Climate Legislative and Executive Workgroup (CLEW)
DRAFT Meeting Summary
October 14, 2013, 10:00 a.m. – 12:00 p.m.

Action Items

	Requested Clarifying Actions	Person Responsible
1.	Develop forecast of per capita emissions.	Leidos
2.	Develop a table of each of the CLEW member proposed policies, their associated savings, available data on costs, impact on jobs, etc. **prior to the November 6 meeting**. CLEW will have enough time to review and identify any gaps needing further research in advance of November 6.	State/Leidos/CLEW Staff

Welcome/Introductions

Governor Inslee called the meeting to order at 10:02 a.m. Senator Ranker was not able to attend the meeting due to inclement weather at the airport. Bob Wheeler (facilitator) then briefly reviewed the agenda.

September 27 Meeting Summary
There were no comments on the draft meeting summary, and it was approved by consensus.

GHG Emissions Projections & Task 4 Presentation

Keith Phillips, CLEW Staff member, gave a presentation on the updated Washington greenhouse gas (GHG) emissions forecast and the gap between the forecast and the statutory targets. At the September 11, 2013 CLEW meeting, the 2010 GHG Emissions Forecast (2009-2035) was presented to CLEW, which was the last official forecast done by the State and relied heavily on data from the early 2000s. This forecast model was updated, extended out to 2050, and presented at the September 27, 2013 meeting. It was based on population estimates, employment projections, and energy projections. Since the last meeting, Ecology and Commerce updated the emissions forecast numbers a third time (October 2013) for two major reasons:

1) Upon closer review of the original state forecast model, it became apparent that some growth projections for individual sectors were fixed based on data from the early 2000s and compounded without change over time, leading to higher emission forecasts in the latter years. The growth projections have been changed to reflect better information on future growth in those sectors. As a result of this change, the emissions forecasts, particularly in 2035 and 2050, decreased.

2) The double counting of emission reductions from three existing policies was removed from the forecast. The State's forecast included the effect of certain existing policies. As a result of this change, the emissions forecast for 2020 increased.

A few key changes in the estimates were highlighted.

- Under <u>Transportation: marine vessels</u>, there was previously an embedded 3% growth rate out to 2050; however, over the last five years, the growth rate has been closer to 0.25%, so this was used in the updated forecast model instead.
- Under <u>Industrial Processes: ozone depleting substances</u>, the rate of growth decreased 20% in the last decade, so the State incorporated a 20% deduction every five years.
- The estimates under <u>Transportation: natural gas and LPG</u> went up due to trends in the availability, cost, and use of natural gas.
- The estimates under <u>Waste Management</u> went down due to improved waste management techniques.

While it took some time for three different modeling groups to connect and reconcile the numbers, the forecast is now more consistent with national and other states' forecasts. That said, it is a model, so a certain degree of uncertainty is inevitable.

Keith Phillips briefed CLEW members on a conversation he had with Richard DeBolt from TransAlta regarding his letter to the Workgroup. The TransAlta agreement embedded in the statute between the State, the Governor, and the company is still in good standing, and is still expected with its implementation to capture the benefits of transitioning from coal power generation. Mr. DeBolt is determining if he can share with the Workgroup 10-years of anonymous data on how much power from the Centralia coal plant is consumed in-state versus out-of-state. The statutory agreement enables TransAlta to build a new natural gas plant to be used as replacement power; however, the market will not support a plant at full power. Mr. DeBolt's best estimate is that a 500-megawatt combined cycle plant will be built, which enables the State to estimate the emissions from the replacement power. The first boiler is not scheduled to close until the end of 2020, so reductions will start accruing in 2021; therefore, Leidos was correct in not attributing reductions to 2020. Once the State has any additional data from TransAlta, the estimated emission reductions will be adjusted, but they are not expected to change significantly.

Questions and Comments
- *Is it correct that the current 2020 emissions forecast does <u>not</u> reflect reductions from TransAlta?*
  - Yes.
- *Do the current 2035 and 2050 emissions forecasts reflect reductions from TransAlta?*
  - Yes.

