



# Governor's Action Team on Energy and Climate Change

## State of Florida

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### Meeting #5 DRAFT Summary

### Governor's Action Team on Energy and Climate Change

Orlando, Florida

Wednesday, August 6, 2008

#### Attendance

##### Florida Energy and Climate Action Team Members

Tommy Boroughs	Mark Kaplan
Mike Branch	Jerry Karnas
Matthew Carter	David McConnell
Camille Coley	Jerry Montgomery
Manley Fuller	Armando Olivera
David Guest	Charles Pattison
Debbie Harrison	Kathleen Shanahan
Tim Hernandez	Jack Shreve
Buzz Hoover	Kathy Viehe
Dr. Lonnie Ingram	

##### State Agency Staff

Steve Adams, Staff Director, EOG  
Brenda Buchan, Chief Analyst, EOG  
Bruce Deterding, Senior Management Analyst II, DEP  
James McNeil, Senior Executive Assistant, DEP  
Kelley Smith, Chief Analyst, EOG  
Matthew Stamatoff, Grant Manager, EOG

##### Center for Climate Strategies (CCS)

Rachel Anderson (via phone), Alison Bailie (via phone), Lewison Lem, Tom Peterson, Steve Roe, Linda Schade, Joel Smith, and Jeff Wennberg.

**Public Comments Received From:** Janet Bowman of the Nature Conservancy, Lane Stevens, and Bob Krasowski and Robert Armstead

MARK KAPLAN chaired Action Team Meeting #5 in place of Secretary Michael Sole and Vice-chair Mayor Baker, both of whom were unavoidably absent. The public was invited to comment by using cards at the front of the room. Mr. Kaplan alerted attendees to a change in the order of agenda items and to the possibility that the meeting might adjourn early.

## **Mayor Crotty**

MAYOR CROTTY addressed the Action Team and shared news of initiatives in Orlando including the Green Futures Partners Pledge, an initiative in 2005 that includes moving toward Leadership in Energy and Environmental Design™ (LEED)-certified public buildings. Other initiatives include the Mayor's "Orange to Green" initiative launched in a county-wide summit in 2007 attended by Governor Crist. Mayor Crotty noted the State's work on economic development and research in the universities is rolling out the "green carpet" to bring green jobs and CleanTech businesses to Orlando and Florida in general. He cited solar energy and clean technology as important contributors to future economic diversity. Mayor Crotty expressed his support of the Action Team's work and welcomed them to Orange County.

## **Review of Meeting #4 Summary**

A motion was made for approval; the motion was seconded and passed without objection.

## **Climate Change News—Federal, State**

STEVE ADAMS provided a report on GOVERNOR CRIST's trade mission to Europe. The Team Florida Trade and Business Development Mission involved two weeks in the UK, Spain, France, and Russia with emphasis on the aerospace and aviation industries and how advances in renewable and alternative energy can address the effects of climate change and boost economic opportunities. In the UK, there was awareness of the lack of federal action in the United States, but only a dim awareness of actions currently taking place at the state level, particularly in Florida.

While in France, the group toured a fuel reprocessing facility; in Madrid, Spain, they toured a solar energy facility; a Memorandum of Understanding was signed with a firm to explore the construction of a 10-megawatt (MW) solar facility in Florida.

The Carbon Trust is a private company set up in 2001 by the UK Government with a mission to "accelerate the move to a low-carbon economy by working with organizations to reduce carbon emissions and develop commercial low-carbon technologies." The Carbon Trust has alternative business models that can be imported to Florida, as well as a great deal of experience in bringing advanced energy technologies from the demonstration stage to commercialization. During the trip, Florida Atlantic University signed joint research agreements with Herriot Watt University in Scotland as well as The New and Renewable Energy Center. Florida Gulf Coast University signed a research agreement with the Bangor University in Wales. These agreements focus on renewable energy technologies – particularly on developing ocean energy – and on environmental resource protection associated with the development of these technologies. The agreements are designed to foster student and faculty exchanges, sharing of past and current research accomplishments, and collaborative research in the future to bring commercial-scale applications to market more quickly.

TOM PETERSON updated the Action Team on a number of federal climate issues. The State of South Carolina has just posted its final action plan report today. After Governor Sanford issued an Executive Order 2 years ago, the state went through a process similar to Florida's Action Team process. The Final Report is available at <http://scclimatechange.us/plenarygroup.cfm>.

The major development on the federal front is that on July 11, the U.S. Environmental Protection Agency (EPA) released an advanced notice of proposed rulemaking looking at the regulation of greenhouse gases (GHGs) through the Clean Air Act (CAA). The EPA is also looking at the impacts of underground injection of carbon dioxide (CO<sub>2</sub>). In addition, EPA is looking at GHG reporting and is expected to issue a proposed rule by September 2008 and a final rule by June 2009 focused on data that will be used for planning purposes.

QUESTIONS on Massachusetts vs. EPA—The U.S. Supreme Court determined that EPA had the authority and responsibility to regulate GHG emissions under the CAA. The CAA has a combination of mechanisms that have been used to remove pollution, including cap-and-trade (C&T) authority (sulfur dioxide [SO<sub>2</sub>] for acid rain) and a state implementation process that allows states to create their own programs to reduce pollution. EPA is inviting comments on how existing mechanisms can be applied to regulating GHGs and whether new mechanisms should be developed.

