# Using the new PI+ interface

The new 2.X versions of PI+ feature a major redesign of the various forecast creation interfaces and the policy variable selector. In keeping up with the industry standard for Windows applications, the design of these interfaces has moved toward the use of smart tiles and has made PI+ much more tablet-friendly in the process.

Forecast Navigation Screen

While the home screen of PI+ will look familiar from the previous version, once you begin the process of creating a forecast you will experience our intuitive new tile design. Navigating to a policy variable via its topic, through a pre-built economic scenario, or with some other grouping like the model blocks, is now more user friendly, with all options on display instead of hidden in drop-down menus. At the forefront of the new forecast navigation screen, the Featured section highlights topics and tools that are likely to be used most often.
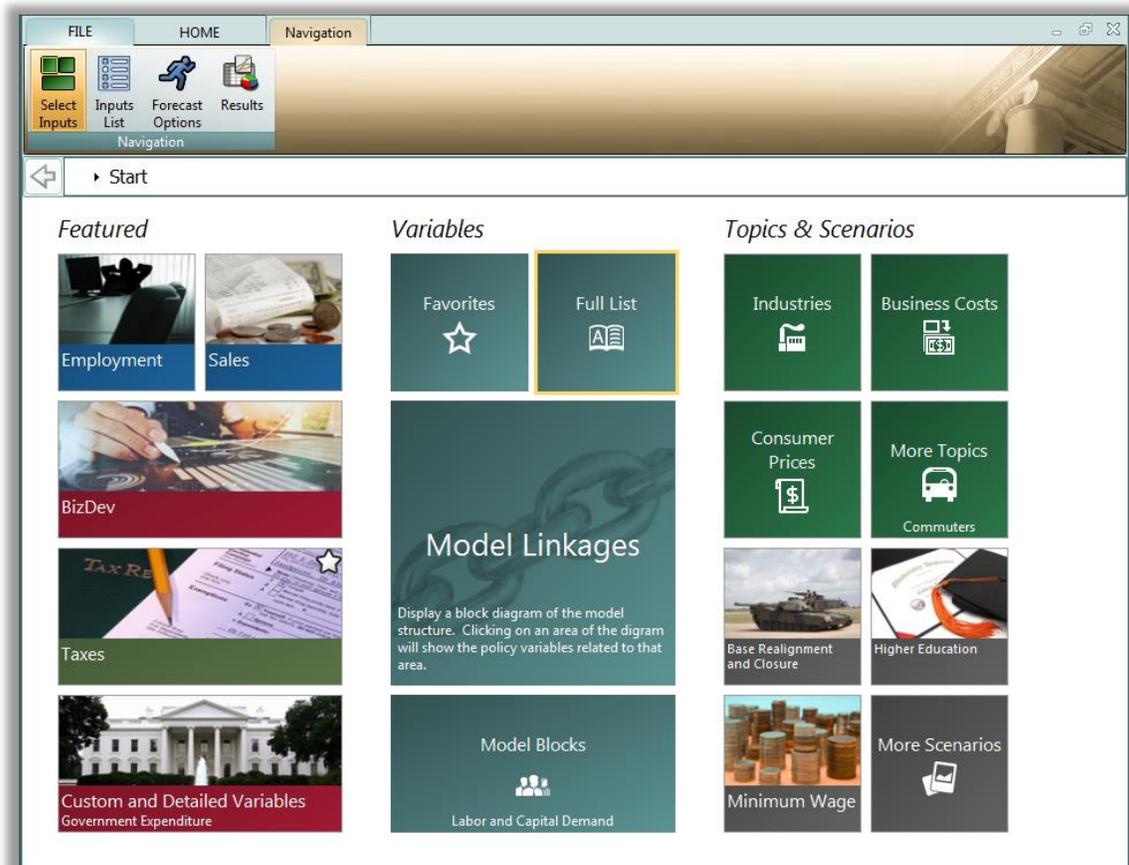
Regional Simulation Home Menu

