RTT REFOREST THE TROPICS, Inc.,

A NGO developing sustainable, economic farm forests in the tropics to offset U. S. carbon emissions to mitigate climate change

An official United Nations Climate Change Program between the U.S. and Costa Rican governments
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Cris Nelson
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Department of Environmental Protection
State of Connecticut
79 Elm Street
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May 31, 2007

RE: Comments on DEP's Pre-proposal regulation to implement the Regional Greenhouse Gas Initiative ("RGGI")

Dear Sirs:

On behalf of Reforest the Tropics, Inc. ("RTT"), I am submitting this preliminary comment on the pre-proposal regulation, Regulation of Connecticut State Agencies (NEW) Section 22a-174-31a. Greenhouse Gas Emission Offset Projects. I am the Director of RTT.

As described more fully below, RTT is a Connecticut-headquartered non-profit organization with participation from numerous prominent Connecticut organizations and individuals. RTT has made path-breaking advances in the research and development of carbon dioxide ("CO2") sequestration through tropical farm reforestation. As the Director of RTT and ex-FAO Forestry Officer, I have more than forty years of direct, practical, expert, in-depth experience in forestry, forestry in tropical regions and CO2 sequestration through forestry projects.

The RGGI program under consideration by the DEP has the potential to provide a significant impetus to the expansion of C02 sequestration through reforestation. DEP's Pre-proposal makes important advances in that regard; but, I submit, also must incorporate certain suggested modifications to the design of the proposed offsets and emissions credit program, discussed in detail later in this letter, in order to fully realize the benefits of atmospheric CO2 reduction through reforestation.

Below, I briefly describe RTT's program, approved in Washington by DOE ad EPA on Nov. 31, 1995. It is also approved by the Government of Costa Rica. In the following section of the comment letter, I provide RTT's specific comments on the DEP pre-proposal regulation.

DESCRIPTION OF THE RTT PROGRAM

Reforest The Tropics, Inc, is a Connecticut- and Costa Rican-based non-profit organization that manages a UNFCCC/Joint implementation program. Our goal is to learn how to create and manage sustainable new tropical farm forests to manage greenhouse gas emissions.

Visit our web site for more information, reforestthetropics.org.

Forty years ago, the author began R&D under the auspices of the United Nation Development Program in Costa Rica to develop a model of farm wood production in mixed-species forests. Below is one example of our results now applied to carbon sequestration.

The above photo is of a 5½-year old forest that we designed and now manage in the Las Delicias Farm in Costa Rica for CMEEC in Norwich, CT. It combines sequestration and eventually wood production in a 25-year agreement with the farmer. This 15-acre forest, now 6.32 years old, has sequestered over 500 tonnes of CO2 in total with a current rate of 210 tonnes/yr in this pilot project. Hac. Las Delicas in Costa Rica.

By managing the forests *sustainably* under long-term contracts, we expect the carbon to be stored indefinitely.

Trees grow very quickly in the tropics because of the year-round growing period, abundant rainfall and solar energy. The RTT Model is unique among tree planting programs in that we combine inexpensive sequestration, under $10 per ton of CO2, and long-term storage for US sponsors in managed forests with the production of wood for the participating farmer to sell. Most of our tree species also produce food for wildlife.

To date, 53 New England emitters have sponsored 260 acres of formal carbon-offset forests on 9 farms in Costa Rica. Among our sponsors are: the Mohegan Casino in Uncasville, CT; the CT Municipal Electric Energy Cooperative in Norwich, CT; Connecticut College in New London, CT and The Superior Nut Co. of Cambridge, MA. Individuals also participate as in the case of the Foley Family of Centennial, CO.

Our measurements now show that a 2½-acre forest, for example, will offset an average of 40 metric tons of CO2 annually during the 25-year contract we sign with the farmer on the emitter's behalf. Of these 40 tons, we estimate that 25 tons will remain in the forest stand, stored indefinitely for the account of the US sponsor, while 15 tons can be harvested in the form of thinnings sold for farmer income. The RTT Model focuses on profitability for the farmer, the key to sustainability and long-term carbon storage.

The RTT Model of the 2 ½-acre (1-hectare) forest requires a *one-time* investment of $5,000 from the US sponsor for the 25-year project, an approximate cost of $10/ton of sequestered CO2 over the life span of the initial contract. Sponsors can follow the month-to-month development of their forest through photographs and e-mail reports sent by RTT. Sequestration can be registered to the name of the sponsor in the Energy Information Agency of the DOE in Washington under certain conditions.

Here's a 28-year old RTT research forest in Costa Rica, showing the productivity and sequestration potential. By managing such a forest sustainably under long-term contracts, large areas of the tropics may be available to Connecticut for offsetting its CO2 emissions. (Notice the person in the t-shirt to appreciate the scale of the forest) Hac. Atirro in Costa Rica.

Each forest is specifically established and managed for its sponsor. Each has a large sign with the sponsor's and farmer's name, date of planting and the organizations involved. We make a GPS map of the size and where the forest is located showing the latitude and longitude.

After the first 25-year contract, the farmer should be positioned to continue to produce carbon-offsets or credits as a new farm product, after verification, on the world market under a 2nd contract.