The Clean Air Interstate Rule (CAIR) for non-GHG pollution from coal plants was challenged by environmental organizations and utilities. The District of Columbia (DC) circuit court recently put all the challenges into one docket and recently vacated the rule. This leaves significant uncertainty about what will happen regarding this rule going forward.

COMMENT: The uncertain regulatory environment throws big construction projects into uncertainty.

## Process

MARK KAPLAN: Note that the Technical Work Group (TWG) reports are reformatted as Appendixes, which is how they will be organized in the Final Report. Today, we will begin deciding what will go into our report to the Governor. We will open up the agenda to public comments before voting on specific items.

TOM PETERSON of CCS: Some of the many policy option proposals are ready for your final recommendations today. As these proposals are approved and cleaned up, all the blanks in the policy templates will be filled in. Some of the other policy options are still undergoing quantification. Also note the Addenda documents in the packets which are the latest version of the Policy Options Documents representing work since the meeting packets were sent out. The Action Team will have another chance to see revisions on August 22.

## Agriculture, Forestry, and Waste Management (AFW) Policy Drafts

STEVE ROE presented and referred to the AFW Addendum.

The chart at the bottom of page 4 of the AFW Addendum regarding Florida per capita emissions was created in response to DR. FENTON'S questions on the Inventory & Forecast (I&F). Dr. Fenton was concerned that the I&F had a flat forecast of emissions on a per capita basis. This chart shows that per capita emissions are rising through 2025.

Table 1, Biomass Supply and Demand Assessment, is a potentially important piece for feedstock source—forest understory species. The Biomass Supply and Demand table (beginning on page 2)

shows that we are currently estimating 56 million dry tons of biomass available annually by 2025. We are bumping up against this with around 49 million dry tons of demand; however, we expect that forest understory biomass could provide a significant boost on the supply side. We also need to add current (business as usual) demand to the table. We'll provide a completed assessment at the next Action Team meeting. This is important information as we discuss the policies that involve either biomass supply or demand.

AFW-1, AFW-2a, AFW-4a, AFW-5a, AFW-5c, and AFW-7 are ready for the Action Team's final consideration.

**AFW-1. Forest Retention—Reduced Conversion of Forested to Non-Forested Land Uses**

The estimated mitigation for AFW-1 is 2.1 million metric tons of carbon dioxide equivalent (MMtCO<sub>2</sub>e) in 2025. The forecast may be adjusted according to the number of forest acres lost per year. That number may come down, depending on final work by the TWG with new data that have been incorporated in the I&F. The GHG reduction estimates could come down by as much as a third.

The goal is no net loss of forest. Action Team input on implementation mechanisms would be appreciated.

The benefit is based on above- and belowground biomass stocks. Soil carbon is an important element, but based on our discussions with the U.S. Forest Service, we have left this out of the I&F data due to the uncertainty in their estimates. This means that it wouldn't be appropriate to attempt to quantify the GHG reductions associated with soil carbon.

COMMENT: I see an acre of land as a pool where we sink carbon. I don't see here how that material is going to be used.

STEVE ROE explained that all the AFW policies are intricately interconnected. AFW-1 is focused on retention of land. AFW-3 (Forest Management for Carbon Sequestration) deals with how forest carbon is managed, including the use of biomass removed from the forest, either for use in durable wood products or as an energy source.

COMMENT: We should have language that these are reservoirs of carbon sinks. I see forests as crops.

Steve explained that the issue of forest carbon management, including management for higher rates of carbon sequestration, is dealt with in AFW-3 (which will be reviewed at the next Action Team meeting).

TWG MEMBER: One idea was to look at the purchase of this land; Florida already owns 27%, but the land is not aggressively harvested or managed. CCS is addressing this under AFW-3.

OTHER COMMENTER: Let's include life cycle analysis. When you talk about incentives, are the costs of the incentives figured in?

STEVE ROE: Yes, CCS is developing estimates of overall societal costs to achieve the goals outlined by the Action Team (the cost of incentives would be a portion of this overall societal cost). To the extent that the AFW TWG can identify appropriate levels of incentives needed to implement the policy, this information will be included in the Implementation Mechanisms section of the policy template.

COMMENT: Have you had participation from all parties and is there no minority opinion?

STEVE ROE: We've had good representation on the calls up to this point – no minority opinions to report.

COMMENT: What are we doing with the wood? Are we putting it in warehouses (as furniture)? As a practical matter, it's going to become furniture and so on, and what is buried in landfills is furniture and construction waste.

STEVE ROE: As mentioned above, this will be addressed under AFW-3.

COMMENT: What is the role of implementation mechanisms in quantification?

STEVE ROE: The quantification of overall societal costs is currently based only on the elements of the Policy Design and is not in the Implementation Mechanisms section, partly because of the compressed schedule of the process.

TOM PETERSON: The use of incentives under carbon credit trading would show up as an implementation mechanism.

COMMENT: How have other states used carbon (offset) credits in a cap-and trade system for sustainable forestry? Would the owner still be able to harvest and get that credit?

It was agreed that the implementation mechanisms for the AFW options that involve carbon sequestration should acknowledge the work of the Cap-and-Trade TWG.

AFW-1 was accepted for approval with no objections.

### **AFW-2a. Forest Landscape**

This policy can offer a significant benefit of 24 MMtCO<sub>2</sub>e per year in 2025 at a cost of \$7/ton. There is a 2.5% annual increase in forested land, which is a significant amount of land (≈400,000 acres/year).

