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To:	Casey Moreau
Cc:	Craig Helmann; Kelly McGourty; Gary Simonson
Subject:	Written testimony for the PSRC Board, March 14
Date:	Thursday, March 14, 2024 1:23:19 AM
Attachments:	John Niles Statement to PSRC Transport Policy Board, 14-03-24.pdf

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See attached. I will also deliver two minutes of this orally. Please make this written version available during the meeting to the attendees.

John

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Submission for the record of the March 14, 2024 Transportation Policy Board of Puget Sound Regional Council

Good morning, I'm John Niles, a Seattle resident and independent transportation analyst commenting on the Climate Work Summary on your agenda today. I am speaking to urge the Board's attention to the complete life cycle analysis of big transportation infrastructure projects, abbreviated LCA. LCA – life cycle analysis -- includes the carbon generation impacts of constructing guideways, bridges, tunnels and stations and then carbon generation from maintenance and refurbishment, as well as of course the later carbon saving after ribbon cutting that occur from mode switching by consumers, from driving to walking near the stations, for example, or changing from commuting in a gasoline powered car to riding on electric light rail.

Back in June 2006, I personally carried out the LCA that caused Sound Transit and the U.S. Government to put into the Record of Decision for the now operating Link light rail to Northgate that the carbon generation of digging the train tunnel and moving the dirt in diesel trucks would generate more carbon than would be saved by people riding the train instead of driving. Unlike air pollution like ozone and particles that blow away, carbon into the global atmosphere is pretty much permanent as the carbon life cycle operates and the atmospheric carbon build up we read about in the news continues.

For Northgate light rail, 640 thousand metric tons of carbon dioxide equivalent was estimated in the EIS to build that train's tracks and station, and – get this -- just 14 thousand tons per day was computed as saved because of people riding the train. 14 thousand tons saved per year divided into 640 thousand tons spewed in construction implies 45 years for payback of the carbon construction debt, and this 2006 calculation did not include the rise of zero-emission electric cars, likely causing a longer payback. So I hope this Policy Board takes LCA into account when planning transportation for the years ahead.

Some rethinking is warranted on some of the infrastructure construction that still lies ahead. Spending four billion dollars to build a light rail stub line from

SODO to three new train stations in West Seattle with a new bridge, some tunneling, and some trenching has very bad LCA carbon numbers. The Draft EIS for that project suggests the train will generate around 8000 new transit trips per day above what is already achieved with existing RapidRide bus service. But carbon coming from construction for the now preferred alignment comes to 600 thousand tons generated through opening in 2032. With the latest new GHG methodology from the National Academy of Sciences, which takes into account the VMT reduction benefits of both electric train ridership and walkable urbanism near stations, the payback on the carbon construction of West Seattle light rail computes to 78 years. You already know about the carbon tipping point that is expected to occur way sooner than that. That is the reason for your focus today on what to do about carbon levels in 2030.

With just this example in mind, which will be publicized by Smarter Transit in the months ahead, I urge consideration by this Policy Board on climate damage brought forth by the carbon spewed out in new rail infrastructure construction, which of course does apply to road improvements as well. But lane painting and signage on existing roads boosting the exclusive use of electric buses is a quite low LCA carbon cost to generate more bus riding and less driving. With electric buses, of course! Thank you.

John Niles, March 14, 2024, [redacted]