Weeks of August 5 and August 12, 2019

Eno Transportation Weekly

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Appropriations Work Continues (Behind the Scenes) Over August Recess

By Jeff Davis

It may be a quiet Congressional recess in most places around the nation’s capital, but work continues in some circles on the fiscal 2020 appropriations process, focusing on three areas: drafting an initial stopgap continuing resolution, making most of the hard choices on the Senate appropriations bills, and giving initial thought to how to downsize some of the House appropriations bills.

Continuing resolution. Fiscal year 2019 ends at midnight on September 30, but since that day falls on the Monday of Rosh Hashanah in 2019 (meaning Congress won’t be in session and voting that Monday), then from Congress’s point of view, the deadline for putting some kind of stopgap appropriations legislation for FY 2020 in place is the close of business on Friday, September 27. Members of Congress won’t be coming back to D.C. from vacation recess until late on Monday, September 9. While a few big decisions about what will and won’t be included in the inevitable stopgap continuing resolution (CR) will have to be made by Congressional leaders that week, the smaller decisions, and the drafting and framing work, will have to be done by Appropriations Committee staff during the recess.

Even a “clean” CR (one that is supposed to be devoid of any changes in policy or funding levels) always has to have a few “anomalies” to reflect facts on the ground that may have changed since the last appropriations law, where a program requires more money than the prior year, early on, just to maintain the same level of service as the prior year. And other extensions and expiring provisions often are rolled into a CR so Congress only has to pass one big bill in the days leading up to September 30.

The White House Office of Management and Budget takes the lead in this regard every August and sends to the appropriators a list of requested “anomalies” that the Administration feels should be included in the CR. For example, here is the FY 2016 OMB list, here is the FY 2017 OMB list (which included an Amtrak proviso), and this article discussed the requested FY18 anomalies. Not all of the requested anomalies pass muster with the House Appropriations Committee staff (the House staff does most of the work preparing the initial CR), and sometimes the appropriators add their own.

One unrelated “must pass by September 30” item likely to ride on the CR if it doesn’t get passed on its own is an extension of federal flood insurance programs (scheduled to expire on September 30).
Transportation advocates want two specific provisos to be included in a continuing resolution:

- **Canceling the July 2020 highway rescission.** The bipartisan budget deal negotiated last month would have been a good place to repeal section 1438 of the FAST Act, which will **rescind $7.569 billion in highway formula contract authority** on July 1, 2020. But that did not happen, and now state DOTs and the highway construction alliance are even more desperate to find a legislative vehicle to repeal the rescission. A must-pass bill like the CR is a likely candidate, but canceling a $7.6 billion spending cut that is currently scheduled by law is the same thing as increasing spending by $7.6 billion (from a budget scorekeeping point of view). There would be Budget Act and other points of order against including the rescission cancelation in the CR, but the real problem is that the appropriators have been reluctant to get involved - it’s not a problem they created, and fixing it would add $7.6 billion to their budget totals (at least in the short term), not the budget totals of the transportation policy committees, who did create the problem.

- **Suspending the Rostenkowski Test.** The Mass Transit Account of the Highway Trust Fund failed its statutory solvency test earlier this year (named after former Ways and Means chairman Dan Rostenkowski (D-IL) who authored the provision creating the Account). The Treasury Department predicted that the FY 2020 mass transit contract authority apportionments would cause total unfunded contract authority (new apportionments and old unexpended apportionments, minus cash balances in the Account) to hit $27 billion, which would be $1.2 billion more than the $26 billion the Transit Account is expected to receive in tax receipts over the four year FY 2020-2023 period. As detailed [here](#), this will cause FY 2020 transit apportionments to be automatically cut by about 12 percent. The House Appropriations Committee has already taken care of this in the FY 2020 Transportation-HUD bill (see sec. 164(1) of Division D of [H.R. 3055 as passed by the House](#)), but the regular appropriations bill may not be enacted into law for quite some time. Apportionments are supposed to be made on October 1 (which would make inclusion in a CR mandatory), but the appropriations process has broken down so much that apportionments now don’t go out until four or five months into the fiscal year. Nevertheless, given how unpredictable the full-year process has become, if you’re going to suspend the Rostenkowski Test, sooner is better than later.

