

## CRC 25!

Dominic and Garry welcomed us to Southern California sun.

While the hotel told us "if disaster" where to run.

All of us must work together to improve on what we have already done.

Saint Alberto came down from the Sacramento Mountain with Commandments Ten.

California's dreaming continues toward reality? Expecting arrival when?

## Emissions Modeling

I thought an emission inventory was a fact that MOVES was trying to match.

I guess I don't think like a regulator. I must be in the wrong cabbage patch.

John says you can use a MOVES default, but take results with pinch of salt.

"I can get MOVES results in only 30 days." "With only 600 Gb of hard drive," Chris prays.

Randy's supercomputer provides 41 billion emission rates running day and night.

Chris when not chairing CASAC says we all should run MOVES Lite.

Susan from Toyota's ozone models can get more than 100% of it.

While Bill from Howard says that more HC reduces your NOx disbenefit.

## Vehicle Emissions Measurements: Laboratory

Imad measures nothing but it comes on and off the wall.

Fanick measures even less. Dilute exhaust guarantees "small".

Peter studies fuel effects. All irrelevant if vehicles not broken at all.

Satya Sardar from ARB can measure nothing too.

And Kent from UCR finally admits these results are "nothing" new.

Erin and David double act; a billion particles per microgram. Too few.

There needs to be a few more billions from the regulator's point of view.

## Off Road

Rolls Royce begat MTU, want to test their motors in use.

Hard to find a willing user; some actually refuse.

Jacques really enforces VERT, keeping the Swiss away from dirt,

Chris Frey again; biofuels on track.

Serves him right for chairing CASAC.

## Dinner and Queen Mary Tour

Thanks from all of us for sure.

Queen Mary is in really great shape; actually older than I.

A crew of 500 painting and polishing might account for why.

## Fuel Effects: Light Duty

Not only is corn ethanol a stupid political fuel, but it makes PM higher.

Nine more unbroken vehicles with negligible emissions on any alcohol you might desire.

Three more irrelevant NG cars. Marc can't get methane to knock.

Even though ARB allows a more than 100% methane stock.

Biodiesel doesn't pay tax but reduces gas mileage some.

MMT remains in use in the world. Is that phenomenon dumb?

Weird organics, one cylinder, even less "on road" said Matt from NREL.

You have to change the lube oil because of its bad smell.

## Fuel Effects: Heavy-Duty

“Garbage gets better mileage than QM,” Chris came again to tell.  
Marc has a 10% methane slip and methane does not burn up well.  
Let us use Dr. Na’s new dyno cycles to simulate hybrids on road.  
Kent showed us great EVs if you don’t care about price, range, or heavy load.  
Another Marc with three engines came from W.V.U.  
Perhaps “cleanerburningalternativefuels” is not entirely untrue.

# Keynote

Sarkar from DOE says our problems, his National Labs will solve soon  
In only a few decades with a suitably filled silver spoon.

## Emission Control Measures, I/M, and OBDII

Connie says evap cans don't work but H.E.A.T. is really great.

Less ready Carl missed his OBD talk because he was Carl Fulper the late.

Todd is helping California to dream of trucks decarbonizing this state.

David's 600% warrantee claim rate on NG HDDV

Does not look really great to me.

Sharon shows successful retrofits, but they are not free.

## Expert Panel Discussion

David, David, and Nigel; designated Monsters three.  
PM and PN, NO and NO<sub>x</sub> and always GHG.

## Emission Rates and Inventory

Sevenfold excess NO<sub>x</sub> in Francisco's "tailored" cycles for Euro 6  
LNT is worse, as Peter showed too, for the few diesels in the US mix.  
Warila plots the prettiest percentiles in purple and in pink.  
While Alan for HKEPD models PEMS results link by link.  
More than 15 minutes Marc, "Regens matter and high T."  
"Only 230 cycles model Texas well", said Josias Z.  
Kathleen showed PM improved. NO<sub>x</sub> we hope comes soon.  
How CERTain is certification? "Not really" says Dr. Yoon.  
MOBILE, MOVES, EMFAC? Modelers all sing the same tune.

## Fuel Efficiency

Nigel has more hair than me.

Serves on a committee for NRC.

Better fuel economy is not free.

David's got a hybrid bus. Its paint is pretty blue.

As long as you get subsidies that's what you should buy new.

Twenty minutes Arvind maps today to predict tomorrow.

Pukei Un, cars in Macao are getting larger to her sorrow.

## Vehicle Emission Measurement: In-Field

Carder says I should call him hot,

But only if he gets a red spot.

Theodoros develops RDEs. Politicians decide how to use them.

Now attacking diesels, Pucher developed gasoline I/M.

His PEM doesn't measure exhaust flow. Congratulations from me.

Tom Long works at ORD.

PEMS and dyno had better agree.

They use the same technology.

As do we.

Karl our disagreeable Brit. Sales pitch for parSYNC perhaps?

Justin just in time at the end to create real world maps.

## Conclusion

Thank you all who remain at the end.

May you leave with pleasant memories as you wend

Your way home, and thanks 100 ½

Per cent to CRC and their staff.