

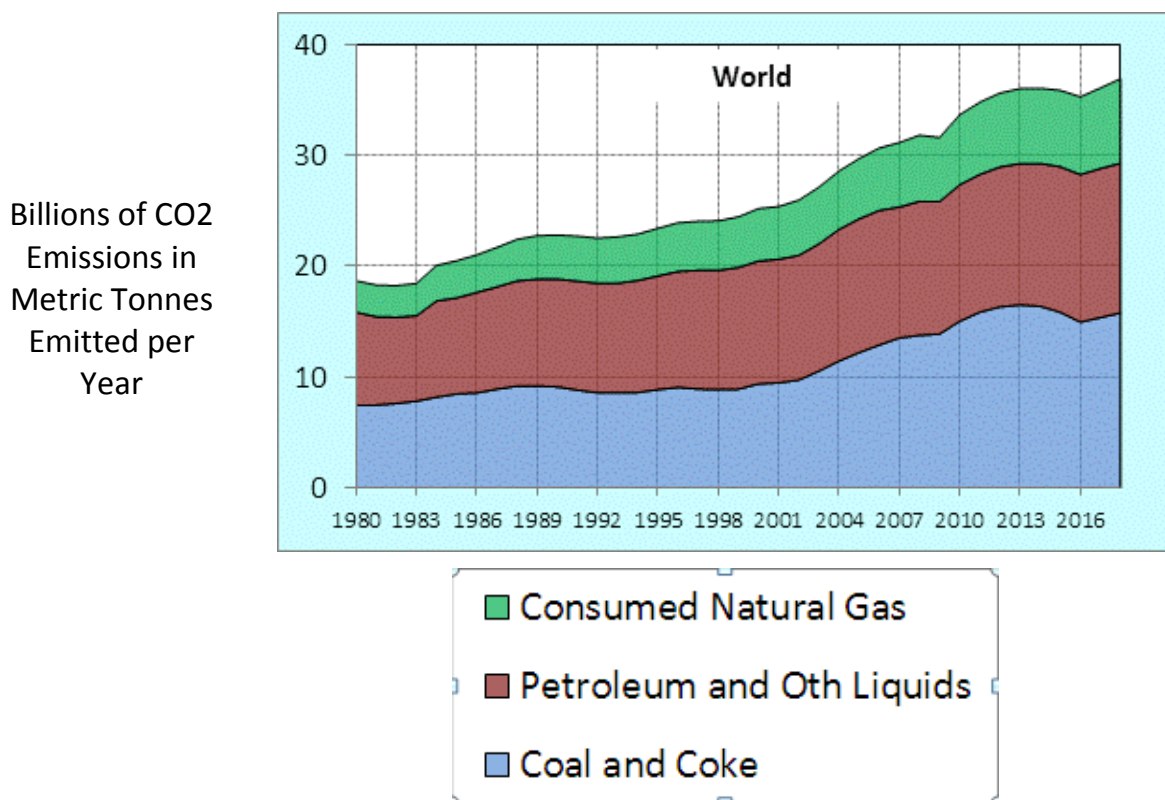
## Board of Directors Meeting: September 15, 2021 – Public Comments

Date	Name	5. Public Comment on Non-Agenda Items
9/14/2021	Mike Arnold	See attachments
Date	Name	6. Consent a. Accept Monthly Ridership Report – August 2021 b. Approval of Civic Edge Consulting Contract Amendment No. 2 c. Approve a Resolution Confirming Documentation of Salary of Former SMART General Manager, Lillian Hames
		None
Date	Name	7. Authorize the General Manager to Award a Sole Source Purchase Order to MAHLE Industrial Thermal Systems America, L.P in an amount of \$200,581.36 for Specialized Diesel Multiple Unit (DMU) Maintenance Equipment
		None
Date	Name	8. Approve a Resolution authorizing the 1) Reaffirming and updating the SMART Title VI Program and Nondiscrimination Policy; 2) Submittal of the document to the Federal Transit Administration; and 3) Allowing the General Manager authority to make non-policy and administrative changes to the SMART Title VI Program as needed, with changes reported to the Board
		None