**Senate bill drafting.** All year, Senate Appropriations Committee chairman Richard Shelby (R-AL) has held back from letting his subcommittees draft their FY 2020 bills, waiting for an agreement with President Trump and House Democrats on the overall spending totals. Now that the agreement has been reached, and signed into [law](#) on August 2, Shelby has reportedly given his subcommittee chairman their tentative spending totals for the 12 general appropriations bills (called the “302(b) allocations” for the section of the Budget Act that requires them). As a result, the Senate subcommittee staffs now get to spend much of the recess making the hard decisions on which programs to favor (and which to freeze or possibly cut) with the money, in anticipation of a number of bill markups starting when the Senate returns the week after Labor Day.

The budget caps under the new deal are $44 billion higher than the FY 2019 caps, and allow $19.5 billion in increases in the defense category and $24.5 billion in increases in the non-defense category.

**The new spending caps allow plenty of real FY20 program growth...**

<table>
<thead>
<tr>
<th>Millions of dollars of discretionary budget authority.</th>
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<tr>
<td>FY19 Enacted</td>
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However, those increases are never distributed evenly, and if Shelby did indeed set aside $5 billion of the non-defense increase for border enforcement, as has been rumored, then that would leave less left over for the other non-defense bills.

**House bill downsizing.** While Shelby made his panel wait to write their bills, his house counterpart, Nita Lowey (D-NY) had her committee draft bills to optimistic spending totals that assumed budget caps that were $7 billion higher than the caps that wound up being enacted into law last month. So her staff now has to start thinking about where to cut their bills for the inevitable reconciliation with the Senate which now has to conform to the new spending caps. And since Lowey’s plan assumed a different defense/non-defense split than wound up being enacted into law, her bills will actually get a defense increase and have to eat a collective $11.5 billion non-defense cut.

However, two House bills stand out for downsizing because their spending totals now exceed those under the plan originally set by Lowey. In the original House plan, a one-time exemption from the budget caps for the 2020 Census would have been created, at $7.5 billion, so that money in the House bill was not counted towards the spending caps. The final budget deal did create a one-time Census exemption, but it’s only $2.5 billion, not $5.0 billion, so the Commerce-Justice-Science bill (which includes the Census funding) is now $5 billion above its own budget ceiling. And during the full Appropriations Committee markup of the draft Homeland Security bill, Rep. David Price (D-NC) offered an amendment to prevent the Trump Administration from implementing a number of new or proposed policies for dealing with aliens and migrants. The amendment passed, but after it passed, the Congressional Budget Office determined that some of the new policies would save federal taxpayers some money, so canceling those new policies via legislation would be the same thing as passing new legislation with $3.1 billion in new spending. So the Homeland Security appropriations bill is now $3.1 billion over the funding total originally given it by Lowey. Those two bills will likely be the initial focus for downsizing to meet the new spending caps.

Two House bills have totals outside what Chairwoman Lowey originally planned - Commerce-Justice-Science for 2020 Census reasons and Homeland Security because of a costly amendment.
**Millions of dollars of discretionary budget authority.**

<table>
<thead>
<tr>
<th>Spending Plan</th>
<th>Original Lowey</th>
<th>What the Bill Now Costs</th>
<th>Difference</th>
<th>Difference</th>
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Parking Reform Picks up Steam in 2019

By Romic Aevaz

The United States is estimated to have anywhere from 722 million to 2 billion parking spaces, and many U.S. cities are commonly associated with car-centric land use and plentiful parking. Houston, Texas is estimated to have over 30 parking spaces per resident, while over 14 percent of Los Angeles County’s land is estimated to consist of parking (3.3 spots per car). Over the past two decades, research from economists has brought parking policy to the forefront of transportation discussions and raised awareness of the impact of cheap, plentiful parking on mobility and housing affordability. In the past several months, Houston, Austin, San Diego, and Los Angeles have taken up parking reform efforts that could mark a departure from the status quo.
On July 17, the Houston City Council voted to extend its existing parking minimum exemptions beyond the Central Business District and into the adjacent East Downtown area and portions of the Midtown neighborhood, citing high transit ridership, nearby METRORail lines, and a plethora of existing surface and garage parking. The city’s existing parking requirements include, for example, 1.33 spaces for each one-bedroom apartment and 1.66 spaces for every two-bedroom apartment.

