

## Mobile Sources & Other Space Heating (Oil/Coal) Work Group – July 20, 2018

### In Attendance:

#### Voting Members

Clark Milne  
Rick Solie  
Donna Gardino  
Angela Speight  
Jackson Fox  
Patrice Lee  
Lee Hazen  
Ron Johnson

#### Non-Voting Members

Cindy Heil, ADEC

#### Facilitation Team

Jana Peirce

### Priorities for Work Group Discussion

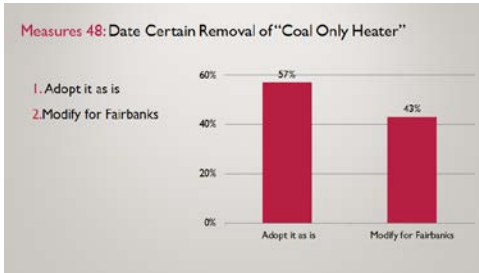
	Needs Fairbanks Modification	Impact/ Priority	Wtd. Priority
Public 14: Identify cost of ULSD heating oil at consumer level		75%	1
Public 15: Expanded incentives for conversion to natural gas		71%	2
Measure 51: Ultra-low Sulfur Heating Oil (Mandate use of ULSD for home heating oil with a 15 ppm sulfur limit)	75%	70%	3
Public 16: Expanded incentives to offset ULSD transition		70%	4
Measures 49: Prohibit Use of Coal Burning Heaters	86%	66%	5
EPA 3: Fuel Oil Boiler Upgrades		62%	6
R29: Increase Coverage of the District Heating System		61%	7
EPA 4: Fuel oil boiler operation and maintenance programs		58%	8
Public 12: State should use royalty gas		50%	9
R20: Transportation Control Measures (Vehicle Idling)		50%	10
Measures 48: Date Certain Removal of "Coal Only Heater"	43%	50%	11
Measure 52: Operation and Sale of Small Used Oil Burners Prohibited	25%	41%	12
Measure 53: No Use Sale or Exchange of Used Oil for Fuel, unless it Meets Constituent Property Limits	38%	37%	13
Public 13: Start ULSD production in Borough		37%	14
Stakeholder 6: Diesel awareness around monitors		8%	15

**Responses: 7**

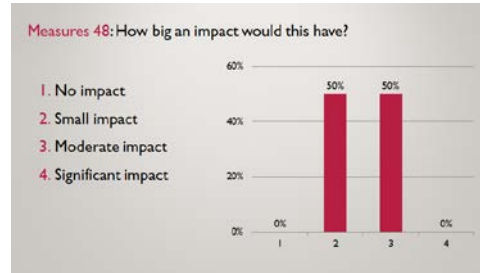
**Modify for Fairbanks: 43%**

**Responses: 6**

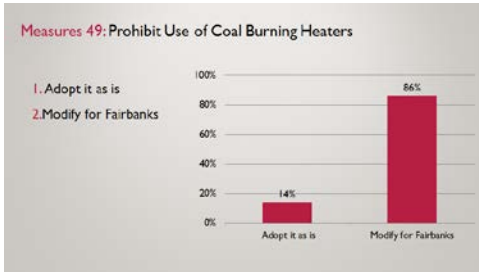
**Impact (Wtd. Avg.): 50%**



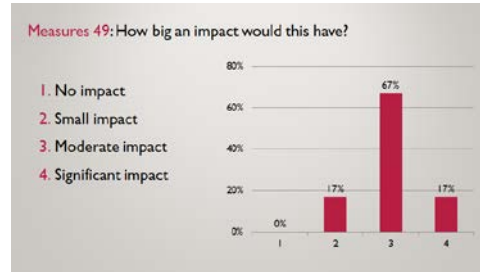
**Responses: 7      Modify for Fairbanks: 86%**



