

## Local Government Alternative Fuel & Vehicle “Extent Practicable” Rulemaking

Meeting Notes – March 26, 2015

### Introductions

Participants in the room recorded their names and organization on a sign-up sheet (see roster following notes). Thirty-three participants joined by phone; as best as could be captured, they were:

- Andrew Levy
- Brandi Vena, Washington Public Ports Association
- Bryan Hanks, Thurston County
- Charlie Phillips, Spokane Transit
- Colleen Murphy, Community Transit
- Dave Richards, Community Transit
- Dennis McBride, City of Port Angeles
- Dennis Rovetto, WA State University
- Gail Sandlin, WA Dept of Ecology
- Janine Robinson, Pierce Transit
- Jeanie Hardy, Thurston County
- Jeff Jensen, Washington Fire Chiefs
- John Condie, Thermclean
- Ken Baily, Community Transit
- Ken Riley, Island Transit
- Kevin Gallacci, Clallam Transit
- Kurt Patterson, City of Arlington
- Larry Stephenson, Klickitat County
- Mark Stephens, Snohomish PUD #1
- Marlyn Twitchell, Climate Solutions
- Matt Stewart, Jefferson County
- Mike Elde, Skagit County
- Mike Nykreim, Convert Clean
- Norma Bessey, Columbia-Walla Walla Fire District #2
- Ron Green, City of Kent
- Scott Barham, Grant Transit
- Scott Peterson
- Scott Rood, Clark County
- Sean Pownall, City of Bellevue
- Steve Hatfield, WA Dept of Enterprise Services
- Susan Knotts, City of Yakima
- Tia Livinggood, Liquor Control Board
- Tyler Thompson, City of Auburn

### Overview

Peter Moulton, Washington Department of Commerce, discussed the purpose of the meeting, which is to review and comment on a discussion draft of the “extent practicable” rule. This meeting follows a scoping meeting earlier in the month of key local government associations involved in this process.

### Section 010 – Authority

This section simply establishes the legal basis for the rulemaking.

### Section 020 – Definitions

Most of the proposed definitions already have common usage, or appear elsewhere in state code. Four definitions were seen as warranting additional discussion:

- **Lifecycle Cost.** This definition mirrors the agency rules, with the addition of “emissions of greenhouse gases.” The Governor’s Executive Order 14-04, Washington Carbon Pollution Reduction and Clean Energy Action, directs Commerce to evaluate lifecycle costs for purchase of clean fuel vehicles by state and other public fleets, including “consideration of the benefits of emission reductions.” This was accomplished for state agencies by incorporating the social cost of carbon, as calculated by the US EPA, into the Total Cost of Ownership spreadsheet used to guide passenger vehicle procurement decisions. Commerce, DES and Ecology collaborated on a white paper that selected which EPA formula to use for these calculations. This value, currently \$68 per ton of CO<sub>2</sub>

equivalent emissions, is applied to EPA's estimate tailpipe emissions (measured in grams per mile) over the anticipated service life of the vehicle. Given the high fuel efficiency criteria already guiding state vehicle procurement, the social cost of carbon has yet to alter most procurement priorities.

The question was raised of whether to incorporate additional carbon emissions, such as those generated through vehicle or fuel production. As Commerce lacks the resources to calculate these emissions across a wide range of vehicles and fuels, and there is no external source of data adequate for these purposes, carbon impacts will need to be limited to tailpipe emissions. Local governments are welcome to include additional greenhouse gas variables as they see fit. Participants suggested using "social cost of carbon" in the definition in lieu of "greenhouse gases."

- **Practicable.** Again, this definition is very similar to that used in the agency rules, with the added variables of operations and maintenance. In order avoid further complexity and confusion, this expanded definition is seen as synonymous with the phrase "reasonably available." The question was raised of whether "reliability" should also be taken into consideration. Since reliability is largely a consequence or consideration of operations and maintenance, keeping the definition to the existing variables seems adequate for any number of operational issues.

The definition is interpreted through implementation of the compliance section of the rules, which uses lifecycle costs to inform procurement choices. There was concern that "practicable" is therefore being applied strictly through the least expensive technology, and that the rules should encourage local governments to go beyond simply an economic assessment. Since the cost of ownership tool will include such variables as energy costs, incremental refueling infrastructure costs, and the social cost of carbon, and compare procurement options to highly fuel-efficient alternatives, it's believed that the economic argument will favor cleaner fuel choices. Local governments are always welcome to exceed the requirements in rule and apply other favorable policy goals as they see fit.

