

European
Automobile
Manufacturers
Association

ACEA RDE Compromise Status

17th February 2015





Feedback status



Informale meeting 11.1.2015 Paul Greening - Nikolaus Steininger

- No need for compromise in the view of Mr. Steininger
- Liklyhood adjustments in package 1:
 - BC Temperature: proposal of spain
 - 2 step introduction , details in package 2 but AT step 1 9/2018 & 2 step delaying by 1 year to NT 9/2021 AT 9/2022
 - 2 step CFs linked to the technology : CF step 1 LNT CF step2 SCR, details in package 2
 - Open for additional BCs if Task force team confirms the need, integrated in package 2



Current ACEA walk out position is C3

ACEA-Walk-In-Position vs. EU-COM-Position - Results

Levels of Negotiation:

Level 3

Level 2

Level 1

Parameter	ACEA draft Walk-In Position	EU-COM Position	EU-COM compromise	ACEA Compromise C1	ACEA Compromise C2	ACEA Compromise C3
Ambient temperature (Moderate/ Extended)	Step 1: +9C/ +3C...30C Mod./ext. Step2: +9C/ +3C...30C mod./ext.	Step 1: +3C/ -2C...30/35C Mod./Ext. Step2: +0C/ -7C...30/35C Mod./Ext.	!ROOMERS!	Step 1: +3C/ -2C...30C Mod./Ext. Step2: +0C/ -7C...30C Mod./Ext.	Step 1: +3C/ +0C...30C Mod./Ext. Step2: +0C/ -7C...30C Mod./Ext.	Step 1: +3C/ +0C...30C Mod./Ext. Step2: +0C/ -3C...30C Mod./Ext. [-7 with add. CF]
Vmax (Moderate/Extended)	130 km/h / 130 km/h + 15 km/h for 3% of time	145 km/h + 15 km/h für 3 % of time		145 km/h + 15 km/h for 3 % of time	130 km/h + 10 km/h for 3% of highway distance; if Pwr/mass < 34kW/to; 145 km/h + 15 km/h for 3% of highway distance; if Pwr/mass >= 34kW/to;	130 km/h / 145 km/h + 15 km/h for 3% of highway distance
Weight (Moderate)	Weight + 200 kg 90 % total mass	90 % total mass		M1: 90 % total mass Max.: 2840kg N1: + 50% payload	M1: unladen weight + 200 kg if Pwr/mass < 34kW/to; M1: 90 % total mass if Pwr/mass >= 34kW/to; Max.: 2840kg N1: + 50% payload	unladen weight + 200 kg Max.: 2840kg 90 % total mass
Min. ø-speed (City/ overland/ highway)	20 km/h / - / 90 km/h	15 km/h / - / 90 km/h		15 km/h / - / 90 km/h	20 km/h / - / 90 km/h	20 km/h / - / 90 km/h
Timing	Step 1: NT2017 / - Step 2: 5 years after O1 N1 + 1year	Step 1: NT2017 / AT2018 N1: t.b.d.	Step 1: 9/2017NT / 9/2018 AT ,N1 + 1year Step 2: 2020 / 2021 N1 + 1year	Step 1: 9/2017NT / 9/2019 AT ,N1 + 1year & (Flexibility by pre-fulfilling of RDE Reg.) Excluding Gasoline DI & Hybrid Step 2: 5 years after published in official journal N1 + 1year Including Gasoline DI & Hybrid	Step 1: 9/2017NT / 9/2019 AT ,N1 II & (Flexibility by pre-fulfilling of RDE Reg.) Excluding Gasoline DI & Hybrid Step 2: 5 years after published in official journal N1 + 1year Including Gasoline DI & Hybrid	Step 1: 9/2017NT / 9/2019 AT ,N1 + 1year & (Flexibility by pre-fulfilling of RDE Reg.) Excluding Gasoline DI & Hybrid Step 2: 5 years after published in official journal N1 + 1year Including Gasoline DI & Hybrid
CF's	2-step approach Step 1: 2,5 / 3 Step 2: 2,5 / 3	1-step < 2	2-step approach Step 1: 2,5 / ? Step 2: 1,5 / ?	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3
Grade (Moderate)	2,0 % / 3,5 % (P95%) 650m/100km; 1000m/100km	no restriction	If confirmed by task force	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km
Dynamic of driving (Moderate/Extended)	2+0,288v < v · apos < 11+0,288v (P95%) 2+0,288v < v · apos <	no restriction	If confirmed by task force	2+0,288v < v · apos < 11+0,288v (P95%) 2+0,288v < v · apos <	2+0,288v < v · apos < 11+0,288v (P95%) 2+0,288v < v · apos <	2+0,288v < v · apos < 11+0,288v (P95%) 2+0,288v < v · apos <

FORD

Task force
2nd road show

3rd road show

Task force
Task force



Conclusion of ACEA compromise Version A ??

- **ACEA offers:**

- Small step forward by BC temperature
- Medium step forward by including AT 9/2019 for RDE step 1

*Is this a realistic compromise which
can be accepted by DG Grow and MS ?*

- **On the other side ACEA demands from DG Grow to take over
ACEA RDE draft 17.12.2014 content for:**

- BC vehicle speed
- BC mass
- BC idle fraction
- BC city average speed
- Add BCs: grade, dynamic ($v \times a_{pos}$)
- CFs for step1 and step 2
- Excluding GDI and N1 class II&III from step 1
- Use of OBD signals
- No detailed PEMS trip data for 3rd parties
- no actions regarding type approval by 3rd parties due to failed PEMS trips
- &
- complete RDE must be defined by TCMV 5/2015



Possible Packages / ACEA position

EU-COM TCMV 3/2015	EU-COM TCMV 5/2015	EU-COM TCMV End/2015
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Scenario liklyhood	EU-COM package 1 3/2015
A >90%	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/-2C 2. Step 0C/-7C - 2step Timing - 2step CFs

