Appendix B

Public Feedback
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To Whom It May Concern:

Your plan to raise the SDM monthly pass from $18 to $26 is a bit much. I could see an increase to $20 or $21 but $26 is just plain inflation! I am 88 years old and I ride the bus every day. My income is very low and I live in low income housing, and such an increase to $26 would really create a hardship. Please reconsider your plan for the SDM monthly pass increase. Thank you.

Respectfully,

Alice Goldman
Mrs. Bus and Trolley

I am writing this letter about the proposed fare change. And I must say, the increase in fare will hurt a lot of family. Plus myself, a lot of family live from paycheck to paycheck. This increase will hurt us everywhere. It will put us in a hole. Do not increase the fare!

I have to ride the Mrs. Bus and Trolley to work five days...
Well it will really hurt my pocket! 
Thank
SANDAG/MTS

To whom it may concern: I have been to at least 2 public meetings of representatives from Sandag/MTS. In both cases we were told that there would be a question and answer time after their presentations. There was none. We were told on both occasions that they were out of time.

They spent most of their time tooting their own horns by saying what a great job they were doing and their super plans for the future. I was not impressed and neither were any of the other people in the audience. I don’t believe that any of your people have ever ridden on MTS or have any idea how to make a schedule that would be convenient for a rider.

As a senior citizen of San Diego on a fixed income that is very small, an $8.00 increase on the monthly pass is going to affect my income. I could see a $2.00 raise being more reasonable and have expected it. Please consider a less drastic increase. Thank you.

Sincerely,
A concerned senior.

P.S. I HAVE RIDDEN ON MOST PUBLIC TRANSITS ON THE WEST COAST AND THEY ARE ALL BETTER THAN SAN DIEGO’S.
SUBJECT: FEE INCREASES

INCREASING SEVERELY DISABLED MONTHLY TRANSIT FEE PASSES ARE NOT A SOLUTION. THAT GROUP CANNOT EARN EXTRA PER MONTH.

DAY PASSES AND TOURIST DAY PASSES INCLUDING SENIOR TOURIST DAY PASSES COULD BE RAISED GREATLY TO $18-$20 MORE.

A BARGAIN COMPARED TO USING TAXIS OR DRIVING AND PARKING FEES.

COMpared to driving, fees can be increased and still be reasonable.

ALL THE ADULT, COLLEGE AGE AND EVEN YOUTH CAN EARN EXTRAS PER VARIOUS CONCERNED CITIZENS.
Dear MTS Representative,

I am writing this letter to state my opposition to proposed fare changes for 2019. I’ve been an MTS rider for the last 10 years using Park & Ride, Bus, Express Bus, Trolley and bike lockers. I’m very impressed with the future vision for San Diego transit.

However, there are 2 changes being proposed I disagree with.

First, increasing the age for senior eligibility from 60 to 65. This age group represents the best opportunity for increasing ridership. The demographic between 60 and retirement should be a target market for MTS and NCTD. While the easy solution to balanced budgets is raising senior eligibility, MTS can instead promote being “60 friendly” and strive to increase riders in this segment. I do recognize rising costs for MTS and NCTD. Therefore, I suggest increasing the senior fare and not changing the age eligibility.

The second objection, is elimination of the 14 day pass. I purchase a monthly premium pass for my commute to work. Sometimes, business travel or vacation means a monthly pass goes to waste. The “half month” 14 day pass is more expensive so it seems an alternative pricing solution could be made to retain the 14 day pass option.

I urge the SANDAG, MTS and NCTD Boards of Directors to reconsider these fare changes in the revision to Regional Comprehensive Fare Ordinance.

Sincerely,

Carl Metzgar
Member of UTC Aerospace Systems - Green Team
2018 iCommute Diamond Awards Gold Tier Recipient

cc: Ron Roberts
SANDAG Board of Director
Subject: LIFT Paratransit service/price increases

To: Corporate and management directors

I would like to begin by stating The Lift Paratransit Service has given me, a person with impairments from brain injury, including loss of some vision, my freedom and Independence. Speaking for myself, I am incredibly grateful and appreciate the service we rely on. I understand it’s complicated.

I have never been present for a meeting or written a letter but decided it was necessary as I have seen a steady decline and flagrant waste of money, most likely subsidies, in many aspects of this service. Particularly, since clients have been notified of a substantial rate increase! Ticket prices are being raised to $5. Many clients are low income or fixed income, like myself. If we could afford Uber, we would do so but it’s not possible. I am being an advocate for myself and those like me.

I would like to express areas of concern. Management must be addressed directly and be diligent in looking into serious issues, which you most like have no idea are taking place, being so far removed. There are certainly common sense solutions. All of the separate corporations cannot sit on the sidelines. Come together and take immediate action!

Sandag, represents the public, NCTD receives tax payer subsidies as the responsible entity, with MV, as the hired operations contractor.

The subsidy monies should be utilized effectively and definitely not wasted! Management should be fully aware of all elements of the daily operations.

Both management for NCTD and MV should have a mandatory requirement for several days, to ride along or shadow a variety of drivers, both East and West, to witness what reality looks like. Follow up with brain storming, including representation from each of the various departments, finding solutions to some of the glaring problems. Get out from behind your desks to witness what is happening!

Your extraordinary devoted, empathetic, compassionate, caring drivers, many I have had the pleasure of riding with for years, are well trained. However, many clients, in their frustration with the ill managed system, have taken out their anger out on the drivers. I’ve heard it! Since I have been a client for years, I know it is not their fault and certainly not the intention to cause chaos for the clients and the appointments we need to get to in a
timely manner. I am witnessing the loss of drivers at a rapid and unfortunate rate. Good people are being lost and many at the end of their ropes!

Taxpayer’s funds are paying for subsidies, received by your company for training. The drivers should be compensated fairly to keep the clearly best drivers; genuine men and women. This is one of those areas that lack good business practice.

Scheduling is a nightmare and absolutely does not show minimal common sense and getting worse with some of the recent changes. An Oceanside driver is sent in the morning all the way to the East, such as Valley Center or Escondido to pick up clients and then, an Escondido driver is sent to Oceanside to pick up a client, both having the possibility of being late with a 45 minute plus commute. Does this sound remotely responsible to you? Definitely wasted resources, especially if the wrong vehicle is sent for a large apparatus or client need. The so called guidelines are not always practical.

Scheduling personnel, should first of all, absolutely know the area well, be familiar with Paratransit requirements, the logistics of the vehicle such as how many wheel chairs it can accommodate in reality, is a van more suited to a bus in a tight space logistics situation.

Clients in wheel chairs should not be subjected to a 2 hour ride while other clients are being picked up and dropped off, being the last to be delivered. I have acquiesced my ride home to deliver a fatigued dialysis patient, before me. I’ve heard drivers frustration with the insane scheduling and how they can be ignored by dispatch. Its plain wrong!

I can guarantee, a driver is being ripped to shreds in this situation, feeling helpless to serve the needs of the client. Some of your clients cannot speak. Do you understand what this is like for them?

I am also advocating on behalf of the clients and directors at Cal State University San Marcos Speech and Language Clinic. The clients are delivered late and picked up over an hour late often! I’m one of them.

This brings me to vehicle shortages. Is this subsidized as well; most likely? Where is the money sitting and why isn’t it being used for your fleet? Many vehicles are worn out, have mechanical issues and must be urgently addressed.

When you contract out to another transportation provider, such as Golden State, etc., they should be required minimally, to watch the Lift Paratransit training video. Many drivers are unacceptable, dangerous drivers. I’m not going to waste time on examples but I can speak and am able to file a complaint with customer service. Others, with a speech or mental challenge, cannot!

If a price increase is forthcoming, we should expect a well-managed, efficient operation and quality service by all means! Are the ADA requirements being met? I doubt it!

Thank you for the opportunity to address concerns. I certainly hope it can make a difference!

Sincerely,

Diedre Franck

cc: NCTD - Oceanside, MV Transportation; Oceanside and Dallas, San Diego Union Tribune
October 15, 2018

SANDAQ PIO
401 B Street
Suite 800
San Diego, CA 92020

Dear Sirs/Mesdames:

In order for the riding public especially the Senior/Disable/Medicare riders who are the most vulnerable sector of our society can understand the rationale of the proposed fare increase, please enlighten us by providing detailed operational expenses related to salaries, bonuses, travel/meeting, and other related expenses.

SDM 30-day monthly pass will increase $8 from $18 to $26 an increase of 44%.

Youth (6 through 18 years old) day pass will decrease $2 from $5 to $3 a decrease of 40%.

Youth 30-day monthly pass will decrease $10 from $36 to $26 a decrease of 28%.

What appears in the MTS Notice is that Senior/Disable/Medicare riders are targeted for stiff fare increase in all modes of public transportations (Regional Pass, Premium Regional, Coaster Regional). We will be adversely affected and this is wrong. Fares for adult riders will remain the same. Fares for youth riders will decrease significantly.

SDM riders are single out for the fare increase. This is wrong.

Thank you and we appreciate your consideration.

Very truly yours,

Eddie R. Padua
NO. NO. NO TO RAISING LOW INCOME OR
DISABLED SENIORS REGIONAL MO. TRANSIT FEES!
THEY HAVE NO WAY TO EARN EVEN $10/MO.
RAISE THE FAES ON ALL THE TOUISTS DAY
PASSES. HAVE SEEN MANY SENIOR TOUISTS USING.
ADULTS, COLLEGE AGE CAN EASILY
PAY MORE AS CAN EASILY EARN. BESIDES,
MO. ADULT COMPASS PASSES ARE A BARGAIN
COMAPRED TO AUTO COSTS, GAS COSTS, AND
PARICING FEES PER MO.
FROM GROUP OF INDEPENENTS UTO CONSIDER AND
COMMENT ON ISSUES
Dear SANDAG Representatives,

Regarding the proposed Regional Comprehensive Fare Ordinance and the TransNet Ordinance, I have several suggestions.

As a resident who prefers to use transit, I feel that the county as well as each city that benefits must subsidize the proposed fare increases. Transit is a much needed public service but many residents in all categories would not be able to pay the fare increases due to our extremely high cost of living. It is time for the county and each individual city to pay their fair share so that costs to the riders remain affordable. We must prioritize transit.

We should also use electric buses rather than big buses to move riders to the larger bus stops or the major routes. This would save fuel costs and improve air quality as well as increasing ridership.

However you decide, I will continue to use transit. We must all change our lifestyles if we value our living planet, our children's well-being, and a livable future for us all. Please consider these comments.

Sincerely,

Helen M. Bourne
October 22, 2018

Sirs,

I am a 69yr old retiree, and use my SDM MONTHLY PASS (MTS) regularly. I find your FARE INCREASE PROPOSAL for it, reasonable in one area and not in another.

Your proposal states two goals: "increasing revenue" and "simplification", but they don't seem to be working in the same direction, and the SDM seem to be "getting the short end of the stick".

I do agree with raising the SDM age requirement to 65. That is more in accordance with the current definition of a "senior", and should generate a significant increase in revenue.

However, instead of following the example of the "single ride" fare increase of approx. 12% (which would increase the SDM MONTHLY PASS to just $20.00), you want to raise it up approx. 45% to $26.00. Then, you want to lower the YOUTH FARE to the same $26.00, and decrease revenue. How is this logical and fair?

Examples from other businesses that combine Seniors and Youth, don't practically apply here, as this situation is more "unique". The current structure has an established precedent that the SDM depend on, and figure into their tight budgets.

The SDM need and deserve to maintain their own price category. Unlike other age groups, options of suplimenting their modest income or walking greater distances are extremely limited. AND, no one treats "transit equipment" more respectfully, or shows more consideration for fellow passengers than the SDM do.

Also, if there was a choice between a new $3.00 SDM DAY PASS, or only a $2.00 monthly increase, the SDM( WHO use predominately a monthly pass ) would "hands down" chose the latter.

REMEMBER, studies that might recomend this type of simplification, look at people as "statistics", but you need to "humanize" those numbers to decide what is really right.

Thank you for your time.

John A. Hammer
A Sandag:

Por medio de esta carta les informo que yo, Josefina Alanis, que cuando hagan sus aumentos de servicio de transporte público en todo San Diego, y modificaciones piensen en personas como yo, familia de 2 hijas, no tenemos carro. Porque nos gusta la transporte público nos gusta caminar más, hacer el ejercicio de pie nos mantienen saludables y conocer más nuestra región Sandiegina como del Sur y del Norte, y del centro. Las hagan de acuerdo a nuestras necesidades, a nuestros horarios y más servicios públicos, facilitando a todos y a ustedes.

El aumento de tarifa que sea asequible a nuestras familias y amigos, y así todos tengamos unas o muchas oportunidades.

Gracias

JAA
I, Josefina Alanis, hereby request that when modifying and increasing transit services throughout San Diego, you consider people like me, a family with two daughters. We don’t have a car because we like public transportation; we like to walk and exercise more. This allows us to stay healthy and get to know our San Diego region from North to South to Downtown. It should be done according to our needs, our schedules and more public services that benefit you and everyone else. The fare increase should be affordable for our families and friends, so that there is one or more opportunities for everyone. Thank you.
I think you waited too long to propose and ask for an increase in fares for public transportation services. You should have been able to foresee the need for extra funding a long time ago when you could have raised prices a little bit, and put some of it in the bank to cushion future financial impacts and give people time to get used to the expectation of the results of inflation and maintenance needs. Now, all of a sudden, you are asking for very substantial increases which, if implemented, can seriously jeopardize the financial well-being of low-income people, which I myself am one of.

The main concern at this point is the proposed increase in the cost of the Senior/Disabled/Medicare passes. It is only an $8 increase, but it is a big jump for some for the monthly/30-day pass. People have difficulty with sudden large increases in prices when they already have their budgets planned and something like this hits.

I noticed that the cost for youth passes in some instances is very significantly reduced while the price for SDM passes is increased so much that we can climb a ladder made of dollar bills to the moon on it. This difference is unfair and displays a lack of moderation. It is too great a difference.

Sincerely,

Leslie Carr

(Save the envelope for referring to return address.)
To whom it may concern,
I am 83 1/2 years, I think raising the cost for 83's is going to hurt a lot, also after we only have S.S. to live on. Also I wish bus 7 would still stop at Park at Robinson and the bus 215 would stop at the Park as it is a regular stop. Also I wish bus 10 could still stop at University & George when bridge is finished.

Sincerely,
Mary

P.S. Sorry can't make the meetings I don't have a computer
To whom it may concern:

SANDAG MTS and NCTD

Board of Directors

Can any one of your agencies explain why it is more important for you to hire and retain Code Enforcement Officers as well as the same contract reinforced officers, in lieu of utilizing your valuable resources toward the lack of or non-existent mass transportation in San Diego County (throughout)?

As an customer who supports MTS and would like to continue to do same, I cannot correlate the #2 (two) discrepancies.

Why can you not keep track of your customer rider ship, a peak commute time?
Between #3 (the) government agencies, why is this not done?

Do you have any clue how inconsiderate, intolerable, and not acceptable this is to your customer base? Most commuters are on a very tight schedule when using your services to get to their next transportation destination. Especially at stations, distance is typically very far when catching a bus, tram, or the trolley above. Please consider this not acceptable having three days with a lack of mass transportation.

Please can we not use your poor use of these valuable resources? For some real mass transportation, thank you for your consideration. Nancy Taylor
November 5, 2018

Dear People,

I am writing to submit comments about the proposal to amend transit fares.

I am 78 years old. You are lucky I do not drive. Although I do have a driver’s license.

I am on a fixed income. The proposed change in the senior monthly pass from $18.00 to $26.00 is HUGE! Almost double. (Hawaii is $30.00 a YEAR! Good way to make it appealing to seniors so they ride rather than drive.) If anything, I think you should lower senior fares and passes and keep seniors off the roads. Less congestion, less accidents.

I believe it would also be good to LOWER the age for senior fares and passes to 55. Get folks used to taking transit early. Have fares be so lucrative it is cheaper to ride transit than drive. Start earlier before they feel they could NEVER give up driving.

Thank you for reading.

Sincerely,

Noyita Saravia
November 1, 2018

**PLEASE CONSIDER THE SENIORS**

Do not raise the age for seniors to 65 and do not put much of a fare burden on seniors.

I am 61, so I already have my S/D/M card, therefore I already pay $18 per month.

This fare has been a lifesaver to me as I work part-time and have not made a full-time income in a while. There may be many people around my age who will turn 60 soon. Please do not put an unnecessary burden upon them financially by requiring them to be age 65.

**PLEASE PRESERVE AGE 60**

Robert Oliver
SATURDAY:

I ATTENDED THE MEETING LAST TUES. AFTERNOON ON OCT. 23RD AT 12TH & IMPERIAL.

THE ONLY COMPLAINT I HAVE IS WITH TROLLY SECURITY!!

SECURITY OFFICERS ARE OVER-PAYED FOR WHAT THEY DO. THEY BOARD THE TROLLYS AND CHECK FOR PASSES — AND THAT’S IT!!! THEY SHOULD STAY ON THE TROLLYS FOR SAFETY ISSUES.

I HAVE HAD QUITE A FEW RUN-INS WITH PEOPLE ON THE TROLLYS OVER THE PAST FEW YEARS. I’VE SEEN WOMEN WHO HAVE BEEN RACED TO YOUNG & OLD THEY ARE ALL SCARED TO DEATH!!!

I NOW CARRY PEPPER SPRAY WITH ME. WHEN I BOARD A TROLLY I SOMETIMES SEE DRUG ADDICTS SLEEPING IN THE AISLES.

YOUR SECURITY STAFF IS A JOKE!!!! YOU NEED AT LEAST ONE OFFICER ON BOARD AT ALL TIMES TO COMBAT POSSIBLE ASSAULTS, ESPECIALLY TOWARD WOMEN — OR M.T.S. WILL BE FACED WITH POSSIBLE LAWSUITS — AND ALSO — WHY DON’T YOU BAN BIKES ON THE TROLLYS? THERE ARE TIMES WHEN YOU CAN’T EVEN GET ON OR OFF THE TROLLYS BECAUSE BIKES ARE BLOCKING THE ENTRY GATES & EXITS !!!!!!

I ALSO SAW MAN LATE AT NIGHT WHO WAS RANTING, "I SHOULD KILL THE WHOLE BUNCH OF YOU!!!" THAT WAS A TERRORIST THREAT!!! THEN AGAIN, NO SECURITY !!!!!!
Also, the language among the passengers is a disgrace especially after games at Petco Park—people & families are catching the green line and you have families with children who have to endure foul language on the trolleys.

I don't mind paying extra for the new increase—however I think I'm speaking for all senior citizens who also vented their safety concerns at the meeting on Oct 23rd.

To me, all this meeting was just a dog & pony show.

MTS is not going to address the concerns of seniors!!!

Another issue is encountered by your security staff last year, was the assault on a black teenager who sat across from me—who was approached by one of your "big fat bully" security officers. If you'd like more information on this you can call me and I will explain what happened. If this officer had approached me the way he approached this black teenage boy that officer would have had all his front teeth knocked out—(The boy was assulted)

I know I will not get a response on this letter—but the city is looking at multiple lawsuits if someone is hurt because your security team is not doing their job!!!
WHY DO THESE OFFICERS CARRY GUNS ???
WHAT'S THE POINT ???. ARE THEY GOING TO
SHOOT A PASSENGER FOR NON-COMPLIANCE ??

GO AHEAD - RAISE THE FARES BUT
HIRE PROFESSIONAL SECURITY OFFICERS

RON TATO

PS:

WHEN YOU HIRE THESE
OFFICERS, DO YOU DO A BACKGROUND
CHECK ?? SOME OF THESE GUYS COME
OFF AS 'THUGS',

I COULD ALSO GIVE YOU MORE
EXAMPLES OF MISBEHAVIOR OF PASSENGERS
IF YOU'D LIKE, BUT I THINK THEY
WILL FALL ON DEAF EARS !!!

IF I SOUND ANGRY - YOUR RIGHT.
To: SANDAG PIO, 401 B Street, Suite 800, San Diego, CA 92101
From: Roy A. Schroeder, [redacted]
Subject: Comment on Proposed Public Transit Fare Increase
Date: 6 November 2018

I believe that the proposed increase for SDM COASTER Regional 30-day/monthly fare from $41.25 to $65.00 is excessive. This equates to a 58% increase, which is far larger than any of the other fare products. It appears to be targeted to cover your proposed decrease for the Youth Fare from $82.50 to $62.50, a 21% decrease. The difference suggests to me that you arrived at these figures based on usage by youth at about 3 times usage by SDM passengers to “balance” the net revenue from these two sources.

I live near the Solana Beach Coaster Station so after I retired in 2003 I switched from driving to public transit for most trips using a COASTER Regional 30-day pass. I average 5-6 trips a month, usually accompanied at my train destination by an MTS bus or trolley transfer. Some months when I took fewer trips I “lost” compared to the cost of purchasing individual tickets, but it was worth the convenience to not have to purchase a ticket at every station.

If the proposed fare increase takes effect I will likely switch to driving for future trips, particularly those that involve transfers, which most of mine do.

Roy A Schroeder
To MTS:

I am against the raise of a S-D-M month 14 pass—especially if the youth pass is cut by so much.

I propose this:

Raise adult to $75.00
Price youth at $40.00
Price S-D-M at $22.00
(30 day/monthly) This way, everyone gets a small increase.

Your other proposals I agree with. I'm a many year rider with MTS because I no longer drive — so if I want to go anywhere it's my bus or trolley, but an $8.00 increase is too much.

Susan E. Petit

10/22/18
I am a retired Oceanside school district employee and retired California Army National Guard. I was deployed to the LA Riots in 1992, the Northridge earthquake in 1994 and more recently to the Global War on Terrorism in 2003-2004.

I am told that there are 3.2 million residents in San Diego County of which one hundred thousand are visually impaired.

The recent proposed Lift fee hike is attached. The proposed increase for disabled riders is vague at best. Please refer to page two last line, highlighted.

The language in the first column reads in part, Lift fee will be related to the breeze/sprinter route needed to complete trip. The third column reflects a $5.00 instead of $5-15.00 one way price.

The omission of a scheduled price makes me think that the disabled passengers are such an insignificant amount of riders, that such attention in a proposed schedule is unwarranted.

If we, the disabled, are a very minor portion of the overall ridership of NCTD, then may I suggest that the disabled riders receive a carve out and retain the current cost of $3.50 one way.

Currently in North County, disabled Lift riders pay three dollars and fifty cents one way for a Lift ride. They also have an NCTD photo ID card that permits us to ride the fixed bus routes and Sprinter free of charge.

I further suggest that NCTD resume the outreach program that educated and encouraged blind riders to transition some of their Lift rides to fixed/flex routes. This practice was discontinued about fifteen years ago.

William Myers
**PROPOSED FARE CHANGES**

- Single one-way fare price ($2.50) for MTS bus, Trolley, Rapid, SPRINTER and BREEZE
- Addition of a $3 Day Pass for Seniors/Disabled/Medicare and Youth for MTS bus, Trolley, Rapid, SPRINTER and BREEZE ($6 for Rapid Express)
- One discounted pass price of $26 for SDM and Youth for MTS bus, Trolley, Rapid, SPRINTER and BREEZE ($36 for Rapid Express)
- Increasing the minimum age for senior discounts from 60 to 65 years (seniors 60 or older prior to the effective date will remain eligible for reduced fares)
- Price increases for COASTER one-way, Day Pass and 30-Day/Monthly Passes
- Elimination of 2, 3, 4 and 14-day passes
- Elimination of Trolley transfers to align with bus policy
- Elimination of the SPRINTER/BREEZE monthly pass (will now be $72 to include service on the MTS bus and Trolley)
- Consideration of a $5 or $6 Adult Regional Day Pass

**SINGLE RIDE VIAJE ÚNICO**

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<th>Pass Type</th>
<th>Current Actual</th>
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**DAY AND MONTHLY PASSES PASES DIARIOS y MENSUALES**

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<th>Current 30-Day/ Monthly Pass/Pase de 30 días actual</th>
<th>Proposed 30-Day/ Monthly Pass/Pase de 30 días propuesto</th>
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*S/D/M = Senior/Disabled/Medicare  *Senior = 65+  
Personas mayores/con discapacitación/Medicare  Personas mayores: 65+  
*Youth = Ages 6 through 16 (5 & under ride free)  
Jóvenes = entre 6 y 16 años de edad (de 5 y menores viajan gratis)  
*Currently includes all modes except ACCESS, LIFT, MTS Rural, & FLEX 372  
Actualmente incluye todos los modos excepto ACCESS, LIFT, MTS Rural y FLEX 372  
*Premium regional includes Regional Pass modes and MTS Rapid Express and NCTD FLEX (Except FLEX 372)  
Regional Premium incluye modos en Pase regional y MTS Rapid Express y NCTD FLEX (Excepto por FLEX 372)
Sandag:
Why must you always steal money from Seniors who can little afford it ?
Why must you give all the money that you steal from us seniors, to reduce the Youth monthly pass cost ?
Why did the working people with jobs not get a monthly pass cost increase, but the seniors with no jobs get a 44% rate hike on our monthly pass ?
Are you Insane or just too Stupid for words ?
Several other cities Do Not charge seniors for a bus pass . Some of those cities are in california and washington state.
Their costs went down as a result . Not up - - Down !
It always costs all public transit companies more money to collect the money, than the money is .
Always . Therefore all public transit companies use the bus fare to just collect the bus fare. and tax subsity money on top of that, to collect the fare money. Therefore all the cost of actually transporting the passangers is 100% paid by taxpayer subsidies and 0% from the fare box . Even the cost of pasangers useing the transit pass costs the bus company for all the fare tracking computers, and computer maintainance, and programing, and electricity to run it, and slower load times ( than if it was free for all passangers and they loaded in both front and back doors ), and more cost of wait times for each passanger to have his pass read by the expensive machines and for the machine to send a message over the cell phone network to check the pass account for payment, and the cost in more time for the driver to wait while he gets paid an hourly wage, and for the bus to use up expensive CNG fuel and whear out the engine while waiting at idle , and increased maintainance costs on the bus, and increased costs of the buses because you have to have more buses on all the routes to account for all those accumulated wait times, and more employee costs to run all those extra buses caused by the extra time it takes to load fare paying passangers ( especially Cash paying passangers ), and the extra costs of having Fare Inspectors check everybody to see if they all paid to ride ( they even check on some bus routes ), and the extra costs of the passes and the machines to load the fares on them and the collecting of the cash from the busses and fare machines and the counting of all those coins and accounting for them and protecting them from theft. By the time you have accounted for all the extra cost of collecting fare, you will see that it far exceeds the actual fare its self. Public transit can never pay for even a small part of its costs, by collecting fares. If you think otherwise, then you are just fooling yourself. So it is totally silly to think that you can solve anything by raising the Monthly Pass ( SDM ) cost for seniors . Also it is totally UNFAIR because almost all of the increase in costs of the SDM monthly pass is to be born by just the seniors and not the ones that have jobs and income that far exceeds the little that seniors get.
You should not be increasing our costs, you should be making it free for the seniors and disabled who can least afford what you are charging now , let alone any large increase you are planning . It would save you more money if you made the SDM pass free, and quit sticking it to seniors every chance you get .
Also every fare increase always causes more people ( seniors and regular adults alike ) to travel in their cars a lot more. More car traveling causes more wear and tear on all the roads, more need for Ambulance services from low income seniors ( many of whom should not be driving in the first place ) and others ( like pedestrians and regular adults ), who get involved in car accidents in direct proportion to all increases in car traffic caused by more people choosing to drive rather than pay the increase in monthly pass cost. Low income seniors can not pay for the ambulance services, and so the city will pay the extra cost. Even one more accident can cost the city more than all the bus fare increases that the city and sandag might try. Even just one more highway accident by another ex-bus passenger that would rather drive, than pay the increase in monthly pass fare, can even cost the hundreds of thousands of commuters more dollars worth of wasted time because of road delays, than they would have suffered from a normal commute day. This extra wasted time results in less overall money earned by those delayed wage earners, going on their commute to and from work, results in less money ( in the millions of $ $, per lost hour per each commuter ) available to spend in San Diego on goods and services ( and less property tax and sales tax and other government fees, from less taxable income ) which will lower home values which will lower property taxes because fewer newer workers move here, to pay the higher home prices ( prices only go up because more people bid on the properties ) because less money is available to be spent on things people want, because they earned less, because they spent extra time waiting for another accident to be cleared from the road, caused by more drivers that did not want to pay the extra cost of the senior ( SDM ) pass. Anytime less money is available, the less the taxes are available to be collected. At the same time the city must subsidise the extra cost of more unpaid ambulance costs from seniors that can not pay, and more hospital emergency room costs from the increase of accidents by persons that can not pay, and increased police services from more traffic, and more road repair costs. All while the tax collections go down due to workers spending longer times waiting in traffic, for slow seniors to get out of the way or for the extra accidents to be cleared, giving the workers less work time, and therefore less income to spend and for taxes to be paid from all that lost business.

Free bus passes save money for the city overall, and a good place to start is by not charging seniors. When the city sees the savings from no cost senior fares, the economy of it all will be apparent to all who look.

thank you for reading all of this very long but necessary explanation. Albert
To Whom It May Concern:

I understand that the plan is to raise the bus fair for seniors and disabled from the current cost of $18.00 to $26.00 as of December 10, 2018. I also understand the bus fair for compass cards, day passes, and non-senior, non-disabled persons will not change. What is the logic behind this proposed plan? This doesn’t make sense, and this is a big mistake! As a blind individual on a fixed income, I am concerned that this will not only adversely affect seniors and disabled persons themselves, but it would also most likely decrease ridership among this population. Ridership is crucial in maintaining the financial stability of SD Transit, and this is what this company aims for. Decreased ridership has the opposite effect. There are many seniors and individuals with disabilities who ride the public bus and trolley, and for anyone on a fixed income, $8.00 is a big increase. Our population deserves to travel without extra cost, and it’s not fair to raise senior/disabled bus fairs when everything else remains unchanged! I am asking whom this may concern to please reconsider this costly increase in bus fair for those who are senior, and/or disabled on a fixed income. Thank you.

Sincerely,

Amy R. Gilstrap
Hello,

Like my fellow public transit commuters, I’m disappointed by the proposed rate hike. I take the Coaster from Santa Fe Depot to Encinitas at least four days a week, and I believe the cost of riding the train is expensive enough as it is.

Raising rates is not likely to increase ridership, which should be the goal. Rate hikes will only encourage more commuters to drive, which will only contribute to the region’s awful traffic issues. Please don’t penalize those of us who choose to go green and are committed to sustainable transportation in San Diego County.

Thank you,

AMY STEELE
MARKETING COORDINATOR
DUDEK
605 THIRD STREET
ENCINITAS, CALIFORNIA 92024
T: [redacted]
WWW.DUDEK.COM
Dear MTS team,

As we were spending last weekend some time as tourists in San Diego we would like to comment on the planned changes and revisions to Regional Comprehensive Fare Ordinance.

We agree that fare increases are necessary but kindly ask you to reconsider the elimination of X-day-passes as these are a perfect fit for tourists.

Every major city we have travelled offers day-passes to relieve some of the stress that tourists have and to make sure that the public transport and its fares will not be an obstacle to discover the city/area.

In SD we used our 4-days-passes quite a lot and would have been moving around way less without them.

Thank you very much in advance for reconsidering this elimination of the day-passes!

Best regards,

André Willenbrecht
To whom it concerns; California is so expensive to live w high rent & costs, I'm a native Californian & a senior / disabled person - I go to free meals to eat & housing/ utilities will take most of my money! too many poor people w no housing or work to raise fares. find the money from another source thank you d
RE Fare increases: I strongly urge focus on increasing ridership, not fare-box economics. More frequency on existing routes and more routes to unserved streets are a prerequisite to make MTS a reasonable alternative to car use. Each car-driver converted to MTS saves transportation funding by reducing road maintenance, and reduced cost to remove carbon (which is very expensive). James Condon Zip 92110
From: Bill Leach
To: PIO
Cc: christopherward@sandiego.gov; kevinfaulconer@sandiego.gov; scott.lewis@voiceofsandiego.org; CAP@sdcounil-ca.gov; SDFORWARD; orgebledsoe@nbcuni.com; Hicks, David; seth.combs@sdcitybeat.com
Subject: Public Comment on MTS, NCTD, Sandag Fare Increase
Date: Thursday, November 08, 2018 9:38:00 AM
Attachments: Notice - Fare 1.pdf
Notice - Fare 2.pdf

11/08/2018

Dear MTS, NCTD, Sandag,

I'm contacting you as a long time Coaster rider (since 2010) regarding your fare increase notice. I'm including my city council member and others on this comment as well as I feel it affects our city.

I read your notice with your reasons for why the increase. It states in broad terms, operational costs have increased & fare revenues have decreased. Also, included is a desire to simplify the fare structure.

The city has a stated Mobility Plan and a Climate Action Plan. In both, we have important goals for regarding our public transit including creating ways to increase ridership. I think your "notice" is counterproductive to our community's goals. You are suggesting a general overall increase in fares, which is not a way to increase ridership, it's a plan to decrease ridership and go into a repeating loop of increase fares then losing ridership until you have a broken, reduced system.

If your goal was to increase ridership to boost revenue. Which would be a goal more aligned with the city's goals, then you would consider a model to boost monthly / subscription ridership to have a strong and consistent base.

Rather than an overall increase, you would consider increasing only daily, one-trip rates while maintaining or even decreasing subscription rates. And market the plan to customers as such, that you are looking for ridership. This is normal business practices to drive up customer retention! By providing benefits and discounts to join you create a more consistent revenue base and a larger community committing to use public transit on a normal basis.

I didn't see any link or access to any factual information to back up these first 2 reasons your notice states. Can you provide this? Seems like you have this to make this claim. Can you also provide how this breaks down in fares from monthly passengers vs. daily tickets and fares? Also, what do you include as "operational costs"? Do you include the upgrades to the blue line to extend to La Jolla? Or the station modification at the Poinsettia Coaster station? And are you doing anything to just reduce these operational fees?

Overall, your proposal seems short-sighted and not addressing the city's broader needs. I urge you to consider better options to build ridership vs. a general fee increase.

By the way, this "notice" was not easy to find. Normally information like this is placed on seats of the Coaster – this time it was hidden from view in the bin with rider pamphlets.

I would appreciate a response (e-mail or in writing) to this comment.

Sincerely,

Bill Leach
Se llevarán a cabo seis reuniones públicas en el condado de San Diego para recibir comentarios sobre la propuesta para modificar las tarifas del transporte público que afectaría las áreas de servicio del Sistema de Transporte Público Metropolitano (MTS, por sus siglas en inglés) y el Distrito de Transporte Público del Condado Norté (NCTD, por sus siglas en inglés). Se propone que todos los cambios aprobados en la Ordenanza regional integral de tarifas y en la Ordenanza de TransNet entren en vigor a partir del 27 de enero de 2019.

¿Por qué es necesario ajustar las tarifas?
- Los costos operativos han aumentado en los últimos 10 años, mientras que los ingresos por pasajes han disminuido y las tarifas no han aumentado.
- Un aumento en los ingresos por tarifas ayudará a mantener un alto nivel de servicio.
- Estos cambios simplificarán la estructura de tarifas en toda la región.

A continuación encontrarás información sobre el programa de reuniones públicas. Los ciudadanos también pueden llamar al (619) 595-5321, enviar un correo electrónico a pio@sandag.org, o entregar comentarios por escrito si no les es posible asistir a una de las reuniones. Luego de recibir y analizar los comentarios del público, las Directivas de la Asociación de Gobiernos de San Diego (SANDAG, por sus siglas en inglés), MTS y NCTD considerarán una recomendación final, que en su momento el público también tendrá la oportunidad de opinar.

**REUNIONES PÚBLICAS**

*Lunes, 22 de octubre de 2018*
5:30 a 7:30 p.m.
Chula Vista Library, Civic Center Auditorium
356 F St., Chula Vista, CA 91910

*Martes, 23 de octubre de 2018*
2:00 a 4:00 p.m.
MTS Board Room
1255 Imperial Ave., 10th Fl., San Diego, CA 92101

*Miércoles, 24 de octubre de 2018*
6:00 a 8:00 p.m.
El Cajon Police Department, Community Room
100 Civic Center Way, El Cajon, CA 92020

*Lunes, 29 de octubre de 2018*
3:30 a 5:30 p.m.
City Heights Library, Community Room
3795 Fairmount Ave., San Diego, CA 92105

*Martes, 30 de octubre de 2018*
12:00 a 2:00 p.m.
Escondido Library, Turritaine Room
239 S Kalmia St., Escondido, CA 92025

Jueves, 1 de noviembre de 2018
6:00 a 8:00 p.m.
Oceanside Library, Community Room
330 N Coast Hwy, Oceanside, CA 92054

**Comentarios para reuniones disponibles en sandag.org/fares**

Las reuniones públicas se llevarán a cabo en un formato de evento de puertas abiertas, donde los participantes pueden asistir en cualquier momento de la reunión, hacer preguntas al personal, completar tarjetas de comentarios o hacer comentarios públicos a los presentadores y el público presente. De conformidad con la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés), SANDAG asistirá a las personas que requieran ayuda para participar en las Reuniones públicas que figuran anteriormente. Si requiere tal asistencia, comuníquese con SANDAG al (619) 699-1900 al menos con 72 horas de anticipación a la reunión.

La visita de participantes con discapacidad a las Reuniones públicas se llevará a cabo en un formato de evento de puertas abiertas, donde los participantes pueden asistir en cualquier momento de la reunión, hacer preguntas al personal, completar tarjetas de comentarios o hacer comentarios públicos a los presentadores y el público presente. De conformidad con la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés), SANDAG asistirá a las personas que requieran ayuda para participar en las Reuniones públicas que figuran anteriormente. Si requiere tal asistencia, comuníquese con SANDAG al (619) 699-1900 al menos con 72 horas de anticipación a la reunión.

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**NOTICE**

Six public meetings will be held in San Diego County on a proposal to amend transit fares affecting the Metropolitan Transit System (MTS) and North County Transit District (NCTD) service areas. Any approved changes to the Regional Comprehensive Fare Ordinance and TransNet Ordinance are proposed to become effective no sooner than January 27, 2019.

**Why fare revisions are needed:**
- Operational costs over the past 10 years have increased, while fare revenue has declined and fares have not increased.
- Increased fare revenue will assist in maintaining high levels of service.
- These changes will simplify the fare structure across the region.

