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Statement of
THEODORE E. LIU
Director
Department of Business, Economic Development, and Tourism
before the
COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING
Friday, February 22, 2008
9:00 a.m.
State Capitol, Conference Room 229

in consideration of
SB 2990
RELATING TO RENEWABLE ENERGY.

Chair Kokubun, Vice Chair Ige, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) strongly supports SB 2990, an Administration Bill which amends the resources that the utilities can use in meeting Hawaii's Renewable Portfolio Standard (RPS) established in Sections 269-91 and 269-92, Hawaii Revised Statutes. The bill requires the electric utilities to use electricity generation from renewable resources only to meet the renewable portfolio standard. The proposed change is aimed at ensuring the increased use and development of renewable energy resources.

The increased use and development of renewable energy resources will greatly benefit Hawaii's economy, environment, energy security and sustainability, in many ways including:

1. Reduced reliance on imported oil supplies resulting to less dollars leaving Hawaii's economy;
2. Reduced cost of fuel for electricity generation, and reduced exposure to the volatile oil prices in the world market;
3. Increased diversification of the electricity generation portfolio, reducing Hawaii's risk to the impact of oil supply shortage and uncertainty;
4. Economic benefits including increased economic activity, economic development and diversification, and job creation; and
5. Reduced greenhouse emissions and the attendant negative impact on climate change and global warming, and on Hawaii's environment.

The Governor has set the vision for a 20% renewable energy by 2020 to achieve energy security, independence, and sustainability. Additionally, the Hawaii Clean Energy Initiative, a joint endeavor with the U.S. Department of Energy and the State of Hawaii, has a vision of 70% of Hawaii's energy coming from renewable resources within a generation (2030). The importance of energy security and self-sustainability for our State cannot be overemphasized, and the long-term path and effort to achieve these objectives can no longer be delayed.

The significance of this bill in achieving Hawaii's energy goals cannot be overstated. In 2006, the Hawaii utilities used fossil fuel to generate over ninety per cent of the total electricity they sold, which represented almost twenty-five per cent of Hawaii's total oil imports. Only about eight per cent of the electricity sold was generated from renewable resources.

Any new fossil fuel-based generation installed in the future will have a useful lifetime of 30 to 50 years or more, which will perpetuate Hawaii's dependence on imported oil, compromising Hawaii's future energy security and sustainability as well as the attendant negative impact on Hawaii's economy and environment. Furthermore, the price risks of Hawaii's heavy dependence on imported fossil fuel for electricity generation are currently borne entirely by Hawaii's consumers. To the extent possible, future requirements for additional electricity generation must be met by electricity generation from renewable resources. While these will not necessarily be less expensive than petroleum-based power, they will certainly be more stable in price.

There will be challenges in weaning the utilities from its heavy dependence on imported fossil fuels for electricity generation. However, the utilities are already moving in that direction. The new 110 MW peaking unit planned in

Campbell Industrial Park by 2009, will use biofuels. The utilities' Renewable Portfolio Standard (RPS) Reports for 2006 indicated other renewable energy projects that the utilities are engaged in or working on in their efforts to achieve a more sustainable future.

Hawaii can achieve the objective set by the bill. Hawaii is blessed by an abundance of renewable energy resources from the sun, wind, ocean, and earth. The sun provides abundant and free energy resource for solar water heating and for photovoltaic generation of electricity. Assessment of opportunities to harvest our ample wind resources have been identified and continued to be updated. The use of wave energy for electricity generation is being tested and explored. We have large untapped geothermal resources on the Big Island. The potential for expanding the waste-to-energy capacity on Oahu is being considered and explored by the City and County of Honolulu.

Hawaii's current renewable portfolio standard (RPS) includes electricity energy savings from the use of renewable displacement or off-set technologies and from energy efficiency programs. DBEDT unequivocally supports all cost-effective, technically feasible energy efficiency and conservation resources and off-set technologies, and does not in any way prevent, preclude, or inhibit the use of such resources and technologies for decreasing Hawaii's dependence

on imported fossil fuels. The establishment of separate energy efficiency standards is an important policy option that deserves serious consideration on its own merits.