Scenario liklyhood	EU-COM package 1 3/2015
B > 50%	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/-2C 2. Step 0C/-7C - 2step Timing - 2step CFs - additional dynamic BCs listed w/o values

Scenario liklyhood	EU-COM package 1 3/2015	EU-COM package 2 5/2015
C 30%	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/-2C 2. Step 0C/-7C - 2step Timing - 2step CFs - additional dynamic BCs listed w/o values	- 2step Timing: NT 9/2017 AT 9/2018 NT 9/2021 AT9/2022 - 2step CFs defined, so far no details - values of all BCs

EU-COM package 2 latest by end of 2015
- 2step Timing: NT 9/2017 AT 9/2018 NT 9/2021 AT9/2022 - 2step CFs defined, so far no details

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ACEA Feedback

ACEA Reaction	Reasons	Yes	No
MS have to block	- timing not acceptable - no additional dynamic BCs included - definition of package 2 to late for 1 step - temperature not okay	☐	☐

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Possible Packages / ACEA position

EU-COM TCMV 3/2015	EU-COM TCMV 5/2015	EU-COM TCMV End/2015

ACEA
Feedback

Scenario liklyhood	EU-COM package 1 3/2015	EU-COM package 2 5/2015
D 30%	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/0C 2. Step 0C/-7C - 2step Timing - 2step CFs - additional dynamic BCs listed with values	- 2step Timing: NT 9/2017 AT 9/2019 NT 9/2021 AT9/2022 - 2step CFs defined, so far no details

ACEA Reaction	Reasons	Yes	No
MS can agree	- timing okay		
	additional BCs included		
	- temperature okay		

Scenario liklyhood	EU-COM package 1 3/2015	EU-COM package 2 5/2015	EU-COM package 3 latest by end of 2015
E chance to achieve	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/0C 2. Step 0C/-7C - 2step Timing - 2step CFs - additional dynamic BCs listed with values	- 2step Timing: NT 9/2017 AT 9/2019 NT 9/2021 AT9/2022 - cf of 1 step defined	- cf of 2 step defined

ACEA Reaction	Reasons	Yes	No
MS can agree	- timing okay		
	additional BCs included		
	- temperature okay		



Possible Packages / ACEA position

EU-COM TCMV 3/2015	EU-COM TCMV 5/2015	EU-COM TCMV End/2015

ACEA
Feedback

Scenario liklyhood	EU-COM package 1 3/2015	EU-COM package 2 5/2015
F <20%	adjustemnets of EU com RDEdraft end of 2014 - BC TemperatureMod/Ext +3C/0C 2. Step 0C/-3C - -7C with add. Cf - 2step Timing & 2 step CFs - additional dynamic BCs listed with values	- 2step Timing: NT 9/2017 AT 9/2019 NT 9/2021 AT9/2022 - 2step CFs defined, so far no details

ACEA Reaction	Reasons	Yes	No
MS can agree	- timing okay additional BCs included - temperature okay	☐	☐

Scenario liklyhood	EU-COM package 1 3/2015	EU-COM package 2 5/2015	EU-COM package 3 latest by end of 2015
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ACEA Reaction	Reasons	Yes	No
MS can agree	- timing okay additional BCs included - temperature okay	☐	☐



Next steps

- ACEA RDE LDC Telco at 18.2.2015
 - Status presentation of 2nd road show
 - results sub group CF (Opel)
 - Kick off „black scenario“
- Task force BC Telco at 19.2. with JRC
- Task force BC Team workshop 25.2.& 26.2. with EU COM and others
 - target: all BCs are defined and values are confirmed and all is included in package 1 of DG Grow for 24th of March TCMV
- ACEA road show starts at 2.3.



Recommendation ???

- ACEA walk out position is compromise C2
- ACEA lobby EU COM for a „3 packages“ RDE legislation development

Package 1 for TCMV 3/2015

- Introduction in 2 steps with concrete dates
 - Step 1: NT 9/2017 AT 9/2019
 - Step 2: NT 9/2021 AT 9/2022
- All necessary BCs will be included together with values

Package 2 for TCMV 5/2015

- CF definition for
 - step 1: target moderate 3,5 extended 5

Package 3 for TCMV End/2015

- CF definition
 - Step 2: target moderate 2 extended 3
 - Adjusted if cold start will be included



Conclusion of ACEA compromise Version B ??

- ACEA offers:

- A medium step forward by BC temperature
- A medium step forward by including AT 9/2019 for RDE step 1
- Big step BC vehicle speed
- Medium step BC mass
- 3 package introduction to define CFs etc.

*Is this a realistic compromise which
can be accepted by DG Grow and MS ?*

- On the other side ACEA demands from DG Grow to take over ACEA RDE draft 17.12.2014 content for:

- BC idle fraction
- BC city average speed
- Add BCs : grade, dynamic ($v \times a_{pos}$)
- Excluding GDI and N1 class II&III from step 1
- Use of OBD signals
- No detailed PEMS trip data for 3rd parties
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ACEA RDE Roadshow Part 2



Participants & Timing

Volunteers for Road Show?!

