

# OZONE SEASON SUMMARY 2019

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Environmental Planner III

Air & Climate Public Advisory Committee  
June 17, 2019

# Peak 8-Hour Average Ozone Levels (ppb)

March 2019							April 2019							May 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
24	25	26	27	28	01	02	31	01	02	03	04	05	06	28	29	30	01	02	03	04
					35	38		48	48	57	58	45	54				39	48	44	39
03	04	05	06	07	08	09	07	08	09	10	11	12	13	05	06	07	08	09	10	11
42	48	44	43	47	44	43	56	47	55	56	45	47	49	31	50	59	43	44	42	38
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18
40	50	55	56	54	46	52	42	45	51	54	58	37	47	39	34	41	51	58	55	66
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
49	47	51	53	45	48	48	43	45	58	56	55	48	56	56	54	44	50	52	56	53
24	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31	
54	55	47	49	55	55	63	46	45	62					52	51	45	56	51	59	
31																				
47																				

Month:  Pollutant:

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						01 AQI:101 details
02 AQI:61 details	03 AQI:44 details	04 AQI:49 details	05 AQI:58 details	06 AQI:77 details	07 AQI:64 details	08 AQI:74 details
09 AQI:41 details	10 AQI:28 details	11 AQI:41 details	12 AQI:47 details	13 AQI:39 details	14 AQI:38 details	15 AQI:50 details
16 AQI:53 details	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

1 Code Orange Day, 31 Code Yellow Days, 76 Code Green Days

Analysis is based on draft and incomplete data as of June 17, 2019.

## 2019 Ozone Exceedances

Date	Monitors Exceeding	Highest Monitor	8-Hr Max (ppb)
6/1	1	Franconia	71

Analysis is based on draft and incomplete data as of June 17, 2019.