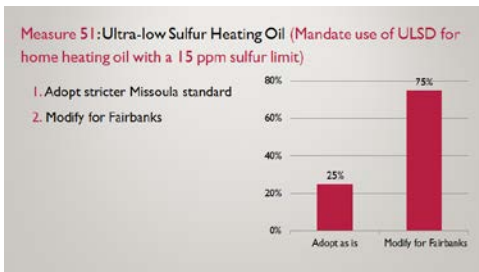
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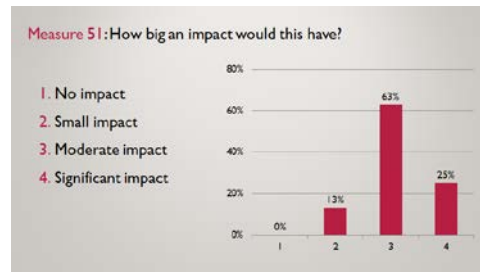
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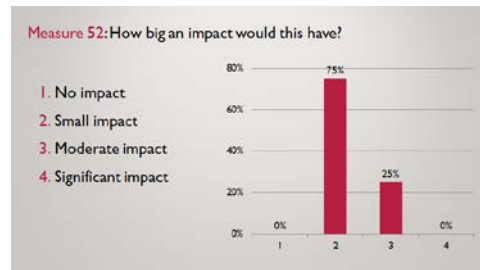
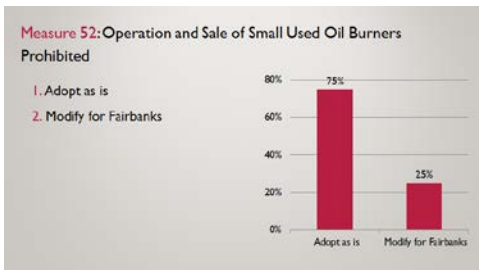
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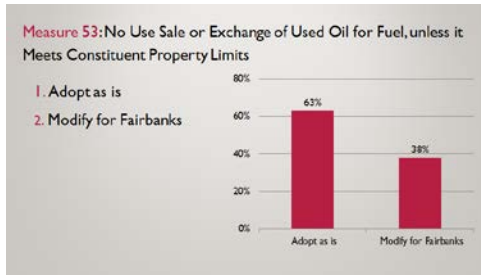
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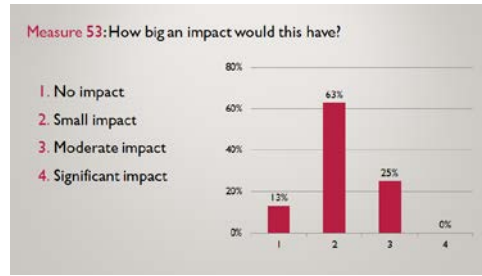
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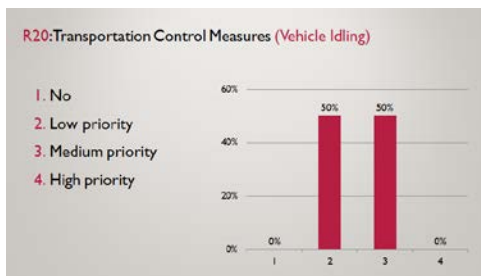
**Responses: 8      Modify for Fairbanks: 38%**



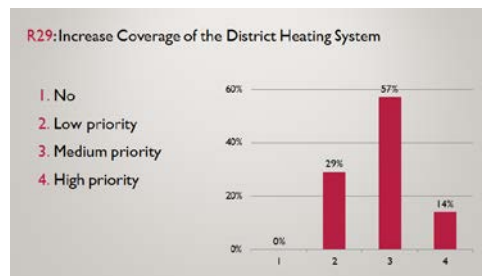
**Responses: 8      Impact (Wtd. Avg.): 37%**