- **Procure.** In addition to outright purchases, the term "procure" is now seen as incorporating operational leases. No objections to this proposal were heard.
- **Vehicles, Vessels and Construction Equipment.** This definition expands upon the agency rules to include small boats (those powered by gasoline instead of diesel engines) since the fuel use is nominal. That said, more electric motors are likely coming to the marine sector in the near future, so local governments are encouraged to explore this alternative as it evolves. This definition also specifies construction equipment "capable of moving under its own power." Since stationary generators are exempt, it's not clear whether this additional phrase is necessary. Is there petroleum-fueled construction equipment that doesn't have wheels or tracks for mobility? The question arose of whether "aircraft" is seen as including helicopters and drones. Since the enabling language specifies vehicles, vessels and construction equipment, all airborne machines are considered exempt. An additional suggestion was to add "and/or leased" for consistency.

Other definitions that were discussed include:

- **Battery Electric Vehicle (BEV), Plug-In Hybrid Electric Vehicle (PHEV), and Plug-in Electric Vehicle (PEV)** definitions were seen as too restrictive since they do not cover the potential for inductive

charging or battery swapping technologies. It was also noted that the reason the BEV definition says “all or most of its motive power” is because BEVs also receive some power from regenerative braking systems.

- **Hydrogen Fuel Cell** vehicles are not mentioned, should they be included, perhaps in the compliance section?
- **Renewable Natural Gas** definition could be interpreted as including fossil natural gas since it also is derived from organic decomposition, even if the decomposition occurred millions of years ago. Although technically true, it seems unlikely that the intent of the definition would be misconstrued. Since there is no ASTM standard for RNG, CNG or LNG used as transportation fuel, fleet managers care about vehicle specs, not pipeline standards. Vehicles can use lower BTU value methane, so it may not be appropriate to reference pipeline standards.
- **BTU Value** for various fuels might be considered since energy density affects efficiency and economics. The difference in energy density between regular gasoline (~10% ethanol) and flex-fuel (~85% ethanol) is already factored in the compliance section. The difference in energy density between neat diesel and blends up to B20 (20% biodiesel) is not considered significant enough to warrant a similar adjustment.

#### Section 030 – Applicability

This section restates existing law, with two clarifications. Existing code states that transit agencies using CNG as of June 1, 2018 are exempt from the rules. The concern is purchase of a single CNG vehicle, such as a paratransit van or forklift, would absolve the whole agency from compliance. It’s not believed this was the intent of the legislation, so the phrase “transit agency vehicles” was proposed to clarify the exclusion. An alternate approach would be exempt a transit agency’s revenue fleet if a certain percentage of the fleet is using CNG. This would mean the non-revenue fleet remains subject to rule. Revenue fleet could be defined as “all vehicles used in to provide transportation services where the fleet is directly or indirectly compensated for the services provided to passengers.”

At present, Pierce Transit and Valley Transit would be exempt from the rules. Because of their existing investments in vehicles and infrastructure, they want to continue using CNG for new and replacement vehicles. Because of their existing investment, it’s believed the procurement process based on lifecycle cost will support their continued use of CNG.

The second clarification is that local governments that exempt police, fire, and other emergency response vehicles, including utility vehicles frequently used for emergency response, must notify Commerce as part of their annual reporting. There will not be a request/authorization requirement for these exclusions, just notice of intent and a brief description of their decision-making process.

#### Section 040 – Assessment data and reporting

#### Section 050 – Compliance threshold

#### Section 060 – Technical coordination

The next three sections were discussed together. All local governments will be expected to comply with the fuels, and will be invited to participate in ongoing discussions about alternative fuel and vehicle use, but only the larger fuel users (over 200,000 gallons of annual combined gasoline and diesel

consumption) will be required to report. Reports would be due mid-year, and take place via an on-line survey. Transit participants already report fuel use to the federal government, but that data could lag by as much as a year. This issue could be addressed by simply indicating the reporting period as part of the survey responses.