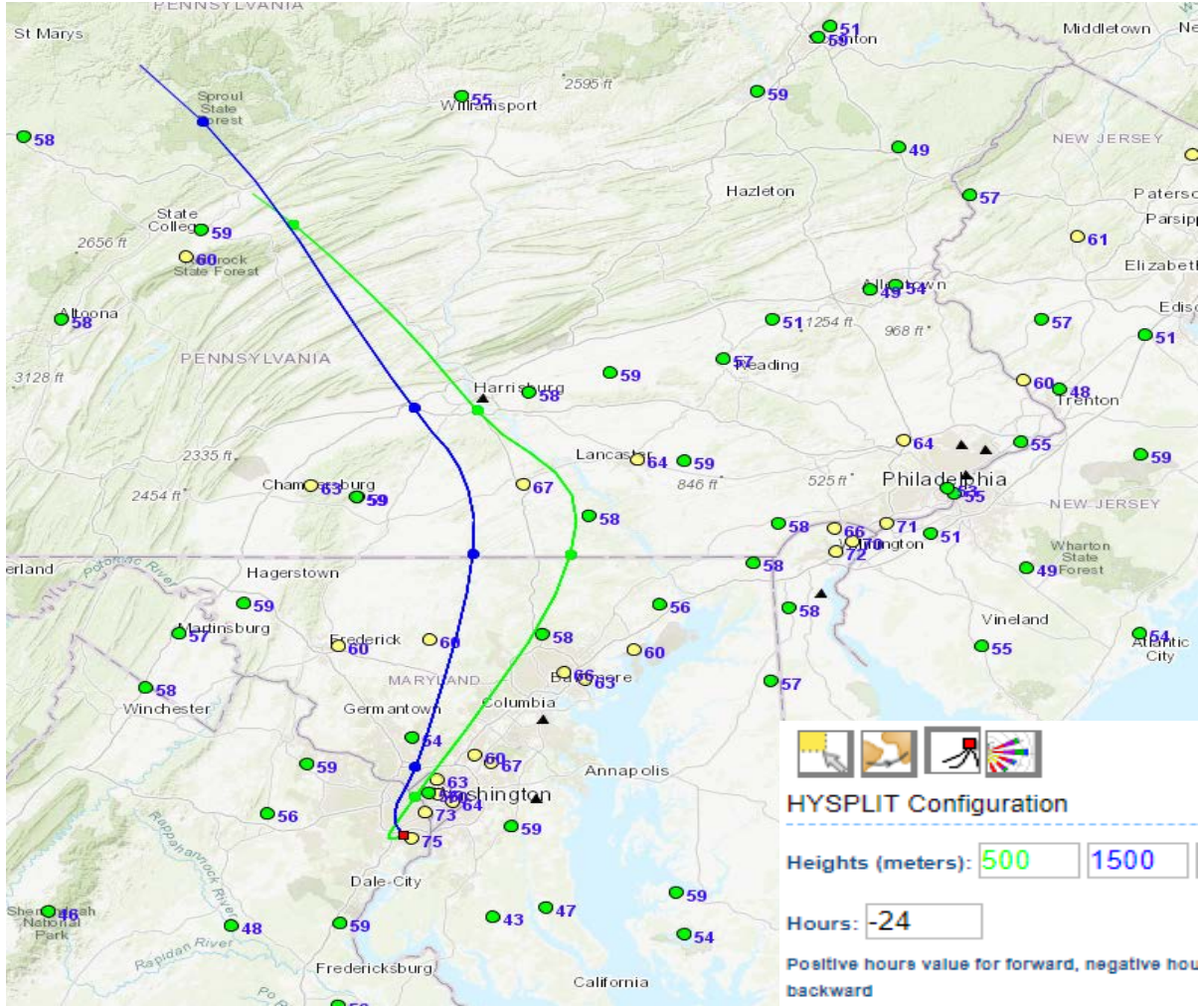


# Meteorology on Exceedance Days

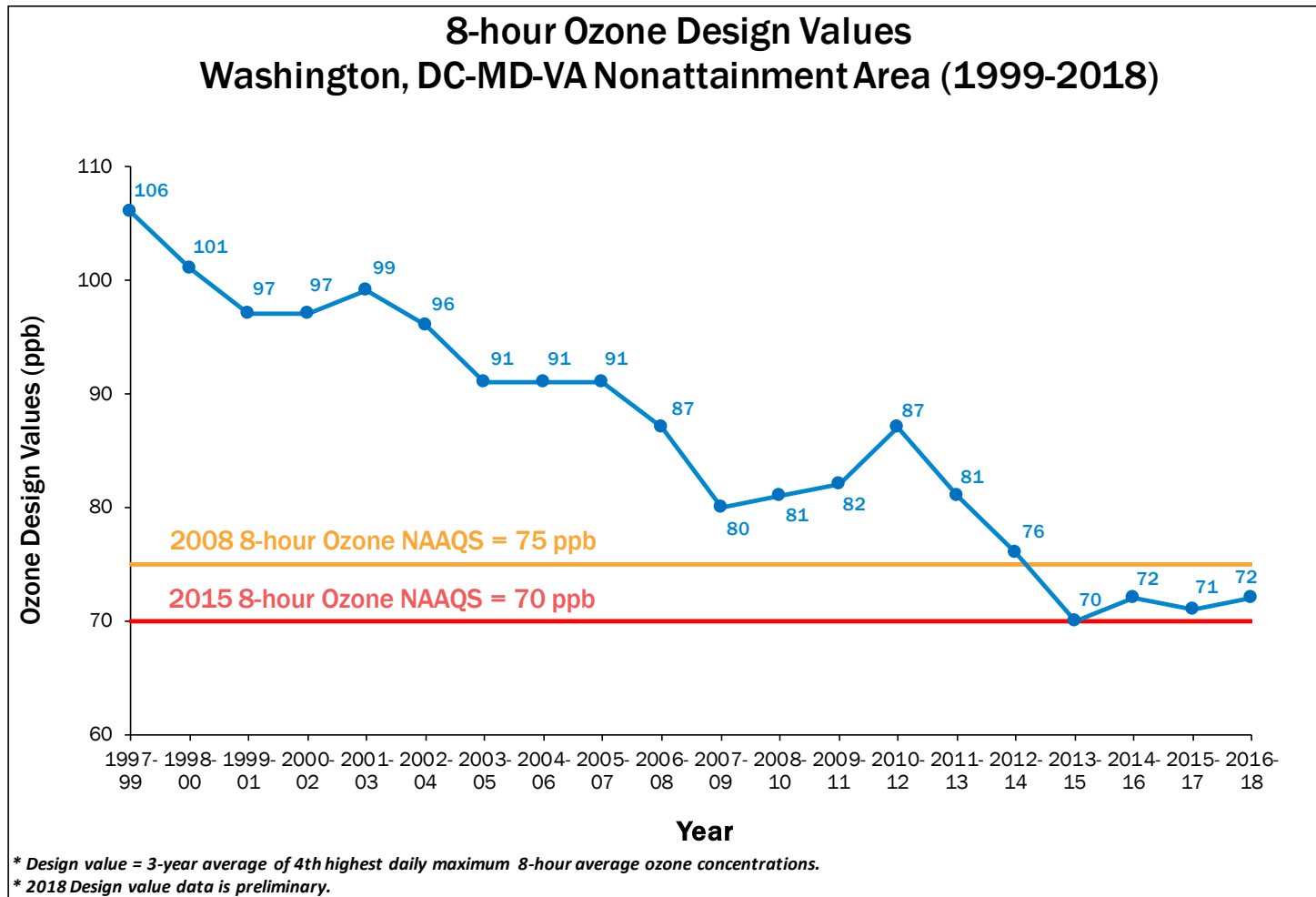
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- June 1 (Seems influenced by both transported & local emissions)
  - High Temperature: 86° F, Clear sky
  - Light northerly winds brought ozone and precursors from upstream areas
  - Ozone build up on previous day

