base profile (e.g., ‘2014HS1-DEV-Profile.epc/raw’.)
7. Select Load Generation Type ‘Seasonal.’
8. Click ok

The file is imported into your browser.

1. Select the file from the file list on the right side of the Profile display (you may need to exit the folder and return to Device Control Profile folder to refresh the listing).
2. The data submitter then selects “Approve/Submit” at bottom right of the display to raise the status to the “*Pending Approval”* state. The BCCS will then send an email to the Area Coordinator.
3. The Area Coordinator selects “Approve/Submit” at bottom right of display to raise to the *“Pending Acceptance”* state to advise WECC staff they can raise the state to the *“Accepted”* state.

**Rating files** (.csv)

1. Base set
2. Click on “Ratings” folder (left side)
3. Click on “Import”
4. Use browser to find desired file to import to BCCS
5. Select “Send”
6. Select “Apply to BaseCase”
7. Select “OK”

The rating profile is imported,

1. Select the file from the file list on the right side of the Rating display (you may need to exit the folder and return to Rating folder to refresh the listing).
2. Select “Validate” at bottom of display. If validation fails, review the violations in the produced report to assess whether file corrections are required.
3. The data submitter selects “Approve/Submit” at bottom right of the display to raise the status to the *“Pending Approval”* state. The BCCS will then send an email to the Area Coordinator.
4. The Area Coordinator selects “Approve/Submit” at bottom right of display to raise to the *“Pending Acceptance”* state to advise WECC staff they can raise the state to the *“Accepted”* state.
5. Project dependent set
6. Click on “Ratings” folder on the left side
7. Click on “Import”
8. Use browser to find desired file to import to BCCS
9. Select “Send”
10. Select the Project that you want to associate with the rating file (e*.*g*.,*40\_BPA\_PDCI*).*
11. Select “Apply to Project: Phase:”
12. Select “OK”
13. Embedded ratings (included within a project file)

It is imported with the project file, as discussed above

**Note:** To delete ratings:

1. Select the desired rating file.
2. Select “Approve/Submit” at bottom right of display three (3) times to fully delete the file from BCCS.

**Net Scheduled Interchange** (\*.epc or \*.raw)

1. Click on NSI Profiles on project tree.
2. Select import.
3. Use browser to find desired file to import to BCCS Import with the following selections:
4. Select Type ‘Series Profile.’
5. Apply to appropriate base profile (e.g., ‘2014HS1-NSI-Profile.epc/raw’).

## Modifying Files Uploaded into the BCCS

Owners will be able to fully edit Projects, Profiles, and Ratings that are in the “Preliminary” review state with the version of the BCCS. Data records can be added, modified, or deleted.

A “Replace” function is planned to be added to the BCCS to allow users to replace the project and its phases without having to delete and re-create the project. This function is not available at this time.

## Helpful Hints

### Removing/Replacing Project Files in the BCCS

An associated rating file is linked to a specific project file when loaded into the BCCS. When that project file is not present in the BCCS (e.g., removed to be replaced by an updated version) the associated rating file is also removed from the BCCS. Therefore, the associated rating file must always be loaded after the applicable project file. This problem can be avoided if associated ratings are embedded in the project file (refer to 2.1 - Step 5).

### Considerations with Ratings

1. The base case ratings are those ratings that will be used when creating any model. These ratings are the permanent ratings your company will assign year-after-year and season-to-season to a branch or transformer. They will be applied to any model created unless there is a new rating applied through a project.
2. When a new future branch or transformer is added with a new rating it will appear in a project. For example, a project dated for the summer of 2014 should have the rating appear in the project NOT in the base case ratings.

Placing this future rating in the base case ratings means the rating will be used or applied to near-term models (i.e., 10SUM) when it is really intended to be applied starting in 2014.

**IMPORTANT** - As this implies, when a project is committed to the BCCS base case, the owner must apply any embedded ratings into the company’s base rating file to use it for future reference. Otherwise the owner can simply refer to its ratings in the BCCS base case rating file (preferred).

### Switching Line Reactor Status between Models

Voltage control changes from one WECC base case to another are generally made via the device control profile. However, it is not currently possible to change the value (e.g., status) of a line reactor modeled in branch data via a BCCS profile. You can only accomplish such a change with a project file.

