

**GHGERTF Meeting Minutes**  
**Thursday, February 5, 2009**

9:00 a.m. - 11:00 a.m.  
Room 501 Leiopapa A Kamehameha Building  
235 S. Beretania St., Honolulu 96813

Task Force Members Present: Makena Coffman, Laurence Lau, Mark Fox, Gary North, Gareth Sakakida, Liz Corbin, designee for Theodore E. Liu

Task Force Members Excused: Robbie Alm, Frank Clouse, Lorenz Magaard, Jeff Mikulina

Representative present from Attorney General's Office: Mr. Gregg Kinkley, Deputy Attorney General

Meeting Minutes:

1) The meeting was called to order by Liz. Corbin, designee for Theodore E. Liu (DBEDT), at 9:20 am with a quorum present.

2) The minutes of the January 2009 TF meeting was approved unanimously without amendments.

3) Dr. Stephen E. Miller, Ph.D., Science Advisor for the Pacific Islands Fish and Wildlife Office gave a presentation on "Developing a Strategy to Address the Effects of Global Warming on Hawaii's Native Species." The presentation included the following:

- Historical data and information showing climate change and global warming, such as glacier melts, solar radiation, temperature, decreases in ice volume, increases in sea level.
- Discussion on varying amount of sunlight on planet. Peak was 10,000 years ago, natural decreases in solar radiation are occurring. The glacial maximum also occurred 10,000 yrs ago. While radiation has dropped over time, human-caused GHG have caused temperatures to rise, and glaciers to recede. Ice volume is going down.
- Methane and carbon dioxide (2 greenhouse gasses). The carbon dioxide levels far exceed methane, yet methane is 25 times more powerful. Other is water vapor. Can't change- water vapor is fairly constant.
- Mark Fox asked what this means for Hawaii. Dr. Miller mentioned that if we stabilize greenhouse gasses, temperature and sea levels will still rise. Sea level increases are a very long term problem and these will still be seen for 1,000 – 2,000 years.
- Projecting island sea level is a huge problem. As global warming sets in, current life zones are impacted. Climate change will change the structure of the Hawaiian Islands. Zones will shift. Species may not be able to adapt. Slide was presented showing red areas as new habitat conditions (new life zone in Hawaii). Questioned whether or not the new habitats will be invaded by invasive species. Invasive species is a problem.
- Discussed strategic habitat conservation (learn, adjust plan, do again), adaptive management (conserve landscape, sustain native species, ecosystems) and strategic management (integrate landscape process)
- Strategic Habitat Conservation deals with the issues by island and by island phase. Requires planning design options, which include the research phase and the conservation design phase. Climate change makes plans irrelevant.
- Critical issue is change: how long is this going to go on? It is a long term process that is not going away. Elements to consider include education, climate modeling, applying climate models to biological systems, how particular species respond to changes, reactive participation, and participatory participation.
- There is a timing issue. Climate models can be run with a certain amount of reliability but there are lots of unknowns. Clouds are a big component, big unknown in climate modeling, particularly on islands.
- Huge driver of climate model systems is uncertainty due to initial conditions. Uncertainty on CO2 emissions. Depending on which scenario you pick, most confident predictions are 30-50 yrs out. The urgency and uncertainty improves over time, iterative process. Don't just do one climate model. Need to get green house gasses to very low levels in next decade. Cap so it doesn't exceed 450 parts per mill. Even if we take extreme action now, ice sheets will still melt.

- Problem with island nations: keep proceeding until unavailable. For example, water on streets (Ala Moana blvd).
- Modeling of climate change is the driver behind all of this. Hawaii is a unique place biologically, storm systems, upper air system, high level wind system. Climate models predictors don't inform much. Continue climate models, take these and apply to natural resources. Need high resolution models for Hawaii. Need to know what is happening down to a very fine scale.
- Nationally and internationally fine scale models are important
- What we know about HI climate is not much because of resolution of climate model. Do know temperature is increasing, trade wind inversion sign issue for natural resources, the temperature increases mainly at night, plants don't do well at high temps at night, opening up opportunities for invasive species.
- Liz Corbin asked if Dr. Miller could share his presentation, which he agreed to.

#### 4) Analysis Committee Report, Dr. Makena Coffman

- Dr. Coffman mentioned that the analysis committee met on Monday (Feb 2).
- Topics covered in committee's meeting included what to highlight for ICF's analysis: an emphasis on upstream regulation, and what to do with the revenues (whether to utilize for revenue neutrality, i.e. reduce other taxes, or to put revenues into R&D) and how to synthesize and integrate with national regulation. Is there a national upstream system? How will this affect Hawaii and what industries are impacted?