# Wind Trajectories (June 1)



# Ozone Design Value Trend



# Why Fewer Exceedance Days Now ?

## Emission Control Programs

Federal	State	Local
Acid Rain Program (1996/2000)	Vehicle Inspection & Maintenance Programs	Renewable Energy Programs Regional Wind Power Purchase Program Clean Energy Rewards Program Renewable Portfolio Standards
Tier 2 (LD Vehicle) Rule (2004)	Maryland Healthy Air Act (2009/2012)	Energy Efficiency Programs LED Traffic Signal Retrofit program Building Energy Efficiency Programs
HD Diesel vehicle Rule (2004/2007)	Virginia CSAPR Rule	VRE Idling Reduction
NOX SIP Call (2004)	Ozone Transport Commission Rules	LOW VOC Paint
CAIR/CSAPR/CSAPR Update (2009/2015/2017)		Gas Can Replacement

# Air Quality Dashboard

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<https://www.mwcog.org/environment/data-and-tools/air-quality-progress-dashboard/>







**Turn Your Engine Off**  
**Diesel Idle Reduction Campaign**  
June 2019



# Diesel Idle Reduction Campaign

- **Mission:** Initiative aimed at decreasing diesel emissions and improving air quality in Metropolitan Washington Region
- **Purpose:**
  - Increase idle reduction awareness and control diesel emissions.
  - Promote idle reduction as a positive behavior that helps bus and truck drivers to avoid fines, save money, and cut fuel costs.
  - Improve public health and protect the environment.
- **Audience:** motorcoach and truck drivers
- **Led by** the Metropolitan Washington Council of Governments (COG), in collaboration with the District, Maryland, and Virginia.



# Diesel Idling Laws

	District of Columbia	Maryland	Virginia
Regulation:	3 minutes	5 minutes	10 minutes
Exemptions:	<ul style="list-style-type: none"> <li>• Private non-commercial passenger vehicles</li> <li>• Temperatures below 32 F (vehicles may idle for 5 minutes)</li> <li>• When necessary for the operation of power takeoff</li> <li>• Equipment such as dumping beds, cement mixers, refrigeration systems, winches, or shredders</li> </ul>	<ul style="list-style-type: none"> <li>• Traffic conditions or mechanical difficulties</li> <li>• Heating, cooling, or auxiliary equipment</li> <li>• Conform to manufacturer's specifications</li> <li>• Accomplish intended use</li> </ul>	Auxiliary power
Enforcement:	Multiple agencies including DOEE, metro police, and parking enforcement personnel	State Highway Patrol  Difficult to enforce due to exemptions	Virginia Department of Environmental Quality



# Campaign Materials

**KNOW THE IDLING LAWS :** TurnYourEngineOff.org

WASHINGTON, D.C.	MARYLAND	VIRGINIA
AVOID THE FINE <b>3</b> MINUTES	AVOID THE FINE <b>5</b> MINUTES	AVOID THE FINE <b>10</b> MINUTES
<b>FINES:</b> \$1000	<b>FINES:</b> \$500	<b>FINES:</b> up to \$25,000
<b>EXEMPTIONS:</b> • 5 min. - below 32°F • Power takeoff	<b>EXEMPTIONS:</b> • Traffic conditions or mechanical difficulties • Heating, cooling, or auxiliary equipment	<b>EXEMPTIONS:</b> • Auxiliary power

**REDUCING IDLE EMISSIONS STARTS WITH YOU:**

- Get the word of mouth rolling. Talk to other drivers about idle reduction.
- Learn about new technologies available to help companies and drivers reduce diesel idling such as automatic engine shutdown/start up controls and auxiliary power units.
- Check with your local, state and federal programs for resources that may be available to assist you with the purchase of fuel savings and emission reduction technologies.
- Ask your employer about the Driver Recognition Program.

