

ON THE 'ENTIRE SYSTEM'S' COSTS, MARGINS AND ACCUMULATED DEBT OVER THIRTY YEARS Brief Note #17 – August 5th 2011

From the authors of *The Financial Risks Of California's Proposed High-Speed Rail Project*, six subsequent Briefing Papers, and *The Financial Analysis of Proposed CHSR Project*. Available at www.cc-hsr.org

Finding: Repaying construction costs for the 'entire system' over the full thirty years of debt amortization burdens the State and taxpayers with three times previous estimates.

Background: The 2009 CHSRA Business Plan, which covered only the first sixteen years of operations (2020-2035), focused on the construction and operation of Phase One, but not the repaying construction costs. Note #16 compared those years' financial results using the 2009 Plan's assumptions, as well as a 2011 estimate of increased Phase One construction costs using only the present, in-hand Federal grants.¹

But Prop 1A and AB3034 authorized the CHSRA to plan to build and operate the 'entire' system connecting seven cities.² This Note provides a preliminary view of the financial ramifications of building the 'entire system'. Importantly, it also reflects the complete, thirty-year repayment period, financial impacts.

Results For Phase One – Based on 2011's estimate of \$66Billion construction cost and only in-hand Federal Grants, this column provides the same annual financial information as in Note #17. Here the cumulative negative cash flow grows from \$65Billion in the 100% Case to \$137Billion in the No Operating Margin Case as Operating Margins drop from about \$2.4Billion to zero per year.

Results For The 'Entire System' – Early 2011 estimates of the cost to build the 'entire system' were \$116Billion; about 75% more than just the Phase One cost and nearly three times the 2008 CHSRA estimate. Even assuming an additional \$3Billion of Federal grants still requires borrowing about \$110Billion, increasing the annual debt service cost by about \$8Billion.

Assuming that operations for the 'entire system' start in 2025, five years after Phase One, and revenues, costs and operating margins increase by the same 75%; the operator's \$2.4Billion Average Annual Operating Margin in the 2009 Plan will grow to \$4.2Billion.⁸ Even results from the 100% Case

show that the Operating Margin will not cover the entire debt-servicing requirement, leading to a thirty-five year cumulative negative cash flow of \$114Billion. In the No Operating Margin Case, the cumulative negative cash flow grows to \$240B. These obligations remain after counting any Operating Margin. Some source, namely California's corporate and individual taxpayers, must service that obligation.

Conclusions: Using the complete thirty-five year payback period, the cumulative negative cash flows for Phase One double to about \$137Billion in the No Operating Margin Case.⁹ Completion of the 'entire system' leads to cumulative negative cash flows of \$114Billion – \$240Billion. Proceeding to build Phase One is highly questionable; but planning to build the 'entire system' exhibits extremely risky behavior.

| ANALYSIS OF BUILDING, FINANCING & OPERATING THE SYSTEM | | |
|---|------------------------|---------------------------|
| Construction In \$Billions Of Complete System | | |
| | Phase One ³ | 'Entire System' |
| Cost To Build Phase One and 'Entire System' | \$66B | \$116B⁴ |
| Less Federal Grants | \$3B | \$6B |
| Debt Required | \$63B | \$110B |
| Less Prop1A Bonds ⁵ | \$9B | \$9B |
| Construction Debt (Private or Public) | \$54B | \$101B |
| Annual Debt Servicing Requirement⁶ | (\$4.6B) | (\$8.0B) |
| Thirty Five Year Impact On Taxpayer's Of Cash Flows (2020-2055) (Cases based on the Average Annual Operating Margin in 2009 Operating Plan) | | |
| 100% of Operating Margin Case | \$2.4B | \$4.2B |
| 100% of Plan⁷ (ridership, ticket prices, and costs) | | |
| Annual Cash Shortfall | (\$2.2B) | (\$3.8B) |
| Cumulative Negative Cash Flow by 2055 | (\$65B) | (\$114B) |
| Some Operating Margin Case | \$0.9B | \$1.6B |
| ** 75% of Plan (ridership, ticket prices, and costs) | | |
| Annual Cash Shortfall | (\$3.7B) | (\$6.4B) |
| Cumulative Negative Cash Flow by 2055 | (\$110B) | (\$193B) |
| No Operating Margin Case ** (for example, 50% ridership, 70% of ticket prices 75% of operating costs in 2009 Plan) | \$0.0B | \$0.0B |
| Annual Cash Shortfall | (\$4.6B) | (\$8.0B) |
| Cumulative Negative Cash Flow by 2055 | (\$137B) | (\$240B) |
| ** See Note #16 at www.cc-hsr.org | | |

¹ Phase One (San Francisco-Los Angeles/Anaheim) financial and debt analysis can be found in Note #17 at <http://www.cc-hsr.org/>

² Prop1A ballot descriptions and AB3034 refer to the seven-city system (Los Angeles, Irvine, Riverside, San Diego, San Francisco, Oakland, and Sacramento) as the 'entire system' whose construction was estimated at about \$45Billion.

³ See: *The Financial Analysis of the Proposed CHSR Project*, June 2011, pgs. 8, 9, 14 at <http://www.cc-hsr.org/>

⁴ See: *The Financial Analysis of the Proposed CHSR Project*, June 2011, Exhibit 1: Appendix A & B, pages 39 and 54 to 58, at <http://www.cc-hsr.org/>

⁵ HSRA Report To The Legislature; December 2009; page 93, "Funding Sources Summary"

⁶ An all debt, versus debt and equity, formula is used as debt is cheaper to the State than equity. Debt is assumed to be serviced at 6% over 30 years.

⁷ Op Cit: Report To The Legislature; December 2009; page 83, "Table K, Net Surplus", averaged over 2020 to 2035.

⁸ This assumption means that additional miles of track will create additional Revenues per mile and Operating Expenses per mile as in Phase One.

⁹ In Note #17 the baseline is the CHSRA's first sixteen years of repayment. See at: <http://www.cc-hsr.org/>