### Suggested Computer Set-Up

#### Internet Explorer is the supported interface to the BCCS. Other browsers can be used to connect to the system but some visual abnormalities may occur.

1. The preferred location to install MOD File Builder is C:\Program Files (x86)\PTI\MODFileBuilder but it can be placed elsewhere if access is limited to your C: drive.

**Appendences**

# Appendix A - Phased Project files in .prj format

**Phased Project Format:** The phased project (extension \*.prj) file can be created with the MOD File Builder tool.

The phased project format should be used to show project phases that have a relationship and are not a group of independent projects. The Effective date follows the second comma of the <PHASE> record.

**Phased Project File Naming Convention (\*prj extension)**

1. Individual facility projects (Granular method) - ***recommended***

Filename: 40\_BPA\_PDCI.prj

Project name: 40\_BPA\_PDCI (32 char max)

With phases: 40\_BPA\_PDCI1, / Sectionalize lines to create station

40\_BPA\_PDCI2, etc. / Add transformers

The data submitter should save this file on their personal computer as 40\_BPA\_PDCI.prj

**Phased Project embedded ratings**

The bottom section of each phase (beginning with “<I>,<J>,<K>….” in phase 2 of the sample file, below) would optionally include ratings for branches or transformers added or modified in that phase if included as “**embedded ratings**” (preferred). Otherwise they would be included as a separate **project phase dependent rating** file as discussed in section 2.4.

Note the following with embedded rating format:

* Field 3 (transformer code) is 0 for transformers and blank for non-transformers
* Field 4 (Circuit ID) is enclosed in single quotes
* Field 6 (transformer name) is enclosed in single quotes and entered as 12 spaces if it has no name
* End the project file name with a “q” if you need to indicate there are “embedded ratings”

Four rating sets are provided for spring, summer, fall and winter using descriptors SPRG, SUM, FALL and WIN, respectively.

Each of these four sets includes five ratings (spring (SPRG), summer (SUM), fall (FALL), winter (WIN), and CON). The BCCS will be able to handle <~NORM>, <~LTE>, <~STE> and <~LD> ratings for each season. Currently, WECC will only use <~NORM> and <~LTE>.

**Phased Project File - Template**

**<PROJECT>,MOD,9**

Project Name, Project Type, Project Status, Project Short Comment

**<PHASE>, Phase Name, Phase Effective Date, Phase Request Date, Phase Comment**

PSS®E/PSLF® Device Type ,Action ,PSS®E/PSLF® Record Data @! 'Comment Field'

PSS®E/PSLF® Device Type ,Action ,PSS®E/PSLF® Record Data @! 'Comment Field'

PSS®E/PSLF® Device Type ,Action ,PSS®E/PSLF® Record Data @! 'Comment Field'

<I>,<J>,<K>,<CKT>,<Winding>,<EquipmentName>,<Summer~NORM>,<Summer~LTE>,<Summer~STE>,<Summer~LD>,<Fall~NORM>,<Fall~LTE>,<Fall~STE>,<Fall~LD>,<Winter~NORM>,<Winter~LTE>,<Winter~STE>,<Winter~LD>,<Spring~NORM>,<Spring~LTE>,<Spring~STE>,<Spring~LD>

**<PHASE>, Phase 2 Name, Phase Effective Date, Phase Request Date, Phase Comment**

PSS®E/PSLF® Device Type ,Action ,PSS®E/PSLF® Record Data @! 'Comment Field'

PSS®E/PSLF® Device Type ,Action ,PSS®E/PSLF® Record Data @! 'Comment Field'

<I>,<J>,<K>,<CKT>,<Winding>,<EquipmentName>,<Summer~NORM>,<Summer~LTE>,<Summer~STE>,<Summer~LD>,<Fall~NORM>,<Fall~LTE>,<Fall~STE>,<Fall~LD>,<Winter~NORM>,<Winter~LTE>,<Winter~STE>,<Winter~LD>,<Spring~NORM>,<Spring~LTE>,<Spring~STE>,<Spring~LD>

**Sample File**

**<PROJECT>,MOD,9**

40\_PGE\_Knight, Generation <= 20 MVA,Planned,WECCDEMO

**<PHASE>,Knight Configuration,2014-07-01,2014-01-03,**

BUS,ADD,43080,'KNIGHTBR ',59.8,1,40,401,14,0.985572,28.907,0.0,0.0,0.0,0.0,45.26719,-122.72243,01/01/2040,12/31/2039,1,1.0,0,0,0,0,0