See below for information regarding scheduled public meetings. Customers may also call (619) 595-5321, email pio@sandag.org, or submit comments in writing if unable to attend the meetings. After public input is received and analyzed, a final recommendation will be considered by the SANDAG, MTS, and NCTD Boards of Directors, at which time the public can also make comments.

**PUBLIC MEETINGS**

*Monday, October 22, 2018*
5:30-7:30 p.m.
Chula Vista Library, Civic Center Auditorium
356 F St., Chula Vista, CA 91910

*Tuesday, October 23, 2018*
2:00-4:00 p.m.
MTS Board Room
1255 Imperial Ave., 10th Fl., San Diego, CA 92101

*Wednesday, October 24, 2018*
6:00-8:00 p.m.
El Cajon Police Department, Community Room
100 Civic Center Way, El Cajon, CA 92020

*Monday, October 29, 2018*
3:30-5:30 p.m.
City Heights Library, Community Room
3795 Fairmount Ave., San Diego, CA 92105

*Tuesday, October 30, 2018*
12:00-2:00 p.m.
Escondido Library, Turritaine Room
239 S Kalmia St., Escondido, CA 92025

*Thursday, November 1, 2018*
6:00-8:00 p.m.
Oceanside Library, Community Room
330 N Coast Hwy, Oceanside, CA 92054

**Comment forms available at sandag.org/fares**

To submit your comments in writing, mail to:
SANDAG PIO, 401 B Street, Suite 800, San Diego, CA 92101
Email: pio@sandag.org
Deadline for public comments: November 9, 2018

*SANDAG will accommodate participants who require assistance in order to participate in the public meetings listed above. If such assistance is required, please contact SANDAG at (619) 699-1900 at least 72 hours prior to the meeting time.*
**PROPOSED FARE CHANGES**

- Single one-way fare price ($2.50) for MTS bus, Trolley, Rapid, SPRINTER and BREEZE
- Addition of a $3 Day Pass for Seniors/Disabled/Medicare and Youth for MTS bus, Trolley, Rapid, SPRINTER and BREEZE ($6 for Rapid Express)
- One discounted pass price of $26 for SDM and Youth for MTS bus, Trolley, Rapid, SPRINTER and BREEZE ($36 for Rapid Express)
- Increasing the minimum age for senior discounts from 60 to 65 years (seniors 60 or older prior to the effective date will remain eligible for reduced fares)
- Price increases for COASTER one-way, Day Pass and 30-Day/Monthly Passes
- Elimination of 2, 3, 4 and 14-day passes
- Elimination of Trolley transfers to align with bus policy
- Elimination of the SPRINTER/BREEZE monthly pass (will now be $72 to include service on the MTS bus and Trolley)
- Consideration of a $5 or $6 Adult Regional Day Pass

**SINGLE RIDE VIAJE ÚNICO**

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<td>Adult Adulto</td>
<td>$15.00</td>
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<td>SDM*</td>
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*S/D/M = Senior/Disability/Medicare  *Senior = 65+
Personas mayores/con discapacidad/Medicare Personas mayores: 65+
*Youth = Ages 6 through 18 (5 & under ride free)
Jóvenes = entre 6 y 18 años de edad (de 5 y menores viajan gratis)
†Currently includes all modes except ACCESS, LIFT, MTS Rural, & FLEX 372
Actuellement incluye todos los modos excepto por ACCESS, LIFT, MTS Rural y FLEX 372
‡Premium regional includes Regional Pass modes and MTS Rapid Express and NCTD FLEX (Except FLEX 372)
Regional Premium incluye modos en Pase regional y MTS Rapid Express y NCTD FLEX (Excepto por FLEX 372)

This information will be made available in alternative formats upon request. To request, please call (619) 231-1466.

Esta información está disponible en diferentes formatos bajo solicitud.
Para solicitar esta información en un formato diferente, por favor llame al (619) 231-1466.
I am an occasional rider on the lift. I use the Breeze and Sprinter when I can but due to blindness there times when I should use the Lift.

If I were sitting across from you, I would counter propose to carve out a provision that keeps the rate for disabled at $3.50 and an active program from NCTD to educate disabled patrons how to use the Breeze and Sprinter.

I have been told that there are 3.2 million residents in San Diego County, of which 100,000 are blind. Using this data I figure that 5,000 Oceanside residents are blind. I assume that you have not received comments from each of these blind people.

I will stick out my neck and speak for them asking that you raise the price collectively and do not raise the price for the disabled.

I am a resident of Oceanside, retired from OUSD and retired US Army.

Thank you for your time and attention.

-Bill

This email was made possible by the Veterans Administration.
Hi. My name is Brian Korn. I use an SDM pass and ride the bus and Sprinter at least 4 days a week.
I work 9am - 5pm. Sometimes on my way to work or on my way back there is only a single car Sprinter. This seems ridiculous to me to be running a single car Sprinter during the rush hours. I have attached a picture of what it feels like to ride the single car train during those hours. (From the movie Schindler's List.) I feel like I'm on the "pack 'em in like sardines" Amtrak. That's why when I go to Orange County I ride the Metrolink. I always get a seat to myself. It's very disappointing to have to ride a crowded single car Sprinter at the 5pm hour after a long day at work. I feel like someone in the attached picture.
I wouldn't mind paying a higher fare if I was guaranteed to always ride a double car Sprinter for my commute. I understand the Sprinters need maintenance. But it shouldn't be done at the 8am or 5pm hours.

Please contact me if you have any questions. I would appreciate a response so I know someone reads this.

Thank you,
Brian Korn
Dear Sirs,
When I saw you were thinking about raising the prices of bus passes for seniors, my first thought was don't they realize that will make them lose money? Probably not. They don't realize COLA increases in Social Security have already been eaten up by increases in Medi-Cal and decreases in SNAP (every time the government increases the amount they send me, I fall further behind). People have to cut costs somewhere. If it's choice of taking the bus and having less money to buy food, or walking to the grocery store and having more money for food, older people tend to choose the latter. Unless they're physically unable to walk.
So your increase will improve the health of those seniors who can walk, but those who can't, will screw up your bus schedules. Why? Because older people who can't walk long distances, usually use walkers (or in the case of males, refuse to use walkers) and between maneuvering the walker up onto the bus – with or without the ramp – and fumbling to get the money into the slot, moving down the aisle to the senior seating, sitting down, folding up the walker, it takes five minutes before the bus can continue on its’ route. And that's just for one person. The people who can walk, will ride the bus less often, if at all. And for the most part these were people who either weren’t buying a monthly pass or who will decide that an eight dollar increase in too much for the number of times per month they ride the bus. (If you’d only raised the price to twenty dollars, people would have grumbled, but figured it wasn’t that bad).
Another problem: Raising the day pass from $5 to $6 means people have push a five dollar bill AND a one dollar bill into the slot – while the bus waits, and waits, and waits. People have enough trouble getting one bill to go through, now you want them to get two to go through.
So now that I’ve told you what you shouldn’t do to increase your profits, I’ll tell you what you should do. The people who set up schedules don’t seem to understand people will ride more if it's convenient and the cost is reasonable. That's one of the trade offs of mass transit. It's not really convenient. (it takes me and hour and a half or more, for what would be a ten minute drive) but if it’s cheap enough people will put up with the inconvenience.
First: Offer special deals on monthly passes. Maybe for a year, lower the cost of the regular monthly pass to $50.00 (or at least $60.00) Why? Because for people who work at minimum wage jobs four days a week, it’s cheaper to buy a one way pass ($2.25/2.50), than it is to buy a monthly pass ($72.00).
Second: Run all your buses/trolleys at least every fifteen minutes during the day (6 am to 6 pm) or at least during morning and evening rush hours (6-9 am, 3-6 pm) and the middle of the day on weekends (10 am–2 pm) for at least a year and see how much more money you make.
Third: (and this one you can’t do even though it would increase paying ridership) Work with Health and Human Services to have them transport homeless people, rather than having homeless riding mass transit.
Why? Because a lot of people who’ve tried riding the bus decided against it because
they can’t stand the smell of someone who’s wearing the same clothes for months on end (I’ve held my breath walking past them a time or two) or who has roaches (and who knows what critters you can’t see) crawling over them or their bundles. And you don’t even want to think about stepping over ‘stuff’ they leave behind.

Also, spend more time enforcing your non smoking rules. (I’d really prefer not to get on a bus or trolley with the smell of marijuana so strong, I have to sit by the door and breathe deep every time it opens. The clove smelling ones aren’t quite so bad). And you really need to push back against those people vaping. At least at the trolley station or bus stop I can move away from them. The problem is the children who can’t. Last thing you need is parents suing you because their kid developed pediatric cancer.

Thank you for your time. I hope you will consider my input in making your decisions.

Sincerely,

Catherine Siebert
Hi, my name is Charles Freeman and I purchase a monthly compass pass. I am a San Diego native 73 yrs. I am very happy to pay 26.00 for the pass instead of 18.00. I rely on the excellent transit system every day.

I think the system can be better and a raise in fares should help in keeping the schedules frequent and add new routes.

I am very excited about the new trolley line. I think route 10 should go down Washington between Park and Fifth Ave. This would avoid one of the slowest sections of the route as well as the busy intersection at Fifth and University. Route 10 should be made as efficient as possible to be an East/West connection to the new trolley line.

Thank you for an excellent job in providing San Diego with public transportation....

Charles Freeman
From: Chris Carlson
To: PIO
Subject: Rate Increases
Date: Tuesday, October 09, 2018 1:28:31 PM

Your proposed rate increases are outrageous and unearned. If approved, I will stop purchasing my monthly (or 30 day) pass and resume my driving commute from San Diego to Carlsbad.

Your current service levels are not deserving of any rate increases. Your reliability is so bad as to, by itself, make many riders consider abandoning the Coaster on a weekly basis. The connections with NCTD buses have become consistently unreliable, with often times (just this week provided two examples in two days) where the connecting buses (444 and 445) are not present when the train drops off.

There is human excrement and urine in the tunnel and surrounding areas of the Old Town Transit station and the invasion of CMH discharges and homeless renders the parking lot a dangerous environment at any hour of the day, but especially in the dark, early morning hours.

Your unilateral decision to reduce service levels to "4-car" service has provided a much more crowded environment making it difficult to conduct work. The lack of consistency between 4 and 5 car service has disrupted the boarding process as riders typically line up where they know doors will be available. With a shift if the number of cars, these locations are impossible to define. The wifi service on the Coaster has always been bad and basically unusable.

The Coaster trains are filthy. Both internally and externally, the cars are dirty and trash is left between seats and stains are left to remain on the floors. By the afternoon commute, many of the bathrooms are so soiled as to be unusable. You provide virtually no security on the trains - I have seen one deputy sheriff in the 18 months I have been riding.

Please consider this a strong objection to your proposed rate increases until such time as your service provides value for the cost. Rest assured, every dollar I save by not subscribing to a pass, will be spent on ensuring defeat of the SANDAG and NCTD board members if this is passed.

Thank you for your kind consideration.

Chris R. Carlson
This submittal responds to the media release dated October 18, 2018 on this subject. This is made as a formal hearing submittal to the parties conducting the public meetings, and to the governing board members of the San Diego Association of Governments (SANDAG), Metropolitan Transit System (MTS), and North County Transit District (NCTD).

From the public notice, it appears that public transportation fare increases are being considered for the bus and rail systems operated by MTS and NCTD. Such fare increases will continue a trend in our region of fare increases over time, which have the effect of reducing affordable access to public transit for all populations, especially those which are most dependent on such transportation; and for the greater populations of potential riders who are looking for cost comparability to private automobiles.

We have been in a downward spiral of fare increases, causing decreased financial accessibility and cost attractiveness, causing reduced ridership and reduced fare recovery, leading to more fare increases, and so on. New fare increases may seem attractive to increase revenues, but will continue this downward spiral. As an alternative, a truly cost-attractive public transit network which provides increased frequency and time-comparability to the private automobile, will increase ridership and operating fare recovery. A new approach to the region’s public transportation system is needed.
I'm both saddened and outraged by the proposed minimum age increase from 60 to 65 years old for senior discounts.

I found myself homeless and fully unprepared for that type of lifestyle. My saving grace after years of transitional housing and living in a tent on the streets was the senior discount for a monthly pass through MTS at age 60.

Forced to apply for my early Social Security benefits at age 60 due to an injury finally made it possible for me to enter a senior homeless prevention program. Thankfully, the injury wasn't permanent so I also was able to receive the senior discount on a monthly pass which enabled me to look and find a part time job.

If the minimum age was 65 years before I could receive the senior discount I wouldn't be celebrating having my own apartment until this coming December when I have my 65th birthday. I'm celebrating 3 years of not being homeless thanks to discounted senior rates at age 60. This increase in the minimum age will hurt a lot of seniors and most likely they will be forced to quit there jobs do to their inability to get to and from work and they too may end up living on the streets.

The charitable (free) monthly passes that SANAG donates to places such as St Vincent de Paul and the passes that are purchased at discounted rates by the clients at the YWCA should be stopped before increasing the minimum age limit to 65 years because clients at the these transitional housing complexes don't have to deal with high rent, purchasing food and all the other costs such as clothing and hygiene products. I'm sure there are more charities that SANDAG donates to but I can only state for a fact about the two mentioned above because I was a client at both.

Those riders that only purchase a daily pass while visiting San Diego or coming downtown to eat or attend a game should be the riders that absorb the cost increases. They aren't the riders that will go hungry and/or not be able to pay their rent do to their inability to purchase a monthly pass at a discounted rate until they are 65 years of age.

Please, don't add to the numbers of seniors living on the streets. Keep the minimum age at 60 not 65.

Thank you.

Deborah Cluck

I'm forever grateful for the senior discount at age 60 that enabled me to rise above being homeless.
Dear MTS,

I work for a non profit organization named Urban Corps and like most of the corps members, I rely on Urban Corps' ability to purchase month pass stickers in bulk at a discount in order to travel to work. Will this be affected by the proposed changes?

Regards,
Derek Selby
While I am not available to make the meetings you have scheduled concerning the proposed fare increases, I would like to supply you with my opinion concerning same.

I have been taking the Coaster from Carlsbad to San Diego for almost 20 years. Over the past 3-5 years, the service has declined considerably - from mechanical issues, old dirty interior cab cars, dirty windows, lack of communication from NCTD management and Board of Directors and most importantly too many train cancellations.

I have prepared an Xcel spreadsheet from July 1, 2018 to the present information taken from NCTD's Twitter account (while you will see a gap from 10/18 to 10/29 because I just got frustrated with spending the time to do this), you will note there were 128 train delays/cancellations; 21 of those were not the fault of NCTD due to trespassers, police activity and Del Mar cliff collapses - there were 20 train cancellations (11 in the month of October alone) and 87 delayed trains due to mechanical issues, PTC and the like.

For SANDAG and NCTD to feel now is the right time to impose a fare increase is unbelievable. I have been in communication with Matt Tucker and his team for over 2 years discussing the train schedules and the purchase of new locomotives. All of my communications seem to have fallen on deaf ears. I suggested over a year ago that NCTD should be looking into purchasing new locomotives. Those locomotives have now been "ordered" but will not be received until the Spring of 2021 and then there will be a delay for those locomotives to be put on rails. It is anticipated that the new locomotives will be placed on the rails in late 2021. The current locomotives will not last until 2021.

I strongly feel that increasing the Coaster passes at this time is not appropriate. I also feel that if you look at the ridership over the past several months you will note that it has declined because of the declining service we are receiving. While NCTD Management will differ with that opinion, I am on the train 2-3 times a week and hear the unhappy passengers.

If you would like to discuss this matter further, please feel free to give me a call.

Farika Rickabaugh
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<td>Passenger medical attention**</td>
<td></td>
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<tr>
<td>9/7</td>
<td>645</td>
<td>-15 Mechanical</td>
<td></td>
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<tr>
<td>9/9</td>
<td>ALL TRAINS</td>
<td>Speed restrictions - up to 10 minutes due to weekend track contruction</td>
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<tr>
<td>9/10</td>
<td>ALL TRAINS</td>
<td>Speed restrictions - up to 20 minutes due to weekend track contruction</td>
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<tr>
<td>9/10</td>
<td>634</td>
<td>Speed restrictions</td>
<td></td>
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<tr>
<td>9/10</td>
<td>631</td>
<td>Late incoming equipment (speed restrictions)</td>
<td></td>
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<tr>
<td>9/12</td>
<td>639</td>
<td>-5 PTC</td>
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<tr>
<td>9/13</td>
<td>653</td>
<td>-6 Passenger assistance*</td>
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<tr>
<td>9/14</td>
<td>636</td>
<td>-10 PTC</td>
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<td>9/14</td>
<td>638</td>
<td>-10 Train meet with 636</td>
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<td>9/14</td>
<td>640</td>
<td>-10 PTC</td>
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<td>9/14</td>
<td>635</td>
<td>-10 Train meet with 640</td>
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<td>9/14</td>
<td>635</td>
<td>-4</td>
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<td>9/14</td>
<td>ALL TRAINS</td>
<td>-7 Speed restrictions in Encinitas</td>
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<td>9/14</td>
<td>657</td>
<td>-20 Mechanical</td>
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<tr>
<td>9/14</td>
<td>663</td>
<td>CANCELLED Mechanical</td>
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<td>9/15</td>
<td>681</td>
<td>-20 Stalled Amtrak 769</td>
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<tr>
<td>9/15</td>
<td>684</td>
<td>-5 Late incoming equipment</td>
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<td>9/19</td>
<td>631</td>
<td>-9 PTC</td>
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<td>-5 PTC</td>
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<td>9/24</td>
<td>638</td>
<td>-12 No reason</td>
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<td>9/27</td>
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<td>-6 Passenger assistance**</td>
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<td>9/27</td>
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<td>9/28</td>
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<td>-10 No reason</td>
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<td>9/29</td>
<td>692</td>
<td>-34 Mechanical</td>
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<td>9/29</td>
<td>697</td>
<td>-30 Disabled freight train</td>
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<td>10/4</td>
<td>651</td>
<td>CANCELLED Mechanical (in Solana Beach)</td>
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<tr>
<td>10/4</td>
<td>656</td>
<td>CANCELLED Due to 651 cancellation</td>
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<tr>
<td>10/4</td>
<td>661</td>
<td>CANCELLED</td>
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<td>10/4</td>
<td>655</td>
<td>-15 Train traffic</td>
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<td>10/5</td>
<td>645</td>
<td>-60 Bluff collapse**</td>
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<td>10/5</td>
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<td>-45 Bluff collapse**</td>
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<td>-20 Bluff collapse**</td>
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<td>-10 Train traffic</td>
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<td>CANCELLED Mechanical</td>
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<td>10/10</td>
<td>661</td>
<td>CANCELLED Bus bridge due to 656 cancellation</td>
<td>Potentially late due to weekend work</td>
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<tr>
<td>10/15</td>
<td>ALL TRAINS</td>
<td>CANCELLED mechanical</td>
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<td>10/16</td>
<td>638</td>
<td>-15 no reason</td>
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<td>10/17</td>
<td>662</td>
<td>CANCELLED mechanical</td>
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<td>10/17</td>
<td>663</td>
<td>CANCELLED mechanical</td>
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<tr>
<td>10/17</td>
<td>665</td>
<td>No service from Santa Fe to Sorrento Valley</td>
<td></td>
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<tr>
<td>10/18</td>
<td>638</td>
<td>CANCELLED mechanical - using same train that broke down the night before</td>
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<tr>
<td>10/18</td>
<td>657</td>
<td>CANCELLED mechanical from 638</td>
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<tr>
<td>10/19</td>
<td>644</td>
<td>-12 mechanical in Sorrento Valley</td>
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<td>10/29</td>
<td>660</td>
<td>CANCELLED mechanical</td>
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<tr>
<td>10/29</td>
<td>663</td>
<td>CANCELLED mechanical</td>
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</table>
Here's a breakdown of proposed MTS 30 day pass increases. MTS is trying to align the SDM & Youth prices to be the same. But why do this at the expense of the people who can least afford it. Largest increases by far affects SDM riders with 30 Day Passes with Youth 30 Day Passes drastically reduced.

MTS Regional 30 Day Pass Adult 0%
MTS Regional 30 Day Pass SDM plus 44%, $18 to $26
MTS Regional 30 Day Pass Youth minus 38%, $36 to $26

MTS Premium Regional 30 Day Pass Adult 0%
MTS Premium Regional 30 Day Pass SDM plus 44%, $25 to $36
MTS Premium Regional 30 Day Pass Youth minus 39%, $50 to $36
Is the age for the senior citizen rate going to be raised from 60 to 65 with the new proposed coaster fare increases?
I am a senior now.

Eirik Einarsson
Caltrans District 11 Safety Specialist
Phone # 619 688 6667
Fax # 619 688 3290
M.S. 251
eirik.einarsson@dot.ca.gov
Dear SANDAG Board of Directors,
My name is Eric Reese and my public comment is on the proposal to consider integrating the San Diego Compass Card with the Amtrak Pacific Surfliner for payment of Pacific Surfliner fares via a Compass Card. To pay for Pacific Surfliner fares with a Compass Card, a passenger would present their Compass Card to the train conductor for validation and payment. The conductor would “tap” the Compass Card to their IPhone ticket scanner to check that the Compass Card is valid, meaning that there is no hold on the card, the card has not expired, and that the card has stored value that is greater than the minimum fare for the Pacific Surfliner. If the IPhone scanner shows valid, then the conductor would ask the passenger for their origin and destination station pairs. Once entered into the IPhone the IPhone would calculate the fare due. The conductor would then tell the passenger the fare and would tap their card to their IPhone scanner to deduct the Pacific Surfliner fare from the Compass Card’s stored value. With the use of a Bluetooth mobile printer attached to the conductors belt, a receipt would then print serving as the official ticket and proof of payment for the fare. There could also be an option for the phone to embed an electronic transfer to the compass card that can be used to transfer to other public transit agencies in San Diego County. My hope is that you would please consider this proposal and turn it over to SANDAG staff for a possible coordination between SANDAG, San Diego Metropolitan Transit System, North County Transit District, Amtrak, and the LOSSAN Corridor Agency for a fare payment integration. The fare integration would require a memorandum of understanding between stakeholders, a Compass Card back office server that would connect to the Amtrak IPhone scanner and would reconcile fares collected, and updated business rules between stakeholders that address the reconciliation of fares collected as well as the appropriation of fares collected to the LOSSAN Agency for Pacific Surfliner Operating Expenses. Integrating the Compass Card with the Pacific Surfliner Service would help reduce the need to buy separate fares for the Pacific Surfliner service and other public transit agencies and would help increase transfer connectivity. Thank you for your time and consideration of this important proposal. 
Sincerely,
Eric Reese
Fare Changes are not fare! If you increase your prices for all is fare. BUT TO INCREASE COST TO SDM, AND LOWER THE COST FOR YOUTH NOT FARE. This would be hard for me a senior to pay the increase. Thank you a Senior from Oceanside
Esther Simon
I have lived in San Diego for almost 30 years and have been using the North County pass, now known as the Breeze monthly pass for 26 years without missing a month. I am firmly opposed to your attempt to eliminate this pass and force riders to use the more expensive regional pass. From $59 to $72, this is a 22% increase per month, which is quite significant. With the increase of other expenses (rent, utilities, medical cost, and other bills) this is making life very difficult for people who are encouraged to use mass transit. You are not helping!

Thank you for attention to this message.

Sincerely,

Mr. Ez Udo

Sent from Yahoo Mail for iPhone
Sandag pio:

Why is it that you have decided to Increase the monthly Pass fares on the backs of Seniors and Disabled who are mostly on fixed incomes, with no increase on the monthly Pass fares of the Working able bodied Adults who have the current and future income to pay for such increases?

The Senior Pass (SDM) is our only Lifeline to the Senior services that we need to survive. A 44% increase in monthly fare just for Seniors and Disabled, and NO monthly pass fare increase, on those (Adult pass) who can best afford it is Unconscionable.

It is obvious that you are trying to pay for the Decrease (27%) in Youth monthly pass fares, by sticking the Seniors with the Bill.

It is also obvious that you want to take a cut of our very small Social Security increase for yourselves, without any regard to our greatly increased other costs of living. Our very small social security increase does not begin to pay for all of just the increases that the City of San Diego has mandated on us Seniors and Disabled. Most of us Seniors living on fixed incomes over the last 10 years (the very 10 years you complain about your cost increases) from 2008 to 2018 have lost a large part of our pensions, like IRAs and the lower (.01%) bank interest on our savings (which was 5%), due to Government manipulations of the currency and bond interest (including lower city bond interest) has put us in a Much Poorer state than we were prior to 2008.

It is Not the backs of Seniors and Disabled where the burden should be placed. If you are really interested in reducing the increased Operational Costs, then do what is done in almost all other countries. Stop collecting Cash Fares on board busses. You already do not take cash fares on board Trolleys. You already require a pre-purchased Ticket/Pass to ride a Trolley.

There is no reason to believe that only Vons/Albertsons/Safeway stores are the only ones that are interested in drawing more customers into their stores by having Automatic Cash/Pass machines in many of their stores. The California DMV now has automatic cash collection machines in many stores (which draws in more customers for the store) to pay the "California Department of Motor Vehicles" cash money for registration renewals and other fees, and eliminates trips to the dmv offices and the clerk's time to process the cash and paperwork, that the machines do for very little cost.

The MTS/Sandag could put such machines (the same type that is at SDSU college) in many stores and other convenient locations, to eliminate cash fares on busses. San Francisco already has many such machines already installed and they issue a temporary paper (electronics inside just like the solid plastic pass) pass at a cost of only 5 cents/pass. It costs way more than 5 cents to collect the cash fare on a bus. San Francisco Municipal Railroad (MUNI), uses the Exact Same Pass system as San Diego does. Also the same in Beijing china (who also have, no cash fares on buses).
Elimination of the cash fare on board busses, will reduce passenger loading wait times. This will reduce bus headways and allow fewer busses to do the same job. This will save money on fuel while the bus waits to load cash paying passengers, and on the bus driver hourly wages. Less wait time = less cost. Also allow passengers to load on both front and rear doors with the pass (just like they do in San Francisco). Both methods save lots of $$$. Installing a few more Bus Pass Cash machines near bus stops is a whole lot less costly, than having cash fare machines on every bus. Also unloading all those cash fare machines from every bus, is also one of your more costly mistakes you make in fare collection. You could also Eliminate all One Way fares. Turn all Fare Tickets into Round Trip only tickets / Day Passes.

If you think that people that travel by airplane need special privilege, then you could have transfer / return ticket machines inside airports, and in other cities / counties / airports / bus terminals and have machines that turn your one day pass (inside the airport etc.) into an out-of-town return option, like they also do in San Francisco.

All of the above suggestions are better than to put a 44% fare increase on the backs of the Seniors and Disabled who can least afford it.

thank you for your consideration of the above suggestions.

Fred
To: Sharon Cooney  
Subject: FW: Proposed MTS/NCTD fare changes  

For emails regarding the fare changes.  

Should I forward those to you to have them logged in?  

-----Original Message-----  
From: Councilmember Georgette Gomez  
Sent: Monday, October 22, 2018 10:21 AM  
To: Barrios, Kelvin <KBarrios@sandiego.gov>  
Subject: FW: Proposed MTS/NCTD fare changes  

MTS related, please respond. Thanks!  
-Stepher  

-----Original Message-----  
From: Councilmember Georgette Gomez  
Sent: Wednesday, October 17, 2018 6:14 PM  
To: Councilmember Georgette Gomez <GeorgetteGomez@sandiego.gov>  
Cc: CouncilMember David Alvarez <DavidAlvarez@sandiego.gov>  
Subject: Proposed MTS/NCTD fare changes  

I've just learned of fare changes to be considered by MTS/NCTD. I won't be attending the public meeting(s) but want to let you know my opinion on what has been reported to me.  

I applaud reduction of Youth monthly fares to $26. That not only makes public transportation more affordable for a class of riders who may well require public transit to get to jobs and school, but it's an opportunity to help create a habit of using public transportation into their post-age 18 years.  

However, I'm horrified at the suggestion of a 45% increase for Senior/Disabled/Medicare riders, a class of public transportation users who most often have finances as limited or more limited than the Youth category. As with the Youth category, most if not all Seniors et al are dependent on use of public transportation, for shopping, for medical appointments as well as for getting out and about which is essential for maintaining a healthy lifestyle, both physical and psychological. Too many seniors and disabled (can be one and the same) end up isolated because of limitations on ability to get about.  

Please reconsider this increase and look more closely at the Adult fare which I understand isn't proposed for increase. Even there, the negative impacts on low-wage earners who depend on public transportation must be carefully considered.  

Thank you for consideration of my comments.  

Judy Swink
I object to your proposed increase in Senior Monthly MTS passes. While you propose no increase in adult fare and a decrease in youth fare, your proposal to raise ONLY the senior fare is discriminatory and creates a financial burden on seniors on fixed income and no other means of transportation other than MTS services.

Please reconsider your increase in senior fares.

Gaynell Schenck, Senior
MTS Monthly Fare Pass User
San Diego, CA 92109

Sent via my Samsung Galaxy, an AT&T 4G LTE smartphone
From: Tamara Acevedo-Lopez
To: PIO
Cc: Israel Maldonado
Subject: Changes to Fare Ordinance Concern
Date: Wednesday, October 24, 2018 8:44:51 AM
Attachments: Customer Case 328763 Concerns Regarding Fare Increase.pdf

Good Morning,

Please see the following concern we received in regards to changes in the fare ordinance.

Best,

Tamara Acevedo
Support Services Coordinator
San Diego Metropolitan Transit System
https://www.sdmts.com/fares-passes-pass-programs/classroom-day-passes
619.233.9558
### Notes

I recently noticed that you will be increasing only the fare on disabled passengers. Several of my friends, my boyfriend and I have disabled bus passes. I am the only of us that has the capacity to work. I have epilepsy (which makes me unable to drive because I can lose consciousness any time of any day). However because I am not "unable to work" I do not qualify for S.S.I. and I work 40 hours a week. I walk 30 minutes to the closest bus stop to my home to catch the 848, to get to the El Cajon transit center, catch the green line to the Santee transit center and walk 10 minutes to my job. In summary I get up at 6 a.m. to arrive at work by 9 a.m. I did an interview with an M.T.S. C.E.O. in the downtown office in 2005 for a college class inquiring as to why rates were going to increase by .25 for all riders (when a disabled pass was $11.25 each month). He explained in detail how monthly passes,
transfers and using tokens all resulted in loss of revenue and it was an attempt to recoup your losses.

Learning that the current monthly passes are going to increase by $6.00 solely for disabled passengers is extremely inequitable. Many disabled passengers take buses and trolleys because they are unable to drive due to a disability. People on S.S.I. receive barely enough to pay for food and rent, and riding the bus is a necessity for them. When I inquired about this increase on the bus the other day the driver said it was because of the gas tax and the fact that wheelchair riders result in more usage of gas. It seems ironic that society doesn't think of someone as having a disability if it is not apparent (i.e. a wheelchair or other visual limitations). However, when people who are confined to a wheelchair result in an increase in expenses, people who have a disabled pass (regardless of whether or not they are in a wheelchair) suffer an increase in their fare. As I previously noted many people who use the M.T.S. system have no other option. Ask yourselves, not as M.T.S. employees/ C.E.Os but as parents/relatives, if someone you cared about was unable to drive due to a disability and was metaphorically eating cheerios off of the floor to survive because of a broken economy, a social security system that attempts to pay as little benefits as possible (to the disabled passengers who ARE on S.S.I.) and the cost of living in San Diego which increases on a daily basis, would you want them to fall through the cracks and become a victim of capitalism? I have some suggestions on how you can improve your services and increase your revenue without increasing the bus rates.

(1) Sync the trolley schedule up with the bus schedule at transit stations. When I catch the green line in Santee to get home from work, I arrive at the El Cajon Transit Center just as the 848 is pulling out of the lot, causing me to have to wait an entire hour for the next bus because it only runs once an hour after 7 p.m.

(2) Alter the bus schedules to where the buses run once every half hour throughout the entire week (not once an hour on the weekend and holidays). Although it is a common misconception that people only work Monday through Friday, many people work on the weekends. Those who don't often go to places such as the beach, Sea World or Balboa Park where they would prefer to avoid driving their own vehicle because of parking rates or difficulty finding a parking space. Others go to supermarkets and the mall and want to avoid the hassle of circling the parking lot searching for an available space.

(3) Reinstate the 854 bus route. No buses run through Lakeside other than the 848 and I used to take the 854 to Grossmont college, Santee and many other locations. When that bus line was discontinued I had to rely on classmates who could drive to take me to school. Many college students would be quick to utilize the M.T.S. system if it were more accessible to them and involved less transferring to other buses and/or the trolley.

(4) If these suggestions do not help you can create a different category for bus passes: In addition to adult, youth and disabled there could be a category for wheelchair passengers.

If you can in good conscience take away the small amount of money
that people with disabilities such as epilepsy, schizophrenia, muscular dystrophy, P.T.S.D. and any other number of disabilities are able to save up to regain lost revenue, despite the fact that they suffer daily beyond your wildest dreams, while they are trying to live as normal a life as they can in their conditions, then all humanity is lost. Just remember who is suffering as a result of those decisions when you leave work in your nice air conditioned vehicle with a stereo and a comfortable place to sit while you drive home, while disabled people walk up hills, nurse our blistered feet and eat scraps with no luxuries in our lives because it doesn't affect you. However one day it will, whether it is because a loved one becomes disabled or because people come to the realization that yet again the M.T.S. system has put money before its passengers. Initially it was just cutting routes, now raising rates on the most vulnerable. Essentially people pay more and get less. Your bread and butter, your passengers can only remain blinded by the greed and lack of empathy for those who need it most, so long. If the rates do increase, when passengers open their eyes, the M.T.S. administrators who chose to increase the bus rates on the disabled will be saying the same thing that the people who voted for Donald Trump are asking themselves: What did I do? What was I thinking? Why didn't I see this coming? Is there any way to fix this? Stop this before it becomes irreversible and your revenue drops even more. People with disabilities are quite familiar with being targeted as a way to regain revenue, whether by social security, employers (if they can work) and corporations. Disabled people stand together to fight this injustice and together we will make our voices heard. Believe me, it a noise that you will not forget anytime soon.

My roommate (who has schizophrenia and P.T.S.D.) is home most of the time and can answer any questions you may have. My work hours make it difficult to reach me at my landline that I provided to you and I rarely check my e-mail. I sincerely hope, for the sake of all of the disabled people who ride the M.T.S. system as well as for yours that you take my suggestions seriously and the concerns of myself and many others to heart.

Sincerely,

Heather Hurd
Regarding the fare increase proposed, certainly I can understand the need for budget stability, however the fare increase proposal does not conform to best practices at other agencies in California or nationally, and seems to be concentrated on the goal of simplification to the extent of valuing passengers and future riders, important to meet the State's climate change goals and help arrest global warming.

Conforming the fare to $2.50 is appropriate, but the lack of either fare capping to the $5 day pass or transfers discourages ridership and does not follow best practices. For example, on Northern California Clipper, day pass accumulators allow day passes to be earned and riders to not pay more than the daily fare. On LA Metro, another Cubic system, riders can transfer. Although there is not a day pass accumulator the day pass is set at four times the base fare so is only valuable for individuals running errands or making multiple trips. Someone who may want to ride transit from auto repair, the airport, or a similar one way trip will have to pay the $5 and may use Uber or Lyft for a more direct trip instead. Similarly, individuals who are not sure how many transit trips they may make may be discouraged from riding at all.

In addition, with the elimination of a single fare for Trolley riders, Trolley fare inspectors will be required to intricately know the system and whether someone had "transferred", which may be challenging (i.e. someone boarding at 12th/Imperial riding on the Green Line could have ridden the Orange Line and transferred for a faster trip). Trolley users will need to find TVMs at transfer stations to purchase another ticket in order to legally continue to ride. In practice, few fare inspectors will learn the system and where they are riding, and few tickets will be issued for individuals "transferring" within the Trolley system. It should be noted that VTA, another day pass system, prior to introducing transfers treated the light rail as one "line", and most POP agencies do not have such a system. LA Metro tried it and received significant complaints over "transferring" between subway branches at between subway and light rail at Metro Center so implemented a transfer system.

Therefore, I strongly urge fare capping at the $5 level for base fare and $2.50 for seniors (I am ambivalent about the change to 65, although the norm in Southern California is 60 (OCTA, Riverside) or 62 (Omnitrans, LA Metro)). Do not implement the fare change without capping. It will also encourage usage of the COMPASS card and the valuable data collected.

Elimination of 2, 3, and 4 day passes cause issues during special events such as Comicon and are not necessary. One missing fare component that most other major California agencies (Metrolink, RTA, Omnitrans, LA Metro) have is a 7 day pass. This should be implemented at a cost of one third the 30 day pass, to account for those with specific needs and those who cannot afford a 30 day pass, rather than purchasing multiple day passes. In this instance, at $24, it would provide a commemorative pass for visitors, meet the need previously fulfilled by the four day and 14 day passes, achieve some fare simplification, and conform to best practices at transit agencies across the country. The NCTD staff presentation omitted the number of 14 day passes sold and with greater marketing, especially to lower income individuals, a 7 day pass could be well received.

Sincerely,
Henry Fung
Hi; I do support some increases! I'm age 58, working part time at Vons grocery store. How about increase age of qualifying for senior passes to age 62 not age 65?

 Compass card for adults is at $72.00, if it's raised to $82.00, I'll be hurting financially. I pay almost half my income to rent, compass card.

 Take care and God Bless you. Hope Manley

P.S. Those rapid buses are really helping thanks!
Oct 9, 2018

Hello, I am a frequent user of both the Trolley and Buses in the MTS system. I was reading the notice you put out about fare changes and revisions in the flyer I took from the bus this week. I am emailing my comments about these changes to you as I am not able to attend the public meeting nearest me as I won't be home from work in time.