#### 5) Discussion of TF next steps including analysis and work plans to achieve emissions reductions, Mr. Laurence Lau

- Have to come up with a regulatory scheme and work plan by the end of this year, which will be presented to the legislature.
- Other topics discussed: Should we also invest in infrastructure? Dealing with less rain on Mountains, big island and Maui. If we're making recommendations about expending revenues, how does this work with national and regional systems? Do we want to mesh into these or be prepared for some kind of exemption?
- It is imperative that we clearly understand which industries are impacted by the new rules. Should 1990 be base year or 2005? Different benchmark for measuring reductions 50% to 80% by 2050.
- Mark Fox mentioned that whatever HI reduces levels to, we're not going to make an impact on global carbon emissions. What HI can do is focus, plan for, mitigate and adapt to what is happening to Hawaii. Our recommendations contribute towards Hawaii's energy security.
- Mr. Lau commented that it is timely to look at the economics of all of this in the Legislative Session, which tries to look at funds set aside for energy and climate. What about our species, what's the best action? These types of issues are policy choice – how much is invested into reduction of emissions verses adaptation. What is the best use of public and private dollars?
- Mr. Fox asked what conversations DBEDT had with ICF on scope of work, and requested DBEDT to ask ICF what they can deliver for the funds we have remaining. Ms. Estrella Seese (DBEDT) said we intend to discuss with ICF what the Analysis Committee recommended for them to emphasize, and that there is \$300,000 to fund analysis but no funding for rule-making, so there is a need to scale back the analysis portion.
- Mr. Lau posed a question on what the odds were of extreme climate events in HI. Dr. Miller mentioned that right now not very active in HI. Big dilemma - trade winds weaker so rain fall will decrease. Unknown what is going to happen.
- Dr. Coffman mentioned that we need to focus on what we need in analysis, focus on co-benefits, renewable energy investments, and new energy infrastructure, as well as the adaptation side of things. Ms. Seese pointed out that Act 234 mandates that the target is 1990 levels and that ICF has been asked to give an analysis of 2007 levels as the start point. Mr. Lau commented that changes in the law could be looked at, not this legislative session, but perhaps next year.
- Clarifying points on conservation: How can HI benefit economically? Part of analysis of what HI can do includes clean energy, smart grids, feed-in tariffs.

6) Update on Hawaii Clean Energy Initiative (HCEI), Ms. Colleen Miller, DBEDT Energy Policy and Planning Branch

- Hawaii Clean Energy Initiative: 2008 Year-In-Review distributed. Covered highlights of 2008:
  - HCEI launched in 1/08 with goal of attaining 70% clean energy in Hawaii's electricity and transportation sectors by 2030
  - Five working groups established
  - October 20: the state and HECO signed an Energy Agreement toward HCEI goal of powering 70% of Hawaii's energy demand with clean energy resources by 2030 and increasing RPS to 40% by 2030
  - October 24: PUC opened dockets to investigate the design of feed-in tariffs and the implementation of decoupling
  - Install AMI and Smart Grid to enable customers to modify consumption to lower rate off-peak hours
- 2009: several working group meetings. Timeline specifics currently not available. Next meetings in April and July.
- Administrative bills relating to HCEI:
  - Generation: SB870 and HB1052
  - Relating to Energy Efficiency: SB871 and HB1053
  - Transportation: SB872 and HB1054
- Comments: Mark Fox asked if those are the only bill numbers relating to HCEI and requested a list of all bills relating to energy. Ms. Estrella Seese mentioned that there are several other house bills that took apart pieces of HCEI.
- Public Comment: most national rules mentioned that if a project is developed to meet RPS it cannot be used in a carbon market project. CCS has those rules, specifically require that you can't double-dip.

7) Green House Task Force and HCEI discussion

Laurence Lau mentioned that there is a lot of interest in having the GHG Task Force work with HCEI. The focus of HCEI is on energy security, not so much on carbon emission. Discussed including emission message with the energy message, emission accounting along with energy accounting.

8) Discussion of working group to conduct an analysis of the potential for, and co-benefits of, forest carbon sequestration, Mr. Mark Fox

- Special investigatory committee covering native reforestation for carbon sequestration and other benefits. Will do the analysis and share report with task force. Report to Task Force will cover economic and ecological potential for forest carbon sequestration through native forest restoration. Targeting report for June meeting.
- Asked Task Force if it approves the investigatory committee. Not requesting any work or asking for support from DBEDT.
- People on Task Force: Mark Fox, Dr. Makena Coffman; had discussions with Robbie Alm; perhaps include U.S. Forest Service.
- Motion called to form a special investigative subcommittee with membership not to exceed 5 voluntary members. Gary North moved, Liz Corbin seconded. Motion adopted unanimously.
- Mark Fox will report who the members are, and the investigative subcommittee will report back to the June Task Force meeting.

9) Discussion of outreach plan an implementation, Ms. Maile Sakamoto, Department of Health

- Draft Outreach Proposal handout distributed.
- Mentioned that outreach education is most important, getting to the people that don't have much information.
- Need to start working with the kids. Everybody is doing something and we should try to move together, understand who's doing what and where activities overlap.
- For basic education programs, California already has model and curricula. Suggestion is to take curricula already created and adapt to HI.
- Requests Task Force support. With support outreach programs would have more clout.
- Mr. Lau asked if it was the sense of the Task Force to support the Outreach Committee implementing Ms. Sakamoto's proposal. Task Force members all spoke in the affirmative that this is the sense of the Task Force.

10) Next meeting scheduled for March 5, 2009. Meeting time proposed for 11 am-1pm to avoid conflict with hearings.

11) Adjournment

a. A motion to adjourn was made by Mr. Laurence Lau, seconded and passed. The meeting was adjourned at 11:09 am.

Enclosures: Handouts distributed at meeting