BUS,ADD,999588,'CANBYTP&1MSL',59.8,1,40,401,14,0.991256,29.40471,1.1,0.9,1.1,0.9, , ,,, , , , , , ,2

BUS,ADD,43078,'CANBYTP1 ',59.8,1,40,454,32,0.997241,20.50289,1.065,0.964,1.065,0.964,45.2669,-122.72277,01/01/2040,12/31/2039,1,1.0,0,0,0,0,0

BUS,ADD,43079,'CANBYTP2 ',59.8,1,40,454,32,0.985615,28.91158,1.065,0.964,1.065,0.964,45.2669,-122.72277,01/01/2040,12/31/2039,1,1.0,0,0,0,0,0

BRANCH,DELETE,43061,43151,'1 ',0.0859,0.2834,0.00338,49.0,62.0,62.0,0.0,0.0,0.0,0.0,1,1,15.0,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,453,1,49.0,62.0,62.0,62.0,49.0,62.0,49.0,62.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43061,43151

BRANCH,DELETE,43149,43431,'1 ',0.03759,0.13461,0.00166,41.0,41.0,41.0,0.0,0.0,0.0,0.0,1,1,7.2,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,41.0,41.0,41.0,41.0,41.0,41.0,41.0,41.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43149,43431

BRANCH,DELETE,43077,40803,'1 ',0.01618,0.08339,0.00102,82.0,102.0,125.0,0.0,0.0,0.0,0.0,1,1,4.5,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,453,1,82.0,102.0,125.0,137.0,82.0,102.0,82.0,102.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43077,40803

BRANCH,DELETE,43077,43754,'1 ',0.00561,0.0205,0.00024,68.0,90.0,103.0,0.0,0.0,0.0,0.0,0,1,1.1,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,68.0,90.0,103.0,117.0,68.0,90.0,68.0,90.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43077,43754

BRANCH,ADD,43077,43078,'1 ',0.00015,0.00061,1e-05,62.0,82.0,94.0,0.0,0.0,0.0,0.0,1,1,0.0,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,62.0,82.0,94.0,107.0,62.0,82.0,62.0,82.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43077,43078

BRANCH,ADD,43061,43149,'1 ',0.0859,0.2834,0.00338,49.0,62.0,62.0,0.0,0.0,0.0,0.0,1,1,15.0,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,453,1,49.0,62.0,62.0,62.0,49.0,62.0,49.0,62.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43061,43149

BRANCH,ADD,43079,43080,'1 ',0.00018,0.00095,1e-05,82.0,102.0,125.0,0.0,0.0,0.0,0.0,1,1,0.1,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,82.0,102.0,125.0,137.0,82.0,102.0,82.0,102.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43079,43080

BRANCH,ADD,43151,43431,'1 ',0.03759,0.13461,0.00166,41.0,41.0,41.0,0.0,0.0,0.0,0.0,1,1,7.2,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,41.0,41.0,41.0,41.0,41.0,41.0,41.0,41.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43151,43431

BRANCH,ADD,999588,40803,'1 ',0.04201,0.12917,0.001,48.4,48.4,69.1,0.0,0.0,0.0,0.0,1,1,5.5,14,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,401,2,48.4,48.4,69.1,69.1,55.3,55.3,55.3,55.3,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43079,40803

BRANCH,ADD,43077,43079,'1 ',7e-05,0.00038,0.0,82.0,102.0,125.0,0.0,0.0,0.0,0.0,0,1,0.0,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,82.0,102.0,125.0,137.0,82.0,102.0,82.0,102.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43077,43079

BRANCH,ADD,43079,999588,'1 ',0.0161,0.083,0.00101,82.0,102.0,125.0,0.0,0.0,0.0,0.0,1,1,4.5,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,82.0,102.0,125.0,137.0,82.0,102.0,82.0,102.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43079,40803

BRANCH,ADD,43078,43080,'1 ',0.00075,0.00327,4e-05,68.0,90.0,103.0,0.0,0.0,0.0,0.0,0,1,0.2,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,68.0,90.0,103.0,117.0,68.0,90.0,68.0,90.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43078,43080