My Comments:
1) I believe the increase in fares for single rides is very fair.
2) I think the proposed fare increase for SDM passes is a bit steep, jumping $8 at one time is not very fair. I could see a $3 to $5 dollar increase as being ok, I am a member of the senior and handicapped group and I have a monthly pass as I still work part time. I am working because I still have 2 adopted minor children living with me and to be able to make ends meet each month I need the income a large $8 jump in my bus pass would be hard to cover.
3) I think that the decrease of the youth pass $10 is a bit much, maybe change it from $36 to $30 decreasing it $6 instead of $10.
4) I think the regular passes could be raised from $72 to $75 to help offset so large a raise in seniors and also so large decrease you want on the youth passes.
5) I believe the $3 day pass for youth and SDM is an excellent idea, as they currently have to pay $5 for a day pass and if they only use them on rare occasions it would be more fair.
6) I do believe increasing the minimum age for seniors from 60 to 65 is fair, as your not eligible for Medicare till 65 and full Social Security is now set at 66.
7) I think that you should keep the 2,3 and 4 day passes with a slight increase in price if day pass prices are increased to $6, tourists use these as they are a good way for them to get around the county. I would get rid of the 14 day pass.
8) I also think there should be some tightening up of the passes handed out to handicapped people, I often see people using them that really don't look like they should have them at all.

Thank You for you consideration
Jacqueline Loomer
Transit Rider for 45 years now.

Virus-free. www.avast.com
RE Fare increases: I strongly urge focus on increasing ridership, not fare-box economics. More frequency on existing routes and more routes to unserved streets are a prerequisite to make MTS a reasonable alternative to car use. Each car-driver converted to MTS saves transportation funding by reducing reduced road maintenance, and reduced cost to remove carbon (which is very expensive). James Condon Zip 92110
Sandag:
Such a huge fare increase of over 44% for the seniors and disabled who can least afford it is unheard of in any other city in the USA. Why must you Punish seniors and disabled people who have less money than the fully able-bodied working persons, who can afford the cost increase and can ask their bosses for a wage increase to pay for it. We seniors are no longer working, and have no chance to get an increase from our non-existent bosses.

It looks like you are trying to hijack our very small increase in the cost of living from our small social security money.

Why are you doing this? or do you just hate seniors. It also looks like you are giving our fare increase in our monthly pass, to the youth with a decrease in their pass cost.

You do not need more money. you just need to improve your efficiency, similar to almost all other countries, changes in methods of operation. You are still running a very inefficient method of operation, especially on your methods of fare collection. We need bus ticket machines in many many more stores and other places.

All bus tickets should only be all-day-passes or monthly passes. This alone would cut in Half the cost of collecting cash.

Faster bus loading means lower costs overall. Less time (time is money) and lower fuel costs. If you were an airline, would you idle your engines while each passenger paid cash, before boarding the airplane?

If not, then why do you do it on buses?

Also eliminate all parking spaces for all Sandag employees, and require 100% of them to take the MTS/North county transit buses and trains to work. Especially the Management (including the elected officials and top management), and have all of them leave their cars at home. If public transit is good enough for us seniors it is good enough for workers and management of the public transit companies. You would then be able to balance your budget by eliminating all non-public-transit transportation activities, for all your employees and management.

No more cars, no more parking, no more taxi costs, and no more costs of accounting for such transit activities. And all such employees would be built in inspectors, of all things public-transit, if they were forced to use what they make. Think of all the gas money they would save with a "free bus pass" as part of their pay. You might even save on the next need for a pay hike, to pay the high cost of gas for their cars.

If you are good enough to run public transit, and public transit is good enough for us seniors, then public transit is good enough, to be the employees only method of transportation.

Thank you for listening.

James
You asked for comments, here are mine:

1. Removing the 30-day pass and the SDM Day Pass for Sprinter/Breeze? And raising the one-ride fare? Really? Trying to cut down on your ridership on those services?

2. Raising the monthly SDM Regional Pass from $18 to $26? No, that is too big a jump. $20 is OK. Especially if you are not raising the Adult pass accordingly.

3. Reducing the Youth pass? That’s OK with me. Though I think you should do that for all students.

4. And OK for bringing the Bus fares up to the Trolley fares. They should be the same.

Jerald Levinson
It is morally unfair to increase the fares for the Disable Senior Citizen passage rs and other Disable persons. Theses individuals are on fixed disability pensions. When the SANDAG via MTS increase the fares concerning the Elderly, we have to choose between transportation, food, and prescriptions. We may or may not receive a COLA, Cost of Living Increase. Some of the Elderly, receive Veterans Pension/Social Security Pensions. In my case, I receive a V.A. pension. Many Disable seniors are home bound, thus not by chose. The Senior Citizen must not bear the increase of the increase on the back of the Elderly. We deserve the total respect on the younger generation. This must not be on MTS terms. You in force this in moral expense on the Senior Citizen, they will stay home. You have elder parents, one day, will have to deal with this situation. Remember, what goes around comes around. Shame on you, for your financial disrespect to the Senior Citizen.

I am 74 years old, and receive a Veterans disability pension. I also receive a Section 8 assistance for rent.

I contacted The FTA Region Office San Francisco Region 9 Office, San Francisco Federal Office Federal Office 90, 7th St. # 15-300 San Francisco, CA 94103. Their is only one way to solve this unpleasantness, do not increase the projected increases fees for the Senior Citizen Compose Card.

As to the youth, they receive Pell Grant, and Cal Grant. There is funding included for public transportation as the youth attend their formal education. At the same time, this money from other grants/scholarships. The needs of the Senior Citizen are more important than the younger person. They are healthy and strong. The young should think more for the Senior Citizen then themselves.

You have shown the worst disrespect to the Senior Citizen. One day, you will be a Senior Citizen. This will be your pain. Your children will be a possible disrespect to you. I mean what I say, I say what I mean.

John J. Lamendola,  
Senior Citizen, and Viet-Nam Era
Dear Clerk, Ms. Tessa Lero and Pio of the San Diego Association of Governments (SANDAG),

Request of those addressed: Please pass this "Recommendation to Reject Metropolitan Transit System's Price Increase on Seniors, Disabled and Medicare (SDM) and Price Decrease on Youth" to the appropriate members in SANDAG who will decide on this recommendation this week of December 17, 2018:

I am writing in hopes that you will reject the recommendation by the San Diego Metropolitan Transit System's Board to impose a 28% percent increase in the monthly fare on "Seniors, Disabled and Medicare" (SDM) customers, and a concomitant 36% decrease in the monthly price for "Youth." It is my unequivocal belief that this unprecedented 28% price increase in fares by MTS on San Diego's most economically-impacted and financially-susceptible demographic group of riders will place an unacceptable burden on San Diego Seniors, Disabled and Medicare riders of MTS's buses and trolleys by expecting them bear more than their share in contributing to the Fairbox Recovery Ratios already seen by SDMTS.

By historical precedent, when Los Angeles Metro raised their fares in September of 2014, bus ridership declined by 5% while rail declined by 2.7%. This week, San Diego's Metropolitan Transit District Board proposed that the recommended increase in fares taking effect next early 2019 will result in a decrease of 1.8 million in ridership (Cooney & Maldonado, Oral Presentation with Accompanying PowerPoint Presentation on December 13, 2018, Item #32). However, based on LA Metro's ridership loss, and MTS weekday ridership of 300,000 trips per weekday, MTS will lose as much as 3.9 million in ridership based on San Diego's 78 million weekday passenger trips per-year. This projection in loss of ridership loss will gravely impact the revenue base and Fairbox Recovery Ratio that currently MTS enjoys; In fact, some agencies report that San Diego MTS Trolley enjoys the highest Firebox Recovery Ratio in the nation of all light rail systems at 55%, and the Blue Line at a remarkable 76.4% (National Transit Database; VoiceofSanDiego.org accessed on December 12, 2018, Gallegos, G.). Nevertheless, with fare increases SDMTS FBRR's could drop significantly.

My impassioned plea to SANDAG's members is that you understand the implication of raising fares by 28% on the least capable of paying such an exorbitant increase in fares on the elderly and disabled that ride our transit system's trolley and buses. This price increase is a targeted, unwarranted and disproportional price increase on our severely disabled and elderly senior citizens who are more often than not mentally and physically challenged, emotionally and psychologically unstable, handicapped or disabled, and are more often than not on a low, subsidized, fixed-income at or near the poverty-level. Many of our seniors have incomes are subsidized with food-
subsidiaries from third-parties with government-supplied shelter and/or housing and are most often incapable of paying for their monthly food and rent let alone an increase in their bus or trolley fare of 28%! It is unacceptable to expect that this low-income segment of the population pay for the $10 million deficit projected by the San Diego Metropolitan Transit System!

Let's do what is morally ethical and make the right decision to not expect our seniors, disabled or medicare passengers bare the burden of the operational costs of one of the best transit systems with one of the highest Farebox Recovery Ratios in the country. Please rescind the recommendation by the San Diego Metropolitan Transit System Board to raise the fares on Seniors, Disabled and Medicare passengers and not jeopardize MTS ridership in the process!

Sincerely,

Rev. Joseph Marchese
Phone

Buenas tardes
No es justo que desaparezcan los pases mensuales de $59.00. Y lo cobren a $72.00 como pase regional. Yo pocas veces viajo al sur del condado (1 viaje cada 6 u 8 meses). No se me hace justo que nos obliguen a pagar por algo que no utilizamos. Los que sí viajan al sur del condado que lo paguen, por usar el servicio. Den las 2 opciones.
Imagen, 8 meses pagando por un servicio que NO necesito solo porque no hay mas opciones.
Nos van a tener como rehenes de su servicio.
Yo dependo del servicio de autobus para todas mis actividades fuera de casa. (Trabajo, compras, llevar hijo a la escuela, descanso, visitas medicas; etc)
Espero que mi opinión sea tomada en cuenta.
Muchas gracias
English Translation

From: Juan Pantoja
Thursday, November 1, 2018

Good Afternoon. It is not fair that they are getting rid of the $59.00 monthly passes and now they charge $72.00 for it as the regional pass. I rarely travel to South County (one trip every six or eight months). I don’t think it’s fair that we have to pay for something we do not utilize. Those who travel to South County should pay for it, because they use the service. Both options should be available. Imagine having to pay a service I DON’T need for 8 months just because there are no other options. It is like we are being held hostage to your service. I rely on the bus service for all my activities away from home (work, shopping, taking son to school, relaxation, medical appointments, etc.). I hope my opinion is taken into consideration. Thank you very much.
To: Sharon Cooney
Subject: FW: Proposed MTS/NCTD fare changes

For emails regarding the fare changes.

Should I forward those to you to have them logged in?

-----Original Message-----
From: Councilmember Georgette Gomez
Sent: Monday, October 22, 2018 10:21 AM
To: Barrios, Kelvin <KBarrios@sandiego.gov>
Subject: FW: Proposed MTS/NCTD fare changes

MTS related, please respond. Thanks!

-Stopher

-----Original Message-----
From: js wink1
Sent: Wednesday, October 17, 2018 6:14 PM
To: Councilmember Georgette Gomez <GeorgetteGomez@sandiego.gov>
Cc: CouncilMember David Alvarez <DavidAlvarez@sandiego.gov>
Subject: Proposed MTS/NCTD fare changes

I've just learned of fare changes to be considered by MTS/NCTD. I won't be attending the public meeting(s) but want to let you know my opinion on what has been reported to me.

I applaud reduction of Youth monthly fares to $26. That not only makes public transportation more affordable for a class of riders who may well require public transit to get to jobs and school, but it's an opportunity to help create a habit of using public transportation into their post-age 18 years.

However, I'm horrified at the suggestion of a 45% increase for Senior/Disabled/Medicare riders, a class of public transportation users who most often have finances as limited or more limited than the Youth category. As with the Youth category, most if not all Seniors et al are dependent on use of public transportation, for shopping, for medical appointments as well as for getting out and about which is essential for maintaining a healthy lifestyle, both physical and psychological. Too many seniors and disabled (can be one and the same) end up isolated because of limitations on ability to get about.

Please reconsider this increase and look more closely at the Adult fare which I understand isn't proposed for increase. Even there, the negative impacts on low-wage earners who depend on public transportation must be carefully considered.

Thank you for consideration of my comments. Judy Swink
Destree Lazo Bascos  
Principal Consultant  
Consultant to SANDAG's Shift San Diego and iCommute programs

Hi Destree,

I filled out the transit survey the other day- I found it to be complicated & kind of confusing. Too many "moving parts" on every single page of the survey for me. I completed it, but really not sure that I understood all the questions.

Krista
Hi,
The RegionalPlus $12 ticket is going to be discounted. Does the new COASTER Regional (Rapid Express + all COASTER zones) $15 ticket include the trolley?

My commute includes Breeze, Coaster and Trolley, does that ticket cover all of them for the day?

Regards,
Leonardo Prosperi
From: Lois Lindsey
To: PIO
Subject: Please don’t change the price on the SDM I’m a every day bus and trolley rider I’m also a SDM customer I go to all doctor appointment s by transportation this new 30day monthly pass proposed will hurt me due to I’m disabled.
Date: Friday, November 09, 2018 5:42:50 PM
Please do not raise the age from 60 to 65. Many older adults not yet 65 need to pay less for transportation and this will make it harder to make ends meet for many of us.
Thank you
Lynn Horton
To Whom It May Concern,

As a long time MTS patron, I can see the need for an increase in fares, BUT I think the increase needs to come by reducing all of the huge discounts given to everyone, except the average ordinary citizen who pays dearly to be over looked when it comes to public transportation both in San Diego and all other areas of California as well. The fact that I as an adult pay $72 a month compared to a youth at $36 or Senior/"Disabled" at $18 is an outrageous difference in price. When I who was unemployed and looking for work and certainly couldn’t afford a vehicle was struggling to get to interviews because I didn’t have the fare for public transportation. Yet seniors, (granted not all) receive an income, live near wherever they shop or visit, students (most) can ride a school bus, allowance from parents etc, sneak on and off the trolley constantly, all get a discount for what? Being loyal, taking up the same space (often more) with book bags, push carts, feet, disobeying rules, guidelines, expect special treatment, music blaring, eating, loud conversations, etc.... What do I get, a larger fare. I never get the discount, I never get a break, even when buying a pass in advance it still almost triple everyone else’s fare. I with no steady income, part-time, travel from one end to the other, often walking home miles because the bus stops running that late or it’s another hour, or it never comes at all. That’s what I get. Harassed by the drug dealers, and the peddlers, and worse. That’s what I get. To be honest it’s not just San Diego, it’s like that all over Southern CA. And what’s worse is every city and county has their own plans, fare structures, heck some of you even have the same bus colors and names. And yet why can we, not now, but in the near future come up with a plan that is universal all over the region. Then I do t need to carry 3 cards, 2 passes, and a map larger than google to figure out who I owe what to when and cash or card or cloud or app. Please make that your next objective task.

But for now raise the prices, because that’s certainly going to increase riders, especially the full fare ones. You want us to increase ridership and reduce traffic and yet we get nothing in return but higher prices, decreased routes and times that are usually all late.

Maybe I’ll just stick to Lyft, Uber, my bike, and my feet. All of the above are cheaper, more reliable and more dependable.

Thank you for listening.

Sincerely,

Your Average Rider
Mark B.

Gmail
I am 60 and living at poverty level. The pass rate age has been a blessing to myself and many others. Raising the age to 65 will be a huge hardship on myself and thousands of men and women in the same financial situation. I pray that you will have compassion on the poor. God bless Michael Hays
TO: SANDAG, MTS, AND NCTD – Attn: Jessica Gonzales, jessica.gonzales@sandag.org; Rob Schupp, rob.schupp@sdmts.com; Kimy Wall, kwall@nctd.org
FROM: Mike Bullock
DATE: October 24, 2018
SUBJECT: Submittal for Public Hearings re: Proposed Fare Changes and Revisions to Comprehensive Fare Ordinance

This submittal responds to the media release dated October 18, 2018 on this subject. This is made as a formal hearing submittal to the parties conducting the public meetings, and to the governing board members of the San Diego Association of Governments (SANDAG), Metropolitan Transit System (MTS), and North County Transit District (NCTD).

From the public notice, it appears that public transportation fare increases are being considered for the bus and rail systems operated by MTS and NCTD. Such fare increases will continue a trend in our region of fare increases over time, which have the effect of reducing affordable access to public transit for all populations, especially those which are most dependent on such transportation; and for the greater populations of potential riders who are looking for cost comparability to private automobiles.

We have been in a downward spiral of fare increases, causing decreased financial accessibility and cost attractiveness, causing reduced ridership and reduced fare recovery, leading to more fare increases, and so on. New fare increases may seem attractive to increase revenues, but will continue this downward spiral.

As an alternative, a truly cost-attractive public transit network, one which provides increased frequency and time-comparability to the private automobile, will increase ridership and operating fare recovery. A new approach to the region’s public transportation system and to transportation in general is needed.

The first attached file shows much of what needs to be done. The California Democratic Party has a rigorous process for approving updates to its Platform, which is it’s official policy. Besides this, SANDAG, the MTS, the NCTD, and California state government have a responsibility to consider ideas from all sources, including the CDP.

Please recognize the harm in the fact that there is no plan to ensure that LDVs (light duty vehicles, meaning cars and light-duty trucks) will achieve
climate-stabilizing targets. I know such a plan is possible since I have written one myself. As a retired systems engineer, I recognized that climate change is a systems engineering problem and there was no systems engineering plan. No plan to succeed is a plan to fail. Your failure path is made clear by your mistaken idea that you must raise fares. My LDV plan has been presented at several conferences (AWMA and EUEC) and has therefore been peer reviewed. Attachments 2, 3, and 4 are the plan. Note that no discretionary project as defined in CEQA can fail to show such a plan if the project has any impact on LDV usage. Either the discretionary project supports the LDV plan or it does not. Remember the well-established concept of cumulative impacts. Climate destabilization is an environmental impact, although it is always poorly described in EIRS, violating both the moral imperative of considering life important and CEQA law.

You may mistakenly believe that CARB’s Scoping Plan is enough of an LDV plan. However, that Scoping Plan fails in at least several important regards.

- Scoping Plan Failure 1: It does not focus on LDVs, the category that is by far the biggest emitter, the biggest challenge, and so far, the biggest failure.
- Scoping Plan Failure 2: it implies that the state mandates are climate stabilizing. Implying such a thing is a moral and logical failure. CARB needs to try to prove it. Sadly, that would be impossible, given what the climate scientists are currently saying.
- Scoping Plan Failure 3: it does not “show its work” in suggesting that its plan to electrify the fleet will somehow match up with some per-capita driving, to result in somehow magically achieving the state’s climate mandates, which, as stated above are NOT climate stabilizing.

The need to have a plan to succeed (to stabilize the climate at a livable level) is shown in bullets 2 and 5 of the first attached file. All of the bullets are important but bullets 4 and 7 are especially important. You can’t continue to pretend that parking systems and road-use charge systems are not crucial to achieving success.

The 5th and 6th attached file show the needed car parking system.

My wife and I attended a house party Tuesday also attended by Stephen Stills of Crosby Stills, Nash and Young. Mr. Stills performed. It reminded me of the power of music to get people to consider different points of view.

From the final attached file (reference the original song here: https://www.youtube.com/watch?v=Soy3PHV3RiM):

Park the car in the parking lot
Its free but the transit’s not
Get on the bus and pay some bucks
Even though the service sucks

I have been trying to get SANDAG to consider different ideas for 11 years now. I have little to show for it. Maybe music will help. Please consider the entire text of the song shown in the final file. In my opinion, the song is art that is firmly grounded in reality.

Please use your influence to lobby SANDAG to lobby CARB and the state to either adopt the plan shown in attachments 1, 2, and 3 or do one of their own. Also, please work to implement the parking system shown in the 4th and 5th attached files. The first place for these systems could be MTS parking, NCTD parking, SANDAG parking and/or parking for municipal governments, as part of their Climate Action Plans.

The current trajectory leads to disaster. A fare increase is one more step. If you feel you have no choice but to raise fares, do so concurrent with a commitment to do what is suggested in this letter.

As Governor Brown said the Pope, “Humanity must reverse course or face extinction.” (Or as County Joe might say, “Whoopee, we’re all going to die.)

Highest regards,

Mike Bullock

California Democratic Party Delegate, 76 AD (author of 2 adopted resolutions and 5 Platform changes)
Elected Member of the San Diego County Democratic Party Central Committee (author of 5 adopted resolutions)

Satellite Systems Engineer, 36 years (Now Retired)
Air and Waste Management Association published and presented papers:
Author, The Development of California Light-Duty Vehicle (LDV) Requirements to Support Climate Stabilization: Fleet-Emission Rates & Per-Capita Driving
Author, A Climate-Killing Regional Transportation Plan Winds Up in Court: Background and Remedies
Co-author, A Plan to Efficiently and Conveniently Unbundle Car Parking Cost
From the 2018 California Democratic Party (CDP) Platform

Transportation

- Support vehicle regulations to provide healthier air for all Californians, strong and workable low-emission and zero-emission vehicle standards that will continue to be a model for the country, and Clean Vehicle Incentive programs to include the installation of charging infrastructure, and provide assistance to small businesses to meet the low-emission standards;

- Demand Regional Transportation Plan (RTP) driving-reduction targets, shown by science to support climate stabilization;

- Work for equitable and environmentally-sound road and parking operations; support strategies to reduce driving, such creating smart growth and “complete streets,” teaching bicycling traffic skills, and improving transit, from local systems to high-speed rail;

- Work for shared, convenient, and value-priced parking, operated with a system that provides financial support to those paying higher costs or receiving a reduced wage due to the cost of providing the parking;

- Demand a state plan outlining how cars and light-duty trucks can hit climate-stabilizing targets by defining enforceable measures to achieve necessary fleet efficiency and per-capita driving limits;

- Support policies, including tax policies and the use of Greenhouse Gas Reduction Fund (GGRF) grants, that empower business owners, especially small business owners, to make investments in transportation infrastructure to ensure that freight moves by lower-emission local, short-line freight railroads, instead of adding to highway congestion and pollution;

- Support the design and implementation of a single, environmentally-sound technology system that will collect and distribute fees for the use of roads, parking, and transit that is both economically fair and convenient and protects user privacy and the interests of low-income users;

- Work for the electrification of all trucking and transit systems; and,

- Work to ensure that freeway expansion projects are subordinate to more sustainable alternatives that will result in more jobs and more economic growth.
Climate-Stabilizing, California Light-Duty Vehicle Requirements, Versus Air Resource Board Goals

Paper 881

Mike R. Bullock
Retired Satellite Systems Engineer

ABSTRACT

An Introduction is provided, including the importance of light-duty vehicles (LDVs: cars and light duty trucks) and a definition of the top-level LDV requirements to limit their carbon dioxide ("CO2") emissions.

Anthropogenic climate change fundamentals are presented, including its cause, its potential for harm, California mandates, and a greenhouse gas (GHG) reduction road map to avoid disaster.

A 2030 climate-stabilizing GHG reduction target value is calculated, using statements by climate experts. The formula for GHG emissions, as a function of per-capita driving, population, fleet CO2 emissions per mile, and the applicable low-carbon fuel standard (LCFS) is given. The ratio of the 2015 value of car-emission-per-mile to the 2005 value of car-emission-per-mile is obtained.

Internal Combustion Engine (ICE) mileage values from 2000 to 2030 are identified, as either mandates or new requirements. A table is presented that estimates 2015 LDV fleet mileage.

Zero Emission Vehicle (ZEV) parameters are given. A table is shown that uses 2030 ZEV and ICE (ICE LDVs) requirements, named the "Heroic Measures" case, to compute the LDV fleet-equivalent mileage. That equivalent fleet mileage is used, with population and the required emission reduction, to compute a required per-capita driving reduction, with respect to 2005. Measures to achieve this per-capita driving reduction are described, with reductions allocated to each measure. The energy used per year for the Heroic Measures case is estimated.

The "Heroic Measures" set of fractions of ZEV's purchased, as a function of year, is compared to the California Air Resources Board (CARB) goals.

INTRODUCTION

Within the context of working the anthropogenic-climate-change problem and from a systems engineering perspective, the top-level requirement is to reduce greenhouse gas (GHG) emissions enough to support stabilizing our climate at a livable level. This top-level requirement must flow down to the subsystem of LDVs, especially due to the magnitude of their emissions. (As an example, LDVs emit 41% of the GHG in San Diego County.)

More specifically, LDV requirements will be identified that, taken together, will result in GHG emission reductions sufficient to "support climate stabilization". "Support climate stabilization" means that the LDV emission level will be equal to a climate-stabilizing target. Such a target is expressed as an emission level in some target year. The target is based on climate science.
From a systems engineering perspective, at the top level, the needed LDV requirements are

- LDV fleet efficiency, meaning the greenhouse gas (GHG) emissions per mile driven, applicable to the entire fleet, on the road in the year of interest and
- an upper bound on per-capita driving, given the derived fleet efficiency and the predicted population growth.

The fleet efficiency requirement will be developed as a function of lower-level requirements, such as Corporate Average Fuel Efficiency (CAFÉ) requirements, requirements on how fast Battery Electric Vehicles (BEVs) must be added into the fleet each year, and requirements to get low-efficiency vehicles off the roads. The second top-level requirement, the upper bound on per-capita driving, will spawn transportation-system requirements designed to result in less driving, such as better mass transit. This paper will derive a formulae to compute the required per-capita driving levels, based on fleet efficiency, predicted population growth, and the latest, science-based, climate-stabilizing GHG emission target.

In this work, three categories of LDV emission-reduction strategies will be considered: cleaner cars, cleaner fuels, and less driving.

**BACKGROUND: OUR ANTHROPOGENIC CLIMATE CHANGE PROBLEM**

**Purpose of This Section**

Before going to work to solve a systems-engineering problem, it is important to understand the nature of the problem. How complex is the problem? How much is at stake if the problem is not solved? Is it reasonable to take a chance and only solve the problem with a reasonably high probability or is there too much at stake to gamble? This section is an attempt to answer these questions.

**Basic Cause**

Anthropogenic climate change is driven by these two processes: First, our combustion of fossil fuels is adding “great quantities” of CO₂ into our atmosphere. Second, that additional atmospheric CO₂ is trapping additional heat.

**California’s First Three Climate Mandates**

California’s Governor’s Executive Order S-3-05 is similar to the Kyoto Agreement and is based on the greenhouse gas (GHG) reductions that were recommended by climate scientists for industrialized nations back in 2005. In 2005, many climate scientists believed that the reduction-targets of S-3-05 would be sufficient to support stabilizing Earth’s climate at a livable level, with a reasonably high level of certainty. More specifically, this executive order aims for an average, over-the-year, atmospheric temperature rise of “only” 2 degree Celsius, above the preindustrial temperature. It attempts to do this by limiting our earth’s level of atmospheric CO₂ to 450 PPM by 2050 and then reducing emissions further, so that atmospheric levels would come down to more tolerable levels in subsequent years. The S-3-05 emission targets are 2000 emission levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050.
It was thought that if the world achieved S-3-05, there might be a 50% chance that the maximum temperature rise will be less than 2 degrees Celsius, thus leaving a 50% chance that it would be larger than 2 degrees Celsius. A 2 degree increase would put over a billion people on the planet into a condition described as “water stress” and it would mean a loss of 97% of the earth’s coral reefs.

There would also be a 30% chance that the temperature increase would be greater than 3 degrees Celsius. A temperature change of 3 degree Celsius is described in Reference 3 as being “exponentially worse” than a 2 degree Celsius increase.

The second California climate mandate is AB 32, the Global Warming Solutions Act of 2006. It includes provisions for a cap and trade program, to ensure meeting S-3-05’s 2020 target of the 1990 level of emissions. It continues after 2020. AB 32 requires CARB to always implement measures that achieve the maximum technologically feasible and cost-effective (words taken from AB 32) greenhouse-gas-emission reductions.

In 2015 Governor Brown signed Executive Order B-30-15. This Executive Order established a mandate to achieve an emission level of 40% below 2020 emissions by 2030, as can be seen by a Google search. If Executive Order S-3-05 is interpreted as a straight line between its 2020 target and its 2050 target, then the B-30-15 target of 2030 is the same as S-3-05’s implied target of 2035, because 2035 is halfway between 2020 and 2050 and 40% down is halfway to 80% down.

California is on track to achieve its S-3-05 second (2020) target. However, the world emission levels have, for most years, been increasing, contrary to the S-3-05 trajectory. In part because the world has been consistently failing to follow S-3-05’s 2010-to-2020 trajectory, if California is still interested in leading the way to stabilizing the climate at a livable level, it must do far better than S-3-05, going forward, as will be shown.

**Failing to Achieve these Climate Mandates**

What could happen if we fail to achieve S-3-05, AB 32, and B-30-15 or if we achieve them but they turn out to be too little too late and other states and countries follow our example?

It has been written⁴ that, “A recent string of reports from impeccable mainstream institutions—the International Energy Agency, the World Bank, the accounting firm of PricewaterhouseCoopers—have warned that the Earth is on a trajectory to warm by at least 4 Degrees Celsius and that this would be incompatible with continued human survival.”

It has also been written⁵ that, “Lags in the replacement of fossil-fuel use by clean energy use have put the world on a pace for 6 degree Celsius by the end of this century. Such a large temperature rise occurred 250 million years ago and extinguished 90 percent of the life on Earth. The current rise is of the same magnitude but is occurring faster.”

**Pictures That Are Worth a Thousand Words**

Figure 1 shows (1) atmospheric CO₂ (in blue) and (2) averaged-over-a-year-then-averaged-over-the-surface-of-the-earth world atmospheric temperature (in red). This temperature is with respect to a recent preindustrial value. The data starts 800,000 years ago. It shows that the current value of atmospheric CO₂, which is now over 400 PPM, far exceeds the values of the last 800,000 years. It
also shows that we should expect the corresponding temperature to eventually be about 12 or 13 degrees above preindustrial temperatures. This would bring about a human disaster\(^3\),\(^4\),\(^5\).

Figure 2 shows the average yearly temperature with respect to the 1960-to-1990 baseline temperature (in blue). It also shows atmospheric levels of CO\(_2\) (in red). The S-3-05 goal of 450 PPM is literally “off the chart”, in Figure 2. Figure 2 shows that, as expected, temperatures are starting to rise along with the increasing levels of CO\(_2\). The large variations in temperature are primarily due to the random nature of the amount of solar energy being received by the earth.

FURTHER BACKGROUND: CALIFORNIA’S SB 375 AND AN IMPORTANT DATA SET

As shown in the Introduction, LDVs emit significant amounts of CO\(_2\). The question arises: will driving need to be reduced or can cleaner cars and cleaner fuels arrive in time to avoid such behavioral change? Steve Winkelman, of the Center for Clean Air Policy (CCAP), worked on this problem.

SB 375, the Sustainable Communities and Climate Protection Act of 2008

Under SB 375, the California Air Resources Board (CARB) has given each Metropolitan Planning Organization (MPO) in California driving-reduction targets, for the years 2020 and 2035. “Driving” means yearly, per capita, vehicle miles travelled (VMT), by LDVs, with respect to 2005. The CARB-provided values are shown at this Wikipedia link, http://en.wikipedia.org/wiki/SB_375. It is important to note that although this link and many other sources show the targets to be “GHG” and not “VMT”, SB 375 clearly states that the reductions are to be the result of the MPO’s Regional Transportation Plan (RTP), or, more specifically, the Sustainable Communities Strategy (SCS) portion of the RTP. Nothing in the SCS will improve average mileage. That will be done by the state and federal government by their Corporate Average Fleet Efficiency (CAFÉ) standards. The SCS can only reduce GHG by reducing VMT. The only way an SCS can reduce GHG by 12%, for example, is to reduce VMT by 12%.

Under SB 375, every Regional Transportation Plan (RTP) must include a section called a Sustainable Communities Strategy (SCS). The SCS must include driving reduction predictions corresponding to the CARB targets. Each SCS must include only feasible transportation, land use, and transportation-related policy data. If the SCS driving-reduction predictions fail to meet the CARB-provided targets, the MPO must prepare an Alternative Planning Strategy (APS). An APS uses infeasible transportation, land use, and transportation-related policy assumptions. The total reductions, resulting from both the SCS and the APS, must at least meet the CARB-provided targets.

Critical Data: Useful Factors from Steve Winkelman’s Data

Figure 3 shows 6 variables as a percent of its 2005 value. The year 2005 is the baseline year of SB 375. The red line is the Caltrans prediction of VMT. The purple line is California’s current mandate for a Low Carbon Fuel Standard (LCFS). As shown, by 2020, fuel in California must emit 10% less per gallon than in 2005. The turquoise line is the 1990 GHG emission in California. As shown, it is 12% below the 2005 level. This is important because S-3-05 specifies that in 2020, state GHG emission levels must be at the
1990 level. The green line is the CO2 emitted per mile, as specified by AB 1493, also known as “Pavley 1 and 2” named after Senator Fran Pavley. The values shown do not account for the LCFS. The yellow (or gold) line is the S-3-05 mandate, referenced to 2005 emission levels. The blue line is the product of the red, the purple, and the green line and is the percentage of GHG emissions compared to 2005. Since VMT is not being adequately controlled, the blue line is not achieving the S-3-05 line. Figure 3 shows that driving must be reduced. For this reason, Steve Winkelman can be thought of as the true father of SB 375.

Figure 1. Atmospheric CO2 and Mean Temperature from 800,000 Years Ago

![Figure 1](image1.png)

Figure 2. Atmospheric CO2 and Mean Temperature, Over the Last 1,000 Years

![Figure 2](image2.png)
This table provides inspiration for a road map to climate success for LDVs. Climate stabilization targets must be identified and achieved by a set of requirements to define fleet efficiency and per-capita driving.

**THE DEVELOPMENT OF CALIFORNIA’S TOP-LEVEL LDV REQUIREMENTS TO SUPPORT CLIMATE STABILIZATION**

It is also clear that cleaner cars will be needed and can probably be achieved. As will be seen, much cleaner cars will be needed if driving reductions are going to remain within what many people would consider achievable. Mileage and equivalent mileage will need to be specified. A significant fleet-fraction of Zero-Emission Vehicles (ZEVs, either Battery-Electric LDVs or Hydrogen Fuel Cell LDVs) will be needed. Since mileage and equivalent mileage is more heuristic than emissions per mile, they will be used instead of CO2 per mile driven.

Since the SB-375 work used 2005 as the reference year, it will remain the reference year here.

**GHG Target to Support Climate Stabilization**

The primary problem with S-3-05 is that California’s resolve and actions have been largely ignored by other states, our federal government, and many countries. Therefore, rather than achieving 2000 levels by 2010 and being on a track to achieve 1990 levels by 2020, world emission have been increasing. Reference 7 states on Page 14 that the required rate of reduction, if commenced in 2020,
would be 15%. That rate means that the factor of 0.85 must be achieved, year after year. If this were done for 10 years, the factor would be \((0.85)^{10} = 0.2\). We don’t know where world emissions will be in 2020. However, it is fairly safe to assume that California will be emitting at its 1990 level in 2020, in accordance with S-3-05. This situation shows that the correct target for California is to achieve emissions that are reduced to 80% below California’s 1990 value by 2030. Note that if the reductions start sooner, the rate of reduction of emissions can be less than 15% and the 2030 target could be relaxed somewhat. However, it is doubtful that the world will get the reduction rate anywhere near the needed 15% by 2020. Therefore, the target, of 80% below 1990 levels by 2030 is considered to be correct for California. Reference 7 also calls into question the advisability of aiming for a 2 degree Celsius increase, given the possibilities of positive feedbacks that would increase warming. This concern for positive feedbacks is another reason that this paper will work towards identifying LDV requirement sets that will support achieving 80% below 1990 values by 2030.

**Notes on Methods**

The base year is 2005. An intermediate year of 2015 is used. The car efficiency factor of 2015 with respect to 2005 is taken directly from Figure 3. The car efficiency factor of 2030 with respect to 2015 is derived herein, resulting in a set of car-efficiency requirements. It is assumed that cars last 15 years.

**Primary Variable Used**

Table 1 defines the primary variables that are used.

### Table 1  Variable Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e_k)</td>
<td>LDV Emitted C02, in Year “k”</td>
</tr>
<tr>
<td>(L_k)</td>
<td>Low Carbon Fuel Standard (LCFS) Factor that reduces the Per-Gallon CO2 emissions, in Year “k”</td>
</tr>
<tr>
<td>(C_k)</td>
<td>LDV CO2 emitted per mile driven, average, in Year “k”, not accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
<tr>
<td>(c_k)</td>
<td>LDV CO2 emitted per mile driven, average, in Year “k”, accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
<tr>
<td>(p_k)</td>
<td>Population, in Year “k”</td>
</tr>
<tr>
<td>(d_k)</td>
<td>Per-capita LDV driving, in Year “k”</td>
</tr>
<tr>
<td>(D_k)</td>
<td>LDV Driving, in Year “k”</td>
</tr>
<tr>
<td>(M_k)</td>
<td>LDV Mileage, miles per gallon, in Year “k”</td>
</tr>
<tr>
<td>(m_k)</td>
<td>LDV Equivalent Mileage, miles per gallon, in Year “k” accounting for Low Carbon Fuel Standard (LCFS) Factor, so this is (M_k/L_k)</td>
</tr>
<tr>
<td>(N)</td>
<td>Number of pounds of CO2 per gallon of fuel but not accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
</tbody>
</table>
**Fundamental Equations**

The emissions are equal to the CO2 per mile multiplied by the per-capita driving multiplied by the population, since per-capita driving multiplied by the population is total driving. This is true for any year.

Future Year $k$:  
$$e_k = c_k \times d_k \times p_k \quad \text{(Eq. 1)}$$  

Base Year $i$:  
$$e_i = c_i \times d_i \times p_i \quad \text{(Eq. 2)}$$

Dividing both sides of Equation 1 by equal values results in an equality. The terms on the right side of the equation can be associated as shown here:

$$\frac{e_k}{e_i} = \frac{c_k}{c_i} \times \frac{d_k}{d_i} \times \frac{p_k}{p_i} \quad \text{(Eq. 3)}$$

Since carbon dioxide emitted per gallon is just a constant (about 20 pounds per gallon), the constant cancels out of the ratio of emissions per mile, leaving the following relationship.