To: David Rabbit, SMART Chair and SMART Boardmembers; Heather McKillop  
From: Mike Arnold  
Subject: Agenda Item # 5: Data on Coal Production, Consumption, and CO2 Emissions  
Date: September 12, 2021

The Energy Information Administration (EIA) in the DOE publishes lots of data on energy consumption and CO2 emissions. The graphs below are relevant to discussions about possible coal trains traveling through Marin and Sonoma counties in order to export coal from US ports. These graphs were prepared for a series of lectures I'm giving at Sonoma State and Dominican University in October and November entitled "Is there a Conflict between Economics and Environmental Preservation?"

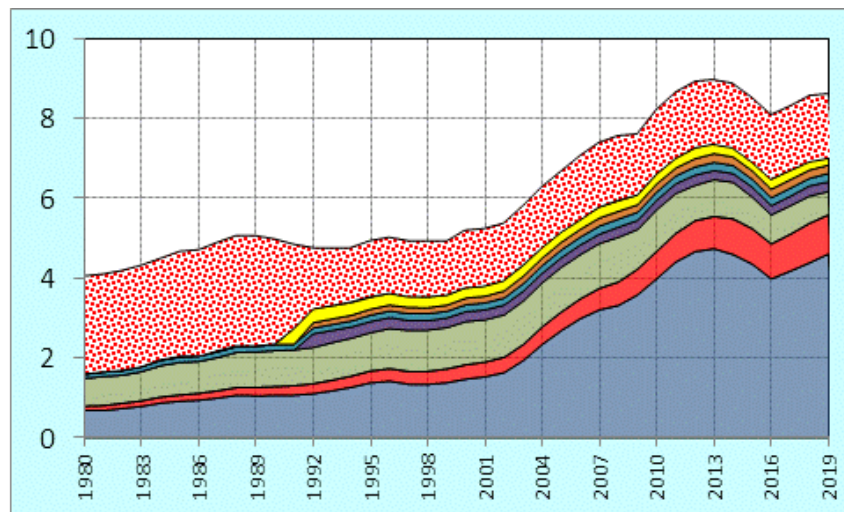
**Figure 1: Worldwide CO2 Emissions by Fuel**



**Comment:** According to the DOE worldwide emissions of CO2 have almost doubled since 1980 and the biggest contributor to the increase is emissions from coal.

**Figure 2: Coal Consumption and CO2 Emissions by Major Country**

Trillions of  
Short Tons  
Consumed  
per Year



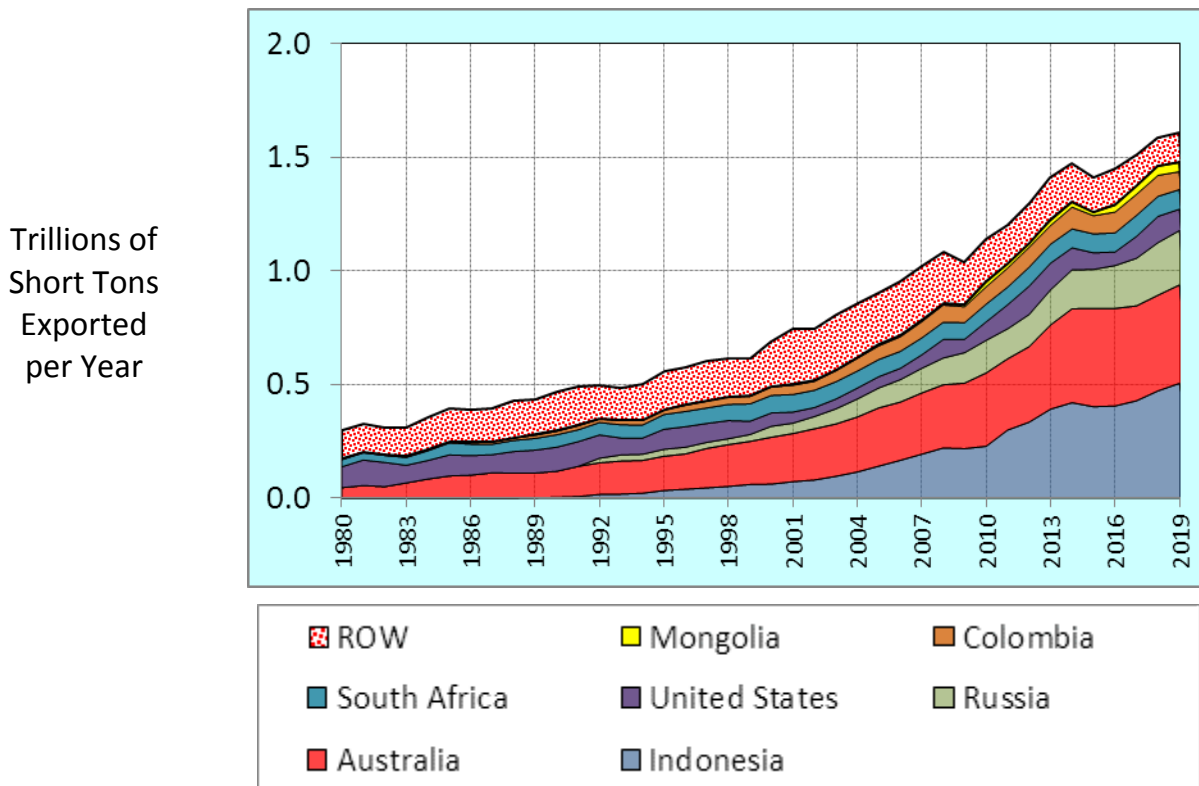
Note: Consumption of coal in Russia was not available until 1990.