BRANCH,ADD,43078,43754,'1 ',0.00556,0.02031,0.00024,68.0,90.0,103.0,0.0,0.0,0.0,0.0,1,1,1.1,32,1.0,0,0.0,0,0.0,0,0.0,' ',0,01/01/2040,12/31/2039,0,40,454,1,68.0,90.0,103.0,117.0,68.0,90.0,68.0,90.0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,43078,43754

BRANCH,MODIFY, 40876,43482,'1 ', , ,0.06673,319.0,319.0,319.0, , , , , , , , , , , , , , , ,,,,,,,,1,319.0,319.0,319.0,319.0,319.0,319.0,319.0,319.0,,,,,,,,,,,,40876,43482

BRANCH,MODIFY, 43029,43752,'1 ',0.00026,0.00135,0.00021, , , , , , , , , , , , , , , , , , ,,,,,,,,1,,,,,,,,,,,,,,,,,,,,43029,43752

LOAD,DELETE,43077,'N ',1,40,452,8.0,1.6,0.0,0.0,0.0,-0.0,14,1,0,'NWV\_MIX ',0,01/01/2040,12/31/2039,1,

LOAD,ADD,43054,'1 ',1,40,452,21.799999,4.7,0.0,0.0,0.0,-0.0,32,1,0,'NWV\_MIX ',0,01/01/2040,12/31/2039,1,

LOAD,MODIFY, 43018,'ss',0, , , , , , , , , , , ,,,,,,

**<PHASE>,Sullivan Generation,2014-08-01,2014-01-03,**

BUS,ADD,43556,'SULIVAN ',4.16,2,40,450,32,0.983302,26.84629,1.1,0.9,1.1,0.9,45.04831,-122.96256,01/01/2040,12/31/2039,2,1.0,0,0,0,0,0

GENERATOR,ADD,43556,'1 ',15.0,-14.4,-14.4,-14.4,1.0,0,33.11,0.0,0.2,0.0,0.0,1.0,1,100.0,15.0,0.0,32,1.0,0,0.0,0,0.0,0,0.0,0,1.0,' ',0,01/01/2040,12/31/2039,0,40,450,0.0,0.0,0.0,0,0,0,0.0,0,0.0,0,0.0,0,0.0,0,0,0,1,0.0,1,0,0.0,0,0,1.0

TRANSFORMER,ADD,43557,43556,0,'1 ',2,2,1,0.0,0.0,2,'SULIVAN ',1,32,1.0,0,0.0,0,0.0,0,0.0,' ',0.00308,0.11126,100.0, , , , , , , , ,59.799999,59.799999,0.0,33.3,33.3,33.3,0,0,0.0,0.0,0.0,0.0,999,0,0.0,0.0,0.0,4.16,4.16, , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , ,' ',0,01/01/2040,12/31/2039,0,40,450,1,0,0.0,0.0,0.0,0.0,0.0,0.0,1.0,1.0,1.0,1.0,33.3,33.3,33.3,33.3,33.3,33.3,33.3,33.3,0,0.0,0,0.0,0,0.0,0,0.0,0,0.0,0.0,0,0,0,0.0,0.0

FIXEDBUSSHUNT,DELETE,43157,'sa',1,0.0,22.0,0,' ',0,' ',0,01/01/2040,12/31/2039,0,40,451,32,1.0,32,1.0,0,0.0,0,0.0,0,' ',0,0

FIXEDBUSSHUNT,ADD,43157,'1 ',1,0.0,22.0,0,' ',0,' ',0,01/01/2040,12/31/2039,0,40,451,32,1.0,32,1.0,0,0.0,0,0.0,0,' ',0,0

MULTISECTIONLINE,ADD,43079,40803,'&1',1,999588, , , , , , , ,

<I>,<J>,<K>,<CKT>,<Winding>,<EquipmentName>,<Summer~NORM>,<Summer~LTE>,<Summer~STE>,<Summer~LD>,<Fall~NORM>,<Fall~LTE>,<Fall~STE>,<Fall~LD>,<Winter~NORM>,<Winter~LTE>,<Winter~STE>,<Winter~LD>,<Spring~NORM>,<Spring~LTE>,<Spring~STE>,<Spring~LD>
43557,43556,0,’1’,,,33.3,33.3,,,33.3,33.3,,,33.3,33.3,,,33.3,33.3,,
q

# Appendix B - Bus/Load/Gen Profile files in \*.epc/raw format

The MOD File Builder program can be used to create Profile files in BCCS format.