Task 4 Presentation

Christina Waldron and Tim Kidman, Leidos, presented on the latest emissions forecast data and how the emissions gap was calculated. Since the last meeting, Leidos took three steps to calculate the current forecast and the gap:

1. Leidos reviewed the methods, assumptions, and data sources of the October 2013 emissions forecast. For example, since Ecology's forecast relied on the U.S. Energy Information Administration's (EIA) 2013 Annual Energy Outlook (AEO), a nationwide energy data source that uses state-level surveys and statistics, Leidos reviewed AEO's documentation. After reviewing the documentation in detail, Leidos determined that three

policies were embedded in the forecast (the federal Renewable Fuels Standard; the Energy Independence Act (I-937); and the clean cars policy (Pavley)). Therefore, **Leidos increased the State's October 2013 forecast by removing the effect of the three existing policies that were embedded in the forecast (to avoid double counting the emission reductions, aka a "clean projection").**

2. Leidos then reduced the clean projection by the integrated effect of all existing state and federal policies ("current forecast" or "expected, current trajectory").
3. Leidos compared the current forecast to the statutory targets to determine the "gap".
4. Leidos subtracted emission reductions from *potential policies* to forecast WA emissions if analyzed policies were adopted.

Additional Reductions Required to Meet Targets

	GHG Emissions (MMTCO$_2$e)		
	2020	**2035**	**2050**
Projected GHG emissions *without* federal and state policy	115.1	128.1	138.2
Estimated reductions from existing state policies	-15.8	-29.0	-36.5
Estimated reductions from existing federal policies	-1.4	-1.6	-1.6
Projected GHG emissions *with* federal and state policy	97.9	97.5	100.1
GHG emissions target	88.4	66.3	44.2
Additional reductions required to meet target	**9.5**	**31.2**	**55.9**

A key finding is that even if all the potential policies are implemented (including either a carbon tax or a cap and trade system), Washington cannot achieve the 2050 emission reduction goal. That said, many of the potential policies are scalable and could be structured to generate more or fewer emission reductions given different funding levels or stringency.

Questions and Comments
- *There was a request to develop a forecast of per capita emissions as well.*
- *How much emission reduction was attributed to each of the three programs (federal Renewable Fuels Standard, I-937, and Pavley)?*
  - Leidos pointed to the numbers shown below in yellow. For the purchasing of clean cars, only 5.5 MMTCO$_2$e applies since 2020 is the year that reflected the Pavley. There are some interactions between these numbers, so the amount of reductions that was added back into the projection is not a straight addition of these numbers.

Existing Policy	*GHG Emission Reductions (MMTCO$_2$e)*			*Sector Addressed*
	2020	*2035*	*2050*	
State Renewable Fuel Standard	*0.03*	*0.04*	*0.05*	*Transportation*
Washington State Energy Code	*0.9*	*5.1*	*11.0*	*Electricity, RCI*
GHG Emissions Performance Standards	*0.0*	*2.9*	*2.9*	*Electricity*
Energy Independence Act (I-937)	*7.9*	*10.9*	*10.9*	*Electricity*

Energy Efficiency and Energy Consumption Programs for Public Buildings	*0.03*	*0.04*	*0.04*	*Electricity, RCI*
Conversion of Public Fleet to Clean Fuels	*0.03*	*0.04*	*0.05*	*Transportation*
Purchasing of Clean Cars	*5.5*	*10.0*	*11.7*	*Transportation*
Growth Management Act	*1.6*	*2.4*	*2.6*	*Transportation*
Federal RFS	*1.4*	*1.6*	*1.6*	*Transportation*
Percent Overlap due to Policy Interactions	*1%*	*7%*	*7%*	
Interactive Sum of Reductions from Existing policies	*17.2*	*30.6*	*38.1*	