COMMENT: We would also want to have a sustainable forestry product.

STEVE ROE: Note again, this ties to AFW-3.

AFW-2a was accepted for approval with no objections.

#### **AFW-4. Expanded Use of Agriculture, Forestry, and Waste Management Biomass Feedstocks for Electricity, Heat, and Steam Production**

AFW 4 has two components: AFW-4a: Agriculture and Forest Biomass and AFW-4b: Municipal Solid Waste (MSW) Biomass, i.e., energy from landfill gas or waste-to-energy (WTE) plants. The TWG is waiting on data for WTE costs in order to complete the analysis of this component. For AFW-4a, sizable reductions of 34 MMtCO<sub>2</sub>e by 2025 at a cost of \$7/MMtCO<sub>2</sub>e were estimated, based on offsetting fossil-fuel-based resources. When the AFW-4b piece is complete, CCS will merge the overall results into a single set of reductions and costs. Also note that AFW-4a and AFW-4b should not be thought of as additive at this stage.

COMMENT: Does Table 1 represent real numbers and non-interference in Florida's economy?

STEVE ROE: It includes our current best understanding of available biomass supplies and estimates of biomass demand.

"MSW" is a real number based on landfill disposal rates and 2005 national waste composition since Florida-specific composition estimates were not available.

COMMENT: There is a lot of potential for fast-growing hardwoods.

AFW-4a was accepted for approval with no objections.

#### **AFW-5. Promotion of Farming Practices That Achieve GHG Benefits**

STEVE ROE described the results of AFW-5a and AFW-5c.

##### **AFW-5a. Soil Carbon Management**

Carbon management programs that include no-till could produce reductions of as much as 1.5 MMtCO<sub>2</sub>e per year. Cost savings are driven by savings in diesel fuel use associated with the adoption of no-till methods.

##### **AFW-5c. Nutrient Management**

Reductions in fertilizer consumption could yield a GHG reduction of 0.3 MMtCO<sub>2</sub>e by 2025. The reductions come from lower nitrous oxide emissions and reductions associated with the embedded GHGs in the fertilizer.

AFW-5a was accepted for approval with no objections.

AFW-5c was accepted for approval with no objections.

#### **AFW-7. In-State Liquid/Gaseous Biofuels Production**

Based on the primary goal of using 20% of available biomass for liquid/gaseous biofuels production, offsetting gasoline with biofuel would result in 8.2 MMtCO<sub>2</sub>e net savings by 2025. This achieves significant reductions but doesn't come close to achieving the secondary goal of offsetting 25% of fossil fuel use. STEVE ROE asked how we want to change the goal reflecting what we now know.

COMMENT: Numbers in Table 7-1 of the AFW appendix for biofuel production seem ambitious. This seems most related to cellulosic ethanol production. It was agreed that STEVE ROE would adjust the ramp-up schedule. MARK KAPLAN asked if there was a specific data source that the TWG should use. There are two or three projects that are being discussed. The TWG has discussed a project in Dade County which is small but well along.

STEVE ROE: We know right now about the biomass supply, but we are not close to the second goal of offsetting 25% of diesel and gas, and we're at about 5% right now. The Action Team may need to adjust the goal downward. [Note that the TLU biofuels option will be addressing the issue of the need for imports to meet their fossil fuel offset goals. The AFW TWG will continue to monitor the TLU option and make the necessary adjustments on overlap, etc.]

Under Implementation Mechanisms, it states that the State of Florida should not support the planting of invasive species for biofuel feedstocks. It would seem to apply to everything but trees. There may be some crops that are not invasives. If a crop like sugar was produced in Florida and it was useful as a fuel, we would want to allow other crops to be used as fuel.

STEVE ROE: The policy was designed so as not to specify fuel feedstocks with the exception that the feedstocks "produce biofuels with significantly lower embedded GHG emissions compared with conventional fuel products" (e.g., corn-based ethanol in the United States). For the purposes of quantification, CCS had to make assumptions about what types of feedstocks and production processes would be used. Currently, the quantification assumes a large amount of cellulosic ethanol.

TWG COMMENT: As we went through each category, we had to be careful not to overuse biomass supplies in each sector (i.e., agriculture, forestry, and waste management), because then it would not be sustainable.

STEVE ROE: Regarding the issue of the amount of transportation-sector fossil fuel use that can be offset with in-state biofuel production and consumption, information from the Transportation and Land Use (TLU) TWG on recommendations that will achieve lower vehicle miles traveled will help to bring down the forecasted 2025 fuel use. To the extent that this occurs, we would be looking at a smaller amount of biofuel needed to achieve the secondary goal. This could help fill some of the gap.

### **AFW-9. Improved Commercialization of Biomass to Energy Conversion and Bio-Products Technologies**

STEVE ROE explained that AFW-9 was not yet ready because the TWG was still awaiting data. Poultry was a point of discussion for the TWG. Poultry wasn't seen by the TWG as producing as much potential for energy as dairy (e.g., as compared with some of the large biomass supply sources in Table 1). CCS will bring that quantification forward at the next Action Team meeting.

It was noted that a University of Florida report was used in the biofuels section (citrus molasses) and likely in other portions of the AFW addendum produced for this Action Team meeting.