Some 150 miles away, the Austin City Council voted on May 2019 to consider eliminating parking requirements within a quarter-mile of major transit corridors and activity centers as part of the city’s land-use code rewrite. Additionally, the Council requested staff to develop a range of possible incentives to boost transit ridership and reduce single-occupancy vehicle trips in December 2018 and was presented with six transportation demand management options earlier last month. Notable among the six options, which include a transit rewards program and free or discounted transit passes to employees, was a recommendation to “unbundle” parking citywide, requiring parking spaces to be leased or sold separately from apartment, condo, or office units.
Outside of Texas, the Los Angeles Planning Department released a draft of its Downtown Community Plan last month, which lays out a range of planning goals and proposed zoning strategies for Downtown. Among the action items to incentivize more affordable housing is a proposal to both unbundle residential parking and eliminate residential parking minimums in Downtown LA.

Los Angeles County also released a sweeping sustainability plan last week that sets ambitious public health, land use, and transportation goals, including reducing per capita vehicle miles traveled (VMT) from 22 miles today to 10 miles by 2045, and increasing the share of trips taken by public transit, micromobility, biking, or walking from 11 percent today to 50 percent in 2045. Among the dozens of proposed action items to meet these targets is a proposal to develop a comprehensive parking reform strategy that includes, but is not limited to:

- Eliminating minimum parking requirements for all new residential units
- Setting parking maximums within half a mile of high-quality transit stops
- Creating and expanding parking benefit districts
- Incentivizing developers to provide less than the maximum allowable parking

In March 2019, San Diego similarly eliminated parking minimums and required parking unbundling for all new residential developments within a half-mile of transit hubs and set a maximum of one parking space per unit for new projects downtown.

Houston, Los Angeles, San Diego, and Austin join regions like Seattle, Miami, Buffalo, and Arlington County, Virginia, among many others, in considering or implementing parking reform initiatives. Parking reform, particularly parking unbundling, has proven to be a highly effective transportation demand management (TDM) strategy to influence travel behaviors and make residents more aware of the true cost of parking. As Donald Shoup writes in The High Cost of Free Parking:

“Bundled parking hides the cost of owning and using cars, and it distorts choices toward cars and sprawl... By contrast, unbundled parking will reveal the cost of parking, reduce the prices of everything else, and give everyone the option to save money by conserving on cars and driving.”

A study of residential TDM programs in Arlington County, Virginia, where new developments are required to implement TDM measures and transportation performance monitoring as a condition of their permit, found that car ownership rates per resident were 13 percent lower when parking was unbundled, while single-occupancy vehicle (SOV) use was 12.5 percent higher for commute trips and 40 percent higher for non-commute trips when parking was bundled. Other studies have found that households with bundled parking are 50-75 percent less likely to be vehicle-free, even when controlling for potential self-selection effects (i.e. drivers choosing to live in units where parking is bundled).

In addition to reducing car ownership and SOV trips, unbundling parking can also make housing more affordable. Various analyses have measured the effect of parking spots on rent, with one estimate pegging the average construction cost of one parking spot at $18,000, translating to a $225 increase in rent costs. Another estimate sets the price of garage parking at $1,700 a year, or 17 percent of a unit’s rent.

In Miami-Fort Lauderdale and Portland, elimination of parking minimums in certain neighborhoods
resulted in parking ratios **dropping** from 2.53 to 1.69 and 1.50 to 0.90, respectively from 2006 to 2016. Similarly, Seattle’s relaxing of parking requirements downtown and in neighborhoods near high-frequency transit over the past decade saw the number of parking spaces per unit in new apartments **plummet** from 1.57 in 2004 to 0.63 in 2017. Even with these overall declines, a 2015 **study** by King County Metro still found that multifamily buildings in the Seattle region supplied over 40 percent more parking than was actually utilized.

