

RDE: Requirements for an effective Instrument

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PUBLIC HEARING
"REAL DRIVING EMISSIONS TESTS"
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About DUH

- German non governmental organization for nature protection and consumer protection
- Founded in 1975
- Budget 2015: ca.8 Mio.€
- 12,000 financial sponsors
- 80 staff members
- Offices in Berlin, Radolfzell and Hannover

Diesel-Gate: State of play

- DUH made public since 9/2007, that most car manufacturers use defeat devices to meet the limits
- German Ministry for Transportation was informed Feb. 11th, 2011 by DUH about alarming NOx-testing results of an VW Passat Euro 6 (with the E189 scandal engine)
- Real NOx emission of Euro 6 diesel cars are on average 6 to 7 times higher than the Euro 6 limit value (TNO, ICCT)
- DUH-tests on NOx emission and defeat device show alarming results and clear violations by all tested vehicles: Opel Zafira, Renault Espace, BMW 1 series (GDI), Mercedes C-Class, Fiat 500x
- All tested cars exceed NOx limit value up to factor 25 and show clear indicators for defeat devices
- German Kraftfahrtbundesamt (KBA) denies law enforcement of EC 715/2007
- First tests of recall VW-Am^aro^k cars show no NOx Reduction, real emissions like before >1.500 mg/km!



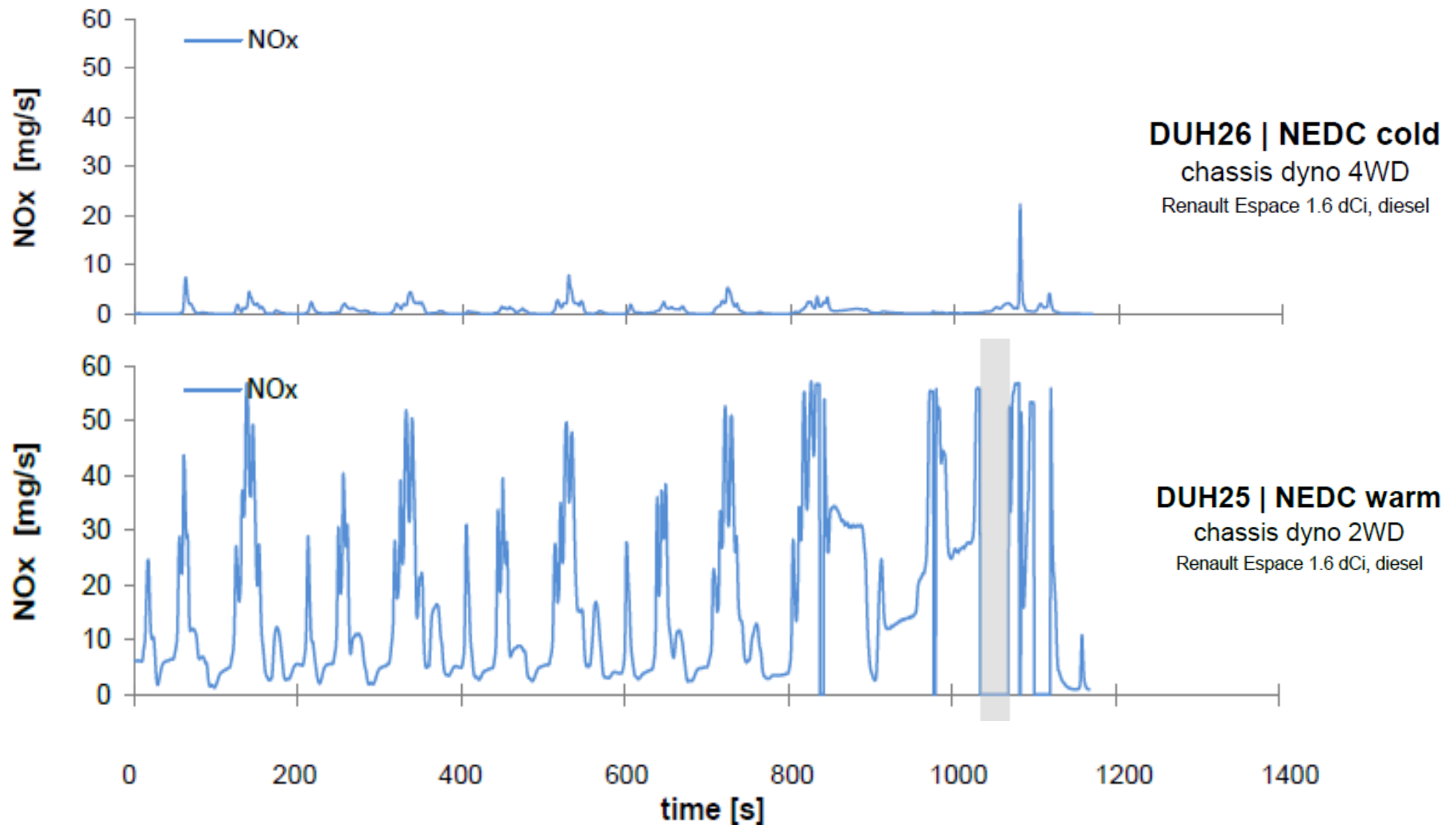
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DUH emission testings and legal actions