Another organizational improvement that we hope will simplify navigating to your most-used policy variables is the Favorites section. Right-clicking tiles will add them to your Favorites (indicated with a star) where they can be dragged into any customized order.
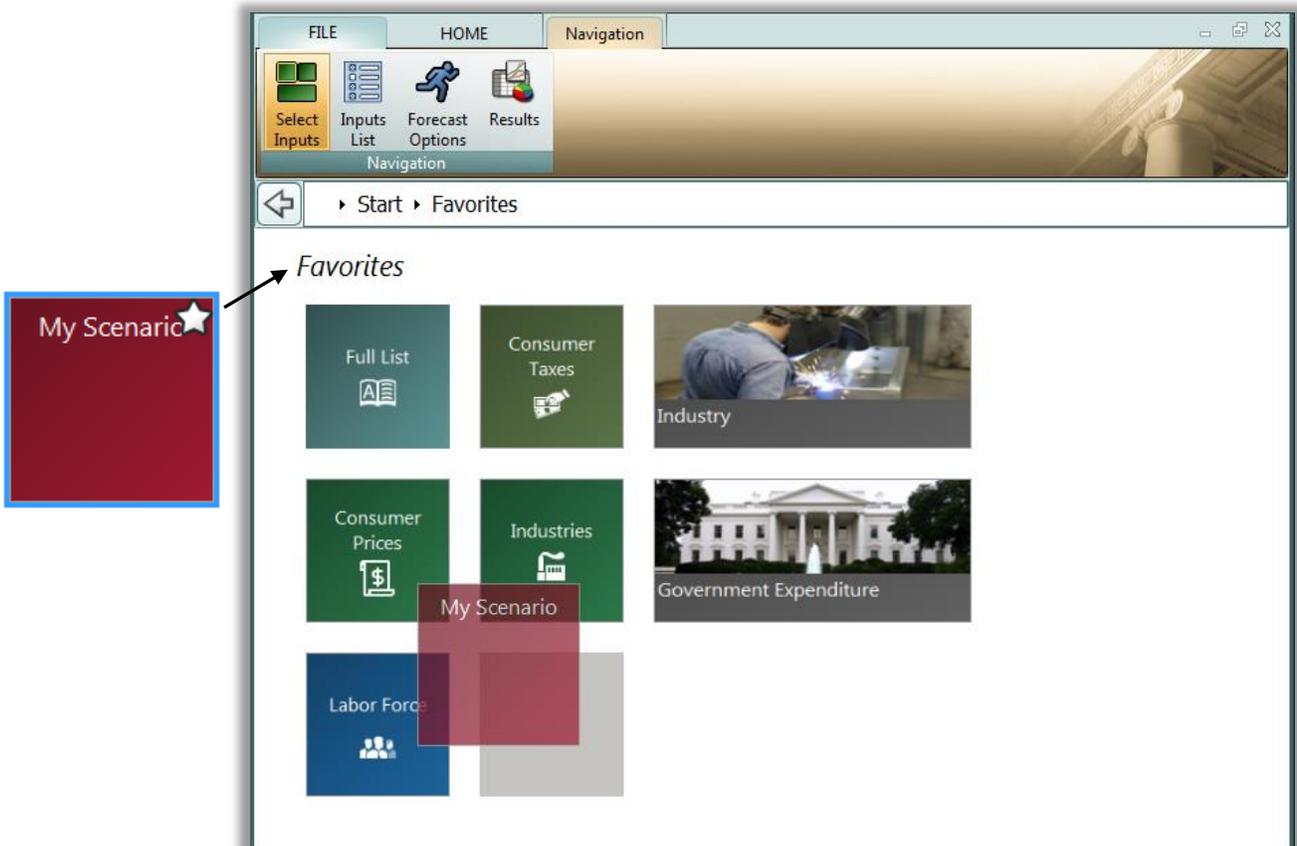

Favorites Menu

Creating a custom scenario, which consists of any number of policy variables, in custom groups and with pre-selected options, can prove to be another very effective way of easily accessing all of the policy variables you use most. Favoriting the resulting custom scenario tile will make it even easier.