To work with mileage:  
$$\frac{m_i}{m_k} = \frac{c_k}{c_i} \quad \text{(Eq. 4)}$$

Putting Equation 4 into Equation 3 results in the following equation:

$$\frac{e_k}{e_i} = \frac{m_i}{m_k} \times \frac{d_k}{d_i} \times \frac{p_k}{p_i} \quad \text{(Eq. 5)}$$

Showing the base year of 2005, the future year of 2030, introducing the intermediate year of 2015 and the year of 1990 (since emissions in 2030 are with respect to the 1990 value) results in Equation 6.

$$\frac{e_{2030}}{e_{1990}} = \frac{e_{1990}}{e_{2005}} = \frac{c_{2030}}{c_{2005}} \times \frac{c_{2015}}{c_{2005}} \times \frac{d_{2030}}{d_{2005}} \times \frac{d_{2015}}{d_{2005}} \times \frac{p_{2030}}{p_{2005}} \quad \text{(Eq. 6)}$$

The ratio on the far left is the climate-stabilizing target, which is the factor of the 2030 emission to the 1990 emission. It is shown to be 0.20 or 80% less. The next ratio is the emission of 1990 compared to 2005. It is the turquoise line of Figure 3, which is 0.87. The first ratio on the right side of the equation is the fleet emission per mile in 2030 compared to the value in 2015. This ratio will be derived in this report and it will result in a set of car efficiency requirements.

Moving to the right, the next ratio is the car efficiency in 2015 compared to 2005. It can obtained by multiplying the purple line 2015 value times the green line 2015 value, which is 0.90 * 0.93. The next term is the independent variable. It is the driving reduction required, compared to the 2005 level of driving. The final term on the far right is the ratio of the population in 2030 to the population in 2005. Reference 8 shows that California’s population in 2005 was 35,985,582. Reference 9 shows that California’s population in 2030 is predicted to be 44,279,354. Therefore,  

$$\frac{p_{2030}}{p_{2005}} = 44279354 \div 35985582 = 1.2305 \quad \text{(Eq. 7)}$$

Putting in the known values results in Equation 8:

$$0.20 \times 0.87 = \frac{c_{2030}}{c_{2015}} \times 0.90 \times 0.93 \times \frac{d_{2030}}{d_{2005}} \times 1.2305 \quad \text{(Eq. 8)}$$
Combining the values, solving for the independent variable (the per-capita driving ratio), and changing from emission-per-mile to equivalent-miles-per-gallon results in the following:

\[
\frac{d_{2030}}{d_{2005}} = 0.1689 \times \frac{m_{2030}}{m_{2015}} 
\]  
(Eq. 9)

With the coefficient being so small, it is doubtful that we can get the equivalent mileage in 2030 to be high enough to keep the driving ratio from falling below one. The mileage of the 2005 fleet will be based on the best data we can get and by assuming cars last 15 years. The equivalent mileage in 2030 will need to be as high as possible to keep the driving-reduction factor from going too far below 1, because it is difficult to reduce driving too much. The equivalent mileage will be dependent on the fleet-efficiency requirements in the near future and going out to 2030. Those requirements are among the primary results of this report.

**Internal Combustion Engine (ICE) Mileage, from Year 2000 to Year 2030**

The years from 2000 to 2011 are taken from a plot produced by the PEW Environment Group, [http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/History%20of%20Fuel%20Economy%20Clean%20Energy%20Factsheet.pdf](http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Fact_Sheet/History%20of%20Fuel%20Economy%20Clean%20Energy%20Factsheet.pdf)

The plot is shown here as Figure 4. The “Both” values are used.

**Figure 4**  
Mileage Values From the PEW Environment Group

The values from 2012 to 2025 are taken from the US Energy Information Agency (EIA) as shown on their website, [http://www.c2es.org/federal/executive/vehicle-standards#ldv_2012_to_2025](http://www.c2es.org/federal/executive/vehicle-standards#ldv_2012_to_2025). They are the LDV Corporate Average Fleet Efficiency (CAFÉ) values enacted into law in the first term of President Obama. From 2025 to 2030, it is assumed that the yearly ICE improvement in CAFÉ will be 2.5 MPG.

**Mileage of California’s LDV Fleet in 2015**
Table 2 uses these values of the Internal Combustion Engine (ICE) LDV mileage to compute the mileage of the LDV fleet in 2015. It assumes that the fraction of ZEVs being used over these years is small enough to be ignored. The 100 miles driven, nominally, by each set of cars, is an arbitrary value and inconsequential in the final calculation, because it will divide out. It is never-the-less used, so that it is possible to compare the gallons of fuel used for the different years. The “f” factor could be used to account for a set of cars being driven less. It was decided to not use this option by setting all of the values to 1. The Low Carbon Fuel Standard (LCFS) values are taken from Figure 3. The gallons of fuel are computed as shown in Equation 10, using the definition for $L_k$ that is shown in Table 1.

### Table 2 Calculation of the Fleet MPG for 2015

<table>
<thead>
<tr>
<th>LDV Set</th>
<th>Years Old</th>
<th>Model Year</th>
<th>CAFE MPG</th>
<th>LCFS Factor $L_{Year}$</th>
<th>Factor Driven f</th>
<th>Gallons Used Per $f*100$ Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14-15</td>
<td>2001</td>
<td>24.0</td>
<td>1.0</td>
<td>1.0</td>
<td>4.17</td>
</tr>
<tr>
<td>2</td>
<td>13-14</td>
<td>2002</td>
<td>24.0</td>
<td>1.0</td>
<td>1.0</td>
<td>4.17</td>
</tr>
<tr>
<td>3</td>
<td>12-13</td>
<td>2003</td>
<td>24.0</td>
<td>1.0</td>
<td>1.0</td>
<td>4.17</td>
</tr>
<tr>
<td>4</td>
<td>11-12</td>
<td>2004</td>
<td>24.0</td>
<td>1.0</td>
<td>1.0</td>
<td>4.17</td>
</tr>
<tr>
<td>5</td>
<td>10-11</td>
<td>2005</td>
<td>25.0</td>
<td>1.0</td>
<td>1.0</td>
<td>4.00</td>
</tr>
<tr>
<td>6</td>
<td>9-10</td>
<td>2006</td>
<td>25.7</td>
<td>.9933</td>
<td>1.0</td>
<td>3.87</td>
</tr>
<tr>
<td>7</td>
<td>8-9</td>
<td>2007</td>
<td>26.3</td>
<td>.9867</td>
<td>1.0</td>
<td>3.75</td>
</tr>
<tr>
<td>8</td>
<td>7-8</td>
<td>2008</td>
<td>27.0</td>
<td>.9800</td>
<td>1.0</td>
<td>3.63</td>
</tr>
<tr>
<td>9</td>
<td>6-7</td>
<td>2009</td>
<td>28.0</td>
<td>.9733</td>
<td>1.0</td>
<td>3.48</td>
</tr>
<tr>
<td>10</td>
<td>5-6</td>
<td>2010</td>
<td>28.0</td>
<td>.9667</td>
<td>1.0</td>
<td>3.45</td>
</tr>
<tr>
<td>11</td>
<td>4-5</td>
<td>2011</td>
<td>29.1</td>
<td>.9600</td>
<td>1.0</td>
<td>3.30</td>
</tr>
<tr>
<td>12</td>
<td>3-4</td>
<td>2012</td>
<td>29.8</td>
<td>.9533</td>
<td>1.0</td>
<td>3.20</td>
</tr>
<tr>
<td>13</td>
<td>2-3</td>
<td>2013</td>
<td>30.6</td>
<td>.9467</td>
<td>1.0</td>
<td>3.09</td>
</tr>
<tr>
<td>14</td>
<td>1-2</td>
<td>2014</td>
<td>31.4</td>
<td>.9400</td>
<td>1.0</td>
<td>2.99</td>
</tr>
<tr>
<td>15</td>
<td>0-1</td>
<td>2015</td>
<td>32.6</td>
<td>.9333</td>
<td>1.0</td>
<td>2.86</td>
</tr>
</tbody>
</table>

| Sum of Gallons: | 54.29 |
| Miles = 100*Sum(f’s): | 1500 |
| MPG = Miles/(Sum of Gallons): | 27.63 |

\[
\text{Gallons Used per } f \times 100 \text{ miles} = \frac{f \times 100}{(\text{CAFE MPG})/L_k} \tag{Eq. 10}
\]

How ICE Mileage Values Will Be Used with ZEV Equivalent Mileage Values
As will be seen, after 2015, the net (computed using both ICEs and ZEVs) mileage values for each year are assumed to greatly improve by having a significant fraction of ZEVs. The ICE CAFE standards are used in this report as just the ICE contribution to fleet MPG. The ICE MPG values are inadequate by themselves and will therefore need to become less important because ZEVs will need to quickly take over the highways.

Federal requirements will need to change dramatically. Currently, federally-mandated corporate average fuel efficiency (CAFE) standards have been implemented, from 2000 to 2025. These standards require that each corporation produce and sell their fleet of cars and light-duty trucks in the needed proportions, so that the combined mileage of the cars they sell, at least meet the specified mileage.

The car companies want to maximize their profits while achieving the required CAFE standard. In California, the car companies will already be required to sell a specified number of electric vehicles, which have a particularly-high, equivalent-value of miles-per-gallon. If the laws are not changed, this will allow these companies to sell more low-mileage, high profit cars and light-duty trucks, and still achieve the federal CAFE standard.

It will be better to apply the CAFE standards to only the ICEs and then require that the fleet of LDVs sold achieve some mandated fraction of ZEVs. The ZEVs will get better and better equivalent mileage, as our electrical grid is powered by more renewable sources of energy. Therefore, their equivalent mileage is not fixed, but will improve over the years. Requirements developed here are for 2030. Therefore a high percentage of all the electricity generated in the state, including both the “in front of the meter” (known as the “Renewable Portfolio Standard” or “RPS”) portion and the “behind the meter” portion is assumed to come from sources that do not emit CO2. More specifically, he value of 80% is assumed. This therefore becomes a fleet-efficiency requirement.

**ZEV Equivalent Mileage Values**

To calculate the mileage of the 2030 fleet of LDVs, it is necessary to derive a formula to compute the equivalent mileage of ZEVs, as a function of the percent of electricity generated without emitting CO2, the equivalent ZEV mileage if the electricity is from 100% fossil fuel, and the equivalent ZEV mileage if the electricity is from 100% non-CO2 sources. The variables defined in Table 3 are used.

The derivation of the equation for equivalent ZEV mileage is based on the notion that the ZEV can be imagined to travel “r” fraction of the time on electricity generated from renewables and “(1-r)” fraction of the time on fossil fuel. If the vehicle travels “D” miles, then, using the definitions shown in Table 3, the following equation can be written.

\[
G = \frac{r \times D}{m_{zr}} + \frac{(1-r) \times D}{m_{zf}} \quad (Eq. 11)
\]

\[
m_z = D/G = D/(\frac{r \times D}{m_{zr}} + \frac{(1-r) \times D}{m_{zf}}) \quad (Eq. 12)
\]

Dividing the numerator and the denominator by D and multiplying them both by the product of the two equivalent mileage values results in Equations 13.

\[
m_z = m_{zr} \times m_{zf} / (r \times m_{zf} + (1 - r) \times m_{zr}) \quad (Eq. 13)
\]

Again, using the definitions in Table 3 results in the following.

\[
m_z = Num/(Den) \quad (Eq. 14)
\]
Table 3  Variables Used in the Calculation of ZEV Equivalent Mileage

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$m_z$</td>
<td>ZEV Equivalent mileage</td>
</tr>
<tr>
<td>$m_{zr}$</td>
<td>ZEV Equivalent mileage if the electricity is from renewables</td>
</tr>
<tr>
<td>$m_{zf}$</td>
<td>ZEV Equivalent mileage if the electricity is from fossil fuels</td>
</tr>
<tr>
<td>$r$</td>
<td>fraction of electricity generated from sources not emitting CO2</td>
</tr>
</tbody>
</table>

Table 4 shows an assignment of assumed values and the result of a calculation, using Equations 13, 14, and the definitions in Table 3, to produce a ZEV equivalent mileage.

Table 4  Variable Assignment and the Resulting ZEV Mileage

<table>
<thead>
<tr>
<th>$m_{zr}$</th>
<th>$m_{zf}$</th>
<th>$r$</th>
<th>1-$r$</th>
<th>Num</th>
<th>Den</th>
<th>$m_z$</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000</td>
<td>70</td>
<td>0.8</td>
<td>0.2</td>
<td>350000.00</td>
<td>1056.00</td>
<td>331.44</td>
</tr>
</tbody>
</table>

Computing an LDV Fleet Mileage Assuming Heroic Measures (HM)

Table 5 shows the additional definitions that will be used in this calculation. Table 6 computes the 2030 LDV mileage, assuming “Heroic Measures” to reduce the miles driven in poor-mileage ICE’s, in building and selling a significant fraction of ZEVs, and in getting the Low Carbon Fuel Standards to continue to improve beyond the Figure 3 minimum of 0.90.

Table 5  Additional Variables Used in the Calculation of 2030 LDV Mileage

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$D_i$</td>
<td>Distance travelled by ICE vehicles</td>
</tr>
<tr>
<td>$D_z$</td>
<td>Distance travelled by ZEVs</td>
</tr>
<tr>
<td>$G_i$</td>
<td>Gallons of Equivalent fuel used by ICE vehicles</td>
</tr>
<tr>
<td>$G_z$</td>
<td>Gallons of Equivalent fuel used by ZEVs</td>
</tr>
</tbody>
</table>

As shown by the values for “f”, government policies must be adopted, in 2030, to reduce the miles driven by the ICE’s, from model years 2016 to 2023. The 2016 model ICE’s are driven only 30% as much as the nominal amount. The 2017 year ICE’s can be driving 10% more. This rate of change continues up to 2023, when the ICE’s are doing less damage, due to the large fraction of ZEVs on the road.
### Table 6 Calculation of 2030 LDV Mileage Assuming Heroic Measures

<table>
<thead>
<tr>
<th>Year</th>
<th>ICE Parameters and Calculations</th>
<th>ZEVs</th>
<th>Yearly Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAFÉ MPG</td>
<td>LCFS</td>
<td>Eq. MPG</td>
</tr>
<tr>
<td>2016</td>
<td>34.3</td>
<td>.9267</td>
<td>37.01</td>
</tr>
<tr>
<td>2017</td>
<td>35.1</td>
<td>.9200</td>
<td>38.15</td>
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<tr>
<td>2018</td>
<td>36.1</td>
<td>.9133</td>
<td>39.53</td>
</tr>
<tr>
<td>2019</td>
<td>37.1</td>
<td>.9000</td>
<td>40.92</td>
</tr>
<tr>
<td>2020</td>
<td>38.3</td>
<td>.8500</td>
<td>42.56</td>
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<tr>
<td>2021</td>
<td>40.3</td>
<td>.8000</td>
<td>47.41</td>
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<tr>
<td>2022</td>
<td>42.3</td>
<td>.8000</td>
<td>52.88</td>
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<tr>
<td>2023</td>
<td>44.3</td>
<td>.8000</td>
<td>55.38</td>
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<td>48.7</td>
<td>.8000</td>
<td>60.88</td>
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<td>2026</td>
<td>51.2</td>
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<tr>
<td>2030</td>
<td>61.2</td>
<td>.8000</td>
<td>76.50</td>
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</tbody>
</table>

**Sum of Miles and then Gallons of Equivalent Fuel:** 1259.00 11.34

**Equivalent MPG of LDV Fleet in 2030:** 111.03

**Sum of ZEV Miles = 865. Fraction of Miles Driven by ZEVs = 68.7%**

As shown, the ZEV fraction of the fleet assumes the value of 12%, just 2 years from now (shown in the green field.) It then proceeds upward, to 18% in 2019; 24% in 2020; 34% in 2021; and so on, until it reaches 99% by 2028.

Achieving these fractions of ZEVs might be compared to what was done during World War II, when automobile production lines were rapidly converted to produce tanks. This reduced the new cars that could be purchased. Besides this, rationing gasoline made it difficult to drive at times and, due to shortages of leather, which was being used to produce boots for soldiers, some citizens found it hard to even buy shoes. These rapid and inconvenient changes were tolerated, because most people agreed that the war needed to be won. The heroic measures assumed here may not be possible unless citizens and the political leaders they elect understand the dire consequences of climate destabilization and therefore accept, and even demand, the measures that are needed to support climate stabilization.

The equivalent miles per gallon of the LDV fleet in 2030, specifically 111.03 miles per gallon, will be considered as a potential 2030 LDV requirement.
Computing the Heroic-Measures (HM) Case Per-Capita and Net Driving Factor Requirements, Based on the Result Shown in Table 6

Plugging the

- equivalent MPG of the LDV fleet in Year 2030, taken from the bottom of Table 6, which is 111.03 MPG ($m_{2030}$), and
- the MPG of the LDV fleet in Year 2015, taken from the bottom of Table 2, which is 27.63 MPG ($m_{2015}$),

into Equation 9, gives the following result:

$$\frac{d_{2030}}{d_{2005}} = 0.1687 \times \frac{m_{2030}}{m_{2015}} = 0.1687 \times \frac{111.03}{27.63} = 0.68$$

(Eq. 14)

This means that the per-capita driving in 2030 will need to be about 32% less than in year 2005. The net driving can be computed by multiplying the per-capita driving, 0.68, by the population factor of 1.2305, computed in Equation 7, resulting in 0.84 (since 0.68 x 1.2305 = 0.84.) This means that, even with the 23% increase in California’s population, the net driving will have to drop by 16%. If this LDV requirement set is selected, all of California’s transportation money can be used to improve transit, improve active transportation (mainly walking and biking), and maintain, but not expand, roads. The good news is that there can be little or no congestion because highway capacity now is larger than it was in 2005. Policies will be needed to achieve the required reduction in driving.

Case 2: Computing LDV Requirements that Support Climate Stabilization but Still Allow 2005 Per-Capita Driving

The first step is to use Equation 9 and the value of the mileage in 2015 to compute the needed LDV equivalent fleet mileage for 2030 if the left side of the equation is equal to 1.0.

$$m_{2030} = 1.0 \times m_{2015} / 0.1689 = 27.63 / 0.1689 = 163.59 \text{ MPG}$$

(Eq. 15)

Table 7 is constructed, with the fraction of ZEVs selected to achieve the needed equivalent fleet mileage of about 163.59 MPG. Since its ZEV fractions are larger and sooner than in the “Heroic Measures” table, Table 7 is showing what has been called the “Extra-Heroic Measures” (EHM) case. The ICE “f” values are unchanged; as are the LCFS values. The EHM ZEV differences from the HM case are the highlighted “z” values.

This means that with the 23% increase in California’s population, computed in Equation 7, the net driving would also increase by 23%. If this LDV requirement set were to be implemented, a lot of California’s transportation money would be needed to expand the highway system, leaving less to improve transit, improve active transportation (mainly walking and biking), and maintain roads.
### Table 7  Calculation of 2030 LDV Mileage Assuming Extra-Heroic Measures

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<tr>
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<th>ICE Parameters and Calculations</th>
<th>ZEVs</th>
<th>Yearly Totals</th>
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<td>Eq. MPG</td>
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</table>

Sum of Miles and then Gallons of Equivalent Fuel: 1304.30 7.97

Equivalent MPG of LDV Fleet in 2030: 163.59

Comparing the ZEV Fraction Values of the “Heroic-Measures” (HM) Case to the “Extra-Heroic Measures” (EHM) Case

Table 8 shows the direct comparison of the ZEV fractions that are ZEV requirements for the HM Case and the EHM Case. The largest differences are highlighted. The EHM case does not appear to be achievable.

### Table 8  HM Case and the EHM Case Which Supports 2005 Per-Capita Driving

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<td>.99</td>
<td>.99</td>
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</table>
ACHIEVING THE REQUIRED DRIVING REDUCTION OF THE HEROIC-MEASURES (HM) CASE

As shown in Equation 14, in 2030, the per-capita driving will need to at least 32% below the 2005 value. As shown in this link, http://en.wikipedia.org/wiki/SB_375, California’s Metropolitan Planning Organizations (MPOs) are adopting Region Transportation Plans (RTPs) that will achieve reductions in year 2020 and 2035. As also shown there, the targets, for year 2035, range from 0% for Shasta to 16% for Sacramento Area Council of Governments. Since this is for 2030 instead of 2035, and to be reasonably conservative, it is assumed here that the state will achieve a 10% reduction in per-capita driving, in 2030, compared to 2005. This leaves 22% to be achieved by new programs.

The title of each of the following subsections contains the estimated per-capita driving reduction each strategy will achieve, by 2030.

Reallocate Funds Earmarked for Highway Expansion to Transit and Consider Transit-Design Upgrades (3%)

San Diego County has a sales tax measure called “TransNet”, which allocates one-third for highway expansion, one-third for transit, and one-third for road maintenance. It has a provision that allows for a reallocation of funds, if supported by at least two-thirds of SANDAG Board members, including a so-called weighted vote, where governments are given a portion of 100 votes, proportional to their population. It is hereby proposed to reallocate the TransNet amount, earmarked for highway expansion, to transit and to do similar reallocations throughout California.

This money could be used to fund additional transit systems; improve transit operations; and/or the redesign and implementation of the redesign of existing transit systems. The redesign could include electrification and automation or even upgrading to a different technology.

A Comprehensive Road-Use Fee Pricing and Payout System to Unbundle the Cost of Operating Roads (7.5%)

Comprehensive means that pricing would be set to cover all costs (including road maintenance and externalities such as harm to the environment and health); that privacy and the interests of low-income drivers doing necessary driving would be protected; that the incentive to drive fuel-efficient cars would be at least as large as it is under the current fuels excise tax; and, as good technology becomes available, that congestion pricing is used to protect critical driving from congestion.

The words payout and unbundle mean that some of the money collected would go to people that are losing money under the current system.

User fees (gas taxes and tolls) are not enough to cover road costs and California is not properly maintaining its roads. Reference 10 shows that in California user fees amount to only 24.1% of what is spent on roads. Besides this, the improved mileage of the ICEs and the large number of ZEVs needed mean that gas tax revenues will drop precipitously.

This system could be used to help reduce the ICE LDV miles driven in 2016 to 2022, as shown in the “f” column of Tables 6 and 7. This system could probably be implemented in less than 5 years.
Unbundling the Cost of Car Parking (7.5%)

Unbundling the cost of car parking\textsuperscript{11} throughout California is conservatively estimated to decrease driving by 7.5%, based on Table 1 of Reference 11. That table shows driving reductions resulting from introducing a price for parking, for 10 cases. Its average reduction in driving is 25% and its smallest reduction is 15%.

Good Bicycle Projects and Bicycle Traffic Skills Education (3%)

The best criterion for spending money for bicycle transportation is the estimated reduction in driving per the amount spent. The following strategies may come close to maximizing this parameter.

Projects to Improve Bicycle Access

All of the smart-growth neighborhoods, central business districts, and other high trip destinations or origins, both existing and planned, should be checked to see if bicycle access could be substantially improved with either a traffic calming project, a “complete streets” project, more shoulder width, or a project to overcome some natural or made-made obstacle.

League of American Bicyclist Certified Instruction of “Traffic Skills 101”

Most serious injuries to bike riders occur in accidents that do not involve a motor vehicle\textsuperscript{12}. Most car-bike accidents are caused by wrong-way riding and errors in intersections; the clear-cut-hit-from-behind accident is rare\textsuperscript{12}.

After attending Traffic Skills 101, students that pass a rigorous written test and demonstrate proficiency in riding in traffic and other challenging conditions could be paid for their time and effort.

As an example of what could be done in San Diego County, if the average class size was 3 riders per instructor and each rider passes both tests and earns $100 and if the instructor, with overhead, costs $500 dollars, for a total of $800 for each 3 students, that would mean that $160M could teach $160M/$800 = 200,000 classes of 3 students, for a total of 600,000 students. The population of San Diego County is around 3 million.

Eliminate or Greatly Increase the Maximum Height and Density Limits Close to Transit Stops that Meet Appropriate Service Standards (2%)

As sprawl is reduced, more compact, transit-oriented development (TOD) will need to be built. This strategy will incentivize a consideration of what level of transit service will be needed, how it can be achieved, and what levels of maximum height and density are appropriate. Having no limits at all is reasonable if models show that the development can function without harming the existing adjacent neighborhoods, given the level of transit service and other supporting transportation policies (such as car parking that unbundles the cost and supports the full sharing of parking\textsuperscript{11}) that can be assumed.

Net Driving Reduction from All Identified Strategies

By 2030, the sum of these strategies should be realized. They total 23%, resulting in a 1% margin over the needed 22% (which is added to the existing 10% to get the needed 32%).
ADDITIONAL ELECTRICITY REQUIRED

The URL [http://www.energy.ca.gov/2013_energypolicy/documents/2013-06-26_workshop/presentations/09_VMT-Bob_RAS_21Jun2013.pdf](http://www.energy.ca.gov/2013_energypolicy/documents/2013-06-26_workshop/presentations/09_VMT-Bob_RAS_21Jun2013.pdf) shows that Californians drove about 325 Billion miles per year, from 2002 to 2011. This value can be multiplied by the 0.84 factor reduction of driving, computed right after the calculation shown in Equation 14, and the fraction of miles driven by ZEVs, shown at the bottom of Table 6, of 0.687 (from 68.7%), to give the 2030 miles driven by ZEVs = 325 Billion x 0.84 x 0.687 = 188 Billion miles per year.

Using the Tesla information here [http://en.wikipedia.org/wiki/Tesla_Roadster](http://en.wikipedia.org/wiki/Tesla_Roadster), it is assumed that 21.7 kW-h is used per 100 miles, or 0.217 kW-h per mile. The total energy used per year is therefore 188 Billion miles x 0.217 kW-h = 40,699 GW-h.

[http://www.cpuc.ca.gov/cfaqs/howhighiscaliforniaselectricitydemandandwheredoesthepowere](http://www.cpuc.ca.gov/cfaqs/howhighiscaliforniaselectricitydemandandwheredoesthepowere)comefrom.htm shows that California is using about 265,000 GW-h per year. Therefore the electricity needed to power California’s HM ZEV LDF fleet in 2030 is 100% x 40,648/265,000 = 15.34% of the amount of electricity California is currently using. Table 4 shows that 80% (r = 0.80, with “r” defined in Table 3) of electricity must generated without producing CO2. This estimated 15.34% increase in demand should help the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) with their planning.

COMPARISON WITH CALIFORNIA AIR RESOURCES BOARD (CARB) PLANNING

The following quote\(^\text{13}\) allows us to compare the CARB plan for LDVs with what would be required to stabilize the climate at a livable level, in the form of the Heroic Measures case:

> Regulations on the books in California, set in 2012, require that 2.7 percent of new cars sold in the state this year be, in the regulatory jargon, ZEVs. These are defined as battery-only or fuel-cell cars, and plug-in hybrids. The quota rises every year starting in 2018 and reaches 22 percent in 2025. Nichols wants 100 percent of the new vehicles sold to be zero- or almost-zero-emissions by 2030.

Table 9 shows the values implied by this statement and compares them to the HM values. Table 10, which is similar to Tables 6 and 7, computes the overall mileage of the 2030 fleet, using the CARB values.

Computing the Heroic-Measures (HM) Case Per-Capita and Net Driving Factor Requirements, Based on the Result Shown in Table 10

Plugging the

- equivalent MPG of the LDV fleet in Year 2030, taken from the bottom of Table 10, which is 74.25 MPG, and
- the MPG of the LDV fleet in Year 2015, taken from the bottom of Table 2, which is 27.63 MPG,

into Equation 8, gives the following result:

\[
\frac{d_{2030}}{d_{2005}} = 0.1687 \times \frac{m_{2030}}{m_{2015}} = 0.1687 \times \frac{74.25}{27.63} = 0.45 \quad \text{(Eq. 16)}
\]
Table 9  Zero Emission Vehicle (ZEV) % of Fleet, for Two Cases

<table>
<thead>
<tr>
<th>Year</th>
<th>CARB</th>
<th>Heroic Measures</th>
<th>Year</th>
<th>CARB</th>
<th>Heroic Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2.7%</td>
<td>4.0%</td>
<td>2024</td>
<td>19.6%</td>
<td>76.0%</td>
</tr>
<tr>
<td>2017</td>
<td>2.7%</td>
<td>7.0%</td>
<td>2025</td>
<td>22.0%</td>
<td>90.0%</td>
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<td>2018</td>
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<td>2026</td>
<td>37.6%</td>
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<td>2019</td>
<td>7.5%</td>
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<td>2028</td>
<td>68.8%</td>
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<tr>
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<td>100.0%</td>
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<td>17.2%</td>
<td>62.0%</td>
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</table>

This means that the per-capita driving will need to be about 55% less in 2030 than in year 2005. The net driving can be computed by multiplying the per-capita driving, 0.45, by the population factor of 1.2305, computed in Equation 7, resulting in 0.55. This means that, even with the 23% increase in California’s population, the net driving will have to drop by 45%. If CARB wants the LDV sector to achieve a reasonable climate-stabilizing target, it will need to require ZEV adoption profile closer to the Heroic Measures Case. The adoption profile they have now will required a reduction in driving that will probably be very difficult to achieve.

CONCLUSION

A requirement set named “Heroic Measures” (HM) is quantified. Table 8 shows that the HM LDV efficiency requirements are much easier to achieve than those needed to allow per-capita driving to remain close to its 2005 level, which has been quantified as the “Extra Heroic Measures Case”. Strategies to achieve the required HM driving reductions are also allocated and described. They are perhaps about as difficult as achieving the HM LDV fleet efficiency. It is computed that the 2030 fleet of LDV HM ZEVs would require an amount of electricity which is equal to about 15% of what California is using today. The current CARB plan for ZEV adoption is shown to require a very large reduction in driving if LDVs are to achieve a climate-stabilizing target.
Table 10 Calculation of 2030 LDV Mileage Assuming the CARB Values

<table>
<thead>
<tr>
<th>Year</th>
<th>CAFÉ MPG</th>
<th>LCFS</th>
<th>Eq. MPG</th>
<th>f</th>
<th>$D_i$</th>
<th>$G_i$</th>
<th>z</th>
<th>$D_z$</th>
<th>$G_z$</th>
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Sum of Miles and then Gallons of Equivalent Fuel: 1236.00 16.65
Equivalent MPG of LDV Fleet in 2030: 74.25
ABREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AB 1493</td>
<td>California’s Assembly Bill 1493</td>
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<td>APS</td>
<td>Alternative Planning Strategy</td>
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<td>CAFE</td>
<td>Corporate Average Fuel Efficiency</td>
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<td>California Air Resources Board</td>
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<tr>
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<td>Center for Biological Diversity</td>
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<td>California Environmental Quality Act</td>
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<td>California Public Utilities Commission</td>
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<td>Center for Clean Air Policy</td>
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<td>CNFF</td>
<td>Cleveland National Forest Foundation</td>
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<td>SB 375</td>
<td>California’s Senate Bill 375</td>
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<tr>
<td>CO2</td>
<td>Carbon Dioxide</td>
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<tr>
<td>CO2_e</td>
<td>Carbon Dioxide Equivalent GHG</td>
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<tr>
<td>EHM</td>
<td>“Extra Heroic Measures” LDV Case</td>
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<td>GHG</td>
<td>Greenhouse gas</td>
</tr>
<tr>
<td>GW-h</td>
<td>Giga Watt-Hours</td>
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<td>ICE</td>
<td>Internal Combustion Engine LDV</td>
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<tr>
<td>kW-h</td>
<td>Kilo Watt-hour</td>
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<td>LCFS</td>
<td>Low Carbon Fuel Standard</td>
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<td>LDV</td>
<td>Light-Duty Vehicle</td>
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<tr>
<td>MPO</td>
<td>Metropolitan Planning Organization</td>
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<td>Pavley</td>
<td>Senator Pavley’s AB 1493</td>
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<tr>
<td>PPM</td>
<td>Parts per Million</td>
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<tr>
<td>RPS</td>
<td>Renewable Portfolio Standard</td>
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<td>RTP</td>
<td>Regional Transportation Plan</td>
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<td>S-3-05</td>
<td>Governor’s Executive Order S-3-05</td>
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<td>San Diego Association of Governments</td>
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<td>SCS</td>
<td>Sustainable Community Strategy</td>
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<td>TransNet</td>
<td>San Diego County sales tax</td>
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<td>URL</td>
<td>Universal Resource Locator</td>
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<td>VMT</td>
<td>Vehicle Miles Travelled</td>
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<td>ZEV</td>
<td>Zero Emission Vehicle LDV</td>
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ACKNOWLEDGEMENTS

Darrell Clarke, Lead Volunteer for the Sierra Club’s “Beyond Oil Campaign”; Dr. Dennis Martinek, Oceanside Planning Commissioner; Sandra Goldberg, formerly California Deputy Attorney General; Dr. Nilmini Silva-Send, Senior Policy Analyst of the Energy Policy Initiative Center; Diane Nygaard, Director of Preserve Calavera and founder of Nelson Nygaard Consulting Associates; Jack Shu, CNFF President; Joan Bullock; San Diego Sierra Club Executive Committee Chairs: Caroline Chase, John Stump, and (former Assembly Member) Lori Saldaña; Malinda Dickenson, Law Offices of Malinda R. Dickenson; Conservation Committee Chair Mollie Biggers; Ed Mainland and Jim Stewart, Co-Chairs, Energy-Climate Committee, Sierra Club California; Bern Grush, Chief Scientist, Skymeter Corporation; and SANDAG Staff: Susan Baldwin, Senior Regional Planner; Charles Stoll, Director of Land Use and Transportation Planning; and Stephan Vance, Senior Regional Planner.

REFERENCES

4. Hertsgaard, M; Latino Climate Solution, the Nation, Dec. 24/31, 2012.
5. Whitney E.; How to Meet the Climate Crisis, UU World, Volume XXVI No. 4, Winter 2012.


9 Schwarm, Walter, Demographic Research Unit, California Department of Finance, Total Population Projections for California and Counties: July 1, 2015 to 2060 in 5-year Increments, from http://www.dof.ca.gov/research/demographic/reports/projections/P-1/, then “Report P-1 (County): State and County Total Population Projections, 2010-2060 (5-year increments) link, to open or download the EXCEL spreadsheet file.


13 Lippert, John; Bloomberg News August 2, 2015; California Has a Plan to End the Auto Industry as We Know It; http://www.bloomberg.com/news/articles/2015-08-03/california-regulator-mary-nichols-may-transform-the-auto-industry

KEYWORDS
Driving, climate, mandates, S-3-05, SB 375, RTP, CEQA, Unbundled, GHG, CAFÉ, ZEVs
Climate-Stabilizing California Light-Duty-Vehicle (LDV) Requirements, Versus Air Resource Board Goals
Greenhouse Gas (GHG) Emissions, SD County
Source: Energy Policy Initiatives Center (EPIC, USD)


On Road Transportation: 46%
Cars and light-duty trucks: 41%
Heavy Duty Vehicles: 5%

A&WMA’s 109th Conference & Exhibit; June 21, 2016; Paper 881
The Climate Problem

Any Earth Science text book* contains the following facts:

- Atmospheric CO2 traps heat
  - CO2 Molecules absorb and then emit, in a random direction, infrared radiation, heat given off by the Earth’s surface
  - This effect is significant

- Combustion of fossil fuels adds great quantities of CO2 to our Earth’s atmosphere
  - The amount of CO2 in the atmosphere is well known
  - Our yearly emissions are well known

How Bad Could It Get?

- *Scientific American* June 2008 issue
  - 550 PPM CO2 possible in several decades
  - This could (5% probability) lead to 8 Deg. Celsius of warming
  - 8 Deg. Celsius could lead to “a devastating collapse of the human population, perhaps even to extinction”

- December 24/31 2012 Issue of Nation magazine:

  A recent string of reports from impeccable mainstream institutions—the International Energy Agency, the World Bank, the accounting firm of PricewaterhouseCoopers—have warned that the Earth is on a trajectory to warm by at least 4 Degrees Celsius

  [4 Degrees Celsius] would be *incompatible with continued human survival.*

Winter, *UU World* magazine (p. 57) “Lags in the replacement of fossil-fuel use by clean energy use have put the world on a pace for 6 degree Celsius by the end of this century. Such a large temperature rise occurred 250 million years ago and extinguished 90 percent of the life on Earth. The current rise is of the same magnitude but is occurring faster. We must reduce or eliminate all uses of fossil fuels.”
Governor’s Executive Order S-3-05

California's S-3-05 CO2_e Emissions, MMT Per Year

- 2000 Value by 2010
- 1990 Value by 2020

Area 1: is the net CO2_e emitted from Year 2010 to 2020.

Area 2: is the net CO2_e emitted from Year 2020 to 2050.

- 80% Below 1990 Value by 2050
- Year
Climate Data

- Keeling Curve:
  http://en.wikipedia.org/wiki/An_Inconvenient_Truth#Scientific_basis

Currently 400 PPM!

Atmospheric Carbon Dioxide
Measured at Mauna Loa, Hawaii

- Burning a gallon of gasoline releases about 19 #’s of CO2!
- Likewise
  - A barrel of oil, about 700 #’s
  - A ton of coal, about 3 tons
  - Etc.
Our Climate Crisis

- Earth & Space Research (ESR) website: http://www.esr.org/outreach/climate_change/mans_impact/man1.html

Current level = 400 PPM

S-3-05’s Goal is to cap CO2 at 450 PPM, which is off this chart.

Start of Industrial Revolution
Our Climate Crisis


**Current Level of CO₂ is 400 PPM**

**S-3-05’s goal is to cap CO₂ at 450 PPM**

**S-3-05 Achievement Outcomes**
- X% chance > 4 (Extinction?)
- 30% chance > 3 (very bad)
- 50% chance > 2 (bad)
A. Parties and Amici. Except for the following, all parties, intervenors, and amici appearing before the district court and in this Court are listed in the Brief for Plaintiffs-Appellants. James Hansen, David Beerling, Paul J. Hearty, Ove Hoegh-Guldberg, Pushker Kharecha, Valérie Masson-Delmotte, Camille Parmesan, Eelco Rohling, Makiko Sato, Pete Smith, and Lise Van Susteren are amici curiae in this appeal (referred to hereinafter as “Amici Scientists.”).
From the Climate Scientists

From Page 21: . . . the required rate of emissions reduction would have been about 3.5% per year if reductions had started in 2005, while the required rate of reduction, if commenced in 2020, will be approximately 15% per year.