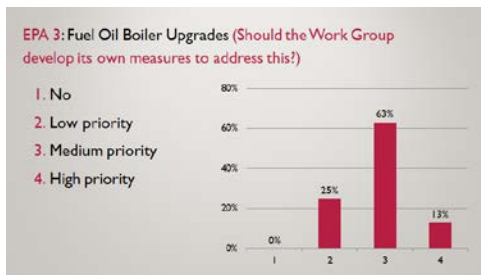
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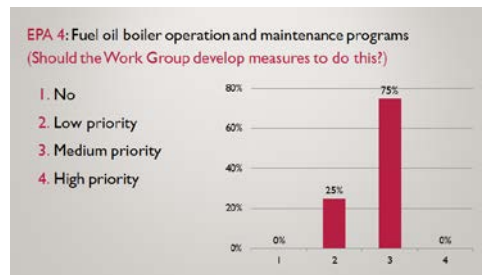
**Responses: 7      Priority (Wtd. Avg.): 61%**



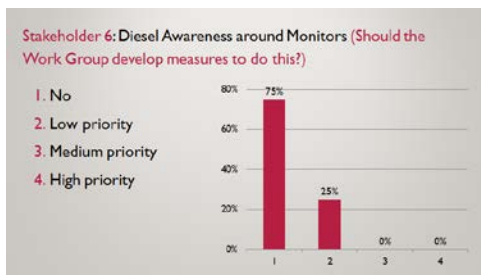
**Responses: 8      Priority (Wtd. Avg.): 62%**



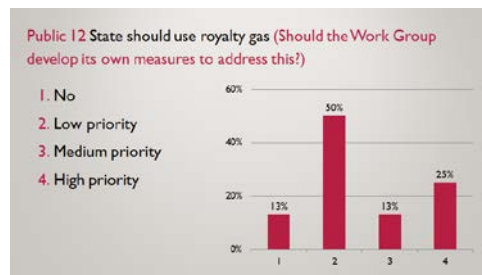
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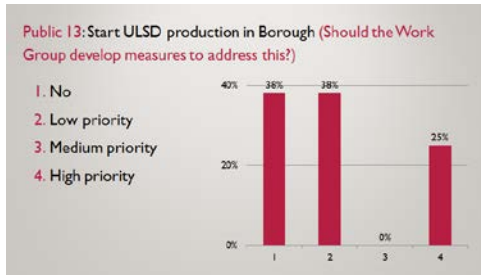
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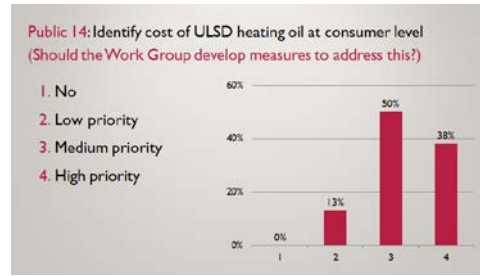
**Responses: 8      Priority (Wtd. Avg.): 50%**