Turning your engine off is one of the easiest and most efficient steps you can take to help improve air quality. This simple act will help you to avoid costly fines, save money and curb fuel use.

For more information, visit [TurnYourEngineOff.org](http://TurnYourEngineOff.org).

**KNOW THE LAWS.**

For more detailed information about the idling laws for Washington, D.C., Maryland and Virginia, visit [TurnYourEngineOff.org](http://TurnYourEngineOff.org).

WASHINGTON, D.C.	<b>FINES:</b> \$1000 <b>EXEMPTIONS:</b> • 5 min. for temperatures below 32°F • Power takeoff
MARYLAND	<b>FINES:</b> up to \$500 <b>EXEMPTIONS:</b> • Traffic conditions or mechanical difficulties • Heating, cooling, or auxiliary equipment
VIRGINIA	<b>FINES:</b> up to \$25,000 <b>EXEMPTIONS:</b> • Auxiliary power

**LEARN ABOUT THE CAUSE.**

Supported by the bus and trucking sectors, the Metropolitan Washington Council of Governments (MCOG), in collaboration with the District Department of the Environment (DDOE), the District Department of Transportation (DDOT) and the Maryland Department of the Environment (MDE), has launched a diesel idle reduction campaign to:

- Increase idle reduction awareness and curb diesel emissions.
- Promote idle-reduction as a positive behavior.
- Help protect the environment and enhance the quality of life.

**NOW, TAKE ACTION!**

Reducing idle emissions starts with you!

- Get the word of mouth rolling. Talk to other drivers about idle reduction.
- Learn about new technologies available to help companies and drivers reduce diesel idling such as automatic engine shutdown/start up controls and auxiliary power units.
- Check with your local, state and federal programs for resources that may be available to assist you with the purchase of fuel savings and emission reduction technologies.
- Ask your employer about the Driver Recognition Program.



# Driver Surveys

- To reach drivers passing through the greater DC area, we deployed street teams to:
  - Provide information about the different laws governing DC, MD and VA;
  - Distribute info cards with details on idling laws and environmental impact; and
  - Gather survey information about company policies governing engine idling
- Drivers were given a \$5 gift card to either Pilot or Travel America for taking the survey



# Location Overview

State	Location	Date	# Surveys	# Info Cards
DC	American History Museum, 14 <sup>th</sup> and Constitution NW	Sunday, 3/31	12	9
	Newseum, 6 <sup>th</sup> and Penn NW	Sunday, 3/31	18	22
	Air & Space Museum, Jefferson Dr. and 3 <sup>rd</sup> /4 <sup>th</sup> st SW	Sunday, 3/31	22	25
MD	I-70 Welcome Center, Westbound	Wednesday, 3/27	19	32
	I-70 Welcome Center, Eastbound	Wednesday, 3/27	28	35
	I-95 Welcome Center, Northbound	Wednesday, 4/3	22	25
	I-95 Welcome Center, Southbound	Wednesday, 4/3	17	18
VA	Pentagon City Mall, S. Hayes St	Saturday, 3/30	19	18
	Dale City South Trucks-only Rest Stop	Wednesday, 4/3	33	37
	Dale City North Trucks-only Rest Stop	Wednesday, 4/3	35	42