Last year, Seattle **passed a package** of further parking reforms that require parking unbundling in new and existing buildings of 10 units or more as well as new commercial leases for new and existing structures that are 10,000 square feet or greater. This package also creates flexible-use parking designations to make it easier for property owners to lease/share unused parking spaces to those outside the building, allows for park-and-ride facilities within garages in certain areas, and expands the number of neighborhoods exempt from parking requirements by clarifying the definition of “frequent transit service.”

The wave of cities taking up parking reform in 2019 suggests that more policymakers are reevaluating traditional approaches to parking for a variety of reasons. As Houston monitors the results of its expanded market-priced parking program and both Los Angeles and Austin consider wide-scale parking minimum reduction and unbundling, these regions ought to take note of the results of parking reform efforts in places like Seattle, Miami, and Arlington, VA.

*(Ed. Note: The Eno Center has done a lot of work on parking over the last 98 years, much of it from the prevailing point of view of traffic engineers at the time – from this piece in 1950 bemoaning the lack of parking in downtown business districts all the way to this piece in 1997 explaining how ISTEA worked parking into transportation planning. Go to [www.enotrans.org/quarterly/](http://www.enotrans.org/quarterly/) for a full index of articles published in Eno’s Traffic Quarterly and Transportation Quarterly from 1947 to 2003.)*
This week, the Federal Motor Carrier Safety Administration (FMCSA) issued a proposed rule that would implement some long-expected changes in the federal rules that govern the consecutive and cumulative hours of service (HOS) that commercial vehicle drivers are allowed to work.

The proposed rule comes almost one year after FMCSA issued an Advanced Notice of Proposed Rulemaking (ANPRM) in August 2018. The ANPRM stated that FMCSA was considering changing hours of service rules in four areas and was considering a petition from the Owner Operator Independent Driver Association (OOIDA) and TruckerNation for changes in two other areas. The ANPRM sought public comments on those proposed areas (more than 5,200 public comments were received) and held five public listening sessions. (By fully complying with the Administrative Procedures Act and giving a public comment period and then responding those comments in the proposed rulemaking, FMCSA hopes to make it easier to defend the proposed rule changes in court.)

The impetus for changes in the HOS rules at this time is the fact that the electronic logging device requirement that took effect two years ago has fundamentally changed compliance with the long-existing rules. This Congressional Research Service report summarizes: “Until December 2017, drivers kept track of their service hours by filling out a paper log book. It was an open secret that drivers often violated the HOS limits, and that the paper logs filled out by the drivers themselves made such violations easy to hide. For decades, highway safety groups had called for a more secure method of recording the service hours of drivers. In 2012 Congress mandated that trucks be equipped with electronic logging devices (ELDs), and in 2015 DOT finalized a rule to implement that mandate. DOT set the mandate to take effect in December 2017 to give the industry time to prepare for the change. Since the ELD mandate went into effect, certain sectors of the commercial trucking industry have complained about its impact. Since the ELD mandate did not change the HOS rule, but merely made it harder to evade the HOS limits without being detected, those complaints suggest that some industry practices had not been in compliance with the HOS rule.” (Emphasis added.)

The areas of potential change mentioned in the ANPRM a year ago, and the outcome in the proposed rule issued this week, are below.
**Short-haul limit** (FMCSA’s own suggestion). Under the existing rules, certain short-haul drivers who return to their normal work location and are released from work within 12 hours of showing up from work, are exempt from many of the HOS rules. Truck drivers operating under this provision are permitted a 12-hour work day in which to drive up to 11 total hours. Passenger-carrier drivers are allowed 10 hours of driving in a 12-hour workday. Under this short-haul exception, drivers also must operate within a 100 air-mile radius of their work reporting location. There are a few other exemptions – the FAST Act gave a statutory exemption to concrete mixing trucks (14 hours, not 12, to return to work location and be discharged), and FMCSA has administratively given some 14-hour exemptions to other paving trucks and to garbage haulers. Under the proposed rule, the short-haul exemption time for all property and passenger drivers is extended from 12 hours to 14 hours, and the distance restriction would be increased from 100 miles to 150 miles (consistent with some other related short-haul exemptions). Truck drivers would continue to be limited to 11 hours of driving time, and passenger carrier drivers to 10 hours of driving time. All CMV drivers using this exception would need to complete their work day within 14 hours of the beginning of the work shift.