The purpose of this bill is to ensure that more renewable sources will be deployed to meet the renewable portfolio standard and increase renewable electricity generation, which is the true intent of setting a renewable portfolio standard. This is supported by the fact that of the twenty-nine states with RPS, there are only six other states besides Hawaii, that include energy efficiency savings in their RPS. Energy savings from off-set technologies and energy efficiency programs decrease electricity demand, but do not lead to increase deployment of renewable sources for electricity generation. Further, energy savings from off-set technologies and energy efficiency programs result in double counting the energy savings in calculating the renewable portfolio standard achieved by the utilities. In 2006, the Hawaii utilities reported achieving almost 14% renewable portfolio standard, which includes renewable generation and energy efficiency and conservation savings. However, the utilities' achieved RPS based on renewable generation is only 8.2%.

This adjustment of the renewable portfolio standard to a classic RPS will help ensure achieving the State vision of

increasing the use and development of renewable energy resources.

Thank you for the opportunity to offer these comments.

LINDA LINGLE
GOVERNOR

JAMES R. AIONA, JR.
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TO THE SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING

THE TWENTY-FOURTH LEGISLATURE
REGULAR SESSION OF 2008

Friday, February 22, 2008
9:00 a.m.

TESTIMONY OF CATHERINE P. AWAKUNI, EXECUTIVE DIRECTOR, DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS TO THE HONORABLE SENATOR KOKUBUN, CHAIR AND MEMBERS OF THE COMMITTEE

SENATE BILL NO. 2990, SENATE DRAFT 1 – RELATING TO RENEWABLE ENERGY.

DESCRIPTION:

This measure increases the Renewable Portfolio Standard ("RPS") percentage to 30 percent of net electricity sales by 2020.

POSITION:

The Division of Consumer Advocacy ("Consumer Advocate") supports this Administration measure, which increases the RPS percentage for the year 2020. Our concerns over the elimination of displacement technologies from the definition of renewable electrical energy were addressed by the Senate Committee on Energy and Environment.

S.B. No. 2990, S.D. 1
Senate Committee on Commerce, Consumer Protection, and Affordable Housing
Friday, February 22, 2008, 9:00 a.m.

COMMENTS:

Hawaii has an abundance of renewable energy resources that can and should be used as alternatives to fossil fuels. The Hawaii Public Utilities Commission ("Commission") is required to conduct a study with the Hawaii Natural Energy Institute of the University of Hawaii ("HNEI") to determine whether the RPS percentages should be amended. Review of the report to be produced by the Commission and HNEI may demonstrate that the Commission, which has statutory authority to adjust the RPS percentages, can and should increase these percentages beyond that which is established today.

Thank you for this opportunity to testify.

Testimony before the Senate Committee on

Commerce, Consumer Protection and Affordable Housing

S.B. 2990 SD1 – Relating to Renewable Energy

Friday, February 22, 2008
9:00 am, Conference Room 229

By Arthur Seki,
Director of Technology
Hawaiian Electric Company, Inc.

Chair Kokubun, Vice Chair Ige and Members of the Committee:

My name is Arthur Seki – I am the Director of Technology at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric Company (HECO) and its subsidiary utilities, Maui Electric Company (MECO) and Hawaii Electric Light Company (HELCO) (hereinafter collectively referred to as HECO).

As you know, the discussions on Renewable Portfolio Standards (RPS) at the Legislature over the past several years have gone through a variety of iterations and, based on the contents of the bills, varying levels of support by HECO. In 2001, HECO supported a RPS bill that led to Act 272. In 2004, HECO supported a RPS bill that led to Act 95. This Act created RPS levels for the electric utilities of 8% in 2005, 10% in 2010, 15% in 2015 and 20% in 2020. Act 95 contained a number of safeguards to allow the law to be revised and recalculated as needs dictated. In 2006, HECO supported a RPS bill that allowed the State of Hawaii Public Utilities Commission (PUC) to establish standards provided at least 50% of the RPS must be from renewable energy generation (Act 62). This bill was part of a package developed by the Hawaii Energy Policy Forum members.