- *Can you clarify why you cannot add up the numbers in yellow to calculate the estimated reductions?*
  - Originally, Ecology calculated the policies individually, whereas Leidos made its calculations by looking at the interactions of policies. Leidos added the policies back in individually and then looked at the interactions between policies so we were not assuming greater benefit. The final numbers only differ from those in yellow by a few percentage points.
- *Did we get feedback from outside groups on the revised numbers or was this just a consultant/State Agency/CLEW Staff effort?*
  - The data was not distributed externally, but Leidos worked closely with Ecology, Caucus staff, and Committee staff, responding to their questions and concerns. Individual staff members may have checked with other constituents, but this was not reported on. Leidos tried to rely on national published information or Pacific regional published information that came from nationally credible sources, partly based on time availability and partly based on being able to show reliable sources.
- *It was clarified that the green line on the PowerPoint graph reflected Business As Usual. The red line reflects what would happen if you include all potential policies except cap and trade (i.e. with the carbon tax). The yellow line reflects what would happen if you include all potential policies except the carbon tax. What kind of level were you assuming for each of these policies since, as you mentioned, many of them are scalable? Are they comparable to mid-level policies that other jurisdictions have used?*
  - Leidos used the numbers presented in Task 2. It also used policies from other jurisdictions as a reference point in establishing the program scale. For the carbon tax, they used the average when evaluating a tax at $10, $30, and $50. If that tax were increased, they would get more emissions reductions, which could be calculated under Task 5 if desired. Leidos could also look at scaling some of the other policies, such as what would happen if you had larger Feed-In-Tariffs, PACE program, etc.
- *It was emphasized that even if all the potential policies are implemented (including a cap and trade system at Leidos' current levels) Washington is still ~50% above the 2050 emission reduction goal.*
- *California is a huge state. Does the fact that it is so much larger than Washington alter projections of GHG reductions associated with WA's Renewable Portfolio Standards (RPS) within I-937?*

- o In the AEO data, which EIA develops using the National Energy Modeling System (NEMS), WA does get a small bump for being in the same census division as CA. NEMS produces a regional estimate, which is dominated by California's RPS, and therefore the amount of reduction associated with WA's RPS is slightly overestimated. The Leidos team was able to confirm that not only does NEMS/AEO capture Washington's RPS, but also slightly exaggerates it; although data on the specific amount of the bump were not readily available for the presentation.[1]
- o *The general public expects the legislators to know where our policies have gotten us and a lot is at stake. There was a request to calculate the specific amount of the bump.*
- o Leidos also analyzed every aspect of Ecology's updated forecast to determine why updates were made, and ensure that Ecology's changes made sense. It was clarified that Leidos' estimates have not changed since the September 27th meeting; all that has changed is how their estimates relate to Ecology's inventory forecasts.

CLEW Presentations of Actions and Policies

Senator Ericksen	
Recommended Policies/Actions	
E1.	**Nuclear energy** How would carbon emissions be impacted if we had more nuclear power in WA?
E2.	**I-937** Look at encouraging conservation and what would happen if we included nuclear energy.
E3.	**Invest in Research & Development (R&D)** A key barrier to the implementation of new policies is that the technology is not in place yet.
Additional Information Needs	
Research economic impacts of policies being considered (e.g. on manufacturing, job creation, household income, etc.), especially the carbon tax, low carbon fuel standard, and cap and trade.	
(E2.) Study cost of I-937 implementation.	
Cost of various energy types (wind vs. nuclear vs. solar power).	
Economic impacts of policies if other neighboring states do not implement those policies as well.	

---

[1] After the meeting it was determined that because the Leidos team adjusted the State's GHG inventory forecast to reflect Power Council data for the electricity sector – including demand growth rates and electricity factors – the "bump" associated with CA's dominance in Census Division 9 was excluded from the Leidos electricity inventory forecast and results. Therefore, although the AEO overestimates WA's RPS reductions, the Leidos-adjusted state inventory forecast and policy evaluation results of GHG reductions reported in the Task 4 Final Report and presented at the October 14th CLEW meeting do not reflect this overestimate because they are based on Power Council data rather than AEO data.