ROW = rest of the world or the aggregation of consumption over 223 countries.



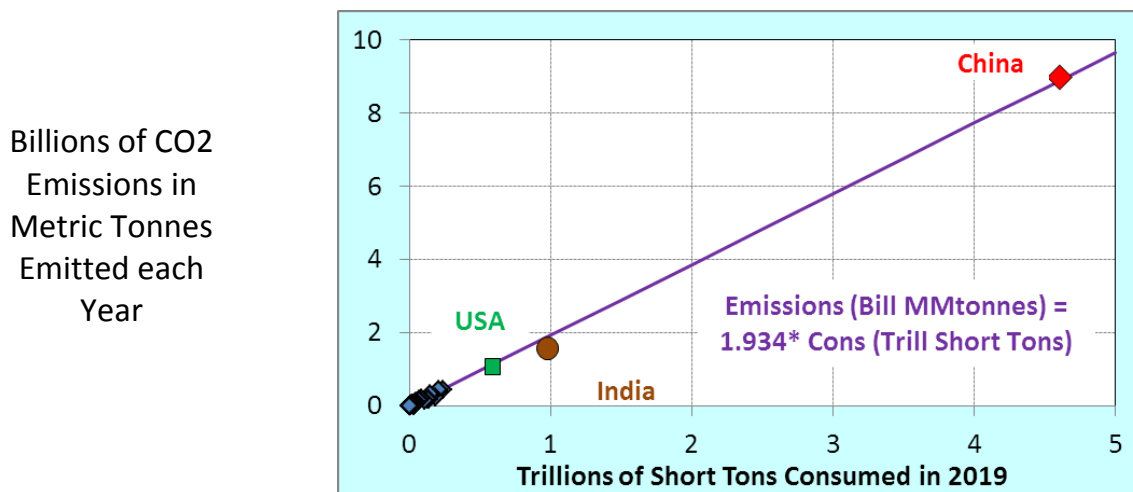
**Comment:** Consumption of coal is increasing worldwide. China is by far the largest consumer. Next is India and while growing, is much smaller than China. US consumption has declined, but it is the third largest consumer of coal in the world.

**Figure 3: Coal Exports by Country**



Comment: Indonesia is now the largest exporter of coal. Australia is not far behind. The US is the fourth largest exporter of coal.

