



EPA Certification & Compliance Program Update

EMA Certification Workshop

April 19, 2016





**Diesel Engine Compliance Center
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DC Office

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Jason Gumbs
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AA Office

**Allen Duncan
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Steve Healy
Peter Smith
Ron Schaefer**

*Senior Environmental Employment
Program Enrollee



Certification Assignments

HD On-Highway Engines and Vehicles*

- Fakhri (FJ) Hamady
- Steve Healy
- Ron Schaefer

*Including GHG and alt fuel conversions

Nonroad

- Steven DeBord
- Allen Duncan
- Jason Gumbs
- Peter Smith
- Melvis Strickland

Marine*

- Steven DeBord
- Melvis Strickland

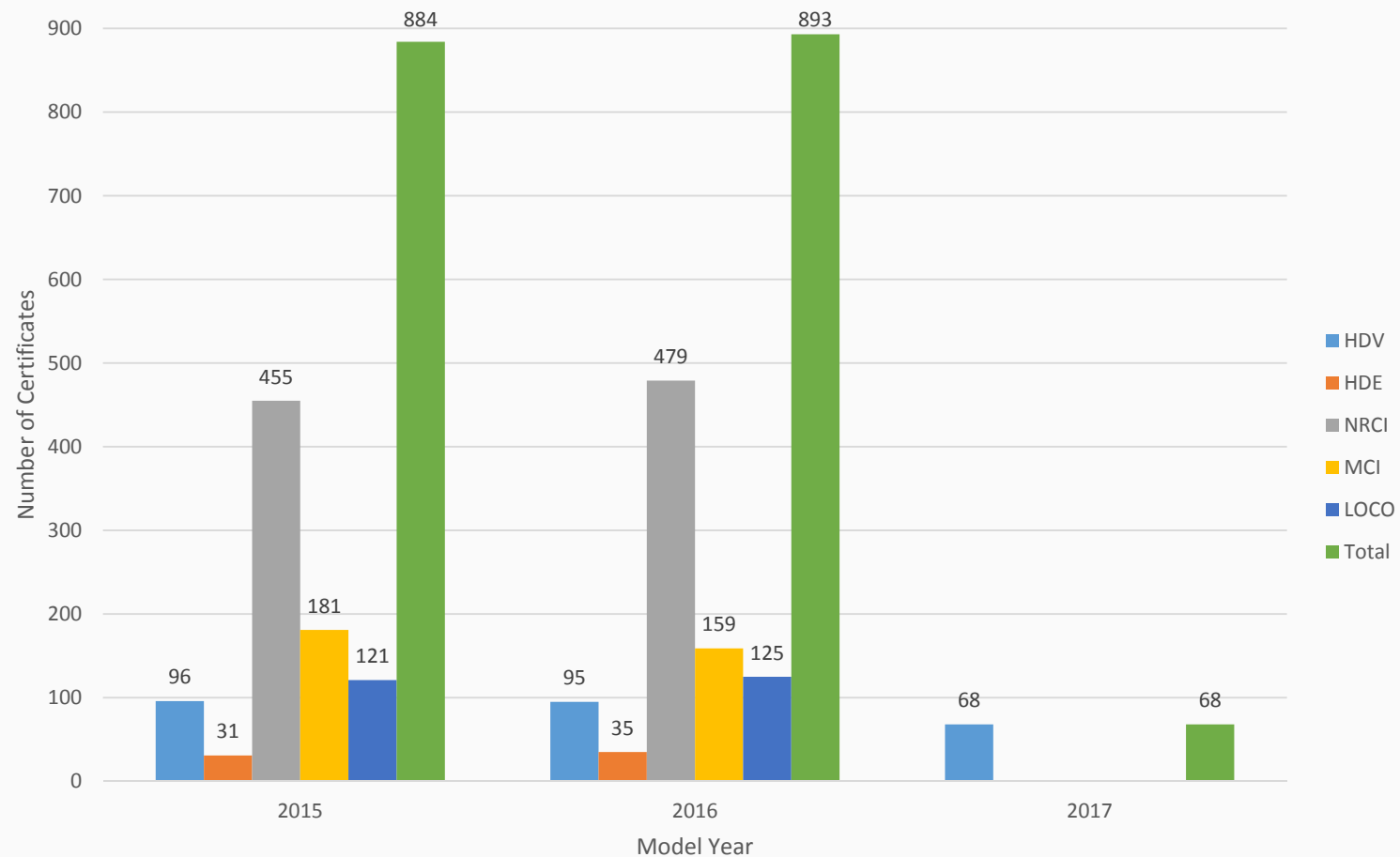
*Including IMO

Locomotive

- Allen Duncan
- Peter Smith

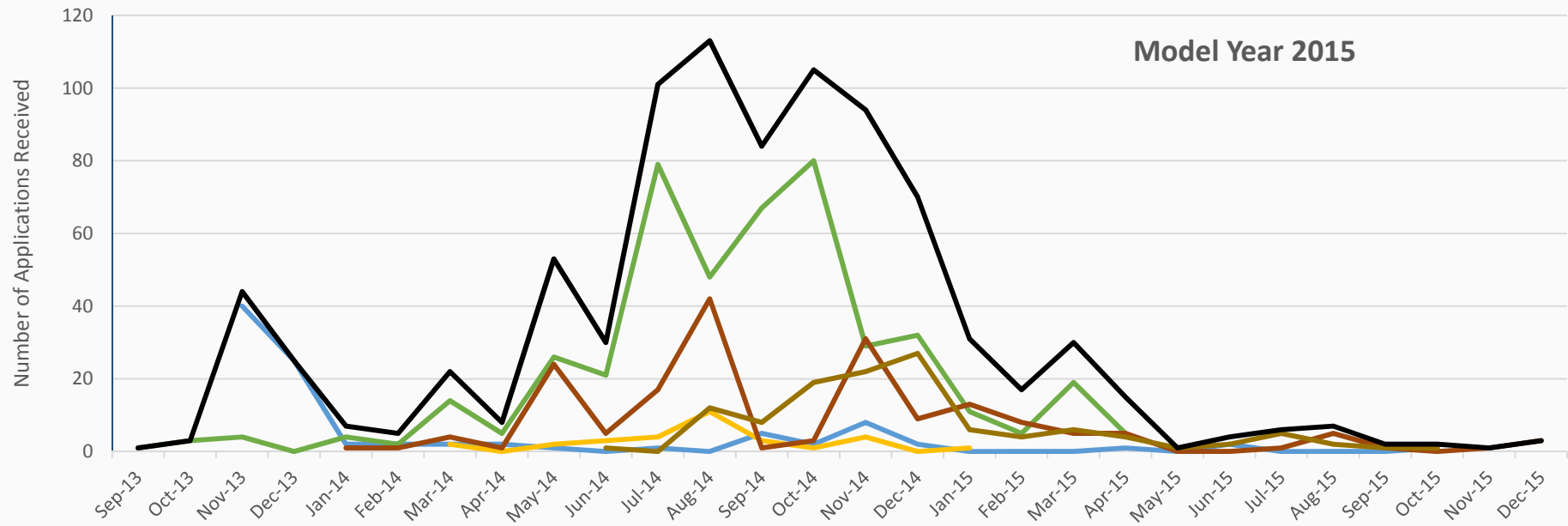


Certificate Issuance by Model Year





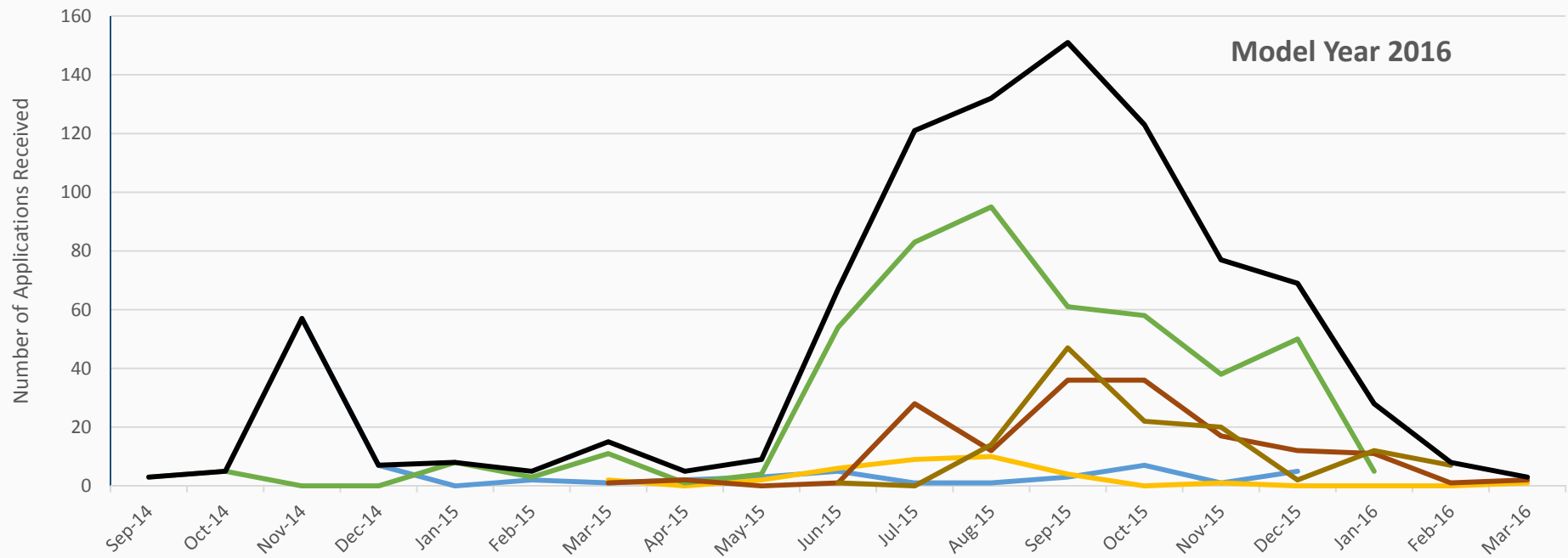
Certification Application Submittals



| | Sep-13 | Oct-13 | Nov-13 | Dec-13 | Jan-14 | Feb-14 | Mar-14 | Apr-14 | May-14 | Jun-14 | Jul-14 | Aug-14 | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| HDV | | | 40 | 25 | 2 | 2 | 2 | 2 | 1 | 0 | 1 | 0 | 5 | 2 | 8 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | | |
| HDE | | | | | | | 2 | 0 | 2 | 3 | 4 | 11 | 3 | 1 | 4 | 0 | 1 | | | | | | | | | | | | |
| NRCI | 1 | 3 | 4 | 0 | 4 | 2 | 14 | 5 | 26 | 21 | 79 | 48 | 67 | 80 | 29 | 32 | 11 | 5 | 19 | 5 | | | | | | | | | |
| MCI | | | | | 1 | 1 | 4 | 1 | 24 | 5 | 17 | 42 | 1 | 3 | 31 | 9 | 13 | 8 | 5 | 5 | 0 | 0 | 1 | 5 | 1 | 0 | 1 | 3 | |
| LOCO | | | | | | | | | | 1 | 0 | 12 | 8 | 19 | 22 | 27 | 6 | 4 | 6 | 4 | 1 | 2 | 5 | 2 | 1 | 1 | | | |
| Total | 1 | 3 | 44 | 25 | 7 | 5 | 22 | 8 | 53 | 30 | 101 | 113 | 84 | 105 | 94 | 70 | 31 | 17 | 30 | 15 | 1 | 4 | 6 | 7 | 2 | 2 | 1 | 3 | |