Senator Ranker – Keith Phillips read from a letter submitted by Senator Ranker	
Recommended Policies/Actions	
R1.	**A comprehensive, multi-sector cap on emissions** Given Leidos' analysis, we should <u>act now</u> on this. The cap should be implemented in the most cost-effective and efficient way.
R2.	**Transition off of coal ("Coal by Wire")**
R3.	**Energy efficiency in buildings** Different opportunities and strategies depending on building type (e.g. commercial, industrial, owner-occupied homes, and rental homes).
R4.	**Promote clean energy technology** It is non-regulatory and can benefit virtually all emission sectors.
R5.	**Distributed generation** Consider programs such as Renewable Investment Incentives, Net Metering, Feed-In-Tariffs, despite shortcomings.
Additional Information Needs	
(R1.) Develop several scenarios for a comprehensive "backstop" by 11/6.	
(R2.) Analyze proposal to transition off coal and develop some alternatives by 11/6.	

Representative Fitzgibbon	
Recommended Policies/Actions	
F1.	**Invest in Research & Development** New technologies would help reduce GHG emissions and potentially grow the economy.
F2.	**Energy efficiency in buildings** Would like to focus on existing buildings. We're on track to have energy-efficient new buildings given the WA Energy Code. There is great potential for new jobs.
F3.	**Requirements to reduce carbon content of fuels** This would have an R&D component (e.g. biofuels radiation). Our large agriculture sector can play a big role.
F4.	**Vehicle Miles Traveled (VMT)** This could help narrow the emissions gap. Integrate State VMT goals into local and regional transportation plans.
Additional Information Needs	
None provided	

Representative Short	
Recommended Policies/Actions	
S1.	**Better utilization of Conservation** Consider allowing rollover of conservation. This could include a R&D component.
S2.	**Renewable Energy Credit (REC) banking** Want to make sure people do not have to purchase utilities before they are needed.
S3.	**Untapped hydropower capacity on existing facilities** We could potentially utilize and broaden the capacity without hurting citizens, although more research is needed on the cost of implementation.
Additional Information Needs	

Cost of implementation and impact on WA citizens.
Per capita footprint moving forward, compared to 1990 goal.

Governor Inslee		
Recommended Policies/Actions		
I1.	**Requirements to reduce carbon content of fuels** Adopt standards that will address the carbon-content of fuels in the most cost-effective way.	
I2.	**Transition off of coal ("Coal by Wire")** We must continue to clean up electricity and negotiate agreements with key utilities to eliminate the use of electrical power from coal in the most cost-effective way.	
I3.	**Address carbon pollution, economy-wide**, **both directly and through market incentives.** We will still be 50% short of the 2050 goal even if we adopt all of the policies proposed plus a cap and trade system.	
I4.	**High-profile campaign on energy efficiency in buildings** Include promotion of new financing, incentives, and support. It is a very cost-effective way to reduce emissions and accelerate local job creation.	
I5.	**Invest in Research & Development** We must continue to research and fund research of clean energy technologies.	
I6.	**Reform approach to transportation planning and investment** Focus on moving people and goods with the least cost, energy, and emissions. As a first step, we should invest in pilot project(s).	
Additional Information Needs		
(I1-6) Develop options for a package in these six proposed policies/actions and associated costs.		

Additional Comments

Senator Ericksen

It is important to put this process into context. The 2008 goals set in RCW 70.235.020 do not have teeth—there are no mandates and no repercussions if the goals are not achieved. The goals are not scientific by nature, but rather are policy-oriented, legislative, and political.

CLEW's charge has several elements, but the most important one is the cost of achieving our goals and what impact it will have on the people of WA. It is concerning that the economic impact of the potential policies is not in Leidos' final report, and we do not yet know the cost of these policies.

Representative Short

It is essential moving forward to understand the costs of the potential policies and actions. While we have discussed some of the "low-hanging fruit", we will be digging deeper into the policies that bear a more significant cost. We have benefitted significantly from hydropower, and we have a lot to lose if electricity costs in the State increase substantially. This is one of the things that has made us so competitive. Cost is still an important piece missing from the picture.