Policy Variable Selector

Clicking on any tile that represents some number of policy variables will open the policy variable selector in a new window. This selector window is split into several tabs that each represent a step in the process of defining exactly how your policy variable will enter the model.
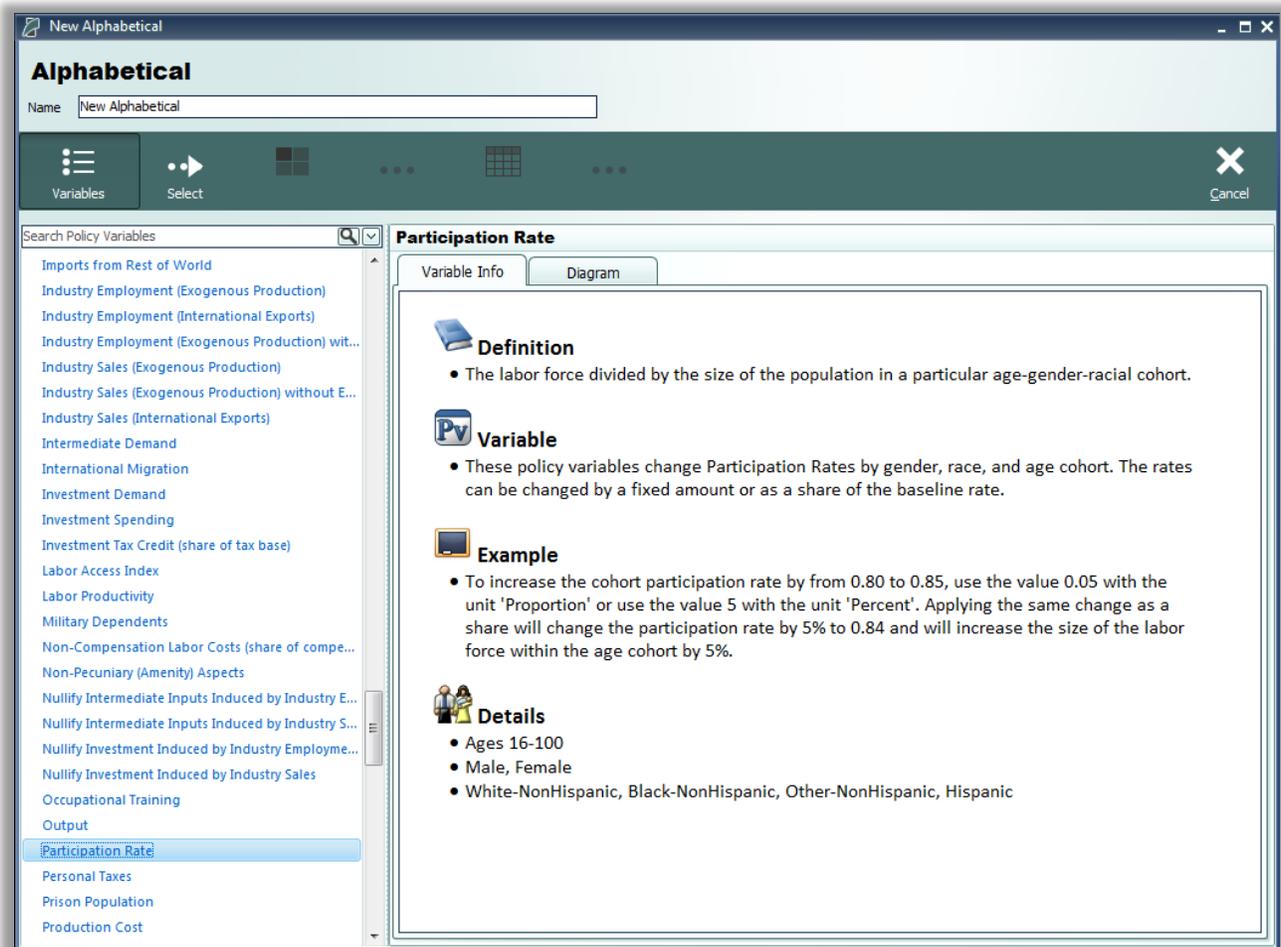
Policy Variable Selector