**Adverse driving conditions** (FMCSA’s own suggestion). Current rules allow for an extra 2 hours of driving time in a shift if there is snow, sleet, fog or other adverse weather conditions. Although the rule allows truck drivers up to 13 hours of driving time under adverse conditions, instead of the normal 11 hours, it does not provide a corresponding extension of the 14-hour driving window. Similarly, the current rule allows drivers of passenger-carrying CMVs up to 12 hours of driving time under adverse conditions without a corresponding extension of the applicable duty period. The new rule would allow a driver up to a 16-hour driving window (for property carriers) within which to complete up to 13 hours of driving, or a 17-hour duty period (for passenger carriers) within which to complete up to 12 hours of driving, if the driver encounters adverse driving conditions.

**30-minute rest break** (FMCSA’s own suggestion and also OOIDA and TruckerNation petitions). Under current rules, if a driver is not subject to the short-haul exception above, they have to stop driving if more than 8 hours have passed since the end of the driver’s last off-duty or sleeper-berth period of at least 30 minutes. The new rules would allow 30 minutes of on-duty, not driving time, off-duty time, or sleeper berth time to qualify as a break (think driving interruptions such as loading or unloading a truck, completing paperwork, or stopping for fuel). Additionally, these proposed changes would not allow an increase in maximum driving time during the work shift or driving after the 14th hour from the beginning of the work shift.

**Sleeper berth rule** (FMCSA’s own suggestion). Current HOS rules allow a sleeper-berth user to divide the minimum 10 hours off duty, which are otherwise required to be consecutive, into two separate periods. Drivers who use sleeper berths may take at least 8 consecutive hours of the required 10-hour off-duty period in the sleeper berth. In addition, the driver using the sleeper-berth exception must take a separate (earlier or later) period of at least 2 hours off duty, which may be in the sleeper berth if desired. The new rules would allow drivers to satisfy the required 10 hours off duty by taking two off-duty periods, provided that neither period is less than 2 consecutive hours and one period consists of at least 7 consecutive hours in the berth. Drivers using this option would be required to obtain one single rest period of at least 7 consecutive hours, paired with another period of at least 2 hours, provided that a total of 10 hours of off-duty time is achieved. When paired, neither qualifying period would count against the 14-hour driving window.

**Split-duty period** (OOIDA petition). Under current rules, after being off duty for 10 or more consecutive hours, a driver of a property carrying CMV is allowed a period of 14 consecutive
hours in which to drive up to 11 hours. The 14-consecutive-hour driving window begins when an individual starts any kind of work. The individual may not drive again after the end of the 14-hour window until he or she has been off duty for another 10 consecutive hours, or the equivalent of at least 10 consecutive hours using the sleeper berth option. This 14-hour window currently may not be extended by off-duty breaks that may occur during the duty period. OOIDA petitioned FMCSA to allow truckers to take a single off-duty rest break for up to 3 consecutive hours once per 14-hour driving window. That rest break would pause the 14-hour clock for the duration of the break. However, drivers would still be limited to 11 hours of driving time and required to have at least 10 consecutive hours off duty before starting a new duty period. FMCSA essentially grants the OOIDA petition – the new rules would allow a single break of off-duty time, ranging from 30 minutes to no more than 3 consecutive hours, to be excluded from the 14-hour driving window, provided the driver has at least 10 consecutive hours off duty before the start of his or her next duty period. A single pause up to 3 hours to the 14-hour clock would provide significantly more flexibility than allowed under the current rules. It would allow drivers to take an off-duty break without fear of exhausting their available hours under the 14-hour clock, which would also allow them to take additional rest or to avoid traffic congestion.

- **Use on-duty time as the 14-hour clock** (TruckerNation petition). TruckerNation petitioned FMCSA to prohibit driving after the driver has accumulated 14 hours of on-duty time, rather than 14 hours after the beginning of the work shift. In addition, it petitioned FMCSA to allow drivers to use multiple off-duty periods of 3 hours or longer in lieu of having 10 consecutive hours off duty. FMCSA denied the petition, saying that it “did not include data or research that would support the request.”