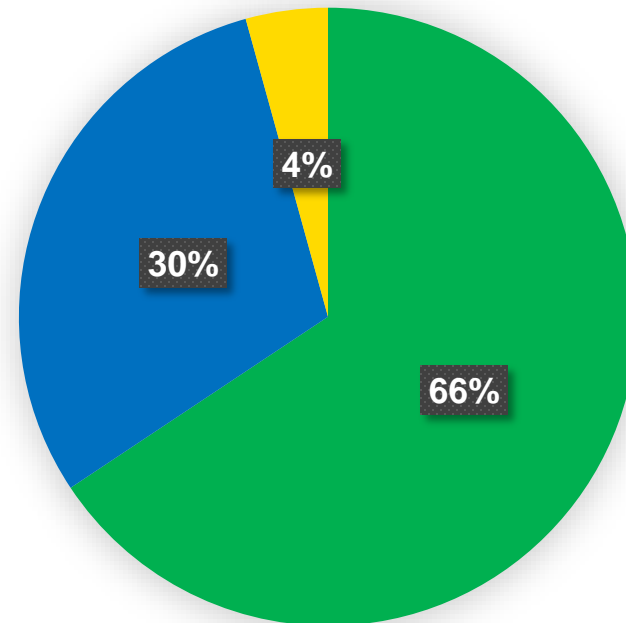
# Company Type

Company	# Respondents
Trucking	153
Motorcoach	70
Other	10
TOTAL	233

OTHER includes:

- Self-identified drivers for companies that are not traditional trucking companies
- Ex: Walmart, UPS, FedEx

## Company Type

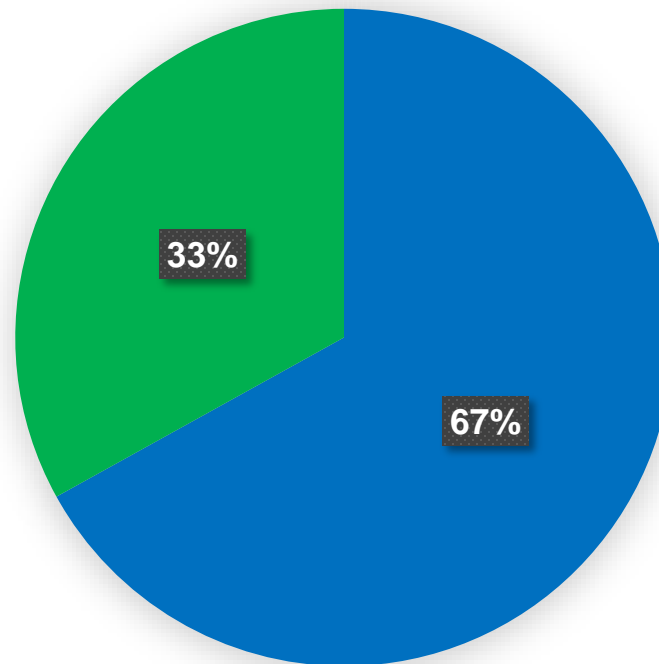


■ Trucking Company ■ Motorcoach Operator ■ Other



# Idling Policy

**Does Your Company Have an Existing Engine Idling Policy?**



■ Yes (156) ■ No (77)

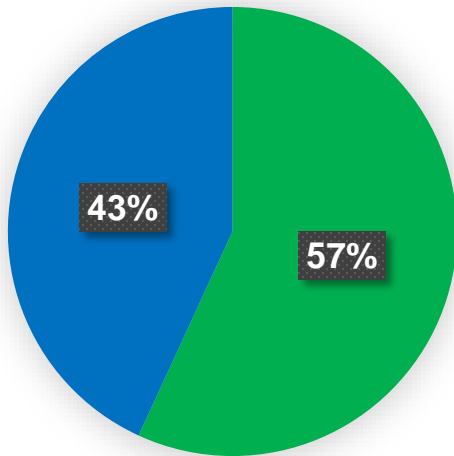




# Idling Policy by Company Type

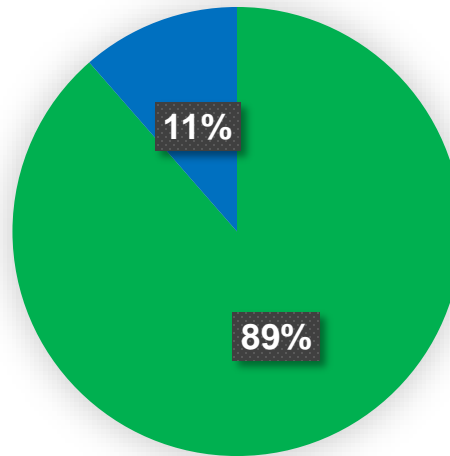
## Does Your Company Have an Existing Engine Idling Policy?