The first tab holds a list of logically grouped policy variables that can be selected. Search functionality has been added to this policy variable list to cut down on time spent looking through the longer lists of variables. Selecting a variable will show information about it and its options, as well as a diagram that depicts how the policy variable relates to other variables and fits into the model. After choosing a variable, clicking the Select arrow button will move your variable to the Details tab.
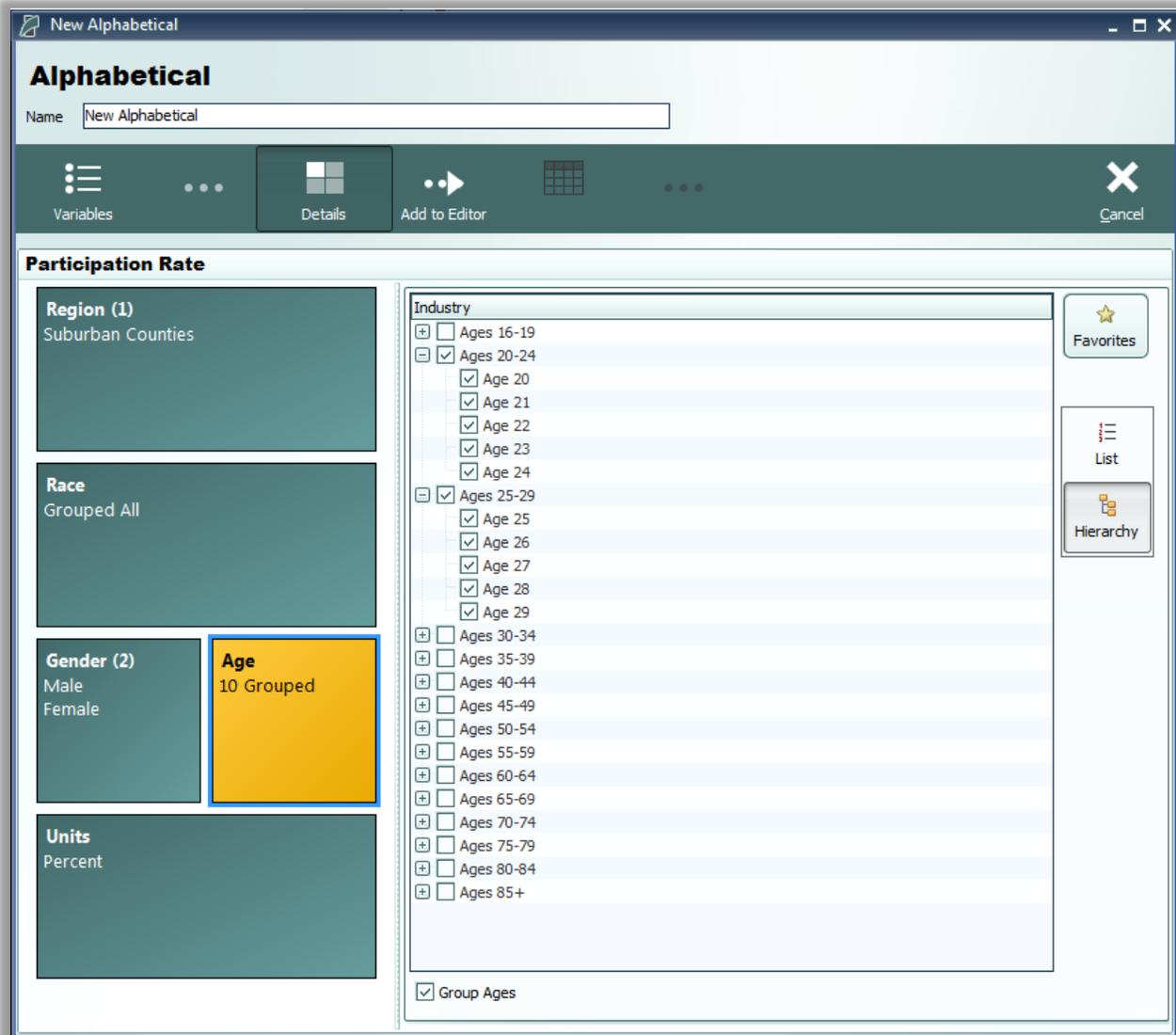
Policy Variable Selector – Details Menu