**Profile File Naming Convention (.raw format)**

Filename: 14hs4a\_40\_BPA\_BLG.epc/raw

**Profile File - Template**

Shown below is the file format of the Bus, Load, Generation Profile. The highlighted items are data records used by the data submitter. The fields in bold red are used. All of the black fields are discarded but necessary as place holders by the data submitter.

**PSS®E Version**

**Load Generation Profile Name**

**40 character Comment**

**I**, 'BUS NAME', BASKV, IDE, **GL**, **BL**, AREA, ZONE, **VM, VA**, OWNER,

0 / END OF BUS DATA, BEGIN LOAD DATA

**I**, **ID**, **STATUS**, AREA, ZONE, **PL**, **QL**, **IP**, **IQ**, **YP**, **YQ**, OWNER

0 / END OF LOAD DATA, BEGIN GENERATOR DATA

**I**, **ID**,**PG**,**QG**,**QT**,**QB**,VS,IREG,MBASE,ZR,ZX,RT,XT,GTAP,**STAT**,RMPCT,**PT**,**PB**,O1, F1, O2, F2, O3, F3, O4, F4

**q**

There must be a bus listed in the bus field for every load and generator declared in this file when you parse out your company data.

# Appendix C - Device Control Profile files in .raw format

The PTI MOD File Builder program can be used to create Device files in BCCS format.

**Device Control File Naming Convention (.raw format)**

Filename: 14hs4a\_40\_BPA \_DevC.raw

**Device Control File - Template**

The Device Control file format is shown below. The highlighted items are data records used by the data submitter. The fields in bold red are used. All of the black fields are discarded but necessary as place holders by the data submitter.

**Note**: For generators, ensure bus is code 2 in the base case and project files with status (on or off) controlled by STAT in the profile.

**PSS®E Version**

**Device Control Profile Name**

**40 character Comment**

0 / END OF BUS DATA, BEGIN LOAD DATA

0 / END OF LOAD DATA, BEGIN GENERATOR DATA

**WINDV2**, NOMV2,

**I**, **J**, **K**, **CKT**, CW, CZ, CM, MAG1, MAG2, NMETR, ’NAME’, STAT, O1, F1, O2, F2, O3, F3, O4, F4

**R1-2, X1-2, SBASE1-2, R2-3, X2-3, SBASE2-3, R3-1, X3-1, SBASE3-1**, VMSTAR, ANSTAR

**WINDV1**, NOMV1, ANG1,  **RATA1, RATB1, RATC**1, **COD1**, CONT1, RMA1, RMI1, **VMA1**, **VMI1**, NTP1, TAB1, CR1,CX1

**WINDV2**, NOMV2, ANG2,  **RATA2, RATB2, RATC2**, **COD2**, CONT2, RMA2, RMI2, **VMA2**, **VMI2**, NTP2, TAB2, CR2, CX2 **I**, **ID**,PG,QG,QT,QB,**VS**,**IREG**,**MBASE**,ZR,ZX,RT,XT,**GTAP**,STAT,**RMPCT**,PT,PB,O1, F1, O2, F2, O3, F3, O4, F4