### Trucking Companies



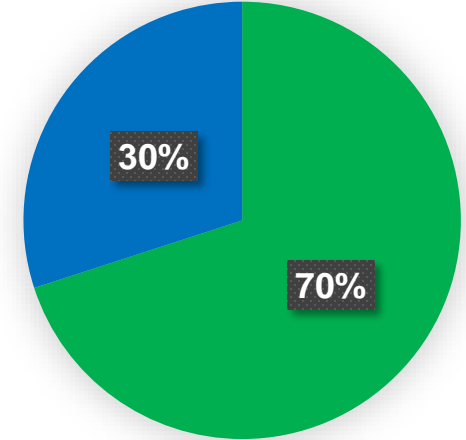
■ Yes (87) ■ No (66)

### Motorcoach Operators



■ Yes (62) ■ No (8)

### Other



■ Yes (7) ■ No (3)

### Top Policies

- Shutdown engine after 3-5 minutes (31)
- Don't idle ever (29)
- Auto shutdown after 0-5 minutes (27)
- Engine idling centrally monitored (8)



# Policy Categories

## Top Policy Categories

- Never idle
- Manual shutdown
- Auto-shutdown
- Weather-related
- Technology-related
- State laws and regulations

### Never Idle policies

- Don't idle (27)
- Don't idle in DC (3)
- Don't idle, don't waste our fuel (2)
- Only idle when necessary for job

### Manual Shutdown policies

- Shutdown engine after 2 minutes (4)
- Shutdown engine after 3 minutes (12)
- Shutdown engine after 4 minutes
- Shutdown engine after 5 minutes (17)
- Shutdown engine after 10 minutes (4)
- Shutdown engine after 15 minutes (3)
- Shutdown engine after 20 minutes
- Shutdown engine after 3 minutes in DC

### State Laws and Regulations

- No company policy, just have to follow regulations and state laws (6)

### Automatic Shutdown policies

- Engine automatically shuts down (7)
- Engine cuts off after 200 seconds
- Engine cuts off after 2 minutes (4)
- Engine cuts off after 3 minutes (9)
- Engine cuts off after 5 minutes (6)
- Engine cuts off after 10 minutes
- Engine cuts off after 15 minutes
- Engine cuts off after 30 minutes

### Weather-related policies

- Idle at 0 degrees, Idle at 100 degrees
- Can idle if temp is over 70 and below 40
- Turns off automatically after 3 minutes except if it's under 40 degrees
- We don't idle. The trucks have separate generators for heat
- Turn off your engine after 3 minutes in summer and 5 minutes in the winter