• My math:
  – 15% means a factor of 0.85, year after year
  – Consider the 10 years from 2020 to 2030
  – \((.85)^{10} = .20\), which is 80% down
  – Other articles, describing Hansen’s work: “decarbonization by 2030”
New Prescription for Climate Stabilization

California's S-3-05 CO2_e Emissions, MMT Per Year

- **2000 Value by 2010**
- **1990 Value by 2020**

**Area1** is the net CO2_e emitted from Year 2010 to 2020.

**Area2** is the net CO2_e emitted from Year 2020 to 2050.

- **Climate Stabilization Supporting Target**
  - 80% Below 1990 Value by 2050

Year
How, for LDVs:

The Development of California Light-Duty Vehicle (LDV) Requirements to Support Climate Stabilization: Fleet-Emission Rates & Per-Capita Driving

Paper 2014-A-30793-AWMA
Notes on Methods

• Base year 2005
• Intermediate year 2015
• Car Efficiency Factor from 2005 to 2015
  – Steve Winkelman’s data
• Car Efficiency Factor, 2015 to 2030
  – Derived in paper
  – Results in car-efficiency requirements
• Cars last 15 years

From a California law (SB 375) giving per-capita driving reduction targets to be achieved in Regional Transportation Plans

Older cars are so few in number that they can be ignored.

Report on SB 375 See its Table 1.
Data Relating 1990, 2005, & 2015 Data

Purple (Low carbon fuel), Green (CO2/Mile), & Gold (S-3-05)

Figure 1, from:  http://www.ecovote.org/sites/default/files/pdf/sb375.pdf
## Variables

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>$e_k$</td>
<td>LDV Emitted C02, in Year “k”</td>
</tr>
<tr>
<td>$L_k$</td>
<td>Low Carbon Fuel Standard (LCFS) Factor that reduces the Per-Gallon CO2 emissions, in Year “k” (k is denotes Year 2030)</td>
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<tr>
<td>$C_k$</td>
<td>LDV CO2 emitted per mile driven, average, in Year “k”, not accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
<tr>
<td>$c_k$</td>
<td>LDV CO2 emitted per mile driven, average, in Year “k”, accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
<tr>
<td>$p_k$</td>
<td>Population, in Year “k”</td>
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<tr>
<td>$d_k$</td>
<td>Per-capita LDV driving, in Year “k”</td>
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<tr>
<td>$D_k$</td>
<td>LDV Driving, in Year “k”</td>
</tr>
<tr>
<td>$M_k$</td>
<td>LDV Mileage, miles per gallon, in Year “k”</td>
</tr>
<tr>
<td>$m_k$</td>
<td>LDV Equivalent Mileage, miles per gallon, in Year “k” accounting for the Low Carbon Fuel Standard (LCFS) Factor, so this is $M_k/L_k$</td>
</tr>
<tr>
<td>$N$</td>
<td>Number of pounds of CO2 per gallon of fuel but not accounting for the Low Carbon Fuel Standard (LCFS) Factor</td>
</tr>
</tbody>
</table>
Fundamental Equations

Future Year $k$: \[ e_k = c_k \times d_k \times p_k \]

Base Year $i$: \[ e_i = c_i \times d_i \times p_i \]

\[ \frac{e_k}{e_i} = \frac{c_k}{c_i} \times \frac{d_k}{d_i} \times \frac{p_k}{p_i} \]

To work with mileage: \[ \frac{m_i}{m_k} = \frac{c_k}{c_i} \]
From the known 1990-to-2005 factor and the Climate-Stabilizing-Target, which is the factor of 2030 emissions to 1990 emissions

\[ e_k \frac{e_i}{m_i} \frac{d_k}{p_k} = m_k \frac{d_i}{p_i} \]

The Independent Variable
It becomes the required per-capita driving reduction with respect to 2005 driving
Solution Using Intermediate Year of 2015

From the **Climate-Stabilizing-Target**, which is the factor of 2030 emissions to 1990 emissions

\[ \frac{e_{2030}}{e_{1990}} \times \frac{e_{1990}}{e_{2005}} = \frac{c_{2030}}{c_{2015}} \times \frac{c_{2015}}{c_{2005}} \times \frac{d_{2030}}{d_{2005}} \times \frac{p_{2030}}{p_{2005}} \]

Taken from the Winkelman data: the known 1990-to-2005 factor of emissions (the light blue line)

**Car Efficiency Factor**
From existing mileage requirements and the *requirements defined herein*

From Winkelman. It is the product of the factor from the green line and the purple line.

The Independent Variable
It becomes the required 2030 per-capita driving reduction with respect to 2005 driving

From known and predicted populations
Putting In the Easy-to-Get Values

From the **Climate-Stabilizing-Target**, which is the factor of 2030 emissions to 1990 emissions

Car Efficiency Factor
From existing mileage requirements and the **requirements defined herein**

From Winkelman. It is the product of the factor from the green line and the purple line.

From known and predicted populations

\[
0.2 \times 0.87 = \frac{c_{2030}}{c_{2015}} \times [0.9 \times 0.93] \times \frac{d_{2030}}{d_{2005}} \times 1.2305
\]

The **Independent Variable**
It becomes the **required per-capita 2030 driving reduction with respect to 2005 driving**

Taken from the Winkelman data: the known 1990-to-2005 factor of emissions (the light blue line)
Combining the Easy-to-Get Values, Solving for the Independent Variable, and Changing the 2015-to-2030 Car Efficiency from CO2-Per-Mile to Equivalent-Miles-Per-Gallon

\[
.1689 = \frac{c_{2030}}{c_{2015}} \times \frac{d_{2030}}{d_{2005}}
\]

\[
\frac{d_{2030}}{d_{2005}} = .1689 \times \frac{c_{2015}}{c_{2030}}
\]

\[
\frac{d_{2030}}{d_{2005}} = .1689 \times \frac{m_{2030}}{m_{2015}}
\]

Equivalent Mileage in 2030 is what we make it. It better be as high as possible, because a large driving reduction will be difficult. = “NUMERATOR MILEAGE”

The required per-capita 2030 driving with respect to 2005 driving

2015 Fleet Mileage is computed = “DENOMINATOR MILEAGE”
Some **Requirements** Defined to Achieve 2030 Fleet Equivalent-Mileage

- Low-Carbon Fuel Standards (LCFS)
- Corporate Average Fuel Efficiency (CAFÉ) Standards from 2015 to 2030
- Driving Reduction Factors \( (f_n) \) for bad-mileage years (Year n)

- Both California’s existing and extended, “L_k”

- Existing, to 2025, **Specified to 2030**

- For example, 0.75 means 25% less driving
- **Cash for Gas-guzzlers?**
Three More Requirements Defined to Achieve 2030 Fleet Equivalent-Mileage

- CAFÉ Standards only apply to Internal Combustion Engine (ICE) LDVs
- New Requirement: Fraction of fleet sold that must be Zero Emission Vehicles (ZEVs)
- In 2030, only 20% of electricity is from fossil fuels

Define “z” to be the fraction of fleet sold that must be ZEVs
<table>
<thead>
<tr>
<th>LDV Set</th>
<th>Years Old</th>
<th>Model Year</th>
<th>CAFE MPG</th>
<th>LCFS Factor L&lt;sub&gt;Year&lt;/sub&gt;</th>
<th>Factor Driven</th>
<th>Gallons Used Per 100 Miles</th>
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Sum of Gallons: 54.29

Miles = 100*Sum(f’s): 1500

MPG = Miles/(Sum of Gallons): 27.3
# ZEV Derivation Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
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<tbody>
<tr>
<td>$m_z$</td>
<td>ZEV Equivalent mileage (miles per equivalent gallon)</td>
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<tr>
<td>$m_{zr}$</td>
<td>ZEV Equivalent mileage if the electricity is from renewables</td>
</tr>
<tr>
<td>$m_{zf}$</td>
<td>ZEV Equivalent mileage if the electricity is from fossil fuels</td>
</tr>
<tr>
<td>$r$</td>
<td>fraction of electricity generated from sources not emitting CO2</td>
</tr>
<tr>
<td>$G$</td>
<td>Gallons of equivalent fuel used</td>
</tr>
<tr>
<td>$D$</td>
<td>Arbitrary distance travelled</td>
</tr>
<tr>
<td>Num</td>
<td>$m_{zr} \times m_{zf}$</td>
</tr>
<tr>
<td>Den</td>
<td>$r \times m_{zf} + (1 - r) \times m_{zr}$</td>
</tr>
</tbody>
</table>
ZEV Derivation

\[ G = \frac{r \times D}{m_{zr}} + \frac{(1 - r) \times D}{m_{zf}} \]

\[ m_z = D/G = D/(\frac{r \times D}{m_{zr}} + \frac{(1 - r) \times D}{m_{zf}}) \]

\[ m_z = m_{zr} \times m_{zf} / (r \times m_{zf} + (1 - r) \times m_{zr}) \]

\[ m_z = Num/(Den) \]

<table>
<thead>
<tr>
<th>( m_{zr} )</th>
<th>( m_{zf} )</th>
<th>( r )</th>
<th>1-( r )</th>
<th>Num</th>
<th>Den</th>
<th>( m_z )</th>
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<td>70</td>
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## “Heroic Measures” Assumptions & Mileage

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<th>Year</th>
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<th>ZEVs</th>
<th>Yearly Totals</th>
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<td>2030</td>
<td>61.2</td>
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<td>76.50</td>
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**Equivalent MPG of LDV Fleet in 2030:** 111.03

**ZEV Miles Driven = 865.0**

**Fraction of Miles Driven by ZEVs = 68.7%**

**Sum of Miles and then Gallons of equivalent fuel:** 1259.00 11.34

**Computed NUMINATOR MILEAGE**
Computing the Ratio of Per-Capita 2030 Driving to Per-Capita 2005 Driving

Equivalent Mileage in 2030 is what we made it. It is as high as possible, because a large driving reduction will be difficult.

\[ \frac{d_{2030}}{d_{2005}} = \frac{0.1689 \times 111.03}{27.30} = 0.68 \]

2015 Fleet Mileage was computed = “DENOMINATOR MILEAGE”

The factor of 0.68 means there is a 32% reduction in per-capita driving, from 2005 to 2030.
Calculation of Net Driving Decrease with Respect to 2005 Driving for the Heroic Measures Case

(Per-Capita Driving Factor) \( \times \) (Population Factor) = Net Driving Factor

\[(.68) \times (1.23) = .84\]

Even though the population will grow 23%, \textit{net driving must decrease by 16%}. Therefore, why add highway lanes?
Fractions of Fleets Sold in California that are Zero Emission Vehicles AND Required Driving Reduction, For 2 Different Cases

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% Reduction in Per-Capita Driving, with Respect to 2005

| Heroic Measures | 32% |
| Extra Heroic Measures | 0%   |
Comparison With Air Resources Stated Goals

The CARB Plan

Regulations on the books in California, set in 2012, require that 2.7 percent of new cars sold in the state this year be, in the regulatory jargon, ZEVs. The quota rises every year starting in 2018 and reaches 22 percent in 2025. Nichols wants 100 percent of the new vehicles sold to be zero- or almost-zero-emissions by 2030.

The CARB Plan results in an equivalent 2030 Fleet Mileage of only **69.2 MPG**, which would require a per-capita driving reduction of **58%**, compared to 2005 driving, to achieve the climate-stabilizing target.

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**Air Resources Board Chair**

*August 8, 2015*

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<th>Year</th>
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**AWMA Report Climate Stabilizing**

*August 8, 2015*

*Requires a 32% reduction in per-capita driving with respect to 2005*
Measures to Get 32%

- Predictions, Regional Transportation Plans 10%
- Stop expanding most roads and all freeways 2%
  - No need, Eliminate congestion with less driving
- Reallocate freeway-expansion $$$ to transit 2%
- Payment methods, to increase fairness & choice 2%
  - Demonstration projects: unbundle parking cost
  - Legislation
    - Unbundle the cost of most “free” or underpriced parking 8%
    - Equitable and environmentally-sound road-use fees 8%
- Smarter growth, complete streets, bike classes 2%
An Important **Pricing** Strategy

**A Road-Usage-Charge (RUC) Pricing & Payout System**

**THEREFORE, BE IT RESOLVED,** that the Democratic Club of Carlsbad and Oceanside (DEMCCO) supports a road-usage charge (RUC) pricing & payout system that (1) covers all road-use costs, including the environmental & health costs caused by driving; (2) could still include a fuel tax or fee; (3) would mitigate impacts on low-income users; (4) would protect privacy; (5) would include congestion pricing when that technology becomes feasible; (6) would keep the per-mile price incentive to drive energy-efficient cars at least as large as it is with today’s fuel excise tax; and (7) would send its earnings to all citizens and institutions that are currently losing money.
Another Important **Pricing** Strategy

**Funding Demonstration Projects of an Equitable & Environmentally-Sound Car-Parking Policy**


- *Work for shared, convenient & value-priced parking, operated with a system that provides earnings to those paying higher costs or getting a reduced wage, due to the cost of providing parking*

**THEREFORE, BE IT RESOLVED,** that DEMCCO supports funding the development and prototype installation of car-parking systems with at least the last two features (numbered 7 and 8), so as to demonstrate useful feasibility, with the full set of features as follows: (1) have full-cost base pricing; . . . . . . . (7) have automatic car detection; and (8) will do efficient mailing of invoices, containing both parking charges and parking earnings.
June 21, 2016, AWMA Track TRAN
Climate-Stabilizing California Light-Duty Vehicle (LDV) Requirements, Versus Air Resource Board Goals

Alternative Vehicles and Modes
Track: TRAN
Room: Bolden 2
Tuesday, June 21, 2016, 1:20 PM
Platform – TCC: OMS1

Chair: Shauna Hallmark, Iowa State University; Note: Shauna had a conflict and so the Session was chaired by George Noel the 2:20 presenter

1:20 PM
Climate-Stabilizing California Light-Duty Vehicle Requirements Versus Air Resource Board Goals
Paper# 881
Michael Ross Bullock, San Diego County Democratic Party Central Committee

1:40 PM
Procedure for Real-World Measurement and Data Analysis of a Flex Fuel Vehicle Operated on E85
Paper# 954
Maryam Delavarrafiee and H. Christopher Frey, North Carolina State University

2:00 PM
Air Pollution Emissions Reduction by the Operation of the J Aerial Cableway Line Powered by Electric Energy as Part of the SITVA (Spanish: Sistema Integrado de Transporte del Valle del Aburr or Aburr Valley Integrated Transportation System)
Paper# 1063
Santiago Gomez, Esteban Echeverri, Edgar Alejandro Velez, Alejandra Quinchia and Oscar Duque, Evaluacion y Control Ambiental S.A.S.

2:20 PM
Assessing Emissions Impacts of Automated Vehicles
Paper# 1105
George Noel, Erin Reed, Scott Smith and Hannah Rakoff, USDOT Volpe Center

2:40 PM
Effect of Lane Closure on Vehicle Trajectories and Emissions: Simulation and Real-World Evaluation
Paper# 1209
Shams Tanvir, Institute for Transportation Research and Education; Martin Hartmann, Karlsruhe Institute of Technology; Nagui Roupail, Institute for Transportation Research and Education; Bastian Schroeder, Kittelson & Associates Inc.

Note: For a 15 minute presentation, I need 3 x (5 minutes x 120 words per minute = 600). So this is 3 x 600 = 1800 words. Since the 33 slide words (like [31], denoting Slide 31) are in the total, the total, for 15 minutes would be 1833 words.
I have 1789 words or (subtracting 33) 1756 spoken words. This has a "margin" of 44 words. This will probably eat into the time for question by a minute or so. Estimate: 1 minute for my Bio, 15.2 minutes for my presentation, and 3.8 minutes for questions.

Arrive to your session about 20 minutes before it is scheduled to begin.
Thank you for being here.

I would be happy to email you what I present.

[Slide 1] Climate-Stabilizing California Light-Duty-Vehicle (LDV) Requirements, Versus Air Resource Board Goals

We need to stabilize the climate. The problem here is for light-duty vehicles (LDVs), in California. I develop a set of LDV requirements. I need to understand the nature of the climate problem.

[2] In San Diego County, cars and light-duty trucks (LDVs) emit 41% of the greenhouse gas, the largest category.

[3] Earth Science text books explain that we have a problem. Atmospheric CO2 traps heat and we are adding great quantities of CO2 to our atmosphere.

[4] This shows 3 sources of information, regarding potential for harm. One says, “the Earth is on a trajectory to warm by more than 4 degrees Celsius [and this] would be incompatible with continued human survival”

[5] This is the Governor’s Executive Order S-3-05, in million metric tons per year. It is based on 2005 Science and conditions. Its greenhouse gas emission targets are

- the 2000 Emission Value by 2010,
- the 1990 Value by 2020, and
- 80% below the 1990 value, by 2050.
[6] This is the world-famous Keeling Curve of atmospheric CO2 over the last 50 years.

[7] This shows global average atmospheric temperature, in blue, with the scale on the right side, and CO2, in red, with the scale on the left side, over the last thousand years. It shows our industrial revolution, with the steep run up in CO2, starting in the 1800’s.

[8] This is the plot from the movie *Inconvenient Truth*, with added notes. The temperature scale is on the left; the Atmospheric CO2 scale is on the right. The plotted blue line is atmospheric CO2, from ice-core samples. The plotted red line is temperature from a study of isotopes. The data starts 800,000 years ago.

[9] To solve the LDV, climate-stabilization problem, we need a climate-stabilizing target. This document is an amicus brief, filed in a court case about climate stabilization. The list of authors includes Dr. James Hansen. The document supports the calculation of a climate-stabilizing target, as follows.

[10] For most years, the world has been breaking its greenhouse gas emission records. Perhaps the world will start to get significant reductions, by year 2020. 15% per year means that the factor of point-eight-five is applied, year after year. Over 10 years, the factor is: point two, or 80% down. In 2020, California’s greenhouse gas emission will be at its 1990 level, as required by AB 32.

[11] Therefore, California needs to achieve the indicated target.

[12] The paper develops the LDV requirements to do that.

[13] Here are some methodology notes. The base year of 2005 conforms to the base year convention of SB 375. SB 375 specifies driving reductions, to be achieved in Regional Transportation...
Plans, with respect to 2005. An intermediate year of 2015 was selected. **Car efficiency**, from 2005 to 2015, is taken from the Steve Winkelman’s report, found at the indicated link. The factor between *emissions* in 2005 and 1990 is taken from the same report. The car efficiency factor, from 2015 to 2030, will be derived. The derivation results in the car-efficiency-related requirements, over those 15 years. It is assumed that cars last 15 years.

[14] Here is the key plot from Steve Winkelman’s report.

[15] Here are most of the variables used. More will follow. “e” is emission of CO2, “L” is Low Carbon Fuel Standard factor; “C” is “C” “O” “2” per mile driven, for a fleet of all LDVs on the road in a given year; “p” is population; “D” is per-capita driving; “m” is miles per gallon and “N” is the pounds of ‘C” “O” “2” per gallon of fuel. The subscripts denote the year.

[16] Here are the fundamental equations. The emission, “e”, is “C”, which **is** CO2 per mile driven, **multiplied by** the per-capita driving, **multiplied by** the population, for any year. The ratios, or factors, can be used as shown. Mileage (miles per equivalent gallon), or equivalent mileage, will be used, to keep things heuristic, or intuitive. For the mileage factor, the base year is in the numerator and the future year is in the denominator, opposite of the factor for the CO2 per mile driven.

[17] Here’s the solution overview. The emission factor is a product of the mileage factor, multiplied by the per-capita driving factor, multiplied by the population factor. The per-capita driving factor is the independent variable and becomes a key reported
**requirement.** The population factor is from the California Department of Finance.

[18] Here, the equations are expanded to show how the intermediate year of 2015 is used for the car-efficiency factor and how the intermediate year of 1990 is used for the needed emission factor. The car efficiency ratio, of 2030 to 2015, is needed. They will lead to the car efficiency **requirements.** The independent variable is the per-capita driving in 2030 compared to 2005.

[19] The easy-to-get values are inserted. Note the use of the Steve Winkelman data.

[20] The kernel equation is derived, using two simple manipulations of the equation. We don’t want the per-capita driving factor to be too small, because we are rather dependent on driving. We also have to be realistic about how efficient our fleet could really be in 2030. As it says, Equivalent Mileage in 2030 is what we make it. It needs to be as high as possible, because a large driving reduction will be difficult to achieve. We must compute the “numerator mileage” and the “denominator” mileage.

[21] Here are some important values to be specified in the developed requirements: Low Carbon Fuel Standards; Corporate Average Fuel Efficiency (CAFÉ) standards; and driving reduction factors, for poor-mileage years. The low carbon fuel standard will increase the equivalent mileage, for internal combustion engine vehicles.

[22] Here are three more critical requirements: First, Corporate Average Fuel Efficiency (CAFÉ) standards will **only** apply to Internal Combustion Engine, light-duty vehicles. Second, each
corporation’s yearly sold fleet of LDVs must include a specified fraction of Zero-Emission Vehicles, or ZEVs. As shown, this factor is represented by the variable “z”. Third, only 20% of electricity in 2030 can come from fossil fuel.

[23] Here is the calculation of the fleet mileage for 2015. It only uses current California mandates. It is assumed that all the cars in any given year, collectively; travel a selected and arbitrary amount of 100 miles. Although this is preposterously low, it doesn’t matter, because this assumed distance is cancelled out of the final mileage calculation, which is equivalent gallons used, which is proportional to distance, divided by total miles. The 2015 fleet equivalent mileage is over twenty seven miles per gallon.

[24] Here are the variables used in the needed derivation of the ZEV’s equivalent mileage as a function of the variables shown.

[25] This shows the derivation and use of the formulae for the equivalent ZEV mileage. The final result is over three hundred and thirty three miles per equivalent gallon.

[26] This shows a case I have named Heroic Measures. The driving reduction factors “f” are significant and critical. The green area shows the ZEV calculations, where the lower case “z” is the fraction of purchased new cars that is ZEVs, for that year. For both the brown and the green, the key calculation is that the number of gallons of equivalent-fuel-used is computed as the distance, divided by the equivalent miles per gallon. The yellow is the total. The 2030 mileage of the different years may be of interest but is not used. The total miles and total gallons, shown in the blue field, are used to compute the 2030 mileage of the entire fleet of LDVs.
The most critical requirements are for the “z” values. The “z” value increases to 95% by 2026, for example.

[27] This shows a significant result. The factor of point six eight means that we will need a 32% reduction in per-capita driving, in 2030, compared to 2005.

[28] The per-capita driving factor 0.68, multiplied times the population growth factor, 1.23, gives the net driving factor. This calculation shows that the “Heroic Measures” Case per-capita driving reduction is large enough that the net miles driven in California must be reduced by 16%, compared to 2005 levels. This shows that increasing highway capacity is a waste of money.

[29] This shows some of the significant results. Besides the “Heroic Measures Case” it shows the results of another case that is shown in the paper, called the “Extra-Heroic Measures” case. The case is designed to allow 2005 per-capita driving in 2030. For the Heroic Measures case, we need 24% of new LDVs to be ZEVs 2020. That will be difficult. However, for the “Extra Heroic Measures” case, 62% is needed. The Extra Heroic Measures case appears to be nearly impossible.

[30] The California Air Resource Board’s current plan, as best we know it, is based on the Chair’s statement, shown on the left. It results in the column shown in brown. Those values can be compared to the “Heroic Measures” values. Using the methods of this presentation it has been found that if the CARB-specified fleet was on the road in 2030, we would have to reduce per-capita driving by 58%, compared to 2005, if LDVs were to achieve the needed climate-stabilizing target.
Here’s a list of measures that might achieve the needed per-capita driving reduction. By 2030, most California RTPs will achieve about a 10% reduction in per-capita driving, compared to 2005. Since most RTPs include road expansions, driving can be reduced by an estimated 2-percent by not building those expansions, as shown in the second bullet. Reallocating that money to transit is estimated to do the same. Payment methods, that increase fairness and choice, for road and parking use, have the most potential.

This describes the kind of Road Usage Charge that we need. California’s Senate Bill 1077 resulted in a Road Usage Charge Pilot Project. To maintain roads, with declining gas tax revenues, and to increase fairness by reducing hidden costs and taxes, California will need to enact a Road User Charge (RUC). This resolution shows some of the needed features.

We need to have parking policies that increase fairness and choice. Most parking for employees is a bundled benefit. It is expensive to provide. The problem is that employees, when they don’t drive to work, get zero benefit. The solution is to operate the parking as a business for the financial benefit of all employees. The bullet shown is from the California Democratic Party Platform. The next item is a resolution calling for automatic car detection and invoice mailing.

That concludes my presentation. I hope there are some questions.
Since most RTPs include road expansions, driving can be reduced some by not building those expansions, as shown in the second bullet. The next bullet is reallocating that money to transit. This assumes the federal government will recognize our climate crisis and allow this. (The 2016 election comes to mind.) The fourth bullet says we will improve the way we pay for roads and for car parking. These measures can increase fairness, besides reducing driving. The final bullet is to do more of what many Regional Transportation Plans are already doing in California. We must increase density and height around good transit stations, for example.

Thank you. Are there any questions?

***********************************************************************

[xx] Here’s an important pricing policy. The resolution was approved by about forty political club members, who had managed to educate themselves about our climate crisis, to the point, where they knew that substantial change was needed.

[Quote] DEMCCO supports a road-use fee pricing and payout system that (1) would cover all road-use costs, including the environmental and health costs caused by driving; (2) could still include a fuel tax or fee; (3) would mitigate impacts on low-
income users; (4) would protect privacy; (5) would include congestion pricing when that technology becomes feasible; (6) would keep the per-mile price incentive to drive energy-efficient cars at least as large as it is with today’s fuel excise tax; and (7) would send its earnings to all citizens and institutions that are losing money under the current system, with the goal being to achieve a full and just compensation.

Recently, SB 1077 became law in California. It establishes a Technical Advisory Committee to prepare a recommendation on how to do a pilot project Road Usage Charge, which could have all the features described in this resolution. They had their first meeting on January 23rd.

[27] Here’s another important pricing policy. This resolution was passed by the same political club that approved the last resolution.

DEMCCO supports funding the development and prototype installation of car-parking systems with at least the last two features (numbered 7 and 8), so as to demonstrate useful feasibility, with the full set of features as follows: (1) have full-cost base pricing; (2) have congestion pricing; (3) have charge and payout policies that will minimize money lost by non-drivers, due to parking facilities; (4) will support sharing of parking facilities; (5) will provide retrievable knowledge of the use of each parking space; (6) have a data interface that will support on-demand predictions of parking-space price and availability; (7) have automatic car detection; and (8) will do efficient mailing of invoices, containing both parking charges and parking earnings.
By the way, unbundling the cost of parking is an important measure of Carlsbad’s Climate Action Plan.

I end this talk summarizing the results in the following two slides

[28] Measures to get LDVs to support climate stabilization can be thought of as a 3-legged stool:

• Cleaner cars,
• Cleaner fuels, and
• Less driving.

[29] Likewise, measures to get the needed driving reduction can be thought of as a 3-legged stool:

• Great transit;
• Great land use; and
• Pricing-and-payout systems, related to driving and parking.

The first two require money; the third will produce money.

I hope there will be questions.

[30] Thank you
Eliminating the Harm of Bundled-Cost or Bundled-Benefit Parking

- Definitions of Parking Systems
- New System: Dividends-Account Parking
  - Motivations for change
  - An example of a demonstration project

Mike Bullock

EUEC 2018
The cost of the parking is contained within some other payment, such as:

- Rent
- Train fare (at least 1 train station with so-called “free” parking)
- Price of consumer items, including food
A Bundled-Benefit Parking System

The 2\textsuperscript{nd} most common of all parking systems. Erroneously called “free”

The parking is part of a benefit package being provided, such as:

- Compensation for work
- Public education
- Public anything, such as a library or park
The harm of a *Bundled-Cost* or a *Bundled-Benefit* car-parking system is that they take *money* from people without their knowledge or consent.

These systems also increase the choice to drive alone.

Sierra Club Resolution: Appropriate pricing of parking is documented as one of the least costly tools to reduce vehicle miles travelled.
Bundled-Cost or Bundled-Benefit car-parking systems should be replaced with Dividend-Account Parking systems.

**Dividend-Account Parking System**

1. Value-priced baseline, with congestion pricing option
2. People for whom the parking is built will get the *earnings*, or “dividends” (AKA “financial support”)
3. Cars parked must be associated with an Account
4. Parking is shared with all drivers, as long as their car is recognized as being associated with an Account
From the California Democratic Party (CDP) Platform:


Transportation

Work for shared, convenient and value-priced parking, operated with a system that provides financial support to those paying higher costs or getting a reduced wage, due to the cost of providing the parking
Motivation for Change, 1 of 7

1. Cars and Light-duty vehicles (LDVs) emit the most GHG of any category

![Pie chart showing GHG emissions by sector.]

- On Road Transportation: 46%
  - Cars and light-duty trucks: 41%
- Natural Gas End Users: 9%
- Electricity: 25%
- Heavy Duty Vehicles: 5%
Motivation for Change, 2 of 7

2. Fleet Efficiency Will Not Come Soon Enough, as shown in peer-reviewed report:

**Air & Waste Management Association (AWMA) 2016 Paper**

**Climate-Stabilizing California Light-Duty-Vehicle (LDV) Requirements**

Derives a set of requirements to ensure that our fleet of cars and light-duty trucks will achieve a climate-stabilizing target.
Motivation for Change, 3 of 7

Problem Solution Overview

1. Get a science-based climate-stabilizing target
   - Percent reduction in emission from some baseline, for the target year

2. Derive the equation for level of driving, as a function of fleet efficiency and the climate-stabilizing target

3. Define a set of requirements resulting in fleet efficiency

4. Compute the required level-of-driving for the target year

5. Develop a set of requirements to get the needed driving reduction

AWMA 2016 & EUEC 2017 Paper
Climate-Stabilizing California Light-Duty-Vehicle (LDV) Requirements
Motivation for Change, 4 of 7

2. Fleet Efficiency Will Not Come Soon Enough, as shown in the peer-reviewed report:

**AWMA 2016 & EUEC 2017 Paper**

*Climate-Stabilizing California Light-Duty-Vehicle (LDV) Requirements*

- Fleet-Efficiency Requirements Included:
  1. Programs to remove gas guzzlers
  2. Yearly Fractions of Sales that are Zero-Emission Vehicles (ZEVs, or Battery Electric)
  3. Corporate Average Fuel Efficiency (CAFÉ) for internal combustion engine cars sold, by year
  4. Target Year Percent of Electricity that is renewable
Motivation for Change, 5 of 7

- Two Solutions: *Heroic* and *Extra Heroic*

15 years of ZEV %, for two Cases

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<td>4.0%</td>
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% Reduction in Per-Capita Driving, with Respect to 2005

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<tr>
<td>Extra Heroic</td>
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Many prefer the “Extra Heroic” case because they want to believe we won’t need to reduce driving.

However, the “Extra Heroic Case” percentages are not reasonable.
Motivation for Change, 6 of 7

- Two Solutions: *Heroic* and *Extra Heroic*

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<th>% Reduction in Per-Capita Driving, with Respect to 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroic</td>
</tr>
<tr>
<td>Extra Heroic</td>
</tr>
</tbody>
</table>

We must achieve a **significant reduction** in per-capita driving, by 2030, with respect to 2005, if we are going to stabilize the climate at a livable level.
A big part of the needed 32% reduction will need to come from car-parking reform.

The first step will be a simplified demonstration project of a Dividend-Account Parking System at a work location.

Such a proposal will now be presented.
A Dividend-Account Parking System for Oceanside

A System to Eliminate the Harm of Bundled-Benefit Car Parking for City Employees
300 North Coast Highway

- Top-Level Outcome & Overview
- Calculations
- Who gets to use the system and how
- Overcoming problems and perceptions
- Outcomes of a new incentive

Mike Bullock

EUEC 2018
Top-Level Outcomes

- Employees that drive every day break even (lose no money)
- Employees that don’t drive every day get paid to not drive
- Fewer employees drive, reducing Greenhouse Gas (GHG) emissions
Overview

• Fully-automated parking system, operated for the financial gain of employees
  – Earnings = revenue minus expense
  – All earnings go to employees

• Price is cost per minute
  – Such as 2.3 cents per minute (= $1.38 per hour)

• An employee’s earnings ("Dividend") is proportional to their time spent at work
Calculations of an Employee’s Earnings

- An employee’s earning is proportional to time spent at work:

<table>
<thead>
<tr>
<th>Definitions to Compute an Employee's Monthly Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$T_{Employee}$</strong></td>
</tr>
<tr>
<td><strong>$T_{AllEmployees}$</strong></td>
</tr>
<tr>
<td><strong>$E_{AllEmployees}$</strong></td>
</tr>
</tbody>
</table>

Employee Earnings = $E_{AllEmployees} \times \left( \frac{T_{Employee}}{T_{AllEmployees}} \right)$
Additional Payment so Those that Drive Every Day Will Lose No Money

Note: This is for an individual employee, “Joe”

Joe’s Parking Payment =
Joe’s Earnings – Price per Minute x Minutes Joe Parked + “(Joe’s) Add In”

“Add In” is zero, unless it must take on a positive value so that Joe loses no money
Charge, Earnings, & Add-In, Payment  
*For Each Employee*

- **Charge**
  - Total Minutes Parked x Cost per Minute

- **Earnings**
  - As shown on earlier slide (proportional to employee’s time spent at work)

- **Add-In**
  - Zero, unless Charge > Earnings
  - If Charge > Earnings, Add-In = Charge – Earnings

- **Payment** = Earnings – Charge + Add-In
Who Gets To Use Dividend-Account Parking

• **Anyone** (not necessarily an employee) driving a car registered in the system
  – There is a person with an account associated with the car
  – The car can be identified
    • RFID attached to the car
    • License plate reader
    • Any other method
Employee Behavior

*Employees Must Park in Their Parking Lot if they Drive to Work*

Measures to Reduce “Cheating” = Parking in the Neighborhood

- **Soft, pre-emptive measure: messaging**
  - *Perceived integrity* is every employee’s responsibility
  - *Insufficient perceived integrity* can cost employees
    - Reduced chance of promotion
    - Smaller pay raises
    - More chance of terminated employment
  - Empty spaces in the employee parking garage cost all employees money
  - Parking free in the neighborhood will not be tolerated
  - The City wants to be a good neighbor: this is the reason for off-street parking ordinances

- **Soft, pre-emptive measure: data collection**
  - Operate the system for a time, perhaps even a year, before actually collecting or distributing money
  - Non drivers are identified, thanked, and asked to provide details as to how they are getting to work without driving

- **Soft, In-Operational Mode: Non drivers are thanked and interrogated**

- **Hard: cameras or RFID sensors can identify employees walking into the work perimeter from the neighborhoods**
Hard-to-Not-Drive Example
Fictional, Simplified Case with Pricing and Payout Considered per Day, Page 1

• Employment Center (factory and office)
• Outside Hemet, California
• 100 employees; parking lot has 100 spaces
• No Transit, 110 degree temperature with poor roads for biking, culture of not car-pooling
• Before installing
  – 99 drive
  – 1 bikes
Hard-to-Not-Drive Example

Fictional, Simplified Case with Pricing and Payout Considered per Day, Page 2

- Dividend-Account Parking charges $10/day
- After installing
  - 99 drive
  - 1 bikes
- Total collected each day: $990
- Each employee gets $9.90 earnings per day
- Each driver loses 10 cents per day
- The “crazy” bike rider gets $9.90 per day extra

Hey, isn’t this an improvement? I would say the “crazy” bike rider is earning his money!

If another employee bikes, the drivers would lose 20 cents per day and the bike riders would get $9.80 per day. If the company president rented out the 2 extra spaces for $10 per day, the drivers would lose nothing and the bike riders would get $10 per day. Biking would increase by 100%! What’s wrong with that?
Results of 3 Actions, Including Cash-out
Case (#1), Reference Patrick Siegman’s article in Bicycle Pedestrian Federation

• Company: CH2M Hill
  – Location: Bellevue, WA (Seattle suburb)
  – Engineering Firm with 430 employees

• Actions
  – $54/month (1995 $’s), to not drive
  – Improved Transit
  – Improved Bike/Ped facilities

### CH2M Hill Work Trips

<table>
<thead>
<tr>
<th>Mode</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>89%</td>
<td>54%</td>
</tr>
<tr>
<td>Carpool</td>
<td>9%</td>
<td>12%</td>
</tr>
<tr>
<td>Bus</td>
<td>1%</td>
<td>17%</td>
</tr>
<tr>
<td>Bike, Walk</td>
<td>1%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Since these changes are brought about by more than just cashout, this case is not used in the tabulation of cashout results (next chart)
Cash-Out Results
(11 Locations, 3 Groups, 1995 Dollars)

- 3 Largest Responses — 38%, 36%, 31%
- 3 Smallest Responses — 15%, 18%, 24%
- Responses are the change; car vacancy rates would be larger

### Impact of Financial Incentives on Parking Demand

<table>
<thead>
<tr>
<th>Location</th>
<th>Scope</th>
<th>1995 dollars per mo.</th>
<th>Parking Use Decrease&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group A: Areas with little or no public transportation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Century City District, West Los Angeles</td>
<td>3500 employees at 100+ firms</td>
<td>$81</td>
<td>15%</td>
</tr>
<tr>
<td>Cornell University, Ithaca, NY</td>
<td>9000 faculty &amp; staff</td>
<td>$34</td>
<td>26%</td>
</tr>
<tr>
<td>San Fernando Valley, Los Angeles, CA</td>
<td>1 employer, 850 employees</td>
<td>$37</td>
<td>30%</td>
</tr>
<tr>
<td>Average for Group</td>
<td></td>
<td>$47</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Group B: Areas with fair public transportation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles Civic Center</td>
<td>10000+ employees, several firms</td>
<td>$125</td>
<td>36%</td>
</tr>
<tr>
<td>Mid-Wilshire Blvd., Los Angeles</td>
<td>1 mid-size firm</td>
<td>$89</td>
<td>38%</td>
</tr>
<tr>
<td>Washington DC Suburbs</td>
<td>5500 employees at 3 worksites</td>
<td>$68</td>
<td>26%</td>
</tr>
<tr>
<td>Downtown Los Angeles</td>
<td>5000 employees, 118 firms</td>
<td>$126</td>
<td>25%</td>
</tr>
<tr>
<td>Average for Group</td>
<td></td>
<td>$102</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Group C: Areas with good public transportation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Washington, Seattle Wa.</td>
<td>50,000 faculty, staff &amp; students</td>
<td>$18</td>
<td>24%</td>
</tr>
<tr>
<td>Downtown Ottawa, Canada</td>
<td>3500+ government staff</td>
<td>$72</td>
<td>18%</td>
</tr>
<tr>
<td>Bellevue, WA</td>
<td>1 firm with 430 employees</td>
<td>$54</td>
<td>39%&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Average for Group, but not Bellevue Washington</td>
<td></td>
<td>$45</td>
<td>21%</td>
</tr>
<tr>
<td>Over All Average, Excluding Bellevue Washington</td>
<td></td>
<td></td>
<td>25%</td>
</tr>
</tbody>
</table>

<sup>1</sup> Parking vacancy would be higher!  
<sup>2</sup> Not used, since transit & walk/bike facilities also improved.
Implementation Example

The City could have the vendor operate the system, for the first 10 years. Over those years, the vendor would be motivated to debug the system and continue to look for operational efficiencies. The vendor could receive 10% of the revenue, for the first 5 years; 5% of the revenue, for the next 3 years; and 2%, for the final 2 years. If 600 cars are parked for 8 hours, 200 days per year, at 50 cents per hour, then the yearly revenue would be $480,000. The vendor would collect $240,000 over the first 5 years, $72,000 over the next 3 years, and $28,800 over the last two years.
Back up Slides
Measures to Get 32%

• Predictions, Regional Transportation Plans

• Stop expanding most roads and all freeways
  – No need, Eliminate congestion with less driving

• Reallocate freeway-expansion $$$ to transit

• Payment methods, to increase fairness & choice
  – Demonstration projects: Dividend-Account Parking
  – Legislation
    • Replace Bundled-Cost or Bundled-Benefit Parking
    • Equitable and environmentally-sound road-use fees

• Smarter growth, complete streets, bike classes

---

Estimated Reduction

- 10%
- 2%
- 2%
THEREFORE BE IT RESOLVED, that the California Democratic Party reinforces the need for all high school students to know, before they graduate, and elected officials to know, acknowledge, and address, as soon as possible, (1) both the existence of and the reason for anthropogenic climate change; (2) its potential for harm; (3) the difference between stabilizing the climate at a livable level and destabilization; (4) science-based, climate-stabilizing, GHG reduction targets; (5) the primary variables and considerations in identifying those targets and (6) the approximate amount of life style and technology change required to achieve those climate-stabilizing targets.
How Bad Could It Get?