Governor Inslee
Three principles should guide CLEW actions in the upcoming weeks:

1) **CLEW should act out of confidence and optimism**. We have already had substantial success in reducing GHG emissions through our policies, while at the same time our economy is booming with Boeing, Microsoft, and Amazon successes. We are an innovative state.
2) **CLEW should act out of necessity of accomplishing this legislatively mandated goal**. Failure is not an option—the beauty and resources of this state is unparalleled, and all of this is at risk.
3) **CLEW should act out of legislative responsibility**. We are here to produce a product that will solve this problem. We have a great start towards success—the consultant has challenged their assumptions and changed the numbers.

Questions and Comments
- *Would any of the multiple policies currently on the table assist in the development of nuclear power?*
  - Leidos can look into this question further.
- *If there is a demand for any energy source that is low or zero carbon emitting, the ability to bring it online and make investments is increased. An advantage of the cap and trade system is that it is technology-neutral—it incentivizes people to invest in multiple technologies. The system treats any low carbon-emitting technology (e.g. solar, nuclear, wind) the same and only evaluates the carbon emissions. Since you're creating a demand by having a cap, you create a demand for low-carbon emission technology (depending on where you set the cap).*
- *The importance of analyzing the economic impact of the proposed policies was reemphasized.*
- *It was noted that <u>cost</u> (what will it cost to live in WA) and <u>cost-effectiveness</u> (the cost-effectiveness of policies) are separate, but equally important components.*

Process and Priorities for Additional Information Needs

The facilitator reviewed the proposed process for prioritizing additional information needs. It was proposed that Triangle Associates would update the list of information requests, and CLEW would work via email between now and the November 6 meeting to make decisions on priorities. CLEW Staff could then develop a scope/cost estimate for those priorities in advance of the November 6 meeting so that decisions could be made at the meeting on which information requests to move forward with. For some additional information items, decisions could be made before November 6 via email decisions.

Questions and Comments
- *There was a request to have a list of each of the CLEW member proposed policies and their associated savings **by the November 6 meeting**, if this is realistic. It would be beneficial to have a "menu list" identifying the amount of savings associated with each policy to more easily add up the savings and see if they achieve the state goals.*
- *In addition, this table should also include the cost of various proposals and the impact on jobs. While a more in-depth cost analysis would be helpful, at minimum, we should look at available data on cost. What price tag is associated with each policy?*

- o The consultant, CLEW staff, and State will try to have this table completed well in advance of the November 6 meeting so CLEW can identify any gaps needing further research prior to the meeting.

Public Hearings Preparation

The facilitator announced that the 10/16 and 10/23 public hearing documents had been finalized and that the timing was updated to accommodate three hours of public comment. Based on recent conversations with CLEW members, there were two final logistical questions:

- Will we give speaking priority to those with special circumstances, such as those with young children?
- Will we give speaking priority to elected officials, or will they be selected randomly? Triangle recommends that we do not prioritize elected officials because we are using a random selection process.

Questions and Comments

- *Several CLEW members expressed concern about prioritizing certain groups of people at the hearings. There will be a lot of interest in the public hearings and many people are expected to attend.*
- *We need to have a consistent approach at all the public hearings.*
- *Elected officials have a lot of opportunities to speak to the public, and these hearings are an opportunity to hear from the public. Everyone should be treated equally, and if someone does not have the opportunity to speak in-person, they can always submit comments in writing or electronically. These formats all hold the same weight.*
- *There was a suggestion to have participants pre-register for the hearings online.*
  - o This can be looked into for future public hearings, but it will be difficult to change the approach for the 10/16 and 10/23 meetings.

Decision: Everyone will be treated equally and selected to speak at random.

Next Steps

The Facilitator stated that the November 21st meeting may be changed to 8:00-10:00 a.m.; however, it was noted that this will not work for one CLEW member. CLEW Staff will work to finalize the timing. The Governor adjourned the meeting at 11:50 a.m.