CW	10						11				
Day	Mo. 02.03	Tu. 03.03	We. 04.03	Th. 05.03	Fr. 06.03	WE.	Mo. 09.03	Tu. 10.03	We. 11.03	Th. 12.03	Fr. 13.03
MS	Romania	Hungary	Slovakia	Czech Republic	Poland		France	Spain	Italy	UK	
1 Organization by → Involve local associations		Audi (K. Kolesa)									
Participants MS											
2 Participants ACEA	J.Franz	J.Franz	K. Land	K. Land	J.Franz		K. Land	K. Land		K. Land	

- Current Feedback:
 - Caro Hosier (Ford): Spain, Italy or France
 - Jens Franz (Daimler): All dates in principal possible - except 11th
 - **Open: Slovenia and Croatia** – Could be organized by Franjo Akmadza, (Hyundai)
- Please respond to Adriana Pop amp@acea.be so she can coordinate the planning and give feedback to Ralf so he can track the Road Show

Due to the **WP29 Meeting** on 10th -12th March in Geneva **these dates are canceled.**
→ Optimal would be to reach them all in Geneva.
→ If not, we have to set up a 2nd Team in a short term to meet them also in CW10!

3 Participants of WP29 Meeting:

Organization of Gov. expert meeting/ dinner by:



Current Diesel Threats



Diesel Threats

NGO's

ICCT Diesel
emissions EU6 $\approx$
600 mg/ km NOx

DG ENV

Project EULES:
 $CF = 0,9 * EU6 (NOx)$
real world driving

UBA

City Nox values of 300
- 600 mg/km
- By 15km/h average

EU COM

- Interservice consultation started on basis Version A (v11) without compromises
 - Step 1: 2017/2018
 - CF: $1 \div 2$
 - No Dynamic BC's
- Hardliner commissioner DG ENV and...?!

London* / Paris Investigation

Banning Diesel
from inner city

*only valid for EURO6

36th INTERNATIONAL

VIENNA MOTOR SYMPOSIUM (05/2015)

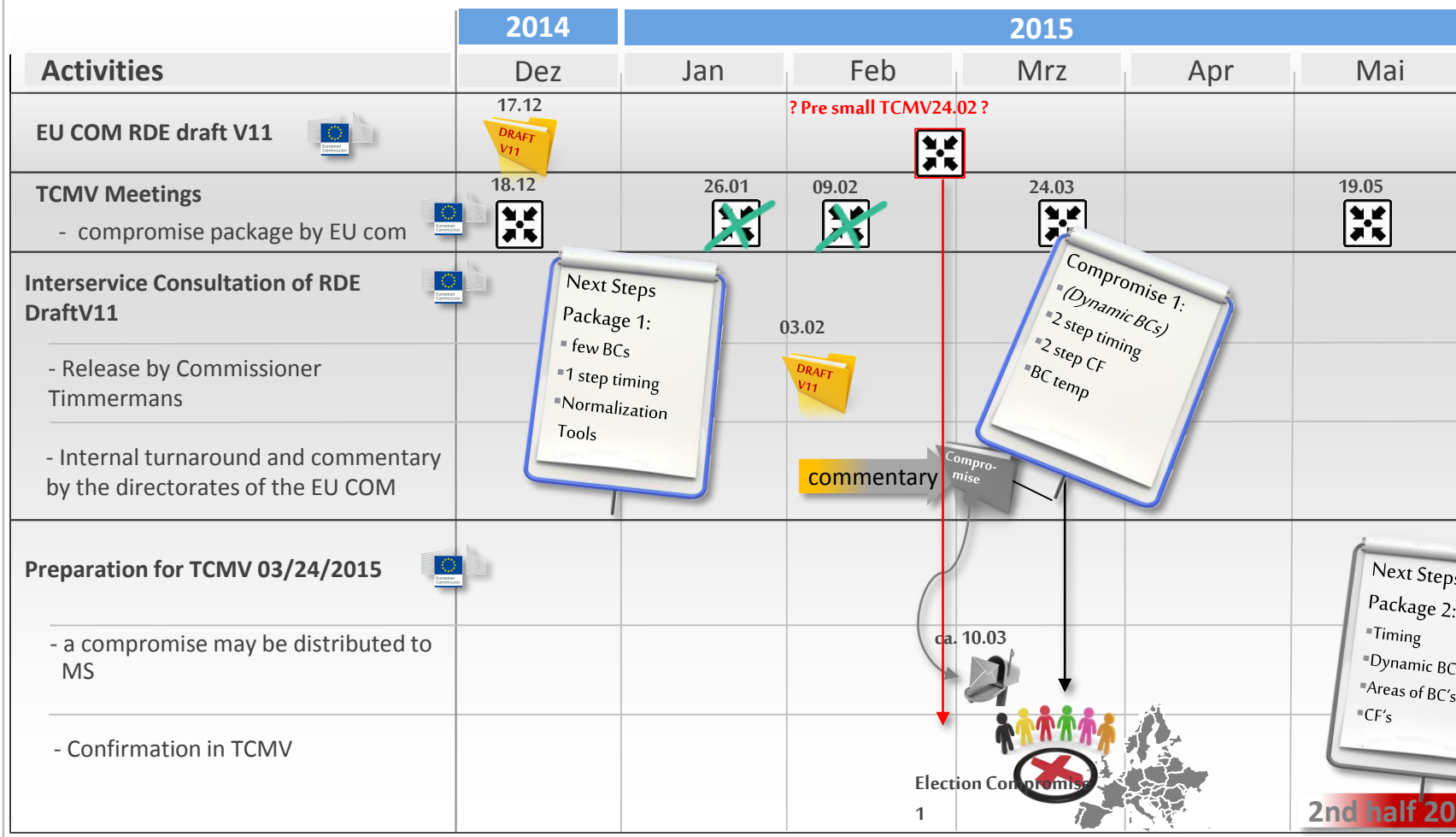
- IET - Institute for Energy and Transport, Ispra: **Evaluating Vehicles Real-Driving Emissions Performance: A Challenge for the Emissions Control Legislation**
- APL Landau & IAVF Karlsruhe, MOT Karlsruhe: **Methods for the Development of a RDE-Capable Powertrain**
- AVL List, Graz: **RDE – Challenges and Solutions**
- FEV & AECC (Association for Emissions Control by Catalyst), Brussels: **Potentials for EU6 Passenger Cars with SCR to Meet RDE Requirements**
- Poznan University of Technology: **LDV and HDV Vehicle Exhaust Emission Indexes in PEMS-Based RDE Tests**
- Emitec, Lohmar: **"NOx-free Exhaust Gas"; The Key Issue Is the AdBlue Dosing**