The Details tab is where you decide what the exact form of your policy variable should be. Clicking on a detail tile opens an interface that allows for customizing the details of your variable such as what region or industry it applies to. Details that require selection of industries, commodities, occupations, and age cohorts include a hierarchical view to allow for easier input at a more aggregate level. Many types of policy variable details allow for grouping multiple options into one. When this is possible, you will see a grouping checkbox below the selection interface. This grouping feature is useful for spreading the effect of one policy variable between multiple regions, industries, or any other detail category that can be grouped. Once each your policy variable has been fully specified, the Add to Editor button can be used to move your variable into the editing grid.
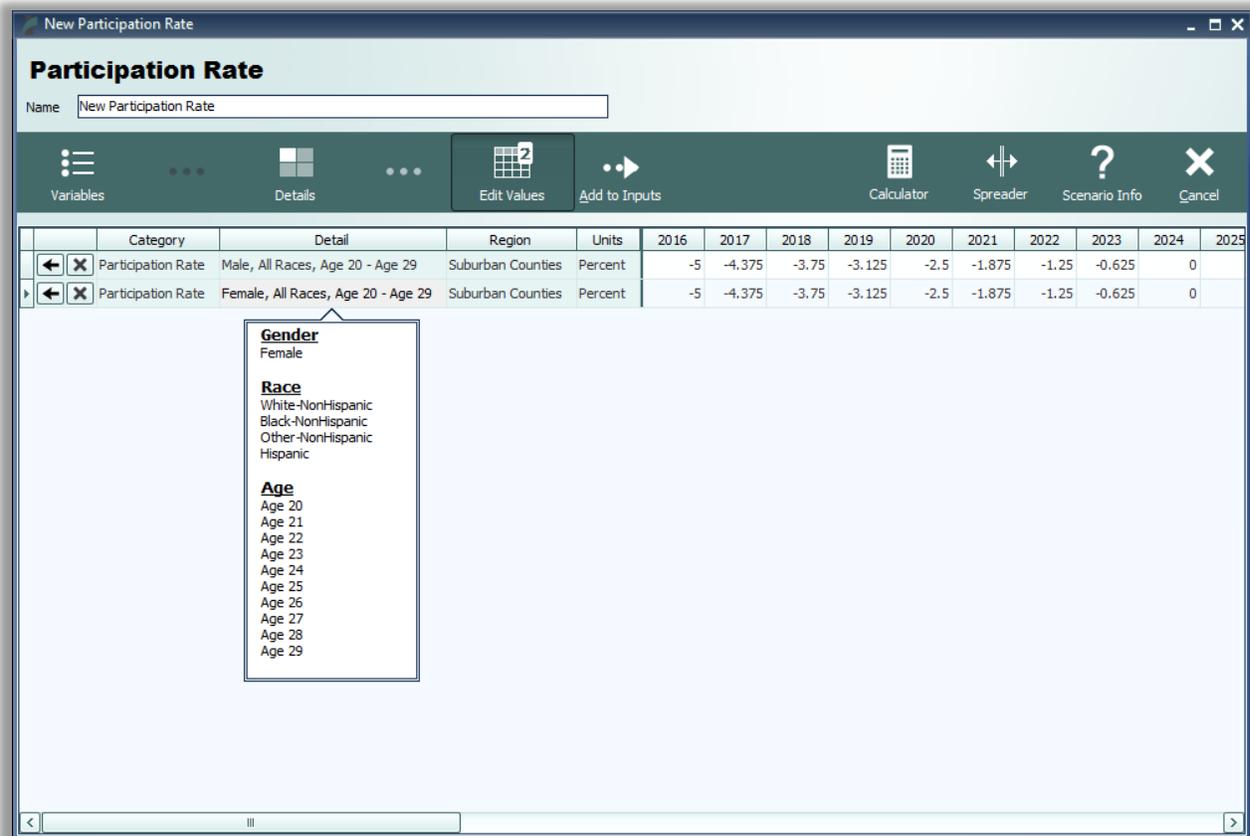
Policy Variable Selector – Editor Grid