Governor Brown to the Pope:

*Humanity must Reverse Course* or Face Extinction

*Must be quantified*
Climate Data

• Keeling Curve:
  http://en.wikipedia.org/wiki/An_Inconvenient_Truth#Scientific_basis

Atmospheric Carbon Dioxide
Measured at Mauna Loa, Hawaii

Burning a gallon of gasoline releases about 19 #’s of CO2!
Likewise
A barrel of oil, about 700 #’s
A ton of coal, about 3 tons
Etc.

Currently 400 PPM!

Paper 2014-A-30793-AWMA
Our Climate Crisis

- From: http://en.wikipedia.org/wiki/An_Inconvenient_Truth#Scientific_basis

S-3-05’s goal is to cap CO2 at 450 PPM

Current Level of CO2 is 400 PPM

S-3-05 Achievement Outcomes
- X% chance > 4 (Extinction?)
- 30% chance > 3 (very bad)
- 50% chance > 2 (bad)
Our Climate Crisis

- Earth & Space Research (ESR) website:
  http://www.esr.org/outreach/climate_change/mans_impact/man1.html

Current level = 400 PPM

S-3-05’s Goal is to cap CO2 at 450 PPM, which is off this chart.

Start of Industrial Revolution
Fixing the Problem

We must stabilize the value of the earth’s atmospheric CO2_e

CO2_e Emissions

Natural: rotting, fire, digestion, respiration

Anthropogenic: combustion of fossil fuel, methane, other

Warming Feed Back: such as methane from melting permafrost

The Warming Feed Back term is the wild card. It must not become dominant.

Sequestration (Photosynthesis)

Growth of plants on Earth

If Anthropogenic emissions were to be sufficiently low (80% below 1990 levels has been allocated to developed countries), the slope would be zero, thus capping the value of the Earth’s atmospheric CO2_e
Motivation for Change

• Fairness to individuals
  – Costs no longer hidden
  – Costs avoided or recovered, by not using parking

• Less driving, to reduce environmental harm
  – Motivates choosing alternative modes
  – Less driving to find parking

• Cost Effective Development
  – Less parking needed reduces land and building costs
Goals, 1 of 2

• One agency operates all parking
• Nearly all parking is shared
• Parking costs are effectively unbundled
  – From wages and rents
  – From costs of goods and services
• No change to how parking gets built
  – Generally, municipalities require & developers build
Goals, 2 of 2

• Priced right
  – Value Priced: Base price derived from costs
  – Driver demand determines a congestion price

• No need to search for parking
  – Directions to parking that meets user’s needs
  – Accurate price predictions

• Each parking space’s use is archived
  – Supports informed decisions

• Privacy and the needs of the disabled are supported
Definitions and Methods, 1 of 6

• Definition & Examples of *Parking Beneficiary Group*

  – Owners
    • Private investors or governments operating public parking
  – Those losing money due to provided parking
    • Employees
    • Apartment renters or condominium owners
    • Hotel or restaurant patrons
    • Shoppers
  – Those offered specific parking
    • Driving-age students at a school with parking
    • Driving-age train riders using a station with parking
Definitions and Methods 2 of 6

• How to Effectively Unbundle the Cost or the Benefit
  – Price charged per minute
    • Base price rate established to cover all costs
    • Congestion price rate
      – Dynamically set as a function of occupancy rate
      – Charge is time average, if rate changes, while car is parked
  – Parking generally available to all drivers
  – Earnings distributed to members of **Beneficiary Group**
    • Calculation of individual’s earnings depends on situation
Definitions and Methods, 3 of 6

- Calculation of monthly earnings
  - If parking is provided for several groups, each group’s portion of the earnings is proportional to its original contribution to cost (Mixed use case)
  - Each beneficiary group’s total is divided up among its members
    - Condominium owners: proportional to spaces effectively purchased
    - Renters: proportional to spaces effectively renting
    - Shoppers: proportional to money spent
    - Employees or students of driving age: proportional to time spent at work or school
    - Train riders of driving age: proportional to time spent on round trips
Definitions and Methods, 4 of 6

• For congestion pricing, define *Cluster of Parking*
  – 20 to 40 contiguous spaces nearly equal in desirability
  – Assigned the same price

• Pricing
  – Base price
    • Covers all costs
    • Report’s Page 13 & 14 provides details
  – Congestion price, for each cluster

\[
r_{\text{Baseline Hourly}} = \frac{r_{\text{Investment} \times V_{\text{Parking}}} + c_{\text{YOYD}}}{(n_{\text{Hours Per Year}} \times f_{\text{TO}})}
\]

\[
r_{\text{Hourly Rate}} = r_{\text{Baseline Hourly}} \times \left(B^{(30-V)/5}\right), \text{ for } V < 30; \ r_{\text{Baseline Hourly}}, \text{ otherwise}
\]

• \( B \) is nominally 2; adjusted to keep vacancy above 15%
• \( V \) is the vacancy % rate (Report’s Eq. 2, Table 2, Pages 14 & 15)
Definitions and Methods, 5 of 6

• Pricing predictions
  – For any set of dates, start times, durations, and destinations
  – Availability of predictions
    • Broadcast into navigational units
    • Website or phone

• Help to find desired parking
  – Driver gives times and locations and stipulates . . .
    • Max price, to get space at minimum walk distance
    • Max walk distance, to get space at minimum price
  – Voice-activated navigational system for ease and safety
Definitions and Methods, 6 of 6

• Monthly statements
  – All parking charges and earnings
    • First, within state
    • Then, within nation
    • Finally, within North and South America
  – Customer selects presentation detail
    • Less detail for ease and more privacy
    • More detail to know and adjust parking decisions
  – Packaged with other statements
    • All utilities, transit use, road use
Implementation Plan, 1 of 3

• Prototype design
  – Most likely a Climate Action Plan Mitigation Measure
• Requirements document to support request for proposal (RFP)
• Winning proposal leads to design
  – Hardware selection and design
  – Software generation
• Prototype installation
  – Most likely a Climate Action Plan Mitigation Measure
  – Debug
  – Adjustments to satisfy stakeholders
Implementation Plan, 2 of 3

• Government agency develops and executes full installation strategy
  – To minimize impact on institutions
  – To maximize early success and driving reductions
    • Large employment centers with “free” parking
    • Train stations with large, “free” parking lots
  – Supported by new law that requires cooperation but very little effort, from . . .
    • Private and public institutions
    • Individuals
Implementation Plan, 3 of 3

• Basis for a new law supporting installations
  – To provide equal protection of the law
    • Government has required parking for 50 years
    • Those driving less than average often lose money
  – Prototype will have demonstrated feasibility
  – Global warming considerations show subsidized parking to be a public nuisance
    • Global warming will likely cause a human catastrophe
    • Short term strategies are critical
    • Electric cars and getting most electricity from renewables will take decades
    • Properly pricing parking is relatively cheap and quick (5 years)
## Unbundle Flow Diagram Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_{\text{INP}}$</td>
<td>Company payroll if there were no parking costs</td>
</tr>
<tr>
<td>$P_{\text{cost}}$</td>
<td>Total parking cost. Price will be sized to recover this.</td>
</tr>
<tr>
<td>$P_{\text{earned}}$</td>
<td>Parking earnings equals parking cost minus collection cost</td>
</tr>
<tr>
<td>$v_i$</td>
<td>Employee value. Fraction of available pay. For the average employee, $1/n$</td>
</tr>
<tr>
<td>$c_i$</td>
<td>Fraction of parking cost paid. Zero, if the employee never parks.</td>
</tr>
<tr>
<td>$f$</td>
<td>Parking earnings divided by parking cost. Close to 1 for efficient collection</td>
</tr>
<tr>
<td>$w_i$</td>
<td>Time worked divided by total time worked of all employees. If average, this is $1/n$.</td>
</tr>
</tbody>
</table>
For the average $i^{th}$ employee, $v_i = 1/n$ and $w_i = 1/n$. If this employee never parks, their pay is $(1/n)P_{INP} - (1/n)P_{cost} (1-f)$. If $f = 1$, the pay is what it would be with no parking.
Mike Bullock, 1 of 2

• Personal
  – Married, two daughters, 3 grand daughters, 1 grandson
    • Daughter Laura Bullock White (Berkeley)
    • Heidi Bullock (Oceanside)
  – Moved from Cupertino to Oceanside in April 2007
  – Oceanside home
  – Swims with and competes for Oceanside Swim Masters

• Education
  – BSEE, Lamar University
  – MSE, University of Texas at El Paso

• Professional
  – Lockheed Martin Systems Engineer, 1971 to 2007
    • Last 2 years, Space Based Infrared System (SBIRS, satellite to detect and track missiles)
    • 10 Years previous: Milstar (communication satellite)
      – Verification of antenna pointing accuracy
      – Antenna pointing calibration
Mike Bullock, 2 of 2

• Most Recent Activities
  – California Democratic Party
    • Delegate, 76\textsuperscript{TH} AD
    • Elected member of the San Diego County Central Committee
    • CDP Resolutions and Platform
These entities or others may become interested in issuing a Request for Information as described herein.

City of Encinitas in cooperation with the cities of Oceanside, Carlsbad, Solana Beach, and Del Mar, the United States Marine Corps Base at Camp Pendleton, and North County Transit District

REQUEST FOR INFORMATION (RFI)
OR A REQUEST FOR AN INDICATION OF INTEREST (RFIOI) IN RESPONDING TO AN RFI
Design, Install, and Operate a Dividend-Account Car Parking System at Selected Work Locations for Employees
CM RFI 18-XX

Date Issued: Month j, 2018 or 2019
Questions Due: Month k, 2018, 5:00 PM
Proposals Due: Month l, 2018, 2:00 PM

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III. INSTRUCTIONS ..................................................................................................................10

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ATTACHMENT 1 ...................................................................................................................... 14
I. INTRODUCTION

The City of Encinitas, or one of the other entities shown above, may want, at some future date, to request information that will aid in the selection of a vendor for a possible Dividend-Account Car-Parking System Demonstration pilot on behalf of the themselves and other entities, such as Oceanside, Carlsbad, Encinitas, Solana Beach, and Del Mar, the United States Marine Corps Base at Camp Pendleton, and the North County Transit District (collectively referred to as “Partners”). The Partners may seek to evaluate the benefits, effectiveness, and popularity of a Dividend-Account Car Parking System for employees in the north coastal region of San Diego County through the operation of a temporary pilot program lasting from twelve (12) to thirty-six (36) months. It could become the goal of the Partners to determine whether permanent Dividend-Account Car-Parking systems would be successful in our region based on the outcome of a pilot program. Partners may decide to be actively coordinating with the San Diego Association of Governments (SANDAG), the agency that may be leading regional Dividend-Account Car-Parking Systems coordination around topics including data collection and monitoring, public outreach, policy/regulations. The partners are more likely to want to proceed if there is an identified interest on the part of vendors to respond to an actual RFI. To save time, the rest of this document is written as if one of the Partners has already decided to issue an RFI. However, that is not currently the case. This document, perhaps best described as Request for Indication of Interest has been adapted from a dock-less bike share RFI. Thank you for considering this concept. Please indicate if you would be interested in designing and operating such a system.

Mike Bullock

A. Location

The study area includes the cities of Oceanside, Carlsbad, Encinitas, Solana Beach, and Del Mar, and the United States Marine Corps Base at Camp Pendleton, all of which are located in northern San Diego County along the coast. The region has a mild climate with average temperatures ranging from the mid-60s in the winter to mid-80s in the summer. The terrain is relatively flat along the coast, particularly when traveling in the north-south directions. Each of the cities have dense urban centers of varying sizes with grid street plans and relatively flat terrain. Generally, most of the cities in the study area have more hilly terrain and a suburban layout east of Interstate 5 (I-5). The combined population of the cities is approximately 365,000 and the combined geographical area of the cities is approximately 106 square miles. Highway 101 runs along the coast through each of the cities for a contiguous distance of approximately 20 miles. Highway 101 is one of the most popular bicycling routes in the San Diego region. North County Transit District (NCTD) operates two rail lines and 34 bus routes throughout North County. Thirteen rail and/or bus transit centers are located within the study area. Total annual NCTD ridership is approximately 10.7 million passengers. The Camp Pendleton Marine Corps base is located just north of Oceanside and serves as a major employer for both enlisted and non-enlisted personnel. The southwest corner of the base adjacent to Oceanside Harbor and west of I-5 features relatively flat terrain and could benefit from increased biking connections.

Table 1: General information about the region
<table>
<thead>
<tr>
<th>City</th>
<th>Population¹</th>
<th>Employment²</th>
<th>Size (sq. mi.)</th>
<th>Coastline (mi.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceanside</td>
<td>175,948</td>
<td>35,662</td>
<td>42</td>
<td>3.5</td>
</tr>
<tr>
<td>Carlsbad</td>
<td>112,930</td>
<td>66,596</td>
<td>39</td>
<td>6.3</td>
</tr>
<tr>
<td>Encinitas</td>
<td>61,928</td>
<td>22,443</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td>Solana Beach</td>
<td>13,494</td>
<td>7,843</td>
<td>3.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Del Mar</td>
<td>4,274</td>
<td>3,474</td>
<td>1.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

¹SANDAG Current Estimates, 2016
²U.S. Census Bureau, 2015

**B. Background**

The cities in the North County coastal region of San Diego County are increasingly aware of the need to reduce local greenhouse gas (GHG) emissions to limit the effects of climate change.
while offering viable transportation alternatives to driving alone. Many of the cities have adopted Climate Action Plans (CAPs) or are in the process of developing CAPs. CAPs establish environmental initiatives by which cities aim to achieve GHG emissions reduction goals and targets. Transportation, especially travel via single occupancy vehicle, is a major source of GHG emissions in North County. Facilitating safe, convenient, and affordable alternative transportation options is often a component of these plans and initiatives. Car parking systems that increase economic fairness and choice, compared to bundled-employee-benefit car parking systems (erroneously called “free parking”) at places of employment will reduce single occupancy vehicle (SOV) commuting and increase the need for first/last mile solutions. For this reason, this RFI will be provided to those firms that would benefit from increasing the demand for first/last mile solutions.

The Marine Corps Mobility Transformation Strategy calls for demonstration projects at installations like Camp Pendleton to meet official business mobility with capabilities that are smarter, more efficient, more accessible, and cheaper.

Partners will seek to coordinate with SANDAG on Dividend-Account Car-Parking Systems data analysis while ensuring the selected Dividend-Account Car-Parking Systems vendor can meet data sharing requirements that assist in quantifying the impacts of Dividend-Account Car-Parking Systems on vehicle miles traveled (VMT), access to transit, economic development, and other benefits.

Offering and promoting programs, like Dividend-Account Car-Parking Systems, that replace vehicle trips with active transportation and/or transit trips, is one of the ways the Partners can help to reduce emissions while offering more efficient and more affordable transportation modes for residents, employees, and visitors. A Dividend-Account Car-Parking System is a system which operates employee car parking for the financial gain of the employees by value-pricing the parking and distributing the earnings, which are the revenue minus a fair cost of operation, among employees. The earnings are provided in proportion to the time an employee spends on the work premises. There may also be an “add in” payment provided by either the employer or from a grant, such as a Greenhouse Gas Reduction Fund (GGRF) grant, sized so that an employee that continues to drive every day will lose no money under the system. This system will in effect pay each employee an additional amount of income for each day they get to work without relying on the single occupancy vehicle (SOV) mode. See Reference 1 for more details on the Dividend-Account Car-Parking System. The References are listed at the end of Section II, Request for Information.

C. Purpose and Objectives of the RFI

The purpose of this Request for Information (RFI) is to identify vendors with the resources to pilot a Dividend-Account Car-Parking System program in the Partners’ jurisdictions, in accordance with the objectives set forth in this RFI.

The Partners seek a qualified vendor to design, establish, implement, operate, and maintain an innovative, valuable, and mutually-beneficial Dividend-Account Car-Parking System pilot program. The pilot should enable and encourage residents, employees, and visitors to affordably and conveniently travel by car pool, transit, active transportation or some combination of these modes. The pilot should also facilitate a decrease in vehicular parking demand, vehicular traffic, and (GHG) emissions, while promoting active and healthy transportation options.
Qualified vendors are invited to submit proposals based on the information provided in this RFI.

This RFI is a mechanism for gathering information and does not constitute a binding procurement process, however, selection of goods and/or services may result from information obtained through this RFI process, where deemed appropriate. The Partners, jointly or individually, are not obligated to make an award or issue a Request for Proposal as part of this process. In addition, the Partners, in their sole discretion, may decide to engage in direct question and answer sessions with one or more vendors and may decide to enter into an agreement or issue permits based upon those discussions/interviews or a resulting proposal.

If a single demonstration pilot project or multiple demonstration pilot projects were successful, given the severity of our anthropogenic climate change crisis, it is anticipated that other employers will decide to install Dividend-Account car-parking systems. Since municipal governments are required under CEQA to adopt General Plan Updates (GPUs) that include, perhaps using a Climate Action Plan, a set of enforceable measures that will achieve climate-stabilizing targets, and since cars and light-duty trucks (LDVs) are the largest category of GHG emissions, it is further anticipated that municipal governments will, over time, update their off-street parking ordinances to include requirements for Dividend-Account Car Parking systems. Reference 2 shows that this system is adaptable to all types of parking. A selected vendor would have access to a market of more than 365,000 residents living in the north coastal region, more than 135,000 employees that work in the region, and others that visit the region for leisure.

Potential Dividend-Account Car-Parking Systems program marketing opportunities may include, but are not limited to: being listed as a preferred vendor on the Partners websites, co-branded sustainability campaigns, signage, event sponsorship, press releases, and social media announcements.

D. Obtaining RFI Documents

The website for this RFI and related documents is: PlanetBids (http://www.encinitasca.gov/bids). All correspondence will be posted on the PlanetBids website. It is the responsibility of Proposers to check the website regularly for information updates and RFI clarifications, as well as any RFI addenda. To submit a proposal, a Proposer must be registered with the City of Encinitas as a vendor. To register as a vendor, go to the following link (http://www.encinitasca.gov/bids), and then proceed to the “New Vendor Registration” link. All addenda will be available on the PlanetBids website.

E. RFI Contact

The City of Encinitas will receive questions and information requests on this RFI up to 5:00 p.m. on some TBD Month “n”, 2018. All questions regarding the RFI documents shall be submitted through PlanetBids. All project correspondence will be posted on the PlanetBids website. It is the responsibility of the Proposers to check the website regularly for information updates, clarifications, and addenda.

II. REQUEST FOR INFORMATION or REQUEST FOR INDICATION OF INTEREST

This section describes the information being requested by the Partners to learn about prospective Dividend-Account Car-Parking System (“System”) vendors and optionally to select a vendor to operate in the Partners’ jurisdictions. Interested vendors must include all
information outlined below in a submitted proposal.

A. Dividend-Account Car-Parking System (“System”) Pilot Program Requirements

Vendors responding to this RFI must describe their proposed system that is capable of providing the following services and shall describe these services in their submission:

1. System pilot program(s), as described in Reference 1, to include the following installed and maintained capabilities:

2. A capability to establish and maintain a database of System Vehicles, System Members, System Parking and System Accounts. A System Account includes the mailing name and address of a person that has agreed to receive payments and pay bills that are the result of the implementation of the System and the actions taken by the person, or some other person driving the System Vehicle or System Vehicles, as described herein. Such a person is a “System Member.” A “System Vehicle” is one that can be identified when it is parked in the System and one that is associated with a System Account and System Member. A System Member may take responsibility to pay for the cost of parking for multiple System Vehicles.

3. A capability to provide an easy method for Employees and others to become System Members by establishing a System Account with their chosen System Vehicles.

4. A capability to provide signage to designate System Parking areas well enough to prevent nearly all accidental entries by unauthorized vehicles, meaning vehicles that are not System Vehicles.

5. A capability to provide written materials to explain to employees and others that may want to become System Members how the System will work and why it is an important improvement to economic fairness and environmental outcomes, assuming a reasonable level of cooperation with the City and other affected groups, such as City vendors and sub-contractors.

6. A capability to operate the system for an agreed-upon amount of time, with no money exchanges, to establish a pre-install database of commute behavior including using questionnaires to determine how non-drivers say they are getting to work.

7. A capability to identify a System Vehicle within a minute of its being parked in a System Parking space and to store the System Vehicle identifier and the time it was recognized as being parked.

8. A capability to recognize when a System Vehicle exits a System Parking space, within a minute and to store the vehicle identifier and the recognized exit time.

9. A capability to identify vehicles that are NOT System Vehicles when they are in the System Parking area and are therefore trespassing, while they are in the System Parking area.

10. A capability to record the start time and end time of the trespassing vehicle’s trespassing, to within an accuracy of 1 minute, as well as its license plate image, sufficient to support a conviction of trespassing.

11. A capability to send the license plate of the trespassing vehicle and its start time and end time of its trespassing to law enforcement officials with 5 minutes of the recorded start time of the trespass.

12. A capability to provide notice and evidence of this trespassing in real time and as stored
information for law enforcement so that they can then ticket and prosecute the owners of any and all vehicles that have been illegally parked in a System Parking space. It is anticipated that this would include the capture and storage of the license plate numbers of the vehicles that are parked in the System Parking lot whenever it is the case that the vehicle is not a System Vehicle.

13. A capability to compute an instantaneous charge rate (cost per minute) for the case of an application of “congestion pricing”, whereby an agreed-upon base price is increased by an agreed-upon congestion-pricing algorithm, designed to prevent the occupancy rate from exceeding an agreed-upon upper bound value, such as 90% occupied. An example of such an algorithm is in Reference 2.

14. A capability to compute and store the time that the charge rate changes, for the case of an application of a congestion-pricing algorithm. Note that this time is called the Rate Change Time. At these times, the rate could either increase, by the addition of a car being parked in a System Space or the rate could be decreased, by the subtraction of a car in a System Space.

15. A capability to accumulate a total charge for each System Member, where the total charge is the sum of the products of each parked duration time over which a fixed charge rate applies and the length of that time duration, for all the System Vehicles associated with the System Member, over a month. This total charge is called the System Member Monthly Charge (“SMMC”). Note that the Member may or may not be an employee.

16. A capability to compute the total charges, for all System Members over a month for the System. This amount is the Total System Monthly Charge (“TSMC”).

17. A capability to compute a Total System Monthly Earnings (“TSME”), which is the TSMC, reduced by a agree-to amount, such as 5%, where the 5% is taken out of the TSMC to cover the operator’s expenses.

18. A capability to record all the times an employee enters and leaves the work premises. One way to do this is to require employees to have an RFID. There may also be an GPS or a license plate reading solution. Note that a privacy requirement will prevent this information from being shared, with the employer, for example, with the exception of providing it to a law enforcement person, in the event a warrant is signed by a presiding judge.

19. A capability to use the times an employee enters and leaves the work premises to compute the time, over a month, an employee has spent at or within the work premises. This time is known as the Employee Monthly Time (“EMT”).

20. A capability to compute the total time all employees spent at the premises over a month, to be known as the Total Employee Monthly Time (“TEMT”).

21. A capability to compute an Employee’s Monthly System Earnings (“EMSE”) as the Total System Monthly Earnings (“TSME”), multiplied by the employee’s Employee Monthly Time, EMT divided by the TEMT. This is also described in Reference 1.

22. A capability to compute an Employee’s Add-In “EAI”, as follows. If the employee’s System Member Monthly Charge, SMMC, value is greater than the employee’s earnings, TSME; then, for that case, the EAI is equal to the employee’s SMMC minus the employee’s TSME. If the employee’s System Member Monthly Charge, SMMC value is not greater than the employee’s earnings, TSME; then the employee’s EAI is equal to zero. This is also described in Reference 1.

23. A capability to accept Employee’s Add-In, EAI money from the Employer, with the
expectation that the money would originate from a grant funded by, for example, the Greenhouse Gas Reduction Fund (GGRF), or could come from the Employer's budget, as a Climate Action Plan (CAP) or other expense. It could also be generated by converting some “free” parking to be a different Account Parking System Parking (System Parking), thereby generating new money to the City.

24. A capability to compute an employee’s monthly payment (“EMP”), as follows: It is equal to the Employee’s Monthly System Earnings, EMSE plus the employee’s Add-In, EAI minus the System Member Monthly Charge, SMMC. This is also described in Reference 1.

25. A capability to automatically send out monthly statements to all System Members. System Members who are not employees will receive a bill if they have parked in the System parking during the month. The bill will then be for the member’s SMMC. Each employee will receive a statement showing SMMC, EMSE, and EAI. If the employee’s EAI is zero, then the employee will receive a payment in the form of cashable check for the employee’s EMP. This is also explained in Reference 1.

26. A capability to protect employee privacy where privacy means that the employee’s data will never be shared, with the sole exception of sharing with law enforcement officials in accordance with a valid court order requesting the data. For example, at no time will the data be shared with other employees, including those working in the management of the employer that is providing the employee parking that is the System Parking.

27. A capability to protect System Member privacy where privacy means that the System Member’s data will never be shared, with the sole exception of sharing with law enforcement officials in accordance with a valid court order requesting the data.

28. A capability to allow visitors, vendors, and others, that are identified by the Company management, to be treated as employees. There could also be “visitor” parking that is not associated with the System.

29. A capability to identify System Vehicles that are parked in the visitor parking or other inappropriate parking places, since it is expected that it will required as a part of City Policy that System Vehicles that are associated with employees will be required to be parked in the System Parking. Since employees are earning money from the System Parking, it would be inappropriate for them to not use the System Parking. This information would be shared with City Management, as soon as it is collected.

30. A capability to perform regular inspection, maintenance, and repair of all System Parking facilities and associated capabilities often enough to eliminate nearly all system failures.

31. A capability to perform vendor-managed methods of enforcement.

32. A capability to have demonstrated secured financial backing with the ability to operate at full capacity for the life of the pilot program and beyond with a sustainable business model.

33. A capability to provide close coordination with all Partners, including real-time sharing of System Parking data collected, active promotion of the Dividend-Account Car-Parking Systems program in coordination with each Partner, and timely response to any complaints received or requests made by the Partners and Dividend-Account Car-Parking Systems users. Describe the type of data that is collected and can be provided to the Partners. Promotion and advertisement of the Dividend-Account Car-Parking Systems program must comply with all Partners’ municipal codes and ordinances.

34. A capability to offer a Dividend-Account Car-Parking Systems program that can be deployed, operated, managed, and maintained by the vendor at no cost, except for the
possibility of the EAI payments, to the Partners and with minimal oversight needed from the Partners.

35. A capability to establish and operated multiple Dividend-Account Car-Parking Systems programs including for for cases other than employee parking, as described in Reference 2, that can be deployed, operated, managed, and maintained by the vendor at no cost, except for the EAI payment, for employee parking, to the Partners and with minimal oversight needed from the Partners.

36. A capability to conform to contract specifications, including general liability insurance, worker’s compensation, automobile liability insurance, indemnification, and termination clauses. Sample contract attached.

B. Proposal Elements

Vendors interested in responding to this RFI must prepare a proposal that includes the following information:

1. Describe how drivers can become System Members.

2. Provide a detailed System maintenance plan.

3. Describe the vendor’s capability to provide data and reports to the Partners, including raw and summarized data. Summarized data could include both user data (e.g., demographics, trip purpose, repeat usage, percent of trips starting and ending in close proximity to transit, mode shift, and transit usage) and trip data (e.g., average trip length, average trip time, trip start and end hotspots, trip path, estimated GHG emissions per trip). Ideally, this data should be provided via a publicly accessible API in your suggested General Dividend-Account Car-Parking Systems Feed Specification (GBFS) format. Describe vendor’s ability to collect quantitative and qualitative data and report out findings from users (e.g. in-app surveys).

4. Describe how the vendor will employ anti-theft and anti-vandalism measures to ensure Systems do not pose a nuisance to the community.

5. Since the establishment of Dividend-Account Parking systems will increase bike usage, describe how the vendor will address bicycle safety concerns, including helmet use, riding at night and other safety concerns that may or may not be regulated by state vehicle codes.

6. Describe how the Dividend-Account Car-Parking Systems program may operate in conjunction with existing bike rental businesses operating in the Partners’ cities.

7. Describe the vendor’s plans for future growth and expansion, including possible anticipated increases in demand for good car parking systems as the public becomes more aware of the threat of anthropogenic climate change and how good systems improve economic fairness, etc.

8. Provide an estimated timeline for a twelve-to-twenty-four-month pilot Dividend-Account Car-Parking System program, including any needed permitting, set-up, promotion, advertising, maintenance and servicing, data delivery to Partners, summary and reporting on the outcome of the pilot program and possible continuation of the program.
9. Describe a recommended minimum Dividend-Account Car-Parking Systems size for the North County Coastal operating area.

10. Describe strategies for effectively educating users on proper System Parking use and the reason that society needs to improve the way we pay for the use of car parking.

11. Describe any approach you would recommend to enhance access and fairness for disadvantaged communities.

12. Describe time required to deploy a Dividend-Account Car-Parking Systems pilot program if selected based on System Parking size, etc.

13. Describe an approach to increasing the use of Dividend-Account Parking to include most city car parking, then across City boundaries, and then across County, State, and international boundaries, with the final system being one wherein nearly all System Vehicles have a single, world-wide, System Account.

References Providing Additional Description

1. *Eliminating the Harm of Bundled-Cost or Bundled-Benefit Parking*, Presentation to the 2018 Energy Utility Environment Conference (EUEC), Mike Bullock, March 2018


3. *Oceanside Civic Center Garage Space Allocation*, EXCEL Spread Sheet, Bullock, based on a file provided by Oceanside staff, July 2018

III. INSTRUCTIONS

A. Proposal Due Date

Proposals must be submitted electronically no later than 5:00 p.m. on TBD Month 2018 or 2019. Proposals must be submitted electronically via the PlanetBids system used to download the RFI. The maximum file size for submittal is 50 megabytes, and the file type shall be Portable Document Format (PDF). The electronic system will close submissions exactly at the date and time set forth in the RFI or as changed by addenda.

B. Proposal Acceptance

Respondents are responsible for submitting and having their submittal accepted before the closing time set forth in this RFI or as changed by addenda. NOTE: Pushing the submit button on the electronic system may not be instantaneous; it may take time for the Respondent’s documents to upload and transmit before the submittal is accepted. It is the Respondent’s sole responsibility to ensure their document(s) are uploaded, transmitted, and arrive in time electronically. The City of Encinitas will have no responsibility for submittals that do not arrive in a timely manner, no matter what the reason.
C. Page Limit

No submissions exceeding twenty-five (25) pages will be accepted (excluding attachments). In addition, attachments may not exceed twenty-five (25) pages. The City of Encinitas discourages “padding” of proposals with brochures, extensive literature, and boilerplate material not applicable to a pilot Dividend-Account Car-Parking Systems program.

D. Proposal Format

Proposals must be organized in the following format and include the following content:

1. Letter of transmittal signed by an individual authorized to bind the proposing entity stating the firm has read and will comply with all terms and conditions of the RFI.

2. General information about the firm, including the size of the organization, location of offices, number of years in business, organizational chart, name of owners and principal parties, number and position titles of staff.

3. Qualifications of principals, project managers and key personnel who would be assigned to this project. Include their position in the firm, and types and amount of relevant experience operating a Dividend-Account Car-Parking Systems program or similar program. Identify the primary contact that will be the overall project manager. Resumes are not required, but may be included as attachments. The selected respondent may not substitute personnel without written authorization from the Partners.

4. A work plan that establishes the Respondent’s understanding of, and ability to satisfy Partners’ objectives. Respondent shall succinctly describe the proposed approach for implementing a Dividend-Account Car-Parking Systems program, outlining the activities, including innovative ideas that would be undertaken in completing the various tasks and specifying who would perform them.

5. A preliminary estimated schedule for deployment of a pilot Dividend-Account Car-Parking Systems program. Show all critical paths, major milestones, and decision points in pilot schedule.

6. A list of the municipal or other government agencies your firm has worked with during the past three years. Provide the following information for at least one operational system that has at least some of the similar components as would a Dividend-Account Car-Parking System program that is managed by the respondent:

   a) Name, address, and telephone number of the agency;
   b) Time period for the project;
   c) Brief description of the scope of the services provided;
   d) Identify the staff members on the project and their specific responsibilities; and
   e) Person and contact information for a reference.

IV. PROPOSAL EVALUATION

A. Proposal Evaluation
A review committee comprised of representatives from each of the potential Partner cities will judge the merit of proposals received in accordance with the general criteria defined herein. Failure of proposers to provide in their proposal any information requested in this RFI may result in disqualification of the proposal. The sole objective of the review committee will be to select the proposal that is most responsive to the Partners’ needs. The Partners reserve the right to elect to not proceed with a pilot Dividend-Account Car-Parking System program and reject all proposals received through this RFI process.

1. Experience of the vendor and proposed staff. Experience of project staff with similar scope of services. Level of education, training, licensing and certification of staff
2. Approach to the project. Demonstrated understanding of the Partners' needs and solicitation requirements. Approach is well organized and presented in a clear, concise and logical manner.
3. Availability and proposed use of technology and methodologies. Quality control and thoroughness is well defined.
4. Capability to Perform. Ability to complete work within deadlines. Availability and continuity of staff during the course of the project, if selected. Unsatisfactory past performance with the City of Encinitas (or any of the Partner cities) may be considered as determined by the City of Encinitas (or any of the Partner cities) in their sole and absolute discretion.
5. Relevant Experience. Experience in performing similar services for organizations of similar size to the Partner cities. Experience with public agencies. Years of experience with these types of services.

B. Final Negotiation

As reflected above, vendor selection will be based on a combination of factors as determined to be in the best interest of the Partners. After evaluating the proposals and discussing them further with the finalists, or the tentatively selected vendor, the City of Encinitas reserves the right to further negotiate the proposed program.

V. CONDITIONS GOVERNING THIS PROCUREMENT

A. Scope Changes, Additions and Deletions

All changes in proposal documents shall be through written addendum and furnished to all proposers. Verbal information obtained otherwise will NOT be considered in the evaluation process.

B. Rejection of Proposals

The City of Encinitas reserves the right to reject any or all Proposals and to waive informalities and minor irregularities in Proposals received and to accept any portion of Proposal or all items of Proposal if deemed in the best interest of the City of Encinitas to do so.
C. Proprietary Information

Any restrictions on the use of data contained within a Proposal must be clearly stated in the Proposal itself. Proprietary information submitted in response to this RFI will be handled in accordance with applicable City of Encinitas Procurement Regulations and the California Public Records Act.

D. Response Materials Ownership

All materials submitted regarding this RFI become the property of the City of Encinitas. Responses may be reviewed by any person at Proposal opening time and after final selection has been made. The City of Encinitas has the right to use any or all ideas presented in reply to this request, subject to the limitations outlined in Proprietary Information above. Disqualification of a proposer does not eliminate this right.

E. Acceptance of Proposal Content

The contents of the Proposal of the successful proposer will become contractual obligations if contractual agreements action ensues. Failure of the successful proposer to accept these obligations in a permit to operate, purchase agreement, purchase order, contract, delivery order or similar acquisition instrument may result in cancellation of the award and such proposer may be removed from future solicitations.

F. Cost of Proposal Preparation

The City of Encinitas shall not be liable for any pre-contractual expenses incurred by any submitting vendor. Each submitting vendor shall protect, defend, indemnify, and hold harmless the City of Encinitas from any and all liability, claims or expenses whosoever incurred by, or on behalf of, the entity participating in the preparation of its response to this RFI. Pre-contractual expenses are defined as expenses incurred by vendors in:

1. Preparing the proposal in response to this RFI;
2. Cost to acquire a permit; and
3. All other expenses incurred by a vendor related to preparation of proposal or establishment of a Dividend-Account Car-Parking System program.

G. Interview

Interviews with the top respondents may be requested. The selection of vendors invited to interview will be solely based on the Partners’ discretion. The vendors asked to interview will be notified in advance.
ATTACHMENT 1

Sample License Agreement for Dividend-Account Parking Services

This License Agreement for Dividend-Account Car-Parking System Services ("Agreement") is made this day of September 2017, by and between the City of Encinitas ("City") and ___ ("Dividend-Account Car-Parking System Vendor").

RECITALS

1. A goal of City is to provide safe and affordable multi-modal transportation options to all residents, reduce traffic congestion, and maximize carbon free mobility.