Possible EU COM timeline for the development of RDE legislation

RDE EU COM

- Objective: Package 1 for TCMV 3/2015 | Package 2 by the end of 2015

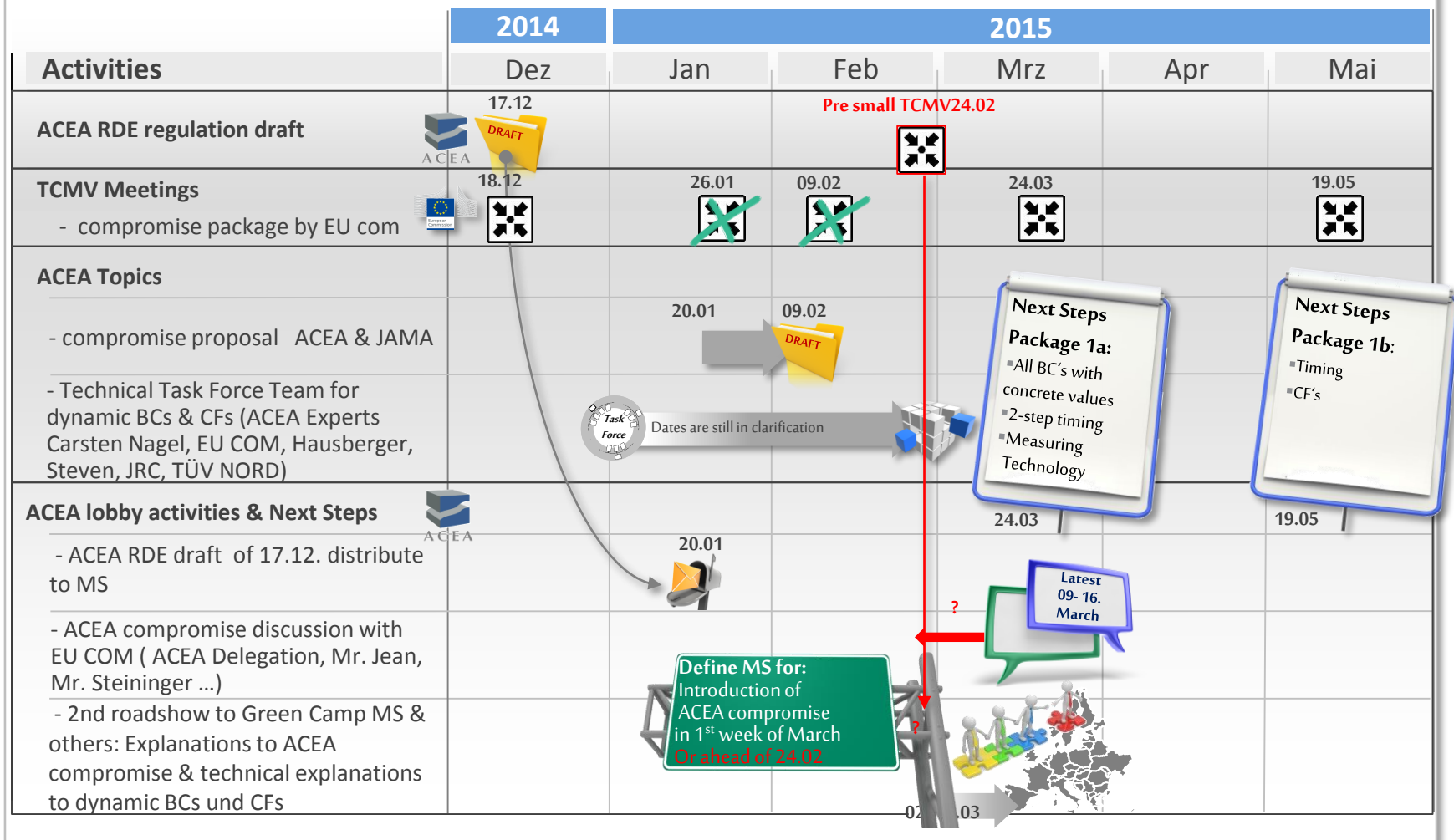




ACEA Action Plan

ACEA RDE Lobbying – Priority 1

- Target: complete RDE Package vote by TCMV in March 2015

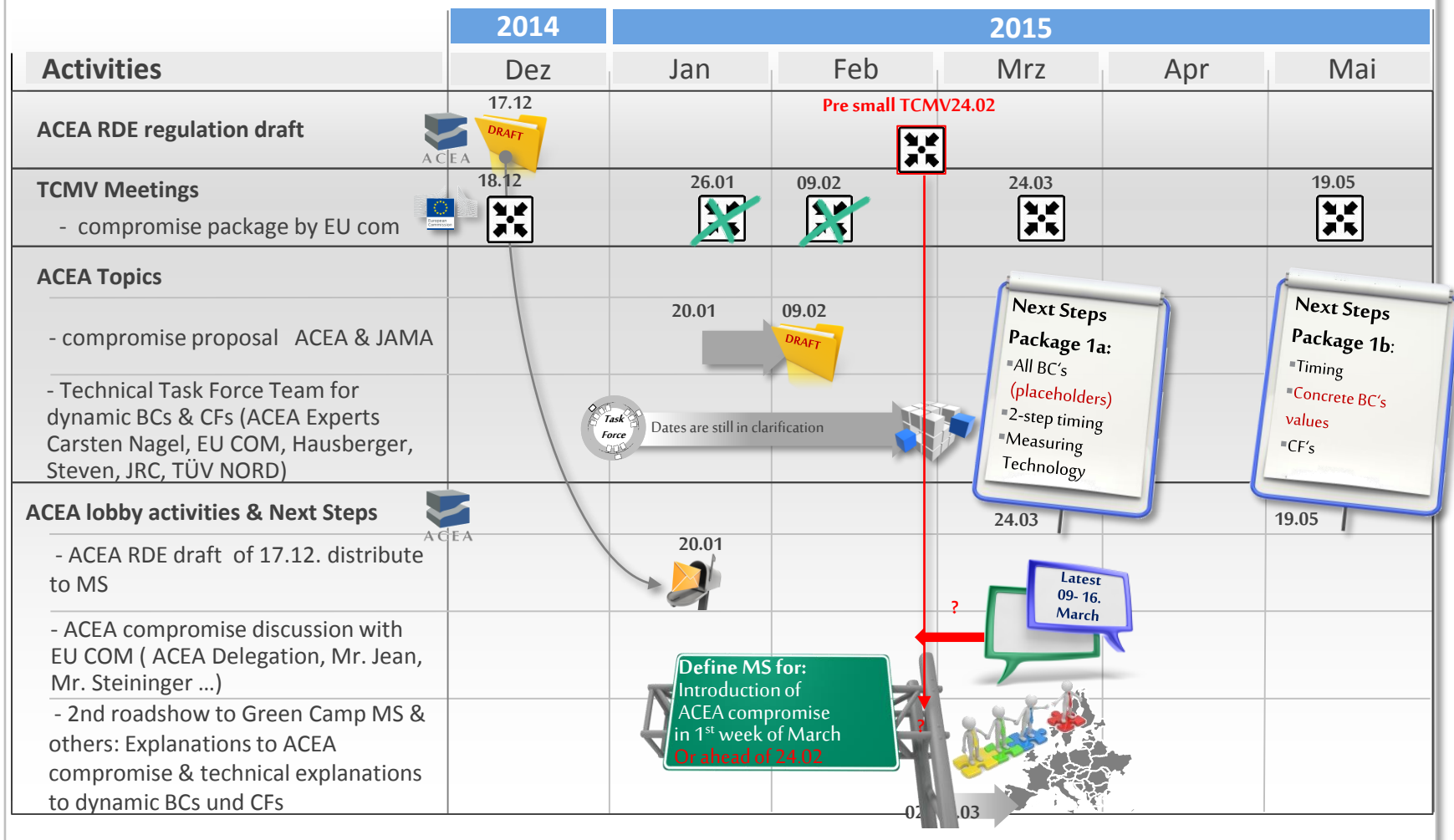




ACEA Action Plan

