

# Transportation Solutions Defense and Education Fund

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January 29, 2015  
By E-Mail

Chad Edison, Deputy Secretary  
State Transportation Agency  
915 Capitol Mall, Suite 350B  
Sacramento, CA 95814

Re: Guidelines for Transit and Intercity Rail Capital Program

Dear Mr. Edison:

The Transportation Solutions Defense and Education Fund, TRANSDEF, is an environmental non-profit advocating for the regional planning of transportation, land use and air quality, with a focus on climate change. As transit advocates, we have a very different perspective than the agencies lining up to receive Transit and Intercity Rail Capital Program (TIRCP) funding. While we are pleased with the draft Guidelines, we believe that they do not address problems that are endemic in American infrastructure projects. If they are finalized in their current form, we are concerned that the on-the-ground outcomes in terms of ridership increases and GHG emissions reductions will be dismal.

## Cost Explosion

There are two related-but-independent problems here: First, it costs far more to build and operate transit in the US than it does in Europe--or than is reasonable. STA would do well to conduct its own investigation of the factors that lead to higher costs. The attached articles (with key statements highlighted) would be a good place to start. Our state needs to receive maximum value for these precious cap and trade funds.

## Project Selection

The other problem is project selection--the worst projects are selected for funding. This too has two elements. The first element is the appropriation of infrastructure projects by political leaders for self-promotion, log-rolling and political horse-trading. (See attached "Case Study: Politics Trumps Outcomes at MTC.") STA will need a strong sense of mission, along with requisite policies and procedures, to be able to resist the inevitable political pressures to fund projects with inferior outcomes.

The other element is the exaggeration of project benefits and the underestimation of costs by consultants. Professor Bent Flyvbjerg discussed the mechanisms of optimism bias and strategic misrepresentation (outright lying) in detail in his classic work

*Megaprojects and Risk*. An article title of his says it best: "Survival of the Unfittest: Why the worst infrastructure gets built." (See attached abstract.) In short, the projects that get funded are the ones that lowball their costs and over-promise the benefits. These two elements are frequently combined, where consultants massage politically driven projects to make them appear deserving of public funds. This harms the public, because more cost-effective (i.e., net beneficial) projects are pushed aside and left unfunded.

... for rail projects, an average cost overrun of 44.7% combines with an average demand shortfall of 51.4%...

... The problem is not that projects worth undertaking do not exist or cannot be built on time and on budget. The problem is that the dubious and widespread practices of underestimating costs and overestimating benefits used by many megaproject promoters, planners, and managers to promote their pet project create a distorted hall-of-mirrors in which it is extremely difficult to decide which projects deserve undertaking and which do not.

... It is not the best projects that get implemented in this manner, but the projects that look best on paper, and the projects that look best on paper are the projects with the largest cost underestimates and benefit overestimates, other things being equal. (Flyvbjerg, "What You Should Know About Megaprojects and Why," attached.)

The draft Guidelines declare open season for P.E.s to be the key element of project promotion. To be able to generate meaningful outcomes for TIRCP, TRANSDEF thinks STA needs to undertake a determined program to change the culture of consulting. Congress responded to an epidemic of accounting fraud with the certification requirements of Sarbanes-Oxley. Like accounting fraud, consultant misrepresentation harms actual people. When transportation professionals present an inaccurate project evaluation, that leads to a less-than-optimal capital allocation, wasting public funds. While we see in transportation parallels to accounting fraud, TRANSDEF recognizes that criminal prosecution of transportation professionals is currently unlikely.

Deterring the temptation to game the Guidelines is relatively simple: Consultants need to be more afraid of STA than they are of their clients. The incentives need to support honest work and discourage cheating, so that the public gets the emissions reductions and congestion relief it pays for.

We urge STA to require all consultant work to be signed off by the firm's CEO, with the STA equivalent of a Sarbanes-Oxley statement. The CEO should declare under penalty of perjury that the firm has not knowingly altered, destroyed, mutilated, concealed, covered up, falsified, or made a false entry in any record, document, or tangible object with the intent to impede, obstruct, or influence the STA project selection process.