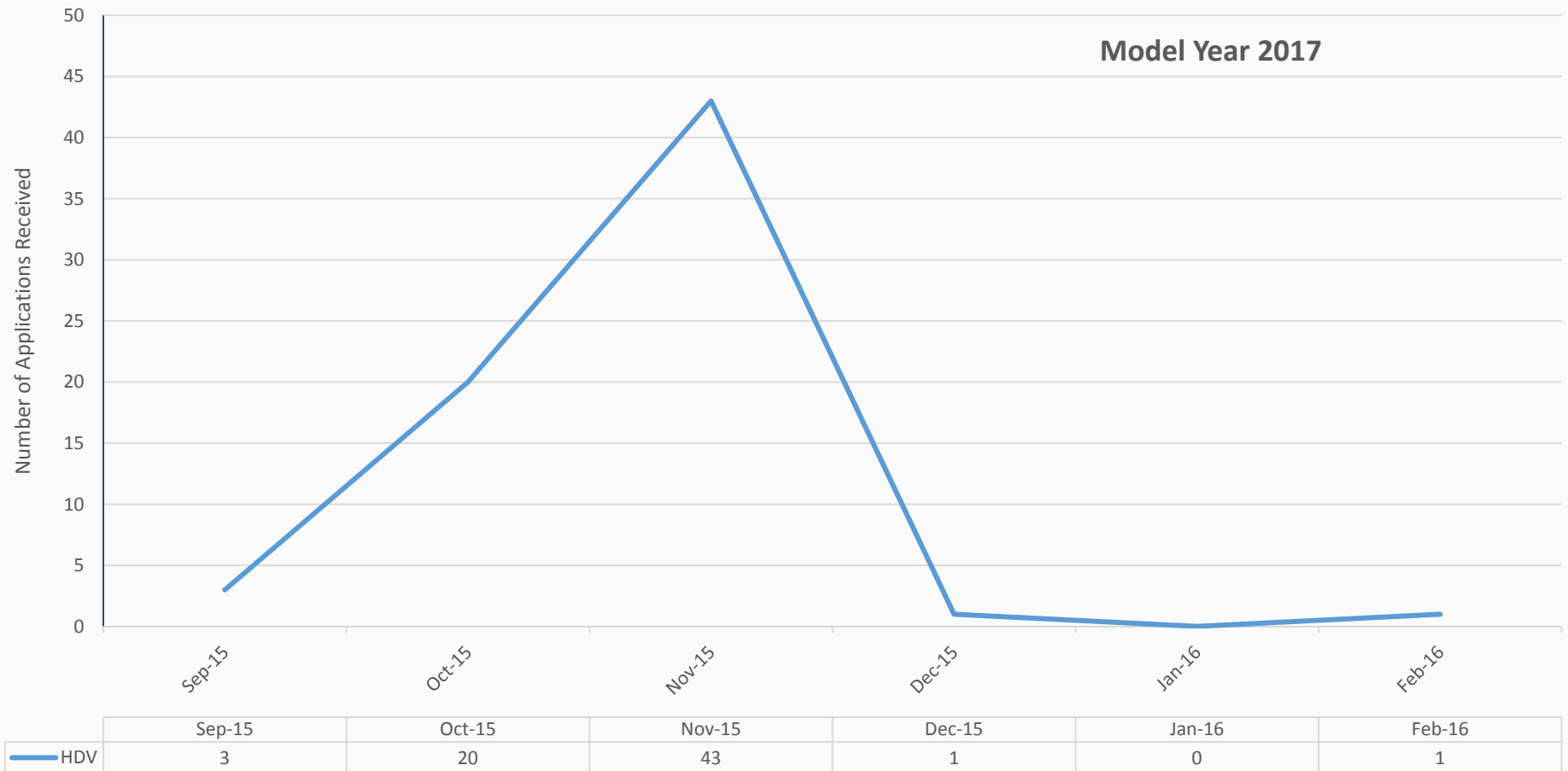
Certification Application Submittals



| | Sep-14 | Oct-14 | Nov-14 | Dec-14 | Jan-15 | Feb-15 | Mar-15 | Apr-15 | May-15 | Jun-15 | Jul-15 | Aug-15 | Sep-15 | Oct-15 | Nov-15 | Dec-15 | Jan-16 | Feb-16 | Mar-16 |
|--------------|----------|----------|-----------|----------|----------|----------|-----------|----------|----------|-----------|------------|------------|------------|------------|-----------|-----------|-----------|----------|----------|
| HDV | | | 57 | 7 | 0 | 2 | 1 | 2 | 3 | 5 | 1 | 1 | 3 | 7 | 1 | 5 | | | |
| HDE | | | | | | | 2 | 0 | 2 | 6 | 9 | 10 | 4 | 0 | 1 | 0 | 0 | 0 | 1 |
| NRCI | 3 | 5 | 0 | 0 | 8 | 3 | 11 | 1 | 4 | 54 | 83 | 95 | 61 | 58 | 38 | 50 | 5 | | |
| MCI | | | | | | | 1 | 2 | 0 | 1 | 28 | 12 | 36 | 36 | 17 | 12 | 11 | 1 | 2 |
| LOCO | | | | | | | | | | 1 | 0 | 14 | 47 | 22 | 20 | 2 | 12 | 7 | |
| Total | 3 | 5 | 57 | 7 | 8 | 5 | 15 | 5 | 9 | 67 | 121 | 132 | 151 | 123 | 77 | 69 | 28 | 8 | 3 |

