Modifying the CPQ&R

Modifications to the CPQ&R are not always required. Nonetheless, allowing for user modifications was a primary design consideration in the development of the CPQ&R. Modifications can take one of two forms:

- Minor modifications are defined as alterations to white-shaded cells in the Implementation Plan in Worksheet B that, if performed correctly, do not require any changes to formulas in the other worksheets within the CPQ&R.
- Major modifications are defined as alterations requiring changes to the formulas in the other worksheets in the CPQ&R.

When contemplating modifications, a useful Excel utility is the *Trace Dependents* feature located in the *Formula Auditing* sub-menu (under the *Formulas* menu). It identifies the location of other cells—including those in other worksheets—that contain formulas dependent upon the highlighted cell. Reviewing dependent cells helps users follow the path of calculations and understand whether a modification will be minor or major.

Minor modifications. There are three types of minor modifications within the CPQ&R:

1. Inserting Rows. Subtotal rows are frequently employed in the Implementation Plan worksheet, and other worksheets routinely draw from such rows rather than from the individual line items that contribute to the subtotals. This facilitates the user's ability to insert additional rows, but only in in certain tables.
2. Adding Scenarios. Adding more than one scenario is considered a minor modification because it does not involve editing cell formulas, but rather manually copying and pasting columns or pressing the **Add a Scenario** button on the HOME Page. The process for adding scenarios is described in the preceding section, Adding Scenarios.
3. Repurposing Elements. With sufficient experience working with the CPQ&R, you may identify opportunities to repurpose specific input assumptions to better meet your needs. Repurposing refers to amending the definition and application of an element (model input) without having to change the formulas within the CPQ&R. Essentially, if you understand how the CPQ&R is applying unit cost and volume calculations, and you can either extend your definition of the element to include additional unit costs or volumes, or replace the unit cost or volume definitions, as you see fit, while preserving the nature of the calculations the CPQ&R performs.

One example of repurposing is how you define implementation years. You could model the previous three years of an existing preschool program as Years 0-2, and then the current and future years as Years 4+. The following is a list of other examples of repurposing within the tables of Worksheet B, the Implementation Plan:

Worksheet B Table	Opportunities to Repurpose Input Assumptions
B.2.a.1. Annual Preschool Slot Plan	• Delivery models can be repurposed. For example, you could choose to model Family Child Care in place of Child Care Centers and adjust the assumptions in the other tables of the Implementation Plan to reflect the economics unique to that delivery model. • Dosage can be repurposed for any combination of class durations, so long as the other input assumptions, and in particular the number of classes per day per adult teaching staff member, are adjusted accordingly. • Age groups can be repurposed. For example, the CPQ&R can model infant and/or toddler care, so long as the other input assumptions, such as class size and staff-child ratio, are adjusted accordingly.
B.2.b.3. Lead Teacher Degree	• Any combination of up to three degree levels can by modeled for lead teachers, as long as other related input assumptions, and in particular the salaries for teaching staff by degree level, are adjusted accordingly.
B.2.b.4. Assistant Teacher Degree	• Any combination of up to two degree levels can by modeled for assistant teachers, so long as other related input assumptions, and in particular the salaries for teaching staff by degree level, are adjusted accordingly.
B.2.b.5. Lead Teacher Specialized Training	• Any combination of up to two credential levels can be modeled for lead teachers, so long as the other related assumptions in the table are adjusted accordingly.
B.2.c.3. Capacity Building	• This table can be repurposed to address any state-level cost that applies only to new facilities forecasted to meet the preschool slot plan.
B.2.c.5. External Technical Assistance	• The costs in the table can be repurposed to include any cost the user wants to model as a percentage of total state-level expenses.

Worksheet B Table	Opportunities to Repurpose Input Assumptions
B.2.d.1. Personnel Costs	• The default non-teaching staff positions can be repurposed for other position types, so long as the other related input assumptions in the table are adjusted accordingly.
B.2.d.4. Indirect Costs	• The costs in the table can be repurposed to include any cost the user wants to model as a percentage of total provider-level expenses.

Major Modifications.   Major enhancements are not recommended for users lacking strong skills in Excel, as such changes require modifications to formulas within not only the Implementation Plan in Worksheet B, but also in Worksheets D, E, and/or F. As mentioned above, the *Trace Dependents* feature in Excel is a very helpful utility when troubleshooting, designing, and implementing major enhancements. You should take care to understand all of the implications of a proposed change to the CPQ&R, using the *Trace Dependents* feature, prior to implementing a major modification. However, the CPQ&R was intentionally designed without write-protected formulas in these worksheets, and with the calculation steps clearly organized, so that users with strong skills in Excel can customize the calculator and ensure that its value grows with the needs of the state education agencies it was intended to serve.