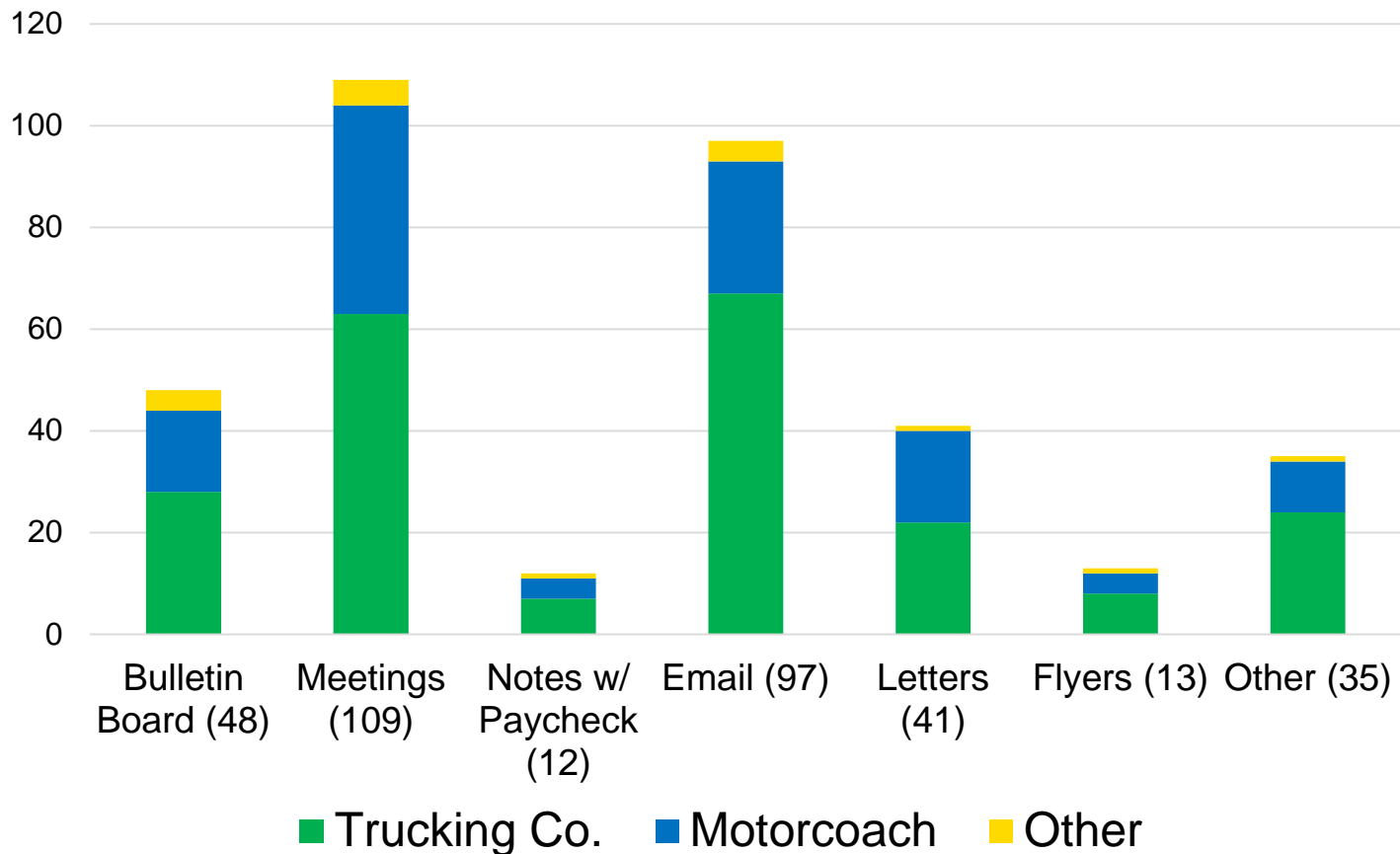
### Technology policies

- Tripac technology instead of keep the engine idling.
- Run Auxiliary Power Unit (3)
- Engine idling monitoring system that notifies drivers.
- Diesel exhaust monitoring system
- We are monitored by a meter
- EOD monitoring system that monitor idling
- They monitor the idling through a tracking system
- They electronically monitor idle times and provide alerts on the cell phone.
- We get messages and emails.
- They have cameras and sensors.



# Policy Communications

How does your company provide information on idling policies and regulations?

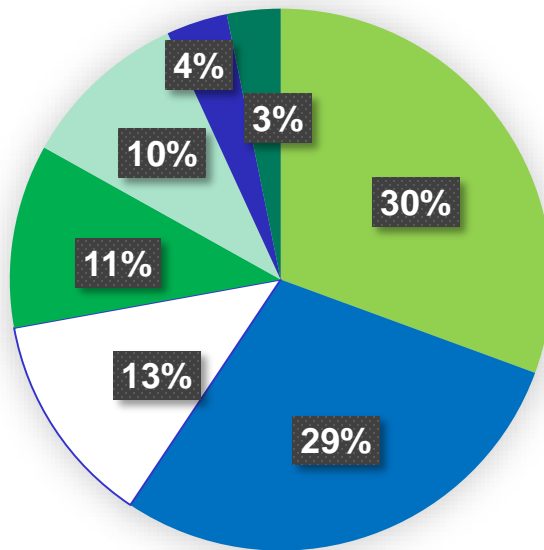




# Policy Communications

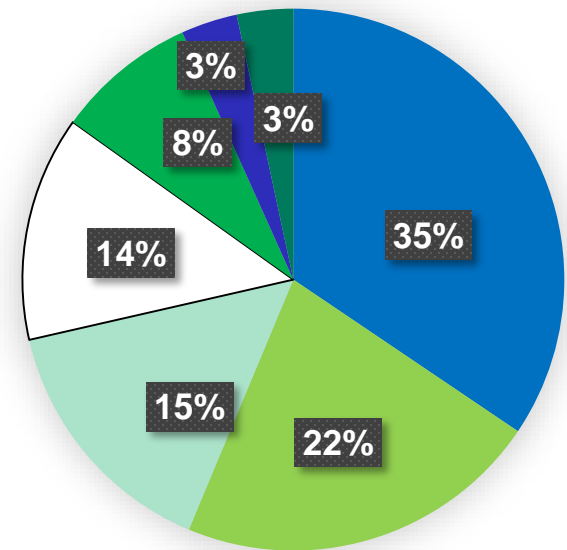
## Trucking Companies

- Email (67)
- Meetings (63)
- Bulletin Board (28)
- Other (24)
- Letters (22)
- Flyers (8)
- Notes w/ Paycheck (7)