S.B. 2990 SD1 increases the RPS level in 2020 from 20% to 30%. S.B. 2990 SD1 is not needed at this time since Act 62 calls for the PUC to have the Hawaii Natural Energy Institute conduct an update of the RPS law in 2009. We recommend that the State wait for the outcome of this study before making any changes to the current RPS law.

We take the RPS law very seriously and have demonstrated through our actions the commitment of our company to achieving these levels. There have been a number of renewable energy projects and initiatives related to renewable energy that we have undertaken:

- integrate wind generated electricity from 3 new wind farms--Hawi (10 MW) and Pakini Nui (20 MW) at South Point on the Big Island and Kaheawa (30 MW) on Maui;
- signed a power purchase contract for a wood energy facility on the Big Island;
- negotiating for new contracts related to wind on Maui and Oahu, solar and geothermal on the Big Island and ocean energy for Oahu;
- released a (100 MW) non-firm draft Renewable Energy Request for Proposal for Oahu for cost-effective renewable energy proposals and installations in the 2010 to 2014 time period;
- committed the 2009 power plant (100 MW) at Campbell Industrial Park to be 100% biofueled;
- tested biodiesel blends in its diesel engines and combustion turbine at Maalaea power plant;
- partnering with biofuels developer to build a 40 million gallon per year biodiesel production plant on Maui;
- developing test plans biofuel blends demonstration in a steam boiler generating unit on Oahu;
- implement biodiesel blend tests in a diesel engine at Big Island unit;
- implement glycerin tests (biodiesel by-product) in a Kahului steam boiler;
- provided seed funding to the Hawaii Agriculture Research Center (HARC) and the agriculture departments at the University of Hawaii's Manoa and Hilo campuses to conduct biofuel crop research; and

- evaluating micro-algae for biofuels and ocean energy projects.

In summary, HECO has demonstrated its concerted effort to increase renewable energy in Hawaii. We have done a lot and will do more.

Thank you for the opportunity to testify.

Testimony on

S.B. 2990, S.D. 1 –

RELATING TO RENEWABLE ENERGY

Before the

Senate Committee on Commerce, Consumer Protection, and Affordable Housing
Friday, February 22, 2008, 9:00 a.m., Conference Room 229

by

David Rezachek, Honolulu Seawater Air Conditioning LLC

Good morning Chair Kokubun, Vice Chair Ige, and members of the Committee.

Honolulu Seawater Air Conditioning LLC (HSWAC) **STRONGLY SUPPORTS** S.B. 2990, S.D. 1 - Relating to Renewable Energy, which increases the renewable portfolio standard percentage to 30 per cent of net electricity by 2020.

HSWAC is particularly pleased that renewable energy electricity displacement technologies such as seawater air conditioning, solar water heating, and solar air conditioning continue to be defined as "renewable energy," because they certainly are renewable energy technologies.

This measure will go along way toward helping Hawaii towards achieving reductions in greenhouse gas emissions, replacement of fossil fuels, and providing other economic and environmental benefits.

However, our analysis shows that even higher RPS goals may be needed to: (1) reduce CO_2 emissions to 1990 levels and (2) reach the very ambitious goal of 70% renewables by 2030 recently proclaimed by the governor and the U.S. Department of Energy.

The following tables provide one possible approach to achieving both RPS and greenhouse gas emissions goals by 2020.

The first table shows how much renewable electricity generation, renewable electricity displacement, and energy efficiency will be needed.

The second table shows how much of each technology, taken individually, would be required to meet 2020 requirements.

Thank you for this opportunity to testify.