**Figure 4: Coal Consumption vs. Coal related CO2 Emissions by Country**



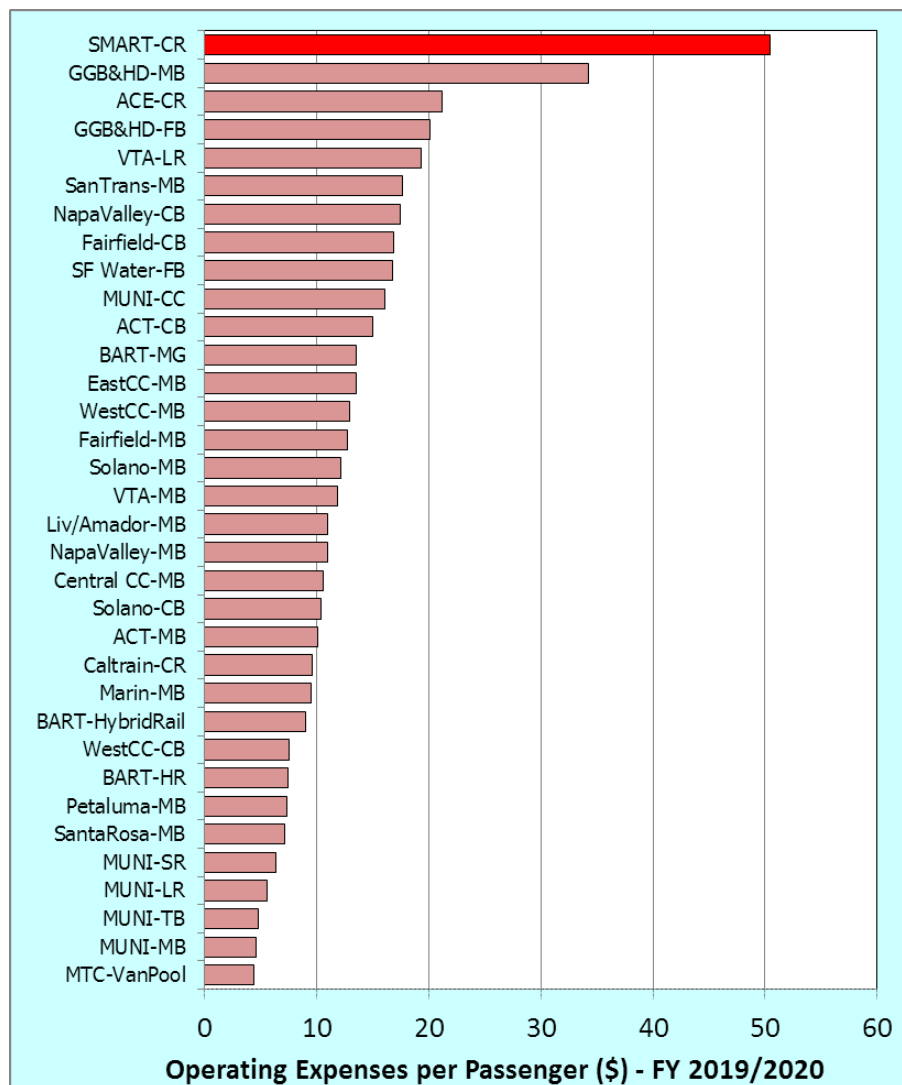
Comment: if we are to reduce CO2 emissions on the planet, it is critical to reduce coal consumption. One step toward reducing coal consumption is to put an end to exporting coal. If the US doesn't stop exporting coal neither will Indonesia and Australia.

To: David Rabbit, SMART Chair and SMART Boardmembers; Heather McKillop  
From: Mike Arnold  
Subject: Agenda Item #5: FY 2019/2020 Operating Expense per Passenger for Bay Area Transit Operators  
Date: September 14, 2021