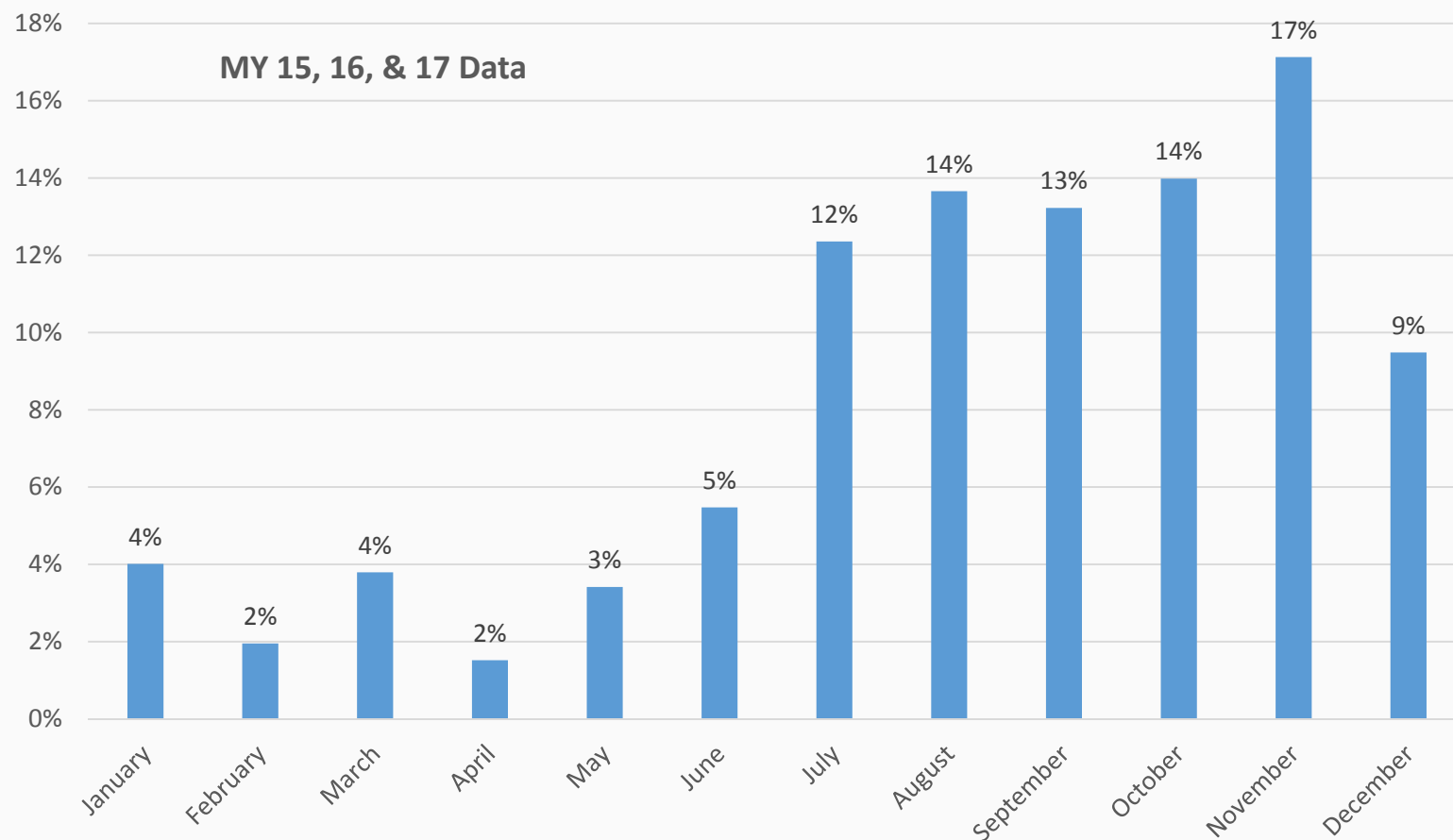


Certification Application Submittals



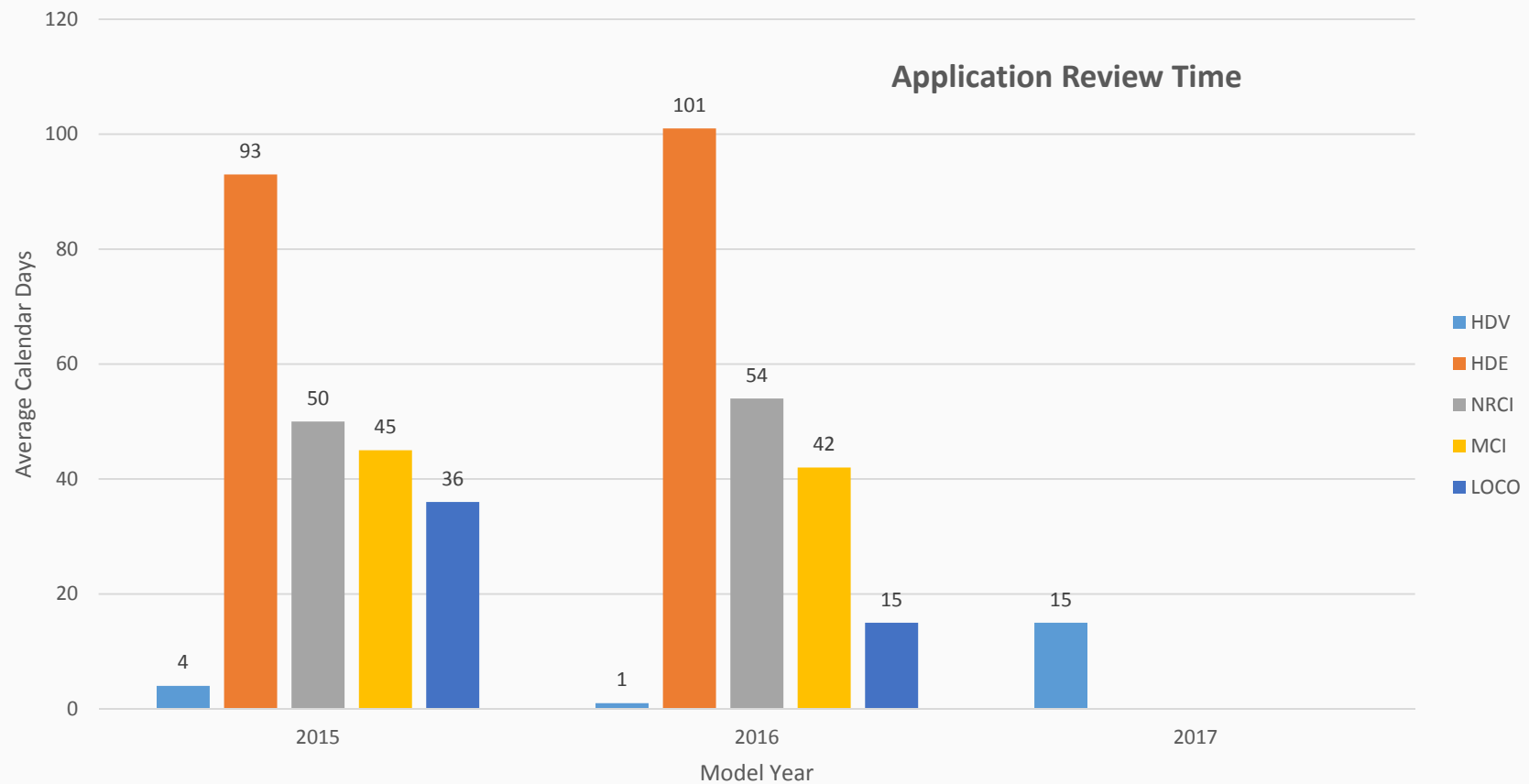


Certification Application Submittals



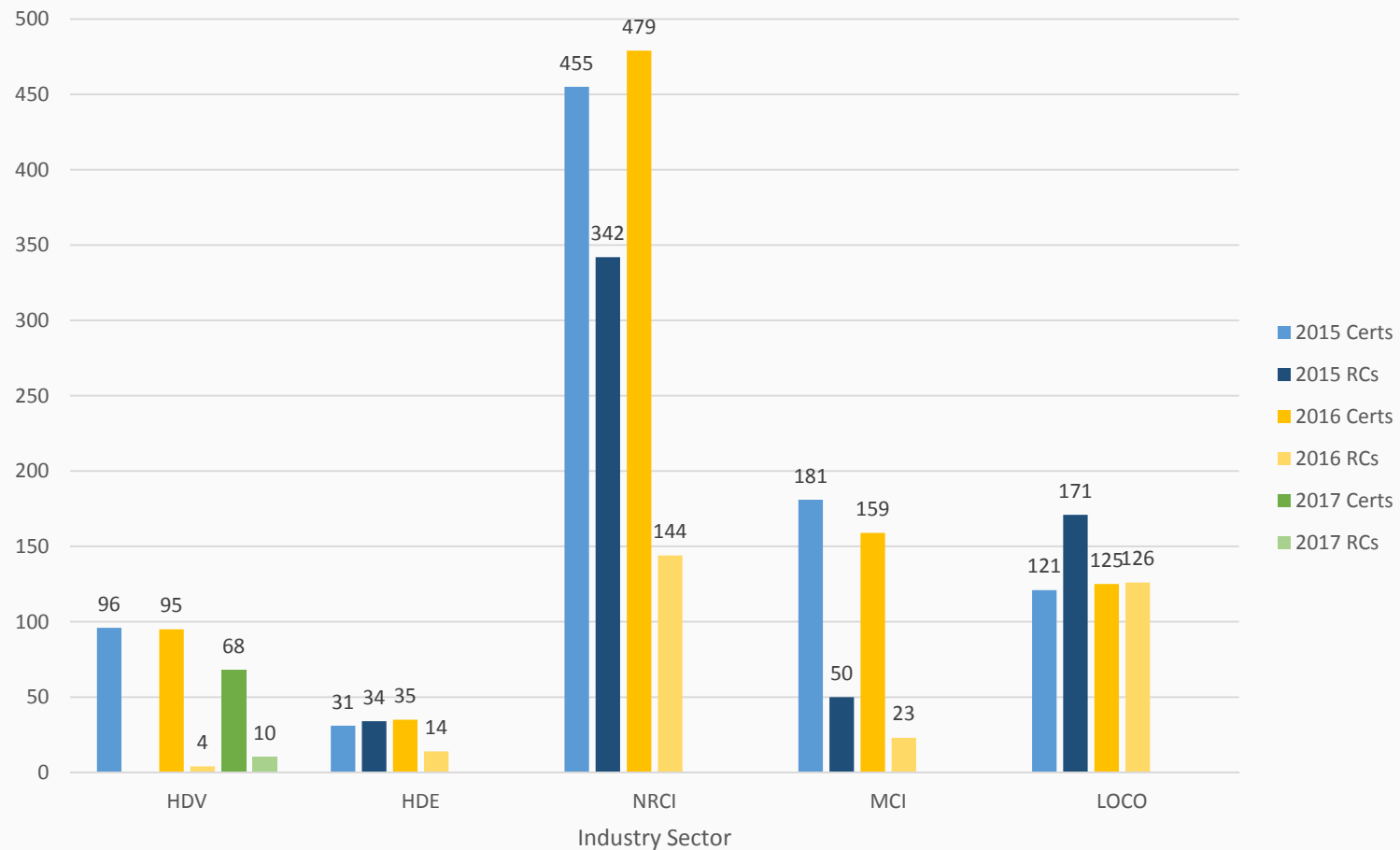


Certification Application Review





Running Change Applications





Certification Focus

- Certification review for new engine families in all sectors, emphasizing the following:
 - Continued oversight on screening AECDs for defeat devices
 - Ensuring appropriate phase out of NTE deficiencies
 - Evaluation of emissions deterioration factor test programs and carry-across proposals
 - Ensuring appropriate DEF quality detection strategies in place for SCR engine families
- Why the focus on these areas?
 - Long-standing concerns about potential defeat devices embedded in complex emission control strategies and reasonable accounting for emissions deterioration at certification
 - Ongoing emissions standards transitions and phase out of flexibilities
 - Follow-through on SCR adjustable parameter guidance



AECD Reviews

- Reviewing AECDs for potential defeat devices can be one of the most time-consuming components of certification
- To facilitate screening process:
 - Be sure all AECDs are disclosed
 - Develop one comprehensive document that represents all AECDs
 - Describe AECDs that are present in every engine family you plan to certify