A question was raised about whether the fuel consumption threshold should take other fossil fuels into account, e.g. gas or diesel gallon equivalent reporting for propane and CNG. This is an interesting consideration, given the overarching intent to move towards electrification and biofuels, but given that these alternate fuels are seen as part of the compliance scenario the current threshold for gasoline and diesel use will be retained for now. Nearly all local jurisdictions above or near this threshold have provided recent fuel data. It appears the following 67 jurisdictions will be expected to report (those just below the threshold appear in parentheses):

- **Cities (10):** Bellevue, Everett, Kent, Renton, Richland, Seattle, Spokane, Tacoma, Vancouver, Yakima (Bellingham, Olympia)
- **Counties (18):** Benton, Chelan, Clark, Cowlitz, Douglas, Grant, King, Kitsap, Lewis, Okanogan, Pierce, Skagit, Snohomish, Spokane, Stevens, Thurston, Whatcom, Yakima (Whitman)
- **Transit (17):** Ben Franklin, Clallam, Community, C-TRAN, Everett, Grays Harbor, Intercity, Island, King Co. Metro, Kitsap, Link, Pierce, Skagit, Sound, Spokane, Whatcom, Yakima
- **Schools (16):** Battle Ground, Bethel, Central Kitsap, Edmonds, Evergreen-Clark, Federal Way, Issaquah, Kent, Lake Washington, Northshore, Pasco, Puyallup, Seattle, Spokane, Tacoma, Vancouver (Everett)
- **PUDs (3):** Chelan, Grant, Snohomish
- **Ports (2):** Seattle, Tacoma
- **Fire (1):** South Kitsap Fire & Rescue

## Section 070 – Compliance Evaluation

### *Biofuels*

Starting with biofuels, the expectation is that all jurisdictions will use a minimum of B5 (5% biodiesel) in diesel engines when available, whether delivered or at retail locations, at a price equal to or less than neat diesel. B5 meets the same ASTM spec as neat diesel, performs the same, and is approved under all OEM warranties. Higher blends are encouraged, with blends up to B20 considered practicable when available, whether delivered or at retail locations, at a price equal to or less than neat diesel, including the cost of any additives necessary to ensure reliable storage and performance. And as directed by state law, local jurisdictions are expected to select equipment with the highest level of biodiesel warranty when making procurement decision involving comparatively priced alternatives.

As for ethanol, regular gasoline is already nearly 10% ethanol on average across the state. While EPA has approved sale of E15 (15% ethanol) for newer model cars, there's little interest thus far in Washington and adoption will be driven by broader market forces. As for flex-fuel (E85), the draft rules are the same as those for state agencies. If a local government has a flex-fuel compatible vehicle, and access to E85, they're expected to use E85 when the price is at least 20% less than regular gasoline. This difference is to account for the significantly lower energy density in ethanol.

As for natural gas, if renewable natural gas (RNG) is available, whether delivered or at retail locations, at a price equal to or less than petroleum natural gas then local governments are expected to use RNG. Finally, local governments are encouraged to incorporate electric vehicle charging infrastructure into fleet parking and maintenance facilities when there is new construction and/or substantial remodeling.

Participants wanted to know if the rules will help drive down the price of biodiesel blends so they're more readily available. Regional biodiesel producers have made a standing offer to provide the state with biodiesel at the same price as neat diesel, if the state will sign long-term supply contracts with guaranteed volumes. While volumetric contracts for biofuels are specifically authorized in state law, DES procurement officials are reticent to pursue this option. Instead, the state has been using ratio pricing with fuel contractors, which means the price of B20, for example, is calculated as 80% diesel and 20% biodiesel rack pricing, as reported through the Oil Price Information Service (OPIS). OPIS biodiesel prices are reported by the fuel contractors themselves, usually for biodiesel produced in the Midwest, not regional biodiesel prices. Therefore, biodiesel blend prices under the state contract are artificially high. Reforms in the state procurement process will hopefully correct this problem in the next contracting process.

There was a discussion about a five percent price premium being considered practicable, as it is with agency rules. Local governments were very resistant to this concept given their limited budgets. There was also discussion about performance issues with biodiesel blends that may not be adequately addressed with additives. There is often confusion about whether biodiesel or diesel is the source of the problem. For example, recent fuel quality testing has found more off-spec diesel fuel than biodiesel. A better understanding of both fuels, and potential solutions to any problems that arise, will continue to be a priority for both industry and government. And finally, there's confusion about biodiesel and engine warranties, since OEMs warranty their engines, not fuel. Warranties are for engine performance using fuels up to a specific blend level (nearly all OEMs now warranty up to B20), assuming the fuel meets ASTM spec.