0 / END OF GENERATOR DATA, BEGIN BRANCH DATA

0 / END OF BRANCH DATA, BEGIN TRANSFORMER DATA

**I**, **J**, **K**, **CKT**, CW, CZ, CM, MAG1, MAG2, NMETR, ’NAME’, STAT, O1, F1, O2, F2, O3, F3, O4, F4

**R1-2, X1-2, SBASE1-2**,

**WINDV1**, NOMV1, ANG1,  **RATA1, RATB1, RATC1**, **COD1**, CONT1, RMA1, RMI1, **VMA1**, **VMI1**, NTP1, TAB1, CR1,CX1

0 / END OF TRANSFORMER DATA, BEGIN AREA DATA

0 / END OF AREA DATA, BEGIN TWO-TERMINAL DC DATA

I, MDC, RDC, SETVL, VSCHD, VCMOD, RCOMP, DELTI, METER, DCVMIN, CCCITMX, CCCACC

**IPR**, NBR, ALFMX, ALFMN, RCR, XCR, EBASR, **TRR**, **TAPR**, TMXR, TMNR, STPR, ICR, IFR, ITR, IDR, XCAPR

**IPI**, NBI, GAMMX, GAMMN, RCI, XCI, EBASI, **TRI**, **TAPI**, TMXI, TMNI, STPI, ICI, IFI, ITI, IDI, XCAPI

0 / END OF TWO-TERMINAL DC DATA, BEGIN VSC DC LINE DATA

**'NAME'**, **MDC**, RDC, O1, F1, O2, F2, O3, F3, O4, F4

**IBUS**, TYPE, **MODE**, **DCSET**, **ACSET**, ALOSS, BLOSS, MINOSS, SMAX, IMAX, PWF, MAXQ, MINQ, REMOT, RMPCT

**IBUS**, TYPE, **MODE**, **DCSET**, **ACSET**, ALOSS, BLOSS, MINOSS, SMAX, IMAX, PWF, MAXQ, MINQ, REMOT, RMPCT

0 / END OF VSC DC LINE DATA, BEGIN SWITCHED SHUNT DATA

**I**, **MODSW**, **VSWHI**, **VSWLO**, **SWREM**, **RMPCT**, **’RM IDNT ’** , **BINIT**,N1,B1,N2,B2,N3,B3,N4,B4,N5,B5,N6,B6,N7,B7,N8,B8

0 / END OF SWITCHED SHUNT DATA, BEGIN IMPEDANCE CORRECTION DATA

0 / END OF IMPEDANCE CORRECTION DATA, BEGIN MULTI-TERMINAL DC DATA

0 / END OF MULTI-TERMINAL DC DATA, BEGIN MULTI-SECTION LINE DATA

0 / END OF MULTI-SECTION LINE DATA, BEGIN ZONE DATA

0 / END OF ZONE DATA, BEGIN INTER-AREA TRANSFER DATA

0 / END OF INTER-AREA TRANSFER DATA, BEGIN OWNER DATA

0 / END OF OWNER DATA, BEGIN FACTS DEVICE DATA

**N**, **I**, **J**, **MODE**, **PDES**, **QDES**, **VSET**, SHMX, TRMX, VTMN, VTMX, VSMX, IMX, LINX, RMPCT, OWNER, SET1, SET2, VSREF

0 / END OF FACTS DEVICE DATA

**q**

# Appendix D - Rating files in .csv format

MOD File Builder program can be used to create Rating files in BCCS format. It populates a .csv file with the ratings for all season (SPRG, SUM, FALL, or WIN). The order of the columns is not important, but consistency between your files may be helpful for debugging problems.

**Ratings File Naming Convention**

Base set Filename: 14hs4a\_Ratings.csv

Project phase linked 14hs4a\_40\_Sullivan ratings.csv / granular project method

If the rating is phased in with a project then using the project name with the ratings file name may help users.

As shown above, 14hs4a\_40\_Sullivan ratings.csv would be linked to project phase “Sullivan Generation” as seen as phase 2 in the example in Appendix A.

**Sample Rating File(.csv)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **RATING\_NAME** | **I** | **J** | **K** | **CKT** | **IFNO** | **NORM1** | **LTE1** | **STE1** |
| 'Summer' | 40185 | 43527 |   | '1 ' |   | 416 | 524 |   |
| Fall' | 40185 | 43527 |   | '1 ' |   | 416 | 524 |   |
| 'Winter' | 40185 | 43527 |   | '1 ' |   | 637 | 703 |   |
| 'Spring' | 40185 | 43527 |   | '1 ' |   | 416 | 524 |   |
| 'Summer' | 43557 | 43556 | 0 | '1 ' |   | 33.3 | 33.3 |   |
| 'Fall' | 43557 | 43556 | 0 | '1 ' |   | 33.3 | 33.3 |   |
| 'Winter' | 43557 | 43556 | 0 | '1 ' |   | 33.3 | 33.3 |   |
| 'Spring' | 43557 | 43556 | 0 | '1 ' |   | 33.3 | 33.3 |   |

Notes:

Winding is blank for AC lines.

A 12-character Equipment Name is allowed for transformers.

Four rating sets are provided for spring, summer, fall and winter using descriptors SPRG, SUM, FALL and WIN, respectively.

# Appendix E - Transaction file in .csv format

Space reserved for future development.

Work is under way for transaction data to be incorporated into the BCCS.