 - For an individual certification application, “gray-out” those AECDs which do not apply
 - Use the template found at the end of guidance letter CCD-04-12 (June 15, 2004) for reporting each AECD and provide thorough information to support your statements
 - Group AECDs by justification that they are not defeat devices:
 - Those that do not reduce the effectiveness of the emission controls
 - Those that are substantially included in the applicable test procedures
 - Those that are necessary to prevent engine damage
 - Those that are active only during starting of the engine
 - Those that are a part of the design for engines installed in emergency vehicles/equipment
 - Familiarize yourself with past Agency guidance on the topic, including VPCD-98-13 and CCD-01-02



Carryover Engine Families

- Manufacturers routinely submit running changes after certification and certify the same family as a carryover in subsequent years
- For carryover engine families, it's helpful for manufacturers to identify any changes from the previous model year
 - Verify database only notifies your EPA contact of running change submittals if you request that a new certificate be issued
 - Time is wasted in the review process if we have to determine for ourselves what has changed from one model year to the next
 - Creates challenges later if we find issues with a significant running change that have not been thoroughly vetted
- When submitting running changes, we encourage you to also communicate with your EPA contact about the submittal outside of Verify



Status of Electronic Certification

- Verify
 - EPA's engine and vehicle compliance information system (<http://epa.gov/otaq/verify/>)
 - Web-based system consisting of two elements
 - Manufacturer interface – consists of web screens and programs that collect and process manufacturer data
 - EPA Interface – gathers, processes, and stores data, issues certificates, and supports compliance functions (access limited to EPA staff)
 - With HD Vehicles and HD Engines in May and August 2015, all certification modules have been deployed into production
 - Data sharing with NHTSA for HD GHG
 - Compliance information shared securely with NHTSA through automated data transfer
 - Relevant certification information will be shared securely through the same process
 - Estimated completion of this functionality within 1-2 months
 - All existing Verify data will be shared with NHTSA when process is complete
 - EPA will continue to implement Request for Certificate/CROMERR process for the remaining industries that have not yet been implemented this year
 - NRCI
 - Locomotive
 - Motorcycles/ATV