## Public Comment

ROBERT ARMSTEAD, The Climate Group: Regarding C&T, if developers purchase a forest and develop it but change management practices in a way that reduces emission, that should be a credit. It would be good to have that type of incentive in place.

JANET BOWMAN, The Nature Conservancy: The objective is encouraging rotations that yield the most carbon benefit. We need to weigh other state priorities such as saving a stand of pines trees where there is a protected cockaded woodpecker population, so we would want to note that as well.

COMMENT: There is a range of forest types—from wild to intensely managed.

TOM PETERSON asked Steve Roe for clarification on the remaining options—AFW-2b (Urban Forestry), plus AFW-5d, AFW-6, AFW-8, AFW-9, and AFW-10. Are they ready for final consideration?

STEVE ROE: No, they are still being quantified.

AFW-7 was accepted for approval with no objections, as long as biofuels are broken out in categories.

MARK KAPLAN: We have come to the time when we will vote on the AFW options. They are subject to the changes that the Action Team has requested today. It also is assumed that staff will do cleanup work on the options. See the notations following each option regarding which ones received unanimous approval. Do you need anything else, Steve? Are there specific recommendations on the text or a tracked changes version?

A motion was made and seconded to approve the policies that had been accepted for approval, with conditions as noted (AFW-1, AFW-2a, AFW-4a, AFW-5a, AFW-5c, and AFW-7). The motion passed without objection.

## Adaptation (ADP) Policy Drafts

JOEL SMITH presented and referred to the ADP policy document. Joel said policies ADP-1, ADP-2, ADP-3, ADP-4, ADP-5, ADP-6, and ADP-7 were ready for final consideration by the Action Team. The remaining policies were still in development.

### ADP-1. Advancing Science Data and Analysis for Climate Change

COMMENT: Let's emphasize collaborative research as opposed to research silos.

### ADP-2. Comprehensive Planning

COMMENT: As appropriate, you want it to be an incentive for good behavior and bring climate change to the table in a positive way. And let's not promote past poor behavior. (This is an acknowledgement of Florida's significant planning process already in place).

It was noted that climate adaptation is going to be an issue in Florida for a long time. There is tension between Miami City and Dade County around development controls. This should be addressed in the policy draft.

**ADP-3. Protection of Ecosystems and Biodiversity**

COMMENT: The Fish and Wildlife Conservation Commission is having a global warming summit the week of August 20; many members of the Adaptation TWG will be in attendance.

**ADP-4. Water Resource Management**

There was a request to build in consistency and coordination for water management districts among the different rules relating to water supplies.

**ADP-5 and ADP-6. Built Environment, Infrastructure, and Community Protection**

JOEL SMITH presented the rationale for putting ADP-6 into ADP-5 – largely the notion of infrastructure was more global and it seemed logical to the TWG members that transportation infrastructure should be included under ADP 5 rather than as a stand-alone issue.

**ADP-7. Economic Development**

COMMENT: Were there any minority opinions expressed?

TWG MEMBER: No.

**ADP-8. Insurance (Property and Casualty)**

There was a request to add language acknowledging that ADP-8 would benefit from collaborative research.

COMMENT: Did the TWG look at equity issues such as how inland property owners will be impacted differently?

JOEL SMITH: No.

**ADP-9. Emergency Preparedness and Response (Extreme Events)**

COMMENT: This needs data, and policymakers need to know where to go for the information when they need it.

**ADP-10. Human Health Concerns**

No comments.

**ADP-11. Social Effects**

Change “billions” to “millions” in text.

COMMENT: Make sure this ADP policy is cross-referenced with education.

**ADP-12. Organizing State Government for the Long Haul**

No comments.

### **ADP-13. State Funding and Financing**

COMMENT: Mention private foundations and venture capital.

### **ADP-14. Coordinating With Other Regulatory and Standards Entities**

No comments.

### **ADP-15. Public Education and Outreach**

COMMENT: Make sure senior business leadership including the Chamber of Commerce is involved. Create reasons for people to participate. Use awards, recognition, free market, and the Internet.

COMMENT: Include faith-based organizations.

### **Public Comment**

JIM MURLEY TWG MEMBER: I see the overlap with the other areas. From my perspective, keeping in mind that the legislature took action on mitigation, we're looking at adaptation as a longer period, more like 50 years.

BOB KRASOWSKI: Regarding insurance—there are hotels being built and major developments planned along rivers. At what point in time will we identify areas that will not be insurable? At least some part of my personal insurance is with condos on the coast. We don't know what will happen in 50 years, but let's give attention to where we might restrict roads or areas where people should self-insure.

MARK KAPLAN asked for a motion to approve ADP polices 1 through 7, as adjusted by the Action Team through this discussion. The motion was made and seconded and passed without objection.

## **Government Policy (GP) Policy Drafts**

JEFF WENBERG presented the Government Policy and Coordination draft policies. Jeff explained that none of the GP policies were subject to quantification. He said that policies GP-1, GP-2, GP-4, and GP-5 were ready for final action by the Action Team. GP-3 was still in development.

### **GP-1. Targets, Reporting, Funding, and Accountability Measures**

COMMENT: Under the goals section where it states "beginning in 2010," what goals are you referring to?

JEFF WENBERG explained that these are the emission reduction goals established by the Executive Order.