The editor will allow you to input yearly values for each policy variable. One policy variable will be created for each combination of options specified on the Details tab, taking into account whether or not the options are grouped. The image above depicts the outcome of grouping the participation rate policy variable's age and race details, but not grouping gender. Buttons in the first column of the editing grid allow you to re-specify and delete your variables. To change the order of variables in the (unsorted) grid, select an entire row using the row selector on the far left of each grid row and either drag and drop (holding Shift to move multiple variables) or use the up and down arrow keys while holding Ctrl. Finished variables can be added to the forecast inputs list by clicking the final arrow button, Add to Inputs.

Inputs List

The forecast inputs list is a screen that displays which policy variables will be included as inputs to the model as it runs a forecast. From this view, policy variable groups can be reopened in the editor grid, renamed, inspected, and converted. When created, policy variables typically have several available units, options, and details to make them more amenable to a wide variety of user data. However, regardless of a variable's specification it will be converted into the same form before it enters the REMI model. Inspecting a variable allows you to view this standard converted form and the converted values. If you wish, you can right click a policy variable and convert it to the standard form.

Forecast Inputs List

Another new set of features can be found by clicking the Tools button. Here you will be able to merge together selected policy variable groups for easier editing or exporting. "Select All" and "Select None" buttons under Tools will make selection easier for large lists of policy variables.