The new proposed rule continues to request more information from the public on the potential impacts of the proposed changes and also asks for comments on how long the proposed changes would take to implement – changing HOS rules is not as simple as it used to be, since the manufacturers of ELDs must now update the software on new devices and also find a way to update the software in all the existing devices to comply with the new rules. The rule asks for comment on whether a 6-month or 12-month timeframe would provide sufficient time for ELD manufacturers and the motor carrier industry to conform to the proposed changes.

The CEO of OOIDA said, in a statement, “The need for changes to the hours-of-service regulations has fallen on deaf ears in Washington, D.C., for too long,. Anyone who truly understands trucking realizes the existing regulations simply don’t work. With the announcement of the proposed changes under Administrator (Ray) Martinez’s leadership, we’re hopefully going to take a big step in the right direction and give drivers more flexibility and, ultimately, improve highway safety.” The CEO fo the American Trucking Associations was more measured in his praise: “Secretary Chao and Administrator Martinez are to be commended for their commitment to an open and data-driven process to update the hours-of-service rules. We look forward to studying and understanding how these proposed changes will impact our industry so we can provide relevant data and information to strengthen and support a good final rule that bolsters safety and provides drivers needed flexibility.”

On the other side, the head of Advocates for Highway and Auto Safety said that her organization is “staunchly opposed to the proposed changes in the NPRM which would significantly weaken HOS rules. Current HOS rules already allow truck drivers to maintain demanding schedules of up to 11 hours behind the wheel during a 14-hour workday. On this existing schedule, truckers can drive up to 77 hours in seven days, double the average American work week. Any proposal that increases pressure on truck drivers, opens new opportunities for abuse of the rules, and further endangers truck drivers and
all those who share the roads with them should be rejected.” And the head of the Teamsters Union said “While we continue to review these proposed regulatory changes by the FMCSA, the Teamsters have serious concerns about what we have seen thus far when it comes to these hours of service reforms.”

Further comments on the proposed rule must be received by 45 days from the date of publication in the hard copy of the Federal Register, which will probably be next Tuesday or Wednesday.
Shared Scooters Can Be Good for the Environment... If You Remove the Automobile

By Christopher Oster

Since the recent introduction of scooters, some cities have piloted or allowed them on all streets as a potential means to reduce vehicle miles traveled. But similar to their ride-hailing peers, it has been difficult for cities to assess whether these devices are, in fact, replacing vehicle trips or siphoning away walkers and cyclists. A reduction in vehicle trips is generally tied to decreases in greenhouse gas (GHG) emissions, but recent analyses have started to question that assumption.

An article published on August 2 in Environmental Research Letters by a group from North Carolina State University assessed the global warming effects of shared electric scooters against various other forms of transportation. The authors use a life cycle analysis to assess how the material processing, manufacturing, shipping, charging, and collection of shared e-scooters contributes to greenhouse gas emissions and how they compared to the modes they are likely to replace. Their results paint a bleak picture with a 65 percent likelihood that the scooter will have more global warming impact than the mode it replaces. This includes a 1.7 percent likelihood that it could be worse than using a personal automobile. How could a small scooter possibly have a higher life cycle impact than an automobile? The short answer; scooter distribution is currently – for the most part – reliant on motor vehicles.

If you factor the scooter by itself and ignore the emissions related to the extra automobile trips needed for their collection and distribution, they are fairly benign compared to the impact of automobiles and are relatively on par with bicycles and e-bikes. From the authors’ estimate, depending on the amount of virgin or recycled aluminum used to make the scooter, the manufacturing process can contribute anywhere from 17.7 kg of CO$_2$e (48% recycled materials) to 200 kg of CO$_2$e (100% virgin materials). The shipping process contributes a minimal 9.54 – 3.44 kg CO$_2$e depending on distance and method.

Charging the scooter itself is minimal, with a small 0.335 kWh battery giving approximately 18 miles of range. (For reference 0.335 kWh is approximately the energy that would be used to run a refrigerator for 1.5 hours) This would contribute around 147 g of CO$_2$e for every full charge of the battery, or 8.2 g/mile. In order for an e-scooter to contribute as much GHG emissions from usage as it’s manufacturing and shipping, it would need to go through nearly 1500 charges if we use the high end of the
manufacturing and shipping figures.