### *Vehicles*

The draft rules provide a cost-driven decision-making procedure for vehicle, vessel and construction equipment procurement, beginning with electrification. A spreadsheet tool similar to that used by state agencies, but much more flexible, will be developed to help guide this process. The goal is to realize the great emission reduction at the lowest cost.

The first question is whether a fully electric model is available that meets operational needs and is suitable for routine use. In other words, are battery-only models on the market, and can charging needs be addressed through fleet management strategies and/or investments in charging infrastructure without undue hardship to the local government. If so, then it's practicable to procure the fully electric model if the lifecycle cost, including a reasonable incremental cost for charging infrastructure, is equal to or less than the lowest cost equivalent hybrid model available through state procurement contracts. If an equivalent hybrid is not available through the state, then the cost comparison shifts to whatever model the local government would otherwise procure.

If a fully electric model is not available or is more expensive than equivalent models, or recharging is an undue burden, then repeat the comparison with plug-in hybrids. If a plug-in hybrid model is not

available or is more expensive than equivalent models, compare a conventional hybrid to equivalent non-hybrid models. Finally, if a conventional hybrid model is not available or is more expensive than equivalent non-hybrids, then procure a model fueled by natural gas or propane if the lifecycle cost, including engine conversion and the incremental cost of changes to fueling infrastructure and maintenance facilities, is equal to or less than the lowest cost equivalent models.

Admittedly, this section can be confusing so a decision tree or checklist will be developed to better explain the process. Responses to this section included:

- Participants were concerned about the requirement to make comparisons with vehicles available through the state contract, especially hybrids. Local governments may have better pricing, especially given DES' new administrative fee. Transit agencies in particular would like to compare models against their own contracts. It was noted the comparison with hybrids is proposed in response to transit requests that diesel-electric hybrid buses be acknowledged in the rules, and that the draft rules don't require local governments to spend more on alternative vehicles, but rather select the option with the greatest emission reduction at a comparable price. Cities and counties were less concerned about the comparisons since most find state pricing favorable.
- It should be clearer that the "extent practicable" criteria are all embedded in the lifecycle cost assumptions. The updated spreadsheet tool will be designed to incorporate the criteria so that reporting entities can readily explain how they applied them in their procurement decisions. This relationship, and associated tools, could be better explained in the definitions section.
- There was concern the decision flow prioritizes electricity above biofuels. For example, fleets wanting to use higher biodiesel blends might be directed to instead procure hybrids that don't provide as much petroleum displacement. The choice between fuels and vehicles isn't that distinct. Diesel engines are directed to use as much biodiesel as is economically and functionally feasible, regardless of whether they are hybrids. And given ongoing efforts to eliminate coal from the fuel mix underlying the state's electricity grid, electrification is arguably the best path forward for emissions reduction.
- The question was raised of whether there should be a phased approach to the 100% requirement. The key consideration in compliance is "extent practicable," not the 100% target itself. The proposed procurement decision-making process seeks to respond to changes in technologies and costs on an ongoing, adaptive basis without establishing hard targets.
- In the first paragraph of the section, the final line should read "electricity and/or biofuels."
- When considering alternate fuels (e.g. natural gas and propane), shouldn't the criteria require a review of both subsections 1 and 2? This question again addresses the difference between fuels and vehicles. As there is no biofuel-specific vehicle, the procurement decision is driven by vehicle selection. A restructuring of these subsections may help clarify this distinction.

#### Next Steps

Comments from today, along with any additional comments submitted via email, will be incorporated into a revised draft for circulation and reply by Friday, April 10. The revised draft will then be discussed

at the Alternative Fuels & Vehicles Technical Advisory Group meeting on Friday, April 17. The official draft rules will then be published in the State Register in late April or early May. This starts the clock on public review and adoption, which needs to take place within 28 to 180 days. An official public hearing must take place no sooner than 20 days after the draft is published. The final rule will hopefully be published by mid-June, and will become effective 31 days after publication.

Under state law, anyone may petition an agency in writing to adopt, amend or repeal a rule. The agency then has 60 days to respond with a denial, an explanation of alternate means to address concerns, or initiation of a rulemaking process.