Electricity Generation and Displacement

Electricity Resource (MWh)		1990		2020	
Fossil Fuel Electricity					
Fossil Fuels		6,475,587	99.1%	6,475,587	64.3%
	TOTAL			6,475,587	64.3%
Renewable Electricity Generation					
Ocean Thermal Energy Conversion (OTEC)		-	-	700,800	7.0%
Biofuels		-	-	376,280	3.7%
Municipal Solid Waste (MSW)		-	-	314,640	3.1%
Wind		-	-	168,192	1.7%
Wave		-	-	140,160	1.4%
PV		-	-	99,625	1.0%
	TOTAL			1,799,697	17.9%
Renewable Electricity Displacement					
Seawater Air Conditioning (SWAC)		-	-	319,820	3.2%
Solar Water Heating (SWH)		55,950	0.9%	279,750	2.8%
	TOTAL			599,570	5.9%
Energy Efficiency					
All Other Efficiency		-	-	1,177,277	11.7%
SWAC Efficiency		-	-	25,335	0.3%
	TOTAL			1,202,612	11.9%
Total Electricity Resource (MWh)		6,531,537	100.0%	10,077,466	100.0%
Percent Renewables - Electricity Generation Only			0.0%		21.7%
Percent Renewables - Electricity + Displacement			0.9%		27.0%
Percent Renewables - Current RPS Definition			0.9%		35.7%
Annual Increase in Utility Demand w/o DSM or Renewables			-		1.5%
Annual Increase in Utility Demand with DSM and Renewables			-		0.8%
Percentage Contribution to CO_2 Reduction to 1990 Levels					
	Electricity Generation Renewables				50.0%
	Electricity Displacement Renewables				16.6%
	Energy Efficiency				33.4%

How Much Will We Need by 2020?

Total Renewable Electricity Generation, Renewable Electricity Displacement, and Energy Efficiency Needed	3,601,879	MWh
This is equivalent to:		
Ocean Thermal Energy Conversion (OTEC)	514	MW
Biofuels	1,053	MW
Municipal Solid Waste (MSW)	633	MW
Wind	1,285	MW
Wave	1,028	MW
PV	1,864	MW
Seawater Air Conditioning (SWAC)	1,043,540	tons
Solar Water Heating (SWH)	1,287,543	systems
Energy Efficiency	48,699,380	CFLs

Conclusions:

- Significantly more than 30% (i.e., 36%) "renewables" will be needed to meet both RPS and greenhouse gas emissions requirements by 2020

- No single renewable energy technology can, or will, satisfy this requirement

- No single energy efficiency technology can, or will, satisfy this requirement

- A portfolio of all available renewable energy and energy technologies will be needed

- No cost-effective renewable energy and energy technologies should be excluded

HAWAII RENEWABLE ENERGY ALLIANCE
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TESTIMONY OF WARREN BOLLMEIER ON BEHALF OF THE HAWAII RENEWABLE ENERGY ALLIANCE BEFORE THE SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND AFFORDABLE HOUSING

SB 2990 SD1, RELATING TO RENEWABLE ENERGY

February 22, 2008

Chair Kokubun, Vice-Chair Ige and members of the Committee I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is a nonprofit corporation in Hawaii, established in 1995 by a group of individuals and organizations concerned about the energy future of Hawaii. HREA's mission is to support, through education and advocacy, the use of renewables for a sustainable, energy-efficient, environmentally-friendly, economically-sound future for Hawaii. One of HREA's goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to encourage increased use of renewables in Hawaii.

The purpose of SB 2990 SD1 is increase the renewable portfolio standard percentage to 30 per cent of net electricity sales by 2020. HREA supports this bill and has the following comments for the Committee's consideration:

1. Overall State Energy Policy. The bill supports the objective of reducing our imported energy use, increasing our energy security and reducing our greenhouse gas emissions;
2. The State's Economy. The bill also supports the creation and sustenance of new jobs, and most importantly, reduces the amount of dollars that go out of state to import energy; and
3. Sustainability Issues. While the RPS has the benefits noted above, we support sustainable sources of renewables. Clearly, sources such as wind and solar are sustainable. However, we must remain diligent to ensure that sources of biomass energy are sustainable

Thank you for this opportunity to testify.