ACEA RDE Lobbying – Backup

- Target: complete RDE Package vote by TCMV in March 2015

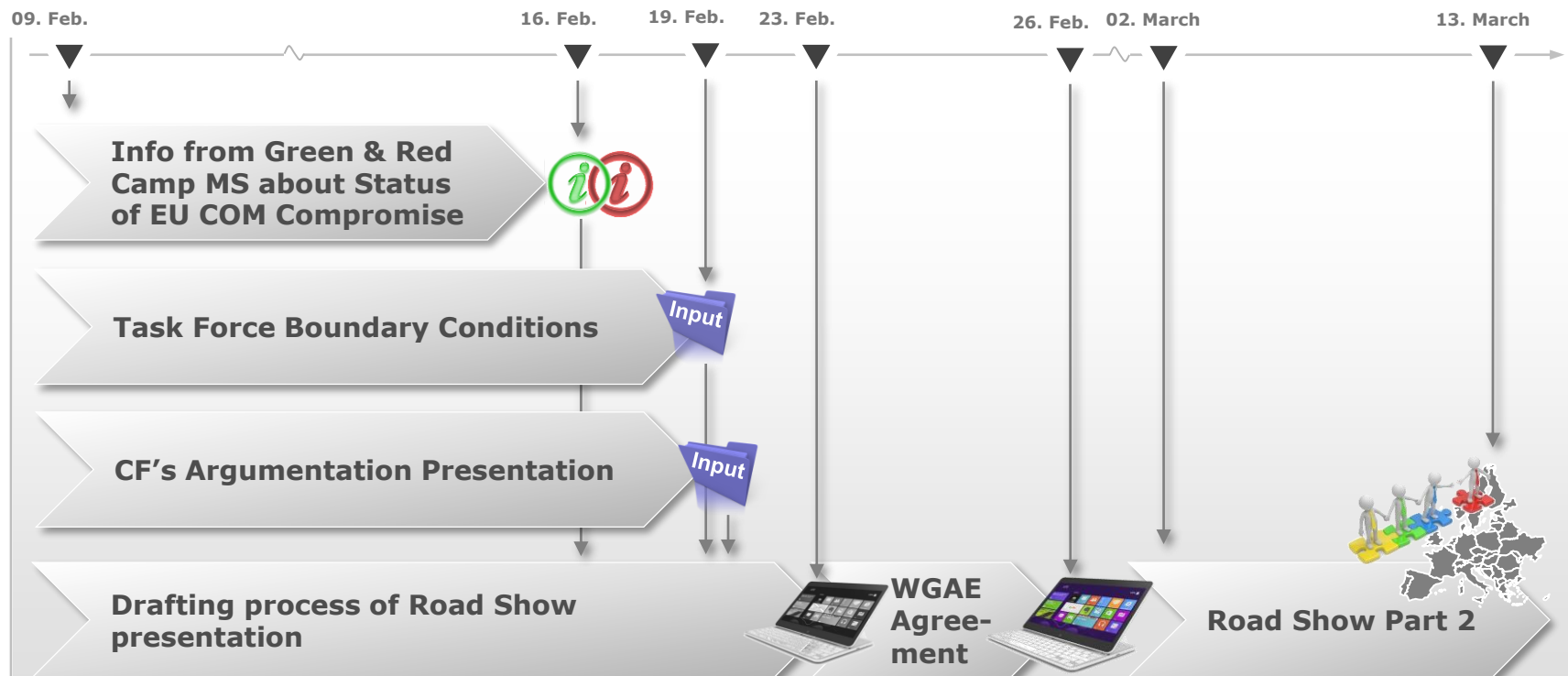




Timeline to get RDE Road Show Part 2 presentation agreed by WGAE

Timeline agreed RDE

- Info from Green- & Red-Camp MS about status of EU COM Compromise until 16.02
- Presentation finished at 23th of Feb.
- WGAE agreed 26th





