

Biomass Scenario Model Quick Start Guide

This quick start guide summarizes the steps to access the software and repository needed to download and operate the public version of the Biomass Scenario Model (BSM-public). There are three components that need to be in place for successful operation: STELLA software, GitHub sharing environment, and the BSM-public model. This guide explains how to set up these components and run, view, modify, and revert or update the BSM-public.

STELLA Software

STELLA is the software in which the model is developed. To use the BSM-public, purchase and install STELLA Professional, version 1.4 or later, from <http://www.iseesystems.com/>.

How can I learn more about STELLA? isee systems offers online tutorials and other resources, in-person training, webinars, and software documentation.

GitHub Sharing Environment

GitHub provides an environment for sharing files that provides full versioning and offers helpful features such as issue tracking.

Join the “bsm-public” repository on GitHub.

1. Create a folder on your computer where you will house a local copy of the bsm-public repository.
2. Go to <https://github.com/NREL/bsm-public>.
3. Click the “Clone or Download” button.
4. Copy the url.
5. Download a GitHub GUI or shell of your choice.
6. In the GUI or shell, go to the folder and clone the repository there. (In a git shell, the command is: `git clone <url>`)

How can I learn more about GitHub? GitHub offers extensive guidance at <https://help.github.com/>. Many other online resources are also available.

What is in the “models” directory?

The BSM-public is constructed in modules. The main model is the file BSM-public.STMX, which is in the “models” directory. The individual modules are in the folder “bsm_public_modules.” These are semi-independent and can be opened on individually.

Basic Operations with the public version of the Biomass Scenario Model (BSM-public)

1. **Download BSM-public:** If you’ve cloned the bsm-public repository, you’ve downloaded the BSM file into the folder you created on your computer. It is BSM-public.STMX.

2. **Open BSM-public in STELLA:** Open STELLA and then open the BSM-public.STMX file, or click on the BSM-public.STMX filename to open.
3. **Understand BSM-public Organization:** The BSM-public is organized into modules. The acronym, name, and purpose of each module is summarized in a table, “Module Acronyms in BSM,” on the initial page.
4. **Run BSM-public:** Click on the “run” arrow in the lower left corner.
5. **View BSM-public results:** BSM-public includes an output table “Big Table” of many results, located by clicking on the “End to End” module and looking just below the model diagram. If the results you are interested in do not appear in this table, you can create a new output table or chart. Output tables can also be exported for use in other applications, such as Excel or Tableau. First you must go to the table you want to export, double-click on the table, and check the box that says “Mark for export” just under the title. (As an alternative, you can export all model variables.) To export the table, create the file where the export will go. Then with the model open in STELLA, go to Model → Export Data, click on the green plus sign, and browse for the file where you would like to export the data. Under “Data Source”, find and select your table. Choose the sheet orientation, link type, and format that you desire. For “Export Interval”, choose Every 1 time units to have an annual output. Click the button under the “Export” column to export your data once you have run the model.
6. **Modify BSM-public:** If you are running the full version of STELLA Professional, you can save a modified version of BSM-public.
7. **Revert or update to the current version of BSM-public:** The GitHub site will be used to post updated versions of the BSM. The commit notes may be viewed in Git to see what has been updated in the current version. To copy the current version of BSM-public to your local drive, use GitHub GUI or clone. (In a git shell, the command is: git pull)
8. **Revert to default input values:** The bsm-public repository includes an input sheet that will revert all input values to their initial defaults. To reload these values into your local copy of BSM-public, import the file “BSM_Default_Inputs.xlsx” from <https://github.com/NREL/bsm-public/models/Data>. Please see the Readme file in <https://github.com/NREL/bsm-public/inputs> for import instructions. Please note that this will not revert to default values of any other assumptions, such as constants that are not included in the input sheet. When in doubt, you can search the input sheet for the variable name in question, or pull BSM-public from the GitHub repository.

How can I learn more about the BSM-public? Please submit questions as GitHub tickets or contact bsm@nrel.gov.