COMMENT: On page 5, it calls for coordination with EPA and The Climate Registry. Should this be the Florida Department of Environmental Protection (DEP) as opposed to the Florida Energy and Climate Commission (FECC)?

JEFF WENBERG agreed and said the change would be made.

COMMENT: We are looking long term and how do you do that? How do you view the relationship of these recommendations and the next step, which is the legislative process?

JEFF WENBERG: The reporting rule is related to C&T, whether it is regional or federal. They do interact. I don't think there are any legislative recommendations on the reporting rule. It was noted that these are recommendations to the FECC and to the Governor.

TWG MEMBER: The sense of urgency desired by the TWG was not quite captured here. That is why we wanted the goals reviewed. We realized that time spent pursuing legislation is time we wouldn't be moving forward with some of these more urgent items.

### **GP-2 Public Awareness and Education**

JEFF WENBERG: The focus was to target three audiences—the general public, policymakers, and educators, through the college and university level. There is new language responsive to the Action Team's request that faith-based efforts be noted here. The TWG also added a list of other potential partners from community and non-government organizations.

COMMENT: Include a reference to the business community in Implementation Mechanisms.

COMMENT: I see these are not quantified. Why are we not being more accountable there?

JEFF WENBERG: It is hard to measure. Unlike most aggressive goals, it would be difficult to quantify or even estimate the results.

### **GP-3 Inter-Government Planning, Coordination, and Assistance**

JEFF WENBERG: There are continuing conversations within the TWG on the appropriate roles for various levels of governments, municipal planning organizations (MPOs), regional planning organizations (RPOs), transportation and land use planning, and how best to coordinate them. This has not yet been agreed to.

COMMENT: Indicators and measures of success should be included under goals because those are key to getting public education programs funded.

JEFF WENBERG agreed to ask the GP TWG to come back with more specifics while noting that it is difficult to tie Government Policy options to GHG reductions.

### **GP-4. "Green" Business Development Policies**

JEFF WENBERG pointed out among the implementation mechanisms listed in GP-4, there is a discussion about what constitutes a "green product," so that state agencies can favor the purchase of green products and services.

COMMENT: There is a need to define green jobs and focus on workforce development. How do we quantify this on policy side? Florida is behind and needs to get bold. California (CA) passed an (RPS) in 2002 but it had no impact on jobs. But then they enacted Assembly Bill 32 (AB-32) with a much more aggressive RPS and are now averaging \$400 million per quarter in green technology development. What is it about AB-32 that spurs on investment? What is it about HB

7135 [House Bill 7135] that does or does not spur investment? Florida needs to find a way to document this.

The California Public Employees Retirement System (CalPERS) manages designated incentive funds, including venture capital for new energy technologies. This policy needs to propose how to get venture capitalists to come to the state and invest in new technology businesses. In California, CALPERS participates side-by-side with private venture capital.

COMMENT: In California, electricity is a lot more expensive than in Florida; they have many programs already under way. Californians pay more for electric rates but use a lot less energy. And Silicon Valley is a huge hub for investment. We've got to explain to the Legislature that these are the policies they should seek in this economic climate.

COMMENT: Explicitly include small businesses and ways for them to participate. Give them a digestible timeline.

COMMENT: The issue is NOT the availability of capital, even in this climate. But investment in renewables won't cover everything. The Public Service Commission (PSC) was able to get some legislation that allowed us to get rates of return that work. We are dealing with a company in Germany; this company wants to build a solar utility in Florida. When you reach critical mass, they are not worried about capital. They need customers and rate structures. How do we increase that? The Governor's Executive Order in Florida—we've got the platform.

GP-4 was returned to the TWG to incorporate this feedback.

COMMENT: Everybody wants to see solar get built in Florida. But what is the demand and need for solar manufacturing? How did Germany create 250,000 jobs in the renewable sector?

JEFF WENBERG: The TWG had the benefit of a presentation from the State of Oregon about Oregon's success. Oregon will be the #1 producer of photovoltaic (PV) panels in the United States next year. The major point of the presentation was that these firms need evidence that there will be a market, and a local market. Oregon passed a big RPS. Then they passed aggressive tax policies and incentives targeted to PVs specifically.

### **GP-5. Introduce Core Competencies into Professional Licensing Programs**

JEFF WENBERG: As requested, Energy Supply and Demand-15a (ESD-15a) was merged with GP-5. The central focus is to change licensing to include climate considerations in licensing exams.

No further Action Team comments.

### **Public Comment**

TWG MEMBER SUSAN GLICKMAN comment on GP-4: I was on the Governor's trade mission as well. The thing that I took away is that they need certainty in the market. Until you send a price signal, certainty in the market is one of the most important things. The Regional Greenhouse Gas Initiative (RGGI) is going to hold its first auction on September 25 and, unfortunately, Florida won't yet be in the game.

BOB KRASOWSKI: Regarding GP-1, I think haste makes waste. A small group of people ends up affecting everyone. Bob read his e-mail related to GP-2, which expressed his concern about giving special priority to religious groups over other civic organizations. He asked that his list of groups be included and be put in alphabetical order. “It is a slight to grassroots people if everyone is not included.”

MARK KAPLAN asked for a motion to approve GP-1, GP-2, and GP-5. The motion was made and seconded and the three policies were approved as amended with no objections.