Sierra Club
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SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING
February 22nd, 2008, 9:00 A.M.

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 2990 SD1, SUGGESTED AMENDMENT

Chair Kokubun and members of the Committee:

The Sierra Club, Hawai`i Chapter, with 5500 dues paying members statewide, supports SB 2990 SD1, increasing Hawaii's renewable energy standard to 30% by 2020. We believe that this percentage is not only achievable, but required given the new realities of fossil fuel prices and global climate change. Further, our current renewable portfolio standard defines "renewable electrical energy" to include such technologies as energy efficiency and energy displacement, rendering a 30% standard less effective in terms of energy security, but easier to achieve. The Sierra Club supports amending this measure to include only "classic" renewable technologies (wind, solar, wave, etc.) and certain displacement technologies while not including energy efficiency or storage technologies—those belong elsewhere.

The original intent of the bill that became Act 95 in 2004 was to set Hawai'i down the path of producing more renewable power. Unfortunately, the "standard" enacted falls far short. The Act left major loopholes that would allow Hawaii's utilities to meet the standards without ever siting a new renewable power facility.

While Act 95 has been called a Renewable Portfolio Standard (RPS), it would be more accurate to call it an "Efficiency Portfolio Standard." Senate Bill 2990 will create a true RPS to drive the state's clean energy market. While striving to increase the amount of energy conservation in Hawai`i should remain a key component to the State's energy strategy, a policy to incrementally increase the amount of clean, indigenous energy generated within the state will increase Hawaii's economic security and self-sufficiency and reduce the impact of electricity production on our environment.

The creation of the third-party "energy efficiency utility" through the system benefit charge—a process that the Public Utilities Commission is currently undergoing—will help Hawai'i achieve the efficiency goals. Alternatively, the legislature could establish a stand-alone "efficiency portfolio standard."

The Sierra Club suggests the following amendment to SB 2990 SD1 to increase Hawaii's energy security and provide a market signal to providers of clean electricity sources:

§269-91 Definitions. For the purposes of this part:
"Renewable electrical energy" means:
(1) Electrical energy generated using renewable energy as the source; or

(2) Electrical energy savings brought about by the use of renewable displacement or off-set technologies, including solar water heating, seawater air-conditioning district cooling systems, solar air-conditioning, and customer-sited, grid-connected renewable energy systems.[~~; or~~

~~*(3) Electrical energy savings brought about by the use of energy efficiency technologies, including heat pump water heating, ice storage, ratepayer-funded energy efficiency programs, and use of rejected heat from co-generation and combined heat and power systems, excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies and central station power projects].~~*

Like it or not, global climate change and $100 per barrel oil have changed the rules of the game. It is time to change our Renewable Portfolio Standard Law to keep up with our new reality.

Mahalo for the opportunity to testify.

TESTIMONY OF THE HAWAII PV COALITION AND THE SOLAR ALLIANCE
IN REGARD
SB 2990 RELATING TO RENEWABLE ENERGY
BEFORE THE
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION AND AFFORDABLE HOUSING
ON
FRIDAY, FEBRUARY 22, 2008 AT 9:00

Chair Kokubun, Vice-Chair Ige and Members of the Committee.

The Hawaii PV Coalition is a non-profit organization that represents installers, suppliers, manufacturers and customers of solar electric systems in the state of Hawaii.[1] The Solar Alliance is a state-focused alliance of solar manufacturers, integrators and financiers dedicated to accelerating the promise of photovoltaic (PV) energy in the United States.[2]

The Hawaii PV Coalition and the Solar Alliance supports the expansion of the Renewable Portfolio Standard (RPS). We believe the RPS can help move Hawaii to become more energy self-sufficient.