- **DUH testing program** for Euro 6 cars for **CO2 + NOx emissions** and **investigation** of violations against EC 715/2007 („in normal use“ and „**defeat device**“, Art. 5-1 and 5-2) in Switzerland
- **Immediate publication** of all found NOx emissions and indicators for defeat devices to the public, national authorities and EU Commission
- **Consumer right enforcement:** Support for selected car owners to enforce their rights in principal legal cases
- **Legal activities:**
 - **Formal claim** to withdraw type approval Opel Zafira and Mercedes Benz C-Class (KBA)
 - **Legal action** against Germany to force KBA to make public all **VW recall-obligations** on CO2 and NOx
 - **Legal cases** against German regions and cities failing the NO2-limits (about 20 cases) **to enforce compliance with air quality directive** (since 2005)
 - Recently **13 legal cases** against the **most polluted cities** and regions pending, up to now all won
 - We expect first court decisions on principal **diesel car bans** in 2016

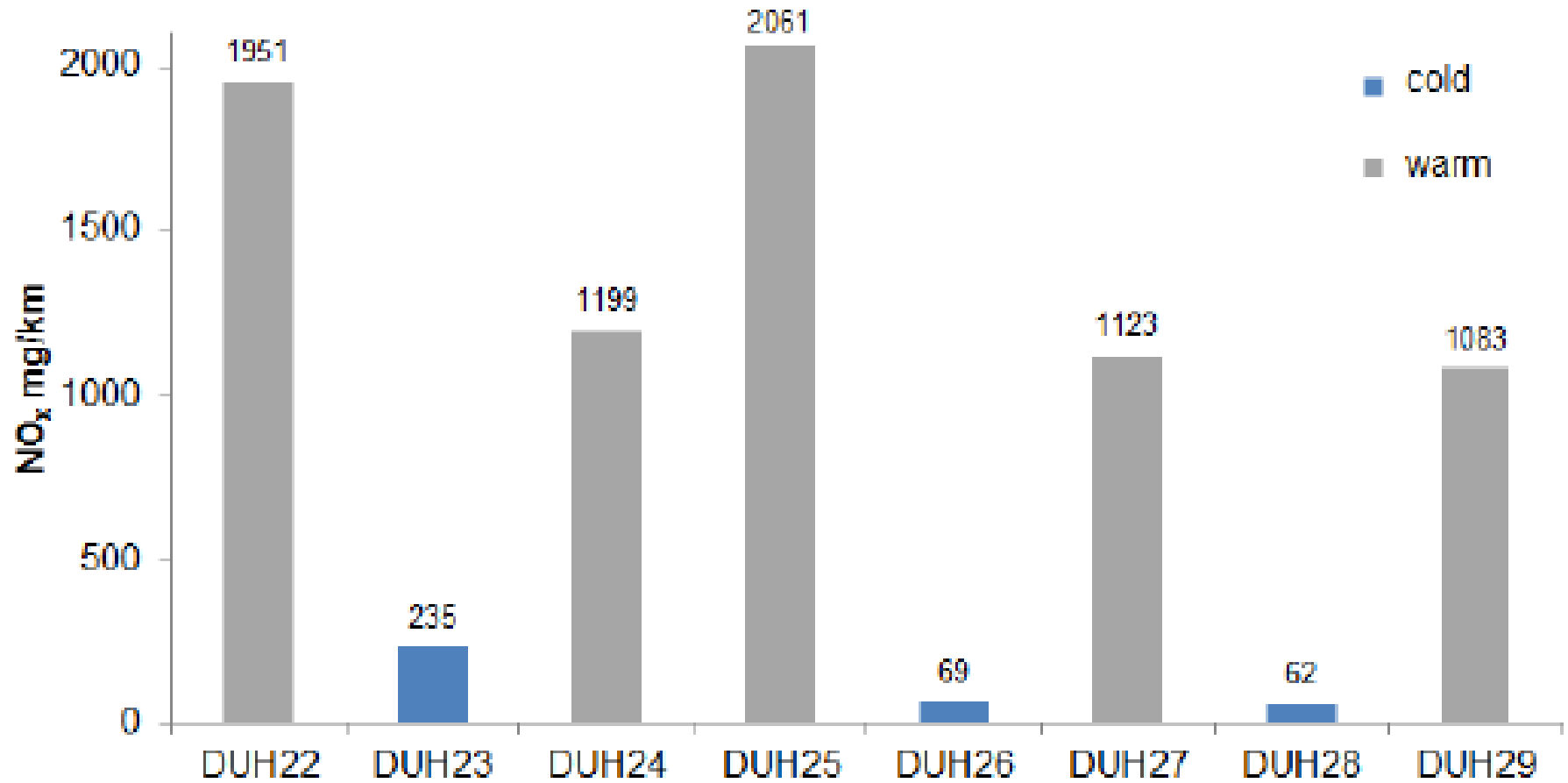


Renault Espace 1.6 dCi Euro 6b



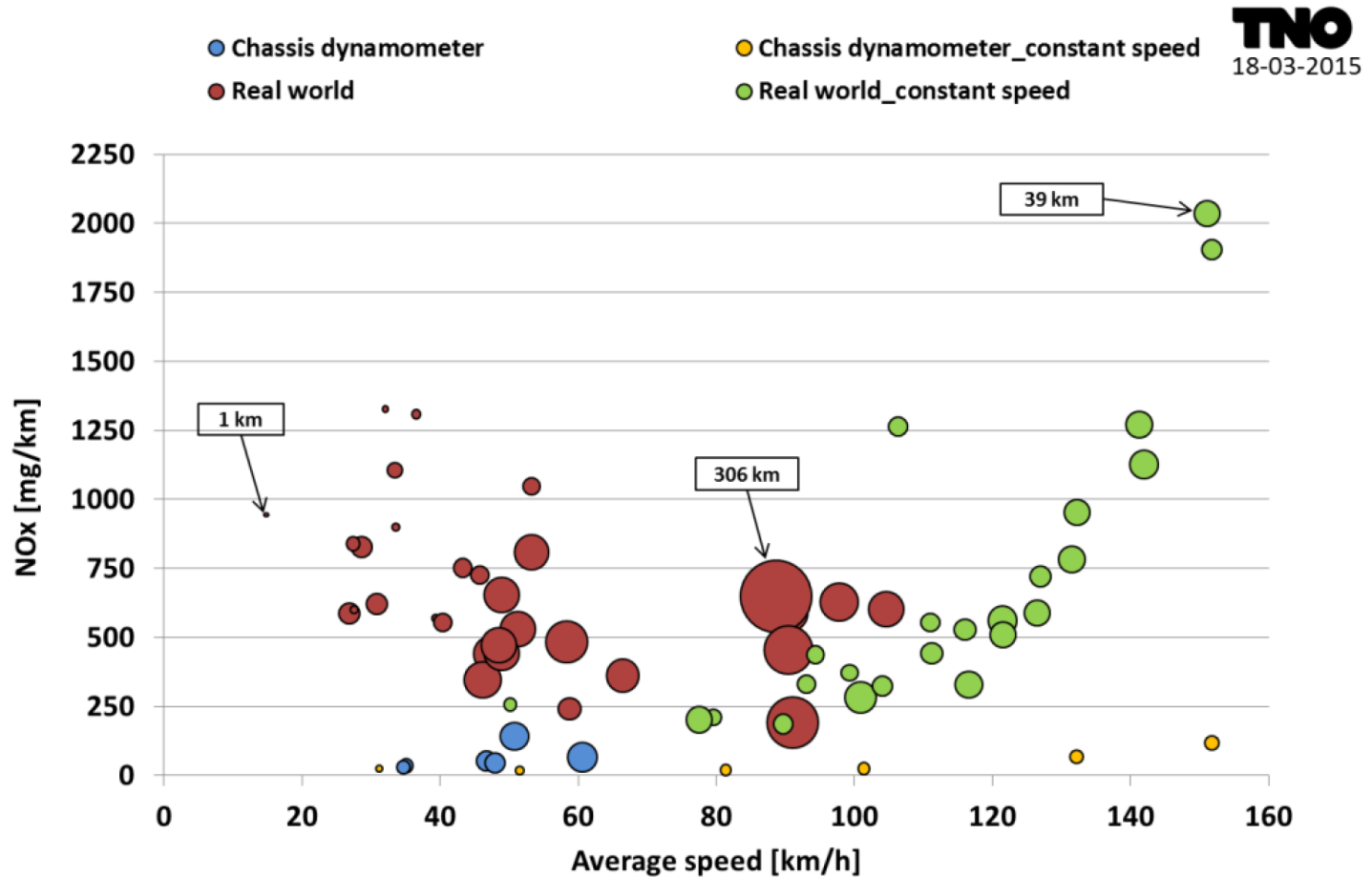
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Renault Espace 1.6 dCi Euro 6b



