DOE Workshop on FTD

Notes on Data Gaps/Questions

Data Gaps

1) Any additional FTD emissions data:

- CONCAWE report 6/3/99, tbp by PetroSA
- CEC data 1992-2001 Caltrans study Shell to provide citations
- citations in recent Syntroleum comments to docket
- DoD TACON program - Dave Sowards (Synt.)

2) Data on post-98 engines

- Dave Sowards to provide some

3) Test data w/ detailed fuel composition

- DOE CIDI program 2000-2001 Progress Report - Steve Woodward
- speciated emissions data in Syntroleum SwI report - McCormick

4) Fuel Economy

- Shell has additional data it may be able to share - Ian Virrels
- CEC or SCAQMD doing research (noted by Woodward)

5) Power differential

- Conoco gathering data in DOE program but won't be available for some time (Doug Smith)

6) Durability/emissions data

- Syntroleum - has data showing less injector deposits. Mileage accumulation data being collected but not available for 1.5 years

7) Cold Flow

- Syntroleum - data on flow improvers, effect of isomerizing on cold flow

8) Materials Compatibility

- PetroSa to provide

9) Speciated emissions data

- Syntroleum SwRI report submitted w/ petition

9) Health/welfare data

- OTT report on DOE website
- EPA has done research on health effects of low sulfur fuel in market - Sowards
- EPA structure-activity analysis pertinent - EPA website. Syntroleum to give cite.

10) Biodegradability/ecotoxicity

- EPA Website - EPI suite (Bob) data on various classes of hydrocarbons
- Environment Canada website - data on various fuels
- PetroSa suggests test protocols in its presentation

Questions

1) Definition?

- Concern that lack of "FTD" term would allow DME. Suggest "FTD derived from NG"
- "Paraffinic hydrocarbon fuel derived from NG"
- Syntroleum suggests defining NG with minimum methane content
- Other suggested language in presentations

2) Trade-offs between different environmental factors?

- Yes - modular gas recovery is possible (???)
- "EPACT is focused on U.S. Air quality issues could create 2 different classes of plants."

3) NOx reductions of 6-20% significant in light of post-2006 standards?

- Syntrol. - any reduction in NOx reduces adsorber recharge and increases fuel economy - emission control and engine makers want FTD. Question asked - comment from EMA and MECA? A: Invited but no comment from them to date.

- Don't know what the range of control technolgies will be.

4) Process energy limits?

- Steve Colville, Sasaol-Chevron - industry is in its infancy. Others: Don't restrict it. Less regulation is better, etc.
- Rentech and PetroSA favor process energy limits 11.5mmBtu/bbl.

5) Fuel parameter specifications?

- All agreed that fuel parameter limits should be set (except Barry McNutt of DOE who favors performance standard defined in terms of emissions model based on fuel parameters)

- Alternative specifications proposed by Rentech, PetroSA, and Syntroleum.

?? Dave Sowards - Detroit Diesel Corp. study shows engines can take advantage of timing changes specific to FTD fuels without adverse impacts on current and future model engines

NOTE: Many other questions listed by DOE were skipped over during this session because they had been addressed during earlier presentations/discussion and no additional comments were offered.