## Motorcoaches

- Meetings (41)
- Email (26)
- Letters (18)
- Bulletin Board (16)
- Other (10)
- Flyers (4)
- Notes w/ Paycheck (4)



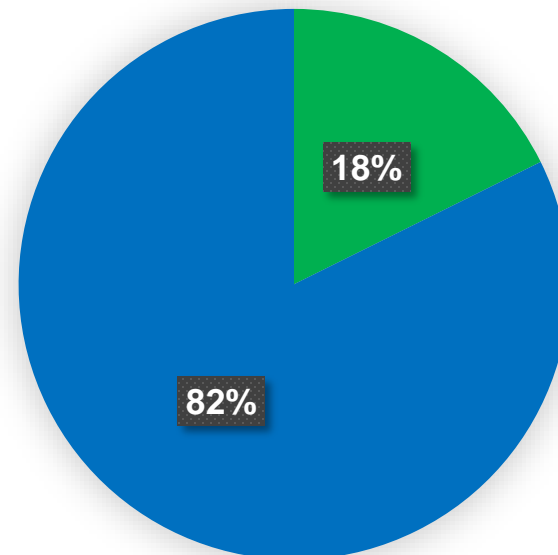
- OTHER includes:**
- Text messages
  - Phone apps
  - Orientation training
  - Word of mouth



# Incentives

**Does your company offer incentives to drivers who do not idle their engine?**

- **Trucking Cos.**  
95% do not have incentives
- **Motorcoaches**  
65% do not have incentives



■ Yes (41) ■ No (191)



# Top Incentives

## Top Incentives

- Financial Bonuses (22)
- Gift cards (6)

## Other Responses

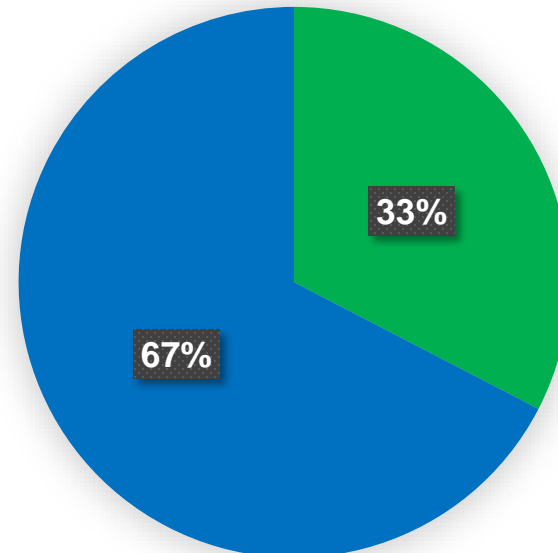
- We get an extra 2 cents of the miles we drove
- We get paid more for lower mileage.
- Rewards programs.
- Yearly banquet that honors those who have maintained clean idle driving.
- Idle free sustainable energy safety bonus tied into idle time
- They are currently in the process of finalizing the incentive program.



# Consequences

**Are there consequences for drivers who violate the company's engine idling policy?**

- **Trucking Cos.**  
19% have consequences
- **Motorcoaches**  
62% have consequences



■ Yes (75) ■ No (155)



# Top Consequences

## Top Consequences

- Trucking Companies – loss of bonus
- Motorcoach Operators – warnings and financial responsibility for paying any fines, citations or tickets

## Other Responses

- Warnings (14)
- Suspension (11)
- Reduction/loss of bonus money (9)
- Pay their own tickets (9)
- Fines (7)
- Increasing severity of penalties for repeat violations (7)
- Termination (5)
- Pay for own gas (5)
- Citations (4)
- Reduction in pay





# Carrots or Sticks?

## Consequences

Incentives

	YES	NO
YES	13%	5%
NO	21%	62%

62% of companies don't have incentives OR consequences for drivers to follow the policy.



# Analysis

## Top Takeaways

- Motorcoach operators are less likely to have their own policies, and instead have a “follow the law” policy
- Motorcoach operators are more likely to have consequences than incentives, and most have to do with drivers assuming responsibility for any tickets/fines for violating the law.
- For trucking companies, majority of incentives/consequences are financial
- The majority of companies don't have either incentives or consequences
- Policies and/or enforcement are increasingly being communicated via mobile devices