Now let’s compare those values with automobiles. Using Argonne National Lab’s Greenhouse gases, Regulated Emissions, and Energy use in Transportation (GREET) Model, the vehicle cycle (manufacturing and recycling) and fuel cycle (on road and fuel production) of emissions associated with different vehicle and fuel mixes can be effectively calculated (See table below). Manufacturing one vehicle alone emits as much GHG as 40 scooters. Even driving a cleaner automobile, such as an electric car, emits over 20 times that of an e-scooter. Driving a CAFE standards-compliant SUV 500 miles (two workweeks of a 50-mile round trip commute) would already emit more than the manufacturing and shipping of an e-scooter. Clearly, the technology of e-scooters is not the problem, it is the associated emissions from their collection for charging where their environmental cleanliness gets beyond murky.

### Emissions Factors of Various Automobiles Fuel Types

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<th>Vehicle Cycle</th>
<th>CO$_{2e}$ (kg)</th>
<th>Fuel Cycle</th>
<th>CO$_{2e}$ (g/mile)</th>
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<td></td>
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*Source: GREET 2018 Models 1 & 2*

Unlike non-electric shared dockless modes, scooters require charging. As noted above, the actual charging related emissions are minimal, but the scooters need to be collected by an individual using a type of vehicle to bring them to some location to charge. While there have been many amusing pictures and videos of several scooters being transported by haphazardly stacking them on top of each other to a charging location, circulating the media, this is hardly the norm. Instead, most scooters are collected using automobiles and, given recent trends, a light-duty truck, as opposed to a fuel-efficient car.

These “chargers” are paid for collecting, charging, and redistributing scooters to high use areas before morning commutes start. Chargers can maximize their profit by collecting as many scooters as possible in the smallest area, though, as with many other gig economy jobs, the competition can be fierce, with chargers undercutting each other. According to the authors of the scooter life cycle analysis, chargers can drive over 2.5 miles to collect one scooter on average (about 1200 g CO$_{2e}$ using our models).

Rebalancing is not a new issue for shared mobility options, docked or not. In Washington DC, Capital Bikeshare (the capital region’s major bikeshare service) moves over 1000 bicycles a day in work vans for redistribution. This is not exclusive to the capital region, and areas are trying newer more environmentally friendly options for relocating bicycles, such as this electric tricycle cart in Portland, OR and this bike trailer in DC.
Lyft, who own the bikeshare operator Motivate (DC’s Capital Bikeshare and NYC’s CitiBike) and runs their own Lyft branded scooters, is reportedly very interested in introducing docks to their scooter share system. This can serve as a charging station, removing a large portion of their lifetime emissions, and a central place to leave them, addressing citizen complaints. Docks may also help address issues of disaffected citizens setting them on fire and throwing them in lakes, which will help increase their lifespan beyond the reported 28.8 days.

While emissions per mile can be close to that of automobiles, this is mostly because automobiles are a part of the scooter-share system. Comparing total contributed emissions, automobiles with their longer lifespan and more absolute miles driven, produce significantly more emissions in their lifetime than a scooter. Scooters have the potential to reduce emissions, lessen congestion, and provide more convenient mobility options in the transportation sector, but these benefits will only be maximized if they can operate without requiring an automobile for redistribution.

Cities and micromobility companies can collaborate to create curbside parking (and solar-powered charging options) that will diminish clutter and provide convenient collection points. Cities can regulate the amount of charge required to charge scooters and companies can also institute incentive programs, such as Capital Bikeshare’s “Bike Angels” program, which rewards users for repositioning bikes at the end of their trips. While many other solutions exist, policies should be implemented to achieve a specified objective. If that objective is to emit less GHG, reducing extraneous automobile trips from micromobility is a good start.
FRA Asks for Applicants for $244M in FY19 Rail Grants

By Jeff Davis

This week, the Federal Railroad Administration announced the availability of $252.5 million in fiscal year 2019 funding for rail capital improvement grants under the CRISI program (Consolidated Rail Infrastructure and Safety Improvements) established by the FAST Act in 49 U.S.C. §22907.