Importing and Exporting Policy Variables

After policy variables have been created, they can be exported to an XML file as a way of saving them to re-use later in other forecasts or workbooks. In addition to importing from exported XML files, policy variables can now also be imported from workbooks and in a limited capacity from exported text files from past PI+ versions. To facilitate the export and import processes, there is a new import/export center located on the inputs list that provides greater control over how policy variables get imported and exported.
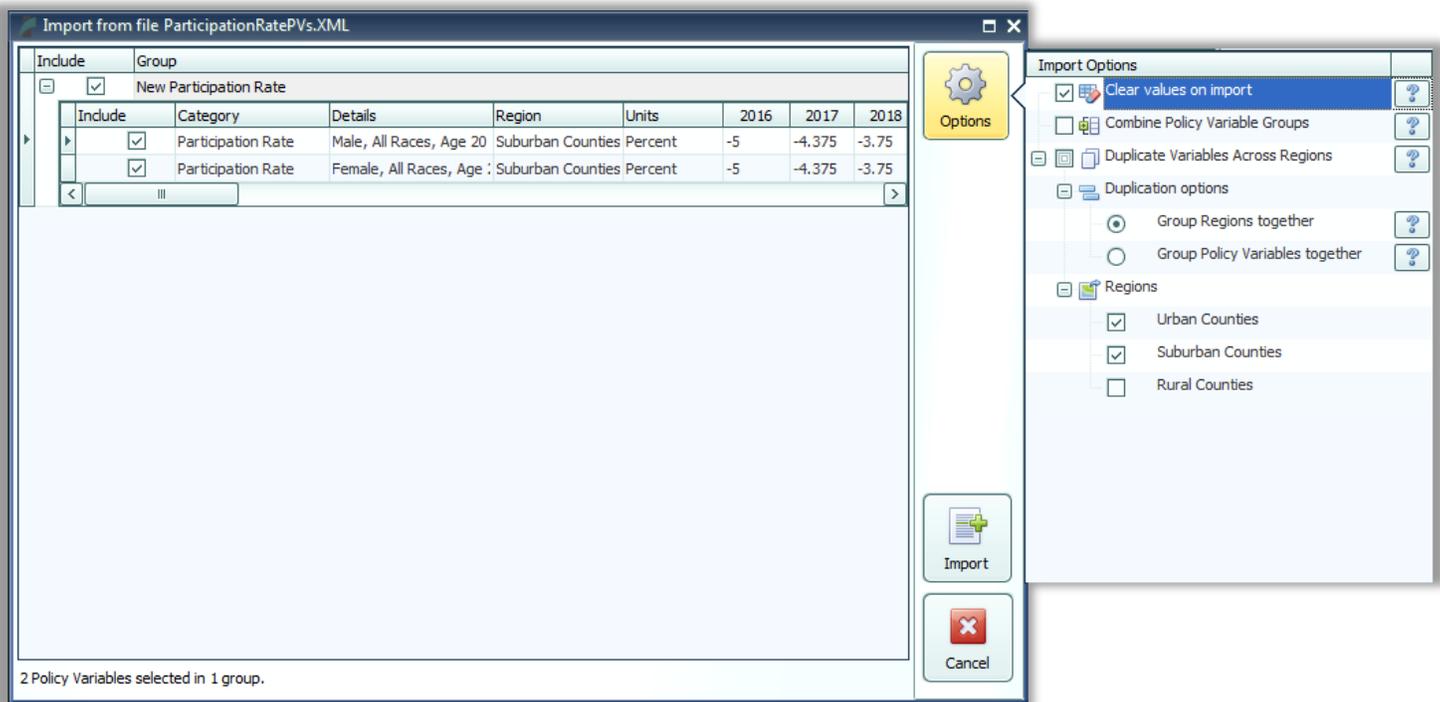
Import/Export Center – Import Mode

The center allows you to select which policy variables you want to export or import so that you can split the variables in your current forecast into multiple exported files or retrieve only a few variables at a time from a master XML file. Another feature available during both exporting and importing is the ability to zero out the yearly values for all policy variables.

The import center has a special set of tools for specifying how the policy variables in your file or workbook should be arranged upon importing. These tools (pictured above in the Import Options menu) are designed to allow for using a single set of exported variables as a template to reduce time spent creating policy variables and make it easier to paste values into PI+ from an outside spreadsheet.

Forecast Options

Running a forecast has been moved to its own screen. There are frequently asked questions about the different options for running the relevant forecast right on this screen alongside the usual year selector and the closure options and iteration settings (some of which are new) if they apply to the forecast being run. Simply click the run forecast button once you have selected your preferred options and the model will start calculating results, as indicated by the progress bar that will appear.