## **Lunch**

RACHEL BEKCHART, Environmental Defense Fund, invited the Action Team and all present to see the low-carbon trucks parked outside. There is a revolution going on in moving things through space especially with regard to heavy-duty fleets. These trucks are reducing fuel costs by 50%.

COMMENT: Having about 3 years of experience with these trucks, we saved 45% in fuel costs, and we have a 95% reduction in tailpipe emissions. I’d be happy to discuss this with you out in the trucks today.

Before the Action Team broke for lunch, CHAIR MARK KAPLAN announced that given progress thus far today, the Action Team might be able to finish TLU and ESD today and might not have to convene for the second day of the meeting.

## **Cap-and-Trade (C&T) Progress Report**

JEFF WENBERG presented. The TWG had calls on July 18 and July 29. The TWG received a briefing and discussion on carbon offset projects and allowance price mitigation measures. The TWG came to quick consensus on purposes for the use of “allowance value.” These are not in priority order:

- Promote energy efficiency investments,
- Mitigate impacts on ratepayers and/or consumers,
- Promote renewable or non-carbon technologies,
- Mitigate impacts on low-income or disadvantaged communities, and
- Mitigate impacts of climate change (i.e., fund adaptation strategies).

The C&T TWG received a briefing on the preliminary modeling of Florida as a participant in the Western Climate Initiative (WCI) and is also scheduled to have a full day in-person meeting this week.

COMMENT: I think we know where the policy issues will shake out—whether it’s an auction or whether these are handed out for free, whether Florida joins an existing trading system—and will there be safety valves. I think the modeling will be interesting, but it doesn’t move us toward resolving the policy issues.

JEFF WENBERG: Toward that end, we've prepared and conducted a survey and discussed the results of the survey. Roughly half the questions posed are within reach of consensus or a strong majority. Half the questions do not present a clear picture. Two of the questions included were "How would it look if Florida joined RGGI?" and "How quickly can we achieve the goals the Governor set?"

JEFF WENBERG briefed the Action Team on the assumptions of the WCI and the RGGI models and introduced the preliminary C&T modeling results showing the impact of Florida joining the WCI. Shortly after his introduction, technical issues were corrected, and Dr. Adam Rose and Dr. Dan Wei were available by telephone to present the modeling results.

ADAM ROSE: Two simulations were performed:

- Cap-and-trade among the 10 WCI Partners
- Cap-and-trade with Florida joining WCI

It was noted that these are preliminary simulation results. They are subject to change after Florida-specific cost data and any updated data from WCI partners is obtained.

This is based on WCI partners—10 states and provinces (Ontario just joined as an eleventh member and, as a significant economy, it will have an effect, but is not yet included). Then a second run was done including Florida as a member. WCI is nearly an economy-wide model, but it is in draft. The model looks at trading in the single year, 2020.

The expected permit price of \$114/ton is the cost of the last, and thus the most expensive, ton of carbon emission avoided.

This analysis shows that every jurisdiction realizes a cost savings by participation in the program, even after program costs are factored in.

JEFF WENBERG: This assumes that goals will be met and compliance will be required. They can do it by investment in their own emissions reductions. If the permit price is less, then they may purchase the permit. The concept is that the market will find the lowest cost. SO<sub>2</sub> got more than required reductions, faster than was ever anticipated. CO<sub>2</sub> is the perfect pollutant for this because it doesn't matter where the pollution occurs on the planet.

QUESTION: Gross emissions—why would soil sinks be excluded?

JEFF WENBERG: Soil sinks can be encouraged, but for the purposes of modeling, it is difficult to measure and demonstrate.

ADAM ROSE: We are trying to simulate Florida in WCI under current conditions, and WCI doesn't include soils. If we did include soils, Florida would have an advantage. Also Florida would be one of the largest jurisdictions in any of these groups—RGGI or WCI. Florida is a purchaser of permits.

COMMENT: The information presented is all based on South Carolina? Yes, though it has been adjusted. When do you expect to model with Florida data? JEFF WENNERBERG responded: When AFW and other TWGs get their quantifications done, those numbers get plugged into this model. We hope that can happen by the next meeting.

Others have done a run of the numbers from the Governor's Executive Order and came up with a cost of \$100 to \$200 per ton. This Cap-and Trade work may be the most positive thing that comes out of this process.

### **Findings for the Preliminary Simulation**

Whether Ontario joins WCI or not will affect how Florida stands to gain by becoming a WCI member; however, there is still a cost savings shown here of 6% for Florida.

There was a request to include the issues of region, allocation, and safety valves in the Cap-and Trade recommendations.

### **Public Comment**

STEVEN SMITH, Southern Alliance for Clean Energy: I'm on the ESD TWG but not on the C&T TWG. We understand that giving permits away to existing polluters dramatically skews the market. The lesson from doing C&T is that all carbon markets are moving toward 100% auction and that is now dominating the discussion at the federal level—which has shifted completely in the last 24 months.

BOB KRASOWSKI: On the previous chart, does anyone have the negative cost activities? JEFF WENNERBERG responded: On the TWG web page, there is a list of the classes of activities that fall near and below the cost line.

BOB KRASOWSKI asked about trading costs.

ROBERT ARMSTEAD: Responding to the discussion about hedging and uncertainty in the market—when the price is set on carbon, that is when you spark green jobs creation and when you make solar and wind cheaper and make those industries more profitable. The Climate Group is doing a report on China. Their industries are booming because their policies are spurring them forward by setting market certainty. An auction allows for more of this and for more green jobs than a free allocation system.