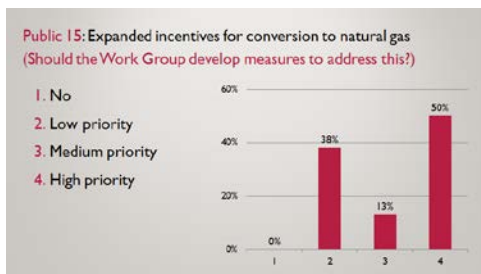
Responses: 8 Priority (Wtd. Avg.): 37%



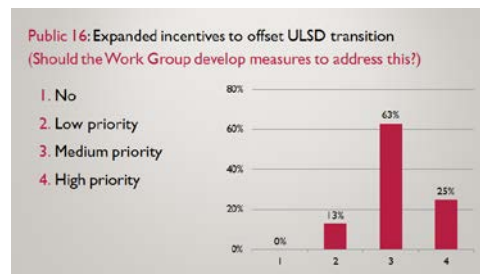
Responses: 8 Priority (Wtd. Avg.): 75%



Responses: 8 Priority (Wtd. Avg.): 71%



Responses: 8 Priority (Wtd. Avg.): 70%



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## Discussion

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- Measure 48: Removal of coal only heaters (Puget Sound, WA)
  - Are there any NOASH that are coal-only (No)
  - How many coal heaters in Fbx, No. Pole?
  - Anyone beside Puget Sound adopted?
- Measure 49: Prohibit coal heaters (Telluride, CO)
  - What about coal-burning power plants? (Would need modification to exempt)
- Measure 51: Ultra Low Sulfur Heating Oil (Missoula, MT)
  - ULSD also reduces VOCs (like natural gas)
  - Is there adequate production and storage?
    - Tesoro/Endeavor says yes
  - Will requiring switch to ULSD lead to more people burning wood due to higher price for heating fuel? Question of Price Elasticity.
    - Ask Joe Little to provide info on study he did
  - Small difference in price from #2 to #1 heating oil, but dramatic difference in SO<sub>2</sub>
    - 4 to 5 cents per gallon difference
    - #2 has 2500 ppm sulfur vs. 900 ppm for #1
    - Easy to switch over: just need to empty tank
    - #1 must be used in aboveground tanks in winter

- Burns cleaner so small savings in maintenance costs for homeowners (may be able to service boiler every other year)
- Diesel trucks are big emitters, high VOCs. Noticeable on monitors at school during pick up
- Need robust analysis of infrastructure costs for ULSD changeover.
  - Proprietary data, need 3<sup>rd</sup> party review?
  - EPA wants supply side costs, not just rack costs
  - Costs will be affected by natural gas costs
- EPA wants to see ULSD in SIP
  - Could be contingency or MSM?
- Measure 52: Small used oil burners (“pot” burners) (Vermont)
  - City of Fairbanks heats garage with used oil, but not “small”
  - Seekins, other auto dealers burn used oil (test it first to comply with fed. hazmat limits on constituent properties).
  - Some residents do this inappropriately
  - Do we let people know its banned during an alert?
- Measure 53: No sale of used oil (Vermont)
  - Federal hazmat limits apply
  - FNSB burns used oil at landfill, heats buildings with it
  - What happens to used oil if not burned? Will people dump it?
- R20: Transportation Control Measures (Vehicle Idling)
  - Transportation/Mobile Sources = ~15% of PM<sub>2.5</sub>
  - Contributes more in core area of city than in rural areas of nonattainment area
- R29: Increase District Heating (Steam/hot water from downtown Aurora plant)
  - Is it economically feasible?
  - Lowest cost space heating at this time. (What about after natural gas is more available?)
  - Will increasing district heating result in increase in coal burning and coal ash residue? Heavy metals in coal ash is a concern due to water percolation
  - Ask for discussion with Aurora Energy
- EPA 3: Fuel Oil Boiler Upgrade
  - Boiler changeout program discussed by Point Sources group
  - Introduction of natural gas will require changeout of existing boilers
  - Annual maintenance servicing of both wood stoves and boilers has gotten much more expensive in last few years
  - #1 burns cleaner, may help reduce maintenance costs (service every 2 years?)
- EPA 4: Fuel Oil O&M Programs
  - Education, public information or incentive
- Stakeholder 6: Diesel awareness around monitors
  - Clean up air around monitors first

- Could be strategy to buy more time to deal with AQ issue everywhere and teach us what works
- Public 12: Use of State Royalty Gas
  - Available from \$4-6/MCF, if authorized
  - Citizens for Clean Air looking at
  - IGU is looking into natural gas
- Public 13: ULSD production in FNSB
  - Petro Star has no plans – not cost effective. Will waive confidentiality on data shared with DEC.
  - No known plans from other refiners
  - Would take 2 years to permit it
- Public 14: Identify costs of ULSD
  - Supply side costs, not only retail (is cost realistic?)
  - Ask Barry Pulliam and/or Joe Little: 2015 analysis for legislature (Angela Speight can get copy of study?)
- Public 15: Expanded incentives for conversion to natural gas
  - Natural gas won't be available in time for SIP. Time is running short.
- Public 16: Expanded incentives to offset ULSD transition
  - How can we help people convert if they can't afford to?