Firms need to know that if they are found to have artificially enhanced the merits of a project, they will be barred for a period of years from submitting work to STA. That is the level of threat it will take to enable consultants to stand up to client pressure to pump up the ridership, or otherwise make a project more attractive. That is what is needed to get past the "everyone's doing it" excuses. STA needs to take explicit steps to counteract the pattern of known industry falsification.

Due to the complexity of starting a new program like this, we recognize that it may not be possible to include a detailed description of its requirements in the Final Guidelines. We suggest mention be made that a certification process is in development.

#### Reference Class Forecasting

Reference class forecasting is an innovation that directly tackles the dual challenges of optimism bias and strategic misrepresentation. Even though every project tends to consider itself unique and without peers, there are commonalities between megaprojects. Useful comparisons become possible when a project is placed in a class of peers. This process is now a requirement for all British government projects. STA should acquire the ability to perform this analysis on all projects submitted.

#### Maintenance of Effort

The Guidelines need to set a bright line test to differentiate between the support of existing expansion programs and additional cap and trade capital investments that will increase ridership and decrease GHG emissions. Agencies will be tempted to shift their capital funds to system maintenance as cap and trade funds pick up the load. While system maintenance tends to get shortchanged, and needs a comprehensive funding strategy, these new funds should not backfill past deferred maintenance.

#### Embedded Energy

GHG analysis should use a life-cycle approach, so that all emissions are captured. Otherwise it is easy to miss inputs like cement, which may generate very large emissions, thus negating project benefits.

#### Scope Changes

A very serious problem arises when project scopes are changed but project selection is not revisited. A cautionary tale: The BART Oakland Airport Connector final cost was roughly 5 times its estimate. The project was downscoped prior to the start of construction, removing all the benefits to the local community. The net benefits of the finished project are a tiny fraction of what was initially promised. The funding agency refused to reevaluate the project, despite a large outpouring of public criticism about the "bait and switch." STA must put muscular procedures in place to prevent such outcomes.

#### Proactive Planning

TRANSDEF is aware of a subtle limitation of the central funding agency model: it is dependent on applications from existing agencies, each with its own geographic scope. We have seen situations where needed service falls into the cracks between agencies. As no agency is itself responsible, these gaps remain unserved.

We urge STA to take on a LAFCO-type role for transportation, where it remains alert to gaps in service and recommends 1). expansions of agency boundaries of responsibility and 2). specific projects to fill in service gaps. Example: MTC funds regional service by Golden Gate Transit connecting Marin and Contra Costa Counties. This service would otherwise not exist, as it does not fall within the responsibility of any agency.

#### Track the TIRCP Outcomes

While agencies like MTC make a point of not looking back to evaluate outcomes, STA must be accountable for the use of cap and trade funds. It should compile reports that track actual outcomes, juxtaposed with estimates submitted with funding applications.

#### Conclusion

TRANSDEF recognizes the difficulties faced by STA in implementing the TIRCP and the importance of achieving optimal outcomes. The rest of the world is watching what you do. As Flyvbjerg wrote, "Never has it been more important to choose the most fitting projects and get their economic, social, and environmental impacts right." (*Id.*) We appreciate this opportunity to comment on the draft TIRCP Guidelines. We would be pleased to assist in the implementation of these ideas.

Sincerely,

/s/ DAVID SCHONBRUNN

David Schonbrunn,  
President  
David@Schonbrunn.org

#### Attachments

Reforms Key to Controlling Costs on Public Works Megaprojects, Say Experts

Why is it so expensive to build a bridge in America?

American transit activists need to speak up about exorbitant construction costs

Survival of the unfittest: why the worst infrastructure gets built

—and what we can do about it (abstract)

What You Should Know About Megaprojects and Why: An Overview

Case Study: Politics Trumps Outcomes at MTC (under separate cover)