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Diesel Threats

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Project EULES:
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Thinkable rating of ACEA RDE compromise in the view of EU COM & MS



ACEA-Walk-In-Position vs. EU-COM-Position - Results

Instructions how to read this ranking:

This picture represents a **prediction** of a possible future approach of COM including a rating of **given "plus points"** for leaving the own position towards the position of the opponent - in favor of finding a compromise.

It represents a thinkable view of COM.

e.g. „Grade“:

- Mr. Steiniger left his position of „no restrictions“ towards the ACEA position „2,0 % / 3,5 % (P95%)“
→ **COM gets 3***
- **ACEA gets nothing** (0 points) because we got what we wanted and did not move.

- Complete table see next page -

Level 1

ACEA Compromise C3

Step 1:	3C/ +0C...30C Mod./Ext.	
Step 2:	0C/ -3C...30C Mod./Ext.	
	[7 with add. CF]	
30 km/h /		
45 km/h + 15 km/h for 3% of		
highway distance		
laden weight + 200 kg		
max.: 2840kg		
0 % total mass		
0 km/h / - / 90 km/h		

	Step 2: 5 years after OJ (NT2020 / AT2021)		Step 2: 2020 / 2021 N1 + 1year	Step 2: 5 years after published in official journal N1 + 1year	Step 2: 5 years after published in official journal N1 + 1year	Step 2: 5 years after published in official journal N1 + 1year	Step 2: 5 years after published in official journal N1 + 1year
	N1 + 1year			Including Gasoline DI & Hybrid	Including Gasoline DI & Hybrid	Including Gasoline DI & Hybrid	Including Gasoline DI & Hybrid
CF's	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	1-step < 2	2-step approach Step 1: 2,5 / ? Step 2: 1,5 / ?	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3	2-step approach Step 1: 3,5 / 5 Step 2: 2 / 3
Grade (Moderate/Extended)	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	no restriction	Agreed to ACEA position	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km	2,0 % / 3,5 % (P95%) cum. altit. 650m/100km; 1000m/100km
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Rating in the view of EU COM: Σ = 12

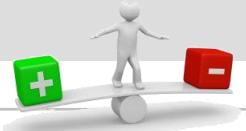
Σ = 12

Σ = 8

Σ = 2



Thinkable rating of ACEA RDE compromise in the view of EU COM & MS



ACEA-Walk-In-Position vs. EU-COM-Position - Results

Levels of Negotiation:

Level 3

Level 2

Level 1

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Vmax (Moderate/Extended)	130 km/h / 130 km/h + 15 km/h for 3% of time	145 km/h + 15 km/h für 3 % of time		145 km/h + 15 km/h for 3 % of time	145 km/h + 15 km/h for 3 % of time	130 km/h / 145 km/h + 15 km/h for 3% of highway distance
Weight (Moderate/Extended)	unladen weight + 200 kg Max.: 2840kg 90 % total mass	90 % total mass		M1: 90 % total mass Max.: 2840kg N1: + 50% payload	M1: 90 % total mass Max.: 2840kg N1: + 50% payload	unladen weight + 200 kg Max.: 2840kg 90 % total mass
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Rating in the view of EU COM: Σ = 12

Σ = 12

Σ = 8

Σ = 2



Decision Template

"Negotiationparameter" (3/5)

ACEA-Walk-In-Position vs. EU-COM-Position - Results



Feedback of 10 Manufacturer

Compromises - including political influences:

Difference EU COM to C1
(close to COM with
important elements of ACEA)

Difference C1 to C2

Difference C2 to C3

Consolidated
Manufacturer
Compromise-Position

Levels of Negotiation:

Level 3

Level 2

Level 1

Parameter	ACEA-Walk-In Position	Feedback [numbers]	EU-COM-Position	ACEA Compromise C1	ACEA Compromise C2	ACEA Compromise C3	Consolidated Manufacturer Compromise-Position
Aerodynamic	no restriction	1 1 8	no restriction ☒	no restriction No aftermarket equipment!	no restriction No aftermarket equipment!	no restriction No aftermarket equipment!	No aftermarket equipment!
Driving style	no pedal pumping	4 6 -	no restriction ☒	no pedal pumping ☒	no pedal pumping ☒	no pedal pumping ☒	no pedal pumping
Predominant Mode	default on	4 5 1	no restriction ☒	no off road modes ☒	default on if statistic data >90% use no off road modes ☒	default on if statistic data >90% use no off road modes ☒	recommenation default on (moderate); linked with n_rel
Usage of additional consumer	no restriction	1 - 9	no restriction ☒	no restriction	no restriction	no restriction	No aftermarket equipment, sensible usage (not full AC and window/seat heating in hot climate)
Regenerationevents	excluded	2 - 8	excluded ☒	excluded	excluded	excluded	excluded
Engine warm-up phase	70 ° C Tcool or 5 minutes	3 1 6	70 ° C Tcool or 5 minutes ☒	70 ° C Tcool or 5 minutes	70 ° C Tcool or 5 minutes	70 ° C Tcool or 5 minutes	
Fuel	DIN EN 590 Fuel Gasoline:DIN EN 228, limitation of PM-Index!?	2 1 7	DIN EN 228/590 Fuel ☒	DIN 590 Fuel (Diesel Fuel) ☒	DIN 590 Fuel (Diesel Fuel) ☒	DIN 590 Fuel (Diesel Fuel) ☒	Fuel analysis mandatory to confirm EN 228/590
Supplies	OEM quality	1 - 9	OEM quality ☒	OEM quality	OEM quality	OEM quality	OEM quality