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Daimler C 220 D Euro 6



Bubble size depends on trip distance

Figure 22: **Post**-SCR NOx emissions of vehicle M1 of on-road trips and chassis dynamometer tests.

DUH critique on RDE-decision

- **Weakening** of binding limit values (negative precedent)
- Until 09/2019 **unlimited exceedance**
- 2019 to 2021 exceedance of limit value by 110%
- 50% exceedance beyond 2021
- Cycle beating and defeat devices not clearly forbidden
- Realistic speed-up and load excluded
- RDE still vulnerable to defeat strategies (“golden cars”)
- Finally: Car manufacturer produce clean diesel cars for the US and 4-times dirtier diesel cars for the EU

Necessary improvements on RDE

- **Ensure compliance** with limit value: CF of 1.0 by 2017
- **Temperature range** for “in normal use” in Europe (at least between -7 to 35°C)
- **Include cold start** for urban environment and **high load**
- **Monitor** and **expand boundaries** of RDE test procedure for ongoing improvement
- **RDE** rather for **in-use-testing** for **compliance** and **enforcement** than for type approval only
- **Transparency**: immediate publication of all data, together with engine family and model name
- Introduction of a **deterrent penalty system**
- Periodic inspection of technical services

What we can learn from US system

- **Strong consumer organizations** like Consumer Watchdog: successful campaign for the financial compensation of false fuel consumption data on more than 900,000 Kia/Hyundai cars
- **Independent testing** by the EPA (15-20% of all new cars and if there are special indications) in **state owned labs**
- 5 different lab tests, RDE and since 2015 a **surprise testing** (“We test on the street but we don’t tell how”)
- **High penalties** in case of violation and **transparent publication** of all relevant data to intensify the pressure to manufacturer



New type approval system needed!

1. **Debureaucratisation:** type approval today means 2,000 pages, no chance for authorities to check accurate
2. **RDE for all categories** of vehicles, **fuels** and all relevant **pollutants**, including **CO₂**.
3. **Self-certification** and consequent **law enforcement:** Manufacturers assure to comply with all legal requirements in normal use
4. **Field monitoring** and **strict control** by national **environmental authority**, not by the type approval authority
5. **Deterrent sanction** in case of violation
6. **Transparency:** all data on declaration and control measurements (engine family and model name)
7. **EU Commission** should **audit national control authorities**



Please consider the several hundred
thousand victims of criminal air pollution

Thank you for your attention

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