



**Governor's Action Team on Energy and Climate Change**  
*State of Florida*

**FLORIDA ENERGY and CLIMATE ACTION TEAM**

**Agriculture, Forestry, and Waste Technical Work Group (TWG)**  
**Notice of Teleconference Meeting, Call #3**  
**March 26, 2008**  
**1:00 PM – 3:00 PM EST**

**Attendance:**

1. Technical Working Group members:  
Mike Branch, Marc Bruner, Jimmy Cheek, Doria Gordon, Eugene Jones, Jay Levenstein, Gary Peter, Dan Roach, Dwight Stansel, Celeste White, Nick Wiley
2. Center for Climate Strategies (CCS) staff:  
Steve Roe, Rachel Anderson
3. Florida Department of Environmental Protection: James McNeil
4. Florida Agency Observers: None.
5. Public Attendees: Bob Krasowski, Nat Mundy – Sterling Planet

**Background documents:**

(all posted at <http://www.flclimatechange.us/AFW.cfm>)

1. Meeting Notice and Agenda
2. PowerPoint for Teleconference
3. Florida AFW Options Description
4. Florida AFW Catalog
5. Summary of Call #2

**Discussion items and key issues:**

1. Steve Roe called the meeting to order, Rachel Anderson completed the roll call, and Steve reviewed the agenda and plans for the call.
2. Steve reviewed the Call 2 summary. Most of the call was used to discuss the catalog in depth and to make sure it included a comprehensive list of potential actions for Florida. The Call 2 summary was accepted without changes.



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3. Steve reviewed the goals for next Climate Action Team meeting on May 29<sup>th</sup>. The Action Team will review initial priority options and the Inventory and Forecast.
4. Steve reviewed the steps the TWG will be working on today: identifying a full range of possible actions and identifying initial priorities for analysis. He also noted we will be reviewing the Inventory & Forecast on this call and on upcoming calls as well.
5. Steve briefly reviewed the Inventory & Forecast (I&F) numbers noting that he won't review data sources and methods today but wanted to provide brief overview of the sector contributions to statewide GHG emissions. He noted that some AFW policy options will not only provide emissions reductions in our AFW sectors but in other sectors as well. For example, biomass to energy options would provide reductions for the energy supply or residential/commercial/industrial sectors. First Steve reviewed agricultural emissions. Question: is the ag data specific to Florida. Answer: Yes. Question: does this baseline data account for new technologies or changes that could come about during the policy period? Answer: Correct. Steve noted that we want TWG members to provide any new information or state data that will improve the forecast (details on the forecast data and methods used will be included in the appendices of the I&F report). Questions: Do the data not include sequestration in crops? Answer: Correct. It is assumed that crops will be consumed by livestock or humans and so do not represent long term carbon sequestration (also the bulk of remaining carbon in agricultural residues either oxidizes to CO<sub>2</sub> or is used as a nutrient during the next crop cycle).
6. Next Forestry was reviewed, noting that the forecast assumes a straight line from 2005 onward. This could be affected by development/removing forested land to other use. The data include GHG emission/sequestration from forested lands, urban forests, and wildfires. For wildfires only methane and nitrous oxide emissions are counted – not carbon dioxide emissions from burning (these are captured within the forest carbon modeling done by the US Forest Service). Member comment: 2005 wildfires number looks low. Question: Why does forestry not include soil carbon? Answer: Forest soil carbon data are included in the appendix; however, the forest service recognizes that their soil modeling data have high uncertainty (their recommendation to CCS is to leave these out of state-level GHG inventories). Comment: Forested landscape should be separated into silviculture and non-production forests. Comment: there are new tools available to aid in understanding land use/forestry projections, including a tool highlighted in a recent Friends of Florida publication (NOTE: the noted publication can be found at <http://www.1000fof.org/PUBS/2060/Florida-2060-Report-Final.pdf>).
7. Finally, Steve reviewed the Waste Management inventory (covering both solid waste and wastewater treatment). CCS is working with DEP to break down the landfill emissions by emissions control type into uncontrolled, flared, and landfill-gas-to-energy categories. Combustion includes traditional MSW