It would also be good for state entities to participate in a C&T program.

### **Transportation and Land Use (TLU) Policy Drafts**

LEWISON LEM presented.

QUESTION ON THE ASSUMPTION MEMO. There are a lot of things that will not be estimated. These indirect effects we typically write into the policies qualitatively as co-benefits. It is difficult to get quantitative data. What about Centers for Disease Control and Prevention data? They are certainly important in terms of morbidity, asthma, and other health effects.

**TLU-1. Develop and Expand Low-GHG and Alternative Fuels**

I've been hearing a lot about jatropha as a biofuel. It's been discussed in the context of TLU-7. There has been a lot of discussion in Lee County on this and a lot of interest at the University of Florida.

A TWG member noted that the TWG intended to include a definition of advanced biofuels.

The intent of this is to provide incentives to encourage manufacturing of advanced biofuels.

**TLU-2b. Add-on Technologies for Existing Vehicles and New Vehicles**

LEWISON LEM: This is undergoing quantification.

**TLU-3. Smart Growth Planning**

No Action Team comments.

**TLU-4. Improving Transportation System Management**

LEWISON LEM: This is undergoing quantification.

COMMENT: From page x-24 in TLU POD. What are transportation facility operators?

LEWISON LEM: Highways and toll road operators.

COMMENT: What are time-based variable pricing and distance-based variable pricing?

LEWISON LEM: The idea is to put more of the cost on the user and give the user options to manage their trips to reduce cost and congestion.

**TLU-5. Increasing Choices in Modes of Transportation**

COMMENT: The policy should include scooters, which are a growing transit option in Florida.

**TLU-6. Factoring GHG Emissions Into Transportation and Land Use Planning Processes**

LEWISON LEM: The TWG added language based on the discussion last time and on a Florida Department of Transportation (FDOT) program—Efficient Transportation Decision Making (ETDM) was noted.

The new language also references a 2007 law providing for GHG emission reductions impacts in general transportation plans and Florida Department of Community Affairs (DCA) actions.

**TLU-7. Incentive Programs for Increased Vehicle Fleet Efficiency**

COMMENT: We have to rethink what the required level of service is because this has changed, such as adding lanes. Let's reduce the level of service.

COMMENT: TLU-6.10 Local governments often measure "effectiveness" if revenues are generated. But for our purpose here, the programs need to be evaluated based on whether they reduce GHGs.

COMMENT: I am not familiar with the roles of metropolitan planning organizations (MPOs). Do they currently incorporate GHG emissions in decisions?

LEWISON LEM: Many of the current planning processes do not incorporate GHG emissions reduction. TLU-7 has language that would require reductions, though that does not necessarily change the planning decisions that get made.

COMMENT: Would you incentivize RPOs, i.e., the state would give more funding to communities that had met certain reduction goals?

The Chair concluded the discussion by sending the suggestions and the policy option back to the TWG for reworking.

LEWISON LEM: Incentive programs for increasing fleet efficiencies are undergoing quantification. This should include commercial truck traffic.

### **TLU-8. Increasing Freight Movement Efficiencies**

LEWISON LEM: This is draft language and the TWG is soliciting more input from stakeholders. This will be discussed during the upcoming TWG call on Wednesday. On the national level, we are trying to become more efficient in fuel use and have fewer trucks on the highway.

### **Public Comment**

JANET BOWMAN, The Nature Conservancy: Issue of concurrency—local governments wouldn't be doing as much transportation planning in the future, so consolidation of planning and priority setting will be different and should take this into account. You could also be more explicit about transit.

### **Energy Supply and Demand (ESD) Straw Policy Drafts**

TOM PETERSON and ALISON BAILIE AND DAVID VON HIPPEL (via telephone) explained that today's focus for all the TWGs is on the Policy Description and Policy Design sections of the template.

The ESD Policy Options were separated into Tier 1 and Tier 2 priorities for the purpose of undergoing quantitative analysis. Policies were ranked as Tier 1 if they promised large GHG reductions, were easy to analyze, or if they were priority issues at the Governor's climate summit. ALISON BAILIE and her quantification team have developed a memo of key and common assumptions.

The ESD TWG has also further developed and sharpened the Policy Designs to get the options ready for quantitative analysis. Finally, the TWG reviewed a sample notional supply curve, which provided a one-page view of the costs of various renewables for Florida.

We are seeking Action Team approval for the Tier 1 and Tier 2 designations and approval to move forward in analyzing the Tier 1 options. It is important to have sufficiently accurate cost curves for this work, and each Action Team member is requested to go through the data sources in the ESD addendum and alert us if better information is available.

MARK KAPLAN: Are there any concerns about going forward with the Tier 1 and Tier 2 designations?

There were none.

### **Discussion of ESD-7. Integrated Resource Plan (IRP)**

COMMENT: Why is ESD-7 “Not to Be Quantified”?

TOM PETERSON: There was in-depth discussion on ESD-7 by the Technical Working Group (TWG), and ultimately it was included in the Implementation Mechanism sections of those Tier 1 options that will be quantified.

COMMENT: As more emphasis is put on energy efficiency (EE), it should change your IRP process. Can you take that incremental improvement in IRP? Not on the IRP itself, but the IRP in Florida is based on least-cost alternatives. We are in a transition period, and we can't just click and all these energy efficiencies are going to save money on Day 1.