We are concerned that Renewable Energy Certificates (RECs) have not been defined as belonging to the owner of the renewable energy generating system. RECs, also known as Green tags, are tradable environmental commodities. They represent proof that 1 megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource.[3] The RECs represent the right to claim the environmental and other attributes associated with renewable electricity generation and are tradable. RECs are extremely helpful in promoting renewable energy and providing an incentive for renewable development because they can be used for such things as RPS compliance and providing an added enticement for installation.

We ask the Committee to modify the current legislation to define RECs ownership with the owner of the energy generating system unless otherwise contracted for through inserting a section stating, "Unless otherwise transferred by contract, renewable energy

[1] The Hawaii PV Coalition, http://www.hawaiipvcoalition.org/
[2] The Solar Alliance, http://solaralliance.org/
[3] Renewable Energy Certificates, http://en.wikipedia.org/wiki/Green_tags

credits shall be owned by the owner of a renewable energy generating system." This provision could accelerate renewable energy in Hawaii thereby reducing Hawaii's dependence on imported energy along with expanding the use of local natural and human resources. It makes economic sense because the owner of the system is the one who invested the capital to create the renewable energy and the RECs.

As of April 2006, no state has yet given all or even a majority of RECs from distributed generation used on site to the utility as a result of net metering rules. Though some states have given the RECs to Qualifying Facilities (QFs) that sell their generation under the Public Utility Regulatory Policies Act (PURPA) of 1978.[4] All of these examples allowed for REC ownership to change by contract.

Making ownership clearly defined with the owner of the energy generation will further accelerate the use of Hawaii's natural resources.

We would like to thank the Committee for the opportunity to submit testimony and for the Committee's consideration.

[4] Who Owns Renewable Energy Certificates: An Exploration of Policy Options and Practice, http://eetd.lbl.gov/EA/emp/reports/rec-ownership.pdf

LIFE OF THE LAND

Ua Mau Ke Ea O Ka `Aina I Ka Pono

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COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING
Chair: Senator Russell S. Kokubun, Chair
Vice-Chair: Senator David Y. Ige, Vice Chair

Friday, February 22, 2008
9:00 am
Conference Room 229

SB 2990, SD1 RELATING TO RENEWABLE ENERGY.

Aloha Chair Kokubun, Vice Chair Ige and Members of the Committee,

Life of the Land is Hawai`i's own environmental and community action group advocating for the people and the `aina since 1970. Our mission is to preserve and protect the life of the land through sustainable land use and energy policies and by promoting open government through research, education, advocacy, and litigation.

SB 2990 SD1 "Each electric utility company that sells electricity for consumption in the State shall establish a renewable portfolio standard of ... Thirty per cent of its net electricity sales by December 31, 2020."

Existing state law states that using 3 energy units (BTUs) worth of coal and one energy unit (BTU) of biomass to produce four units of biofuel (BTUs) (ethanol or biodiesel) counts as four units of green energy. Boiling oil and recovering the heat also counts as renewable energy.

With definitions like these, requiring or suggesting goals of X percent by year Y may feel good, but has no significance. The proposed legislation is nothing more than greenwashing a solution to climate disaster.

State law also does not take into account the climatic impacts of different fuels. Some "renewable energy" sources, such as palm oil, have worse life cycle greenhouse gas emissions than coal.

What if climate change is a very serious threat to the world, and we in Hawai`i were going away from the solution? What if we were making things worse, more dire? And what if we knew it, but cared more about money than surviving the coming catastrophe? Then what?

Alternatively, we could support energy proposals that stand up to critiques including peer reviewed life cycle analysis.

SB 2990 promote "renewable energy" without evaluating whether they are renewable, low-climate-impact, low-environmental-impact, and/or low-social-impact.