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- incinerators/combustion and residential open burning such as backyard burn barrels. Most of the Florida MSW combustion plants are electricity generating and as such will be removed from the waste inventory, once we confirm they are being included in the electricity supply sector estimates.
8. Steve next moved to the catalog and notional ratings. A few TWG members provide their ideas on notional GHG reductions and costs. Comment: Plasma arc technology will still result in GHG emissions even though it is being touted as emission-free. It will still have heavy metals in the residue – just not in the stack. It is not currently commercialized anywhere, so there are a lot of unknowns about how it will work. Steve reviewed the key to understanding GHG emissions reductions and cost per ton on the first page of the catalog. Comment: Cost for some may actually be a cost savings or a revenue stream. Steve then lead the group in a discussion of each section of the catalog as follows:
    - a. Section 1: Agriculture – Production of Energy and Materials. Comment – For 1.1 and 1.2 the cost is medium (M). Question: What is 1.4 “Improving Energy Capture from Biomass Heat”? Answer: There may be existing biomass facilities where we can try to identify opportunities for combined heat and power. Or it could refer to developing pilot projects/R&D on technologies for energy capture from biomass. Comment: Can the members add information about externalities/feasibility issues to the catalog now? Answer: Yes.
    - b. Section 2: Agriculture – Livestock. Question: What is an example of 2.3 “Technology Improvements to Increase Water Conservation”? A member noted that it takes power to move/pump water from point A to point B and minimizing this can save energy. Question: Is it more appropriate for the livestock sector rather than the crops sector? Answer: It appears in both. Comment: It takes a tremendous amount of water to run dairies. This could be an opportunity for water recycling or reuse, such as using dairy runoff to water feed crops.
    - c. Section 3: Crop Production. Question: Is biosolid application to crops viable? Comment: Biosolids are becoming more valuable as fertilizer costs go up. Comment: DEP is moving in the other direction because of the “yuck” factor (i.e. negative public perception towards biosolid application to crops), but the right thing to do is to recycle organic solids as fertilizers. Comment: the ‘yuck’ factor is the major externality. Comment: Drainage management may not need to be a category and should be removed. In recent years there hasn’t been a problem with standing water – the state has had the opposite problem. A member asked his water policy people about it and they were puzzled by the category. The group decided to leave it in with the note that it is not favored as a policy option for the state. Comment: Farm bill may cover some of these issues and provide funding opportunities.



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- d. Section 4: Agriculture – Land Use Change. Comment – A member asked to include a reference to ecosystem and wildlife habitats.
- e. Section 5: Agriculture - Farming Practices. Action Team added harvesting practices and wanted it to be a separate category.
- f. Section 6: Forestry – Production of Forestry Energy and Materials. A member commented that 6.1 “Expanded Use of Forest Biomass Feedstocks for Electricity, Heat and Steam Production” should cost M. Another commented it could lead to high (H) reductions and M cost. Comment: 6.2 “In-state Liquid/Gaseous Biofuels Production” cost is M and would only refer to cellulosic ethanol since that is the kind that could be made from forestry products (CCS notes that a lot of research is being conducted on other types of liquid fuels production from forest feedstocks).
- g. Section 7: Forestry – Biomass Protection and Management. The FL Action Team requested that silvicultural practices be included in 7.4. Comment: 7.1 would be M if you could buy low-cost conservation easements. As you get closer to urban boundaries the cost of easements would go up. However, land close to urban centers might be the kind of land we would be targeting with this kind of policy. Comment: 7.1 “Forest Protection—Reduced Clearing and Conversion to Non-forest Cover” could also include incentive programs and technical assistance programs that work with private landowners to promote forest cover. A member noted that there could be “carbon easements” – where you purchase the carbon sequestration rights rather than the development rights (with lower costs). Comment: There are a lot of acres we are talking about that could be used by either forestry or biomass production. Steve noted that 7.2 “Urban Forestry” includes energy reductions through shading with urban tree canopy. In southern states the energy savings tend to drive the emissions reductions more than the actual carbon sequestration. A member noted that for 7.4 “Forest Management for Carbon Sequestration” there can be some short rotation management practices that achieve long-term sequestration in the form of forest products (i.e. durable wood products). There are some long rotation forests that aren’t sequestering a lot of carbon because they aren’t actively taking up any more carbon. Steve asked the group: How much FL forestry production goes towards pulp and paper rather than durable products? A member answered that it is probably 50/50. In regard to 7.4, a member noted that the state already has 99.6% compliance with silvicultural best management practices. Steve asked the group if fertilizer is being applied to pine plantations and would this be a possible use for biowaste solids? A member noted that for plantations approximately 2/3 get fertilized once every 10 years. There is some minimal use of biosolids, but it requires a lot of DEP permitting and still has the “yuck” factor. A member also noted that biosolids also