Forecast Options Menu

Locating Other New Features

There are some new preference options available under the File > Preferences menu. Regions can now be grouped so that results are displayed for only some of your model's regions. Additionally, the map of your regions can now be customized to use a variety of different color schemes, thereby making the map better for visualizing regional differences in the results and more colorblind-accessible.
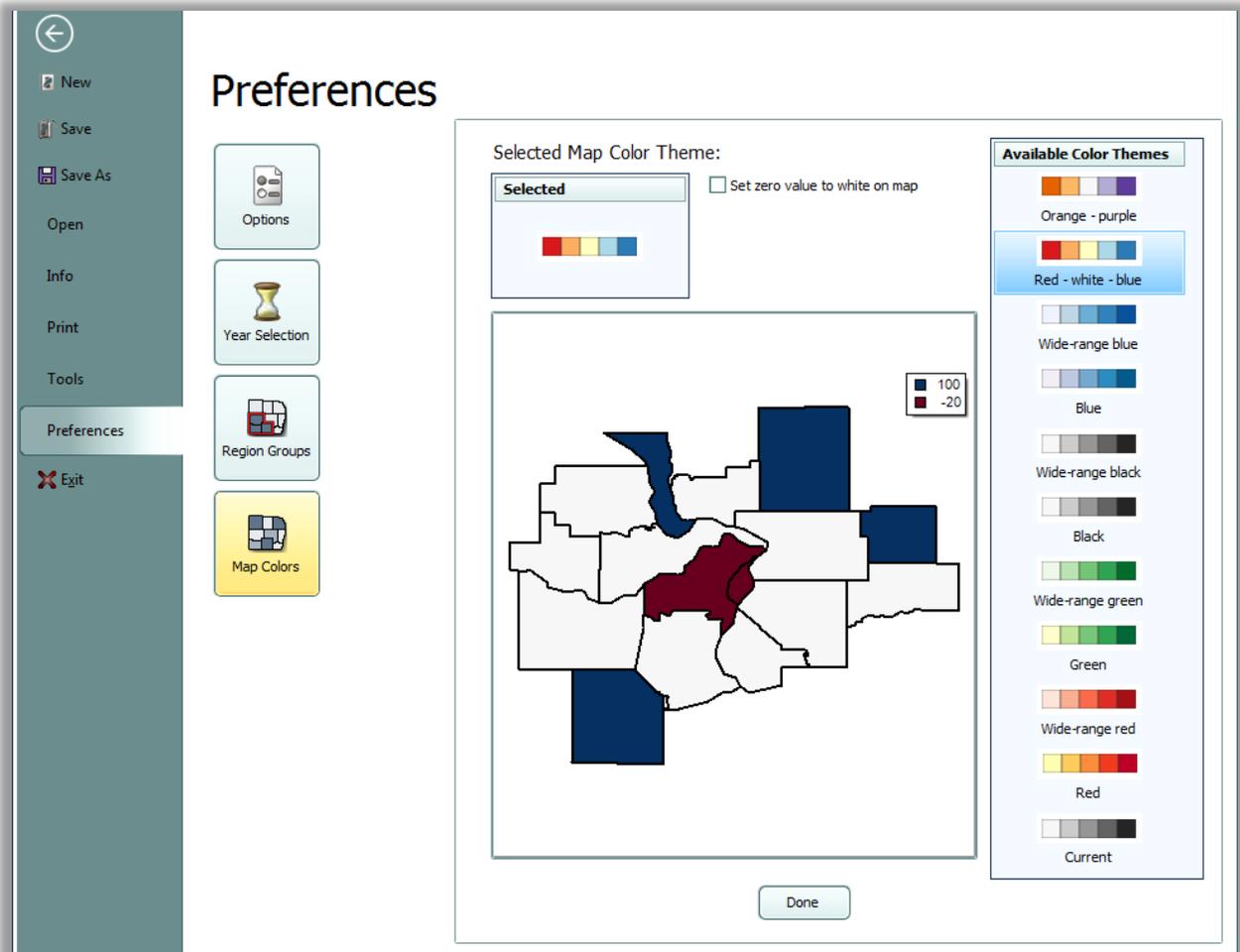
Preferences Menu

The Model Details menu located on the home page of PI+ and under File > Info contains three new interfaces. First is a FAQ viewer that lists all frequently asked questions and answers found throughout PI+ in one place and an option to view them by topic. Next is a documentation reference that displays PI+ model documentation using a built-in PDF viewer. This viewer supports printing and copying and pasting of text from the PDF files.

Lastly, we have created a combined national and regional parameter display. In doing so we also increased the number of listed parameters, organized them by model equation, and improved their names and descriptions to match information published in the model equations book. Parameter data can be exported to a spreadsheet using the right-click menu associated with any parameter grid.

Model Parameters Viewer