2. Dividend-Account Car-Parking System services are a component to help the City achieve its transportation goals and the City desires to make this System available to residents and those who work or otherwise drive and park in the City.

3. Dividend-Account Car-Parking System Vendor proposes to operate a Dividend-Account Car Parking program within the City at an agreed-to location with an agree-to number of System parking spaces within the designated location or locations. As an example, based on Reference 3, there could be 239 spaces designated as System Parking, out of a total of 284 spaces in the Oceanside Civic Center Parking Garage. Note further, that if there are 259 employees that work for the City and are given parking spaces, there would be a need to establish 20 additional System Parking spaces outside of the Oceanside Civic Center Parking Garage.

4. Dividend-Account Car-Parking System Vendor will abide by all City ordinances and rules governing the use of public space.

5. Dividend-Account Car-Parking System Vendor possesses the technology necessary to install, operate, maintain, and expand such a system and multiple systems as demand expands.

AGREEMENT

1. Initial Term. This Agreement is effective for twelve to eighteen months from the date of execution ("Initial Term, Phase 1"), which will include a duration of installation during which no money is exchanged so as to establish a baseline of modal splits for employee commuting, and then a year of full operation to document the modal split changes and an estimated amount of greenhouse gas (GHG) emissions saved by the program. At the conclusion of the Initial Term Phase 1, the Agreement may be extended by mutual written agreement of the parties for an additional two-year term (Initial Term, Phase 2), subject to any new terms agreed between the parties, unless either party notifies the other party of its intent not to continue with the Agreement no later than 30 days before the expiration of the Initial Term, Phase 1 and Phase 2.

2. Exclusive Operator. During the Initial Term’s Phase 1 and Phase 2, the City designates Dividend-Account Car-Parking Systems Vendor as the exclusive provider of the System services within its city limits. This designation is personal to Dividend-Account Car-Parking Systems Vendor and may not be assigned or transferred to any party. This exclusivity provision shall expire and not be renewed past the Initial Term’s Phase 1 and Phase 2 unless agreed in writing by the parties.
3. **Use of City Property.** City authorizes Dividend-Account Car-Parking Systems Vendor to use (“License”) City property, including the public right-of-way and System Parking areas that are suitable, solely for the purposes set forth in Section 4 of this Agreement. This authorization is not a lease or an easement, and is not intended and shall not be construed to transfer any real property interest in City Property.

4. **Permitted Use.** Dividend-Account Car-Parking System’s System Members may use City Property solely for parking System Vehicles. The City Property is maintained by the City. Dividend-Account Car-Parking Systems Vendor may operate an agree-to amount of System Parking places on City Property as set forth in Exhibit A. If at any time during the term of the Agreement Dividend-Account Car-Parking Systems Vendor desires to place additional System Parking within the City limits, Dividend-Account Car-Parking Systems Vendor must request and receive authorization from the city to do so in writing. The City may limit the number of System Parking places upon identifying a potential harm to public health or safety. Dividend-Account Car-Parking Systems Vendor shall not place or attach any personal property, fixtures, or structures to City Property without the prior written consent of City.

   a. Use of City Property and Dividend-Account Car-Parking Systems Vendor's operations within the City, shall, at a minimum: a) not adversely affect City Property or the City's streets, or sidewalks; b) not adversely affect the property of any third parties; c) not inhibit pedestrian or vehicular movement, as applicable, within City Property or along other property or rights-of-way owned or controlled by the City; d) not create conditions which are a threat to public safety and security. Dividend-Account Car-Parking Systems Vendor shall instruct its customers not to park or leave any System Vehicle where they would impede pedestrian or vehicular traffic.

   b. Upon termination of this Agreement by either party, Dividend-Account Car-Parking Systems Vendor shall, at its sole cost and expense, immediately restore City Property to a condition which is visually and structurally indistinguishable from the immediately surrounding area.

5. **System Parking.** The City, at its own discretion, may support the System with the installation of signs and painting to further the orderly operation of the System Parking.

6. **Condition of City Property**

   a. City makes City Property available to Dividend-Account Car-Parking Systems Vendor in an "as is" condition. City makes no representations or warranties concerning the condition of City Property or its suitability for use by Dividend-Account Car-Parking Systems Vendor or its customers, and assumes no duty to warn either Dividend-Account Car-Parking Systems Vendor or the System Members concerning conditions that exist now or may arise in the future.

   b. City assumes no liability for loss or damage to Dividend-Account Car-Parking Systems System Members. Dividend-Account Car-Parking Systems Vendor agrees that City is not responsible for providing security at any location where Dividend-Account Car-Parking Systems Vendor's System Vehicles are parked, and Dividend-Account Car-Parking Systems Vendor hereby waives any claim against City in the event Dividend-Account Car-Parking System’s System Vehicles or other property are lost, stolen, or damaged.

7. **Maintenance and Care of Portion of City Property;** Dividend-Account Car-Parking Systems Vendor shall be solely responsible for: (i) maintaining City Property to the City standards applicable for use by the Dividend-Account Car-Parking Systems Vendor as
permitted under Section 3; and (ii) obtaining from the City any applicable permits or approvals required by the City. Dividend-Account Car-Parking Systems Vendor shall exercise due care in the use of City Property and shall be responsible for maintaining City Property in good condition and repair. Dividend-Account Car-Parking Systems Vendor shall not act, or fail to act, in any way that result in excessive wear or damage to City Property. Dividend-Account Car-Parking Systems Vendor expressly agrees to repair, replace or otherwise restore any part or item of real or personal property that is damaged, lost or destroyed as a result of the Dividend-Account Car-Parking Systems Vendor's use of City Property. Should the Dividend-Account Car-Parking Systems Vendor fail to repair, replace or otherwise restore such real or personal property, Dividend-Account Car-Parking Systems Vendor expressly agrees to pay City's costs in making such repairs, replacements or restorations. The obligations under this Section apply to all City facilities, infrastructure, or appurtenances located on City Property.

8. **Operations & Maintenance.** Dividend-Account Car-Parking Systems Vendor will cover all maintenance costs for the System and maintenance to minimum level of service and reporting outlined in Exhibit A.

9. **License Fee.** The parties intend to agree to a license fee before the Agreement may be extended beyond the Initial Term.

10. **Indemnification.** Dividend-Account Car-Parking Systems Vendor shall defend, pay, indemnify and hold harmless City, its officers, officials, employees, agents, invitees, and volunteers (collectively "City Parties") from all claims, suits, actions, damages, demands, costs or expenses of any kind or nature by or in favor of anyone whomsoever and from and against any and all costs and expenses, including without limitation court costs and reasonable attorneys' fees, resulting from or in connection with loss of life, bodily or personal injury or property damage arising directly or indirectly out of or from or on account of:

   a. Any occurrence upon, at or from City Property or occasioned wholly or in part by the entry, use or presence upon City Property by Dividend-Account Car-Parking Systems Vendor or by anyone making use of City Property at the invitation or sufferance of Dividend-Account Car-Parking Systems Vendor, except such loss or damage which was caused by the sole negligence or willful misconduct of City.

   b. Use of Dividend-Account Car-Parking Systems Vendor's System Parking by any individual, regardless of whether such use was with or without the permission of Dividend-Account Car-Parking Systems Vendor.

11. **Insurance.** Dividend-Account Car-Parking Systems Vendor shall procure and maintain for the duration of this agreement insurance against claims for which Dividend-Account Car-Parking Systems Vendor has indemnified the City pursuant to Section 10 of this Agreement. Dividend-Account Car-Parking Systems Vendor shall maintain general liability and automobile liability insurance policies with limits of no less than one million dollars ($1,000,000.00) per occurrence for bodily injury or death, personal injury and property damage, and two million dollars ($2,000,000.00) aggregate. Each insurance policy shall name the City as an additional insured and it shall be endorsed to state that:

   (i) coverage shall not be suspended, voided, or cancelled by either party, or reduced in coverage or in limits except after thirty (30) calendar days prior written notice by certified mail, return receipt requested, has been given to City; and (ii) for any covered claims, the Dividend-Account Car-Parking Systems Vendor's insurance coverage shall be primary insurance as respects the City and any insurance or self-insurance maintained by the City shall be in excess of the Dividend-Account Car-Parking Systems Vendor's
insurance and shall not contribute with it. The insurance required to be provided herein, shall be procured by an insurance company approved by City, which approval shall not be unreasonably withheld. Additionally, before Dividend-Account Car-Parking Systems Vendor shall employ any person or persons in the performance of the Agreement, Dividend-Account Car-Parking Systems Vendor shall procure a policy of workers’ compensation insurance as required by the Labor Code of the State of California, or shall obtain a certificate of self-insurance from the Department of Industrial Relations.

12. **Compliance with Law.** Dividend-Account Car-Parking Systems Vendor at its own cost and expense, shall comply with all statutes, ordinances, regulations, and requirements of all governmental entities applicable to its use of City Property and the operation of its System program, including but not limited to laws governing operation of vehicles. If any license, permit, or other governmental authorization is required for Dividend-Account Car-Parking Systems Vendor's lawful use or occupancy of City Property or any portion thereof, Dividend-Account Car-Parking Systems Vendor shall procure and maintain such license, permit and/or governmental authorization throughout the term of this Agreement. City shall reasonably cooperate with Dividend-Account Car-Parking Systems Vendor, at no additional cost to City, such that Dividend-Account Car-Parking Systems Vendor can properly comply with this Section and be allowed to use City Property as specified in Section 4, above.

13. **Business License.** Dividend-Account Car-Parking Systems Vendor is required to obtain and maintain a City Business License during the duration of this Agreement.

14. **Required Reports.** Dividend-Account Car-Parking Systems Vendor shall provide reports to the City concerning utilization of its System Parking not less than monthly, and shall cooperate with the City in the collection and analysis of any aggregated data concerning its operations.

15. **No Joint Venture.** Nothing herein contained shall be in any way construed as expressing or implying that the parties hereto have joined together in any joint venture or liability company or in any manner have agreed to or are contemplating the sharing of profits and losses among themselves in relation to any matter relating to this Agreement.

16. **Termination.** This Agreement may be terminated prior to the expiration date set forth in Section 1, above, upon the occurrence of any of the following conditions:

   a. Upon delivery of written notice from City to the Dividend-Account Car-Parking Systems Vendor terminating this agreement for any reason, or for no reason, by giving at least sixty (60) days' notice to the Dividend-Account Car-Parking Systems Vendor of such termination.

   b. An attempt to transfer or assign this Agreement.

Dividend-Account Car-Parking Systems Vendor shall not terminate this Agreement without first by giving at least 180 days' written notice of plans for termination.

17. **Amendment.** This Agreement may be amended by mutual agreement of the parties. Such amendments shall only be effective if incorporated in written amendments to this agreement and executed by duly authorized representatives of the parties.

18. **Applicable Law and Venue.** The laws of the State of California shall govern the interpretation and enforcement of this Agreement. Any action to interpret or enforce the terms or conditions of this Agreement shall be brought in the Superior Court for the County of San Diego, or in the United States District Court for the Southern District of California. Dividend-Account Car-Parking Systems Vendor hereby waives any right to remove any such action from San Diego County as is otherwise permitted under
California Code of Civil Procedure Section 394.

19. **Counterparts.** This Agreement may be executed simultaneously or in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same agreement.
IN WITNESS WHEREOF THE PARTIES HERETO have executed this Agreement on date first above written.

CITY OF ENCINITAS

Karen Brust, City Manager

Date

DIVIDEND-ACCOUNT CAR-PARKING SYSTEMS VENDOR

[Title]

Date

ATTEST:

City Attorney
Exhibit A

Description of Dividend-Account Car-Parking Systems Vendor’s Service Level Agreement

The following performance indicators shall be met and reported to help the City measure our success serving its citizens and improving the livability and mobility of Encinitas. Dividend-Account Car-Parking Systems Vendor will maintain its System in an excellent state of functionality and repair, with a minimum of error-free operation 95% of the time.

<table>
<thead>
<tr>
<th>Performance Indicator</th>
<th>Description</th>
<th>Measurement Tool</th>
<th>Minimum Performance Standard</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>App &amp; customer service support portal: phone and internet. The portal will support the establishment of an account and editing an account</td>
<td>A new account can be entered and audited. It can be edited and an audit can verify the edits. The time and method of the submissions can be retrieved</td>
<td>Tool to audit accounts either by name or unique account number</td>
<td>Accurate 99.5% uptime.</td>
<td>monthly</td>
</tr>
<tr>
<td>Ability to set the value price of the parking, a per minute value</td>
<td>The system can accept a “value price” and use the number as described in this report</td>
<td>Tool to audit the fact of and the proper use of the value price</td>
<td>Accurate 99.5% uptime.</td>
<td>monthly</td>
</tr>
<tr>
<td>Ability to set the base multiplier, which is used in the congestion pricing algorithm as shown in Table 2 of Reference 2. It is expected to be a number between 1.5 and 2.5. It can be adjusted upwards if the parking is getting too full too often</td>
<td>The system can accept a “base multiplier” and use the number as described in Table 2 of Reference 2.</td>
<td>Tool to audit the fact of and the proper use of the value base multiplier</td>
<td>99.5% of the time</td>
<td>monthly</td>
</tr>
<tr>
<td>Ability to report out monthly statements</td>
<td>A feature to display each statement that can be viewed and verified for accuracy with an accuracy of 99.5%</td>
<td>Interface to allow a specification of</td>
<td>Statements can be viewed and verified for accuracy with an accuracy of 99.5%</td>
<td>monthly</td>
</tr>
<tr>
<td>Ability to accept money into an account and to pay earnings and “add-ins”, out of the account, as described in this report</td>
<td>Most of the money accepted will be car-parking charge but there will also money that is sent in to cover the “Add-in” payments. Most of the money will be via an automated transfer as is done for dockless bike rentals. However, an ability to accept a mailed check will also be required</td>
<td>Transactions will be put into a file that can be audited</td>
<td>Monthly transfers will occur and be observable with an accuracy of 99.5%</td>
<td></td>
</tr>
<tr>
<td>Ability to report out the percent of employees at their work location that are using their allocated parking over any duration, from specific days to longer specified durations</td>
<td>This tool supports a request for the percent of employees that are at work without using car parking in the employee parking spaces</td>
<td>Software interface that will show the results on a screen and allows for the result file to be stored or printed</td>
<td>Functional 99.5% of the time</td>
<td></td>
</tr>
<tr>
<td>Ability to report out the total amount charged to employees, paid to employees as earnings and, separately, as “add ins”, over any duration, from specific days to longer specified durations</td>
<td>This tool supports a request for the described data</td>
<td>Software interface that will show the results on a screen and allows for the result file to be stored or printed</td>
<td>Functional 99.5% of the time</td>
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<tr>
<td>Parking spot usage rate</td>
<td>The monthly use rate is reported for any single parking place or for a set of parking places</td>
<td>The result can be viewed on screen or in a file that can be stored or printed</td>
<td>Data collection failure would be reported within two (2) hours during business hours between 8am to 8pm Monday through Friday except for State and Federal holidays. Direct 24/7 contact line for true emergencies, either by phone, text, and/or email. Failure outside of business hours reported within two hours (2) of start of business hours</td>
<td></td>
</tr>
<tr>
<td>System failure detected or reported by a member</td>
<td>Error either automatically reported to the person responsible and their back-ups, as a text on their phones and an email to their computer, to include the error report time</td>
<td>A program collects the time of the data error recognition and the time of the correction</td>
<td>Within two (2) hours during business hours between 8am to 8pm Monday through Friday except for State and Federal holidays. Direct 24/7 contact line for true emergencies, either by phone, text, and/or email. For complaint outside of business hours, within two hours (2) of start of business hours</td>
<td></td>
</tr>
</tbody>
</table>
Climate Change Rag

Based on Country-Joe McDonald’s Viet Nam Rag

Chorus
Well, it’s 1, 2, 3 temperatures rising high
Don’t ask me ‘cause I don’t give a damn
Climate it’s destabilizing
An’ its 5, 6, 7, rising up to the sky
Ain’t no time to wonder why
We all gonna die.

Verse 1
Artic ice is melting fast
Warmed up by the greenhouse gas
Pulls the rug on the polar bear
Pull the plug why should we care?
Kiss it good bye and tell is so long
Life on our Earth will be gone

Chorus

Verse 2
Park the car in the parking lot
Its free but the transit’s not
Get on the bus and pay some bucks
Even though the service sucks
Big or little it ain’t no bull
The freeways will be equally full

Chorus

Verse 3
Arctic ice will soon be gone
Permafrost it won’t be long
Methane gas will rise up high
Heat will cause our crops to die
Fifty bucks for a loaf of bread
Most of us will starve and be dead.

Chorus
Why not follow the example of the transit system in New Orleans? They have a daily 40 cents charge for Seniors over 65, where they can take their system all day for that charge. Wouldn't that be really helpful for Seniors? I don't think it would cut into your revenue to a great amount, but would encourage them to use your service.

Mike Nichols
University City,
San Diego
A few flyers on a bus or two is not really getting the word out that SANDAG is planning an $8.00 increase each month for SDM SENIOR & DISABLED riders, which is much higher than for other riders. One would justly question the reason and compassion of our stalwart, well paid executives at SANDAG for hitting the least fortunate citizens the hardest.

resident of San Diego, Mira Mesa
I am a 67 year old senior who buys a monthly $18 transit pass. Although a raise to $26 a month will not affect me unduly, I am concerned about the overall direction of raising fares to meet expenses, which seems a 20th century way of looking at things that doesn't take into account the larger, much more critical picture of our planetary future.

In a nutshell, San Diego County is part of this planet, and this planet has to find radical new solutions in the next few years - less than 12, per the UN report - or the cost of transit will be the least of our worries.

We need to get OFF fossil fuels. We need to completely restructure our transit system to include as many people as possible, getting them out of their cars and into buses, jitneys and whatever will move them around without individual vehicles - unless those vehicles are powered without fossil fuels. We need to restructure our neighborhoods so that people aren't forced to commute an hour or two to get to jobs - truly building things like grocery stores and necessities into developments, rather than building as we have, with clusters of large homes in cul de sacs leading to freeways.

But what we should NOT do is raise fares and cut routes so that even more people are forced OFF public transportation or forced to stay home from work or errands.

I believe public transportation should be free. Yes, that's a radical notion. But economically it makes sense, and there are models you can look to.

Look at the next 12 years and start thinking about long term goals, not short term finances.

Sincerely,

Peggy J. Stone
Please do not increase monthly rate for seniors by $8.00. $2.00 would be a more reasonable choice.
SANDAG/MTS
To whom it may concern: I have been to a least 2 public meetings of representatives from Sandag/MTS. In both cases we were told that there would be a question and answer time after their presentations. There was none. We were told on both occasions that they were out of time.
They spent most of their time tooting their own horns by saying what a great job they were doing and their super plans for the future. I was not impressed and neither were any of the other people in the audience. I don’t believe that any of your people have ever ridden on MTS or have any idea how to make a schedule that would be convenient for a rider.
As a senior citizen of San Diego on a fixed income that is very small, an $8.00 increase on the monthly pass is going to affect my income. I could see a $2.00 raise being more reasonable and have expected it. Please consider a less drastic increase. Thank you.
Sincerely,
A concerned senior.
RE: Fare Changes and Revisions to Regional Comprehensive Fare Ordinance and TransNet Ordinance

I am a Senior, I buy Monthly Passes, and I ride MTS buses, the Trolley, and the NCTD Breeze. I take buses several times a week to classes at UCSD. On weekends, I ride to Farmers Markets and events around the county. It is a very convenient, enjoyable, responsible, and affordable means of transportation, always with a high level of service. I have introduced several friends and classmates to the ease of taking the bus. Affordable fare is very important for Seniors.

I am writing in opposition to the proposed change in the SDM Monthly Pass fare. I think you are asking Seniors to bear more than their share of the costs.

In meeting increased Operational Costs, Pass Types and the proposed increase in fares should be moderate and incremental. Let's compare the SDM and the Adult 30-Day/Monthly Pass: The proposed SDM pass is an $8.00 increase. That is a 44% increase from $18.00 to $26.00. There is no proposed increase for the Adult pass; It remains at $72.00.

I propose a SDM, 30-Day/Monthly Pass increase of $2.00, a 11% increase from $18.00 to $20.00.

I agree with the proposed increase in the minimum age for senior discounts, from 60 to 65 years.

Together, these changes allow Seniors to do their fair share. Fare revenue will increase and will offset necessary operational costs.

Your consideration will be very much appreciated.

Robyn Bianco
My name is Rochelle Glickman and I am a retired senior who uses the public transit system a lot. This rate hike will be very bad for me and I think many others as well. For those of us who live on limited incomes which don't go up very much a hike like this is very harmful. All you are doing is penalizing the list able in the city, seniors and the disabled. They will suffer more. Meanwhile the wealthy won't notice the difference, not that they take public transit anyway. In the long run this may be self defeating as well. You say you need to do this to keep up with costs. Well just maybe a lot of people will either take public transit less or stop all together. I really think you don't care about vulnerable people, only those with money. Shame on you!
I feel that the fare hikes for Senior Monthly passes are over 40% are more than any other age group how can you justify such a large fare increase for us seniors! Is anyone aware of such a huge increase per age group it's shameful
I like to protest the over 40% Senior Fare increase for monthly pass this biggest percentage increase for any age group shameful!
From: Huston, Sandra (USACAS) [Contractor]
Sent: Thursday, November 1, 2018 11:28 AM
To: NCTD Rider Reports
Subject: Fare Increase

Hello:

While I recognize the cost of senior fares on the Coaster has not risen in ten years, I feel the proposed 50% increase is far too aggressive. The cost of student fares is being lowered considerably and the cost of most ridership is unchanged. Perhaps have an across the board increase of 5%. Thank you for your consideration.
To MTS Board:

I have reviewed your notice regarding the proposed fare changes and one of the changes that was requested is the age for seniors from 60 to 65. I would like to point out that San Diego County is building housing for seniors that are 55 and older. There are some seniors that live in these homes due to the fact that they have a disability or they have enough credits to retire early. I think you should consider lowering the age to 55 and above because of the 55 and up for low income housing.

Thank you for your time,
Sarah J Umpleby
Hello - I am a 61 year old grandfather who relies on the Coaster to get to my job.

I was horrified to hear that you are planning to (a) raise the senior rate and (b) change the senior age to 65. You can't be serious!

Would you actually take my senior pass away from me, or would I be "grandfathered"?
To whom it may concern:

I am concerned about the proposed fare increase for the MTS Access.

I ride the bus at a minimum twice a day Monday through Thursday to get to my school which is called ABI (acquired brain injury). I had a stroke in 2010 and can no longer drive due to peripheral vision loss. I also take access to get to doctors appointments and other destinations.

The fare increase would create a hardship for me. I hope the fare will remain the same.

Thank you for your consideration.

Sharon A. Lynn
Hello,
I appreciate the fact that fares have remained at a reasonable rate for several years, but your proposed increase for a monthly pass is too high and a bit unfair. Unfair because $72 is really high to commute within North County, not everyone commutes to San Diego. I'm not opposed to an increase that is fair to everyone.
If I may suggest, an increase of $5 -$6 for those passengers who do not commute to San Diego seems to be more reasonable.

Thank you,
Sonya McArthur
I am reaching out to you as a very concerned Citizen, neighbor and public transit activist.

My underlying position is no fare increase unless there is a substantial service increase.

Our neighborhoods today—and particularly the neighborhoods we are planning—depend on high quality public transit.

Below are critical public transit issues, from my user perspective as a car-less daily public transit user needing to reach all areas of San Diego and border.

Goal
Public transit deserves to be a first class experience, like in New York where investment bankers who use it and in London, Paris where everyone uses it!

Car alternative
Frequency, consistent during the day, the evening and weekend.
Who would give up a car if they can’t get home after a party? Who would give up a car if they can’t do their shopping with multiple stops on the weekends because the frequency is dropped dramatically

This is not a farebox balanced budget analysis.
Every public transit user offsets the dramatic climate impact of car users.
Why would MTS think about penalizing the people who are contributing to the solution in so many ways including congestion, and climate impact: car users should subsidize public transit users. MTS has no right to ask public transit user to pay the entire price for use of public transit when car users are not paying the full price for car usage.

MTS must start
by increasing frequency seven day a week plus early and late night hours on existing transit line

Next
MTS must Institute more direct transit lines so that a 10 minute car drive it’s not equivalent to a one hour MTS transit trip (each way) -because it required three connections. Plus the risk of missing any one connection could double ones arrival time.

Next
MTS must Expand more fingers into communities for people to be able to get get from where they live to where they want to work or play. MTS should not focused exclusively on home to work but home to play: after all this is San Diego and if you want transit users to use the services without a car you need to get them where they really want to go

Importantly
Mts is responsible for Solving the last half-mile. This is critical. This issue has been highly successfully and cost-effectively accomplished in Mexico City. It’s called ecobicci
What is ecobicci?
Here’s the link
https://www.ecobici.cdmx.gob.mx/en/service-information/what%20is%20ecobici

Mexico City has integrated a docked biking systems into their public transit system with a single app and a free 30 minute utilization so that people can get from where they live in the community to the closest transit stop. Mexico City implemented this with a corporate partnership which dramatically decrease the cost resulting in minimal upfront investment. And each Docked bicycle stations were installed to serve concentric 30 minute intervals circles so that publicAdoption was immediate and cost effective well also encouraging people to use public transit

Health/Sanitation
Every transit station must have and maintain clean restrooms open 24 hours available for all riders and visitors. These restrooms should be served/maintained by the city -not relegated to franchise stores -and should be maintained with high security. Yes homeless people may use them and actually it’s a health benefit that they do. Homeless people are also looking for jobs that are relevant for them. Homeless who want to use the bathroom might be ideal candidate for those can be paid a wage to maintain them and encourage proper standards for the use of them by other homeless people and all.
As a community we need to acknowledge that human beings need to go to the bathroom. It’s inhuman to rely on buying a Starbucks coffee or a McDonald's hamburger to get access to a bathroom
FYI for me living between OB and old town, the majority of my trips require three legs typically a bus a trolley and of us. Where do I get to go to the bathroom??

Accountability
Any public official responsible for/or making decisions about public transit must be required to use public transit a minimum of three days a week and at least one day during the weekend as a contingency for them maintaining their job. They must be reapproved on a monthly basis based on actual utilization of public transit.

Representation/feedback
Finally
Any public transit authority or decision making body must Include representatives of the public who are exclusive public transit users.
It is not adequate to have just political presentation. These bodies must rely on input from real users— not just during a public comment period of a few weeks in the space of the year but an ongoing constant and respected feedback loop for any policy decisions, and construction that’s being undertaken on our taxpayer dollars.

Resource
We represent an active group of public transit users who Offer ourselves as resources.
We want to make san diego public transit a first class experience.
One of many:
Stefania Aulicino

Sent from my iPhone San Diego
Stefania Aulicino

Cell/text

Founder/President

www.CapitalLinkUSA.com
Profitable Growth, Faster, Safer.

For International friends, Call, Text, or WhatsApp
To SANDAG,

I am disable rider of the San Diego Transit System. If you, feel the need to raise prices. Here are my suggestions: Any child 2 to 4 should be charge a quarter. 5 year to 10 should be half a adult fare. Teen a quarter more than what the pay now. Students of all kinds a ten cents raise. Adults a dollar more but works with both trolley and buses!!! NO raise on disable!!!!

Other suggestion, have more Transit police in Fashion Valley bus stop. Any citizen can predict when the trolley police will ride them. Around 1,15,30. Every month.
The proposed increase in the SDM from $18.00 to $26.00 is OUTRAGEOUS! That’s a 40% increase for those of us who are disabled and elderly who live on fixed incomes. The decrease for the youth doesn’t bode well for me either as most youth:

- Have jobs or have their parents pay for their bus fares/passes.
- Drive cars so they don’t have reason to take the bus?
- Have school buses that transport them to and from school.
- Millennials have more than us disabled and elderly folks.

Why decrease bus fare/passes for the youth and raise them for the disabled and elderly? That is not right! I can understand raising SDM from $18.00 to say, $20.00, but not $26.00. The CEO's, presidents, and superintendents would use that money to give themselves raises, not improve transit service to customers. The SDM need the discount, not the millennials.

Sincerely,
Tina Wilson
The proposal to increase fares due to a decrease in ridership is almost comical. This will serve no purpose until the root cause is addressed. The NCTD Breeze has been a precious service to me in particular as I work 9am to 5pm. I use an SDM pass and travel from Pacific Beach to Sorrento Valley where 30k+ tech employees work. It also costs more money per fare rather than the simple reality of increasing the minimum age for seniors. The majority of tech employees are not 65+ and are not trying to increase their income. I believe it more fair and equitable that monthly pass fare increases be equally spaced among all fare classes with the exceptions that I am not paid hourly and I believe that the line is going to be maintained. The Breeze is one of the more affordable public transportation options and appears to be reliable and cost-effective.

I implore the Board of Director’s to consider a smaller increase in fares associated with the NCTD Breeze. While I believe in the concept of public transportation, it is also unfair to those that use the Breeze as the least amount of fare increases are to be maintained.

I am opposed to any fare increase. Particularly raising the SDM Senior fare would be a huge economic burden on many low-income seniors. And the minimum age for qualifying seniors should not be raised from 60 to 64 years old. Also, I understand that for fare increases of $20 or more, they do not publish the current inflationary senior discount policy of ages 60-64. I would urge that this is kept as is, in the interest of fairness and equity. I would predict that pensioned potential revenue enhancement due to these changes may not materialize to due a variety of factors and alternative options available to these transit users. Some of these options will not contribute to regional climate action plans as they will involve the systematic single-angle operation transfers.

I believe it is unfair and inequitable that much of the proposed monthly pass fare increase will fall on the backs of senior citizens who are among the most vulnerable members of our society and the least able to increase their income resources. I believe it more fair and equitable that monthly pass fare increases be equally spaced among all fare classes with the exceptions that I am not paid hourly and I believe that the line is going to be maintained. The Breeze is one of the more affordable public transportation options and appears to be reliable and cost-effective.

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Hi. My name is Brian Korn. I use an SDM pass and ride the bus and Sprinter at least 4 days a week. I work 9am - 5pm. This seems ridiculous to me to be running a single car Sprinter during the rush hours. I have attached a picture of someone running a car as I am writing this email. I would urge that the board consider running a 30AXE car Sprinter during the peak hours.

I respect the need for the fare increases but it seems that the fare increases are only being considered for the SDM Senior fare and not the other public transportation options. I would urge that the board consider running a 30AXE car Sprinter during the peak hours in order to reduce the burden on the SDM Senior fare.

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I would urge the board not to raise fares, especially the coastier by so much. The proposed increase will have a big impact on rideability.

I would urge that we consider running a 30AXE bus during the rush hours to offset the increase in fare for the seniors.

It is unfortunate that you wish to raise rates. Ridership will likely to continue to decline due to the lack of security at the stations and on the trains, noise issues and the constant issues that delay or disrupt the trains. How about making the experience safe, consistent and pleasurable then maybe I would be more open to the idea of fare increases.

It is unfortunate that you wish to raise rates. Ridership will likely to continue to decline due to the lack of security at the stations and on the trains, noise issues and the constant issues that delay or disrupt the trains. How about making the experience safe, consistent and pleasurable then maybe I would be more open to the idea of fare increases.

I am opposed to any fare increase. Particularly raising the SDM Senior fare would be a huge economic burden on many low-income seniors. And the minimum age for qualifying seniors should not be raised from 60 to 64 years old. Also, I understand that for fare increases of $20 or more, they do not publish the current inflationary senior discount policy of ages 60-64. I would urge that this is kept as is, in the interest of fairness and equity. I would predict that pensioned potential revenue enhancement due to these changes may not materialize to due a variety of factors and alternative options available to these transit users. Some of these options will not contribute to regional climate action plans as they will involve the systematic single-angle operation transfers.

Good day. There are many things that I disagree with the proposed changes. #1. My mom uses the U-T pass all the time and will say that the 5pm hour after a long day at work. I feel like someone in the attached picture. I wouldn’t mind paying a higher price for the 5pm hour if we really had to, but it shouldn’t be the only option available to me.

I disagree with the proposed changes. #1. My mom uses the U-T pass all the time and will say that the 5pm hour after a long day at work. I feel like someone in the attached picture. I wouldn’t mind paying a higher price for the 5pm hour if we really had to, but it shouldn’t be the only option available to me.

To whom it may concern, I am glad that M.T.S. AND N.C.T.D will be on the same page. While I am not opposed to a moderate increase in fares for seniors (i.e. a LARGE INCREASE FOR SENIORS), while youth fares will be DECREASED! To me this is not only unfair but unjust. TO RAISE
Online Michele Addington
Yeah, I see that you want to raise that senior pass from 18 to 26 dollars an hour. First of all, that's one hell of a...
Let me (a bus rider for over 30 years) get this straight: Instead of working to make your buses (for instance the 44, ... serve current riders that DEPEND on public transportation, work hard to get new riders, you want to RAISE fares on the
I agree that the new proposed fares are outrageous. It makes our fares in our very expensive county to live in among the
You are eliminating multi-day passes, which is ok for me and residents. However, these may be vital to encouraging the
I AM NOW 56 YEARS OF AGE.. I AM AGAINST RAISING THE SENIOR AGE TO 62 OR 65. I HAVE SEVERAL DISABILITIES.. IF THE AGE IS...
Like most people (I assume), I oppose proposed fare increases. I am a regular (5 days/week) rider of the Sprinter. I...
As a rider for the last 18 years, I can say that the quality of the Coaster has declined in the last few years. In the...
Online Chris Carlson
You are proposing raising the cost of the monthly Senior/Disabled/Medicare Regional Pass by a whopping 44%...
I agree that the new proposed fares are outrageous. It makes our fares in our very expensive county to live in among the
You are proposing raising the senior age of the Senior pass from 60 to 65. Rate increases are valid.
Our community is sick and tired of having to walk three miles to work just to get a parking pass. The Coaster is already expensive. It seems
As a rider for the last 18 years, I can say that the quality of the Coaster has declined in the last few years. In the...
I am writing to put my two cents in about the proposed fair change to day and monthly passes. MY main focus being on the...
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You are proposing raising the cost of the monthly Senior/Disabled/Medicare Regional Pass by a whopping 44%...
It is troubling you wish to place an elevated burden on seniors and disabled people. Even as you are simultaneously
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Hi, my name is Linda. REDACTED. I'm calling in with regards to the senior bus pass fare increase. I'm on a limited income, and I was 60 years old. I'm just a little upset about this. Thank you.

Hi, My name is Georgina Blake. My phone number is [REDACTED]. I'm calling regarding the senior compass rise. I don't believe that $8 a month extra would hurt a lot of us very much, so that $8 a month extra, that's a lot. But I mean, if you have to go to that, can you give us a chance... I'll call the phone number [REDACTED]. Thank you very much.

Hello, my name is David Galesea. My number is [REDACTED]. I am calling you to urge you to keep in mind that people who have low incomes are limited and fixed. If you must raise fares, please consider raising them on people who are working. At least they can still work. What you're doing is bad for society, and it's bad for people who are poor. I hope you consider this.

Hi, my name is Liam Hendrikson. I'm a disabled veteran that has been taking your buses for years and this is the first time I've had a problem. I'm a little upset with this. And it's going to hurt a lot of disabled people who are on a fixed income like myself. Where, as it is, I live on $900 a month, and the time I pay for bus fare, there is already a lot of it. Even though it's only the time I pay for bus fare, there is already a lot of it. Even though it's only the time I pay for bus fare, that's a lot of money. I'm just a little upset with this. Thank you.

Hi, this is Robin Huntgate. My number is [REDACTED]. I hope they don't raise the price. That's what I have. I'm sure that's what I have. It's important. I think it's important. Thank you very much.

Hi, yes, good evening. My name William Bowina and I wanted to make a comment about raising the fares. Why can't we just keep the rate at $3.50 each way. We could afford that, but to raise it to $5 seems to be unfair to us, especially for people who are on a fixed income, like low-income. If we can't ride, we can't work, we can't get to work. We can't get to work. Thank you very much.

Hi, this is Douglas Schwarterer. My comment is so the rate increase. I understand maybe a $3 a month rise on the Compass Card, but anything higher than that is a bit steep, I think. My number is [REDACTED]. My phone number is [REDACTED]. If you need to get in touch with me, thank you.

Hi, my name is Georgia Blake. My phone number is [REDACTED]. I'm calling regarding the senior compass rise. I don't think it's fair because senior citizens and disabled people are not given any fair chance at a cost of living raise, so the $8 a month extra would hurt a lot of us very much, I included. I have been a rider with San Diego Transit for over 40 years and I would have to have to stop because of it. I would have to have to buy because of it. I can't see being fair. Taking down the children $10 and raising the senior citizen - I should be splitting the fare, not the monthly. I would have to have to split the fare, not the monthly, but the fare I would have to pay have some amount of need for that. Don't take away the senior citizens and the people who are disabled. People who are disabled. People who are disabled. $8 a month extra would hurt a lot of us very much. If you don't have a computer and you don't have a computer, I would have to have to stop. So, you have to have to do all these things. Thank you very much.

Hello, my name is Al. My phone number is [REDACTED]. My comment is the rate increase. I understand maybe a $3 a month increase on the Compass Card, but anything higher than that is a bit steep, I think. My number is [REDACTED]. My phone number is [REDACTED]. If you need to get in touch with me, thank you.

Hi, my name is Sara Dariush. My comment is so the rate increase. I understand maybe a $3 a month rise on the Compass Card, but anything higher than that is a bit steep, I think. My number is [REDACTED]. My phone number is [REDACTED]. If you need to get in touch with me, thank you.

Hi, my name is Guillermina. My phone number is [REDACTED]. I'm calling in with regards to the increase of $8 a month extra. Are you trying to do the old bargaining - ask for the world and then maybe bring it down and then you can see how nice you are by compromizing to bring it down. Why don't you do it for a normal increase in rates? At least I can call the phone number [REDACTED]. Goodbye.

Hi, this is Georgina Blake. My phone number is [REDACTED]. I'm calling regarding the senior compass rise. I don't believe that $8 a month extra would hurt a lot of us very much, so that $8 a month extra, that's a lot. But I mean, if you have to go to that, can you give us a chance... I'll call the phone number [REDACTED]. Thank you very much.