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- encourage weed growth in tree plantations. With regard to 7.6 "Mitigation of Forest Loss Due to Insects/Disease," genetics is used most often to overcome disease. A member noted that prescribed fire in a diseased stand will hurt it not help it.
- h. Section 8: Forestry – Wood Products and Waste. Comment: 8.2 "Improved Logging Residue Recovery" is more expensive than mill waste recovery because it involves a second trip to the woods and is more labor intensive.
  - i. Section 9: Waste Management – Waste Management Strategies. The Florida Action Team asked that hurricane waste be added to the title of 9.1. Members noted that hurricane waste might need to be broken out as a separate option since it only happens during some years whereas yard waste can be collected every day. Another member noted that organic waste can be split into two streams – non putrescible yard waste and food waste such as eggshells, orange peels, etc. noting that they can't be dealt with the same way. A member also noted that municipal solid waste also includes fiber, paper, and lumber that isn't separated out before being collected. A member noted that one thing the state could do better on is the procurement of recyclable materials, noting that the state needs to attack an option like 9.3 on both the waste collection end and also increase the markets for recycled materials.
  - j. Section 10: Waste Management – Landfill Gas Strategies. A member noted that a large externality is the actions of the public service commission
  - k. Section 11: Waste Management – Wastewater Management Activities. No comments. The next AFW TWG call is scheduled for April 30<sup>th</sup> from 1-3 PM EDT. We will be reviewing ballot results.
9. Before the next call each TWG member will receive a ballot with instructions as well as an updated catalog with the notional ratings.
10. Public input:
- a. Bob Krasowski from southwest Florida said he was very interested in the Waste portion and thought the comments were great. He noted that what creates methane in the landfill is the organics fraction of the waste stream. If we were to take the organics out there would be virtually no landfill emissions. He suggested we should move away from the idea of landfills as the basis for waste disposal and instead focus on other means such as using digesters for the organics. He would like everything in the catalog to be measured against sustainability criteria.
  - b. Nat Mundy – Sterling Planet, Atlanta. He commented that waste streams that could make a clean energy fuel should be separated out. He said that ASTM defines types of refuse-derived fuels and that these



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definitions could help steer the TWG in defining waste streams and fuel types. (NOTE: Nat emailed some information about fuels that will be supplied to the TWG members separately by email.)

### **Next steps and agreements:**

1. The next TWG meeting will be held on Wednesday, April 30<sup>th</sup>, from 1:00 - 3:00 pm.
2. Next FL Action Team meeting is May 29<sup>th</sup>.
3. Dates for upcoming TWG conference calls:
  - a. April 30<sup>th</sup>, 1-3 p.m.
  - b. May 20<sup>th</sup>, 10 a.m – 12 p.m
  - c. June 10<sup>th</sup>, 10 a.m – 12 p.m
  - d. June 24<sup>th</sup>, 10 a.m – 12 p.m
  - e. July 15<sup>th</sup>, 10 a.m – 12 p.m
  - f. July 29<sup>th</sup>, 10 a.m – 12 p.m
  - g. August 12<sup>th</sup>, 10 a.m – 12 p.m
  - h. August 26<sup>th</sup>, 10 a.m – 12 p.m