

## ON THE 'ENTIRE SYSTEM'S' COSTS, MARGINS AND ACCUMULATED DEBT OVER THIRTY YEARS Brief Note #17 – August 5<sup>th</sup> 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](http://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.<sup>1</sup>

But Prop 1A and AB3034 authorized the CHSRA to plan to build and operate the 'entire' system connecting seven cities.<sup>2</sup> 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.<sup>8</sup> 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.<sup>9</sup> 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 <sup>3</sup>	'Entire System'
<b>Cost To Build Phase One and 'Entire System'</b>	<b>\$66B</b>	<b>\$116B<sup>4</sup></b>
Less Federal Grants	\$3B	\$6B
Debt Required	<b>\$63B</b>	<b>\$110B</b>
Less Prop1A Bonds <sup>5</sup>	\$9B	\$9B
Construction Debt (Private or Public)	<b>\$54B</b>	<b>\$101B</b>
<b>Annual Debt Servicing Requirement<sup>6</sup></b>	<b>(\$4.6B)</b>	<b>(\$8.0B)</b>
<b>Thirty Five Year Impact On Taxpayer's Of Cash Flows (2020-2055)</b> (Cases based on the Average Annual Operating Margin in 2009 Operating Plan)		
<b>100% of Operating Margin Case</b>	\$2.4B	\$4.2B
<b>100% of Plan<sup>7</sup> (ridership, ticket prices, and costs)</b>		
<b>Annual Cash Shortfall</b>	<b>(\$2.2B)</b>	<b>(\$3.8B)</b>
<b>Cumulative Negative Cash Flow by 2055</b>	<b>(\$65B)</b>	<b>(\$114B)</b>
<b>Some Operating Margin Case</b>	\$0.9B	\$1.6B
<b>** 75% of Plan (ridership, ticket prices, and costs)</b>		
<b>Annual Cash Shortfall</b>	<b>(\$3.7B)</b>	<b>(\$6.4B)</b>
<b>Cumulative Negative Cash Flow by 2055</b>	<b>(\$110B)</b>	<b>(\$193B)</b>
<b>No Operating Margin Case **</b> (for example, 50% ridership, 70% of ticket prices 75% of operating costs in 2009 Plan)	\$0.0B	\$0.0B
<b>Annual Cash Shortfall</b>	<b>(\$4.6B)</b>	<b>(\$8.0B)</b>
<b>Cumulative Negative Cash Flow by 2055</b>	<b>(\$137B)</b>	<b>(\$240B)</b>
** See Note #16 at <a href="http://www.cc-hsr.org">www.cc-hsr.org</a>		

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

<sup>2</sup> 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.

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

<sup>4</sup> 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/>

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

<sup>6</sup> 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.

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

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

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