Theory of colors :

Must have

Give up if absolutely unsustainable

Negotiable

Agreed:



Under Review:





Decision Template

"Negotiationparameter" (4/5)

ACEA-Walk-In-Position vs. EU-COM-Position - Results



Feedback of 10 Manufacturer

Compromises - including political influences:

Difference EU COM to C1
(close to COM with
important elements of ACEA)
New

Difference C1 to C2

Difference C2 to C3

Consolidated
Manufacturer
Compromise-Position

Levels of Negotiation:

Level 3

Level 2

Level 1

Parameter	ACEA-Walk-In Position	Feedback [numbers]	EU-COM-Position	ACEA Compromise C1	ACEA Compromise C2	ACEA Compromise C3	Consolidated Manufacturer Compromise-Position
CF-value	2-step approach Step 1: 3, 5 / 5	6 3 1	1-step <2	2-step approach Step 1: 3, 5 / 5	2-step approach Step 1: 3, 5 / 5	2-step approach Step 1: 3, 5 / 5	2-step approach Step 1: 3, 5 / 5
	Step 2: 2 / 3	8 2 -	1-step <2 Division modal emissions by a factor of "ext" for extended BCs only in events where ext. BC's occur.	Step 2: 2 / 3	Step 2: 2 / 3	Step 2: 2 / 3	Step 2: 2 / 3
Timing	Step 1: 2017 / -	3 4 3		Step 1: 9/2017NT / 9/2019 AT ,N1 + 1 year & Flexibility by pre-fulfilling of RDE Reg. Excluding Gasoline DI & Hybrid	Step 1: 9/2017NT / 9/2019 AT ,N1 + 1 year & Flexibility by pre-fulfilling of RDE Reg. Excluding Gasoline DI & Hybrid	Step 1: 9/2017NT / 9/2019 AT ,N1 + 1 year & Flexibility by pre-fulfilling of RDE Reg. Excluding Gasoline DI & Hybrid	Step 1: 2017 NT, 2019 AT (N1 II, III plus 1 year) Alternative 1: ST1 2017NT, ST2 2020 NT/AT
	Step 2: 2020 / 2021 N1 + 1 year	3 4 3	Step 1: 2017 / t.b.d. N1: t.b.d.	Step 2: 5 years after published in official journal N1 + 1 year Including Gasoline DI & Hybrid	Step 2: 5 years after published in official journal N1 + 1 year Including Gasoline DI & Hybrid	Step 2: 5 years after published in official journal N1 + 1 year Including Gasoline DI & Hybrid	Step 2: 2020 NT, 2021 AT (N1 II, III plus 1 year) Alternative 2: ST1 2017NT, ST2 2019 NT, 2020 AT --> only if CF's remain unchanged (ST1 3,5; ST2 2; fallback Division by 2 for extended
Reporting	Emission values per phase and total and selected as BC's report	4 3 3	Emissions to the second in csv format with complete Transparenz the manufacturer	Emission values per phase and total and selected as BC's report	Emission values per phase and total and selected as BC's report	Emission values per phase and total and selected as BC's report	Weighted and unweighted emission values every phase and also selected BC as report
	Technical vehicel data without manufacturer	4 2 4		Technical vehicel data without manufacturer	Technical vehicel data without manufacturer	Technical vehicel data without manufacturer	Technical vehicel data with manufacturer

Theory of colors :

Must have

Give up if absolutely unsustainable

Negotiable

Agreed:

Under Review:



Decision Template

"Negotiationparameter" (5/5)



ACEA-Walk-In-Position vs. EU-COM-Position - Results

Feedback of 10 Manufacturer

Compromises - including political influences:

Difference EU COM to C1
(close to COM with
important elements of ACEA)
New

Difference C1 to C2

Difference C2 to C3

Consolidated
Manufacturer
Compromise-Position

Levels of Negotiation:

