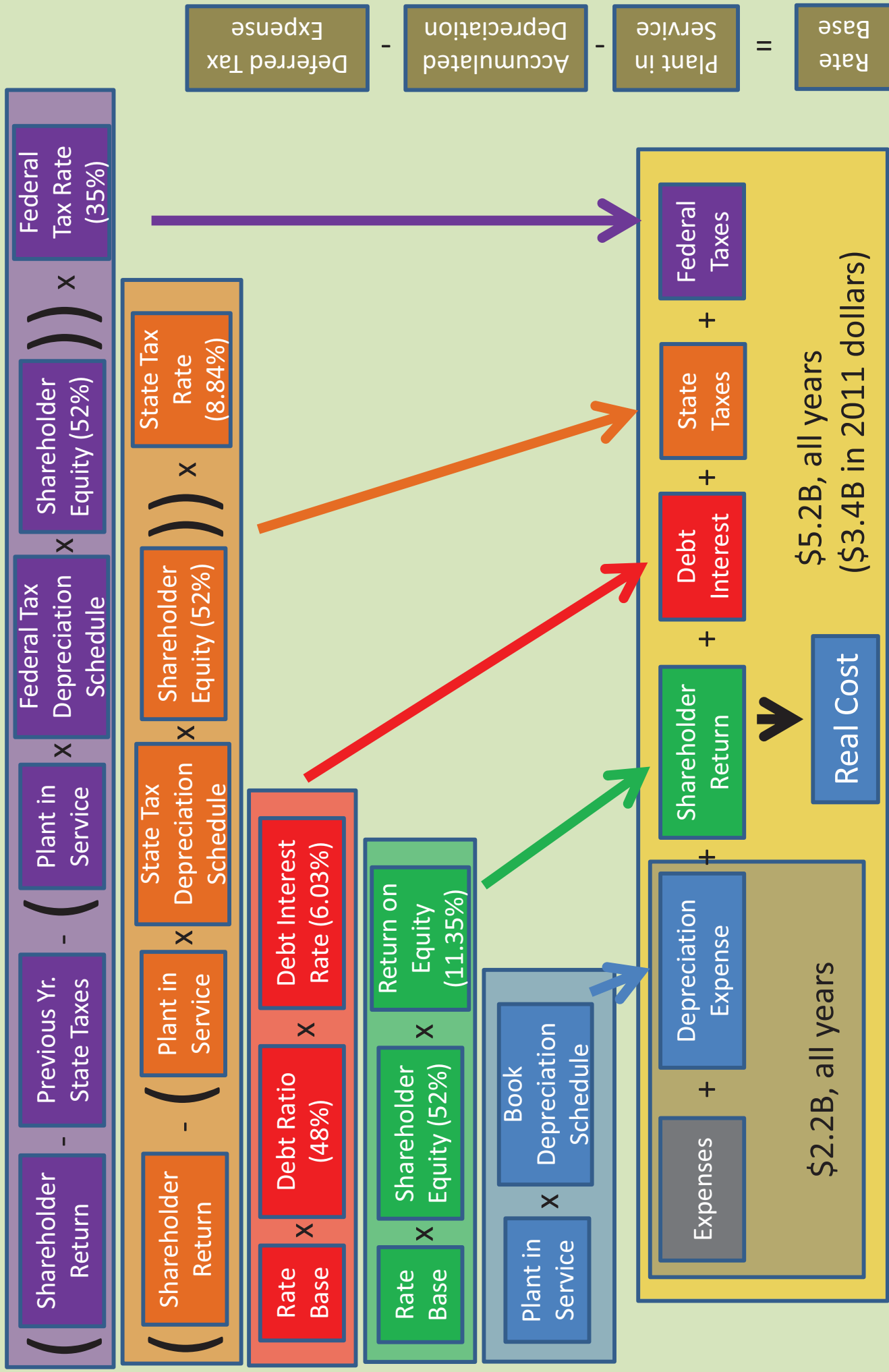


PG&E's Gas Transmission Upgrade Plan Annual Cost Calculation



The Calculation

Expenses: These total \$750M and include hydrostatic testing, MAOP validation, etc. These costs are only incurred 2011-2014.