Certification Data

- Posting of Manufacturer Certification Data
 - Using Class Determination (CD-13-05 – Class Determination of Confidential Business Information) to organize and expand the certification data we currently post on EPA’s website:
<http://www.epa.gov/otaq/certdata.htm>
 - Certification data for all industries is posted on a quarterly basis (January, April, July, and October)
 - Data is not posted until the manufacturer-submitted “Introduction into Commerce” date has passed
 - HD GHG data will be included with postings later this month



Manufacturer Compliance Reporting

- Standardized reporting tools have been developed to facilitate collection of post-certification compliance information
- Engines subject to criteria pollutant standards
 - Templates are MS Excel-based
 - Cover production volume data, AB&T credits, PLT data, and in-use test data (locomotives only)
 - Templates available at <http://www.epa.gov/otaq/certdat2.htm>
 - Submit reports using process outlined at <https://www3.epa.gov/otaq/certdat2.htm#compl-rpt>
- Engines/vehicles subject to GHG standards
 - Web application accessed through CDX account (same interface as Verify certification modules)
 - Covers production volume data, AB&T credits, and off-highway exempted production volume data
 - For more details, see HD GHG ABT presentation at <http://epa.gov/otaq/verify/publications.htm#presentations>



Manufacturer Compliance Reporting

- Data will be reviewed in conjunction with certification applications
- Failure to report may result in:
 - Referral of violation to OECA for possible assessment of civil penalties
 - Revocation, suspension, or voiding of current or prior model year certificates
 - Denial of new certificates
- Information contained in reports is used to make stand-alone compliance determinations (e.g., PLT and ABT), to prioritize compliance oversight activities, and as a data source to assess rule effectiveness



Manufacturer In-Use Testing

- 2014 selections for on-highway sector
 - 31 vehicles tested from 7 engine families representing 6 manufacturers
 - With one exception, all vehicles tested reported pass ratio > 0.90 for all pollutants
 - Testing deferred for one engine family due to failure in previous testing year and ongoing recall
- Selections for 2016 coming in June
- Currently working with CARB and EMA in-use committee to revise reporting schema for future data submissions



EPA Compliance Testing

- Compliance testing program continues with goal to:
 - Ensure benefits stated in rulemakings are reflected in real world operation
 - Address level playing field issues for all market participants
 - Address compliance issues for new and in-use engines



EPA Compliance Testing

- Compliance testing and analysis will utilize all of the available tools, including:
 - Confirmatory tests
 - Selective enforcement audits
 - General laboratory and records audits
 - In-use data evaluation from manufacturer and EPA test programs
 - Informal site visits
- Important that manufacturers submit certification and production plans
 - Ensures timely selection and performance of compliance testing
 - See CD-13-06 (March 2013) for further instructions
- Also important that manufacturers maintain up-to-date contact information in Verify



Emission-Related Defects and Voluntary Recalls

- Part 85 – HD on-highway sector (may optionally report via Part 1068)
 - Electronic reporting system (EDIR/VERR System)
 - Replaced hardcopy reporting process on August 30, 2011
 - Reporting documents and instructions can be found at <http://epa.gov/otaq/verify/publications.htm#edir>
- Part 1068 – Nonroad and other sectors
 - Plan to include in electronic EDIR/VERR System in the future
 - Use specified format for reporting found in regulations
 - Submit electronic (preferred) or hardcopy report to Justin Greuel and your EPA certification representative



Transition Program for Equipment Manufacturers (TPEM)

- New website
 - See <https://www3.epa.gov/otaq/tpem.htm>
 - Resource for program participants that will be updated periodically with general guidance
- Hardship relief
 - Equipment manufacturers in need of hardship relief should be referred to <https://www3.epa.gov/otaq/tpem-hardship.htm> for information on the application process



Compliance Report

- EPA issued compliance reports in 2007 and 2008, 2009-2011, and 2012-2013
 - Reports present convenient reference for environmental data collected from manufacturers and generated in our test programs
 - Available at <http://www.epa.gov/otaq/hwy.htm>



Contacts by Topic

| | |
|---------------------------------------|--|
| Compliance Reporting (ABT, PLT, etc.) | Richard Deadwyler, Nydia Yanira Reyes-Morales |
| Confirmatory Testing | Ron Schaefer, Peter Smith |
| Emission Defect/Recall Reporting | Fakhri (FJ) Hamady |
| HD In-Use Testing Program | Fakhri (FJ) Hamady |
| Locomotive In-Use Testing Program | Peter Smith |
| TPEM Program | TPEM Help Desk – TPEM- CI@epa.gov or (734) 214-4100 |
| TPEM Hardship Relief | Hardship Relief Help Desk – TPEMHardshipRelief@epa.gov or (888) 697-2367 |



Contact Information

| | | |
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