Hi, my name is Betty Jo Paine. My phone number is [REDACTED]. For example, I ride the MTS $3.50 to $5, which is 50 cents. But for Lift, to go from $3.50 to $5 I feel that it is too much. I would like to speak to someone more in depth about this. Thank you and have a nice day. Good bye.

Hi, yes, good evening. My name William Bowina and I wanted to make a comment about raising the fares. Why can't we just keep the rate at $3.50 each way. We could afford that, but to raise it to $5 seems to be unfair to us, especially for people who are on a fixed income, like low-income. If we can't ride, we can't work, we can't get to work. We can't get to work. Thank you very much.

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Hello, my name is David Galesea. My number is [REDACTED]. I am calling you to urge you to keep in mind that people who have low incomes are limited and fixed. If you must raise fares, please consider raising them on people who are working. At least they can still work. What you're doing is bad for society, and it's bad for people who are poor. I hope you consider this.
Voicemail

My name is Clytie Koehler and I’m a North County rider of whatever happens to be available and going my way. I am really concerned that the county has the BREEZE 10-15 years ago. I kind of noticed that there was the regional pass and the North County Pass. Now, you became the BREEZE pass. I live in North County and I have been living in North County for 25 years. Since 1992, I have used the bus every month without interruption until they became the BREEZE 10-15 years ago. I kind of noticed that there was the regional pass and the North County Pass. Now, you saw that the rise of the fees or eliminated the $30 BREEZE pass. I think about this, it will be hard for a lot of people. I mean this is more than 20%. Usually, even when raising very by 25%, you need six months notice, usually, raising rates. This is a lot. By itself, it’s not much, but if you add, inflation, medical expenses, living expenses, it adds up. So you want to make an increase, do it in increments and still show the evidence of the BREEZE. I think you shouldn’t phase it out. I think you should keep it. This is a North County resident. I’ve been here since ’87. I would appreciate it if people watch our thinking this before taking these drastic measures. Might, thank you very much, hopefully, you’ll reconsider eliminating the $30 BREEZE. I think it’s a very bad idea. Thank you and have a wonderful day. I am very grateful to have a mass transit. Keep up the good job and if we can’t find out something.

Voicemail

Lois Vernot

This is Lois Vernot at REDDICT. I want to know why the senior fares are targeted with a 6.4% increase, when adult fares remain constant and why are junior fares decreased by 28%. Senior income does not increase, while working people receive raises and promotions. Senior have supported Caltrans for more than 50 years, only to be treated like second-class citizens. Maybe somebody thinks California is not the place for seniors. Thank you.

Voicemail

Jean Collins

Hello, my name is Jean Collins. I am senior. I am 75 years old and I live in Escondido. I understand that you need to raise your fare and I certainly appreciate the good service you have on the 30 but I am struggling economically and at the amount of difference - the raise for the Compass Card is - in too much to do all at once. And several greatly appreciate it because it is very big to us. I understand that you want to do because I am not able to think twice about the public service. At the rate of $5 per bus ride, that could be as much as $15 or even $20 one-way to a necessary medical appointment. I would like to know if there is any way of doing that. I have to make a very difficult decision. Please do not hit the low-income seniors riding the senior Compass Card that I hit. I hope you find a way to not to do that. I have been a steady rider for over 40 years and I appreciate the bus system. I’ve never had bus since was born here and depend greatly on the bus. But that’s just going to be a hardship with everything that is going up in this community. Can’t I a raise a check for us to get us comfortable. You get a raise for people. I am going to continue to operate efficiently and conveniently for you. I am sorry the ride has not increased as you had hoped.

Voicemail

Mike Lopez

Hello. I am a senior citizen that counts your proposal for the increased fee of the senior citizen, disabled, and Medi-Cal. The $26 is too much. We cannot afford $52 per month and $54 per month. It is too much. We cannot afford because the senior citizen will be cut to $15 and Medi-Cal to $20 per month. I know you have raised it by $5. I know you increased it by $5. But we cannot afford it. You are cutting it to $20 for the month. We are going to $25 for the month. Then you lose your job. You are cutting it to $12 for your seniors. I get to keep you $10 and if you get you $5 and Medi-Cal $20. Without you, you are going to eat your $8 for the week. You get to keep you $10 and if you get you $5 and Medi-Cal $20. Without you, you are going to eat your $8 for the week. Thank you and thank you and you did not want to do the other services. Thank you and you did not want to do the other services. It is more than $10 to $20 for a month. Why do you want to hit us with $5 a month? It’s too much. We can not afford it. We can’t. We can’t. We can’t afford it. It’s too much. We can’t.

Voicemail

Escondido Clytie Koehler

Why decrease bus fees passes for the youth and raise them for the disabled and elderly? That is not right! I understand raising SDFM from $18 to $26, but $60. The CEO’s, presidents, and superintendents would use that money to generate themselves raises, not improve transit service to reduce. The SDM need the discount, not the millennials.

Public Comments Transcripts

1. Public Comments Transcripts

MTS Board of Directors

Deborah Room

The price increase from $18 to $26 is too high for the SDM pass. I’m paying more for less service. One option would be to give the pass to all commuters who work within a certain distance of MTS. The reason is to help commuters and to reduce traffic congestion. Thank you.

2. Public Comments Transcripts

MTS Board of Directors

Room

Yes, I would like to leave this message. I am a senior citizen of 74 years old and only my dependencies transportation around San Diego MTS on the bus or trolley. Now, there were rumors going around SANDAG maybe increase the senior bus pass to $26. It’s $18 now and that’s a bargain. $26 or $28 would put a strain on seniors’ months’ (sic) Social Security or Medicare checkbook. Please consider the现实问题，而不是仅仅考虑票价。请考虑现实问题，而不是仅仅考虑票价。请考
My name is Malow Perdomo and I am 30 years old and Mexican american ethnicity, citizen of San Diego, only use 30 day SDM passes for school, medical appointments, and make runs to grab food for the family. A lot of us probably feel the same way. I think I am going to vote no on everything. I am tired of them changing everything.

basically, the 14-day passes being grouped, suggestion, day pass going up to 6, 7 dollars okay, and even if the regional pass goes up to 15, it would not be that much of a problem. But there are days where I cannot afford the monthly pass and would prefer the 14-day pass because if you are late, you are done and have to pay the full cost for the month.

I really don't think the $8 increase for SDM is fair. I think that what MTS needs to do is make a slow increase over a couple of years and their fare increase are the seniors, disabled, Medicare pass holders. My proposal is that the largest population being adults paying a little bit more is better than SDM holders paying a lot more. But I really don't think the $8 increase for SDM is fair. I think that what MTS needs to do is make a slow increase over a couple of years and their fare increase are the seniors, disabled, Medicare pass holders. My proposal is that the largest population being adults paying a little bit more is better than SDM holders paying a lot more.

According to this proposed rate change, SDM cards are going to absorb about 150% of this rate increase because regular seniors, the youth cards go down to zero and people on fixed income need to change their income and probably not have choices in transportation – most of them earn the same income without the ability to change their income and probably not even have choices in transportation - most of them probably don't even think of it. They may be trying to get by on $72 a month and when they get a $20 increase it's a lot. They probably don't even think of it. They may be trying to get by on $72 a month and when they get a $20 increase it's a lot. They probably don't even think of it.

It looks like MTS is considering getting rid of the 2,3,4 day passes because we want people to try public transit more. But I don't think that's a very good idea because if you were not on a trolley by 11 p.m., you never got back home. So, I may have actually driven intoxicated a few times because I was not able to get home.

We don't have it by 11 p.m. for the trolley. And those types of experiences certainly discourage people from ever trying to adapt to public transportation. I used to enjoy going downtown and getting a few hours of freedom and I always thought it would be great if I could ride public transportation – the trolley – downtown and then back, but there was no way, because if you were not on a trolley by 11 p.m., you never got back home.

I'm a senior and disabled but you cannot do that! I don't think it's fair that MTS is considering getting rid of the 2,3,4 day passes because we want people to try public transit more. But I don't think that's a very good idea because if you were not on a trolley by 11 p.m., you never got back home. So, I may have actually driven intoxicated a few times because I was not able to get home.

I think that MTS needs to do is make a slow increase over a couple of years and their fare increase are the seniors, disabled, Medicare pass holders. My proposal is that the largest population being adults paying a little bit more is better than SDM holders paying a lot more.

At least explore having a progressive discount for riders from the same family. That would require a bit of checking and so forth, but you already get a lot of the hard data. I can't understand getting rid of the 2, 3, 4 day pass, and you pay 14 in town pass. They probably don't even think of it. They may be trying to get by on $72 a month and when they get a $20 increase it's a lot.

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I'm a senior and disabled but you cannot do that! I don't think it's fair that MTS is considering getting rid of the 2,3,4 day passes because we want people to try public transit more. But I don't think that's a very good idea because if you were not on a trolley by 11 p.m., you never got back home. So, I may have actually driven intoxicated a few times because I was not able to get home.

I don’t think that MTS needs to do is make a slow increase over a couple of years and their fare increase are the seniors, disabled, Medicare pass holders. My proposal is that the largest population being adults paying a little bit more is better than SDM holders paying a lot more. But I really don't think the $8 increase for SDM is fair.
It is so ridiculous that MTS wants to raise its fares when the company sucks. The drivers are RUDE. There are NO security guards. It is very hard to get to the garage sometimes. At least one bus should remain for the 1 to 2 bus routes should remain $1.50. For myself to travel to the gym under the proposed rate increase it would be $1.50. For me to get to a shorter distance, because it would be 3 fixed bus routes, it would cost $1.50. This is why I feel 2 fixed bus routes should be kept at $1.50. Be sure any travelling 3 fixed routes, because of the distance, should be kept at $1.50. So maybe the savings should be kept on the rate rate increase fixed bus routes. Zero to $1.50 is OK. Some basic fare increase. Regular COASTER Commuter 3 days / Week. Concerts to Downtown and back everyday. I currently have the $20 fare, so pay $20 to ride the COASTER. I understand that the transit district and MTS are stuck because their rolling stock is aging and it needs to be repaired or replaced, but asking people to pay more does not make sense because of age, broken down trains is a kind of a bad business model. For instance, for us seniors, going from UCSD to Kinross the proposed $60/month is about a 33% increase. This increase will affect a lot of people and will hurt many people. Keep up the great work!

Challenges with stagnant wages make it hard to weather increased transportation costs.

My feedback would be that it might be better to have an incremental scheme instead of right off the bat be change. I don’t mind paying the amount if the service of the COASTER improves, especially when we have delays. Or another alternative would be to have a discount if the delay is over 30 minutes. 1) A 44% senior pass price increase would be a tremendous burden on the great majority of that population who already lives on a fixed income; 2) Have a senior free-ride day once a month. Please! Do not discontinue 2/3/4 and 14 day passes, or discontinued transfer fair with comp pass (no additional transfer fee). I read this info is possible on MTS trolley flier today, and it is not being considered/addressed in this survey.

Youth pass hours should be limited on school nights.

I use the train and I have a monthly pass. It looks like all of the rates are going up but not to the extent that the senior and disabled rate is. And the youth is actually getting a credit. But the seniors are usually on fixed incomes and disabled otherwise are at almost poverty levels. We cannot afford this kinds of increases. That rate is one that is increased more than all of them. The rate in for seniors for $2.50, $2.50 is a huge rate increase, but my rates are fixed, so it doesn’t affect me. I usually ride the train and I change my card not because I don’t know the answer to your question. But NYC and I have the super pass for the $9/month and it is cheaper than a 3 ride pass. At least they’re not changing more than one at the time. They’ve checked the others. Last year barely they’re checking into them more but, i’ve been riding for months, I am very diligent about my card, I don’t know the reason for your question. I have to figure that out myself. I don’t think you’re the people that combined with youth.

I ride very rarely, but when I do, you have provided EXCELLENT service. Thank you for adding route #235, I hope many more express routes will be added in the near future.

Youth pass hours should be limited on school nights.

It doesn’t get easier. We should increase the options that we have and the increase in the price. I always try to argue that the options that I selected because I want more. The current version is too limited.

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Via:

Public
Meeting
Location

First
Name

Last Name

Public Comments

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I desire to create more safe ways to transport for first timers
Maintain costs low, improve quality and quantity, and campaign for more funding from local and state government.
Make this place awesome.
An app to see where buses are in route such as Uber/Lyft maps.
44% increase for people whose incomes increase by token amounts while rent and food costs mount by significantly more. County and cities should contribute more to reduce traffic. Significant factor for car users is not cost but convenience.
I strongly object to raising the rate of the monthly SDM pass from $18 to $26. This is a 44% increase for customers who already struggle on social security and SSI or disability which usually are given annual cost of living increases in the 3-5% range.
Cleaner.
Raising the rate from $18 to $26 for seniors is unreasonable. Most of us are on a fixed income. Why should seniors have the bear the whole burden?
Please put a map on 215 to let customers know what the stops are going to be. More Sunday Route 28 service.
I'm disabled and I think SD Disabled pass will be too expensive. I don't think that pass should change.
My suggestion for NCTD senior day pass would be to increase to $2.50 price the "new" $3 SDM day pass at $2.50 also. The youth pass could be decreased $4 to $32. The senior monthly pass could be raised $4 to $22 these are reasonable amounts. Your proposal is unreasonable. An increase of 34% to the NCTD
Sprinter/Breeze Day Pass (from $2.25 to $3) is excessive. Surrounding day passes (senior) in surrounding counties range from $1.50 (OCTA) to $2.50 (LA Metro) and Riverside at $2. In general, 10-15% increases are reasonable given 10 years has passed since last increase. A 45% increase in senior/disabled monthly
rate is very unreasonable, especially when youth rates are substantially reduced. Youth fares on monthly pass are currently quite competitive compared to other are transit agencies. A 28% decrease is uncalled for especially when SDM rates are increased 45% making it the highest in Southern California.

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Look at the top admin and scrap the revenue from there before even making people pay more for public transportation
I am a MTS employee and I'm concerned about raising the senior age to 65 because people get excited that they are almost to 60 and now they have to wait an extra 5 years. 2, 3, 4 and 14 day passes should stay because a lot of people buy those passes, especially tourists.

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You are not addressing the needs of the homeless who cannot afford anything!!
I want senior's monthly pass to not increase more than 22.5%. I would agree to maybe a $21 monthly senior pass.
I think raising the senior age is ultimately ridiculous. Less people will be able to take advantage of that increase
What is wrong with the best cost system we have in the US now! Pay your CEO's less and it would be no problem to do all of the above because the rates can stay the same!
We need more service, more bus routes and a cut in the monthly adult pass to $60 amount
I would STRONGLY DISAGREE with the proposed $26 fare hike
Seniors seventy plus should ride for free. Service in the senior communities should be. And since there is none the fare should be free. Frequent night/weekend services are not in your design.
I am disappointed you want to raise the senior rate and age
The night service would be better with smaller buses at night because there's not a lot of people and more frequent service please.
Instead of raising rates on seniors and disabled people, why not raise rates for able-bodied people to lower the rates for youth? Or just lower the rates for youth in general and watch your ticket sales go up? Also, transfers for trolley and bus tickets need to be free. Thank you!
120 bus needs more stops. 5th and Hawthorne. Buses need to be more on time - always running late. Seniors are outside waiting and end up late to appointments. Drivers go too fast and almost miss stops. Need more security.
I want free transfers for bus and trolley riders.
I don't like the idea of raising prices. I thought this was all a service to the area to cut down traffic, etc on the roads, and ia sacrifice to support this by the city, county.
I will have to stop using the pass for monthly availability, but i would like to know that any amount can be added to a pass at any time to cover future rides.
Enought damage to my travels was done when the buses, etc were changed. Forced me to leave earlier just to catch a bus that was added to a route that was not needed. why would you break up a route into sections, causing added buses AND drivers, all at a time when we were
being told "it was to streamline and save money"?. cant see it at all. Extra buses and drivers to save money is simply bull. Extra Maintenance, overtime, etc. thimk! Yes that was spelled that way to make you think! someone needs to. Leave it alone, it's got to be better now than how
you will change it to. Yes, You!, leave it alone.
The homeless situation on the buses and trolleys would not make me want to pay more when I can't even feel comfortable or safe on the transit system because they have made it their home and sometimes leave it filthy.
No quiero pagar mas porque mi salario no me gustan para los gastos basicos.
English Translation : I don’t want to pay more because I don’t [like] my salary for basic expenses.
Free transfers
Transfers should be free for bus and trolley riders, as is the case with other large transit agencies.
Bring back free transfers for Urban core.
It's ridiculous that you want to increase the SDM monthly pass from $18 to $26...and reduce the Youth fare from $36 to $26! And keep the Adult fare the same, NO INCREASE at all??? They mostly have jobs, get raises! My SS went up just $3/mo last January! 😠😠

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Free transfers
I think it's completely unfair that SDM riders should have to pay more for monthly passes, many of these riders are assisted by SSI and their income is very limited and well distributed. An increase in their passes could affect the way the distribute their money.
Transfers should be free to make accessing the system easy and seamless, especially for new and occasional riders.
Seniors and disabled are being hit with a 44% increase in monthly premium Express passes. Why, when there is no increase for regular adult passes? Seniors and disabled are the least able to afford a 44% increase.
It would help if ran more frequent on weekends
I hope that this will help out with the way the buses run now. That they will receive better upgrades soon to their fleet they have now.
I’m a sdsu student, i get the discounted semester pass.
seniors are on a limited budget don't raise them , maybe raise the daily pass for regular people 1 dollar
Enjoyed the open forum. Thank you for your hospitality and participation in our interviews. I hope you take into consideration our feedback and how it affects low income seniors, disability.
I think there should be service in more places and there should be more frequent service than I would choose to take the MTS instead of my car even I would pay more for it.
24 hours? TOP = 816 - 874 sometime all afternoon leapfrog. SDM = 150% of the cost b/c youth fares decrease. S.E. El Cajon not going to increase student riders b/c Montgomery middle and granite Hills got cut. My proposal existing on small charge for youth. Discount 2 times in
same family. (Does not simplify fare structure but with computers it doesn't have to be simple on your end and may incentivize larger families to send kids. Eliminate 2, 3, 14, day passes? TOP: 24 hours, not seen Trolley Green Line on some nights. TOP: 816 - 874 leapfrog. 816 no
service Saturday, Sunday. Google maps still shows old routes (not stops).
Please increase security by having a Transit police member at each transit station.
I want more Sunday bus. Sunday more 944 and 945. Please for my work. Lyft costs me $18.50 every Sunday.
Bus should run better on weekends but the schedule during the week is awesome.
The fares are currently equitable and fair, increases would reduce the ridership, decrease revenue and thereby reduce frequencies and coverage.
I like riding MTS
Work for state grant
Electric busses would be great. better experience once off the bus. Also, consider reducing downtown stops to speed service.
Less expensive for seniors!
Estoy bien con el servicio.
English Translation: I am OK with the service.
Need night service
If fees rise too high, I won't ride.
Keep up the good work (for rides) and also housing for the homeless!!
Thanks you MTS
How about fare raising for homeless? allow homeless carry cans in buses or let them ride for less. $1 per ride. or $1 day passes.
More trolleys!
Increase for seniors? Many have a limited income. Some buses which crowded mid-day have few riders later in evening or at night. Smaller buses at times?

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The buses are more reliable than the Coaster. We should consider offsetting the increase by lowering the SDM fare by $4.00 and adding the $4.00 increase to youth monthly passes.

We can’t buy a $2.50 one-way pass on phone, and need to do so often. The monthly pass isn’t enough of a discount for me to buy, at present. Maybe have an intermediate bulk pass we can buy with our phones?

Price is just right for SDM.

Don’t make me subsidize fares for young healthy youth who can work part time for their expenses, as I did.

Who at MTS believes that the disabled and seniors on a fixed budget should subsidize ANYONE ELSE’S fare?!?! The working people get help. Why should Ms who believe it would get anything different? Amazon deciding that it will only deliver during the hours of 9 AM and 6 PM to cut costs ‘We’re not delivering on Sundays’. They would lose business With such a mis-guided cost cutting approach like that. The fare clearly does not have an actual user of the service. We users know what it needs and how much we value the MTS public service for the San Diego city life.

The proposed increase to the disabled monthly pass should be cut to only $4.00 and adding the $4.00 increase to youth monthly passes.

In regards to the fare changes, I dislike the current proposed with the increase of the 30 day pass. I like that if an increase is necessary, a role of $224 (54 $4) could be acceptable with a $5 discount on the Youth 30 day pass instead of the proposed $10 cut.

The fare prop. ideas fail to meet the quality of service. It’s unfair that SDM fare is being raised $8 for the most vulnerable passengers to lower fare for youth. Raise SDM fare by $4 rather than $8.

I would like to keep the 2,3,4 day pass. It helps people to use MTS if their pass runs out a day or two before payday. It is very important.

All in all it’s unfair to give a free ride a day on a month or every three months. I call this a perk - something good and earned.

Any rate increase must be accompanied with more value specifically increased frequency is this light it later service and the evenings weekend frequency equal to weekday frequency plus direct express route so that trips do not take one hour for a 10 minute drive. On the opposite side there should be no increase in fees. In order to get increased ridership you need to do things that make the riders feel the predictability and speed of transit. Increasing fares will actually have the unintended consequence of lowering ridership and a worse economic result for the MTS system. The only way to make MTS profitable is to make it more robust and lower the price. This is a value proposition we need people out of their cars and into public transit for the health of our planet and the health of San Diego. I see no safety at Fashion Valley stop at all. Need clean bathrooms at each location to make ride more comfortable. Need dialled bikes stations cheap to go the last half mile. Reduced fees over the last 10 years has been consistent with reducing service as well. This is the equivalent of breaking a promise deciding that it’s going to cut costs by reducing to less service, instead of increasing service allowing for more riders. Why should Ms believe it would get anything different? Amazon deciding that it will only deliver during the hours of 9 AM and 6 PM to cut costs ‘We’re not delivering on Sundays’. They would lose business With such a mis-guided cost cutting approach like that. The fare clearly does not have an actual user of the service. We users know what it needs and how much we value the MTS public service for the San Diego city life.

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Please do something about the CONSTANT music use on cell phones on the bus and trolley. Not having a transfer option is ridiculous. A trolley should cost more than a bus. But a transfer option should exist. I would pay 25 to 50 cents more to take a bus and transfer to trolley. As a college student, I love that I can buy a semester pass. I would also love to see a yearlong pass, since I do not have an apartment or car. Also, it's difficult sometimes to get around when the times on the platforms are so erratic. 

I would pay more for MTS as a punctual and consistent as Japan transit system. I have to be riding it. I believe raising the prices would help our problem here on campus because less homeless people would be riding it. I think the prices should increase so the MTS busses and trolleys are cleaner and with better service.

As a senior, I love that I can buy a semester pass. I would also love to see a yearlong pass, since I do not have an apartment or car. Also, it's difficult sometimes to get around when the times on the platforms are so erratic. I'd like to see improved communication with MTS regarding the schedule. I also think the website for the Conpass card should be redesigned.

I understand that people have to bring carts and strollers onto the bus but I find these very problematic especially when they take up most of the room. I would be in a positive and best interest if MTS for looking into an another way affordable way for everyone to have lots of space on the bus and not so cramped and the fees use of carts and strollers.

The MTS system on campus makes our campus very unsafe. I believe raising the prices would help our problem here on campus because less homeless people would be riding it. I think the prices should increase so the MTS busses and trolleys are cleaner and with better service.

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I am in favor of a reduced fare day pass for SDM users. I am absolutely not in favor of raising the price of a monthly SDM pass for the people least likely to be able to afford it.

Earlier services - I cannot get to Old Town from La Mesa earlier than about 5:50, but would certainly ride an earlier run.

Please keep it affordable for the seniors, disabled and Medicare. It’s not easy to pay when funds are tight.

Need to start planning to build new trolley line from UTC to Miramar College station soon.

Try to integrate the ferry service with the SD metro transport service.

Veteran passes are more important than kid passes. I started using Uber or Lyft because of convenience.

I also wish that MTS will give at least one free ride to those who have monthly passes who are trying to get to a doctor’s appointment...or not being able to get to a pharmacy for medications??? NOT ACCEPTABLE for someone who is handicapped, senior, or on social security (all three apply in my case).

I think these are excellent proposed changes. Keeps things simple. Thanks!

No fee increase please. It would be a strain financially.

If the trolley breaks down, riders should get a voucher.

Most people just want frequent, reliable service, and clean trains without transients asking for money or people blaring music.

You need to have gates that check for passes before people can enter the vehicles. A LOT of lost revenue because there is no one checking passes!

I see a lot of people riding for free and they don’t even get kicked off at the next stop. If you threw them off at the next stop they would be more likely to pay. Not fare to us people who pay!!

MTS needs to deal with the homeless people on the trolley that make it cluttered, stinky and unpleasant to ride in before they consider raising cost of fares.

I’m deaf

I many times see cockroaches in the trolley.

$5 is a good solid round amount to have on hand to get a day pass. Increase to $6 would make it slightly more difficult to get passes easily. Once more people use the Compass Cloud app, I think it is more reasonable to increase the fare here than. Additionally, a $10 and $20 fare option would be nice, but not what that could be applied to. Maybe a $20 or $35-70 fare for a trolley (fairly common in other major cities).

No fee increase please. It would be a strain financially.

You have to be kidding me that you want to raise SDM fares. We have no money to begin with.

No. Received Via Public Meeting Location First Name Last Name

258 MTS Survey

Meeting

NCTD and MTS are a godsend to working adults who can’t drive, whether due to disability, not being able to afford a car; or environmental concerns. Taxis, Lyft, and Uber are too costly to be a daily use option. It’s rare to have viable public transit options in the U.S., and we should be making these services cheaper, more convenient, and more widely available for regular use because it reduces day tripping. It reduces travel and tourists for children and raises prices for the people who need it the most. If MTS and NCTD need more money to provide service, they should consider other options.

MTS needs to be combined and on the same page. NCTD service is abysmal. Many people have to commute from MTS to work in NCTD areas.

Is 5 a bad number - you need two bills to make the payment. Is $5 so much more convenient for the rider.

I think of a lot of SDM riders might have trouble with higher fees. I could pay a bit more, but for that I’d like to see at least more trolleys when there are events downtown and always 3 cars. There are when there are 3 cars on trolleys headed downtown and only 2 for the return trip, it can be a problem because some of us can’t wait all the way. Waiting a half hour for a trolley at night is not great.

Earlier services - I cannot get to Old Town from La Mesa earlier than about 5:30, but would certainly ride an earlier run.

MTS service is not acceptable. I use the trolley to commute to work daily. I noticed that my co-workers that live in Chula Vista, Mira Mesa and even San Marcos area has the option to use the drop-in fare instead of a trolley fare. Why can’t the trolley provide the non-stop bus as an alternate commute for people that live in Spring Valley/San Marcos area? We need another alternative route to commute to work other than the trolley.

I use the trolley to commute to work daily. I noticed that my co-workers that live in Chula Vista, Mira Mesa and even San Marcos area has the option to use the drop-in fare instead of a trolley fare. Why can’t the trolley provide the non-stop bus as an alternate commute for people that live in Spring Valley/San Marcos area? We need another alternative route to commute to work other than the trolley.

Veterans passes are more important than kid passes. I started using Uber or Lyft because of convenience.

MTS needs to deal with the homeless people on the trolley that make it cluttered, stinky and unpleasant to ride in before they consider raising cost of fares.

MTS could offer a monthly pass to help offset these costs.

Veteran passes are more important than kid passes. I started using Uber or Lyft because of convenience.

MTS needs to deal with the homeless people on the trolley that make it cluttered, stinky and unpleasant to ride in before they consider raising cost of fares.

MTS should have a program for low income families like myself, that paying 72 dollars is already alot.

Region plus day pass should stay at $12.

I think an increase in security, and more frequent night service could go a long way in the Downtown area to help with my sense of safety.

MTS should have a program for low income families like myself, that paying 72 dollars is already alot.

I think these are excellent proposed changes. Keeps things simple. Thanks!

No fee increase please. It would be a strain financially.

If the trolley breaks down, riders should get a voucher.

Most people just want frequent, reliable service, and clean trains without transients asking for money or people blaring music.

You need to have gates that check for passes before people can enter the vehicles. A LOT of lost revenue because there is no one checking passes!

I am in favor of a reduced fare day pass for SDM users. I am absolutely not in favor of raising the price of a monthly SDM pass for the people least likely to be able to afford it.
We are killing us $52.00 for 2 people way too much we need monthly SDM to get to all of our doctors. I walk with the crutches under my arms, they hurt so the part that I need my bus closer is key at 3rd and Peach, bus #815 please. Permanent condition.

I am on a fixed income, people don't raise the 30 day SDM pass. Leave it at $18.00. I am an American, War Veteran. I lost ... have artificial legs and it hurts even to walk long distances. Please bring back Bus #815 that stopped at 3rd and Peach.

Please do no make the 30 day seniors/disabled/Medicare bus pass, low fix income and barely make it. I have to buy my own medication and diapers are expensive on top of it all. Thank you.

Man Homeless please don't raise the 30 day monthly SDM. I will not be able to afford it.

Single, Husband is in the military and I take care of my disabled child. I need his disabled 30 day pass SDM not to go up. Please it would be a hardship.

52.00 monthly for 2 too much Low fixed income. This is the only way to get around for food, doctors, medications. I need my monthly SDM bus pass not to be raised in price. Thank you.

We are fixed income. Please do not raise monthly (SDM) $18.00 bus pass.

Woman Homeless vet please don't raise 30 day monthly SDM

I have to buy 4 disabled bus passes low income, Please do not raise it.

We need our #815 to come back to Broadway to Main Street in City of El Cajon.

The mentally disabled and people with ailments find it easier to find the bus stop when it is near their home. We have to have the #815 bus stop that stopped at 3rd & Peach back. Please, so that they can find it easier. Thank you.

We beg of you. We are on a fixed income, wheelchair, you would think that at least at the end of our days we could avoid the stress of not being able to get around. This is the only form of entertainment to get out of the house and take a ride on our bus. ($18.00) we can afford; makes the other fares bearable.

We need green housing. Protection with trash can at 3rd and Peach when you put. Please Bus - 5 to 10 pm - back at 3rd and Peach #815. Thank you

I can't go vote the 875 and 874 use to go to Kennedy Park Recreation Center - Meeting Room 1675 East Madison Ave. at 1/²-1 hour shopping time on billet/fare could help. Might increase revenues gained from retail at transit hubs, while increasing ridership. Why ride transit if you have to get in car to go shopping?

I use to take my little brother and sisters to home school. Bus came pick them up at 3 p.m. each, to then take #815 to go to school. All my family got to church on Sunday on #815.

We have to buy my own medication and diapers are expensive on top of it all. Please bring back Bus #815 that stopped at 3rd and Peach.

We are handicapped. We have to walk to shop. When we can not walk long distances of time, we have to go shopping after using transit to commute extra work. 1/²-1 hour shopping time on billet/fare could help. Might increase revenues gained from retail at transit hubs, while increasing ridership. Why ride transit if you have to get in car to go shopping?

I walk with the crutches under my arms, they hurt so the part that I need my bus closer is key at 3rd and Peach, bus #815 please. Permanent condition.

Please don't raise the seniors and disabled monthly pass, difficult operations on knees permanently disabled.

I use the #815 bus to go to church to vote. We have to walk to shop. When we can not walk long distances of time, we have to go shopping after using transit to commute extra work. 1/²-1 hour shopping time on billet/fare could help. Might increase revenues gained from retail at transit hubs, while increasing ridership. Why ride transit if you have to get in car to go shopping?

We are killing us $52.00 for 2 people too much we need monthly SDM to get to all of our doctors.

Please don't raise the seniors and disabled monthly pass, difficult operations on knees permanently disabled.

We get to work on this bus it's part-time and I can only afford one-way. I walk back.

We have to walk to shop. When we can not walk long distances of time, we have to go shopping after using transit to commute extra work. 1/²-1 hour shopping time on billet/fare could help. Might increase revenues gained from retail at transit hubs, while increasing ridership. Why ride transit if you have to get in car to go shopping?

We are on a fixed income, wheelchair, you would think that at least at the end of our days we could avoid the stress of not being able to get around. This is the only form of entertainment to get out of the house and take a ride on our bus. ($18.00) we can afford; makes the other fares bearable.

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MTS Survey

Parent of 5. I buy 6 bus passes, please do not raise the price, we are destitute. I walk when we can't afford it, we need to save for food.

Ridiculous. Your service is so unreliable cannot be used with any confidence.

I am a full time student. I have very little income and can barely afford my bus pass as is.

NCTD Survey

Should keep the sprinter / breeze monthly pass, maybe increase it a couple of dollars. Then probably still worth getting but not with regional at $72/mo, for $72 probably drive more ride less or not at all.

I propose that the 358/359 service should in six day service instead of just Mon-Fri.

Not as happy with the $5 LYFT Fare as $3.50 current fare.

Services are already at a minimum for intercity communities of Oceanside Southside. Seniors 70+ should ride free. Seniors 65 or 62. 65 is too high.

Ridiculous. If fares are increased as proposed, I will expect improved, NOT maintained services. If fares are increased as proposed, I will expect improved, NOT maintained services.

The proposed SDM pass from $18 to $26 is outrageous! The millennia/youth have jobs or their parents pay for their education, they don't have the money that the people who are working full time have to pay for these things. The problem is not that to increase the fares 40%, but it is that youth and millennials would drive and wouldn't take the bus.

NCTD Survey Comments

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Should keep the sprinter / breeze monthly pass, maybe increase it a couple of dollars. Then probably still worth getting but not with regional at $72/mo, for $72 probably drive more ride less or not at all.

I am not happy with the Coaster since it is my transportation to and from work. The time schedule needs to be adjusted. There is no reason the Coaster fails to show up. If fares are increased as proposed, I will expect improved, NOT maintained services.

Why raise rates for seniors and disabled who have difficulty getting $?. Most young adults won't ride because they can't listen to their rap music as loud as they want and blast the base, so raise cost on people who can afford is easiest.

How often do you ride on Oceanside rider. I believe a fare increase is important for maintaining service and meeting the needs of regular riders.

Seniors should be extended also.

The proposed SDM pass from $18 to $26 is outrageous! The milleniums/youth have jobs or their parents pay for their education, which would create a hardship if passes are raised 40%. Besides, youth and millennials would drive and wouldn't take the bus.

I don't mind the increase if you can provide service that is reliable. The last couple of years have been hit and miss or just not there at all. If the service is reliable, I will continue to ride.

NCTD Survey

Don't raise the prices!

I am a full time student. I have very little income and can barely afford my bus pass as is.

Question #6 is a poorly written question. It's not that I do not know. I would prefer to know where the funds to run our transit system come from. Haven't funds been put aside for maintenance to begin with? Have costs increased that much that fare prices need to be increased to this extent? Why?

Why would people want to subsidize students when the age for seniors is too high. The age for seniors should be extended.

30-60 or 62. 65 is too high.

I am a full time student. I have very little income and can barely afford my bus pass as is.

NCTD Survey Comments

I don't mind the increase if you can provide service that is reliable. The last couple of years have been hit and miss or just not there at all. If the service is reliable, I will continue to ride.

I am a full time student. I have very little income and can barely afford my bus pass as is.
I can understand a fare increase but I do not like the change in age limit for SDM! I also expect that if the fares do not increase, the time and bus drivers learn their routes before they start a new route. Also, increasing fares do not encourage an improvement and more frequent services are essential to the success of San Diego as a city in the global marketplace, and the proposed increases here are measured and reasonable.

I understand the need to increase fares but some of increases are quite large. Most importantly is all the "mechanical" increases do not encourage an improvement. If reliability were better it would probably not be such an issue. We already pay a lot for the ride. It seems you are punishing seniors, 65 instead of 60 and will now have to pay more for the 30 day coaster pass. Does not make sense. Why are there now less cars? Why are we now packed in so tight makes for an uncomfortable ride. I should not have to change from the Sprinter-Breeze monthly pass to the pass for all of SD. I do not use the other vehicles offered and shouldn't have an extra $158 yearly cost because of it. Your increase from $59 to $72 is too much!

It seems you are punishing seniors, 65 instead of 60 and will now have to pay more for the 30 day coaster pass. Does not make sense. Why are there now less cars? Why are we now packed in so tight makes for an uncomfortable ride.

Proposed fares remain very good value for money vs. other transportation methods (or driving a car), and are still considerably cheaper than other major cities transit systems (e.g. BART, London's underground).

I ride the Coaster to and from work. I am pleased that the conductors have started checking tickets/passes. I realize the importance of making sure riders are paying the fares before increasing fares to cover expenses. I think there are still people who ride the Coaster without paying,

Proposed fares remain very good value for money vs. other transportation methods (or driving a car), and are still considerably cheaper than other major cities transit systems (e.g. BART, London's underground).

Improved and more frequent services are essential to the success of San Diego as a city in the global marketplace, and the proposed increases here are measured and reasonable.

Improved and more frequent services are essential to the success of San Diego as a city in the global marketplace, and the proposed increases here are measured and reasonable.

You have decreased services throughout North County. Most of us walk a mile to a mile and a half to bus stops. Your buses and trains break down too often. Why want to pay extra cost because of it. If you increase from $59 to $72 is too much! I do not know how to change from the Sprinter-Breeze monthly pass to the pass for all of SD. I do not use the other vehicles offered and shouldn't have an extra $158 yearly cost because of it.

Thank you. I LOVE the COASTER!

The proposed increase in the SDM from $18.00 to $26.00 is OUTRAGEOUS! That's a 40% increase for those of us who are disabled and elderly who live on fixed incomes. The decrease for the youth doesn't bode well for me either as most youth have jobs or have their parents pay for their bus fares/passes. Why decrease bus fares/passes for the youth and raise them for the disabled and elderly? That's not right! I can understand raising SDM from $18.00 to say, $20.00, but not $26.00. Most of that money would be going into the CEO's, presidencies, and superintendents pockets, not improving service which we need. If fares go up you should go up for everyone. If anything the SDM need the discount, not the millennials.

Increased fares makes me nervous...but I also understand operational costs are increasing...I really wish you didn't have to!!

You guys ALREADY reduce services, #7 you know perfectly well most taking these services cannot afford to stop taking the breeze, sprinter or coaster. The only times I EVER use the trolley is when I manage to snag a volunteer shift at comic con, and even then there is a special fare. I feel as if the NCTD has never once actually listened to the people...