RTT's COMMENTS ON THE CT DEP PRE-PROPOSAL

Overall, the DEP Pre-proposal represents a significant advance in implementing RGGI. My comments, informed by RTT's extensive and practical experience in forest research and reforestation in tropical regions, are focused on modifications to the pre-proposal's afforestation offset program. As noted below, some of the Pre-proposal's

requirements for qualifying afforestation offsets may, in their current form, undermine the ability to successfully develop reforestation offset projects with substantial CO2 sequestration potential – contrary to the intent of RGGI.

1) Reforestation in the tropics is one option to meet the challenge of climate change in Connecticut. UNFCCC/Joint Implementation projects can legally offset developed country (U.S.) CO2 emissions in foreign countries under certain conditions. In addition to energy efficiency, conservation and new clean sources of energy, it could have significance at a national level. This is an opportunity of significance.

2) In 2004, according to The Economist Magazine, Brazil cleared 9,170 square miles of tropical forests for pastures and meat exportation. The reforestation of this area could conceivably sequester 60 million tonnes of CO2 per year at a rate of a net of 25 tonnes of CO2/ha/yr for at least 50 years, with the storage being permanent in productive, economic forests. There are already 22,000 sq. miles of teak planted in the world, so planting an area of this size is quite possible, given the right business conditions.

Because of political considerations, it is not possible for corporations, foreign or national, to own significantly large tracts of land safely. The banana companies learned this. In contrast, RTT works with farmers in joint projects. Because farmers own the land, the RTT Model must fit their needs of funding and profitability.

3) The goal of the RTT carbon-offset/production forest model in this UNFCCC/JI, proof-of-concept, applied research program is to determine the feasibility and to create a demonstration of a working model. Essential is the balance between farmer needs for income and the reasonable requirements/regulations of carbon offset programs in the U.S.

4) RTT's current program has formal contracts with conservation easements for a 25-year period. Our experience is that farmers will not sign an easement in perpetuity. This restriction, perpetuity, if left in the regulation, is likely to make impossible any reforestation project in the tropical regions – precisely those areas, which because of their growing conditions, have the or one of the highest potentials for CO2 sequestration. Thus, I suggest that another formula be chosen to allow millions of acres of tropical pastures to be used for validated, storage of US CO2 emissions without the "perpetuity" requirement contained in the Pre-proposal. "Long-term" would be acceptable.

5) Delete the requirements in the Pre-proposal for the use of mainly native species. Let the developers determine the species. Almost all of the experience in the tropics shows that genetically managed or selected naturalized species do much better than native species. Most crops in the tropics are not native e.g., coffee, bananas, teak, cattle, most vegetables, sugarcane and even the people. By artificially limiting tree species to mainly native, you will be limiting the capacity of forests to sequester CO2, and worse, limit R&D to develop more productive forests that achieve higher rates of sequestration and profitability. Agriculture in the U.S has profited greatly through R&D, and there is an equally great potential in increasing the productivity in tropical reforestation projects.

6) Add a clause to the Pre-proposal that permits research efforts to improve the rates of sequestration through reforestation programs even including carbon-offsets that can be "sold" to power plants. RTT has demonstration forests with a current sequestration rate of 40 tonnes of CO2/ha at the age of 4 ½ years of age. We expect to achieve 60 tonnes/ha/yr in a few years by combining and managing mixtures of various native and naturalized species.

7) The limit in the Pre-proposal on reforestation programs of 60 years (3x20) is too restrictive. Some of the species of trees we use grow to over 250 feet in height and 6 feet in diameter, living an estimated 100-200 years of age. We have research forests that are 150 feet tall at age 40, still sequestering 40 tonnes of CO2 annually. Isn't the purpose of reforestation for sequestration to achieve the longest sequestration and storage possible? What is the remaining concern about program length, if validation demonstrates that the required sequestration is occurring? Managed Swiss forests reach 120 years.

8) It will require long-term funding in R&D to rehabilitate those millions of acres of tropical pastures for the reestablishment of the world's tropical forests for sequestration and wood production. If the offset program regulations are too restrictive, major funding from the power industry may not be accessible.

9) Leave some flexibility for *applied* research in the regulations so new sequestration technology in forests can be developed and tested, say to a size not to exceed a maximum of 5,000 acres. RTT is presently testing 20 innovations in forest design and technology to increase sequestration and production in 30 different mixtures of

tree species. Consider a special permission granted by the CT DEP Commissioner for a qualifying offset program, upon application, which may vary some of the specific requirements set forth in the regulations.

10) Keep project reviews and validation costs inexpensive.

11) Make the maximum period between measurements of the carbon content of forests 6 years instead of 5. This would allow measurements every 5 years, allowing time for calculations and reporting. Otherwise, the period between successive measurements under the proposed 5-year rule of time will turn out to be 4.82 years or some other strange number so as to squeeze in just before the limit of 5 years in the Pre-proposal.

These are my initial comments, based on a quick review of the Pre-proposal. I just received my copy today, the 31st of May. I would welcome the opportunity to present our case to you in person. Our UNFCCC/JI program is approved by the U.S. and Costa Rican governments as a pilot program to learn how to take advantage of the thousands of acres of pastures in the tropics and their capacity to sequester and store U.S. CO2 emissions.

In order to allow for the possibility of more extended comments of the Pre-proposal, I request an extension of your June 1st deadline until June 30th to review the document more closely and, if warranted, provide more detailed written comments and to meet with you to discuss such comments.

Thank you.

Herster Barres
Director