TOM PETERSON: Alison, how much would IRP figure into the baseline and modeling?

ALISON BAILIE: TWG members are providing text that will reflect an updated version of IRP.

DAVID VON HIPPEL: We typically have treated IRP as a supporting policy and as an existing or recent action.

COMMENT: The question is, “How does this affect consumers’ bills”? You can model it in the best case. Part of this is how you incorporate growth.

COMMENT: Unless it is in Tier 1, and if utilities are going to change their methods of cost planning in order to allow a new evaluation of what the costs are, we need to keep it open and figure out where those pinch-points are.

It was agreed that ESD-7 would be sent back to the TWG and moved to Tier 1.

### **ESD-3. Renewable Energy Incentives and Barrier Removal**

The level of effort for ESD-3 should go above and beyond the level of effort for ESD-5.

### **ESD-5. Renewable Portfolio Standard (RPS)**

COMMENT: As much as possible, the RPS policy should represent the discussion that is going on now in the Legislature.

COMMENT: On the other hand, the Legislature did not have information on the cost to consumers, and recent analysis shows that renewable energy credits is the most expensive options for the consumer. To limit the policy goals to the legislative discussion is too narrow. The Legislature was acting with the best of intentions but without complete information. My concern is focused on the narrowing of the option to renewable energy credits. There has been a cost analysis of how to implement RPS which shows that feed-in tariffs are cheaper for consumers (e.g., the UK

is using feed-in tariffs). Yet currently, the PSC will be limited to considering renewable energy credits for implementation.

COMMENT: Is this a request for analysis as part of this (Action Team) process? ALISON BAILIE noted that this discussion is beyond the analysis of the carbon reduction potential of ESD-5 and more germane to Implementation Mechanisms. To what extent can modeling pick up these differences? ALISON explained: Mostly we've looked at the costs and benefits for the state as a whole—for internal cash flows. We wouldn't pick up cost differences in Implementation Mechanisms at this stage or level of analysis.

The Action Team requested that cost differentials of different implementation mechanisms should be considered —feed-in tariffs are the lowest cost option. Please look at the UK Study.

TOM PETERSON: It is possible that this analysis fits in the category of what would be difficult to do in the time allowed. There could be a recommendation to undertake that analysis.

COMMENT: When the RPS issue came up in Congress and someone said it will cost an enormous amount to implement, it was killed. We need clarity in the recommendations so that doesn't happen in Florida. We should be looking for the least-cost option.

### **Other ESD-Related Discussion**

ALISON BAILIE: For ESD-13a, we have excellent Florida data sources. Are there other questions on ESD-13a, ESD-13b, and ESD-14?

The Public Service Commission (PSC) had a workshop on July 11 and a “straw man” rule is underway for an RPS. The PSC hopes to propose the rule by October and to hold a hearing in mid-December or early January at the latest.

COMMENT: ESD-23. Decoupling: There is a letter from Armando Olivera in the Action Team's packet and Steven Smith disagrees with the points made in the letter and plans to respond in writing.

COMMENT: Decoupling should focus on saving megawatt-hours (MWh) instead of just MW. True energy efficiency should be the target.

### **Discussion of ESD Quantification Memo**

TOM PETERSON: Does the Action Team have any revisions to this document, as presented in the last meeting?

COMMENT: The Action Team noted that 2006 data is being used and, while some of these renewables costs will be stable, some costs will drop dramatically, such as the cost for thermal solar. We should put a stake in the sand where we think these prices are going; otherwise, our data will be wrong. Also include fuel use changes in the analysis.

### **Notional Cost Curve**

TOM PETERSON: This is built on data that are not Florida-specific. However, it does show that some renewables have cost savings, some have costs. The Action Team likely also wants to

consider non-economic factors and co-benefits such as health benefits. This is a time-sensitive analysis, a snapshot in time.

## **Public Comment**

BOB REEDY, Florida Solar Energy Center: I support the comment that the costs of solar energy are dropping significantly. Please do make this an iterative process. In the last 2 years, the changes in cost have been significant. When mass production and installation occur, it will be a different situation. Here are some solar costs per kilowatt figures: mass installation scale is \$3.50/kW; residential scale is \$8 to \$10/kW. In 5 years, it could get down to \$2/kW for mass scale and \$6/kW for well-planned residential retrofits.

## **Public Comment**

BOB KRASOWSKI, Florida Alliance for a Clean Environment commented on Slide 32 of the Meeting #5 PowerPoint, "Energy Supply and Demand Tier 1." I'm concerned about ESD-11, specifically the burning of municipal solid waste. I'd like to see that changed from "waste" to "resource." We should separate out the materials to make sure we are using the resources in the waste stream.

ROBERT ARMSTEAD: I think IRP should be moved to Tier 1 with a sensitivity to ESD-13b.

## **Agenda, Time, and Date for Next Meeting**

August 22, St. Petersburg, Florida. Location will be the Council Chambers in the City of St. Petersburg City Hall, 175 Fifth Street North, St. Petersburg, FL 33704.

## **General Public Input and Announcements**

None were offered.

CHAIR MARK KAPLAN thanked all present and adjourned the meeting, announcing that the session planned for August 7 would not be held due to the completion of the agenda. The DEP will have staff available in the room tomorrow to inform attendees who might not receive word beforehand.