Level 3

Level 2

Level 1

Parameter	ACEA-Walk-In Position	Feedback [numbers]	EU-COM-Position	ACEA Compromise C1	ACEA Compromise C2	ACEA Compromise C3	Consolidated Manufacturer Compromise-Position
Scope	Gas-PEMS: only Diesel NOx, CO without limit	5	Gas-PEMS: NOx, CO without limit	Gas-PEMS: NOx, CO without limit	Gas-PEMS: NOx, CO without limit	Gas-PEMS: NOx, CO without limit	Gas-PEMS: Diesel NOx, Diesel and gasoline CO without limit, gasoline NOX w/o limit; Gasoline timing aligned with PN PEMS, PN only Gasoline
		5					
	PN-RDE: only Otto DI	5	PN-PEMS: t.b.d.	PN-PEMS: only Otto DI	PN-PEMS: only Otto DI	PN-PEMS: only Otto DI	PN-RDE: only Otto DI
		4					
		1					
Normalization-Tool	1 tool, validation until end of 2015	2	Both tool still open	Both tool still open	Both tool still open	Both tool still open	Of course we would want single tool ASAP. We think we need two tools open because validation does not allow selection of tools during 2015.
		5					
		3					
Additional Parameters?!							
Verification Test of Equipment	Required as Pre-Test		Recommended as post-test, if abnormality observed	Recommended as post-test, if abnormality observed	Recommended as post-test, if abnormality observed	Recommended as post-test, if abnormality observed	From procedure point-of-view required (if OBD-is used essential). Necessary for EMRoad CO2-curve
Usage of OBD-Signals	Required (needed e.g. GSI, Pedal Pumping Detection, Mass Flow, Velocity)		not-allowed	Required (needed e.g. GSI, Pedal Pumping Detection, Mass Flow, Velocity)	Required (needed e.g. GSI, Pedal Pumping Detection, Mass Flow, Velocity)	Required (needed e.g. GSI, Pedal Pumping Detection, Mass Flow, Velocity)	Required (needed e.g. GSI, Pedal Pumping Detection, Mass Flow, Velocity)
Hybrids	no testing until final definition of test procedure including additional necessary parameters (e.g. "multiple" cold-starts, consid. of electrical power)		hybrids are tested as is	no testing until final definition of test procedureincluding additional necessary parameters (e.g. "multiple" cold-starts, consideration of electrical power)	no testing until final definition of test procedureincluding additional necessary parameters (e.g. "multiple" cold-starts, consideration of electrical power)	no testing until final definition of test procedureincluding additional necessary parameters (e.g. "multiple" cold-starts, consideration of electrical power)	no testing until final definition of test procedure including additional necessary parameters (e.g. "multiple" cold-starts, consideration of electrical power) fall back: hybrid testing only charge sustaining mode
Cold start emission	Hot start		Weighting	Hot start	Hot start	Hot start	Step1 : Hot start Step2: Weighting

Theory of colors : Must have Give up if absolutely unsustainable Negotiable

Agreed: ☒

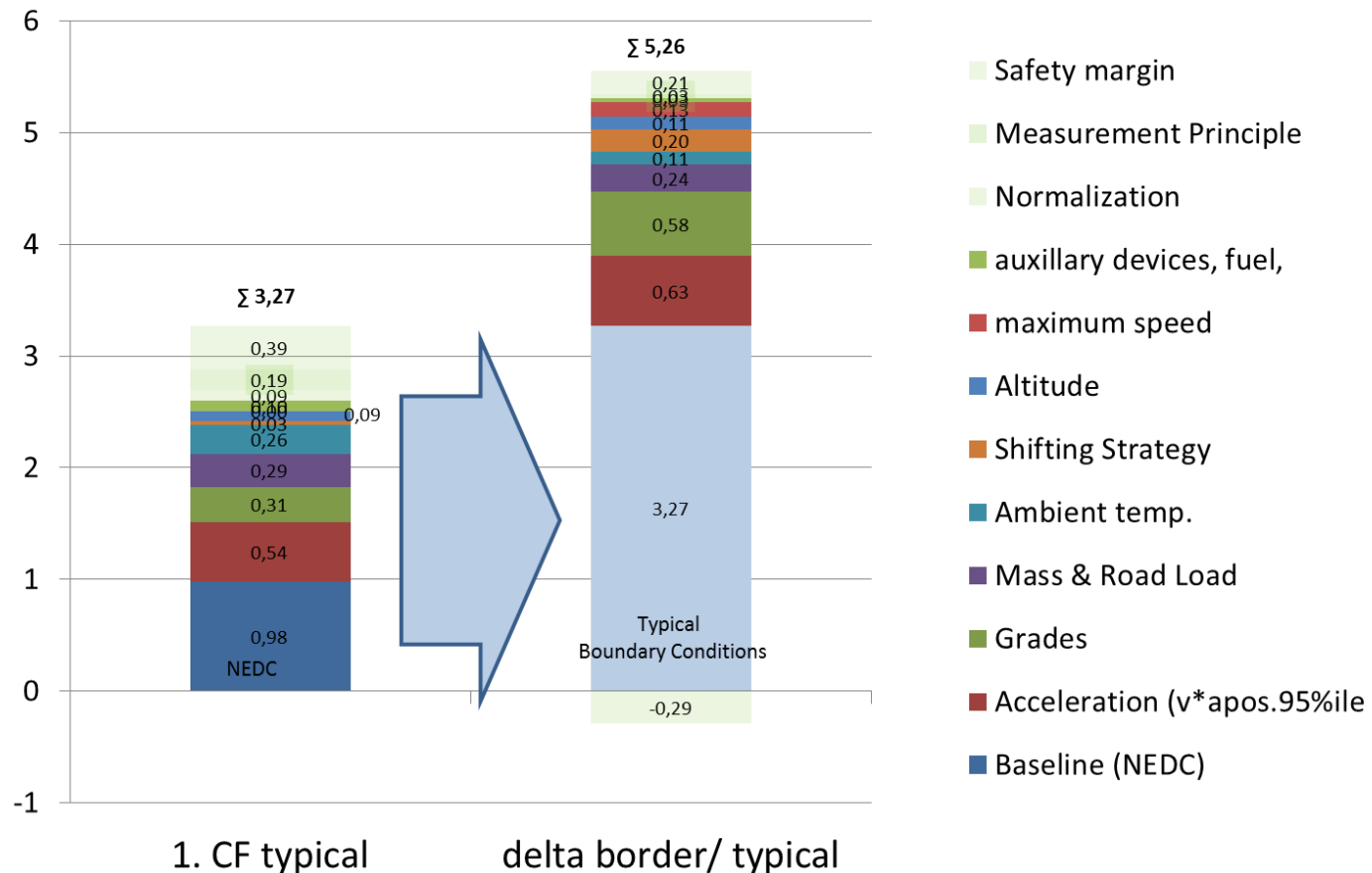
Under Review: ☐



Sub-Group CF's Argumentation Presentation

CF's Argumentation Presentation

- Technical Background for shown CF's - *Online discussion during Telco -*





Annex



Influencing Boundary Conditions