New York Times (February 8, 2008): Biofuels Deemed a Greenhouse Threat By Elisabeth Rosenthal
Almost all biofuels used today cause more greenhouse gas emissions than conventional fuels if the full emissions costs of producing these "green" fuels are taken into account, two studies being published Thursday have concluded. ...
Together the two studies offer sweeping conclusions: It does not matter if it is rain forest or scrubland that is cleared, the greenhouse gas contribution is significant. More important, they discovered that, taken globally, the production of almost all biofuels resulted, directly or indirectly, intentionally or not, in new lands being cleared, either for food or fuel. ...
The clearance of grassland releases 93 times the amount of greenhouse gas that would be saved by the fuel made annually on that land, said Joseph Fargione, lead author of the second paper, and a scientist at the **Nature Conservancy**. "So for the next 93 years you're making climate change worse, just at the time when we need to be bringing down carbon emissions."
http://www.nytimes.com/2008/02/08/science/earth/08wbiofuels.html?hp

Asia Times (Nov 29, 2007) More bad rap on Asian biofuels, By Marwaan Macan-Markar. "European Union (EU) demand for Asian-produced biofuels, particularly palm oil, is coming at a high social and environmental cost, a report released on Tuesday by the United Nations Development Program (UNDP) warns. The UN agency in its annual "Human Development Report 2007/2008" cautioned countries in the region against following the lead taken by Indonesia and Malaysia, the main producers of palm oil as a biofuel.
http://www.atimes.com/atimes/Southeast_Asia/IK29Ae01.html

Wall Street Journal (November 28, 2007) Ethanol Craze Cools As Doubts Multiply: Claims for Environment, Energy Use Draw Fire; Fighting on the Farm By Lauren Etter. "Little over a year ago, ethanol was winning the hearts and wallets of both Main Street and Wall Street, with promises of greater U.S. energy independence, fewer greenhouse gases and help for the farm economy. Today, the corn-based biofuel is under siege."
http://online.wsj.com/public/article/SB119621238761706021.html

Smithsonian Magazine (November 2007) Who's Fueling Whom? Why the biofuels movement could run out of gas. By Richard Conniff. "So what's the hitch? Partly it's that bit about doing a little planning. The move to biofuels thus far looks more like a stampede than a considered program to wean ourselves from fossil fuels. Critics in the financial community have used words like "gold rush" and even the dreaded "bubble," fretting that "biofool" investors are putting too much money into new refineries, which could go bust as markets and subsidies shift or as technologies and feedstocks become obsolete. http://www.smithsonianmag.com/science-nature/presence-biofuel-200711.html

The **Christian Science Monitor (May 21, 2007):** Hidden costs of corn-based ethanol: Diverting corn from food to fuel could create unprecedented turmoil By Colin A. Carter and Henry I. Miller. "**Policymakers and legislators often fail to consider the law of unintended consequences**. The latest example is their attempt to reduce the United States' dependence on imported oil by shifting a big share of the nation's largest crop – corn – to the production of ethanol for fueling automobiles." **http://www.csmonitor.com/2007/0521/p09s02-coop.html**

Wall Street Journal (December 5, 2006, Page 1) "Among the world's most fabled islands, Borneo -- which is divided between Indonesia and Malaysia --is considered by environmentalists to be one of the last great tropical wildernesses. It's home to rare and unusual species, including the wild orangutan, the clouded leopard and the Sumatran rhinoceros. ... Now, the palm-oil boom threatens what's left.
As fires burn deep into the dry peat soil beneath Indonesia's forests, centuries of carbon trapped in the biomass are released into the atmosphere. A study presented last month at a U.N. Climate Change Conference in Nairobi showed that Indonesia is the world's third biggest carbon emitter behind the U.S. and China, when emissions from fires and other factors are considered."
http://online.wsj.com/article/SB116501541088338547-search.html?KEYWORDS=palm+oil+burning&COLLECTION=wsjie/6month

Mahalo

Henry Curtis
Executive Director