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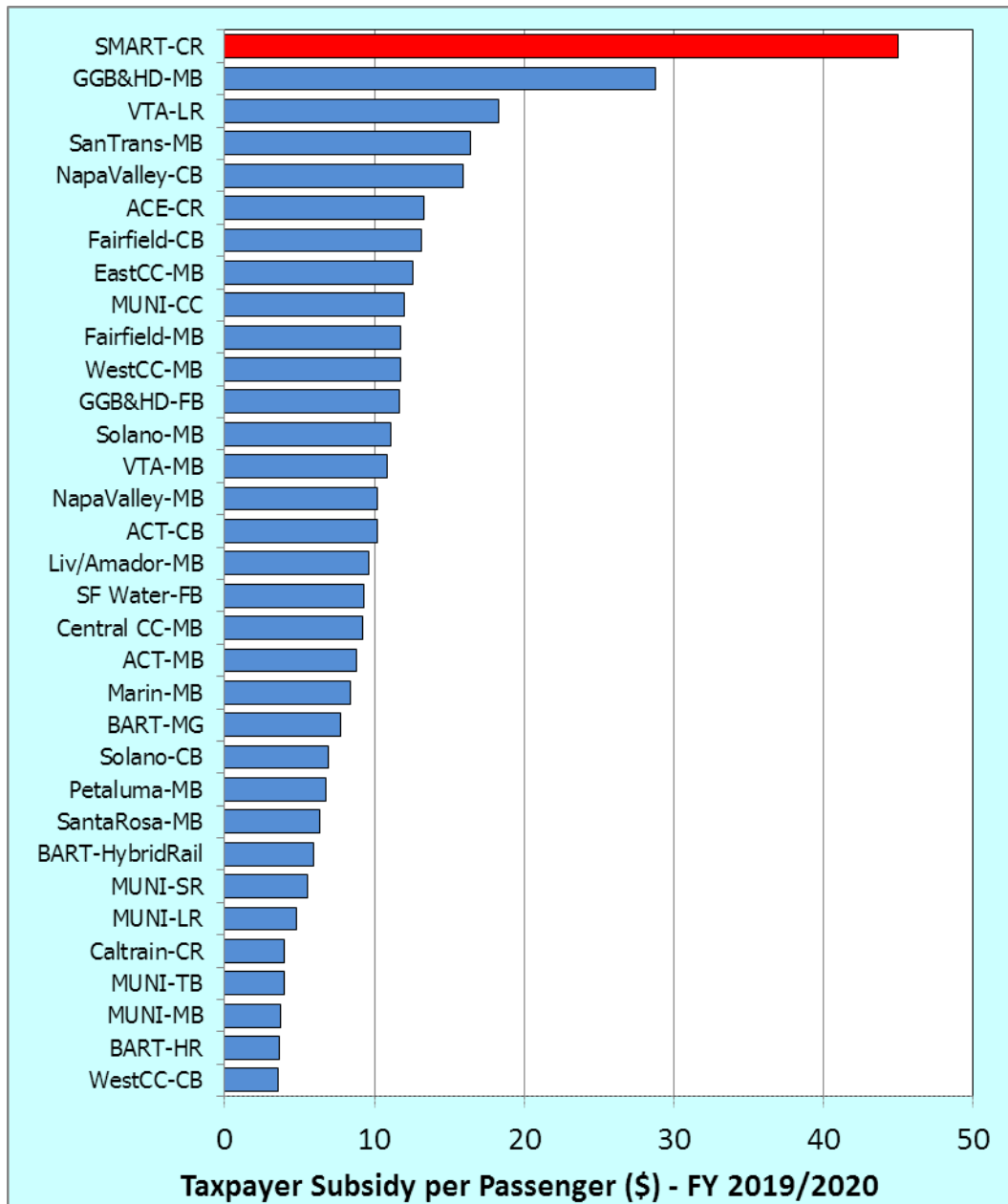
The National Transit Database has recently published operating expenses per passenger by transit operator and mode for FY 2019/20 ending June 30, 2020. The chart below is for Bay Area operators. From the reported data, taxpayer subsidy per passenger can be calculated and that chart is on the next page

### Operating Expenses per Passenger for FY 2019/2020 (\$)



Mode Codes: CR – commuter rail, MB – motor bus, HR – heavy rail, LR – light rail, TB – trolley bus, SR – streetcar, CC – cable car.

### Taxpayer Subsidy per Passenger for FY 2019/2020 (\$)



Taxpayer subsidy per passenger = (Operating Expenses – Fare Revenues)/Unlinked Passenger Trips