California ISO TAC Model
Operating Instructions

Introduction

The revenue requirements model has three types of worksheets:

- A "Summary" worksheet that provides the forecasts of the HV revenue requirements, HV gross plant, HV rate base and TAC rate. There are no input cells on the Summary worksheet.
- An "Existing" facilities worksheet that captures all of the model input related to existing HV facilities and develops the forecast revenue requirements associated with existing HV facilities.
- A "New" facility worksheet for each new HV facility that captures all of the model input for the new HV facility and develops the forecast revenue requirements associated with the new HV facility.

The New facility worksheets are designed to be stand-alone and can be copied into a separate workbook for review by other parties, such as the respective PTO.

The model has been initially configured to accommodate up to 12 new HV facilities. Additional new facilities can be added to the model by adding a copy of one of the New facility worksheets to the end of the model, and modifying the Summary worksheet to include the new project in each of the three summary tables.

All worksheets cover a 15-year period, although the print settings have been set to print only the first 10 years.

Input cells are highlighted in yellow.

Further details on the Existing and New facility worksheets are provided below.

Existing Facilities Worksheet

The total HV revenue requirements are comprised of the HV Base TRR, the HV TRBAA and the HV Standby Credit.

The first section of the Existing facilities worksheet sets out the input assumptions used to forecast the revenue requirements for the existing HV facilities:

- Line 1 – the non-ISO capital rate (expressed as a percentage of the prior year gross plant) is used to forecast total gross plant for the existing HV facilities (line 133). For example, since existing HV gross plant is approximately $14.5 billion, a non-ISO capital rate of 2% would result in forecast annual capital maintenance additions of approximately $290 million.
- Line 2 - for simplicity, in the model all revenue requirement items other than amortization (depreciation), return (both debt and equity) and income taxes are referred to as "Operations and Maintenance" or "O&M". For example, property taxes are included as part of O&M. The O&M escalation rate is used to forecast the O&M portion of the Base TRR (line 138) and the small PTO portion of the Base TRR (line 140).
- Line 3 – the HV TRBAA escalation rate is used to forecast the total HV TRBAA (line 37).
- Line 4 – the HV Standby Credit escalation rate is used to forecast the total HV Standby Credit (line 53).
- Line 5 – the gross load growth rate is used to forecast total gross load (line 85).

For all forecast assumptions, the model applies the forecasts entered in the "Reference" column to each year of the forecast. If desired, different forecasts can be entered for each year using the blue shaded cells. Furthermore, annual forecasts for the total HV TRBAA, total HV standby credit and the total gross load can be entered directly using the blue shaded cells in lines 37, 53 and 85 respectively, in which case the forecast assumptions entered in lines 3, 4 and 5 are not used.

The next sections of the Existing facilities worksheet (lines 6 to 97) are taken at the start of current year from the California ISO's TAC Rates summary and include:

- The HV Base TRR for each PTO.
- The HV TRBAA for each PTO.
- The HV Standby Credit for each PTO.
- The Total HV Revenue Requirement for each PTO.
- The Gross Load for each PTO.
- The current TAC rate.
- The current HV utility specific rates.

The next sections of the Existing Facilities worksheet (lines 98 to 132) summarize the gross plant, rate base and Base TRR for the largest five PTOs:

- PG&E
- SCE
- SDG&E
- DATC Path 15
- Trans Bay Cable

These five PTOs account for 95% of the total HV Base TRR.

The components of the HV Base TRR for each of these five PTOs were not readily available. The best available information was included in the Reference column, and was then pro-rated to match the known HV Base TRR for each PTO. In most cases the data used was from the PTO's original filing, since settlement documentation does not include the required detail. References to the source material are provided in italics on each line, and links to all of the source material are provided on lines 142 through 147. Data that was pro-rated is highlighted in light brown.

The final section of the worksheet (lines 133 to 141) calculates the total HV Base TRR for the existing facilities:

- Line 133 – Gross Plant is increased by the forecast non-ISO capital rate (line 1).
- Line 134 – Rate Base is forecast by adding the increase in Gross Plant (line 133) and deducting the forecast amortization (line 135). The model assumes that there is no impact on rate base due to other changes such as changes in the amount of deferred taxes.
- Lines 135 – Amortization is forecast by applying the actual average depreciation rate (shown in the Reference column) to the forecast of Gross Plant (line 133).
- Lines 136 and 137 – Return and Taxes are forecast by applying the actual average return rate and composite income tax rate (shown in the Reference column) to the forecast of Rate Base (line 134).
- Lines 138 and 140 – Operations and Maintenance and the revenue requirements of the other PTOs are increased by the forecast O&M escalation (line 2).

If desired, the forecast average depreciation rate, return rate and composite income tax rate can be changed by inserting the desired forecasts in the Reference column of lines 135, 136 and 137 respectively (blue shaded cells).

New Facilities Worksheets

For each new project, the forecast assumptions for the new facility are entered on lines 1 to 18 of the respective New facility worksheet:

- Line 1 – the in-service year is entered in the format "yyyy". All additions are assumed to take place at mid-year.
- Line 2 – the annual capital expenditures are entered in nominal dollars. Any capital expenditures after the in-service year are added to rate base in the year of expenditure.
- Line 3 – the carrying cost applied to the CWIP balance can be either the cost of debt ("IDC") or the average return rate ("AFUDC").
- Line 4 – CWIP can be included ("Y") or excluded ("N") from rate base. If CWIP is included in rate base, there is no carrying cost applied to the CWIP balance and line 3 is not used.
- Line 5 – the average amortization rate for revenue requirement purposes is entered. The amortization method for revenue requirement purposes is assumed to be straight-line.
- Lines 6 to 10 – the percentage of debt in the capital structure, the cost of debt and the cost of equity are entered on lines 6, 7 and 9 respectively. The percentage of equity in the capital structure (line 8) and the average return rate (line 10) are calculated.
- Lines 11 to 13 – Federal income taxes are based on the MACRS 15-year method. Line 11 shows the annual depreciation percentages under this method (not an input line). Federal income taxes can be deferred or not deferred by entering a "Y" or "N" respectively on line 12. The federal income tax rate is entered on line 13.
- Lines 14 to 16 – State income taxes are based on the declining balance method. The declining balance percentage is entered on line 14 (for example, entering 200% on line 14 results in the use of the double declining balance method). State income taxes can be deferred or not deferred by entering a "Y" or "N" respectively on line 15. The state income tax rate is entered on line 16.
- Lines 17 and 18 – the incremental O&M costs associated with the new facility are entered on line 17, expressed as a percentage of the capital addition. The incremental O&M costs are assumed to start the year following the in-service date. Thereafter, the O&M costs are escalated by the rate entered on line 18.

For all forecast assumptions, the model applies the forecasts entered in the Reference column to each year of the forecast. If desired, different forecasts can be entered for each year using the blue shaded cells.