Depreciation Expense: This is the principle associated with capital expenditures. Every year, for the useful life of the asset (45 years for pipe), a portion of the principle is paid down. This expense is spread over the useful life of the asset so that the cost is spread over current and future ratepayers.

Shareholder Return: Shareholders get a return each year for the equity they have invested in the utility. The equity is determined by the *rate base*. The rate base is the amount of capital plant invested that has not been paid back (Plant in Service – Depreciation Expense). Deferred Taxes will be explained below. The return to shareholders on rate base is determined by the percent of the equity investment, as opposed to debt (Shareholder Equity: 52%) and the Commission-authorized Return on Equity (11.35%).

Debt Interest: The interest on the debt must be paid back. As bondholders are the first paid, they shoulder the least risk, and so the interest rate is lower (6.03%) than that for shareholders.

State Taxes: State taxes are determined by (Shareholder Profit – Deductions) x Tax Rate (8.84%). The only deduction considered here is a deduction for depreciation.

Tax Depreciation: The purpose of tax depreciation is to allow a capital investment to be fully deducted, and that deduction spread over a number of years. Depreciation schedules for tax purposes are accelerated, so that the tax benefits happen earlier. This is meant to be an incentive to make these long-term investments, as tax benefits are more valuable in present dollars than they are in future dollars. This is one reason that PG&E always pays less than the nominal tax rate (35% federal + 8.84% state \approx 44%). On the federal level, added accelerated depreciation (*bonus* or *super* depreciation) was enacted in law for 2011 and 2012 to incentivize investment (read: jobs).

Federal Taxes: Federal taxes are determined by (Shareholder Profit – Deductions) x Tax Rate (35%). The deductions are accelerated depreciation and the previous year's state taxes.

Deferred Taxes: As the federal depreciation deduction is accelerated in contrast to the depreciation used to calculate rate base (*book* or *accounting* depreciation), one would expect that the benefit would be passed on to ratepayers. It is not, though, as federal law prohibits this, as passing the accelerated deduction to ratepayers would eliminate the incentive for the company (shareholders) to invest. This only applies to accelerated federal depreciation—the benefit of accelerated depreciation on the state level is passed directly to ratepayers. At the federal level, ratepayers do benefit indirectly, as the difference between book depreciation and tax depreciation—the *deferred tax*—is subtracted from rate base, which lowers shareholder return a small bit.

Notes on the worksheets:

1. Approximations

This model ignores:

- a. Chevron's contribution to the Standard Pacific line (STANPAC), which Chevron owns 1/7 share. (would reduce cost \$3-\$6M)
- b. Taxes on Preferred Stock. (would increase cost \$15-\$50M)
- c. Property Taxes. (would increase cost \$150-\$300M)

2. Assumptions

The return on equity (ROE) is set at 11.35% over the entire life of the investment. PG&E's ROE is very likely to drop in 2013, as interest rates are lower now than when the ROE was originally set. The assumption of 11.35%, however, is the same assumption that PG&E uses for its model.

PG&E currently has a capital structure of 52% shareholder equity, 46% long-term debt, and 2% preferred stock equity. These are determined by the CPUC and may be changed, though any change is unlikely to be dramatic

Federal and state tax rates reflect current rates.

An inflation rate of 3% annual is consistent with PG&E's cost escalation factor in its plan. Annual inflation has averaged 2.73% between 1990 and 2010. In 2010 and 2011 inflation was 1.64% and 3.16%, respectively.

3. Model Limitations, Timing Issues

The model does not take into consideration timing issues, such as when in the year work is completed (here assumed always at midyear), when after that PG&E is able to add improvements to rate base, when after that rates will reflect those costs, and when taxes are recognized and filed. Because of timing issues, the model here recognizes costs earlier (apparently 6mo-1yr) than PG&E's model requires those costs to be reflected in rates. This model therefore would overestimate rate impacts in the first several years. Should someone be interested in rate impacts over the life of the investment, he or she should ask PG&E to provide rate impacts to residential customers over the next 50 yrs.