The original appropriation was $255.0 million. Per the statute, there is a 1.0 percent set-aside for FRA oversight of the program, a 25 percent minimum set-aside for projects in rural areas (defined as not located in a Census-defined urbanized area), and a complicated* set-aside totaling $7.8 million for projects in Alaska, South Dakota and Wyoming [er §22907(l) (Alaska because it is not connected to the rest of the U.S. rail system, and South Dakota and Wyoming because they have no intercity passenger rail service). That leaves a maximum of $180.9 million left over, at most, for grants in urbanized areas.

<table>
<thead>
<tr>
<th>FY 2019 CRISI Grant Appropriation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total FY19 Appropriation</td>
<td>$255,000,000</td>
</tr>
<tr>
<td>1% Oversight Set-Aside</td>
<td>-$2,550,000</td>
</tr>
<tr>
<td>25% Rural Grants Set-Aside</td>
<td>-$63,750,000</td>
</tr>
<tr>
<td>AK/SD/WY Set-Aside</td>
<td>-$7,828,500</td>
</tr>
<tr>
<td>Remainder for Other Grants</td>
<td>$180,871,500</td>
</tr>
</tbody>
</table>

However, this is the Trump Administration, and just because the statute (in §22907(g)) says that “at least 25 percent” of the amount appropriated must go for rural grants, that doesn’t mean that the Administration will stop at 25 percent. The Notice of Funding Opportunity leads off by saying “The Department is committed to addressing the unmet transportation infrastructure needs of rural areas. Underinvestment in rural transportation systems has allowed a slow and steady decline in the transportation routes that connect rural American communities to each other and to the rest of the country, fraying the fabric of American interconnectivity. A majority of the nation’s rail route miles are in rural America. Investment is necessary to grow rural economies, facilitate freight movement, improve
access to reliable and affordable transportation options and enhance access to healthcare and safety for residents.”

(The NOFO also warns applicants to account for life-cycle costs: “The Department also recognizes the importance of applying life cycle asset management principles throughout America’s infrastructure. It is important for rail infrastructure owners and operators, as well as those who may apply on their behalf, to plan for the maintenance and replacement of assets and the associated costs.”)

Per the statute, projects eligible for CRISI funding include, but are not limited to:

- Deployment of non-PTC railroad safety technology and rail integrity inspection systems (PTC projects for intercity passenger and freight rail are eligible under other project eligibility categories)
- Capital projects
- Highway-rail grade crossing improvement projects
- Rail line relocation and improvement projects
- Regional rail and corridor service development plans and environmental analyses
- Any project necessary to enhance multimodal connections or facilitate service integration between rail service and other modes
- The development and implementation of a safety program or institute
- Any research to advance any particular aspect of rail-related capital, operations, or safety improvements

Eligible recipients include: states; groups of states; interstate compacts; public agencies or publicly chartered authorities established by one or more states; political subdivisions of a state; Amtrak or another rail carrier that provides intercity rail passenger transportation; Class II or Class III railroads; rail carrier or rail equipment manufacturer in partnership with at least one of the above; the Transportation Research Board together with any entity with which it contracts in the development of rail-related research, including cooperative research programs; University Transportation Centers engaged in rail-related research; or non-profit labor organizations representing a class or craft of employees of rail carriers or rail carrier contractors.

For an example of how DOT gave out the FY 2018 CRISI grants (from a larger appropriation), see this list issued two months ago.

Applications are due 60 days from the date that the draft NOFO linked above is printed in the Federal Register, which has not happened yet. The due date should be sometime from October 15-19.

*The amount of the AK-SD-WY set-aside is set by statute at “not less than the share of the total railroad route miles in such State of the total railroad route miles in the United States, excluding from all totals the route miles exclusively used for tourist, scenic, and excursion railroad operations.”
August 16, 2019

The Congressional Budget Office is scheduled to release its annual summer update to its Budget and Economic Outlook on August 21.

Among many other details, the new update should include updated projections for Highway Trust Fund excise tax receipts and spending outlays and thus may give a clearer picture on how much longer the Trust Fund can keep going before it runs out of money some time in 2021.

*ETW* will send out an update based on the new data once it is released and we have a chance to digest it.