

## ON HIGH SPEED RAIL RIDERS AND RIDERSHIP FORECASTS

### Brief Note #2 – June 6th 2011

From the authors of *The Financial Risks Of California's Proposed High-Speed Rail Project* and six Briefing Papers. Available at <http://www.cc-hsr.org/>

#### **Finding: Reasonable ridership forecasts are crucial to financial credibility**

**Background:** There are consistently far fewer riders than ridership forecasts. In the 2003 seminal study of megaprojects, the authors stress: ". . . (rail) forecasts were overestimated on the average by 65%."<sup>1</sup> The World Bank's 2010 high-speed rail report concluded that, "High-speed projects have rarely met the full ridership forecasts asserted by their promoters . . ."<sup>2</sup>

In 1992, the Eurostar forecasted "15 million passengers per annum in 1995 and growing". In 2009 Eurostar carried 9.2 million passengers, only 60% of that forecast.<sup>3</sup>

A US DOT study found that actual rail ridership forecasts were only 39% of forecasts.

Bay Area Rapid Transit's (BART) forecast for the SFO airport was for initial (2003) daily ridership of 39,500 – and 68,600 by 2010. The opening year daily ridership averaged 16,500, 42% of projections. Daily ridership in 2009 was still less than 17,000, only 25% of the 2010 projection.<sup>4</sup>

In 2008 the California High Speed Rail Authority (CHSRA) asserted there would be over 90Million train riders annually on the LA to SF route.<sup>5</sup> They reduced their 2009 forecast for 2030 to 39Million riders.<sup>6</sup> The more than a 60% decrease was challenged by, among others, a 2010 Senate-commissioned study by UC Berkeley's Institute For Transportation Studies.<sup>7</sup> Even the lower 2009 CHSRA projection inflated some stations' boardings, artificially increasing revenues, justifying specific routes and therefore financial credibility.<sup>8</sup>

A pragmatic forecast might use the USA's cousin to high-speed rail, Acela. In 2009, Acela's total ridership (Boston-NYC-PHL-WDC) was 3 million, about 11% of the 28Million in nearby metropolitan areas.<sup>9</sup> To attract 11% of California's 48Million residents in 2030, the train would have to carry about 5Million riders, only 13% of CHSRA's forecasted riders.<sup>10</sup> The Megaprojects book's findings suggest the 'overshoot' indicates attracting about 11Million riders in 2030.<sup>11</sup>

These 'forecasted-to-actual' examples show actual results to be 30-40% of forecasts; suggesting 2035 ridership of about 14Million, not 41Million passengers.<sup>12</sup> The CHSRA 2009 Plan shows that about a third of their 2035 passengers would come from the airlines and two-thirds from autos and local rail; suggesting about a total of 14Million from both, not that Plan's 41M. That range, from 12M to 16M, is consistent with actual results and pragmatic analyses.

**Conclusions:** Something is amiss. The present CHSRA-captive ridership reassessment study group will likely produce results similar to the 2009 version. This cannot go unchallenged. The Senate must require and commission an independent-of-the-Authority ridership reassessment. To regain credibility the project must have believable ridership numbers as its entire financial plan presently depends on a false and misleading ridership forecast.

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<sup>1</sup> Flyvbjerg, Bent; et al: *Megaprojects And Risk. An Anatomy of Ambition*; Cambridge University Press, 2003; pg. 26.

<sup>2</sup> Paul Amos, Dick Bullock and Jitendra Sondhi; World Bank Report No 55856; July 2010; pg.14.

<sup>3</sup> Op.cit. Flyvbjerg et al. for both the Eurostar quote at pg. 22 and page 25 for the DOT quote

<sup>4</sup> See: <http://www.sfexaminer.com/local/BARTs-price-of-expansion-98637079.html#ixzz0vtA2t9EL>

<sup>5</sup> 2008 California High-Speed Train BUSINESS PLAN, November 2008; pg 7.

<sup>6</sup> California High-Speed Rail Authority (CHSRA): *Report to the Legislature*; December 2009; page 73

<sup>7</sup> Samer Madanat; Director, UC ITS Berkeley; found at [http://www.berkeley.edu/news/media/releases/2010/07/01\\_high\\_speed\\_rail.shtml](http://www.berkeley.edu/news/media/releases/2010/07/01_high_speed_rail.shtml) and CARRD Ridership Comments; April 26, 2010 at <http://www.calhsr.com/>

<sup>8</sup> Both the 2009 SF and Anaheim boardings include, that is, 'double count' passengers from Oakland and San Diego where stations are to be constructed in later phases. See Bay Area to Central Valley High-Speed Train: Revised FINAL Program Environmental Impact Report; Volume 2: Response to Comments; August 2010, California High-Speed Rail Authority Page 1082. At <http://www.cahighspeedrail.ca.gov/assets/0/152/198/082f1fb0-c589-4719-88e7-99ef392cce91.pdf>.

<sup>9</sup> Table in "Amtrak Fiscal Year 2009" Oct. 2008-Sept. 2009.

<sup>10</sup> See: [http://www.michigan.gov/documents/hal\\_lm\\_census\\_Projections\\_Kurt\\_122858\\_7.pdf](http://www.michigan.gov/documents/hal_lm_census_Projections_Kurt_122858_7.pdf)

<sup>11</sup> Op.cit Flyvbjerg et al. pg. 25.

<sup>12</sup> Op.cit *Report to the Legislature*; December 2009; Figure 1, page 71